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## Bureau of Land Management

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Environmental Assessment  
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### Deer Creek Mine Closure Water Pipeline UTU-91700 and PRI-1606

**Location:** Rilda and Huntington Canyons, Emery County, Utah  
T. 16 S, R. 7 E, Sections 22, 23, 26, 27, 28, 29, 25, 35, and 36

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# Deer Creek Mine Closure Water Pipeline UTU-91700 and PRI-1606

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## Chapter 1. Introduction and Need for the Proposed Action

### 1.1 Introduction

The Bureau of Land Management (BLM) Price Field Office and Forest Service (FS) Manti-La Sal National Forest have received a Title V right-of-way application from PacifiCorp for a buried water pipeline from the Deer Creek Mine to settling ponds at the Huntington Power Plant. The proposed pipeline would be located in T. 16 S, R. 7 E, Sections 22, 23, 26, 27, 28, 29, 35, and 36 (see Map 1 in Appendix A).

### 1.2 Background

The Deer Creek Mine has completed active coal mining and is undergoing mine closure procedures. As part of the closure procedures, the mine must address the management of intercepted groundwater. Deer Creek Mine is projected to have permanent post-mine gravity discharges at Deer Creek Canyon portals (south half of mine), and at Rilda Canyon portals (north half of mine) after final mine closure.

The last day of production at Deer Creek Mine was January 7, 2015. Efforts began immediately to prepare the mine for closure, including mining equipment removal. By mid-April of 2015, nearly all of the mining equipment, including conveyor belt lines, had been removed, and permission had been granted by the lease holder (BLM) to enable permanent sealing of the south half and northwest quadrant of the mine. The Rilda Canyon portals are still open with intact power, ventilation, and water systems, which allows for operation of pumps to direct intercepted groundwater to Deer Creek Canyon portals, and prevents water from discharging out of the Rilda Canyon portals; however, this method of water management prevents final closure of the mine.

Deer Creek Canyon portals are within a drainage defined as Category 2 waters, whereas Rilda Canyon portals are within Category 1 waters, per UAC R317-2. Definitions of these categories are as follows:

- Category 1 Waters: Waters which have been determined by the Board to be of exceptional recreational or ecological significance or have been determined to be a State or National resource requiring protection, shall be maintained at existing high quality through designation, by the Board after public hearing, as Category 1 Waters. **New point source discharges of wastewater, treated or otherwise, are prohibited in such segments after the effective date of designation.**
- Category 2: Waters are designated surface water segments which are treated as Category 1 Waters except that a point source discharge may be permitted provided that the discharge does not degrade existing water quality.

PacifiCorp currently has two permitted outfalls for Deer Creek Mine, both in Deer Creek Canyon. No discharge permits have been or will be issued for the Rilda Canyon portals because point source discharges within Category 1 waters are prohibited. Intercepted groundwater must be conveyed outside of Category 1 waters in order to be discharged. Therefore, appropriate management of the intercepted groundwater must be established to allow for the mine to cease operations, seal the mine, and complete the reclamation process as set forth in the Utah Division of Oil, Gas and Mining (UDOGM) permit and FS regulations.

Since the announcement of the Deer Creek Mine closure in December of 2014, PacifiCorp has designed and applied for mine closure approval from various government agencies to prevent a prohibited post-mine gravity discharge of water from the portals located in Rilda Canyon. The original preferred plan was to build water-retaining bulkheads to contain all of the intercepted groundwater in the underground mine workings in perpetuity. Efforts undertaken since late 2014 to obtain permission from the Mine Safety and Health Administration (MSHA) and the UDOGM to permanently retain intercepted groundwater underground with concrete bulkheads and possibly to direct overflow water to the Deer Creek Canyon were rejected in April of 2016. MSHA and UDOGM will not allow any water retention as part of the Deer Creek closure plans; water must be directed to the portals to flow unimpeded out of the mine. This response by the agencies necessitates that PacifiCorp develop other alternatives to manage intercepted groundwater that would otherwise discharge from the Rilda Canyon portals in violation of UAC R317-2.

Water that would discharge from the Rilda Canyon portals has total iron that is elevated above background levels. Mining in the northwest quadrant of the mine encountered an elevated sulfur zone in the form of pyrite ( $\text{FeS}_2$ ) in the lower portion of the coal seam. Water accumulating in the northwest quadrant of the mine comes in contact with a high-sulfur/high-iron zone, which causes the water to dissolve total iron that is elevated above background levels. This water must be settled to allow the iron to precipitate; once the iron has settled out, no other treatment is needed for the intercepted groundwater to meet water quality standards. The water can be used or discharged in accordance with existing permits or policy.

The level of iron in the groundwater is anticipated to dissipate over a period of time to background levels of typical intercepted groundwater, and settling would no longer be required. The volume of the intercepted groundwater would likely follow a similar trend, slowly dissipating due to the lack of recharge, from the initial projection of approximately 600 gallons per minute (gpm) to 200 gpm. Management of water from the mine would be required as long as the flow of intercepted groundwater continued.

### **1.3 Agencies' Purpose and Need for the Proposed Action**

The purpose of the action is to determine whether to authorize a pipeline right-of-way within existing road rights-of-way on public lands to provide conveyance of mine water from the Rilda Canyon portals to settling ponds at the Huntington Power Plant at the mouth of Huntington Canyon. The purpose of the pipeline is to provide for conveyance of the intercepted groundwater to a permitted discharge location outside of Category 1 waters, which will allow for final closure and reclamation of the mine, and to avoid potential contamination of the water resources on federal lands due to water with high levels of iron filling the mine and naturally flowing out of the portals in Rilda Canyon.

The need for both BLM and FS is established by the agencies' responsibilities under the Federal Land Policy and Management Act (FLPMA) to respond to PacifiCorp's application for a Title V right-of-way. The BLM and FS have a statutory obligation to evaluate and respond to the SF-299 application according to 43 Code of Federal Regulations (CFR) 2800 and 36 CFR 251.54, respectively. The agencies must respond to the proposal in accordance with the objectives of their Land Use Plans, and fulfill their regulatory responsibilities to manage public lands for multiple uses. This EA provides a

project-level analysis that is not intended to re-examine the basic land use allocations made in the Land Use Plans, nor propose broad changes in land use allocations. The regulations require that the activities be conducted, insofar as possible, in a manner which minimizes adverse impacts to natural resources and lands administered by the agencies.

As stated under 43 CFR 2801.2, “it is the BLM’s objective to grant rights-of-ways to any qualified individual, business, or government entity and to direct and control the use of rights-of-way on public lands.”

Forest Service Manual (FSM) 2703.2 states that use of National Forest System lands may be authorized if “the proposed use is consistent with the mission of the Forest Service to manage National Forest System lands and resources in a manner that will best meet the present and future needs of the American people, taking into account the needs of future generations for renewable and nonrenewable resources, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific, and historical values; and the proposed use cannot reasonably be accommodated on non-National Forest System lands.”

The BLM and FS would decide whether or not to grant the right-of-way, and if so, under what terms and conditions. The agencies will make separate decisions for implementation of the proposal based on the environmental analysis.

## **1.4 Conformance with BLM Land Use Plan**

Land use decisions for the project area are contained in the Price Field Office Record of Decision and Approved Resource Management Plan (RMP), approved in 2008. Specifically, the proposed action conforms to the following RMP decisions:

As stated in the RMP (pg. 66), the BLM’s goals for soil, water, and riparian resources are:

- Manage uses to minimize and mitigate damage to soils, including critical soils and biological soil crusts.
- Prevent excessive soil erosion.
- Maintain or restore the chemical, physical, and biological integrity of the area’s soil and waters.

Specific soil, water, and riparian management decisions pertinent to this proposal include:

- Manage resources to improve streams listed as water quality limited and prevent listing of additional streams under the Clean Water Act, Section 303(d).
- Manage resources to maintain or restore overall watershed health and reduce erosion, stream sedimentation, and salinization of water according to 43 CFR 4180 through watershed assessments.
- Manage resources to reduce salinity loading where possible in accomplishing the goals and objectives outlined in the Colorado River Basin Salinity Control Act.
- Maintain and enhance water-dependent natural resource values.
- Maintain and/or enhance riparian areas (Utah Riparian Management Policy 2005) through project design features and/or stipulations that protect riparian resources.
- Protect floodplains pursuant to Executive Order (EO) 11988 and avoiding disturbance in floodplains.

- Implement management actions to ensure that sufficient quantity, quality, and timing of water is present to support water-dependent resource values, including fisheries, riparian communities, wetland communities, aquatic insects, terrestrial wildlife, and migratory/non-migratory birds.
- Implement management actions to ensure that sufficient quantity, quality, and timing of water is present to support human and economic uses of water on public lands, including livestock grazing, recreation, forestry, and mineral development

As stated in the RMP (pg. 115), the BLM’s primary management objectives for the lands and realty programs are to:

- Make public lands available through ROWs or leases for such purposes as transportation routes, utilities, transmission lines, and communication sites, in coordination with other resource goals.
- Maintain and acquire public access to meet resource management needs.
- Make public lands available to meet the needs for smaller ROWs (e.g., roads or pipelines for oil fields).

Specific lands and realty management decisions pertinent to this proposal include:

- LAR-28: Additional ROWs will be granted consistent with RMP goals and objectives.

## **1.5 Conformance with FS Land Use Plan**

The proposed action is in conformance with the Manti-La Sal Land and Resource Management Plan (LRMP) approved in 1986, as amended.

FS lands are generally available to occupancy, where such is in the public interest, except where occupancy is specifically prohibited through legislation of administrative decision (LRMP, p. II-57).

The proposed project crosses management areas GWR (general big game winter range), MMA (leasable minerals area), and RNG (range forage production). These areas are identified in Map 2 in Appendix A.

The following Management Direction, as well as others not listed, applies:

- Consider special-use applications and permits on the basis of relative benefit to the public and individual need (LRMP, p. III-5).
- Utilities and other special uses will be considered in suitable areas and/or corridors based on need and overall benefit (LRMP, p. III-13).

Under Forest-wide Direction, the proposed action would conform to:

- Act on special-use applications according to the following priorities: A. Land and use activity requests relating to public safety, health, and welfare, e.g., highways, powerlines and public service improvements (LRMP, Special-Use Management, Non-Recreation, J01, p. III-37).

## **1.6 Relationships to Statutes, Regulations, and Other Plans**

This EA was prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 and in compliance with all applicable regulations and laws passed subsequently, including the President’s Council on Environmental Quality (CEQ) regulations, the U.S. Department of Interior

requirements and guidelines listed in the BLM Manual Handbook H-1790-1, and Forest Service Handbook (FSH) 1909.15.

The right-of-way grant would be processed pursuant to Title V of the Federal Land Policy and Management Act (FLPMA) of 1976, as amended {43 U.S.C 1761} and would be subject to the terms and conditions set forth in 43 CFR 2800. The Title V right-of-way would also be consistent with the Rangeland Health Standards and Guidelines (43 CFR 4100, subsection 4180) and Native American Trust Resource policies.

The proposed project is also consistent with the Emery County General Plan (2012), which generally supports mitigation for mineral and energy resource extraction, multiple use-sustained yield concepts, and providing adequate water quality.

A general listing of agencies that could be involved in the implementation of the proposed action, and their respective regulatory authority, is provided below in Table 1-1.

**Table 1-1. Permits, Approval, and Authorizing Actions Required for the Proposed Action**

Issuing Agency/Permit Name or Authorizing Action	Nature of Permit/Approval	Regulatory Authority (If appropriate)
<b>Advisory Council on Historic Preservation (ACHP)</b>		
Cultural Resource Compliance	Protects cultural & historic resources; coordinated with Utah State Historic Preservation Office (SHPO)	National Historic Preservation Act (NHPA), Section 106.
<b>Bureau of Land Management</b>		
Antiquities, cultural, & historic resource permits	Inventory, excavate, or remove cultural and historic resources from federal lands	Antiquities Act of 1906 (16 U.S.C. 431-433); Archaeological Resources Protection Act of 1979 (16 U.S.C. 470aa-470.11), 43 CFR Part 3.
ROW Grants & Temporary Use Permits	Authorizes land uses on federal lands	FLPMA (43 U.S.C. 1761-1771), 43 CFR 2800.
<b>Forest Service</b>		
Special Use Permit	Authorizes land uses on federal lands	FLPMA (43 U.S.C. 1761-1771), FSM 2700.
<b>State of Utah</b>		
State Historic Preservation Office (SHPO)	Consult on Section 106 compliance; approves cultural resource clearances; provides protection of cultural resources	Archaeological Resources Protection Act of 1979

## 1.7 Identification of Issues

The scoping process for this EA was conducted in accordance with BLM and FS regulations and guidance. This scoping process included involvement and participation by interested persons, other

government agencies, and BLM and FS resource specialists. Based on the results of this scoping process, key issues were identified that require assessment in this EA.

### **1.7.1 Public Scoping**

A scoping letter describing the proposed project and soliciting comments was sent by the FS, in cooperation with the BLM, to interested parties on June 13, 2016. These parties included local, state, and federal agencies, non-governmental organizations (NGOs), and the general public. On June 14, 2016, a legal notice of proposed action and request for comments was published in the Sun Advocate newspaper. The public comment period for scoping closed on July 14, 2016. The legal notice is the document that sets the comment period, which identifies those individuals or organizations that have objection rights for FS decisions.

In addition, the BLM listed the project information on the ePlanning website, and the FS listed the EA scoping information on the Schedule of Proposed Action (SOPA) website.

### **1.7.2 Internal Scoping**

Internal scoping with BLM and FS resource specialists was conducted prior to public scoping. This process was also used to identify issues for analysis in the EA, and is summarized in the Interdisciplinary Team (IDT) checklists (Appendix B).

### **1.7.3 Public comments**

One unique comment letter was received on behalf of Heal Utah and the Sierra Club, and over 787 form letters were submitted electronically within the established 30-day comment period. A summary of comments received during public scoping is included as Appendix C.

### **1.7.4 Issues**

An issue is a point of debate, dispute, or disagreement regarding anticipated effects of implementing the proposed action. CEQ regulations at 40 CFR §§1500.4 and 1501.7 require that the EA focus on issues that are key to the proposed action. Key issues are directly or indirectly caused by the proposed action and may lead to the development of alternative actions or other mitigation.

Non-key issues are defined as being: 1) outside the scope of the project; 2) already decided by law, regulation, or policy; 3) irrelevant to the decision; or 4) conjectural and not supported by scientific or factual evidence. Issues were identified based on the scoping process described above. These issues were categorized as key issues based on the CEQ regulations.

Based on the agencies' responses as documented in the IDT checklists (Appendix B), the issues being carried forward in this EA for analysis are associated with resources that may be affected by the proposed action. Additionally, the rationale for not carrying resources forward in this EA are also documented in the checklists.

The following resources are being carried forward for analysis in this EA:

Cultural Resources	Designated Areas	Water Resources	Recreation Resources
Native American Religious Concerns/Values	Soil Resources	Visual Resources	Wildlife Resources

***Cultural Resources/Native American Religious Concerns/Values***

- Would the project impact cultural resources?

***Designated Areas: National Trails and Backways***

- Would the project adversely impact the Energy Loop National Scenic Byway?

***Recreation Resources***

- Would the project adversely impact recreation associated with the Energy Loop National Scenic Byway or adjacent recreation areas?

***Soil Resources***

- Would the project adversely impact soil resources?

***Visual Resources***

- Would the project adversely impact visual resources?

***Water Resources***

- Would the project adversely impact water resources?

***Wildlife Resources***

- Would the project affect habitat effectiveness for big game?
- Would the project adversely impact FS sensitive species?
- Would the project affect FS management indicator species (MIS) population trends?
- Would the project adversely affect migratory birds?

**1.7.5 Issues Considered but Eliminated from Further Analysis**

Other resource issues were considered, but were eliminated from further analysis as documented in the IDT checklists (Appendix B).

## Chapter 2. Description of Alternatives

### 2.1 Introduction

This section describes the range of alternatives to be addressed in the environmental analysis. A range of alternatives were considered and objectively evaluated by the BLM and FS interdisciplinary teams. Alternatives that were determined not to meet the reasonable standards were eliminated from further analysis.

### 2.2 Proposed Action

PacifiCorp proposes to construct 5.6 miles of a 10-inch high-density polyethylene (HDPE) gravity flow water pipeline from the Deer Creek Mine 1st Right Portals in Rilda Canyon to settling ponds at the Huntington Power Plant. The pipeline would be constructed mostly within the existing road rights-of-way; within Emery County Road #306 right-of-way for about 11,835 feet (2.2 miles), and within the State Route (SR)-31 right-of-way (UTU-0-17187) for about 14,606 feet (2.8 miles). The route was selected to minimize new disturbance in Rilda and Huntington Canyons. Approximate pipeline lengths by landownership are shown in Table 2-1.

**Table 2-1. Length of proposed pipeline right-of-way**

<b>Landownership</b>	<b>Total length</b>
FS	9,622 feet (1.8 mi)
BLM	6,388 feet (1.2 mi)
Private	13,518 feet (2.6 mi)
<b>Total</b>	<b>29,528 feet (5.6 mi)</b>

Because the pipeline must be offset from parallel culinary pipelines by a minimum distance of 10 feet as specified by the State of Utah regulations (UAC R317-401-5), the proposed pipeline would be installed on the northeast side of SR-31. The proposed permanent right-of-way width is 12 feet centered on the pipeline, and is wholly within the road rights-of-way. An additional 20 feet of temporary right-of-way on the outer edge of the permanent right-of-way (away from the roadway) would allow for construction of the pipeline (see Map 3 in Appendix A). Estimates of area in the permanent 12-foot right-of-way, the temporary 20-foot right-of-way, and the total 32-foot area are shown in Table 2-2.

**Table 2-2. Right-of-way calculations by land status**

<b>Jurisdiction</b>	<b>Permanent 12-foot ROW (acres)</b>	<b>Temporary 20-foot ROW (acres)</b>	<b>Total 32-foot area (acres)</b>
FS	2.7	4.4	7.0
BLM	1.8	2.9	4.7
Private	3.7	6.4	10.1
<b>Total</b>	<b>8.1</b>	<b>13.7</b>	<b>21.8</b>

Of the total 32-foot right-of-way, approximately 2.7 acres of the temporary disturbance would occur beyond the Emery County Road #306 right-of-way. Up to 1.7 acres of new disturbance would occur on FS-administered land, and 1.0 acre of new disturbance would occur on private land. There would be no temporary disturbance beyond the SR-31 right-of-way.

The main project design features are listed below; additional detail can be found in the POD (Appendix D).

- The trench for the pipeline would be excavated with a trenching machine, track hoe excavator, or similar equipment. Topsoil and subsoil would be segregated and stockpiled separately adjacent to the trench. After the pipeline was installed, the stockpiled subsoil would be used to backfill the trench, and the topsoil would be replaced on the surface and graded to pre-disturbance contours.
- Large rocks that are unsuitable for fill would be placed on the surface within the road rights-of-way, outside of the safety clear zone. If the excavated rock contrasted with the natural surface, the contrasting material would be removed from the right-of-way and disposed of in an appropriate location off-site.
- The pipeline would include a shut-off valve at the mine entrance.
- Pipe segments would be laid out end-to-end along the trench at each active site. The pipeline segments would be about 50 feet long, and would be heat-welded together on-site.
- Bedding material would be placed in the trench below and above the pipeline. Such bedding material serves two principal functions: protection of the pipe from mechanical damage during installation and trench filling, and stabilization of the pipe in the event of seismic shifts or frost heaves.
- The pipeline would be buried with at least 5 feet of cover, except at the crossings of Huntington Creek, where the pipeline would be attached to an existing bridge or diversion structure at each crossing. The pipeline would be concealed in the existing girders under the west side of the bridge, and set on top of the diversion structure. The pipeline would not be buried at these crossing locations.
- Air vents and Carsonite posts would be installed approximately every 1,000 feet along the alignment; these features would be about 4 feet high, but would be colored to be visually unobtrusive from the roadway.
- A tracer wire and a fiber optic conduit would also be buried with the pipeline. The conduit would allow for installation of a telecommunications cable in the future without requiring excavation of the entire length of line. This fiber optic cable would allow PacifiCorp to remove the existing power line while providing communication capabilities to continue monitoring for security of the site.
- Directional drilling would be applied to install the pipeline at crossings under Emery County Road #306, SR-31, and Bear Creek and the adjacent Bear Canyon Road. The Emery County Road #306 crossings would be drilled at two locations: north and south of the Huntington River bridge (see Figure 1 in Attachment D of the POD). The SR-31 crossings would also be applied in two locations: 1) approximately 500 feet south of the SR-31 and Emery County Road #306 intersection (see Figure 1 in Attachment D of the POD), and 2) adjacent to the Huntington Power Plant diversion dam (see Figure 2 in Attachment D of the POD). These road crossings are on private land. The crossing under Bear Creek and Bear Canyon Road is on BLM-administered land (see Figure 3 in Attachment D of the POD). Drill pits would be excavated on each side of a crossing and a vacuum trailer would ensure that drilling mud did not discharge into the adjacent waters.
- No permanent roads would be constructed during project implementation. All construction activities would take place alongside and largely within the rights-of-way of existing roads.
- A stormwater pollution prevention plan (SWPPP) and spill prevention and response plan (SPRP) would be prepared and implemented to ensure compliance with the Clean Water Act during construction. Temporary erosion control measures could include sediment barriers such as silt fence or fiber rolls. Permanent erosion control measures would include trench breakers and revegetation where suitable within the road rights-of-way.

- Construction is anticipated to take 2 to 3 months in the fall and winter of 2016-2017, depending on weather conditions and other factors.
- A cultural resources discovery plan is included in the POD (Appendix D), and would be applied if cultural resources were discovered.
- Timing stipulations would be applied where appropriate to avoid potential impacts to wildlife (see section 7.b.9 of the POD [Appendix D]).
- A reclamation plan is included in the POD (Appendix D). Seeding would occur in the fall after construction to increase the likelihood of success. All disturbance areas would be monitored for noxious weeds annually, for a minimum of three growing seasons following completion of the project, or until desirable vegetation was established. If found, weeds would be treated as described in the reclamation plan.
- The intercepted groundwater from the mine would be directed into the settling ponds at the Huntington Power Plant, and used or discharged in accordance with existing permits or policy.
- After construction, PacifiCorp would maintain the right-of-way and allow the pipeline to operate continuously. The pipeline would be intended to be permanent; if the pipeline were decommissioned, it would be left in the ground to avoid further ground disturbance.

## 2.3 No Action

The no action alternative would be to deny the right-of-way application as proposed. PacifiCorp would not be allowed to construct the pipeline across federally administered lands. The Deer Creek Mine would remain open to continue pumping water until other suitable methods for management of intercepted groundwater were determined.

## 2.4 Alternatives Considered but Not Analyzed in Detail

Alternatives that were dismissed from further consideration include:

1. **Retain water in the mine for discharge at Deer Creek portals** – MSHA and UDOGM will not allow water to be retained in the mine; therefore, this alternative is not feasible.
2. **Treat the water prior to discharge at the Rilda Canyon portals** - Regardless of water quality, discharge of water at the Rilda Canyon portals is prohibited per UAC R317-2; therefore, this alternative is not feasible.
3. **Treat the water at the Rilda Canyon Portals and then pipe the water to Huntington Creek** – This alternative would require additional surface disturbance to build new settling ponds on public lands, and would still require a pipeline to convey water to a permitted discharge location per UAC R317-2. This alternative was dismissed due to the additional disturbance that would be required on public lands.
4. **Construct a pumping station at Rilda Canyon portals and pipe the water to Left Fork portals** - A pumping station would be built at the Rilda Canyon 1st Right portals. A pipeline would be installed running from this pump station to the Left Fork portals. Water discharging at the 1st Right Rilda Canyon portals would be pumped back into the mine at the Left Fork portals, where it would gravity feed into the Deer Creek Mine workings. This alternative requires a pipeline and permanent pumping facilities, namely the pump station, power lines, and communication lines, to be constructed at the mine site on FS-administered land. These facilities would require permanent periodic maintenance. Risk associated with equipment failure and discharge of non-approved and potentially non-compliant water to

Rilda Canyon is considered to be moderate. This alternative was dismissed due to the additional disturbance that would be required on public lands.

5. **Construction of a water treatment facility at the Huntington Power Plant** - A pipeline would still be required to convey intercepted groundwater to such facilities. This alternative would require additional disturbance at the Huntington Power Plant; this disturbance is not considered to be necessary as discharge can be properly managed using the existing settling ponds at the power plant. This alternative was dismissed because of the additional disturbance that is unnecessary for proper management of the water.
  
6. **Extension of the water pipeline to the Town of Huntington's sewer treatment plant or next closest existing treatment plant** – Similar to the alternative above, a pipeline would still be required to convey intercepted groundwater to such facilities. The closest existing treatment plant is farther down the canyon than the power plant; installation of additional pipeline length would require additional disturbance. This disturbance is not considered to be necessary as discharge can be properly managed using the existing settling ponds at the power plant. This alternative was dismissed because of the additional disturbance that is unnecessary for proper management of the water.

## **Chapter 3. Affected Environment**

### **3.1 Introduction and General Setting**

The affected environment was considered and analyzed by the BLM and FS as documented in the IDT checklists (see Appendix B). Information and description of the affected environment contained in the BLM 2008 Price Field Office RMP and the Manti-La Sal 1986 LRMP are incorporated by reference in accordance with 40 CFR 1502.21 regulations.

The IDT checklists indicate which resources of concern are either not present in the project area or would not be impacted to a degree that requires detailed analysis. Resources which could potentially be impacted to a level requiring further analysis are described in chapter 3, and impacts on these resources are analyzed in chapter 4.

#### **3.1.1 General Description**

The project area is located about 10 miles west of Huntington in Emery County (see Map 1 in Appendix A).

The project area is within the High Plateaus of Utah physiographic subdivision of the Colorado Plateau. More specifically, the project area is located in Rilda and Huntington Canyons, on the east side of the Wasatch Plateau. Elevation of the proposed project is between 6,500 and 7,800 feet above sea level. A majority of the project area has been previously impacted by the existing roadways and utilities within these canyons.

#### **3.1.2 Resources Brought Forward for Analysis**

The scoping process indicated that the following resources could potentially be impacted by this proposed project, and require further analysis:

##### ***3.1.2.1 Cultural Resources/Native American Religious Concerns/Values***

The area of potential effect (APE) is defined to be the footprint of the pipeline with a 300-foot-diameter buffer around the pipeline centerline. A total of ten sites are known to be located within the APE. Of these sites, two were determined eligible for the National Historic Register in 1985; however, both were excavated in 1986 and reburied outside the road right-of-way, on Emery County property. Two new sites were recorded in 2016; these are recommended as ineligible to the National Historic Register. The remaining six sites were previously determined to be ineligible for listing to the National Historic Register.

There is potential for discovery of or adverse impacts to cultural resources as a result of project implementation due to new excavation, although this potential is low due to the project overlap with existing disturbed rights-of-way. Approximately 2.7 acres of proposed right-of-way would occur beyond the Emery County Road #306 right-of-way; this is about 12 percent of the total 21.8-acre project area. In the event that a discovery occurred during construction, the discovery plan in the POD (Appendix D) would be applied.

##### ***3.1.2.2 Designated Areas: National Trails and Backways***

The proposed project parallels a segment of the Huntington/Eccles Canyons Energy Loop National Scenic Byway. The Byway is approximately 101 miles long and travels from Fairview through the Manti-La Sal National Forest southeast to Huntington via Huntington Canyon, and northeast to near Colton via Eccles Canyon. Sights along the Byway highlight industrial development such as coal

mining operations, historic mining towns, and coal-fired power plants. Of the 101 total miles of the Byway, the project parallels about 2.8 miles between 8 and 11 miles west of Huntington. The relevant goals as stated in the Energy Loop Byway Corridor Management Plan Update (2011) are to “Advocate strategies and activities that protect the intrinsic character and natural resources along the Byway,” and, “Provide safe travel along the Byway for the visiting public and residents.” Designated roadside interpretive sites do not occur within the project area.

### **3.1.2.3 Recreation Resources**

The proposed action is located within an Extensive Recreation Management Area (ERMA), where significant recreation opportunities and problems are limited and explicit recreation management is not required. Most recreation in the area is associated with the Byway and sites further up the canyon that are accessed by the highway. Bear Creek Campground is adjacent to the highway, near the Huntington Power Plant.

### **3.1.2.4 Soils Resources**

The soils within the project area have been generally described as alluvial bottomland. These soils are “very deep (greater than 60 inches to bedrock),” and “well to somewhat poorly drained.” Soil textures are primarily sandy loam or sandy clay loam. Stones and boulders are scattered on the soil surface. A majority of soils in the project area are within previously disturbed road rights-of-way (19.1 acres). The remaining 2.7 acres (12 percent) of proposed right-of-way would occur outside of the existing road rights-of-way. Vegetation is sparse along SR-31, and mainly consists of roadside weeds and grasses with limited sagebrush (*Artemisia* spp.) and juniper (*Juniperus* spp.). Vegetation beyond the road right-of-way for Emery County Road #306 includes up to 2.7 acres of mature conifers, shrubs, and grasses.

### **3.1.2.5 Visual Resources**

The project area is located within a VRM Class II area on BLM-administered land, where the objective is to retain the existing character of the landscape. Management activities may be seen but should not attract the attention of the casual observer. Project activities would be visible to those travelling on the parallel segment of SR-31. On FS-administered lands adjacent to SR-31, the Visual Quality Objective (VQO) is Partial Retention of the characteristic landscape. The VQO in Rilda Canyon is Modification.

### **3.1.2.6 Water Resources**

The proposed project is within the Huntington Creek watershed. Huntington Creek is a perennial stream that drains a large area of the Wasatch Plateau. It is one of three headwater tributaries to the San Rafael River. Generally, headwater streams contribute substantial recharge to aquifer and groundwater systems, especially where confined canyons enter broad valleys or contact water-bearing geologic strata or quaternary valley fill aquifers. A report by the Utah Geological Survey (2003) specifically discusses Huntington Creek and other headwater tributaries of the San Rafael River as major groundwater recharge contributors.

The proposed pipeline alignment parallels Huntington Creek and the bottom of Rilda Canyon, which drains into Huntington Creek. A majority of the project area is within the Miller Fork Canyon-Huntington Creek 6th field Hydrologic Unit Code (HUC; 140600090105). The last mile of the project is within the Huntington Lake-Huntington Creek 6th field HUC (140600090107). The surface waters within the FS boundary are designated as Category 1 per UAC R317-2. A permit cannot be obtained to discharge intercepted groundwater at Rilda Canyon portals because the water would discharge into Category 1 waters, where new point source discharges of wastewater are prohibited.

The project area is located at the upper boundary of Utah Department of Environmental Quality - Division of Water Quality Watershed Assessment Unit Huntington Creek-2 (UT14060009-004), and the lower boundary of Huntington Creek-3 (UT14060009-003). Huntington Creek-2, which includes Huntington Creek and its tributaries from Highway 10 to the FS boundary, and Huntington Creek-3, which includes Huntington Creek and its tributaries from the FS boundary to the headwaters, are currently impaired for dissolved oxygen, total dissolved solids (TDS), pH, and temperature (Division of Water Quality 2016); these conditions are likely due to the Seeley wildfire that occurred in 2012 (Peterson 2016). Stormwater flows from the project area would discharge into Huntington Creek-2 and -3.

PacifiCorp has collected and had a laboratory analyze the intercepted groundwater samples from areas within the mine that will gravity flow to the Rilda Canyon portals utilizing the EPA Priority Pollutant List, which consists of 129 priority pollutants (USDA FS 2016b). None of the pollutant parameters were detected. The intercepted groundwater in the mine is estimated to initially have a total iron concentration is 2-2.5 mg/L and an estimated TDS concentration of 500 mg/L. The elevated levels of iron in the groundwater is from the oxidation of the mineral pyrite in areas of the mine that contain pyrite mineralization within the coal seam. A gradual decrease in the concentration of iron is predicted to occur over the next 5 to 10 years as the surface area of exposed pyrite is consumed and available oxygen diminishes. The concentration of iron is the only elevated analyte in the mine's groundwater that exceeds water quality standards for PacifiCorp's Deer Creek Canyon discharge permit (UT0023604). The intercepted groundwater has an initial estimated flow rate of about 500-600 gpm (USDA FS 2016b). The amount of flow is expected to decrease with time because there is no active recharge from perched aquifers (USDA FS 2016b).

Per UAC R317-2-13, Beneficial Use Classifications identified for waters within Huntington Creek-2 and -3 include:

- 1C - Drinking Water
- 2B - Secondary Contact Recreation
- 3A - Cold Water Aquatic Life
- 4 - Agricultural Uses

Huntington Creek water is diverted below the project area for use by the Huntington Power Plant, agricultural irrigation, secondary municipal irrigation systems, and culinary use by communities in the valley below.

Surface flows from the project area would drain east through Rilda Canyon into Huntington Creek. A culinary water gathering system operated by the North Emery Water Users Special Service District sits approximately 1,500 feet east of and below the Rilda Canyon portals; this system utilizes the Rilda Canyon Upper and Lower developed springs, and is downgradient from the proposed project. The district provides culinary water to Lawrence, Huntington Canyon, Huntington Airport, and areas outside city limits in Northern Emery County. A source protection plan is on file with the Utah Division of Drinking Water. The Huntington Cleveland Irrigation Company holds water rights for Birch Spring, which is located just north of Highway 31.

### ***3.1.2.7 Wildlife Resources***

Various wildlife species of concern could occur within the project area or be impacted by the project. These species include FS sensitive species, FS management indicator species (MIS), migratory birds (including raptors), and big game. A biological specialist report (USDA FS 2016a) and Biological Assessment/Biological Evaluation (BA/BE; Appendix E) were prepared to analyze and disclose

impacts to the relevant species of concern for the FS. Please see those reports for more detail on the affected environmental and effects analysis.

The following species were carried forward for detailed analysis:

***Bald eagle (Haliaeetus leucocephalus) – FS sensitive, migratory bird***

No bald eagles are known to nest on the Ferron-Price Ranger District. Open habitats with available carrion could exist within the project area. Bald eagles may fly over the area and roost or perch incidentally, mainly from November through March.

***Flammulated owl (Otus flammeolus) – FS sensitive, migratory bird***

Flammulated owls may nest in the mature forest at the bottom of Rilda Canyon, and could forage within the project area.

***Northern goshawk (Accipiter gentilis) – FS sensitive, migratory bird***

Goshawks may nest in the mature forest at the bottom of Rilda Canyon, and could forage within the project area.

***Peregrine falcon (Falco peregrinus anatum) – FS sensitive, migratory bird***

Potentially suitable cliff nesting habitat occurs in both Rilda and Huntington Canyons. The project area includes riparian habitat, which may provide prey for foraging falcons.

***Spotted bat (Euderma maculatum) – FS sensitive***

Potential cliff roosting habitat occurs in both Rilda and Huntington Canyons. Foraging may occur throughout the riparian area adjacent to the project area.

***Townsend's big-eared bat (Corynorhinus townsendii pallescens) – FS sensitive***

Potential cavern roosting habitat is not known within the project area. Foraging may occur throughout the riparian area adjacent to the project area.

***Mule deer (Odocoileus hemionus) – FS MIS***

The proposed project is wholly within Utah Division of Wildlife Resources (UDWR)-mapped crucial winter habitat. Trend counts conducted by the UDWR indicate that the mule deer population trend in Utah has been increasing (UDWR 2014).

***Rocky Mountain elk (Cervus elaphus) – FS MIS***

The proposed project is within UDWR-mapped crucial winter and summer habitats. Trend counts by the UDWR indicate that elk populations in the area are at or above the population objective (UDWR 2015).

***Golden eagle (Aquila chrysaetos) – FS MIS, migratory bird***

Potentially suitable cliff nesting habitat occurs in both Rilda and Huntington Canyons. Golden eagles may forage throughout the project area. Results from annual surveys on the Forest indicate that golden eagle populations across the Manti-La Sal National Forest are stable and will continue to persist across the Forest (USDA FS 2016a).

## **Chapter 4. Environmental Impacts**

### **4.1 Introduction**

The potential consequences or effects of each alternative are discussed in this chapter. Best management practices (BMPs) and design features are incorporated within the applicant's proposed action, which would reduce or eliminate a majority of the potential environmental impacts.

Direct effects are those caused by an action that occur at the same time and place. Indirect effects are those that are reasonably foreseeable consequences of the action, but are later in time or further removed in distance from the direct effects. Both types of effects are discussed in this section.

Impacts to a resource can be beneficial or adverse over the short- or long-term.

Environmental impacts that could result from implementation of the proposed action or no action alternative are quantified where possible. In absence of quantifiable data, the professional judgment of knowledgeable sources was used. Impacts may be described using ranges of potential impacts or in qualitative terms, if appropriate.

### **4.2 Direct and Indirect Impacts**

#### **4.2.1 Proposed Action**

This section analyzes the impacts of the proposed action to those potentially impacted resources described in chapter 3 above.

The proposed action would result in the disturbance of up to 7.0 acres of FS-administered land, 4.7 acres of BLM-administered land, and 10.1 acres of private land (21.8 acres total; see Table 2-2), all parallel to existing roadways and largely within existing road rights-of-way. The disturbance would include clearing a portion of the temporary right-of-way for work access and excavation of a trench to install the pipeline. The trench would be from 3 to 7 feet wide and over 6 feet deep. Temporary erosion control measures could include sediment barriers such as silt fence or fiber rolls. Permanent erosion control measures would include trench breakers and revegetation where suitable within the road rights-of-way.

Directional drilling would be applied at road crossings and Bear Creek to avoid impacts to the roadway surface and the stream channel. The pipeline would be attached to existing structures at the Huntington Creek crossings; the proposed design avoids impacts within active stream channels. No new roads are proposed as the project would be accessed by the existing adjacent roadways. Manual on Uniform Traffic Control Devices (MUTCD)-approved warning signs would be placed along SR-31, and traffic control would be applied when necessary. Project activities are anticipated to occur for up to 3 months in the fall and winter of 2016-2017.

##### **4.2.1.1 *Cultural Resources/Native American Religious Concerns/Values***

Ground-disturbing activities such as excavation can directly and irreversibly damage or destroy sensitive cultural resources. A Class III inventory of the project area was completed in June of 2016. No eligible cultural sites were identified within the APE according to the inventory report prepared by EnviroWest (Billat 2016); however, due to the potential for subsurface discoveries during excavation, a cultural monitor would be on-site during excavation activities at identified locations. A cultural resources discovery plan has been developed in case of unanticipated buried resources, and is included in the POD (Appendix D). These measures would minimize the risk of adverse impacts to cultural resources.

Implementation of the project could also result in atmospheric, visual, and auditory disturbances that impact the cultural experience of the area. Effects to the canyon would be temporary (up to 3 months during construction), and would not significantly exceed the existing levels of disturbance in the canyon.

#### **4.2.1.2 Designated Areas: National Trails and Backways**

The project would impact 2.8 miles of the total 101-mile Huntington/Eccles Canyons Energy Loop National Scenic Byway (about 3 percent). Implementation of the project would meet the stated goal of the Byway to “advocate strategies and activities that protect the intrinsic character and natural resources along the Byway.” Impacts to the intrinsic character of the Byway are disclosed in the *Visual Resources* section of this chapter. Impacts to natural resources are disclosed throughout this chapter (*Cultural Resources*, *Soil Resources*, *Water Resources*, and *Wildlife Resources*). The project includes traffic control to reduce safety risks to the travelling public; therefore the project would also meet the stated goal to “provide safe travel along the Byway for the visiting public and residents.”

#### **4.2.1.3 Recreation Resources**

Implementation of the project would cause temporary disturbance and possible delays to recreational users on the Huntington/Eccles Canyons Energy Loop National Scenic Byway and adjacent recreation areas; however, it is anticipated that traffic flow would be maintained during construction, and delays would be limited. Bear Creek Campground is directly across the highway from the proposed project; noise associated with project activities could disturb campers during construction. Any impacts would be temporary, as project activities are only expected to occur for up to 3 months in the fall and winter. Recreation would not be adversely impacted in the long-term by implementation of the proposed action.

#### **4.2.1.4 Soil Resources**

The proposed project would include excavation of less than 5.6 miles of linear trench, with associated ground disturbance of up to 21.8 acres. Approximately 19.1 of these acres (88 percent) are within existing disturbed rights-of-way. Direct impacts to soil would include exposure due to vegetation removal on 2.7 undisturbed acres, mixing of soil horizons, loss of topsoil productivity, soil compaction, and increased susceptibility to erosion. The magnitude of impacts would be reduced when considering the existing impacts from the road rights-of-way. Where compatible with the overlapping road rights-of-way, disturbed areas would be reclaimed according to the reclamation plan in the POD (Appendix D). Impacts to soil resources on the reclaimed areas would be short-term (during construction and up to 5 years after), and would diminish as reclamation was achieved.

Implementation of the reclamation plan would reduce soil erosion, control runoff, and prevent pollution. A stormwater pollution prevention plan (SWPPP) would be prepared prior to construction, and would describe measures to minimize erosion and prevent soils from leaving the site during construction activities. The measures outlined in these plans would stabilize disturbed areas during and after construction.

#### **4.2.1.5 Visual Resources**

Implementation of the proposed project would create a visual contrast that would attract attention along SR-31; however, the bold vertical lines of the canyon walls would still dominate the view. As reseeded and replanted vegetation established and matured, visual contrast of the disturbed right-of-way would decrease. The level of change to the landscape would be low; the proposed changes would repeat the basic elements found in the predominant natural and manmade features. Detailed analysis of the visual impacts is included in Appendix F. The project would meet BLM Class II objectives to retain the existing character of the landscape. The VQO of Partial Retention would not be met temporarily along SR-31 on FS-administered lands during construction activities; however,

upon successful reclamation, the VQO would be met. The VQO of Modification in Rilda Canyon would be met through implementation of the proposed action.

#### **4.2.1.6 Water Resources**

Implementation of the proposed action would impact surface water flows, and would potentially increase sedimentation or pollution of surface waters. Approximately 21.8 acres would be disturbed by implementation of the proposed action; 19.1 of these acres (88 percent) are within existing disturbed rights-of-way. This disturbance could lead to increased erosion and sedimentation of the disturbed soils into Huntington Creek.

To reduce or prevent adverse impacts to water quality, a stormwater pollution prevention plan (SWPPP) and spill prevention and response plan (SPRP) would be prepared prior to initiation of ground disturbance. These plans would detail the best management practices and site-specific measures to prevent sediment and other pollutants from discharging into the creek during construction. Implementation of the SWPPP and SPRP would reduce sedimentation and the risk of pollution to surface waters during construction. For a list of the BMPs that would be implemented, refer to the POD (Appendix D) and the Hydrology Report (USDA FS 2016b).

The pipeline would be buried above the water level of the adjacent groundwater system that feeds the North Emery Water Users Special Service District's spring collection system; therefore, implementation of the project would not impact the quality or quantity of water present in the groundwater system that sustains the springs. It is also unlikely that implementation of the project would affect Birch Spring's water quality or quantity because the spring is topographically above the proposed disturbance (Peterson 2016).

If implemented, the intercepted groundwater piped from the Rilda Canyon portals would mix with diverted water from Huntington Creek in the settling pond, and then be used in the plant operations. The water management and discharge would be regulated by PacifiCorp's existing UPDES permits.

Implementation of the proposed action would not adversely affect water quality in the long-term, nor contribute to the existing water quality impairments defined by the Utah Department of Environmental Quality (UDEQ; USDA FS 2016b).

#### **4.2.1.7 Wildlife Resources**

The information in this section is summarized from the Biological Specialist Report (USDA FS 2016a). Please see that report for more detail on the effects analysis.

Up to 21.8 acres of potentially suitable habitat for wildlife species could be disturbed by implementation of the proposed project; however, actual impacts would likely be much less because a majority (19.1 acres; 88 percent) of the proposed right-of-way overlaps with existing roadway disturbance, which is mostly early seral species adjacent to a busy road, and does not provide habitat value. Habitat effectiveness in the area is likely decreased due to the existing roads and associated disturbance. Disturbance to wildlife due to noise or the presence of equipment and personnel could occur, but is unlikely as most animals would be habituated to some level of disturbance from the existing road. Potential disturbance from construction would be short-term (up to 3 months), and most animals would avoid areas where project activities were occurring. Temporary displacement would be short-term and during construction (up to 3 months). Disturbance to nesting migratory birds is unlikely as all young should be fledged and highly mobile by the time project activities begin in the fall.

Implementation of the proposed action may impact individuals or habitat of the FS-sensitive species analyzed in this document, but would not likely contribute to a trend toward federal listing or cause a loss of persistence to these populations or species.

Habitat effectiveness would be decreased for all species analyzed, but only slightly when considering the existing disturbance and habitat modification.

#### Mule deer and Rocky Mountain elk

The UDWR has delineated crucial winter mule deer habitat and crucial winter and summer elk habitat within the project area. Up to 2.7 acres of vegetation may be removed directly adjacent to the roadway; however, the linear nature of the project would result in similar edge habitat, which would continue to provide foraging opportunities for big game and result in minimal loss of cover. Project activities would occur in the fall and winter of 2016, after calving season; therefore, crucial elk summer habitat use would not be impacted. Project activities may extend into December, when crucial winter habitats are used by both deer and elk. Deer and elk may be temporarily displaced by disturbance associated with the proposed action, but would be expected to return to the area shortly after implementation. Habitat effectiveness would be decreased, but only slightly when considering the existing disturbance and habitat modification. The proposed project would not impact mule deer or elk population trends across the Forest.

### **4.2.2 No Action**

The no action alternative would be to deny the application as proposed. The mine would remain open to allow for continued pumping of intercepted groundwater. The mine would not proceed with final closure and reclamation activities until proper water management methods were determined. Because no new ground disturbance would be authorized, no effects would be expected to the Cultural Resources/Native American Religious Concerns/Values, Designated Areas: National Trails and Backways, Recreation Resources, Soil Resources, Visual Resources, Water Resources, or Wildlife Resources.

## **4.3 Cumulative Impacts**

### **4.3.1 Introduction**

Based on the anticipated permanent assignment of a Title V right-of-way grant for the proposed pipeline, the timeframe for the cumulative effects is permanent.

The purpose of the cumulative effects section is to describe the interaction among the effects of the proposed action and relevant past, present, and reasonably foreseeable actions. This interaction may be:

- Additive: the effects of the actions add together to make up the cumulative effect.
- Countervailing: the effects of some actions balance or mitigate the effects of other actions.
- Synergistic: the effects of the actions together is greater than the sum of their individual effects.

### **4.3.2 Past, Present, and Reasonably Foreseeable Actions**

The proposed project is within active grazing allotments. Previous actions include construction of paved roadways, culinary water lines, oil and gas development, telecommunication lines, and power lines that run parallel within the canyons. Emery Telcom will be installing a fiber optic cable along a portion of SR-31 on BLM-administered land and private land in the fall of 2016. This project was approved under DOI-BLM-UT-G020-2016-0015-CX.

Operation of the Huntington Power Plant, the Rhino Mine, and the Deer Creek Mine have also impacted the area. There will be reclamation activities associated with the final closure of the Rilda Portals if the proposed project is completed.

### **4.3.3 Cumulative Impacts**

#### ***4.3.3.1 Cultural Resources/Native American Religious Concerns/Values***

Impacts to cultural resources from construction activities are not necessarily additive across a landscape because the sites are typically discrete; therefore, the cumulative impact area for cultural resources is the 205-acre APE. Previous development of the existing roadways and utilities has resulted in considerable surface disturbance within the cumulative impact area. Impacts to cultural resources have been minimized by avoiding or mitigating adverse impacts based on field surveys prior to surface-disturbing actions. Future impacts to buried cultural resources in the cumulative impact area are possible, but unlikely due to the minimal amount of available space for additional utilities.

#### ***Proposed Action***

Impacts to the cultural experience would be temporarily additive (up to 3 months during construction) when considering the existing disturbance in the canyon. It is not expected that these impacts would result in cumulative changes to the relevant and important values within the canyon.

#### ***No Action***

There would be no cumulative effects to cultural resources or values under the no action alternative because there would be no direct or indirect impacts to cultural resources or values.

#### ***4.3.3.2 Designated Areas: National Trails and Backways***

The cumulative impact area is the Huntington/Eccles Canyons Scenic Byway.

#### ***Proposed Action***

Based on the analysis of relevant resource values disclosed in this EA, direct or indirect impacts to the values of the area would be temporary, and not cumulative.

#### ***No Action***

There would be no cumulative effects to the Byway under the no action alternative, because there would be no direct or indirect impacts.

#### ***4.3.3.3 Recreation Resources***

The cumulative impact area for recreation resources is the Huntington/Eccles Canyons Scenic Byway and adjacent Bear Creek Campground.

#### ***Proposed Action***

Based on the impact analysis for *Designated Areas: National Trails and Backways*, direct or indirect impacts to the recreation values of the area would be temporary, and not cumulative.

#### ***No Action***

There would be no cumulative effects to recreation the no action alternative, because there would be no direct or indirect impacts to recreation.

#### **4.3.3.4 Soil Resources**

The cumulative impact area for soil resources is the 77,185-acre 6th field watersheds (Miller Fork Canyon-Huntington Creek [140600090105] and Huntington Lake-Huntington Creek [140600090107]) that contain the project area (see Map 4 in Appendix A).

##### ***Proposed Action***

Cumulative effects are unlikely to spread beyond the topographical boundaries of the watersheds. The majority of impacts to soils in the area are due to surface disturbing activities associated with agriculture and energy development. Disturbance from implementation of the proposed action could add cumulatively to soil impacts, such as erosion, within the larger area; however, implementation of the design features would decrease the magnitude of potential effects during construction. Impacts to the soil resources would be temporarily additive (during construction and up to 5 years after), but would reduce as reclamation was completed. It is not expected that these impacts would result in cumulative long-term impacts to soil resources within the watershed.

##### ***No Action***

There would be no cumulative effects to soils under the no action alternative, because there would be no direct or indirect impacts to soils.

#### **4.3.3.5 Visual Resources**

The cumulative impact area includes Huntington Canyon from the power plant to the junction with Emery County Road #306, and Rilda Canyon up to the mine. Visual impacts within these areas of the canyons include the Huntington Power Plant, roadways, utilities, and mining developments.

##### ***Proposed Action***

Visual impacts along the existing features would be additive for those travelling the highway and county road. However, cumulative impacts would be temporary, and would reduce as the proposed reclamation efforts were applied.

##### ***No Action***

There would be no cumulative effects to visuals under the no action alternative, because there would be no direct or indirect impacts to visuals.

#### **4.3.3.6 Water Resources**

The cumulative impact area for water resources is the 77,185-acre 6th field watersheds (Miller Fork Canyon-Huntington Creek [140600090105] and Huntington Lake-Huntington Creek [140600090107]) that contain the project area. Cumulative effects are unlikely to spread beyond the topographical boundaries of the watersheds. The majority of impacts to water resources in the area are due to surface disturbance, sedimentation, and potential spills.

##### ***Proposed Action***

Disturbance from implementation of the proposed project could add cumulatively to impacts within the watersheds; however, implementation of the design features would decrease the magnitude of potential effects during construction. Under the proposed action, less than three-hundredths of a percent (0.028 %) of the cumulative impact area would be temporarily disturbed. Implementation of the reclamation plan would reduce erosion, control runoff, and prevent pollution. Cumulative impacts would be temporary, and would reduce as the proposed reclamation efforts were applied.

### ***No Action***

There would be no cumulative effects to water resources under the no action alternative, because there would be no direct or indirect impacts to water resources.

#### ***4.3.3.7 Wildlife Resources***

The cumulative impact analyses for FS sensitive species were disclosed in the BE (Appendix E). That report determined that, “Due to the magnitude of existing disturbance, implementation of the proposed action would not result in cumulative adverse impacts to sensitive species.” There would be no cumulative effects to sensitive species under the no action alternative, because there would be no direct or indirect impacts to sensitive species.

The cumulative impact analyses for management indicator species, migratory birds, and big game were disclosed in the biological specialist report prepared for this project (USDA FS 2016a). The report determined that habitat effectiveness would not noticeably decrease for any analyzed species when considering the existing disturbance within the cumulative impact area, and that the proposed project would not impact population trends across the Forest for any of the analyzed management indicator species (MIS; golden eagle, northern goshawk, mule deer, or elk). There would be no cumulative effects to management indicator species, migratory birds, and big game under the no action alternative, because there would be no direct or indirect impacts. Cumulative effects for the big game species are repeated here.

#### **Mule deer and Rocky Mountain elk**

The cumulative impact area for mule deer includes all mapped crucial winter habitat within the impacted watersheds; the cumulative impact area encompasses an area of 48,806 acres (see Map 5 in Appendix A). The cumulative impact area for elk includes all mapped crucial winter and summer habitat within the impacted watersheds; the cumulative impact area encompasses an area of 62,003 acres (see Map 6 in Appendix A).

#### ***Proposed Action***

Big game habitat within the cumulative impact area has been impacted by oil and gas development, competitive livestock grazing, and recreational use. Possible effects of these actions include displacement into less suitable habitats, behavioral disruption and stress due to construction noise and activity, and modification of forage and water resources. Disturbance to big game could occur as a result of project activities, but is unlikely as the animals may avoid areas where project disturbance is occurring, and abundant isolated habitat is accessible within the cumulative impact area. Habitat effectiveness would not noticeably decrease when considering the existing disturbance within the cumulative impact area. Mule deer and Rocky Mountain elk would not be adversely affected by implementation of the proposed action.

#### ***No Action***

There would be no cumulative effects to big game under the no action alternative, because there would be no direct or indirect impacts to big game.

## Chapter 5. Persons, Groups, and Agencies Consulted

### 5.1 Persons, Agencies, and Organizations Consulted

Consultation efforts are summarized in the table below:

Name	Purpose or Authorities for Consultation or Coordination	Findings and Conclusions
Tribal consultation	As required by the American Indian Religious Freedom Act of 1978 (42 U.S.C. 1531)	All tribes affiliated with lands in the proposed project area were consulted with by the BLM in a letter sent on June 17, 2016.
Utah State Historic Preservation Office (SHPO)	Consultation for undertakings, as required by the National Historic Preservation Act (NHPA) (16 USC 470) 36 CFR 800.4(d)(1) Or Consulted on as required by the National Historic Preservation Act of 1966 (as amended) (16 U.S.C. 470)	To be completed.

A 30-day comment period was initiated on June 14, 2016, with a mailing to government entities, elected officials, and known interested parties. Over 855 comments were received; however, most of these were considered outside the scope of the proposed project. Responses to the scoping comments received are included in Appendix C.

Notice to potentially affected rights-of-way holders and the grazing permittee were sent on June 25, 2016. They were given 30 days to send their concerns or written recommendations as to how the proposed use affects the integrity of, or their ability to operate, their facilities. No responses were received.

### 5.2 List of Preparers

Responsibility	Name	Affiliation
Team Lead	Connie Leschin	BLM
Team Lead	Jeff Salow	FS
Environmental Coordinator	Jake Palma	BLM
NEPA Planner	Dana Truman	FS
Document preparation	Jenna Jorgensen	Jones and DeMille Engineering

Additional BLM and FS staff members who determined the affected resources for this document are listed in Appendix B.

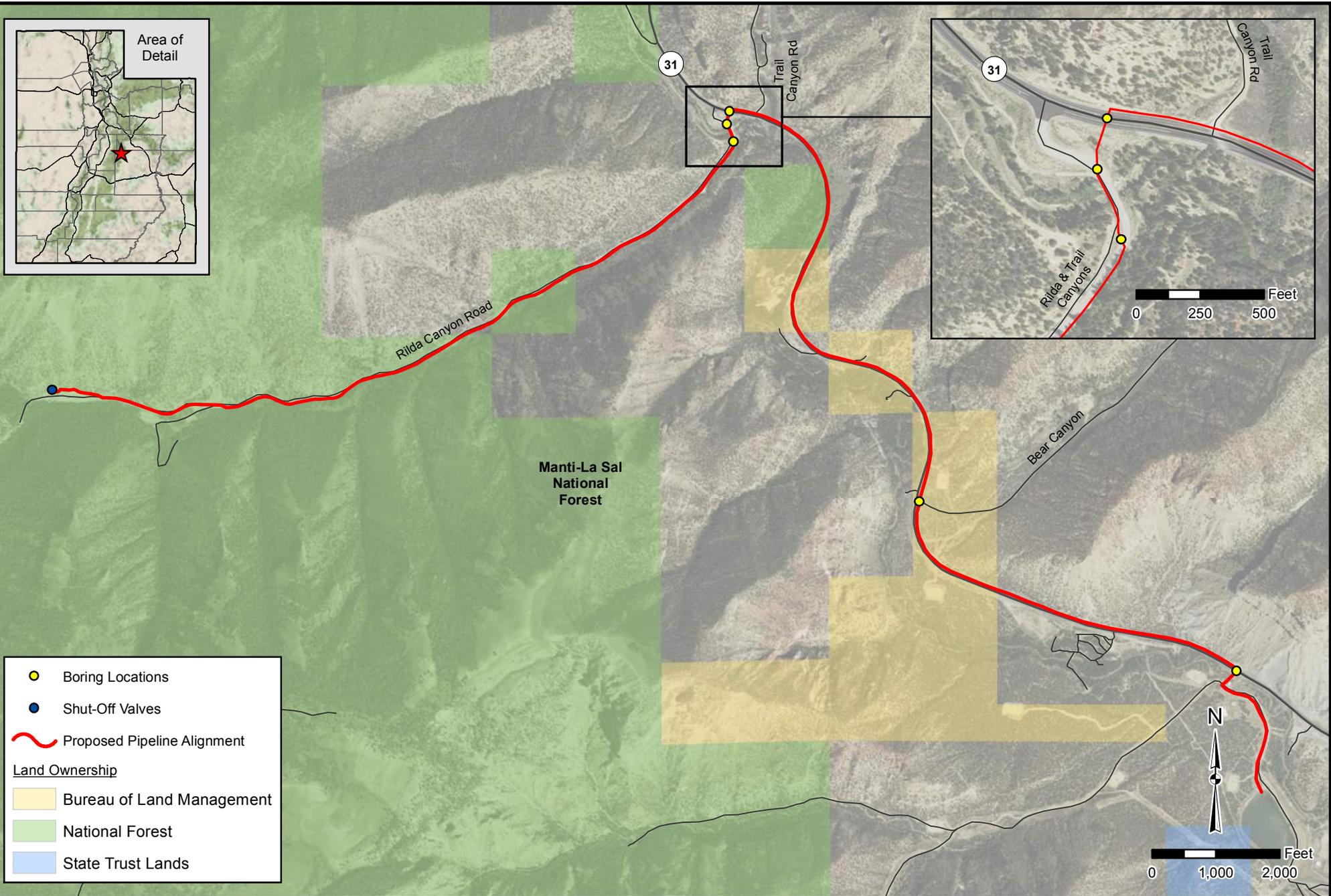
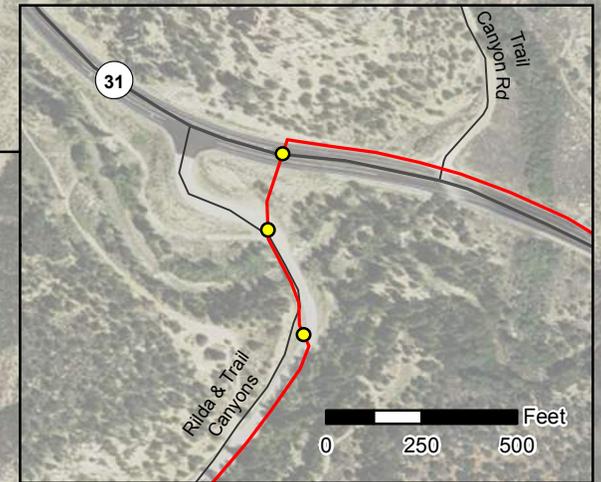
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## Chapter 7. Acronyms and Abbreviations

<b>Acronyms/Abbreviations</b>	<b>Meaning</b>
APE	Area of Potential Effect
BA	Biological Assessment
BE	Biological Evaluation
BLM	Bureau of Land Management
BMP	Best Management Practice
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
EA	Environmental Assessment
FLPMA	Federal Land Policy and Management Act
FS	Forest Service
HUC	Hydrologic Unit Code
IDT	Interdisciplinary Team
LRMP	Land and Resource Management Plan
MIS	Management Indicator Species
MSHA	Mine Safety and Health Administration
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
POD	Plan of Development
RMP	Resource Management Plan
ROW	Right-of-way
SHPO	State Historic Preservation Office
SPRP	Spill Prevention and Response Plan
SR	State Route
SWPPP	Stormwater Pollution Prevention Plan
UDEQ	Utah Department of Environmental Quality
UDOGM	Utah Division of Oil, Gas and Mining
USC	United States Code
VQO	Visual Quality Objective

**Appendix A. Maps**



- Boring Locations
- Shut-Off Valves
- ~ Proposed Pipeline Alignment

**Land Ownership**

- Bureau of Land Management
- National Forest
- State Trust Lands



GIS



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PacifiCorp

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Deer Creek Mine - Proposed Live Water Relief Pipeline  
Overview

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Map Name: H:\JDI\Proj\1506-121\Design\GIS\Maps\EA1\_Overview.mxd  
Project Number: 1506-121      Drawn by: JWW 09-16      Last Edit: 09/19/2016

EMERY COUNTY

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SCALE: 1" = 2,000'

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1



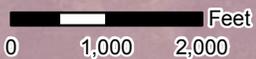
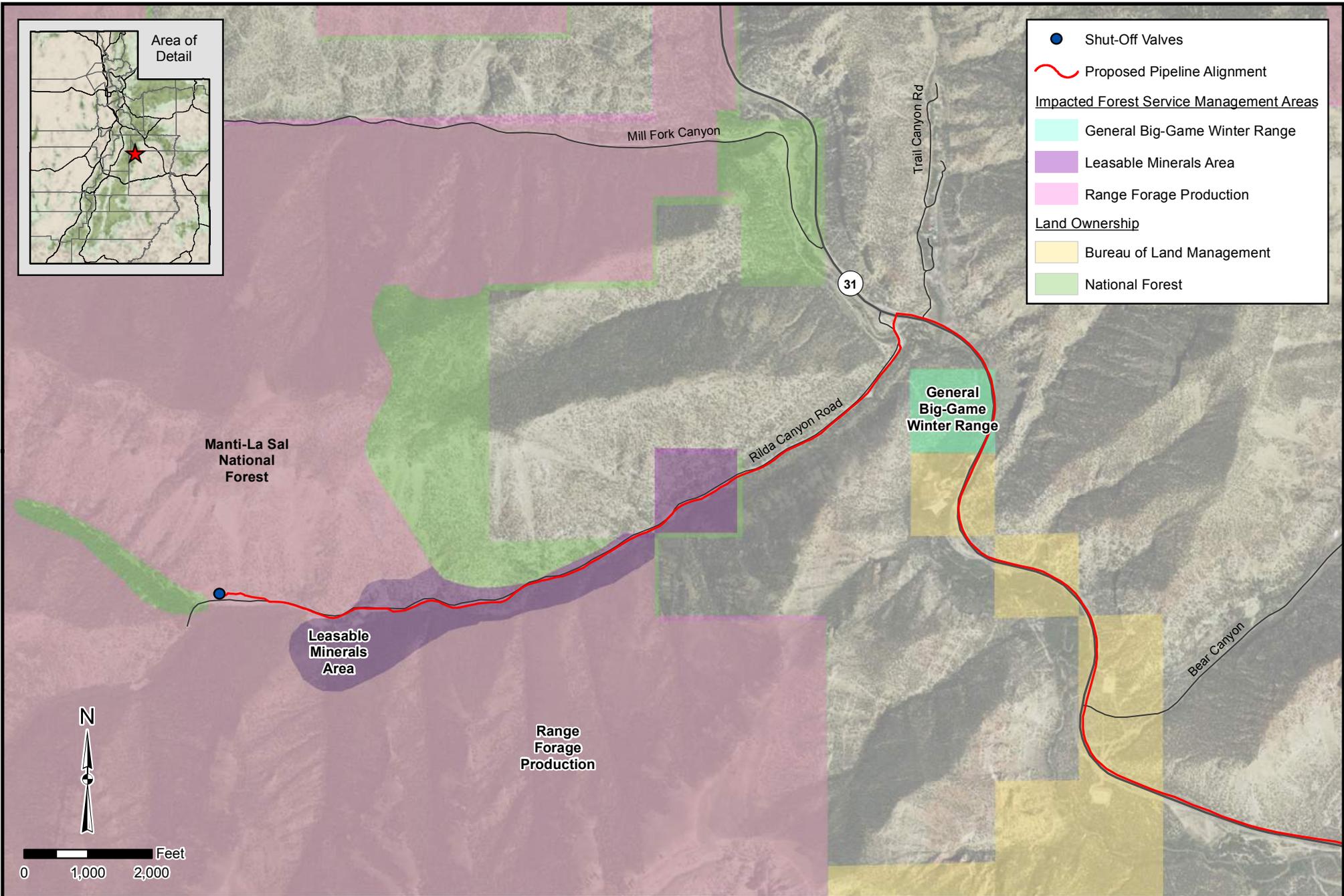
- Shut-Off Valves
- ~ Proposed Pipeline Alignment

**Impacted Forest Service Management Areas**

- General Big-Game Winter Range
- Leasable Minerals Area
- Range Forage Production

**Land Ownership**

- Bureau of Land Management
- National Forest



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**Deer Creek Mine - Proposed Live Water Relief Pipeline  
Forest Service Management Areas**

Map Name: H:\JDI\Proj\1506-121\Design\GIS\Maps\EA\2\_Forest\_Service\_Management\_Areas.mxd  
Project Number: 1506-121 Drawn by: JWW 09-16 Last Edit: 09/19/2016

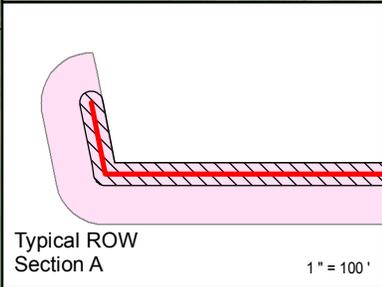
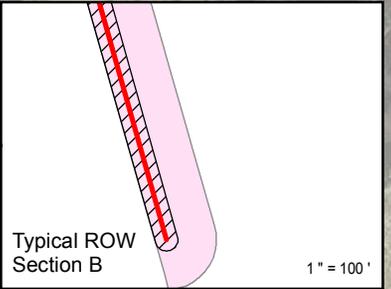
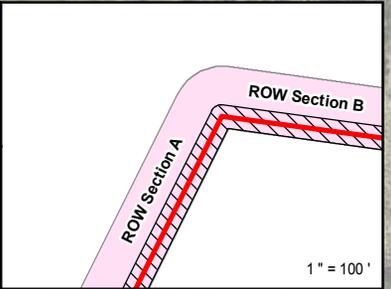
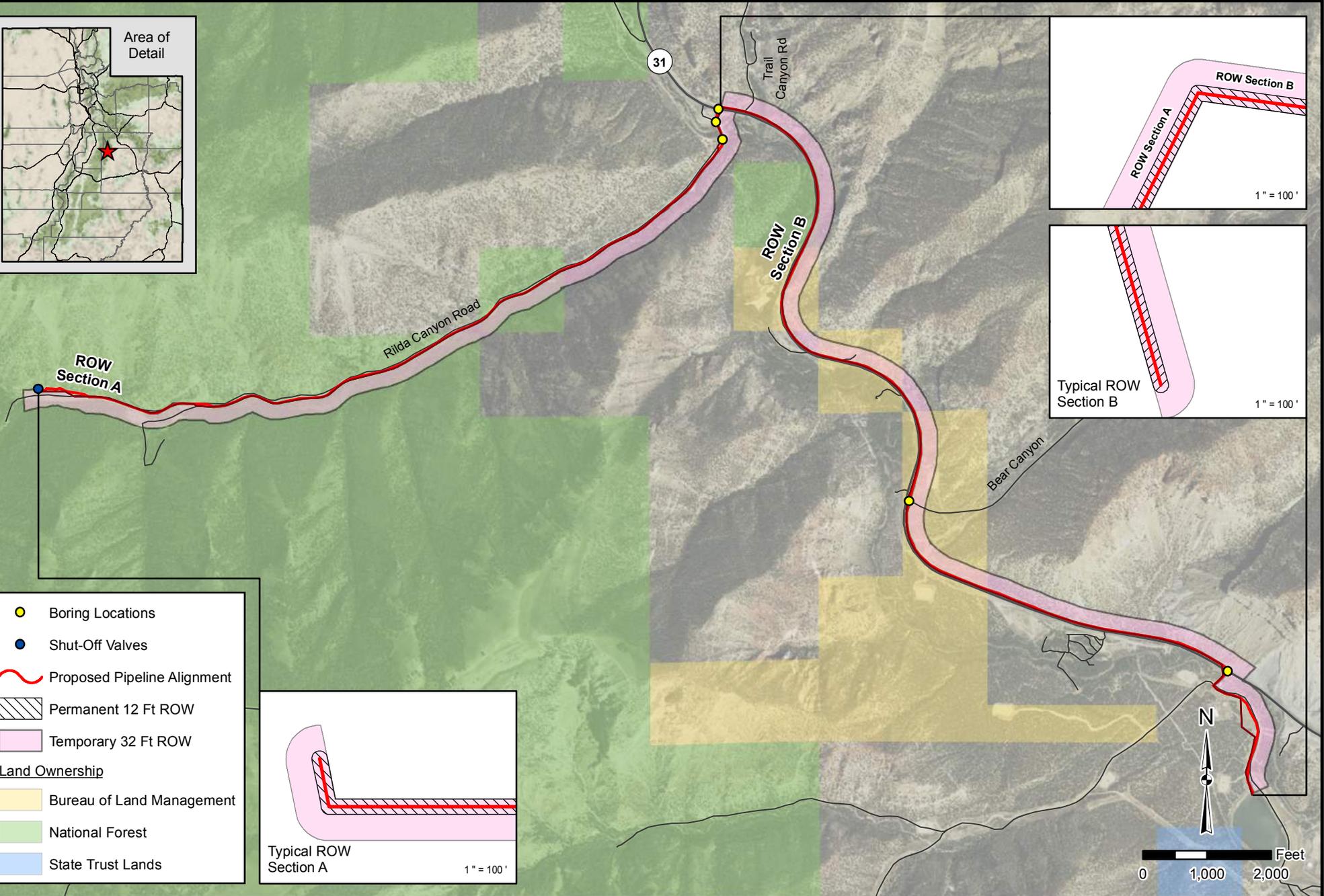
EMERY COUNTY

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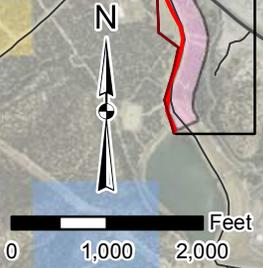
2



Area of Detail



- Boring Locations
  - Shut-Off Valves
  - ~ Proposed Pipeline Alignment
  - Permanent 12 Ft ROW
  - Temporary 32 Ft ROW
- Land Ownership**
- Bureau of Land Management
  - National Forest
  - State Trust Lands



Note: Permanent 12ft ROW and Temporary 32ft ROW have been exaggerated to improve legibility at the 1:1,200 map scale.

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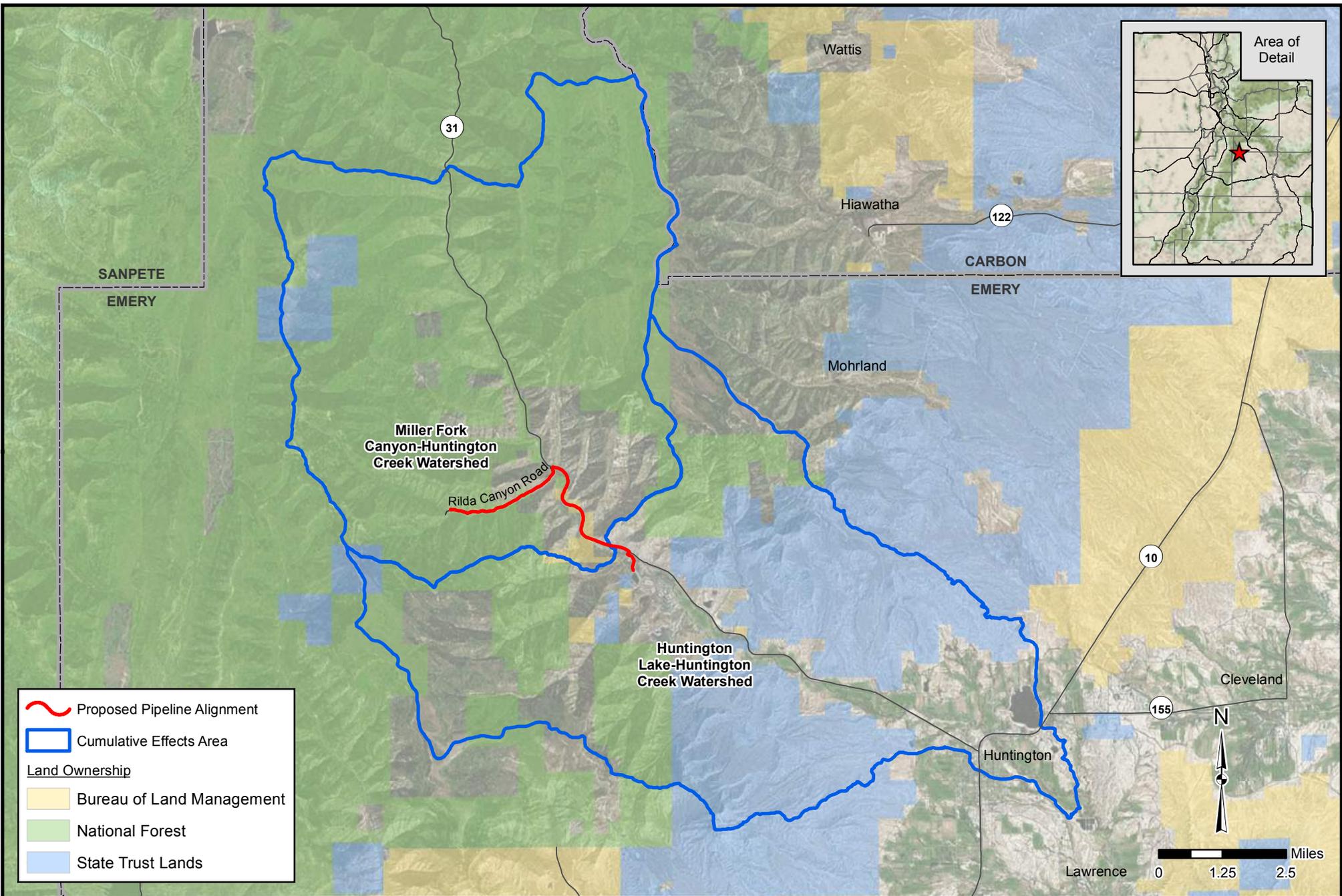
**Deer Creek Mine - Proposed Live Water Relief Pipeline  
Proposed Rights-of-Way**

Map Name: H:\JDI\Proj\1506-121\Design\GIS\Maps\EA\3\_ROW.mxd  
Project Number: 1506-121      Drawn by: JWW 09-16      Last Edit: 09/19/2016

EMERY COUNTY

SCALE: 1" = 2,000'

3



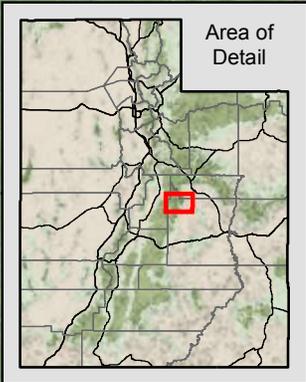
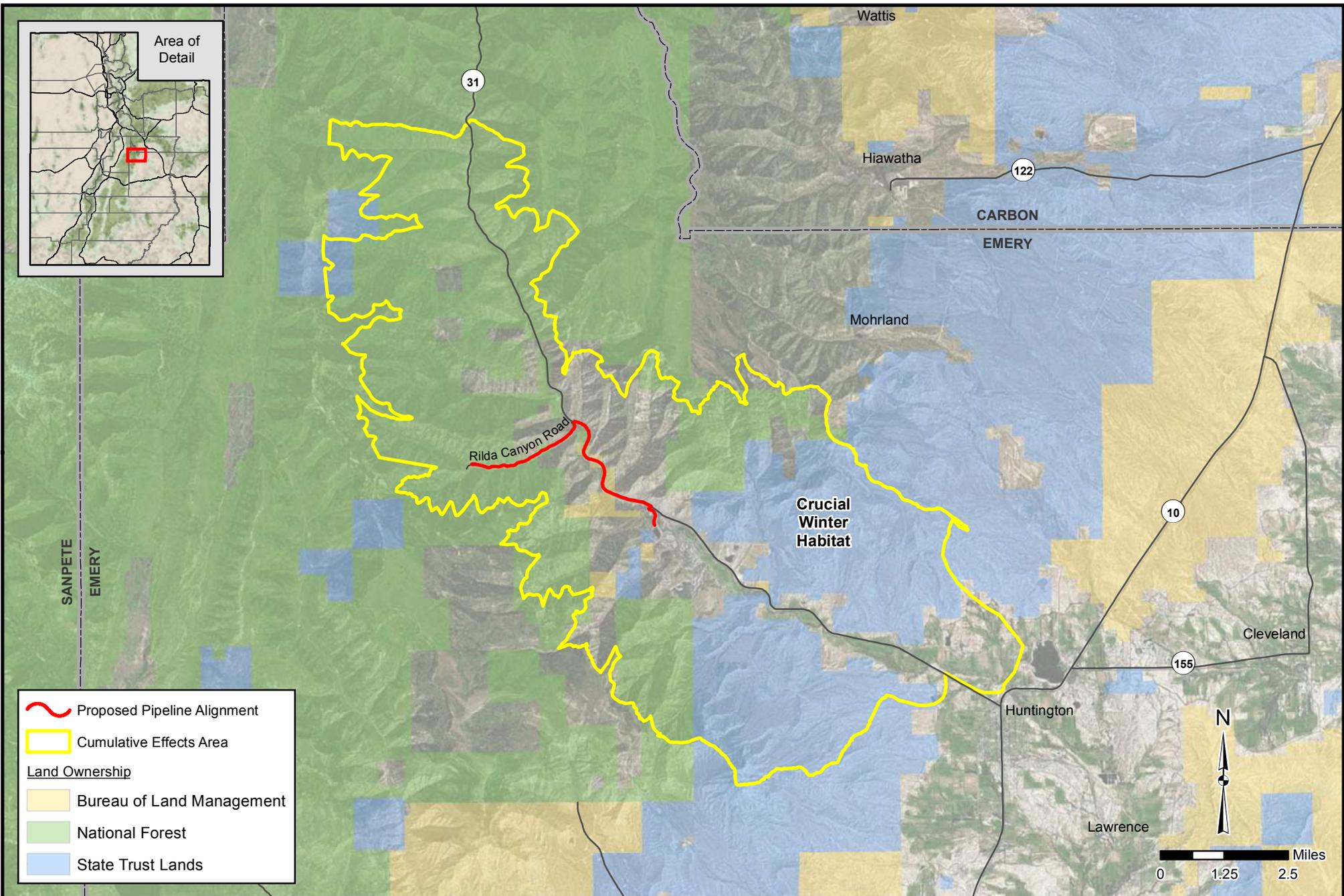
 Proposed Pipeline Alignment  
 Cumulative Effects Area  
**Land Ownership**  
 Bureau of Land Management  
 National Forest  
 State Trust Lands



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**PacifiCorp**  
**Deer Creek Mine - Proposed Live Water Relief Pipeline Impacted Watersheds**  
 Map Name: H:\JD\Proj\1506-121\Design\GIS\Maps\EA\4\_Impacted\_Watersheds.mxd  
 Project Number: 1506-121 Drawn by: JWW 07-16 Last Edit: 07/20/2016

**EMERY COUNTY**  
 SCALE: 1" = 2.5 Miles  
**4**



 Proposed Pipeline Alignment  
 Cumulative Effects Area  
**Land Ownership**  
 Bureau of Land Management  
 National Forest  
 State Trust Lands

  
 Miles  
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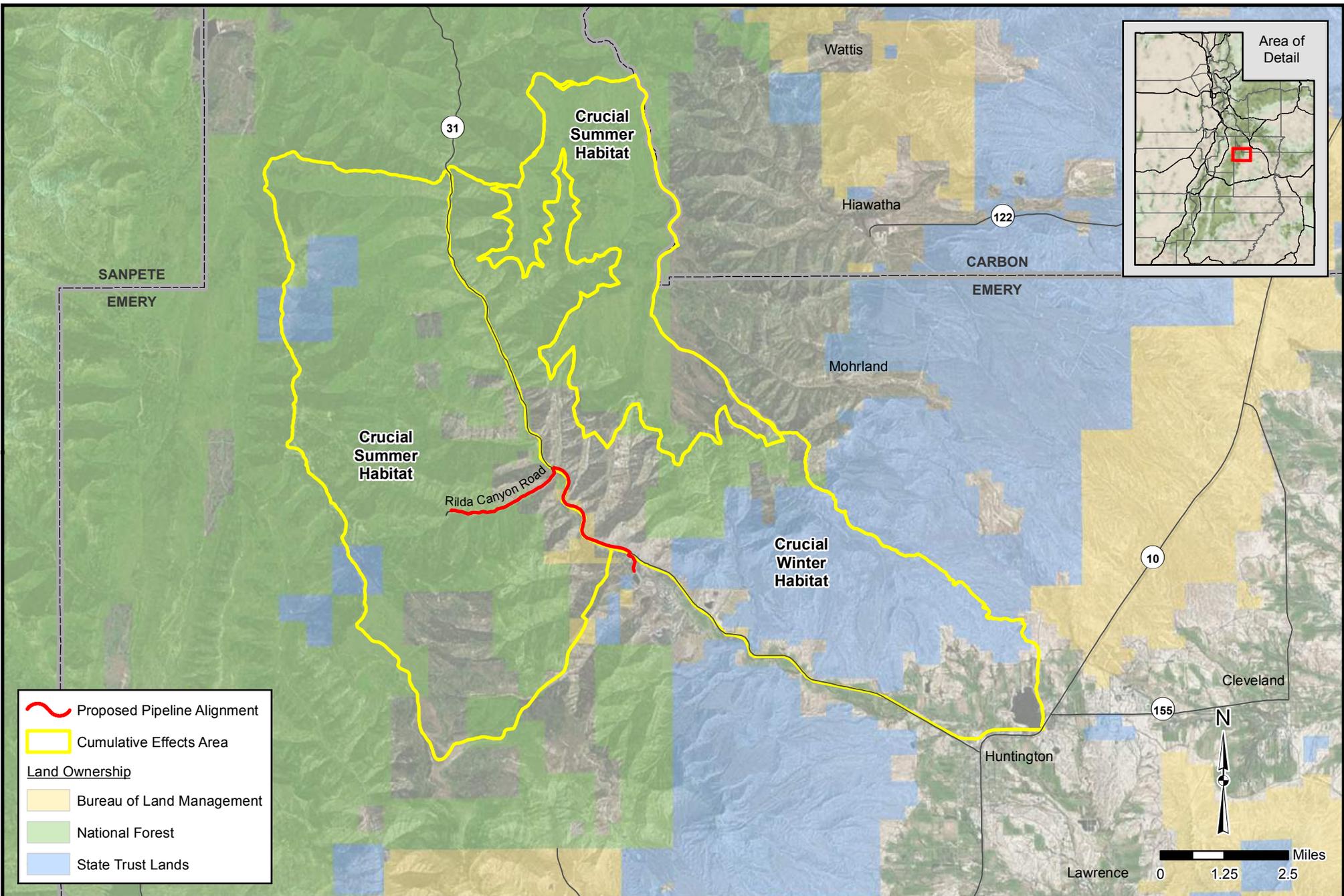




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**PacifiCorp**  
**Deer Creek Mine - Proposed Live Water Relief Pipeline**  
**Mule Deer Cumulative Effects Area**  
Map Name: H:\JDI\Proj\1506-121\Design\GIS\Maps\USFS\5\_CEA\_Deer.mxd  
Project Number: 1506-121    Drawn by: JWW 08-16    Last Edit: 08/15/2016

**EMERY COUNTY**  
 SCALE: 1" = 2.5 Miles  
**5**



 Proposed Pipeline Alignment  
 Cumulative Effects Area  
**Land Ownership**  
 Bureau of Land Management  
 National Forest  
 State Trust Lands




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**PacifiCorp**  
**Deer Creek Mine - Proposed Live Water Relief Pipeline  
Rocky Mountain Elk Cumulative Effects Area**  
Map Name: H:\JD\Proj\1506-121\Design\GIS\Maps\USFS\6\_CEA\_Elk.mxd  
 Project Number: 1506-121 Drawn by: JWW 08-16 Last Edit: 08/15/2016

**EMERY COUNTY**  
 SCALE: 1" = 2.5 Miles  
**6**

## Appendix B. Interdisciplinary Team Checklists

### BLM IDT Checklist

**Determination of Staff:** *(Choose one of the following abbreviated options for the left column)*

NP = not present in the area impacted by the proposed or alternative actions

NI = present, but not affected to a degree that detailed analysis is required

PI = present with potential for relevant impact that need to be analyzed in detail in the EA

Determination	Resource/Issue	Rationale for Determination	Signature	Date
<b>Resources and Issues Considered (Includes Supplemental Authorities Appendix 1 H-1790-1)</b>				
NI	Air Quality & Greenhouse Gas Emissions	Emissions from earth-moving equipment, vehicle traffic, drilling and completion activities, separators, oil storage tanks, dehydration units, and daily tailpipe and fugitive dust emissions could adversely affect air quality. No standards have been set by the EPA or other regulatory agencies for greenhouse gases. In addition, the assessment of greenhouse gas emissions and climate change is still in its earliest stages of formulation. Global scientific models are inconsistent, and regional or local scientific models are lacking so that it is not technically feasible to determine the net impacts to climate due to greenhouse gas emissions. It is anticipated that greenhouse gas emissions associated with this action and its alternative(s) would be negligible.	Jeffrey Brower	5/13/16
NP	BLM natural areas	There are no BLM Natural Areas within the proposed project area as per GIS and RMP review.	Matt Blocker	5/12/16

<b>Determination</b>	<b>Resource/Issue</b>	<b>Rationale for Determination</b>	<b>Signature</b>	<b>Date</b>
PI	Cultural Resources	The proposed Area of Potential Affect for the Deer Creek Mine pipeline project is defined by any proposed surface disturbing activities with a buffer of 150 feet from the edge of surface disturbance pending topographic features. This project is multijurisdictional. According to the MOU between the BLM and FS, the BLM is responsible for Section 106 for all administered properties, excluding FS-administered land. A total of seven archaeological sites are located within the project and extended buffer area. Of these sites, two are reported as eligible for the National Register (NR) (42EM2095 & 42EM2109); however, both were excavated in the 1980s and are located on Emery County property; their current eligibility status is unknown. Two sites are located on BLM-administered property (42EM3841 & 42EM1101) and are reported as not being eligible for inclusion for the NR. One site is located on private property (42EM1330) and is reported as not being eligible for inclusion on the NR. One site (42EM2667) is located on Emery County property and is reported as not eligible for the NR. One site is located on FS-administered property (42EM3115) and is reported as not being eligible for the NR. Pursuant to 36 CFR 800, additional inventory will be required for any new surface disturbing activities where previous inventory did not occur.	Amber Koski	5/16/16
PI	Cultural: Native American Religious Concerns	There is a potential to impact cultural resources significant to Tribes. It is recommended that Tribal consultation occur for this project.	Amber Koski	5/16/16
NP	Designated Areas: Areas of Critical Environmental Concern	After review of our current RMP and GIS, there are no ACECs located within the proposed area.	Josh Winkler	5/11/16
PI	Designated Areas: National Trails and Backways	The Huntington/Eccles Canyons Energy Loop National Scenic Byway is located within the proposed action. Management directives may be found under the current RMP page #146 (TRA-18 - Manage the small portion of this byway in the PFO in accordance with the USFS Byway Management Plan). The road construction may affect visitor's experience while accessing this Byway.	Josh Winkler	5/11/16
NP	Designated Areas: Wild and Scenic Rivers	There are no designated Wild and Scenic Rivers within the proposed project area as per GIS and RMP review.	Matt Blocker	5/12/16

<b>Determination</b>	<b>Resource/Issue</b>	<b>Rationale for Determination</b>	<b>Signature</b>	<b>Date</b>
NP	Designated Areas: Wilderness Study Areas	There are no BLM WSAs within the proposed project area as per GIS and RMP review.	Matt Blocker	5/12/16
NI	Environmental Justice	No minority or economically disadvantaged communities or populations would be disproportionately adversely affected by the proposed action or alternatives.	Jacob Palma	5/12/16
NI	Farmlands (prime/unique)	No prime or unique farmlands as identified by the NRCS, based on soil survey data for the county, are located in the project area.	Jeffrey Brower	5/13/16
NI	Fuels/Fire Management	No fuel management activities are planned for the project area. The proposed project would not conflict with fire management activities.	Josh Relph	5/13/16
NI	Geology / Minerals / Energy Production	This ROW crosses through known fluid and solid (coal) mineral resource areas; however, the designated route for this ROW will have negligible potential impact on any fluid or solid mineral development. The ROW corridor passes through four separate existing federal coal leases and three separate existing federal oil and gas leases. All four of these coal leases have been mined out and are in the process of being relinquished. Therefore, no reduction in mining (or change of any kind) due to the installation of new water pipeline would be required. Also, because of the very narrow corridor proposed for the pipeline, any potential impact to oil and/or gas development within existing leases (or future leases) can be avoided. There is a natural gas pipeline within a portion of the proposed ROW (roughly the lower 1.5 miles); however, there will be no impact to the pipeline due to proximity mitigation. In any case, this buried water line ROW corridor is non-exclusive and does not preclude either solid or fluid mineral development.	Michael Glasson	5/13/16
NI	Lands/Access	A review of LR2000 and the Master Title Plats showed that the proposed action is compatible with the existing land use and authorized ROWs. There are no conflicts with other land use authorizations. The potentially affected ROW holders were notified and none commented on the proposed project.	Connie Leschin	5/12/16
NP	Lands with Wilderness Characteristics	There are no lands with wilderness characteristics within the proposed project area as per GIS and RMP review.	Matt Blocker	5/12/16

<b>Determination</b>	<b>Resource/Issue</b>	<b>Rationale for Determination</b>	<b>Signature</b>	<b>Date</b>
NI	Livestock Grazing	The project area goes through the West Huntington Grazing Allotment. The project area is also within a main livestock trailing corridor. By avoiding working on this project during trailing times (June & October), impacts to livestock trailing will be avoided. Since the project is taking place within UDOT's ROW, impacts to livestock grazing in the West Huntington Allotment will be negligible.	Stephanie Bauer	5/12/16
NP	Paleontology	Surface disturbance will be in fill, alluvium, or geologic formation with very low potential to have vertebrate fossils.	Michael Leschin	5/12/16
NP	Vegetation: BLM Sensitive	After review of the BLM sensitive plant species for the proposed project area, there is no potential habitat or known BLM sensitive plant species populations within the project area.	Karl Ivory	5/4/16
NI	Vegetation: Invasive Species / Noxious Weeds	The project area is within UDOT's ROW. Annual weed treatments within the ROW are the responsibility of the ROW holder. Surface disturbance can introduce/spread invasive species/noxious weeds. By following BMPs and power washing vehicles and equipment at a commercial facility to remove mud and debris prior to surface disturbance, the possibility of introducing or spreading invasive species/noxious weeds will be lessened.	Stephanie Bauer	5/12/16
NP	Vegetation: Threatened, Endangered, Proposed, or Candidate	After review of the TES plant species for the proposed project area, there is no potential habitat or known TES plant species populations within the project area.	Karl Ivory	5/4/16
NI	Vegetation: Vegetation Excluding USFW Designated Species and BLM Sensitive Species	The proposed project is limited to previously disturbed areas along the highway right-of-way. Minimal disturbance would occur to the existing vegetation.	Karl Ivory	5/4/16
NP	Vegetation: Wetland/Riparian	After review of the BLM wetland/riparian database, it was determined that no wetland/riparian areas would be affected by the proposed project.	Karl Ivory	5/4/16
NP	Vegetation: Woodlands/Forestry	There are no merchantable woodland or forestry products within the project area.	Stephanie Bauer	5/12/16
NI	Rangeland Health Standards	The proposed project would have a minimal effect on ecological processes on BLM lands within the project area. Rangeland Health Standards would not be affected.	Karl Ivory	5/4/16

<b>Determination</b>	<b>Resource/Issue</b>	<b>Rationale for Determination</b>	<b>Signature</b>	<b>Date</b>
PI	Recreation	The proposed action is located within an Extensive Recreation Management Area (ERMA), which is an area where significant recreation opportunities and problems are limited and explicit recreation management is not required. Minimal management actions related to the BLM's stewardship responsibilities are adequate in these areas. Road construction and the expected delays associated with the construction and temporary road closures would affect recreation use along the Huntington/Eccles Canyons Energy Loop National Scenic Byway and adjacent recreation areas.	Josh Winkler	5/11/16
NI	Socio-Economics	No impact to the social or economic status of the county or nearby communities would occur from this project due to its small size in relation to ongoing development throughout the PFO.	Jacob Palma	5/12/16
PI	Soils	The proposed project will include a long linear trench. A small amount of mixing of horizons will occur. Due to the nature of the canyon slope and the linear project, increased erosion could occur.	Jeffrey Brower	5/13/16
PI	Visual Resources	The project area is located within a VRM Class II area where the objective is to retain the existing character of the landscape. Management activities may be seen but should not attract the attention of the casual observer. Visual contrast ratings are needed to determine impacts from key observation points along the proposed area.	Josh Winkler	5/11/16
NI	Wastes (hazardous/solid)	No chemicals subject to reporting under SARA Title III will be used, produced, stored, transported, or disposed of annually in association with the project. Furthermore, no extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will be used, produced, stored, transported, or disposed of in association with the project. Trash would be confined in a covered container and disposed of in an approved landfill. No burning of any waste will occur due to this project. Human waste will be disposed of in an appropriate manner in an approved sewage treatment center.	Jeffrey Brower	6/13/16
NI	Water: Floodplains	The project as proposed will cross Huntington Creek and be attached to existing structures.	Jeffrey Brower	6/13/16
NI	Water: Groundwater Quality	The proposed project as received will not be deep enough to intercept groundwater except at stream crossings and parts of the alluvial aquifer. No measurable impacts are expected to groundwater.	Jeffrey Brower	6/13/16

Determination	Resource/Issue	Rationale for Determination	Signature	Date
PI	Water: Hydrologic Conditions (Stormwater)	See comments in soils.	Jeffrey Brower	6/13/16
PI	Water: Surface Water Quality	Increased soil erosion is a possibility affecting the quality of water in the stream. This will be a temporary impact. All refueling and lubing of equipment will be performed at least 100 feet from the center of the stream and in a confined fuel station. A spill prevention and response plan will be included in the NEPA document and kept on-site at all times.	Jeffrey Brower	6/13/16
NP	Wild Horse / Burro	The Proposed Project is not within a Wild Horse or Burro Herd Management Area.	Mike Tweddell	5/12/16
NI	Wildlife: BLM Sensitive	The proposed action is located adjacent to Huntington Creek which has been identified as containing two (2) BLM sensitive fish species (Flannelmouth Sucker and Bluehead Sucker). Construction of the pipeline will occur on the opposite side of the road from the creek and therefore should not have any impacts to these species.	Jared Reese	5/13/16
NP	Wildlife: Migratory Birds (including raptors)	Per GIS review, there were no known areas of high value breeding habitat within BLM lands associated with the project.	Jared Reese	5/13/16
PI	Wildlife: Non-USFWS Designated	The project is located within crucial winter habitat for both Mule Deer and Elk. Seasonal restrictions should be applied to ensure impacts to these species are reduced during this important time.	Jared Reese	5/13/16
NP	Wildlife: Threatened, Endangered, Proposed or Candidate	Per GIS review, there are no known populations or critical habitat identified for any T&E species on BLM lands.	Jared Reese	5/13/16

**Final Review:**

Reviewer Title	Signature	Date	Comments
Environmental Coordinator			
Authorized Officer			

## FS IDT Checklist

### Determination of Staff: (Choose one of the following abbreviated options for the left column)

NP = not present in the area impacted by the proposed or alternative actions

NI = present, but not affected to a degree that detailed analysis is required

PI = present with potential for relevant impact that need to be analyzed in detail in the EA

Determination	Resource/Issue	Rationale for Determination	Signature	Date
<b>Resources and Issues Considered</b>				
NI	Air Quality & Greenhouse Gas Emissions/Climate change	Although there will be some emissions from equipment used to construct the pipeline, no additional emissions will occur through the life of the pipeline. Greenhouse gas emissions should be negligible when compared worldwide.	Greg T. Montgomery	7/5/2016
NP	Cultural Resources	No sites of any kind exist in the APE and there are no Tribal concerns	Charmaine Thompson	7/6/2016
NP	Cultural: Native American Religious Concerns	No tribal concerns	Charmaine Thompson	7/6/2016
NP	Designated Areas: Research Natural Areas, etc, existing or proposed	Not present in project area	Bill Broadbear	7/7/2016
NI	Designated Areas: National Scenic Byways	Scenic Byway not affected along road ROW. Utah Highway 31 is designated as a National Scenic Byway. Approximately 0.15 mile of the pipeline route is located on National Forest System lands adjacent to the Scenic Byway. Once pipeline installation is completed, efforts should be made to return disturbed areas to pre-construction conditions.	Daniel Luke	7/6/2016
NP	Designated Areas: Wild and Scenic Rivers	No present in project area	Bill Broadbear	7/7/2016
NP	Designated Areas: Wilderness	Not present in project area	Daniel Luke	7/6/2016
NI	Fuels/Fire Management	Must use spark arresters when removing vegetation. Must disperse/discard all combustible fuel piles upon completion of pipeline.	Brandon Hoffman	7/5/2016
NI	Geology / Minerals / Energy Production	This pipeline will intersect four active federal coal leases. Construction of the pipeline within the ROW will not affect coal resources or reduction in coal mining on leases. Construction of the pipeline should not affect the NEWAU culinary pipeline.	Jeff Salow	7/5/2016
NP	Inventory Roadless	Not present along road ROW	Daniel Luke	7/6/2016

<b>Determination</b>	<b>Resource/Issue</b>	<b>Rationale for Determination</b>	<b>Signature</b>	<b>Date</b>
NI	Lands/Access	A review of FS records showed that the proposed action is compatible with existing land use authorizations. The potentially affected ROW holders were notified and none commented on the proposed project.	Anita Jones	7/1/2016
NI	Livestock Grazing	The Proposed Project Area is located in the Gentry C&H allotment. The pipeline will have negligible effects on grazing except during construction where it will limit livestock movement from one side of the pasture to the other. By avoiding work on this project from mid-June to mid-July, conflicts with livestock grazing will be avoided.	Steven Cox	7/11/2016
NI	Paleontology	There is a very low probability of encountering vertebrate fossils in alluvium, or geological formations within the existing ROW. No impacts to vertebrate fossils should occur due to construction of the pipeline.	Jeff Salow	7/5/2016
NP	Vegetation: FS Sensitive	No sensitive plant species are known to occur in the project area. The BA/BE completed for this project details the rationale.	Kim Anderson	7/6/2016
NI	Vegetation: Invasive Species / Noxious Weeds	Soil disturbance can introduce/spread invasive species/noxious weeds. By following BMPs and power washing vehicles and equipment at a commercial facility to remove mud and debris prior to surface disturbance, the possibility of introducing or spreading invasive species/noxious weeds will be lessened. Weed treatment of pipeline corridor will be conducted annually for 5 years following disturbance. After the initial 5 years, the corridor will be monitored annually and treated as needed to keep invasive plants/noxious weeds from establishing.	Mark Chamberlin	7/6/2016
NP	Vegetation: Threatened, Endangered, Proposed, or Candidate	No Threatened, Endangered, Proposed, or Candidate plant species are known to occur in the project area. The BA/BE completed for this project details the rationale.	Kim Anderson	7/6/2016
NI	Vegetation: General vegetation	Proposed project to occur in previously disturbed road right-of-way.	Kim Anderson	7/6/2016
NI	Vegetation: Wetland/Riparian	Riparian area outside the proposed project area.	Kim Anderson	7/6/2016
NI	Vegetation: Woodlands/Forestry	Disturbance will be restricted to the identified corridor. Although some pinyon-juniper or other conifers may be removed, numbers will be limited and effects to forest and woodland vegetation landscape wide should be minimal.	Greg T. Montgomery	7/5/2016

Determination	Resource/Issue	Rationale for Determination	Signature	Date
NI	Recreation	Recreation use is limited to low levels of dispersed camping along the Rilda Canyon road and non-motorized trail use of system trail #5962 (Rilda Right Fork trail, 0.6 mile). Once pipeline construction is completed vehicle access to dispersed campsites and for trailhead parking should be re-established as needed.	Bill Broadbear	7/7/2016
PI	Soils	The Proposed Project will include a long trench that will run parallel to the road. As the topsoil is removed, some mixing can occur. Also because of the topography and the linear pipeline, soil erosion could occur because vegetation has been removed, exposing the soil surface. This can be minimized by reseeding the project area after project completion.	Steve Cox	7/11/2016
NI	Visual Resources	Utah Highway 31 is designated as a National Scenic Byway. Approximately 0.15 mile of the pipeline route is located on National Forest System lands adjacent to the Scenic Byway. Once pipeline installation is completed, efforts should be made to return disturbed areas to pre-construction conditions.	Bill Broadbear	7/7/2016
NI	Wastes (hazardous/solid)	Concurs with BLM rationale for determination (see BLM checklist).	Carla Gleave	7/5/2016
NI	Water: Floodplains, wetlands, municipal watersheds	The proposed project will cross Huntington Creek and merge into existing infrastructure. The floodplain and municipal watershed will not be affected to a measurable degree.	Steve Cox	7/11/2016
NI	Water: Ground/surface quality or quantity	The proposed pipeline will not be deep enough to meet the groundwater except at stream crossings and shallow parts of the alluvial aquifer. No measurable impacts on the groundwater are expected unless erosion of soil from the site occurs. By reseeding the pipeline, erosion will be minimized.	Steve Cox	7/11/2016
PI	Wildlife: FS sensitive	The BA/BE completed for this project details the rationale.	Jeff Jewkes	8/12/2016
PI	Wildlife: MIS	The BA/BE completed for this project details the rationale.	Jeff Jewkes	8/12/2016
PI	Wildlife: Migratory Birds (including raptors)	The BA/BE completed for this project details the rationale.	Jeff Jewkes	8/12/2016
PI	Wildlife: Non-USFWS Designated	The BA/BE completed for this project details the rationale.	Jeff Jewkes	8/12/2016
NI	Wildlife: Threatened, Endangered, Proposed or Candidate	The BA/BE completed for this project details the rationale. Is the proposed project in sage grouse PHMA or GHMA? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Jeff Jewkes	8/12/2016
NI	Fisheries: MIS	See specialist report	Pamela Manders	7/9/2016

<b>Determination</b>	<b>Resource/Issue</b>	<b>Rationale for Determination</b>	<b>Signature</b>	<b>Date</b>
NI	Fisheries: FS Sensitive	See BA/BE	Pamela Manders	7/9/2016

**Final Review:**

<b>Reviewer Title</b>	<b>Signature</b>	<b>Date</b>	<b>Comments</b>
Environmental Coordinator			
Authorized Officer			

## Appendix C. Response to Scoping Comments

One unique comment letter was received on behalf of Heal Utah and the Sierra Club, and over 855 form letters were submitted electronically, with 787 of those submitted within the established 30 day comment period.

Comment Number	Subject	Comment	Consideration of Comment	Issue or Alternative (Y/N)
<b>Cara L., plus 854</b>				
1	NEPA procedure	The Forest Service must conduct a full environmental impact statement for this proposal and consider all available alternatives.	<p>An environmental assessment (EA) shall be prepared for proposals as described in § 220.4(a) that are not categorically excluded from documentation (§ 220.6) and for which the need of an EIS has not been determined (§220.5). (36 CFR 220.7(a))</p> <p>The purpose of an EA is to determine if a proposed action or its alternatives have potentially significant environmental effects. An EA:</p> <ol style="list-style-type: none"> <li>1. Provides evidence and analysis for determining whether to prepare an EIS;</li> <li>2. Aids agency compliance with NEPA when no EIS is necessary; and</li> <li>3. Facilitates preparation of an EIS when one is necessary.</li> </ol> <p>(40 CFR 1508.9(a))</p> <p>The EA process concludes with either a Finding of No Significant Impact (FONSI) or a determination to prepare an Environmental Impact Statement.</p>	N
2	Waste management	Groundwater data shows that PacifiCorp's waste handling practices have created an imminent and substantial endangerment to public health and the environment.	Discharge permits are issued by the State of Utah Department of Environmental Quality Division of Water Quality (UDWQ). Monitoring of the groundwater would continue to occur through this project in accordance with their permits. Any compliance issues would be address by the responsible agency.	N
3	Water quality	PacifiCorp's proposal will not further the government's goal of ensuring that this mine waste will not pollute Huntington Creek (i.e., the proposal may pollute Huntington Creek).	MSHA and UDOGM will not allow any water retention as part of the Deer Creek closure plans; water must now be directed to the Rilda Canyon portals to flow unimpeded out of the mine. A discharge permit has not and will not be issued for the Rilda Canyon even if the water met water quality standards	N

Comment Number	Subject	Comment	Consideration of Comment	Issue or Alternative (Y/N)
4	Water management	PacifiCorp's proposal simply moves the point of discharge from Rilda Canyon to the Huntington Power Plant.	<p>because the Rilda Canyon portals are within Category 1 Waters per UAC R317-2.</p> <p>Category 1 Waters: Waters which have been determined by the Board to be of exceptional recreational or ecological significance or have been determined to be a State or National resource requiring protection, shall be maintained at existing high quality through designation, by the Board after public hearing, as Category 1 Waters. New point source discharges of wastewater, treated or otherwise, are prohibited in such segments after the effective date of designation.</p> <p>Therefore the point of discharge must be moved from Rilda Canyon.</p> <p>To maintain the water quality in Huntington Creek, any discharge of water into Huntington Creek is governed by Utah Pollutant Discharge Elimination System (UPDES) permits and UDWQ. The transport of the water to the power plant settling basis is considered to be an acceptable option by the governing agencies because discharge would be in compliance with the existing permits.</p> <p>In addition, proper management of the intercepted groundwater would allow for closure of the mine and reclamation activities to be implemented.</p>	N

Comment Number	Subject	Comment	Consideration of Comment	Issue or Alternative (Y/N)
<b>Rob Dubuc on Behalf of Heal Utah and the Sierra Club</b>				
1	Water quality	<p>this proposed project has a reasonable potential to violate water quality standards and exacerbate existing waste management and water quality problems at the Huntington Power Plant. Therefore, we request that a full environmental impact statement (EIS) be undertaken before any decisions are made with regard to the project.</p> <p>These current coal ash management problems at PacifiCorp's Utah coal plants underscore the need to undertake a full environmental impact statement (EIS) related to its Deer Creek Mine Closure Pipeline proposal. In light of this recent coal ash spill, approval of the disposal of an additional 315 million gallons/year of mine drainage at the Huntington power plant without a full environmental impact statement would be arbitrary and capricious based on the existing EA.</p>	<p>An environmental assessment (EA) shall be prepared for proposals as described in § 220.4(a) that are not categorically excluded from documentation (§ 220.6) and for which the need of an EIS has not been determined (§220.5). (36 CFR 220.7(a))</p> <p>The purpose of an EA is to determine if a proposed action or its alternatives have potentially significant environmental effects. An EA:</p> <ol style="list-style-type: none"> <li>1. Provides evidence and analysis for determining whether to prepare an EIS;</li> <li>2. Aids agency compliance with NEPA when no EIS is necessary; and</li> <li>3. Facilitates preparation of an EIS when one is necessary.</li> </ol> <p>(40 CFR 1508.9(a))</p> <p>The EA process concludes with either a Finding of No Significant Impact (FONSI) or a determination to prepare an Environmental Impact Statement.</p>	N
2	Water quality	The EA fails to present any water quality data for the discharge.	Water quality information was summarized and considered in the EA. Detailed analysis of the water quality is in the Hydrology report (USDA FS 2016).	Y
3	Water Management	The EA fails to document the fate of polluted mine drainage once it is disposed of at the power plant.	The intercepted groundwater will flow from the downstream end of the pipeline into the settling pond (raw water pond) at the Huntington Plant. In the settling pond, the water will mix with the diverted water from Hunting Creek and then be used in the plant operations. This information and further details are found in the EA and the hydrology report in the project record (USDA FS 2016).	Y
4	Water quality	The EA fails to assess whether the polluted mine drainage water is suitable for use in the power plant.	This is beyond the scope of this project. PacifiCorp is responsible for the management of the power plant operations.	N

<b>Comment Number</b>	<b>Subject</b>	<b>Comment</b>	<b>Consideration of Comment</b>	<b>Issue or Alternative (Y/N)</b>
5	Water management	The EA fails to assess whether the Raw Water Pond/Settling Basin has the capacity to store an addition 864,000 gallons/day of water.	The intercepted groundwater from the mine will be used in lieu of the fresh water from Huntington Creek, thus no additional storage of water is needed. The intercepted mine water will replace gallon for gallon water diverted from Huntington Creek to maintain the current water levels.	N
6	Water quality	The EA fails to assess whether the addition of 315 million gallons of polluted mine drainage to the Raw Water Pond/Settling Basin will exacerbate the history of seepage, resulting in an unpermitted discharge of untreated water to Huntington Creek.	The quantity of water in the settling pond will remain the same under current operation because the intercepted groundwater from the mine will be used in lieu of the fresh water from Huntington Creek. Any discharge of water is regulated by the UDWQ.	N
7	Water quality	The EA fails to assess whether the Raw Water Pond/Settling Basin will achieve any level of “treatment” of the polluted mine drainage, and if so, what level of treatment will occur for all pollutants.	The intercepted groundwater will be mixed with the diverted water from Huntington Creek water in the Settling Pond. Based on the current water quality and the discharge permits no additional treatment is required by the UDWQ.	N
8	Water quality	The EA fails to assess whether application of additional “irrigation” water to the research farms will result in an over-application of water causing an exacerbation of pollution to groundwater and/or Huntington Creek.	No additional irrigation proposed. The intercepted groundwater from the mine will be used in lieu of the diverted Huntington Creek water in the cooling towers and subsequent irrigation. The irrigation that occurs would be in compliance with PacifiCorp’s permits.	N
9	Water quality	The EA fails to assess whether there will be uptake of pollutants in the polluted mine drainage in the “crops” grown on the research farm, and if so, will the degree of uptake of pollutants into the vegetation ensure that groundwater/surface waters will not exceed water quality standards.	The EA and the Hydrology Report evaluates the water quality of the intercepted groundwater and the potential effect to the environment. All discharge must be in compliance with UPDES permits. In addition, the intercepted groundwater will be used in the cooling towers in lieu of water from Huntington Creek, directly reducing the amount of fresh water pulled from Huntington Creek for the cooling towers. While the intercepted groundwater is used in the cooling towers, the equivalent amount of fresh water will remain in the creek (expected to be 300 – 600 GPM).	N
10	Water quality	The EA fails to assess whether disposal of the polluted mine drainage at the Huntington Power Plant will result in an exceedance of salt loadings from the power plant in violation of the Colorado River Salinity standards.	The intercepted ground water will be mixed with the water from Huntington Creek in the Settling Pond. Approximately 97% is consumed by evaporation, and only 3% is transferred to the irrigation storage reservoir.	N

<b>Comment Number</b>	<b>Subject</b>	<b>Comment</b>	<b>Consideration of Comment</b>	<b>Issue or Alternative (Y/N)</b>
11	Water quality	The EA fails to assess whether the disposal of 315 million gallons/year of polluted mine drainage will exacerbate the existing imminent and substantial endangerment created by PacifiCorp's existing waste management practices.	The irrigation on the research farm and water monitoring is in compliance with the requirements of PacifiCorp's current permits (Ground Water Discharge Permit Permit No. UGW150002). Any discharge would meet state and federal standards.	N
12	Water quality	The EA fails to assess whether the disposal of 315 million gallons/year of polluted mine drainage will exacerbate the existing impairments to Huntington Creek at the power plant site or downstream, including TSD, selenium, and temperature. The Clean Water Act prohibits new discharges containing pollutants exacerbating existing impairment.	Detailed water quality information of the intercepted groundwater from the Hydrology report was considered and summarized in the EA.  The intercepted groundwater in the mine is estimated to initially have a total iron concentration is 2-2.5 mg/L and an estimated TDS concentration of 500 mg/L. The concentration of iron is the only elevated analyte in the mines groundwater that exceeds water quality standards for PacifiCorp's Deer Creek Canyon discharge permit (UT0023604). All other chemical parameters are within permit limitations. The current discharge permit standard for iron is 1 mg/L. TDS less than 500 mg/L are allowed to be discharged.	Y
13	Permitting	The EA fails to require a Clean Water Act 401 certification from the State of Utah despite the apparent need for a Clean Water Act 404 permit for the project and the major federal action contemplated under NEPA.	PacifiCorp as the applicant is responsible for acquiring all necessary permits.	N
14	NEPA procedures	EA fails to consider other reasonable viable alternatives, such as construction of a water treatment facility at the Huntington Power Plant or extension of the water pipeline to the Town of Huntington's sewer treatment plant or next closest existing treatment plant.	Several alternatives including the ones mentioned were considered, but dismissed from further analysis in section 2.4 in the EA.	N

Comment Number	Subject	Comment	Consideration of Comment	Issue or Alternative (Y/N)
15	Permitting	The EA fails to analyze whether PacifiCorp has a federal and/or state water right to appropriate the mine groundwater into its power plant processes.	Water discharged from the mine will be used by PacifiCorp at the Huntington Plant under PacifiCorp's existing shares that it owns in the Huntington Cleveland Irrigation Company (HCIC). There will not be any new water rights required by the State Engineer's Office in order for PacifiCorp to use the water at the Huntington Plant, only a change to HCIC's existing water rights. PacifiCorp and HCIC are currently in the process of seeking approval from the State Engineer's Office (through the Change Application process) to add the mine portal as an approved point of diversion to HCIC's existing water rights. Once approved, PacifiCorp will be able to use the mine discharge water under its existing shares it owns in HCIC.	N
16	Water quality	The proposed disposal of 315 million gallons/year of polluted mine drainage has the reasonable potential to result in a direct point source discharge, or hydrologically connected point source discharge to Huntington Creek.	This EA analyzes the effects of the installation of the pipeline and the current water management proposal. The majority of the intercepted ground water (97%) will be consumed (evaporated) in the cooling towers for the life of the plant. The Huntington Plant is currently projected to operate into the 2030s. Because of the inactive (limited vertical recharge), perched nature of the intercepted groundwater within the mine, the mine outflow rates are expected to diminish with time.  When the intercepted groundwater meets the water quality standards, the water could be discharged directly into Huntington Creek if it met the discharge permit requirements. The UDWQ would analyze the effects of the discharge permit at the appropriate time.	N

**Appendix D. Plan of Development (POD)**

# 1<sup>st</sup> Right Rilda Canyon Portals to Huntington Plant Pipeline Plan of Development

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## 1. Purpose and Need

### a. What will be constructed?

Buried 10-inch high-density polyethylene (HDPE) pipeline with associated air reliefs from Deer Creek Mine 1<sup>st</sup> Right Portals to Huntington Power Plant. PacifiCorp proposes to construct the buried pipeline within the existing rights-of way of Emery County Road #306 and State Route 31 (SR-31) from the Deer Creek Mine Rilda Canyon portals to existing settling ponds at the Huntington Power Plant. The route was selected to minimize disturbance in Rilda and Huntington Canyons. An overview map is included as Attachment A.

### b. Commodity to be transported and for what purpose?

Intercepted groundwater from Deer Creek Mine will be transported to settling ponds at the Huntington Power Plant. The purpose of the pipeline is to gravity flow intercepted groundwater from the northern portion of the Deer Creek Mine to prevent prohibited discharges within Category 1 waters. The geologic structure of the mine will route intercepted groundwater from the northern portion of the mine to the Rilda Canyon 1<sup>st</sup> Right Portals. If this pipeline is not constructed, PacifiCorp will be required to keep the mine open and pump the intercepted water to Deer Creek Canyon portals for permitted discharge.

Initially, the water will have total iron that is elevated above background levels. The elevated iron concentrations are related to a carbonaceous mudstone in-seam split in the lower portion of the Hiawatha Seam containing pyritic iron. The elevated sulfur is likely in the form of gypsum and is found in the floor and the bottom 2 feet of the unmined pillars. Sulfur in coal may be in oxidized, reduced, and native forms. Oxidized sulfur includes minerals such as gypsum ( $\text{CaSO}_4 \cdot n\text{H}_2\text{O}$ ) and anhydrite ( $\text{CaSO}_4$ ), which form in evaporative environments and as secondary mineralization. Reduced forms include iron sulfide minerals such as pyrite and marcasite ( $\text{FeS}_2$ ) that are the source of the iron.

This water must be settled to allow the iron to precipitate; once the iron has settled out, no other treatment is necessary to bring water quality to standards. The level of iron (total form) in the groundwater will dissipate over a period of time to background levels of typical intercepted groundwater. The volume of the intercepted groundwater will follow a similar trend, slowly dissipating due to the lack of recharge from the initial projection of approximately 600 gallons per minute (gpm) to approximately 200 gpm. The proposed pipeline will remain in use as long as the flow of intercepted groundwater continues.

**c. Is the pipeline for a gathering system, trunk line, or distribution line?**

The pipeline is a single use distribution line from mine portals to existing settling ponds.

**d. Will it be surface or subsurface?**

The pipeline will be buried below the land surface to a minimum depth of the 5 feet, except at the bridge and diversion structure crossings (see 2.c). In addition, the buried pipeline will be offset from culinary pipelines by a minimum distance of 10 feet, as specified by the State of Utah regulations (UAC R317-401-5).

**e. Length and width of the right-of-way and the area needed for related facilities**

The total proposed pipeline is approximately 29,528 feet long (5.6 miles), and crosses multiple landowners. The permanent right-of-way would be 12 feet wide. Where possible, an additional 20 feet of temporary right-of-way for construction would be needed for soil stockpiling and equipment operation.

An estimate of length for the pipeline right-of-way by landownership is shown below:

**Table 1. Length of proposed pipeline right-of-way**

<b>Proposed Right-of-Way Length</b>	
<b>Landownership</b>	<b>Total length</b>
USFS	9,622 feet (1.8 mi)
BLM	6,388 feet (1.2 mi)
Private	13,518 feet (2.6 mi)
<b>Total</b>	<b>29,528 feet (5.6 mi)</b>

**f. Is this ancillary to an existing right-of-way?**

The proposed pipeline would be within the Emery County Road #306 right-of-way for about 11,835 feet, and within the SR-31 right-of-way (UTU-0-17187) for about 14,606 feet. Of the total 32-foot right-of-way, approximately 2.7 acres of the temporary disturbance would occur beyond the Emery County Road #306 right-of-way. Up to 1.7 acres of new disturbance would cross USFS-administered land, and 1.0 acre of new disturbance would cross private land.

**g. List alternative routes or locations**

Other alternatives were considered, but eliminated as infeasible based on the following rationale:

**Alternative #1** – No pipeline; water would be impounded in the mine with bulkheads. On January 20, 2015, PacifiCorp originally applied to install a series of hydrologic bulkheads to the Mine Safety and Health Administration (MSHA). These hydrologic bulkheads would have redirected the flow of intercepted groundwater from the northern portion of the mine to the portals located in Deer Creek Canyon. Discharge of mine water at the Deer Creek portals is approved under an existing permit issued by the State of Utah Division of Water Quality. PacifiCorp amended the mine closure application to MSHA on several occasions to address safety concerns. However, on April 12, 2016, after nearly a year and half of extensive preparation work, PacifiCorp was notified by Utah Division of Oil, Gas and Mining (UDOGM)

and MSHA that water retention in the mine would not be allowed. This response by the state and federal agencies necessitates that PacifiCorp develop other alternatives to manage intercepted groundwater that would otherwise discharge from the Rilda Canyon portals in violation of UAC R317-2.

A chronology of the bulkhead application is summarized below:

#### 2014

- Reviewed historic bulkhead installations (failures and successes)
- Discussed application protocol with MSHA District 9 Price Field Office
- Designed bulkhead installation based on the National Institute for Occupational Safety and Health (NIOSH) IC 9506 “Guidelines for Permitting, Construction, and Monitoring of Retention Bulkheads in Underground Coal Mines”
- Developed wells from surface for long term monitoring of bulkheads
- Prepared draft application

#### 2015

- January 6, 2015 - Meeting was held with MSHA District 9 Price Field Office
- January 20, 2015 - Initial bulkhead submittal. District 9 requests technical assistance from Mine Emergency Operations (MEO) and Mine Waste and Geotechnical Engineering Division (MWGE)
- March 2, 2015 - Deer Creek Mine receives copy of memorandum from MEO to Russell Riley dated February 23rd outlining deficiencies
- March 2, 2015 - Deer Creek submits Addendum #1 (add air sampling tubes) to address MEO’s concerns
- March 12, 2015 - Submitted Addendum #2 (addressing possible impounded water by primary bulkheads)
- April 1, 2015 - Submitted Addendum #3 (relocation of secondary bulkheads from 1<sup>st</sup> Right x-28 to 1<sup>st</sup> Right x-4)
- April 10, 2015 - Submitted Addendum #4 (re-sequencing mine closure to provide inspection of both sets of bulkheads)
- May 29, 2015 - Deer Creek received disapproval letter from District 9 with technical reasons for disapproval
- July 14, 2015 – Submitted Addendum #5 (bulkhead application extensively revised to address concerns of the MSHA Mine Waste and Geotechnical Engineering Division letter dated May 15, 2015)
- September 8, 2015 – Deer Creek received disapproval letter from District 9 with enclosed August 21, 2015 report by MWGE
- PacifiCorp retained J.T. Boyd to conduct a third-party independent review of the Deer Creek Mine closure plan
- PacifiCorp met with Assistant Deputy Director of Labor to outline concerns with MSHA’s jurisdictional authority related to mine closure
- December 1, 2015 received notification from District 9 stating, “We do not have the authority to approve bulkheads for the purposes described”
- December 18, 2015 PacifiCorp submits application to UDOGM to construct interlocking parallel plugs and seal enhancement
- April 12, 2016 PacifiCorp receives amendment denial from UDOGM:  
“After spending considerable time reviewing RMP [Rocky Mountain Power] proposed mine closure and particularly the water retention design, the Division, in a routine phone call with Mr. Russell Riley of MSHA on April 11, 2016 was

told that his letter of December 1, 2015 had been interpreted incorrectly by you and also by the Division. He emphatically stated that the letter was intended as an unequivocal denial of the plan. He stated that under no circumstances could MSHA approve a water-retaining structure as part of mine closure plan. He asserted that the letter was referring to MSHA's lack of legal authority to approve a plan that requires water retention, not its jurisdictional authority to approve the closure plan. He affirmed that MSHA does have jurisdiction to review and approve mine closure plans and did not waive that jurisdiction for the RMP plan.”

Alternative 1 has been rejected by MSHA and UDOGM. Feasible alternatives are very limited without water retaining structures underground.

**Alternative 2** – A pumping station would be built at the Rilda Canyon 1<sup>st</sup> Right portals. A pipeline would be installed running from this pump station to the Left Fork portals. Water discharging at the 1<sup>st</sup> Right Rilda Canyon portals would be pumped back into the mine at the Left Fork portals, where it would gravity feed into the Deer Creek Mine workings. This alternative is impractical as it requires permanent pumping facilities to be constructed at the mine site on USFS-administered land, namely the pump station, power lines, and communication lines. These facilities would require permanent periodic maintenance. In addition to the permanent features, risk associated with equipment failure and discharge in violation of UAC R317-2 is moderate.

**Alternative 3** – No action; keep the mine open and continue to pump intercepted groundwater to Deer Creek Canyon portals. This alternative requires permanent disturbance on public lands, and does not allow for mine closure and reclamation.

## 2. Right-of-way location

### a. Legal description

All sections are within T 16 S, R 7 E; Sections 22, 23, 26, 27, 28, 29, 25, 35, and 36.

Detailed tables showing landownership, quarter-quarter sections, and parcel area are included as Attachment B. Legal description by landownership is summarized in the following table:

**Table 2. Legal description of proposed right-of-way**

Sections in T 16 S, R 7 E	
Owner	Section #
USFS	22, 27, 28, 29
BLM	26, 27, 35
Emery County	35
PacifiCorp	22, 28, 36
Andalex	22, 27
COP	22, 23, 26
UDOT	36

A map with section details and landownership is included as Attachment C.

**b. Site-specific engineering surveys for critical areas**

Directional drilling will be employed to install the pipeline under Emery County Road #306 and SR-31, at two locations each; one on either side of the Huntington River bridge at the mouth of Rilda Canyon; and the entrance to Rilda Canyon and at Huntington Power Plant diversion dam. The access road for Rhino mine (Bear Canyon Road) and Bear Creek will also be drilled, to prevent disruption to Rhino’s coal deliveries and avoid impacts to the stream channel.

Exhibits showing the locations of the directional bores are included as Attachment D. Drill pits will be excavated on each side of the crossing, and a vacuum trailer will ensure that drilling mud does not discharge into the adjacent waters.

The pipeline will include a shut-off valve at the mine entrance.

**c. Maps and drawings showing river crossings**

The pipeline will be attached to an existing bridge and diversion structure at each crossing of Huntington Creek. The pipeline will not be buried at these locations. Exhibits showing these locations are included as Attachment D.

**d. Acre calculation of the right-of-way by land status**

The pipeline right-of-way crosses three types of landownership; the temporary 32-foot right-of-way includes the permanent 12 feet and an additional 20 feet (where possible). Details are shown in the following table:

**Table 3. Right-of-way calculations by land status**

<b>Jurisdiction</b>	<b>Permanent 12-foot ROW (acres)</b>	<b>Temporary 20-foot ROW (acres)</b>	<b>Total 32-foot area (acres)</b>
USFS	2.7	4.4	7.0
BLM	1.8	2.9	4.7
Private	3.7	6.4	10.1
<b>Total</b>	<b>8.1</b>	<b>13.7</b>	<b>21.8</b>

**3. Facility Design Factors**

**a. Pipeline pressure standards**

**i. Pipe wall thickness and pounds per square inch (psi) rating**

The pipe size will be 10-inch diameter HDPE DR 17, 0.507-inch wall thickness, pressure rating 125 psi.

**b. Toxicity of pipeline product**

The product will be groundwater with elevated Total Iron (Fe).

PacifiCorp has had independent laboratories analyze the intercepted groundwater samples from areas within the mine that will gravity flow to the Rilda Canyon portals. Compared against the Environmental Protection Agency (EPA) Priority Pollutant List, which consists of 129 priority pollutants, none of the pollutant parameters were detected. Results of these analyses are included as Attachment E.

The intercepted groundwater in the mine is estimated to initially have a total iron concentration of 2-2.5 mg/L and an estimated total dissolved solids (TDS) concentration of 500 mg/L. The elevated levels of iron in the groundwater are from the oxidation of the mineral pyrite in areas of the mine that contain pyrite mineralization within the coal seam. The concentration of iron is the only elevated analyte in the mine groundwater that exceeds water quality standards for PacifiCorp’s Deer Creek Canyon discharge permit (UT0023604). The current discharge permit standard for iron is 1 mg/L. All other chemical parameters are within permit limitations. A TDS concentration of less than 500 mg/L is allowed to be discharged.

The measured average pH of water within the mine is 7.5. The host rock has a high content of carbonate minerals, which results in naturally high alkalinity levels in the ground water. Acid mine drainage conditions will not occur because the alkalinity in the groundwater and carbonate buffers in the host rock neutralize any acid generation due to the oxidation of pyrite.

Water from Huntington Creek is diverted into the settling pond at 7,000 to 10,000 gpm. Water from the settling pond is used for plant operations, cooling towers, and boiler vents. The water is diverted from Huntington Creek at the same rate that it is used in the operations of the plant. Of the 7,000-11,000 gpm of water used in plant operations, approximately 97 percent of the water is evaporated off. The remaining 3 percent is transferred to the irrigation storage reservoir and used on crop research fields. The water used for irrigation on the research fields is regulated by the Utah Department of Environmental Quality, Division of Water Quality by authorization of a Ground Water Discharge Permit. The permit requires that water quality be measured periodically in monitoring wells in order to maintain compliance with the Ground Water Discharge Permit (UGW150002).

Diversion water entering the settling pond from Huntington Creek will be composed of similar concentrations of iron and TDS as measured at the sampling point in Huntington Creek, as summarized in Table 4.

**Table 4. Water Quality Parameter Measurements**

<b>Water Quality Parameter</b>	<b>Huntington Creek (mg/L)</b>	<b>Intercepted groundwater in mine (mg/L)</b>	<b>Settling pond water (mg/L)</b>
Selenium	<0.002 <sup>*1</sup>	<0.02 <sup>*2</sup>	<0.002 <sup>*1</sup>
Iron	0.48 <sup>*3</sup>	Projected at 2.0-2.5 <sup>*4</sup>	<0.5 <sup>*5</sup>
TDS	244	500	248-262
pH	8.4 <sup>*1</sup>	7.5	8.4
<sup>*1</sup> : Based on samples collected by PacifiCorp on Huntington Creek above the plant, Emery County Road 304/Huntington Creek bridge crossing. <sup>*2</sup> : Based on samples collected by PacifiCorp on in-mine groundwater projected to gravity flow from the Rilda Canyon 1 <sup>st</sup> Right Portals. Value limited by the reporting criteria of the analyzing equipment.			

Water Quality Parameter	Huntington Creek (mg/L)	Intercepted groundwater in mine (mg/L)	Settling pond water (mg/L)
<p>*3: Based on samples collected by PacifiCorp on Huntington Creek above the plant, Emery County Road 304/Huntington Creek bridge crossing. Total iron value influenced by sediment load in Huntington Creek. Projected total iron in the Plant settling pond.</p> <p>*4: Total iron from the mine will dissipate over time, projected at &lt;1.5 mg/L in less than 4 years.</p> <p>* 5: Total iron of the raw water pond influenced by sediment load in Huntington Creek. Sampling of the raw water pond by PacifiCorp indicates precipitation of the sediment reduces the total iron to &lt;0.1 mg/L.</p>			

At a maximum flow rate of 600 gpm of intercepted groundwater and a minimum flow rate of 7,000 gpm diversion water, the intercepted groundwater would be diluted by a factor of greater than ten times the volume of water entering the raw water pond from the Huntington Creek diversion. Using these flow rates and the high estimated iron concentration of 2.5 mg/L, the intercepted groundwater would be diluted to 0.2 mg/L plus the measured average background concentration (0.48 mg/L) of iron in Huntington Creek, minus the precipitation of iron (~1 mg/L), due to sediment loading from the Huntington Creek diversion, will yield approximately 0.5 mg/L. As the flow of diversion water increases and the intercepted groundwater flow decreases, the total iron concentration will decrease. Groundwater concentrated in iron discharged into the settling pond at the power plant will precipitate iron hydroxide and other ferric solids, which would stain sediment and rock with orange-rust coloration.

The level of iron in the groundwater is anticipated to dissipate to background levels of typical intercepted groundwater over the next 5 to 10 years. The decrease will occur as the surface area of exposed pyrite is consumed and available oxygen diminishes.

The volume of the intercepted groundwater would likely follow a similar trend. The amount of flow is expected to decrease with time because there is no active recharge from perched aquifers. Perched aquifers are isolated lenses of sandstone trapped between shales and mudstones. Once the perched aquifers reservoirs are emptied, the flow of groundwater coming from the mine will diminish from the initial projection of approximately 600 gpm to 200 gpm.

Water quality will be monitored on a monthly basis in perpetuity unless the state changes the point-source discharge regulations.

**c. Anticipated operating temperatures**

The pipeline will be buried at least 5 feet deep, well below the frost line, to prevent freezing. The pipeline will not be heated; water will flow at the ambient ground temperatures (estimated to be 40 degrees Fahrenheit minimum). The short unburied segments (Emery Road #306 bridge crossing and Huntington Plant Diversion Dam crossing) will be enclosed in a steel casing with closed-cell foam insulation. These insulated crossings will not be exposed long enough to result in freezing at the expected flow rates.

**d. Depth of the pipeline**

The pipeline will be buried at a minimum depth of 5 feet to be below the frost line and meet requirements for separation from the roadway. Where necessary, it may be buried deeper than 5 feet to provide the required minimum distance from culinary pipelines as specified by the State of Utah regulations (UAC R317-401-5).

**e. Permanent width or size**

The permanent right-of-way width is 12 feet.

**f. Temporary areas needed**

20 feet on the non-road side of the permanent right-of-way.

**4. Additional Components of the Right-of-way**

**a. Connection to an existing right-of-way**

The proposed pipeline right-of-way does not connect to an existing right-of-way, but does parallel or lay within sections of existing pipeline and road rights-of-way.

**i. Existing components on or off public land**

There are no existing components for this project. The right-of-way will provide water conveyance from an existing mine to the existing settling ponds at the Huntington Power Plant.

**ii. Possible future components**

Future components are not anticipated at this time.

**b. Location of pumping and/or compressor stations**

Pumping or compressor stations are not proposed; the pipeline will operate as gravity flow. Air vents will be installed at appropriate locations along the alignment, within the right-of-way. The air vents will typically be 3 to 4 feet high, and will be painted to blend as much as possible with the surrounding area to reduce the visual contrast.

**c. Need for sand and gravel and where it will be obtained**

The pipe will be bedded in sand or similar material. Where possible, bedding material will be produced on-site by screening the native materials. We anticipate obtaining additional bedding materials from commercial sites near the project area.

**d. Location of equipment storage areas**

Equipment will be stored at the mine property, the Huntington Power Plant, or on private property along the alignment.

**5. Government Agencies Involved**

**a. FERC, USFWS, USACE**

- FERC will not be involved.
- The pipeline crosses USFS- and BLM-administered land.
- USFWS could be involved through the section 7 consultation process if listed species may be impacted.

- USACE could be involved through the application for crossings of ephemeral channels; the pipeline will cross perennial waters on existing structures.

**b. State and local agencies that may be involved**

- Utah Division of Oil, Gas, & Mining will be involved through oversight and permitting of mine-related facilities.
- Utah Department of Transportation will be involved through permitting of the pipeline within the SR-31 right-of-way.
- Emery County, Utah will be involved through permitting of the pipeline within the County Road #306 right-of-way.

**6. Construction of the facilities**

Construction is anticipated to take 2 to 3 months to complete. Work schedule for the construction period will be 7 days a week, daylight hours only, unless specified otherwise by surface owners, regulatory agencies, or construction contractors.

**a. Construction (brief description)**

Construction will consist of excavation of a trench or direction bore, installation of the pipeline and appurtenances, refilling the trench, and reclaiming the disturbed area.

**i. Major facilities (including vehicles and number of tons and loads)**

We estimate that eight truckloads will be required to deliver the pipeline segments and associated parts.

**ii. Ancillary facilities (including vehicles and number of tons and loads)**

There are no new ancillary facilities associated with this project.

**b. Work force (number of people and vehicles)**

The estimated work force is eight people. Staff includes trencher or track hoe operator, loader and operator to place pipe, pipe fusion machine operators, foreman, traffic control flaggers, and laborers. If pipeline construction is conducted at more than one segment at the same time, this number will be multiplied by the number of construction sites.

**c. Flagging or staking the right-of-way**

The pipeline route and rights-of-way will be flagged or staked by a professional survey company prior to initiation of construction.

**d. Clearing and grading**

Clearing and grading will be minimized to only the extents necessary to dig the trench for the pipeline itself. Debris will not be placed in stream channels. The ground surface will be graded back to original contours as the pipeline is installed.

## **e. Facility construction data**

### **i. Description of construction process**

The trench for the pipeline will be excavated with a trenching machine or track hoe excavator. Topsoil and subsoil will be segregated and stockpiled separately adjacent to the trench. Pipe segments will be laid out end-to-end along the trench at each active site. The pipeline segments will be 50 feet long, and will be heat-welded together on-site.

Bedding material will be placed in the trench below and above the pipeline. Bedding material must be clean sand or soil and must not contain stones having a maximum dimension larger than 0.5 inch. Material must be placed to a minimum depth of 6 inches under the pipe and 6 inches over the top of the pipe. The remaining backfill must not contain rock larger than 6 inches. Such bedding material serves two principal functions: protection of the pipe from mechanical damage during installation and trench filling, and stabilization of the pipe in the event of seismic shifts or frost heaves.

A tracer wire and electrical conduit will be buried above the pipeline. The tracer wire is used to locate the pipeline from the surface. The electrical conduit could be used in the future to install a fiber optic cable to the mine. This fiber optic cable would allow PacifiCorp to remove the existing power line while providing communication capabilities to continue monitoring for security of the site, without excavating a new trench. The fiber optic cable could be installed with minimal ground disturbance.

The stockpiled subsoil will be used to backfill the trench, and the topsoil will be replaced on the surface and graded to pre-disturbance contours. Large rocks that are unsuitable for fill will be placed on the surface within the road rights-of-way, outside of the safety clear zone. This rock is expected to match the exposed rock that makes up the canyon walls, and would not contrast visually. If the excavated rock does contrast with the natural surface, the contrasting material will be removed from the right-of-way and disposed of in an appropriate location off-site.

At the Rilda Canyon bridge, the pipeline will be routed under County Road #306 using a directional bore. The pipeline will cross Huntington Creek on the Rilda Canyon bridge, with the pipeline concealed in the existing girders under the west side of bridge. At the north end of the bridge, the pipeline will be routed under County Road #306 through another directional bore. Directional bores will be used under SR-31 at Rilda Canyon and near the power plant. The pipeline will be buried in a trench along the north and east side of SR-31.

The pipeline will be buried from SR-31 to the diversion structure, where it will cross Huntington Creek on the diversion structure. The pipeline will then be buried from the diversion structure to the Huntington Power Plant settling ponds.

### **f. Access to, and along, right-of-way during construction**

The project will take place largely within the Emery County and State of Utah rights-of-way along existing paved roads. No additional access ways or roads will be necessary.

**g. Engineering drawings and specifications for site-specific problems relating to surface use or special mitigation**

Engineering drawings and specifications are included as Attachment F.

**h. Diagrams, drawings, and cross sections to help visualize the scope of the project**

Diagrams, drawings, and cross sections are included in the engineered plans in Attachment F.

**i. Special equipment that will be utilized**

Specialized equipment includes a mechanized trenching machine where possible, and directional boring equipment for the road crossings. Concrete drilling and boring equipment will be used to construct the bridge crossing at Rilda Canyon.

**j. Contingency planning**

Contingency may be required for weather-related issues, but is not expected to be a significant factor in project completion. No other contingencies have been considered at this stage of development.

**i. Holder contacts**

- PacifiCorp: Chuck Semborski (435) 687-4720  
Scott Child (801) 220-4612
- Andalex Resources, Inc.: David Hibbs (435) 888-4016
- C.O.P. Coal Development Company: Charles Reynolds (801) 857-0399
- Emery County, Utah: Wayde Nielsen (435) 381-3150

**ii. Agency contacts**

- USFS: District Ranger - Darren Olsen (435) 636-3586  
Geologist - Jeff Salow (435) 636-3596  
Realty Specialist – Anita Jones (435) 636-3578
- BLM: Minerals Support Supervisor - Roger Bankert, BLM State Office (801) 539-4037  
Mining Engineer - Jeff McKenzie, BLM State Office (801) 539-4038  
Assistant Field Manager Coal - Steve Rigby, Price Field Office (435) 636-3604  
Mining Engineer - Steve Falk, Price Field Office (435) 636-3605  
Realty Specialist - Connie Leschin, Price Field Office (435) 636-3610

**k. Safety requirements**

All safety requirements of the Occupational Safety and Health Administration (OSHA) will be observed during project construction. Special road flagging and traffic control will be the responsibility of the pipeline construction company. Mandatory speed limits will be posted and enforcement will be the responsibility of the contractor and the assigned project inspector. Manual on Uniform Traffic Control Devices (MUTCD)-approved warning signs will be placed along SR-31.

## **I. Industrial wastes and toxic substances**

There will be drilling mud and associated byproducts where directional drilling occurs. The drilling process will be managed and contained following procedures from the UDOGM. Construction contractors will also be required to adhere to the Stormwater Pollution Prevention Plan (SWPPP) and Spill Prevention and Response Plan (SPRP), which address hazardous material control. Drafts of these documents are provided as Attachment G and Attachment H, respectively.

## **7. Resource Values and Environmental Concerns**

### **a. Address at level commensurate with anticipated impacts**

#### **i. Location with regard to existing corridors**

All proposed construction will take place within existing road and utility rights-of-way.

### **b. Anticipated conflicts with resources or public health and safety**

#### **i. Air, noise, geologic hazards, mineral and energy resources, paleontological resources, soils, water, vegetation, wildlife, threatened and endangered species, cultural resources, visual resources, BLM projects, recreation activities, wilderness**

The project has been designed to be consistent with the Green River District Reclamation Guidelines and Appendix R-3 of the Price RMP.

1. Air:

There would be a short-term increase in vehicle and fugitive dust emissions during construction.

2. Noise:

Construction will cause a temporary increase in daytime noise levels.

3. Geologic hazards:

No conflicts with geologic hazards are known or anticipated.

4. Mineral and energy resources:

No conflicts with mineral or energy resources are known or anticipated.

5. Paleontological resources:

Potential impacts to paleontological resources could occur during excavation.

6. Soils:

Impacts to soils will be minimized by following the Reclamation Plan (Attachment I). The specific design features to be followed include:

- Reconstruct the disturbed area to original contours, particularly drainages.

- Topsoil will be salvaged, stockpiled, and replaced upon completion of construction.
  - Topsoil storage will be identified with appropriate signage.
  - Topsoil will not be stored beyond one growing season.
- Implement a Storm Water Pollution Prevention Plan (Attachment G) to prevent sediment transport from the construction area, manage waste, and prevent contamination.

There will be no slopes greater than 40 percent within the pipeline right-of-way. Elevations on BLM-administered land are less than 7,000 feet asl. Elevations on USFS-administered land are between 7,150 and 7,780 feet asl.

7. Water:

The pipeline will mainly be placed within the existing roadway fill, outside of jurisdictional channels; however, Section 404 permits will be obtained from the Army Corps if jurisdictional channels cannot be avoided. Coverage under the Utah Pollutant Discharge Elimination System (UPDES) permit UTRC00000 will be obtained for compliance with Section 402 of the Clean Water Act. Best management practices will be detailed in the SWPPP (Attachment G), SPRP (Attachment H), and Reclamation Plan (Attachment I).

8. Vegetation:

Vegetation will be removed from a portion of the right-of-way for construction purposes; however, vegetation is limited within the disturbed rights-of-way that contain the proposed pipeline right-of-way. Seeding will be applied as detailed in the Reclamation Plan (Attachment I).

9. Wildlife:

USFS sensitive species that could occur in the area include:

- Bald eagle (*Haliaeetus leucocephalus*): Eagles may use the area incidentally for scavenging.
- Flammulated owl (*Otus flammeolus*): Potentially suitable mature forest habitat does not occur within the project area, and is limited within the Rilda Canyon drainage.
- Northern goshawk (*Accipiter gentilis*): Potentially suitable mature forest habitat does not occur within the project area, and is limited within the Rilda Canyon drainage. This species is also a management indicator species (MIS) on the Manti-La Sal National Forest.
- Peregrine falcon (*Falco peregrinus anatum*): Potentially suitable cliff nesting habitat and foraging habitat occurs within the canyons.
- Spotted bat (*Euderma maculatum*): Potential cliff roosting habitat occurs within Rilda Canyon; foraging may occur throughout the project area.
- Three-toed woodpecker (*Picoides dorsalis*): Coniferous habitat above 8,000 feet in elevation does not occur within the project area.

- Townsend's big-eared bat (*Corynorhinus townsendii pallescens*): Potential cliff roosting habitat occurs within Rilda Canyon; foraging may occur throughout the project area.

The Manti-La Sal National Forest also considers golden eagle (*Aquila chrysaetos*) as a management indicator species (MIS); suitable cliff nesting habitat occurs within the canyons, and eagles may forage in the project area.

Raptors and migratory birds (including the USFS sensitive species listed above) are likely to occur within and near the project area. Direct loss of habitat is unlikely due to collocation of the proposed pipeline within existing disturbed rights-of-way. Birds in the area are likely habituated to human presence and noise associated with the roadways. Although construction is proposed in the latter part of breeding season, it is unlikely to cause undue stress on birds in the area because of the existing roadway use.

The project is within crucial winter mule deer (*Odocoileus hemionus*) habitat, crucial winter and summer elk (*Cervus elaphus*) habitat, and crucial yearlong and winter moose (*Alces alces*) habitat. Due to the existing roadway and other uses, animals in the area are likely habituated to human presence and noise. It is hoped that construction would be completed before December 1, prior to seasonal closure for these habitats. Mule deer and elk are listed as management indicator species (MIS) for the Manti-La Sal National Forest.

The project area is over 2 miles from mapped greater sage-grouse (*Centrocercus urophasianus*) general habitat. Timing stipulations would not apply.

#### 10. Threatened and endangered species:

The IPaC system was accessed on 5-2-16 to identify listed species that may potentially occur within the project area. The following species were identified:

- Mexican spotted owl (*Strix occidentalis lucida*): The nearest critical habitat is over 40 miles to the east of the project area. Modelled potentially suitable habitat does occur within Huntington Canyon.
- Southwestern willow flycatcher (*Empidonax traillii extimus*) and yellow-billed cuckoo (*Coccyzus americanus*): Mature riparian vegetation is present along Huntington Creek; however, a dense understory suitable for nesting is not present. These species are unlikely to occur in the project area.
- Bonytail chub (*Gila elegans*), Colorado pikeminnow (*Ptychocheilus lucius*), humpback chub (*Gila cypha*), and razorback sucker (*Xyrauchen texanus*): Critical habitat for these species is over 50 miles downstream. Implementation of best management practices will reduce impacts to water quality; the project will have no impact on these species.
- Barneby reed-mustard (*Schoenocrambe barnebyi*): This species is mainly known to occur in Capitol Reef National Park; the project will not impact this species.

- Jones cycladenia (*Cycladenia humilis* var. *jonesii*): The project area does not include the known suitable habitat characteristics for this species.

There are no critical habitats within or near the project area.

11. Cultural resources:

Impacts to cultural resources are not anticipated due to the collocation of the proposed pipeline within existing disturbed rights-of-way. If deemed necessary, Class III inventories will be completed as soon as possible, prior to construction. Impacts to eligible sites will be avoided where possible. If cultural resources cannot be avoided, mitigation will be applied. A discovery plan is included as Attachment J.

12. Visual resources:

Where it crosses BLM-administered land, the project is within VRM Class II. SR-31 is part of the Huntington Canyon Scenic Byway. Visual impacts would occur due to the presence of heavy equipment directly adjacent to the highway during construction; these impacts would occur for up to 3 months. Disturbed ground would create a visual contrast after the project was completed, but would not contrast significantly within the existing disturbed road right-of-way. The contrast would be short-term (less than 5 years), and would also reduce as vegetation established on the reseeded areas.

13. Other projects:

Installation of a buried fiber optic cable within the same corridor will be coordinated to reduce the area and cumulative time of project disturbance. No other projects are known at this time.

14. Recreation activities:

Recreational users in the canyon will be temporarily impacted by visible construction adjacent to the roadway; however, it is anticipated that traffic flow will be maintained during construction, and delays will be limited. No other impacts to recreation are anticipated.

15. Wilderness:

The nearest designated wilderness area is over 24 miles away. No lands designated as wilderness are within the project area. No BLM natural areas or other lands with wilderness characteristics are within the project area.

16. Land Use:

The alignment crosses general big-game winter range (GWR), leasable minerals area (MMA), and range forage product (RNG) management areas on the Manti-La Sal National Forest.

The BLM-administered land within the project area is classified as controlled surface use (CSU).

## **8. Stabilization and Rehabilitation**

Stabilization and rehabilitation will be conducted according to the Green River District Reclamation Guidelines, as detailed in the Reclamation Plan (Attachment I).

### **a. Soil replacement and stabilization**

As outlined in the Guidelines, topsoil will be salvaged, stockpiled, and replaced after construction is complete. A Stormwater Pollution Prevention Plan (SWPPP; Attachment G) will be prepared prior to construction that will detail the stabilization and erosion control measures to be implemented.

### **b. Disposal of vegetation removed during construction (i.e., trees, shrubs, etc.)**

Vegetation removed for construction will either be disposed of off-site or used as mulch/stabilizer for the disturbed soil.

### **c. Seeding specifications**

Seeding will be completed per direction in the agency-approved Reclamation Plan (Attachment I) and as required by individual landowners.

### **d. Fertilizer**

Fertilizer will be applied as required by the individual landowners or agencies.

### **e. Limiting access to the right-of-way**

Limiting access to the right-of-way during construction for safety reasons will be the responsibility of the construction contractor. When construction is complete, the pipeline will be within the existing road rights-of-way; no limitation of access will be necessary.

### **f. Will roads built during construction be reclaimed?**

No roads will be constructed during this project.

## **9. Operation and Maintenance**

### **a. Will new or expanded access be needed for operation and maintenance?**

No; existing adjacent roadways will provide access to the right-of-way.

### **b. Will there be hydrostatic testing and subsequent release of water and what is the anticipated volume?**

The pipeline will be tested for integrity when it is complete. The total volume of the pipeline will be approximately 70,000 gallons. Water used in testing will drain into the Huntington Power Plant settling pond at the lower end of the pipeline.

**c. Will removal and/or addition of pipe and/or pumps be required as part of the pipeline maintenance?**

No. Routine maintenance will be restricted to periodic checking of pressure relief and air introduction valves. Emergency maintenance may require the temporary use of bypass sections of pipe to route the flow around maintenance areas.

**d. Will all maintenance activities be confined within the right-of-way?**

Yes.

**e. Safety**

Safety concerns are minimal with the proposed gravity flow water pipeline. Pipe wall thickness and the location of the shut-off valve were selected based on anticipated pressures.

**f. Will industrial wastes and toxic substances be generated or stored on right-of-way?**

No.

**g. Inspection and maintenance schedules**

Visual inspection of the finished pipeline will be conducted on a monthly basis from the existing roadways.

**i. Will these be conducted on the ground and/or by aircraft?**

Routine maintenance inspections will be conducted on the ground, using existing roadways.

**ii. If by aircraft, will the aircraft require landing strips and/or heliports?**

No.

**h. Work schedules**

Work schedules during operation will consist of the monthly ground inspection.

**i. Fire control**

Operation of the gravity flow water pipeline does not create the potential for fire.

**j. Contingency planning**

No contingencies have been identified at this time.

**10. Termination and Restoration**

This pipeline, once constructed, is intended to be a permanent installation.

**a. Removal of structures**

Once construction is complete, the pipeline and associated structures (valves, pressure reliefs, air-vac structures) will be left in place permanently. PacifiCorp will operate and maintain the pipeline regardless of power plant operations.

**b. Will pipe be removed or cleaned and left in ground?**

Pipe will be left in the ground.

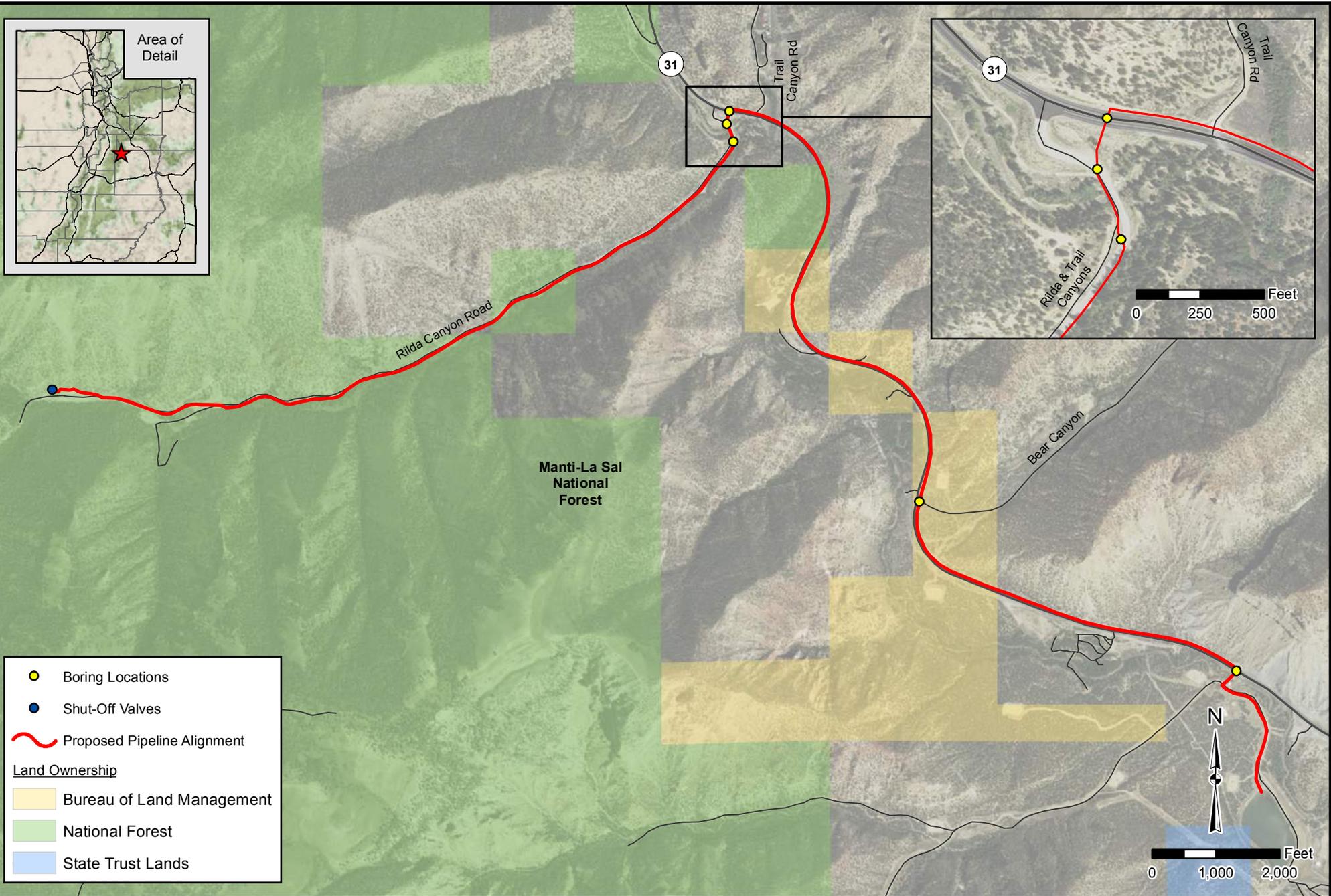
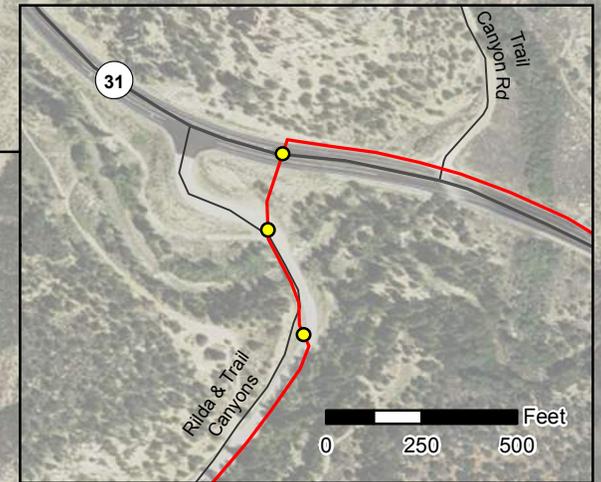
**c. Obliteration of roads**

No roads will be constructed during this installation. All construction activities will take place alongside and largely within the rights-of-way of existing roads. No obliteration of roads will be necessary.

**d. Stabilization and revegetation of disturbed areas**

Disturbed areas will be reclaimed according to agency-approved reclamation plans at the time of termination.

**Attachment A. Overview Map**



- Boring Locations
- Shut-Off Valves
- ~ Proposed Pipeline Alignment

**Land Ownership**

- Bureau of Land Management
- National Forest
- State Trust Lands



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<b>PacifiCorp</b>	
<b>Deer Creek Mine - Proposed Live Water Relief Pipeline Overview</b>	
Map Name: H:\JDI\Proj\1506-121\Design\GIS\Maps\EA1_Overview.mxd	Project Number: 1506-121
Drawn by: JWW 09-16	Last Edit: 09/19/2016

<b>EMERY COUNTY</b>
SCALE: 1" = 2,000'
<b>1</b>

## Attachment B. Legal Description Tables

**Table B. 1. Legal Description in Pipeline Order, from Start to End**

Sections within T 16 S, R 7 E			
Owner	Section #	Description	Parcel Acres
USFS	29	SE 1/4, SW 1/4, NE 1/4	10
USFS	29	S 1/2, SE 1/4, NE 1/4	20
USFS	28	S 1/2, S 1/2, NW 1/4	40
USFS	28	N 1/2, SW 1/2, NE 1/4	10
USFS	28	S 1/2, NE 1/4, SW 1/4, NE 1/4	5
USFS	28	N 1/2, SE 1/4, NE 1/4	20
PacifiCorp	28	SE 1/4, NE 1/4, NE 1/4	10
USFS	27	S 1/2, NW 1/4, NW 1/4	20
USFS	27	NE 1/4, NW 1/4, NW 1/4	10
Andalex	27	N 1/2, NE 1/4, NW 1/4	20
PacifiCorp	22	S 1/2, SE 1/4, SW 1/4	20
Andalex	22	SW 1/4, SW 1/4, SE 1/4	10
Andalex	22	N 1/2, SW 1/4, SE 1/4	20
COP	22	E 1/2, NE 1/4, SE 1/4	20
COP	22	S1/2, NW 1/4, NE 1/4, SE 1/4,	5
COP	22	N 1/2, SW 1/4, NE 1/4, SE 1/4	5
COP	22	SE 1/4, NE 1/4, SE 1/4	10
USFS	22	E 1/2, NE 1/4, SE 1/4, SE 1/4	5
COP	23	W 1/2, W 1/2, W 1/2, SW 1/4, SW 1/4	5
USFS	22	E 1/2, SE 1/4, SE 1/4, SE 1/4	5
BLM	27	E 1/2, NE 1/4, NE 1/4	20
Andalex	27	E 1/2, SE 1/4, NE 1/4	20
BLM	26	N 1/2, SW 1/4, NW 1/4	20
BLM	26	SE 1/4, SW 1/4, NW 1/4	10
COP	26	W 1/2, SW 1/4, SE 1/4, NW 1/4	5
BLM	26	W 1/2, W 1/2, NE 1/4, SW 1/4	10
BLM	26	W 1/2, SE 1/4, SW 1/4	20
BLM	26	S 1/2, SE 1/4, SE 1/4, SW 1/4	5
BLM	35	NE 1/4, NE 1/4, NW 1/4	10
Emery Co.	35	N 1/2, NW 1/4, NE 1/4	20
Emery Co.	35	SE 1/4, NW 1/4, NE 1/4	10
Emery Co.	35	S 1/2, NE 1/4, NE 1/4	20
UDOT	36	S 1/2, NW 1/4, NW 1/4	20
PacifiCorp	36	NE 1/4, SW 1/4, NW 1/4,	10

PacifiCorp	36	W 1/2, NW 1/4, SE 1/4, NW 1/4	5
PacifiCorp	36	W 1/2, SW 1/4, SE 1/4, NW 1/4	5
PacifiCorp	36	W 1/2, W 1/2, NE 1/4, SW 1/4	10

**Table B. 2. Legal Description in Section Order**

<b>Sections within T 16 S, R 7 E</b>			
<b>Owner</b>	<b>Section #</b>	<b>Description</b>	<b>Parcel Acres</b>
PacifiCorp	22	S 1/2, SE 1/4, SW 1/4	20
Andalex	22	SW 1/4, SW 1/4, SE 1/4	10
Andalex	22	N 1/2, SW 1/4, SE 1/4	20
COP	22	E 1/2, NE 1/4, SE 1/4	20
COP	22	S1/2, NW 1/4, NE 1/4, SE 1/4,	5
COP	22	N 1/2, SW 1/4, NE 1/4, SE 1/4	5
COP	22	SE 1/4, NE 1/4, SE 1/4	10
USFS	22	E 1/2, NE 1/4, SE 1/4, SE 1/4	5
USFS	22	E 1/2, SE 1/4, SE 1/4, SE 1/4	5
COP	23	W 1/2, W 1/2, W 1/2, SW 1/4, SW 1/4	5
BLM	26	N 1/2, SW 1/4, NW 1/4	20
BLM	26	SE 1/4, SW 1/4, NW 1/4	10
COP	26	W 1/2, SW 1/4, SE 1/4, NW 1/4	5
BLM	26	W 1/2, W 1/2, NE 1/4, SW 1/4	10
BLM	26	W 1/2, SE 1/4, SW 1/4	20
BLM	26	S 1/2, SE 1/4, SE 1/4, SW 1/4	5
USFS	27	S 1/2, NW 1/4, NW 1/4	20
USFS	27	NE 1/4, NW 1/4, NW 1/4	10
Andalex	27	N 1/2, NE 1/4, NW 1/4	20
BLM	27	E 1/2, NE 1/4, NE 1/4	20
Andalex	27	E 1/2, SE 1/4, NE 1/4	20
USFS	28	S 1/2, S 1/2, NW 1/4	40
USFS	28	N 1/2, SW 1/2, NE 1/4	10
USFS	28	S 1/2, NE 1/4, SW 1/4, NE 1/4	5
USFS	28	N 1/2, SE 1/4, NE 1/4	20
PacifiCorp	28	SE 1/4, NE 1/4, NE 1/4	10
USFS	29	SE 1/4, SW 1/4, NE 1/4	10
USFS	29	S 1/2, SE 1/4, NE 1/4	20
BLM	35	NE 1/4, NE 1/4, NW 1/4	10
Emery Co.	35	N 1/2, NW 1/4, NE 1/4	20
Emery Co.	35	SE 1/4, NW 1/4, NE 1/4	10
Emery Co.	35	S 1/2, NE 1/4, NE 1/4	20
UDOT	36	S 1/2, NW 1/4, NW 1/4	20

PacifiCorp	36	NE 1/4, SW 1/4, NW 1/4,	10
PacifiCorp	36	W 1/2, NW 1/4, SE 1/4, NW 1/4	5
PacifiCorp	36	W 1/2, SW 1/4, SE 1/4, NW 1/4	5
PacifiCorp	36	W 1/2, W 1/2, NE 1/4, SW 1/4	10

**Table B. 3. Legal Description in Alphabetic Order of Landownership**

<b>Sections within T 16 S, R 7 E</b>			
<b>Owner</b>	<b>Section #</b>	<b>Description</b>	<b>Parcel Acres</b>
Andalex	22	SW 1/4, SW 1/4, SE 1/4	10
Andalex	22	N 1/2, SW 1/4, SE 1/4	20
Andalex	27	N 1/2, NE 1/4, NW 1/4	20
Andalex	27	E 1/2, SE 1/4, NE 1/4	20
BLM	26	N 1/2, SW 1/4, NW 1/4	20
BLM	26	SE 1/4, SW 1/4, NW 1/4	10
BLM	26	W 1/2, W 1/2, NE 1/4, SW 1/4	10
BLM	26	W 1/2, SE 1/4, SW 1/4	20
BLM	26	S 1/2, SE 1/4, SE 1/4, SW 1/4	5
BLM	27	E 1/2, NE 1/4, NE 1/4	20
BLM	35	NE 1/4, NE 1/4, NW 1/4	10
COP	22	E 1/2, NE 1/4, SE 1/4	20
COP	22	S1/2, NW 1/4, NE 1/4, SE 1/4,	5
COP	22	N 1/2, SW 1/4, NE 1/4, SE 1/4	5
COP	22	SE 1/4, NE 1/4, SE 1/4	10
COP	23	W 1/2, W 1/2, W 1/2, SW 1/4, SW 1/4	5
COP	26	W 1/2, SW 1/4, SE 1/4, NW 1/4	5
Emery Co.	35	N 1/2, NW 1/4, NE 1/4	20
Emery Co.	35	SE 1/4, NW 1/4, NE 1/4	10
Emery Co.	35	S 1/2, NE 1/4, NE 1/4	20
PacifiCorp	22	S 1/2, SE 1/4, SW 1/4	20
PacifiCorp	28	SE 1/4, NE 1/4, NE 1/4	10
PacifiCorp	36	NE 1/4, SW 1/4, NW 1/4,	10
PacifiCorp	36	W 1/2, NW 1/4, SE 1/4, NW 1/4	5
PacifiCorp	36	W 1/2, SW 1/4, SE 1/4, NW 1/4	5
PacifiCorp	36	W 1/2, W 1/2, NE 1/4, SW 1/4	10
USFS	22	E 1/2, NE 1/4, SE 1/4, SE 1/4	5
USFS	22	E 1/2, SE 1/4, SE 1/4, SE 1/4	5
USFS	27	S 1/2, NW 1/4, NW 1/4	20
USFS	27	NE 1/4, NW 1/4, NW 1/4	10
USFS	28	S 1/2, S 1/2, NW 1/4	40
USFS	28	N 1/2, SW 1/2, NE 1/4	10

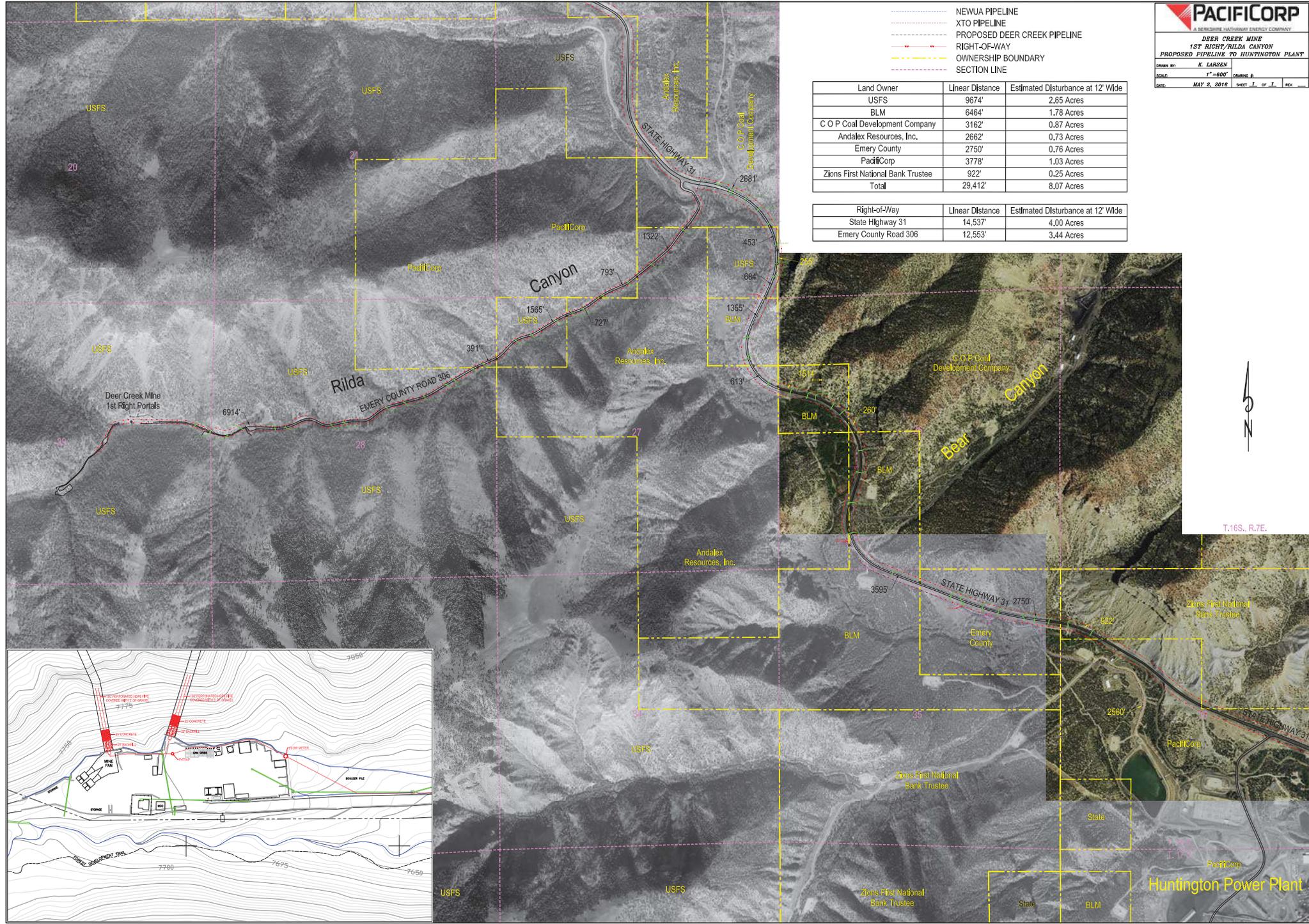
USFS	28	S 1/2, NE 1/4, SW 1/4, NE 1/4	5
USFS	28	N 1/2, SE 1/4, NE 1/4	20
USFS	29	SE 1/4, SW 1/4, NE 1/4	10
USFS	29	S 1/2, SE 1/4, NE 1/4	20
UDOT	36	S 1/2, NW 1/4, NW 1/4	20

## **Attachment C. Landownership Map**

- NEWUA PIPELINE
- XTO PIPELINE
- PROPOSED DEER CREEK PIPELINE
- RIGHT-OF-WAY
- OWNERSHIP BOUNDARY
- SECTION LINE

Land Owner	Linear Distance	Estimated Disturbance at 12' Wide
USFS	9674'	2.65 Acres
BLM	6464'	1.78 Acres
C O P Coal Development Company	3162'	0.87 Acres
Andalex Resources, Inc.	2662'	0.73 Acres
Emery County	2750'	0.76 Acres
PacifiCorp	3778'	1.03 Acres
Zions First National Bank Trustee	922'	0.25 Acres
<b>Total</b>	<b>29,412'</b>	<b>8.07 Acres</b>

Right-of-Way	Linear Distance	Estimated Disturbance at 12' Wide
State Highway 31	14,537'	4.00 Acres
Emery County Road 306	12,553'	3.44 Acres



T.16S., R.7E.

Huntington Power Plant

## **Attachment D. Bore and Stream Crossings Figures**

Figure 1. Boring and Bridge Crossing Location Details at the Mouth of Rilda Canyon

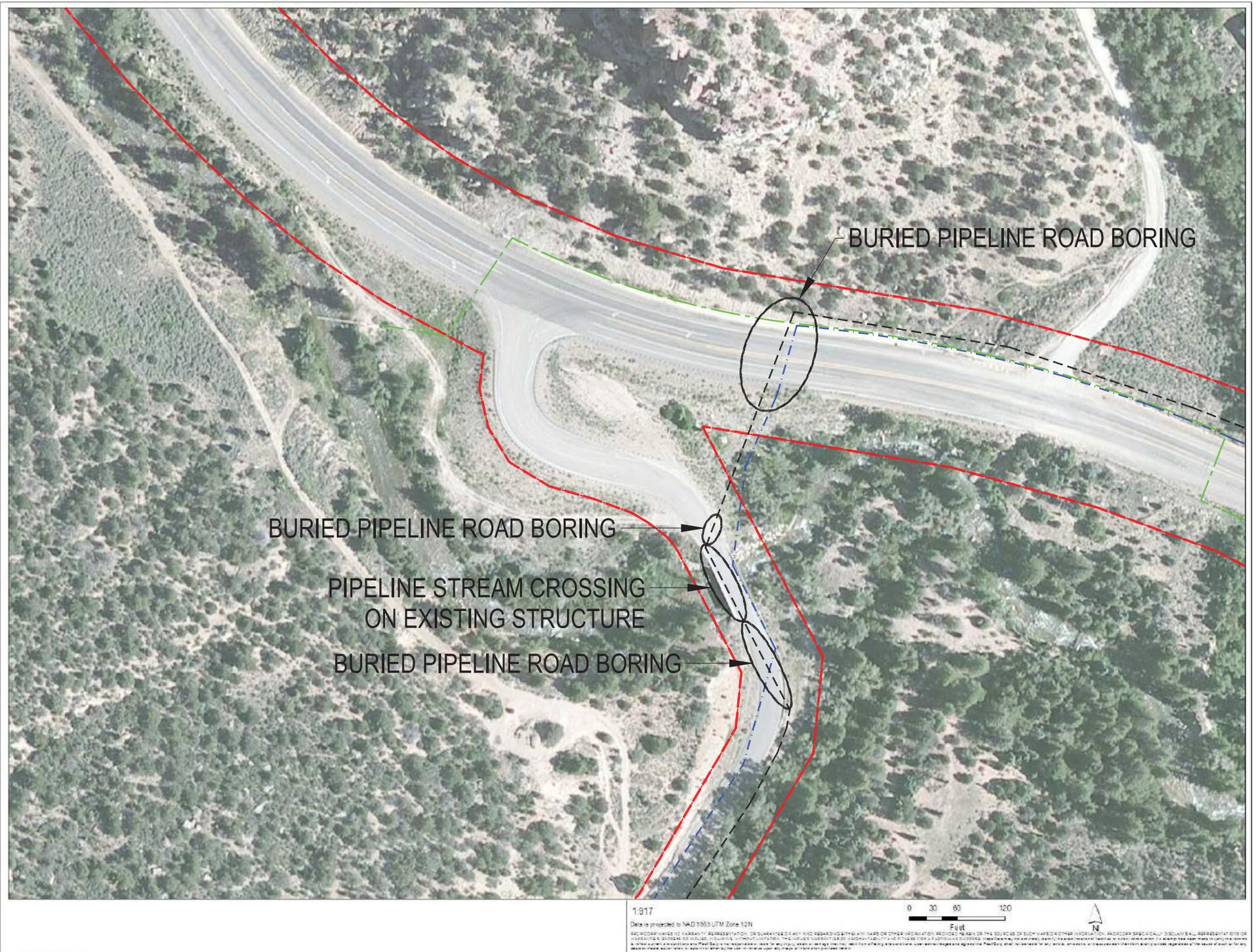
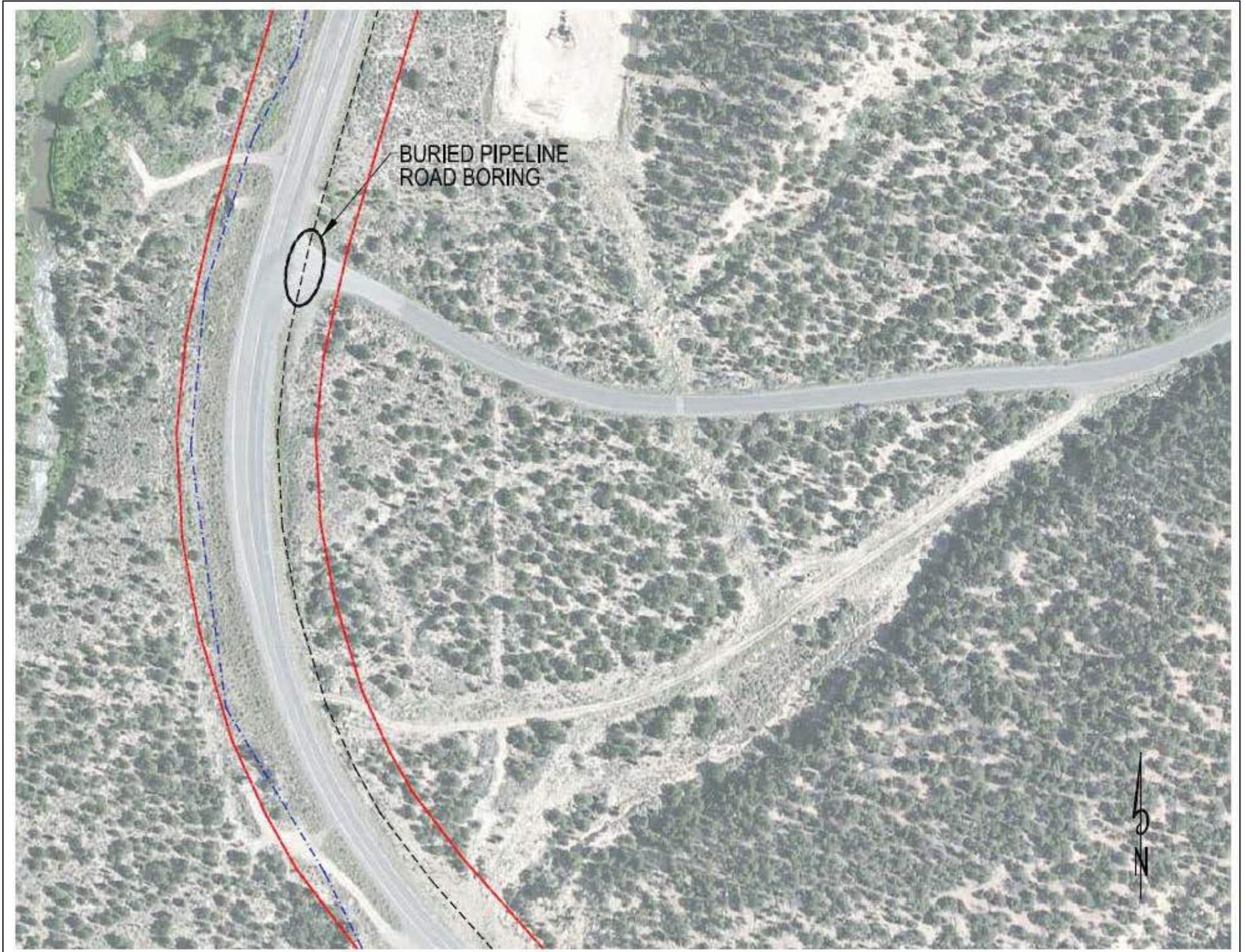




Figure 3. Boring Location Details at Bear Canyon Road



## **Attachment E. Water Quality Sampling Results**



7/6/2016

**Work Order: 16F0973**  
**Project: Deer Creek Mine 11th-17th West**

**Pacificorp - Huntington Plant**  
**Attn: Chuck Sembroski**  
**P.O. Box 680**  
**Huntington, UT 84528**

**Client Service Contact: 801.262.7299**

The analyses presented on this report were performed in accordance with the National Environmental Laboratory Accreditation Program (NELAP) unless noted in the comments, flags, or case narrative. If the report is to be used for regulatory compliance, it should be presented in its entirety, and not be altered.



Approved By:

  
\_\_\_\_\_  
Reed Hendricks, Senior Project Manager

## Certificate of Analysis

**Pacificorp - Huntington Plant**  
**Chuck Sembroski**  
**P.O. Box 680**  
**Huntington, UT 84528**

PO#: **3000116067**  
Receipt: **6/17/16 14:52 @ 10.60 °C**  
Date Reported: **7/6/2016**  
Project Name: **Deer Creek Mine 11th-17th West**

Sample ID: **Deer Creek Mine 11th-17th West**

Matrix: **Water**

Lab ID: **16F0973-01**

Date Sampled: **6/17/16 10:21**

Sampled By: **Chuck Sembroski**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Minimum Reporting Limit</u>	<u>Method</u>	<u>Preparation Date/Time</u>	<u>Analysis Date/Time</u>	<u>Flag(s)</u>
<b>Pesticides</b>							
4,4'-DDD	ND	ug/L	0.2	EPA 608	6/21/16	6/28/16	
4,4'-DDE	ND	ug/L	0.1	EPA 608	6/21/16	6/28/16	
4,4'-DDT	ND	ug/L	0.2	EPA 608	6/21/16	6/28/16	
alpha-Chlordane	ND	ug/L	0.1	EPA 608	6/21/16	6/28/16	
Aldrin	ND	ug/L	0.2	EPA 608	6/21/16	6/28/16	
alpha-BHC	ND	ug/L	0.05	EPA 608	6/21/16	6/28/16	
beta-BHC	ND	ug/L	0.1	EPA 608	6/21/16	6/28/16	
delta-BHC	ND	ug/L	0.1	EPA 608	6/21/16	6/28/16	
Dieldrin	ND	ug/L	0.1	EPA 608	6/21/16	6/28/16	
Endosulfan I	ND	ug/L	0.1	EPA 608	6/21/16	6/28/16	
Endosulfan II	ND	ug/L	0.2	EPA 608	6/21/16	6/28/16	
Endosulfan sulfate	ND	ug/L	0.2	EPA 608	6/21/16	6/28/16	
Endrin	ND	ug/L	0.1	EPA 608	6/21/16	6/28/16	
Endrin aldehyde	ND	ug/L	0.2	EPA 608	6/21/16	6/28/16	
gamma-Chlordane	ND	ug/L	0.1	EPA 608	6/21/16	6/28/16	
Heptachlor	ND	ug/L	0.1	EPA 608	6/21/16	6/28/16	
Heptachlor epoxide	ND	ug/L	0.1	EPA 608	6/21/16	6/28/16	
Lindane	ND	ug/L	0.05	EPA 608	6/21/16	6/28/16	
PCB-1016	ND	ug/L	2.0	EPA 608	6/21/16	6/28/16	
PCB-1221	ND	ug/L	2.0	EPA 608	6/21/16	6/28/16	
PCB-1232	ND	ug/L	2.0	EPA 608	6/21/16	6/28/16	
PCB-1242	ND	ug/L	2.0	EPA 608	6/21/16	6/28/16	
PCB-1248	ND	ug/L	2.0	EPA 608	6/21/16	6/28/16	
PCB-1254	ND	ug/L	2.0	EPA 608	6/21/16	6/28/16	
PCB-1260	ND	ug/L	2.0	EPA 608	6/21/16	6/28/16	
Toxaphene	ND	ug/L	2.0	EPA 608	6/21/16	6/28/16	
<b>Semi-Volatile Compounds</b>							
1,2,4-Trichlorobenzene	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
1,2-Dichlorobenzene	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
1,3-Dichlorobenzene	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
1,4-Dichlorobenzene	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
2,4,6-Trichlorophenol	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
2,4-Dichlorophenol	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
2,4-Dimethylphenol	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
2,4-Dinitrophenol	ND	ug/L	10	EPA 625	6/21/16	6/27/16	
2,4-Dinitrotoluene	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
2,6-Dinitrotoluene	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
2-Chloronaphthalene	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
2-Chlorophenol	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
2-Nitrophenol	ND	ug/L	10	EPA 625	6/21/16	6/27/16	
3,3'-Dichlorobenzidine	ND	ug/L	10	EPA 625	6/21/16	6/27/16	
4,6-Dinitro-2-methylphenol	ND	ug/L	10	EPA 625	6/21/16	6/27/16	
4-Bromophenyl phenyl ether	ND	ug/L	5	EPA 625	6/21/16	6/27/16	

## Certificate of Analysis

**Pacificorp - Huntington Plant**  
**Chuck Sembroski**  
**P.O. Box 680**  
**Huntington, UT 84528**

PO#: **3000116067**  
Receipt: **6/17/16 14:52 @ 10.60 °C**  
Date Reported: **7/6/2016**  
Project Name: **Deer Creek Mine 11th-17th West**

Sample ID: **Deer Creek Mine 11th-17th West (cont.)**

Matrix: **Water**

Lab ID: **16F0973-01**

Date Sampled: **6/17/16 10:21**

Sampled By: **Chuck Sembroski**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Minimum Reporting Limit</u>	<u>Method</u>	<u>Preparation Date/Time</u>	<u>Analysis Date/Time</u>	<u>Flag(s)</u>
<b>Semi-Volatile Compounds (cont.)</b>							
4-Chloro-3-methylphenol	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
4-Chlorophenyl Phenyl Ether	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
4-Nitrophenol	ND	ug/L	10	EPA 625	6/21/16	6/27/16	
Acenaphthene	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
Acenaphthylene	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
Anthracene	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
Azobenzene	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
Benidine	ND	ug/L	10	EPA 625	6/21/16	6/27/16	
Benzo (a) anthracene	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
Benzo (a) pyrene	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
Benzo (b) fluoranthene	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
Benzo (g,h,i) perylene	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
Benzo (k) fluoranthene	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
Bis (2-chloroethoxy) Methane	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
Bis (2-chloroethyl) Ether	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
Bis (2-chloroisopropyl) Ether	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
Bis (2-ethylhexyl) Phthalate	ND	ug/L	10	EPA 625	6/21/16	6/27/16	
Butylbenzylphthalate	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
Chrysene	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
Dibenzo (a,h) anthracene	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
Diethylphthalate	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
Dimethyl phthalate	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
Di-n-butylphthalate	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
Di-n-Octylphthalate	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
Fluoranthene	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
Fluorene	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
Hexachlorobenzene	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
Hexachlorobutadiene	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
Hexachlorocyclopentadiene	ND	ug/L	10	EPA 625	6/21/16	6/27/16	
Hexachloroethane	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
Indeno (1,2,3-cd) pyrene	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
Isophorone	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
Naphthalene	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
Nitrobenzene	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
N-Nitrosodimethylamine	ND	ug/L	10	EPA 625	6/21/16	6/27/16	
N-Nitrosodi-n-propylamine	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
N-Nitrosodiphenylamine	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
Pentachlorophenol	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
Phenanthrene	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
Phenol	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
Pyrene	ND	ug/L	5	EPA 625	6/21/16	6/27/16	
<b>Volatile Organic Compounds</b>							
1,1,1,2-Tetrachloroethane	ND	ug/L	5	EPA 624	6/20/16	6/20/16	

## Certificate of Analysis

Pacificorp - Huntington Plant  
Chuck Sembroski  
P.O. Box 680  
Huntington, UT 84528

PO#: 3000116067  
Receipt: 6/17/16 14:52 @ 10.60 °C  
Date Reported: 7/6/2016  
Project Name: Deer Creek Mine 11th-17th West

Sample ID: Deer Creek Mine 11th-17th West (cont.)

Matrix: Water

Lab ID: 16F0973-01

Date Sampled: 6/17/16 10:21

Sampled By: Chuck Sembroski

Parameter	Result	Units	Minimum Reporting Limit	Method	Preparation Date/Time	Analysis Date/Time	Flag(s)
<b>Volatile Organic Compounds (cont.)</b>							
1,1,1-Trichloroethane	ND	ug/L	5	EPA 624	6/20/16	6/20/16	
1,1,2-Trichloroethane	ND	ug/L	5	EPA 624	6/20/16	6/20/16	
1,1-Dichloroethane	ND	ug/L	5	EPA 624	6/20/16	6/20/16	
1,1-Dichloroethene	ND	ug/L	5	EPA 624	6/20/16	6/20/16	
1,2-Dichlorobenzene	ND	ug/L	5	EPA 624	6/20/16	6/20/16	
1,2-Dichloroethane	ND	ug/L	5	EPA 624	6/20/16	6/20/16	
1,2-Dichloropropane	ND	ug/L	5	EPA 624	6/20/16	6/20/16	
1,3-Dichlorobenzene	ND	ug/L	5	EPA 624	6/20/16	6/20/16	
1,4-Dichlorobenzene	ND	ug/L	5	EPA 624	6/20/16	6/20/16	
2-Chloroethyl vinyl ether	ND	ug/L	5	EPA 624	6/20/16	6/20/16	
Acrolein	ND	ug/L	100	EPA 624	6/20/16	6/20/16	
Acrylonitrile	ND	ug/L	50	EPA 624	6/20/16	6/20/16	
Benzene	ND	ug/L	5	EPA 624	6/20/16	6/20/16	
Bromodichloromethane	ND	ug/L	5	EPA 624	6/20/16	6/20/16	
Bromoform	ND	ug/L	5	EPA 624	6/20/16	6/20/16	
Bromomethane	ND	ug/L	5	EPA 624	6/20/16	6/20/16	
Carbon Tetrachloride	ND	ug/L	5	EPA 624	6/20/16	6/20/16	
Chlorobenzene	ND	ug/L	5	EPA 624	6/20/16	6/20/16	
Chloroethane	ND	ug/L	5	EPA 624	6/20/16	6/20/16	
Chloroform	ND	ug/L	5	EPA 624	6/20/16	6/20/16	
Chloromethane	ND	ug/L	5	EPA 624	6/20/16	6/20/16	
cis-1,3-Dichloropropene	ND	ug/L	5	EPA 624	6/20/16	6/20/16	
Dibromochloromethane	ND	ug/L	5	EPA 624	6/20/16	6/20/16	
Ethylbenzene	ND	ug/L	5	EPA 624	6/20/16	6/20/16	
Methylene Chloride	ND	ug/L	5	EPA 624	6/20/16	6/20/16	
Tetrachloroethene	ND	ug/L	5	EPA 624	6/20/16	6/20/16	
Toluene	ND	ug/L	5	EPA 624	6/20/16	6/20/16	
trans-1,2-Dichloroethene	ND	ug/L	5	EPA 624	6/20/16	6/20/16	
trans-1,3-Dichloropropene	ND	ug/L	5	EPA 624	6/20/16	6/20/16	
Trichloroethene	ND	ug/L	5	EPA 624	6/20/16	6/20/16	
Vinyl Chloride	ND	ug/L	5	EPA 624	6/20/16	6/20/16	



# Chemtech-Ford Laboratories

Serving the Intermountain West Since 1953

9632 South 500 West  
Sandy, UT 84070  
O:(801) 262-7299 F: (866) 792-0093  
[www.ChemtechFord.com](http://www.ChemtechFord.com)



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## Certificate of Analysis

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Pacificorp - Huntington Plant  
Chuck Sembroski  
P.O. Box 680  
Huntington, UT 84528

PO#: 3000116067  
Receipt: 6/17/16 14:52 @ 10.60 °C  
Date Reported: 7/6/2016  
Project Name: Deer Creek Mine 11th-17th West

---

## Report Footnotes

### Abbreviations

ND = Not detected at the corresponding Minimum Reporting Limit (MRL).

1 mg/L = one milligram per liter or 1 mg/kg = one milligram per kilogram = 1 part per million.

1 ug/L = one microgram per liter or 1 ug/kg = one microgram per kilogram = 1 part per billion.

1 ng/L = one nanogram per liter or 1 ng/kg = one nanogram per kilogram = 1 part per trillion.

**CHEMTECH - FORD ANALYTICAL LABORATORY**

**CHAIN OF CUSTODY**

COMPANY: PACIFICORP - INTERWEST MINING COMPANY  
 ADDRESS: P.O. BOX 310 15 NORTH MAIN  
 CITY/STATE/ZIP: HUNTINGTON, UT 84528  
 PHONE #: 435-687-4720 FAX: 435-687-2695  
 CONTACT: CHUCK SEMBORSKI PROJECT: DEER CREEK MINE 11<sup>TH</sup>-17<sup>TH</sup> WEST  
 EMAIL: CHUCK.SEMBORSKI@PACIFICORP.COM

BILLING ADDRESS: 15 North Main Street  
 BILLING CITY/STATE/ZIP: Huntington UT 84528  
 PURCHASE ORDER #: 3000116067



TURNAROUND REQUIRED: \* July 1, 2016

\* Expedited turnaround subject to additional charge

Lab Use Only	CLIENT SAMPLE INFORMATION				
	LOCATION / IDENTIFICATION	DATE	TIME	MATRIX	Field: Residual Chlorine
E0973 -01	1. DEER CREEK MINE @ 11 <sup>TH</sup> -17 <sup>TH</sup> WEST	6/17/16	10:21		
	3.				
	4.				
	5.				
	6.				
	7.				
	8.				
	9.				
	10.				

TESTS REQUESTED										Bacteria			
										Total Coliform + E. coli (Present/Absent)	Total Coliform + E. coli (Enumerated)	HPC (Plate Count)	E. Coli Only
SEE ATTACHED SHEET													

Sampled by: (print) CHUCK SEMBORSKI Sampled by: (signature) [Signature]

**ON ICE** NOT ON ICE Temp (C°): 10.6

Special Instructions:

Samples received outside the EPA recommended temperature range of 0-6 C° may be rejected.

Relinquished by: (signature) [Signature]  
 Relinquished by: (signature) [Signature]  
 Relinquished by: (signature) [Signature]

Date/Time 6/17/16 @ 11:25  
 Date/Time 6/17/16 @ 14:52  
 Date/Time

Received by: (signature) [Signature]  
 Received by: (signature) [Signature]  
 Received by: (signature) [Signature]

Date/Time 6/17/16 11:25am  
 Date/Time 6-17-16 14:52  
 Date/Time

CHEMTECH-FORD  
 9632 South 500 West  
 Sandy, UT 84070  
 801.262.7299 PHONE  
 866.792.0093 FAX  
 www.chemtechford.com

Payment Terms are net 30 days OAC. 1.5% interest charge per month (18% per annum). Client agrees to pay collection costs and attorney's fees.

## Priority Pollutant List

Priority Pollutants are a set of chemical pollutants we regulate, and for which we have developed analytical test methods. The current list of 126 Priority Pollutants, shown below, can also be found at 40 CFR Part 423, Appendix A.

These are not the only pollutants regulated in Clean Water Act programs. The list is an important starting point for EPA to consider, for example, in developing national discharge standards (such as Effluent Guidelines) or in national permitting programs (such as NPDES).

1. Acenaphthene
2. Acrolein
3. Acrylonitrile
4. Benzene
5. Benzidine
6. Carbon tetrachloride
7. Chlorobenzene
8. 1,2,4-trichlorobenzene
9. Hexachlorobenzene
10. 1,2-dichloroethane
11. 1,1,1-trichloroethane
12. Hexachloroethane
13. 1,1-dichloroethane
14. 1,1,2-trichloroethane
15. 1,1,2,2-tetrachloroethane
16. Chloroethane
17. (Removed)
18. Bis(2-chloroethyl) ether
19. 2-chloroethyl vinyl ethers
20. 2-chloronaphthalene
21. 2,4,6-trichlorophenol
22. Parachlorometa cresol
23. Chloroform
24. 2-chlorophenol
25. 1,2-dichlorobenzene
26. 1,3-dichlorobenzene
27. 1,4-dichlorobenzene
28. 3,3-dichlorobenzidine
29. 1,1-dichloroethylene
30. 1,2-trans-dichloroethylene
31. 2,4-dichlorophenol
32. 1,2-dichloropropane
33. 1,3-dichloropropylene
34. 2,4-dimethylphenol
35. 2,4-dinitrotoluene
36. 2,6-dinitrotoluene
37. 1,2-diphenylhydrazine
38. Ethylbenzene
39. Fluoranthene
40. 4-chlorophenyl phenyl ether
41. 4-bromophenyl phenyl ether
42. Bis(2-chloroisopropyl) ether
43. Bis(2-chloroethoxy) methane
44. Methylene chloride
45. Methyl chloride
46. Methyl bromide
47. Bromoform
48. Dichlorobromomethane
49. (Removed)
50. (Removed)
51. Chlorodibromomethane
52. Hexachlorobutadiene
53. Hexachlorocyclopentadiene
54. Isophorone
55. Naphthalene
56. Nitrobenzene
57. 2-nitrophenol
58. 4-nitrophenol
59. 2,4-dinitrophenol
60. 4,6-dinitro-o-cresol
61. N-nitrosodimethylamine
62. N-nitrosodiphenylamine
63. N-nitrosodi-n-propylamine
64. Pentachlorophenol
65. Phenol
66. Bis(2-ethylhexyl) phthalate
67. Butyl benzyl phthalate
68. Di-N-Butyl Phthalate

- |                              |  |
|------------------------------|--|
| 69. Di-n-octyl phthalate     | 100. Heptachlor                          |
| 70. Diethyl Phthalate        | 101. Heptachlor epoxide                  |
| 71. Dimethyl phthalate       | 102. Alpha-BHC                           |
| 72. Benzo(a) anthracene      | 103. Beta-BHC                            |
| 73. Benzo(a) pyrene          | 104. Gamma-BHC                           |
| 74. Benzo(b) fluoranthene    | 105. Delta-BHC                           |
| 75. Benzo(k) fluoranthene    | <del>106. PCB-1242 (Arochlor 1242)</del> |
| 76. Chrysene                 | <del>107. PCB-1254 (Arochlor 1254)</del> |
| 77. Accnaphthylene           | <del>108. PCB-1221 (Arochlor 1221)</del> |
| 78. Anthracene               | <del>109. PCB-1232 (Arochlor 1232)</del> |
| 79. Benzo(ghi) perylene      | <del>110. PCB-1248 (Arochlor 1248)</del> |
| 80. Fluorene                 | <del>111. PCB-1260 (Arochlor 1260)</del> |
| 81. Phenanthrene             | <del>112. PCB-1016 (Arochlor 1016)</del> |
| 82. Dibenzo(h) anthracene    | 113. Toxaphene                           |
| 83. Indeno (1,2,3-cd) pyrene | <del>114. Antimony</del>                 |
| 84. Pyrene                   | 115. Arsenic                             |
| 85. Tetrachloroethylene      | <del>116. Asbestos</del>                 |
| 86. Toluene                  | <del>117. Beryllium</del>                |
| 87. Trichloroethylene        | <del>118. Cadmium</del>                  |
| 88. Vinyl chloride           | <del>119. Chromium</del>                 |
| 89. Aldrin                   | <del>120. Copper</del>                   |
| 90. Dieldrin                 | <del>121. Cyanide, Total</del>           |
| 91. Chlordane                | <del>122. Lead</del>                     |
| 92. 4,4-DDT                  | <del>123. Mercury</del>                  |
| 93. 4,4-DDE                  | <del>124. Nickel</del>                   |
| 94. 4,4-DDD                  | <del>125. Selenium</del>                 |
| 95. Alpha-endosulfan         | <del>126. Silver</del>                   |
| 96. Beta-endosulfan          | <del>127. Thallium</del>                 |
| 97. Endosulfan sulfate       | <del>128. Zinc</del>                     |
| 98. Endrin                   | <del>129. 2,3,7,8 TCDD</del>             |
| 99. Endrin aldehyde          |  |

**Additional Information**

- Toxic and Priority Pollutants Under the Clean Water Act





# Analysis Report

August 16, 2016

**PACIFICORP**  
FIELD OFFICE  
PO BOX 1005  
HUNTINGTON UT 84528

Page 1 of 3

Client Sample ID: 11W-17W SEALS  
Date Sampled: Jul 12, 2016  
Date Received: Jul 12, 2016  
Product Description: WATER

Sample ID By: PacifiCorp  
Sample Taken By: CAS KSF  
Time Received: 1325  
Time Sampled: 1021  
Location: 11W-17W SEALS  
Mine: 4  
Field - pH: 7.66 pH units  
Field - Conductivity: 929 UMHOS/CM  
Field - Temperature: 13.4 DEG. C

Comments: Dissolved Metals Filtered at Lab: Total Selenium 200.8 Analyzed at A.W.A.L.

SGS Minerals Sample ID: 782-1638403-001

TESTS	RESULT	UNIT	METHOD	REPORTING	ANALYZED		
				LIMIT	DATE	TIME	ANALYST
Hardness, mg equivalent CaCO3/L	304	mg/L	SM2340-B	1	2016-07-26	12:00:00	HF
Acidity	<5	mg/L	D1067	5	2016-06-30	15:00:00	MS
Anions	9.48	meq/L	SM1030E	0	2016-07-26	12:00:00	HF
Balance	-2.24	%	SM1030E	-10	2016-07-26	12:00:00	HF
Cations	9.07	meq/L	SM1030E	0	2016-07-26	12:00:00	HF
Alkalinity, mg CaCO3/L (pH 4.5)	362	mg/L	SM2320-B	5	2016-07-19	10:00:05	MS
Bicarbonate Alkalinity as CaCO3	362	mg/L	SM2320-B	5	2016-07-19	10:00:05	MS
Carbonate Alkalinity as CaCO3	<5	mg/L	SM2320-B	5	2016-07-19	10:00:05	MS
Nitrogen, Ammonia	3.9	mg/L	SM4500-B-D	0.1	2016-07-25	07:30:00	MS
pH	7.39		SM4500-H	0.01	2016-07-03	09:00:00	MS
pH Temperature	20.00	°C	SM4500-H	0.01	2016-07-03	09:00:00	MS
Conductivity	842	µmhos/cm	SM2510	0.1	2016-07-21	11:37:32	MS
Total Dissolved Solids	489	mg/L	SM2540-C	30	2016-07-14	14:30:00	MS
Nitrate	<0.05	mg/L	EPA 300.0	0.05	2016-07-13	12:00:00	HF
Nitrite	<0.05	mg/L	EPA 300.0	0.05	2016-07-13	12:00:00	HF
Chloride, Cl	11	mg/L	EPA 300.0	1	2016-07-13	12:00:00	HF
Sulfate, SO4	93	mg/L	EPA 300.0	1	2016-07-13	12:00:00	HF
Ortho-Phosphate-P	<0.05	mg/L	EPA 300.0	0.05	2016-07-13	12:00:00	HF
Mercury, Hg - Total	<0.2	µg/L	EPA 245.1	0.2	2016-08-04	07:00:00	HF

### METALS BY ICP

Lab Supervisor

Domenic Ibanez  
Lab Supervisor

SGS North America Inc. Minerals Services Division  
2035 North Airport Road Huntington UT 84528 t (435) 653-2311 f (435)-653-2436 www.sgs.com/minerals

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August 16, 2016

**PACIFICORP**  
 FIELD OFFICE  
 PO BOX 1005  
 HUNTINGTON UT 84528

Page 2 of 3

Client Sample ID:	11W-17W SEALS	Sample ID By:	PacifiCorp
Date Sampled:	Jul 12, 2016	Sample Taken By:	CAS KSF
Date Received:	Jul 12, 2016	Time Received:	1325
Product Description:	WATER	Time Sampled:	1021
		Location:	11W-17W SEALS
		Mine:	4
		Field - pH:	7.66 pH units
		Field - Conductivity:	929 UMHOS/CM
		Field - Temperature:	13.4 DEG. C

Comments: Dissolved Metals Filtered at Lab: Total Selenium 200.8 Analyzed at A.W.A.L.

SGS Minerals Sample ID: 782-1638403-001

TESTS	RESULT	UNIT	METHOD	REPORTING		ANALYZED	
				LIMIT	DATE	TIME	ANALYST
<b>METALS BY ICP (continued)</b>							
Aluminum, Al - Dissolved	0.04	mg/L	EPA 200.7	0.03	2016-07-19	10:00:00	HF
Arsenic, As - Dissolved	<0.01	mg/L	EPA 200.7	0.01	2016-07-19	10:00:00	HF
Arsenic, As - Total	<0.01	mg/L	EPA 200.7	0.01	2016-08-03	10:23:19	HF
Boron, B - Total	0.22	mg/L	EPA 200.7	0.01	2016-08-03	10:23:19	HF
Cadmium, Cd - Dissolved	<0.001	mg/L	EPA 200.7	0.001	2016-07-19	10:00:00	HF
Cadmium, Cd - Total	<0.001	mg/L	EPA 200.7	0.001	2016-08-03	10:23:19	HF
Calcium, Ca - Dissolved	57.96	mg/L	EPA 200.7	0.03	2016-07-19	10:00:00	HF
Chromium, Cr - Total	0.005	mg/L	EPA 200.7	0.001	2016-08-03	10:23:19	HF
Copper, Cu - Dissolved	<0.01	mg/L	EPA 200.7	0.01	2016-07-19	10:00:00	HF
Copper, Cu - Total	<0.01	mg/L	EPA 200.7	0.01	2016-07-14	13:00:00	HF
Iron, Fe - Total	1.35	mg/L	EPA 200.7	0.05	2016-07-14	13:00:00	HF
Iron, Fe - Dissolved	<0.03	mg/L	EPA 200.7	0.03	2016-07-19	10:00:00	HF
Lead, Pb - Dissolved	<0.01	mg/L	EPA 200.7	0.01	2016-07-19	10:00:00	HF
Lead, Pb - Total	<0.01	mg/L	EPA 200.7	0.01	2016-07-14	13:00:00	HF
Magnesium, Mg - Dissolved	38.76	mg/L	EPA 200.7	0.01	2016-07-19	10:00:00	HF
Manganese, Mn - Total	0.020	mg/L	EPA 200.7	0.002	2016-07-14	13:00:00	HF
Manganese, Mn - Dissolved	0.018	mg/L	EPA 200.7	0.002	2016-07-19	10:00:00	HF
Molybdenum, Mo - Dissolved	0.011	mg/L	EPA 200.7	0.005	2016-07-19	10:00:00	HF
Nickel, Ni - Total	0.037	mg/L	EPA 200.7	0.001	2016-07-14	13:00:00	HF
Potassium, K - Dissolved	10.40	mg/L	EPA 200.7	0.14	2016-07-19	10:00:00	HF

  
 Lab Supervisor

Domenic Ibanez  
 Lab Supervisor

SGS North America Inc. | Minerals Services Division  
 2035 North Airport Road Huntington UT 84528 t (435) 653-2311 f (435)-653-2436 www.sgs.com/minerals

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# Analysis Report

August 16, 2016

**PACIFICORP**  
FIELD OFFICE  
PO BOX 1005  
HUNTINGTON UT 84528

Page 3 of 3

Client Sample ID:	11W-17W SEALS	Sample ID By:	PacifiCorp
Date Sampled:	Jul 12, 2016	Sample Taken By:	CAS KSF
Date Received:	Jul 12, 2016	Time Received:	1325
Product Description:	WATER	Time Sampled:	1021
		Location:	11W-17W SEALS
		Mine:	4
		Field - pH:	7.66 pH units
		Field - Conductivity:	929 UMHOS/CM
		Field - Temperature:	13.4 DEG. C

Comments: Dissolved Metals Filtered at Lab: Total Selenium 200.8 Analyzed at A.W.A.L.

SGS Minerals Sample ID: 782-1638403-001

TESTS	RESULT	UNIT	METHOD	REPORTING	ANALYZED		
				LIMIT	DATE	TIME	ANALYST
<b>METALS BY ICP (continued)</b>							
Selenium, Se - Total	<0.02	mg/L	EPA 200.7	0.02	2016-07-14	13:00:00	HF
Selenium, Se - Total	<0.002	mg/L	EPA 200.8	0.002	2016-08-05	13:24:00	DI
Silver, Ag - Total	<0.002	mg/L	EPA 200.7	0.002	2016-08-04	06:00:00	HF
Sodium, Na - Dissolved	62.50	mg/L	EPA 200.7	0.09	2016-07-19	10:00:00	HF
Zinc, Zn - Dissolved	<0.004	mg/L	EPA 200.7	0.004	2016-07-19	10:00:00	HF
Zinc, Zn - Total	<0.004	mg/L	EPA 200.7	0.004	2016-07-14	13:00:00	HF



Lab Supervisor

Domenic Ibanez  
Lab Supervisor

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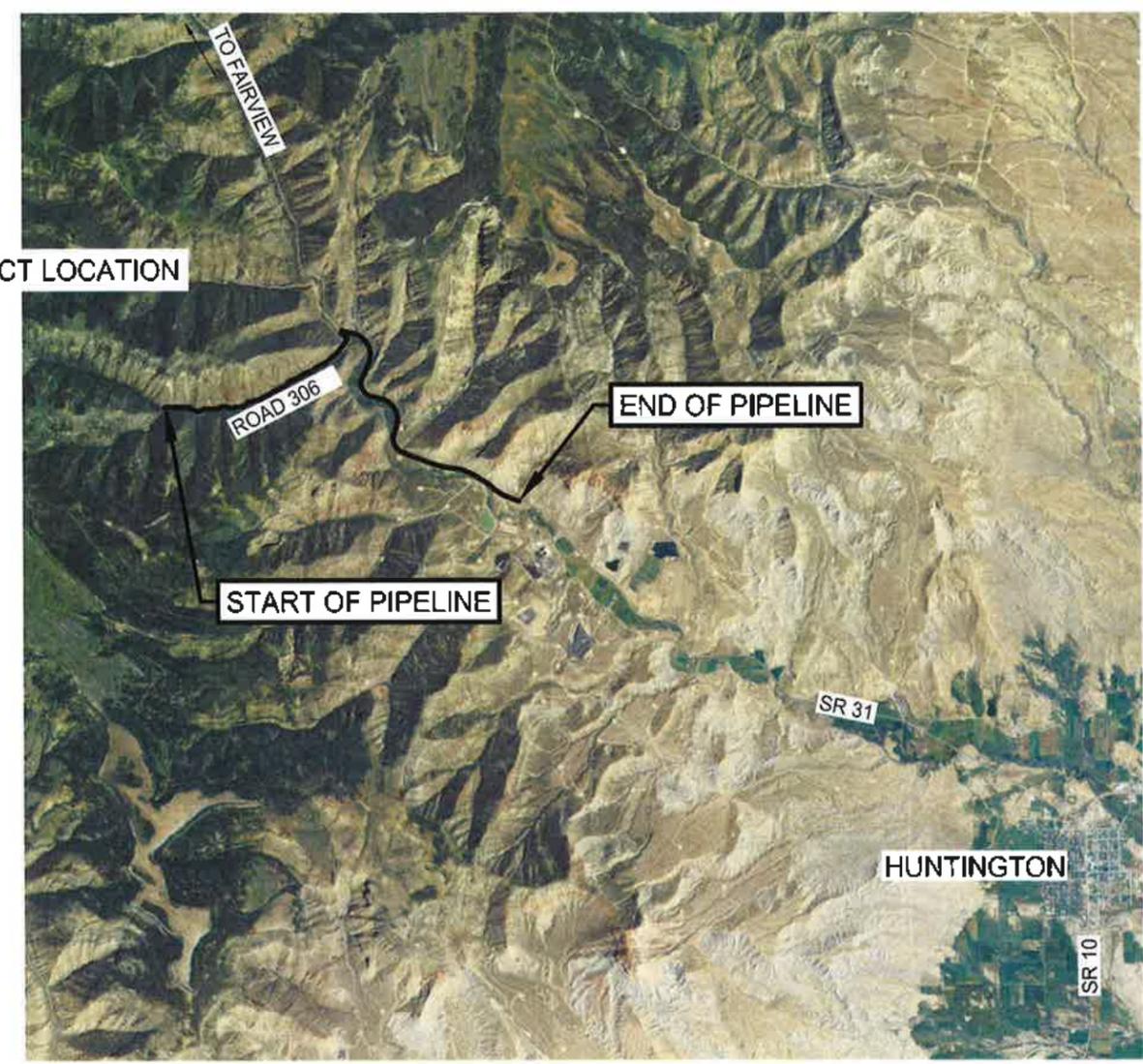
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**Attachment F. Plan Set (Engineered Drawings)**

# INTERWEST MINING COMPANY DEER CREEK MINE WATER RELIEF PIPELINE RILDA CANYON 2016

PROJECT NO.	SHEET NO.
1506-121	1



## APPROVAL

RECOMMENDED FOR APPROVAL:	
ENGINEER	DATE
APPROVED:	
INTERWEST MINING COMPANY	DATE

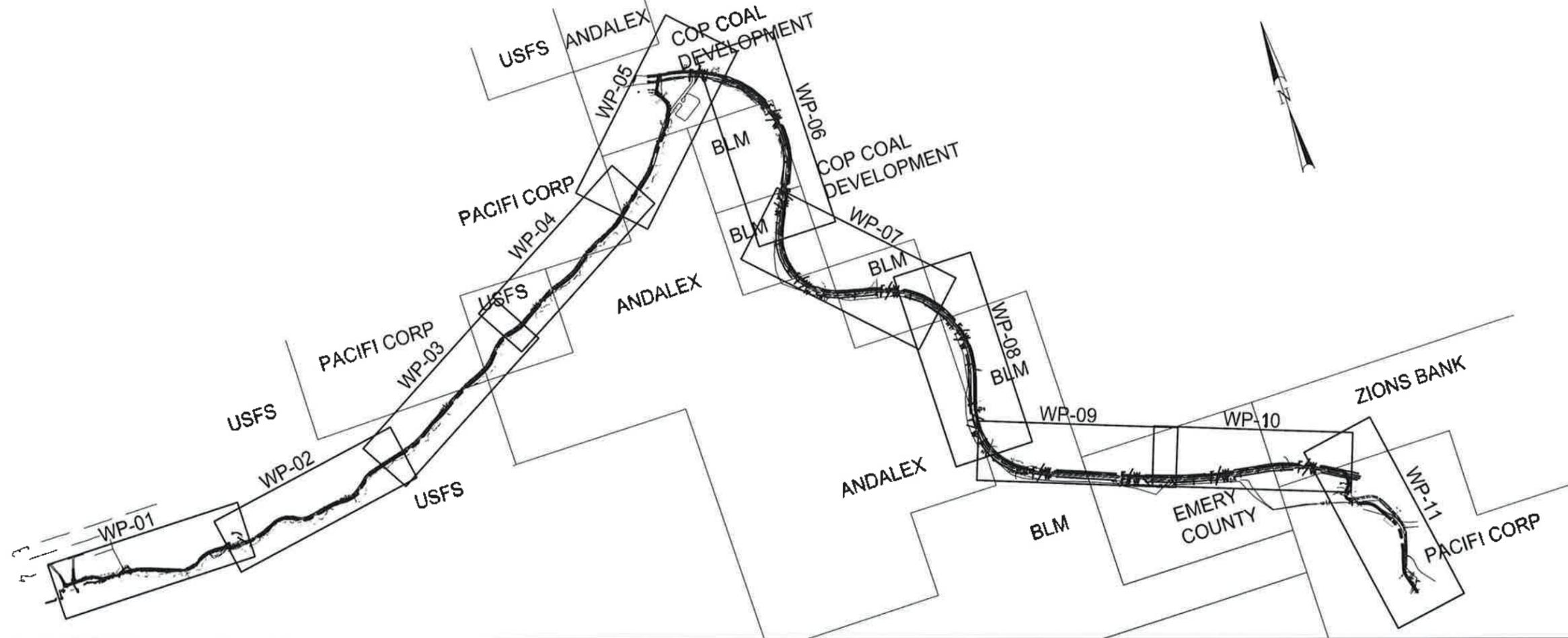
PRELIMINARY  
SUBJECT TO REVISIONS

VICINITY MAP



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GIS - ENVIRONMENTAL  
- infrastructure professionals -  
1.800.748.5275 www.jonesanddemille.com

# INDEX TO SHEETS



## INDEX

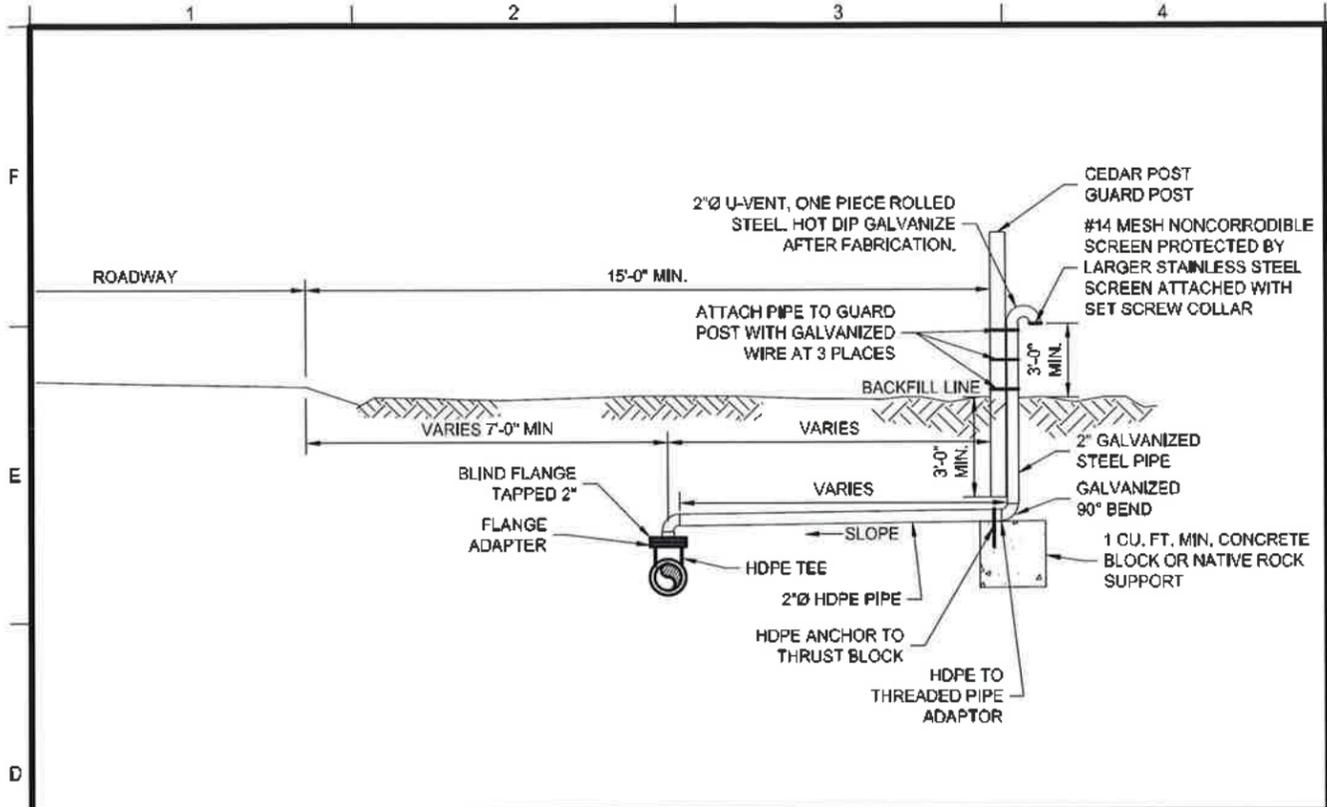
SHEET NO.	DESCRIPTION
1	TITLE
1A	INDEX TO SHEETS
1B	LEGEND
DT-01 to DT-11	DETAIL SHEETS
WP-01 to WP-11	WATER PLAN & PROFILE SHEETS
SP-01 to SP-03	SITE PLAN SHEETS

**PRELIMINARY  
SUBJECT TO REVISIONS**

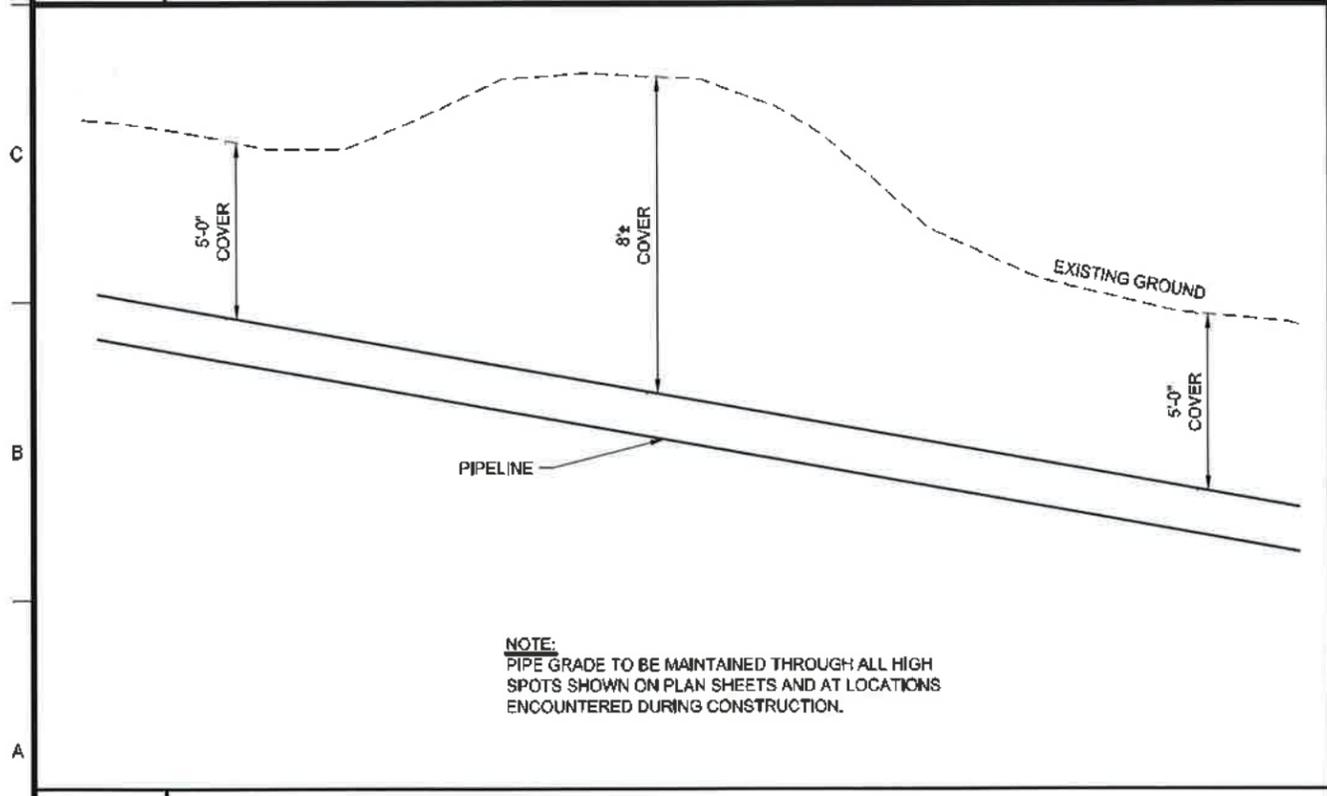
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 GIS - ENVIRONMENTAL  
 1.800.746.5275 www.jonesanddemille.com

INTERWEST MINING COMPANY	DEER CRK MINE WTR RELIEF PIPE	INDEX TO SHEETS	1506-121
EMERY COUNTY	SHEET NO. 1A		
APPROVAL RECORD:	DATE	APPROVED	DATE
PROJECT DESIGN ENGINEER			
DESIGN	15-08	CHECK	CHECK
DRAWN	TT	CHECK	CHECK
DATE		DATE	
REVISIONS	SCALE	NTS	DATE
NO.	DATE	BY	DATE
REVISIONS	SCALE	NTS	DATE
ORIGINAL SUBMISSION FOR AUTHORIZATION	DWG NAME	TRK_L_PIP	DATE
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REMARKS	DWG CREATED	2016/10/06	DATE
	PLotted	9/21/2016	DATE

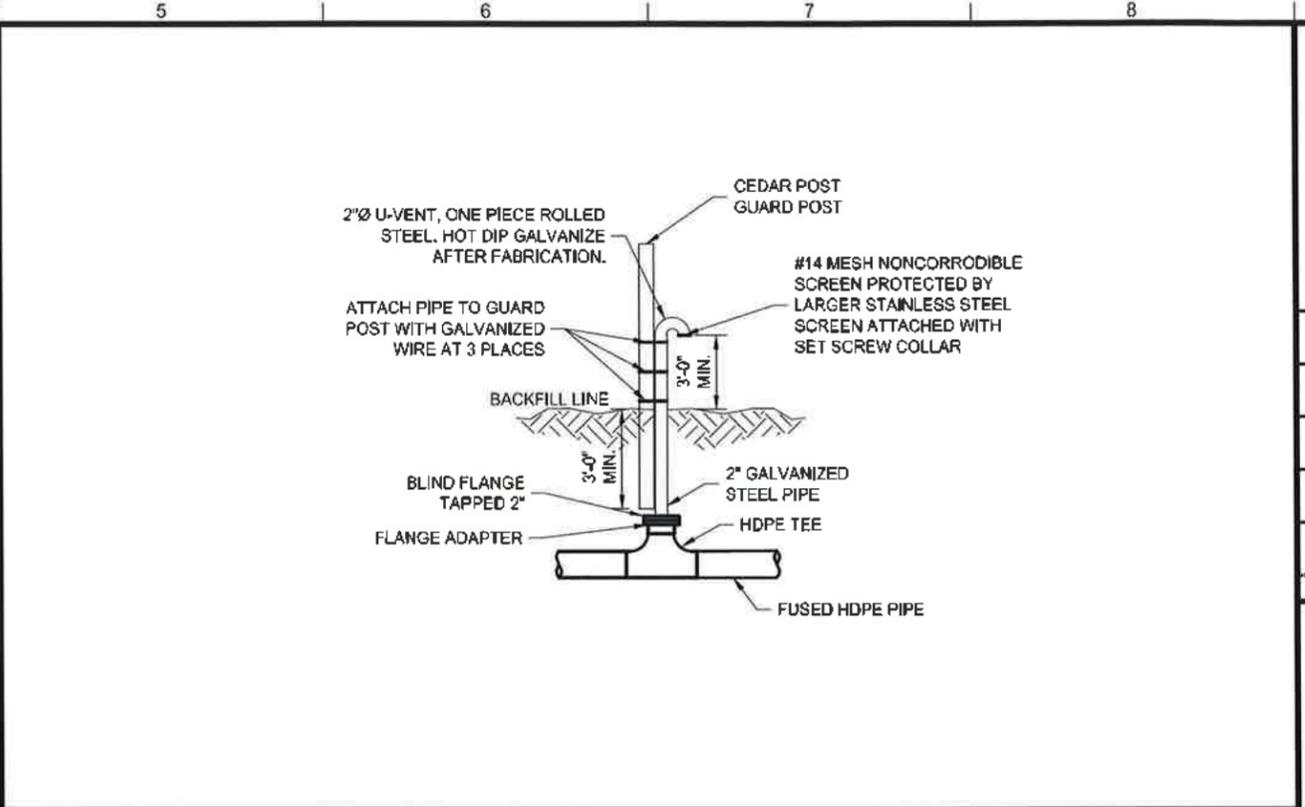




D1 ROADWAY INSTALLATION - GOOSENECK AIR VENT DETAIL  
NTS



A1 PIPE GRADE DETAIL  
NTS

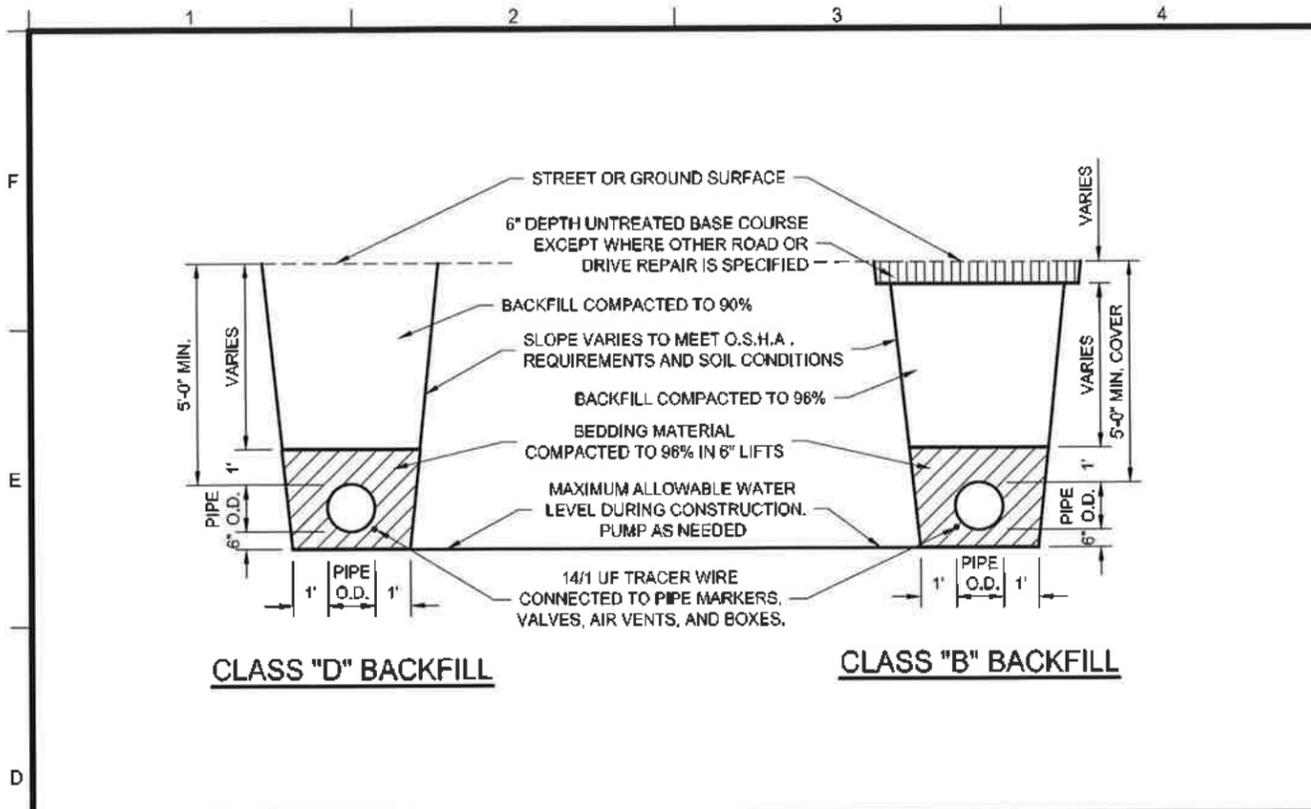


D5 STANDARD INSTALLATION - GOOSENECK AIR VENT DETAIL  
NTS

PRELIMINARY  
SUBJECT TO REVISIONS

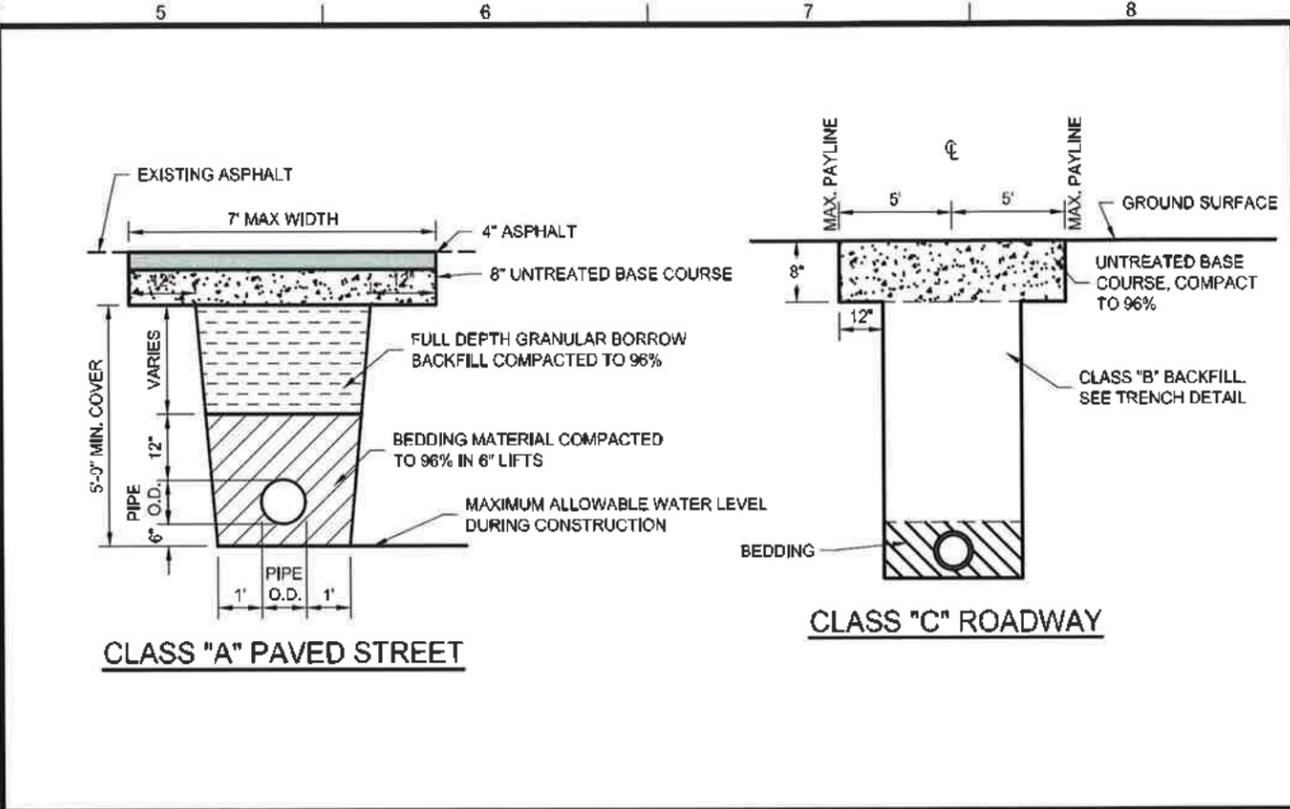
A5 DETAIL NAME  
NTS

<b>INTERWEST MINING COMPANY</b> DEER CRK MINE WTR RELIEF PIPE DETAILS PROJECT NUMBER: 1506-121									
<b>EMERY</b> COUNTY									
SHEET NO. DT-01									
<b>PRELIMINARY SUBJECT TO REVISIONS</b>									
<b>INDEX</b>									
APPROVAL RECORD: _____ DATE: _____ APPROVED: _____ DATE: _____									
DESIGNER: _____ CHECK: _____ DRAWN: TT 08-16 QUANT: _____									
PROJECT ENGINEER: _____ 1,800.748.5275 www.jonesanddemille.com									
<b>Jones &amp; DeMille Engineering, Inc.</b> CIVIL ENGINEERING - SURVEYING - TESTING GIS - ENVIRONMENTAL									
ORIGINAL SUBMISSION FOR AUTHORIZATION REVISIONS: _____ DWS CREATED: 08/09/2016 DWS PLOT: 08/21/2016 SCALE: VARIES SHY SET: #00 PEN TEL: #00									



**CLASS "D" BACKFILL**

**CLASS "B" BACKFILL**



**CLASS "A" PAVED STREET**

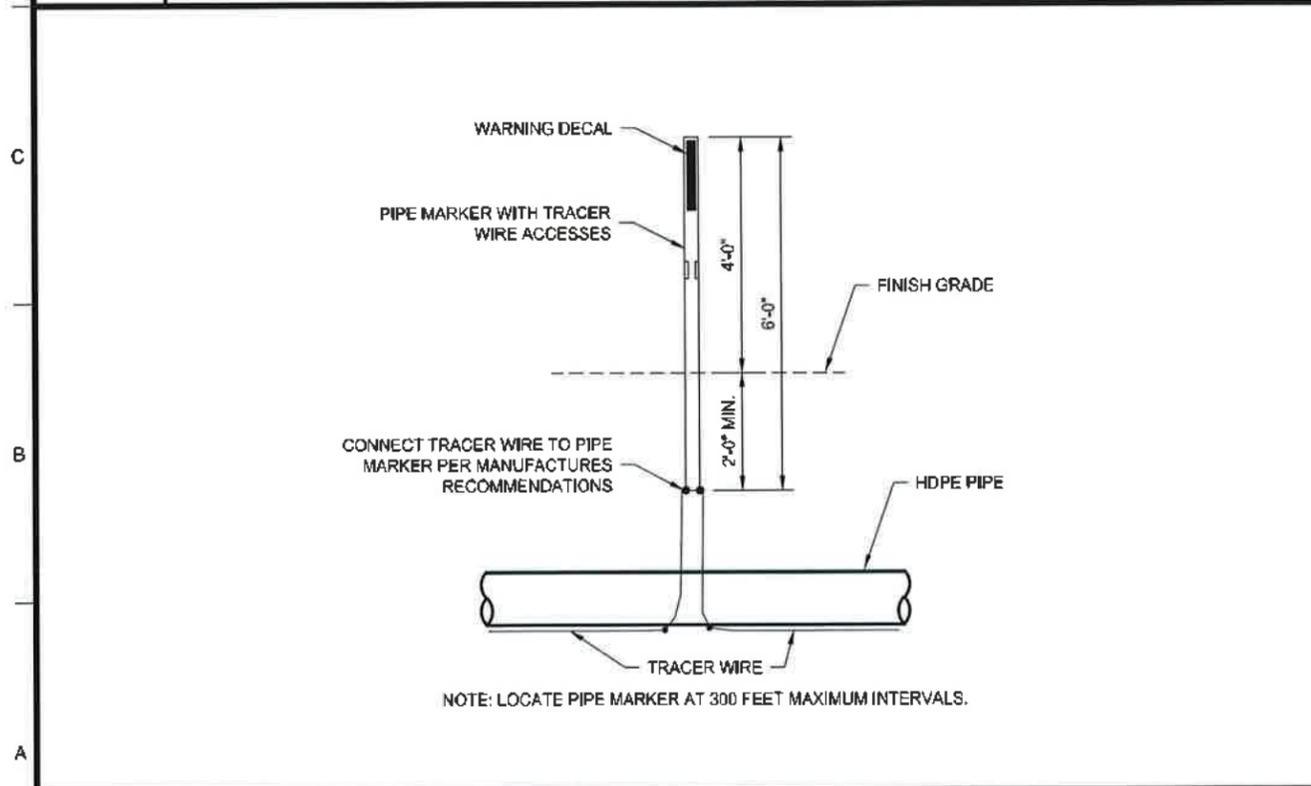
**CLASS "C" ROADWAY**

**D1 WATER TRENCH DETAIL**

NTS

**D5 ROAD REPAIR DETAILS**

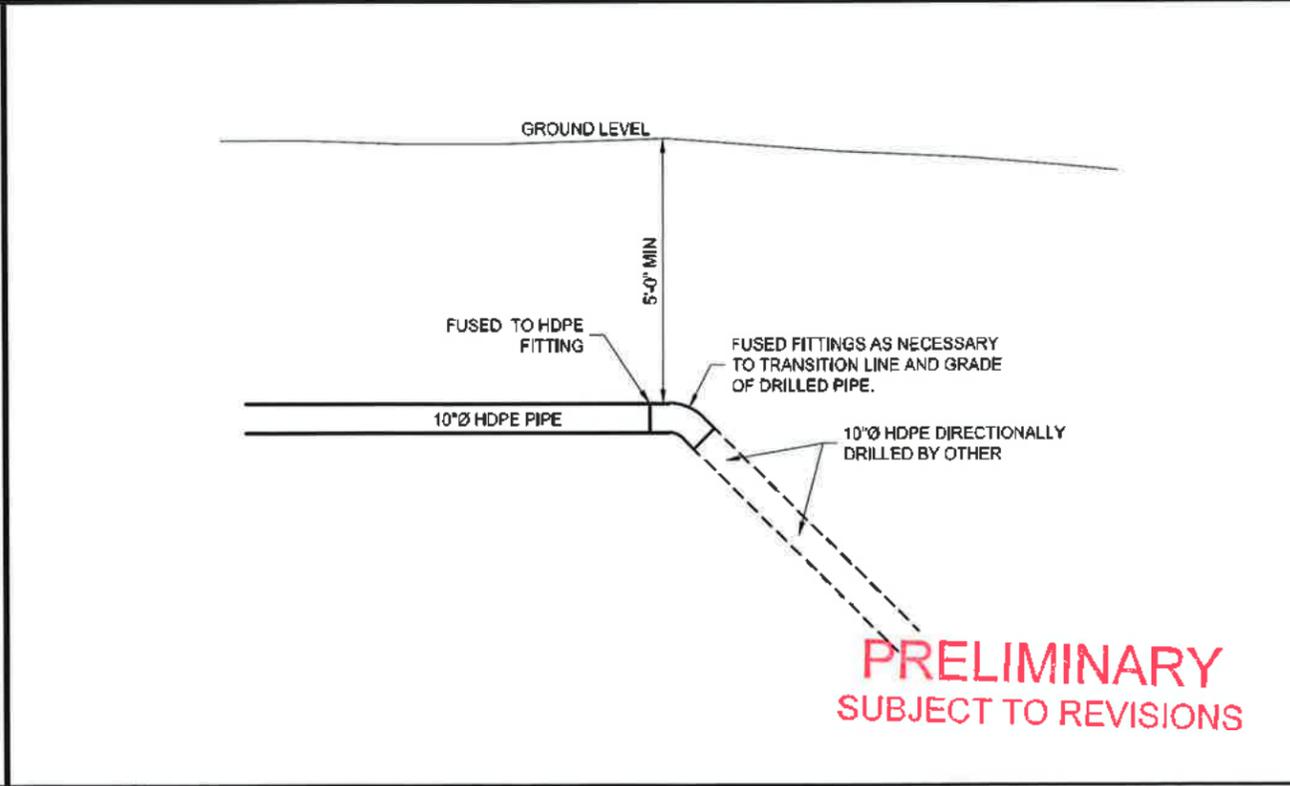
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NOTE: LOCATE PIPE MARKER AT 300 FEET MAXIMUM INTERVALS.

**A1 PIPE MARKER WITH TRACER WIRE**

NTS

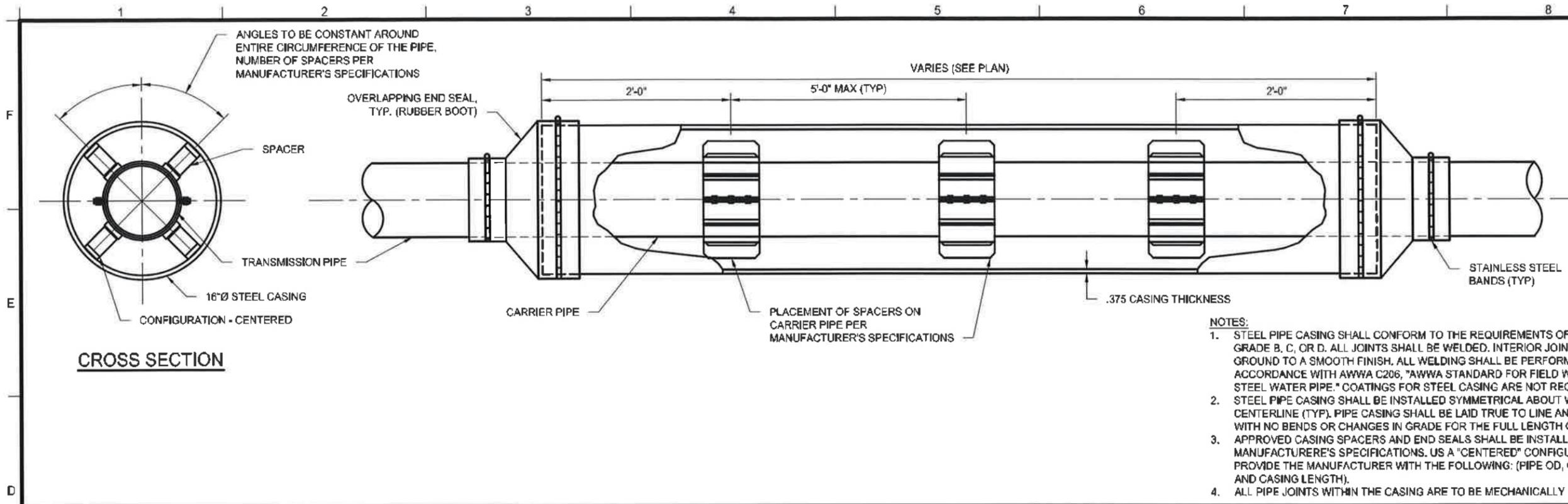


**PRELIMINARY  
SUBJECT TO REVISIONS**

**A5 DIRECTION DRILL CONNECTION**

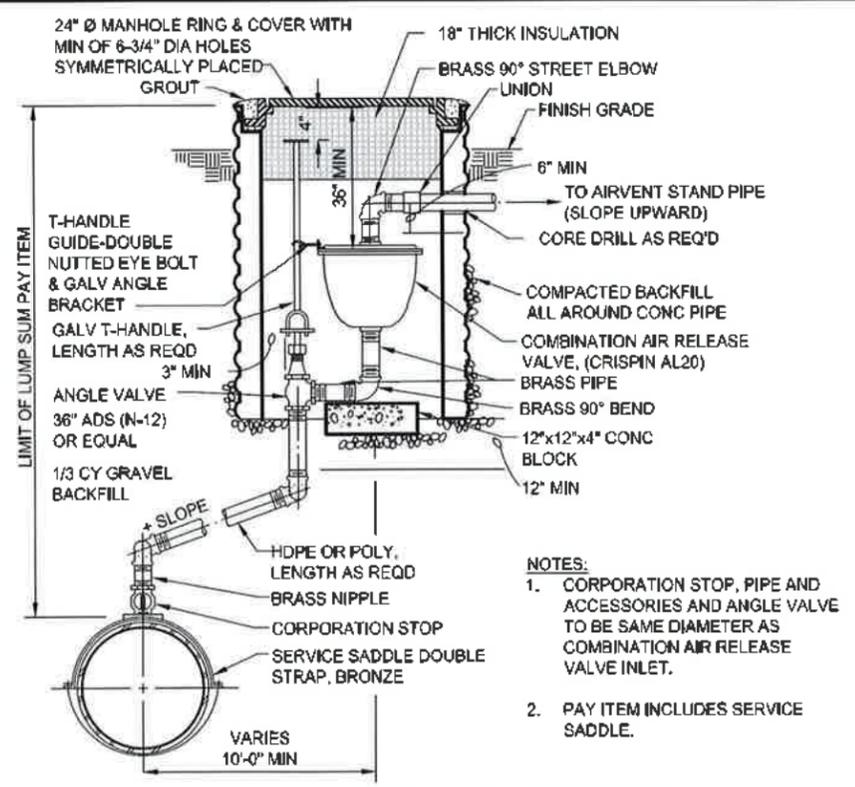
NTS

<p><b>Jones &amp; DeMille Engineering, Inc.</b> CIVIL ENGINEERING - SURVEYING - TESTING GIS - ENVIRONMENTAL 1.800.748.5273 www.jonesanddemille.com</p>		<p>REVISIONS</p> <table border="1"> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>	NO.	DATE	DESCRIPTION						
NO.	DATE	DESCRIPTION									
<p>APPROVAL</p> <table border="1"> <tr> <td>DESIGNER</td> <td>DATE</td> <td>PROJECT DESIGN ENGINEER</td> </tr> <tr> <td>CHECK</td> <td>DATE</td> <td>PROJECT DESIGN ENGINEER</td> </tr> <tr> <td>APPROVED</td> <td>DATE</td> <td>PROJECT DESIGN ENGINEER</td> </tr> </table>		DESIGNER	DATE	PROJECT DESIGN ENGINEER	CHECK	DATE	PROJECT DESIGN ENGINEER	APPROVED	DATE	PROJECT DESIGN ENGINEER	<p>REMARKS</p>
DESIGNER	DATE	PROJECT DESIGN ENGINEER									
CHECK	DATE	PROJECT DESIGN ENGINEER									
APPROVED	DATE	PROJECT DESIGN ENGINEER									
<p>SCALE: VARIES</p>		<p>ORIGINAL SUBMISSION FOR AUTHORIZATION</p>									
<p>PROJECT NUMBER: 1506-121</p>		<p>DATE: 08-16</p>									
<p>INTERWEST MINING COMPANY</p>		<p>DEER CRK MINE WTR RELIEF PIPE</p>									
<p>EMERY COUNTY</p>		<p>DETAILS</p>									
<p>SHEET NO. DT-02</p>		<p>PROJECT NUMBER: 1506-121</p>									



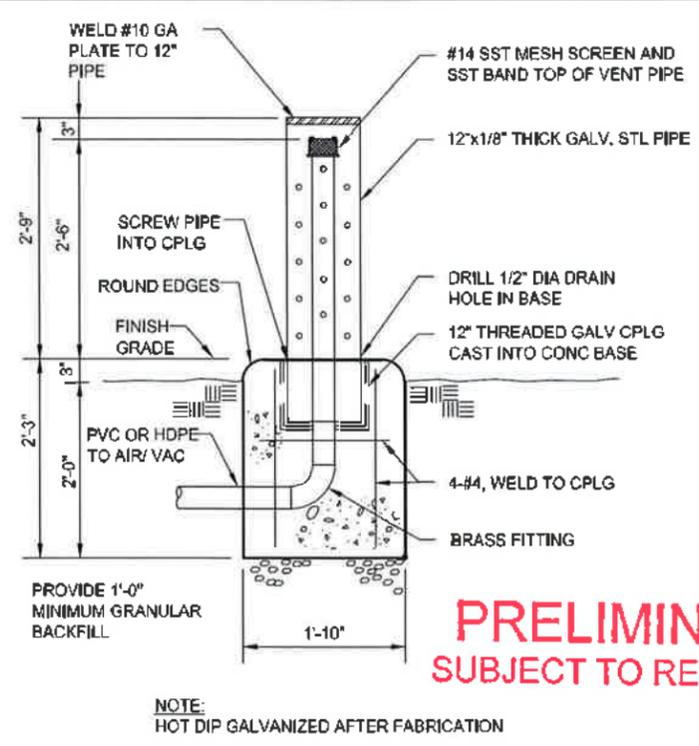
E1 STEEL PIPE CASING DETAIL

NTS



A1 COMBINATION AIR RELEASE VALVE ASSEMBLY DETAIL

NTS



A5 AIR VENT STAND PIPE DETAIL

NTS

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**INTERWEST MINING COMPANY**  
 DEER CRK MINE WTR RELIEF PIPE

**DETAILS**  
 PROJECT NUMBER: 1506-121

**EMERY**  
 COUNTY

SHEET NO. DT-03

NO.	DATE	REVISIONS	BY

APPROVAL: PROJECT DESIGN ENGINEER, DATE: 05-16, CHECK: KJ, DATE: 05-16, CHECK: KJ, DATE: 05-16, CHECK: KJ, DATE: 05-16

REMARKS: ORIGINAL SUBMISSION FOR AUTHORIZATION

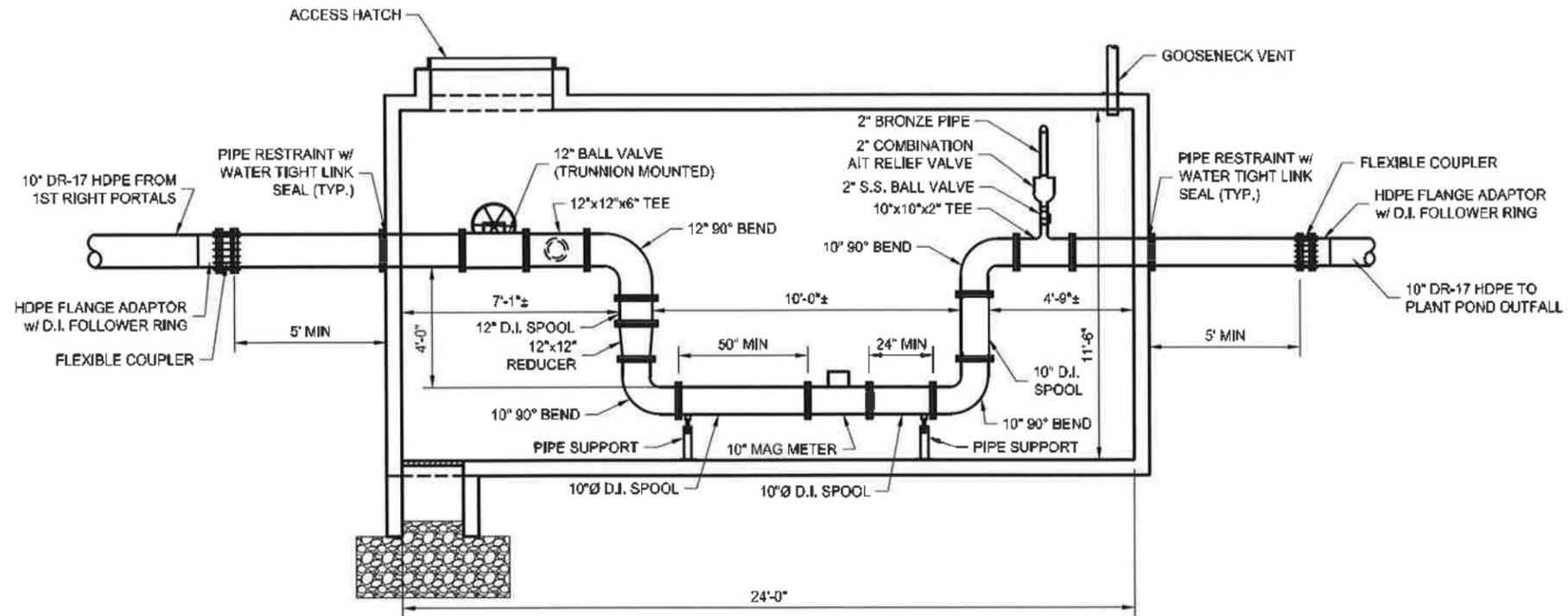
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SCALE: VARIES, PEN TBL:

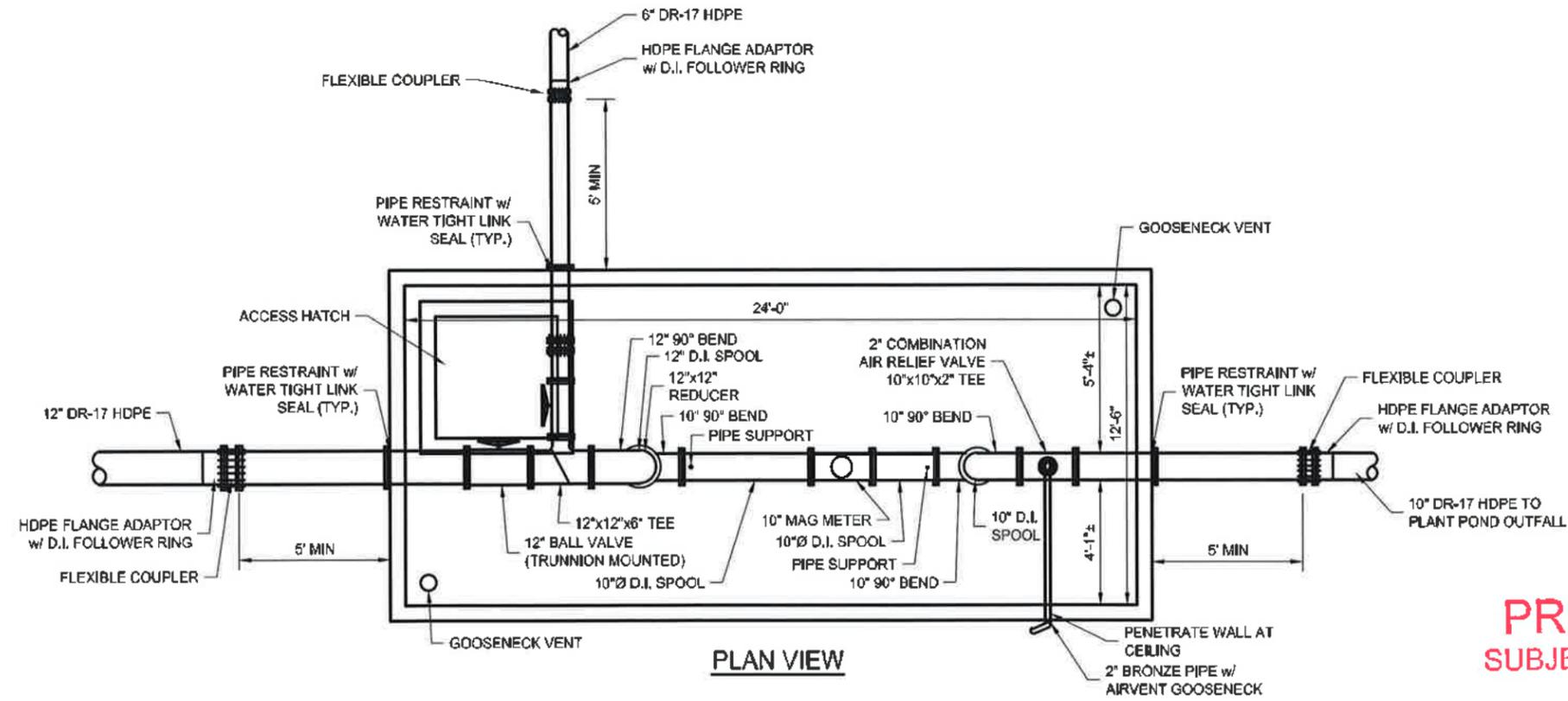








SECTION VIEW



PLAN VIEW

**PRELIMINARY  
SUBJECT TO REVISIONS**

A1 1ST RIGHT PORTAL VAULT PLUMBING (WITH FLOWMETER)

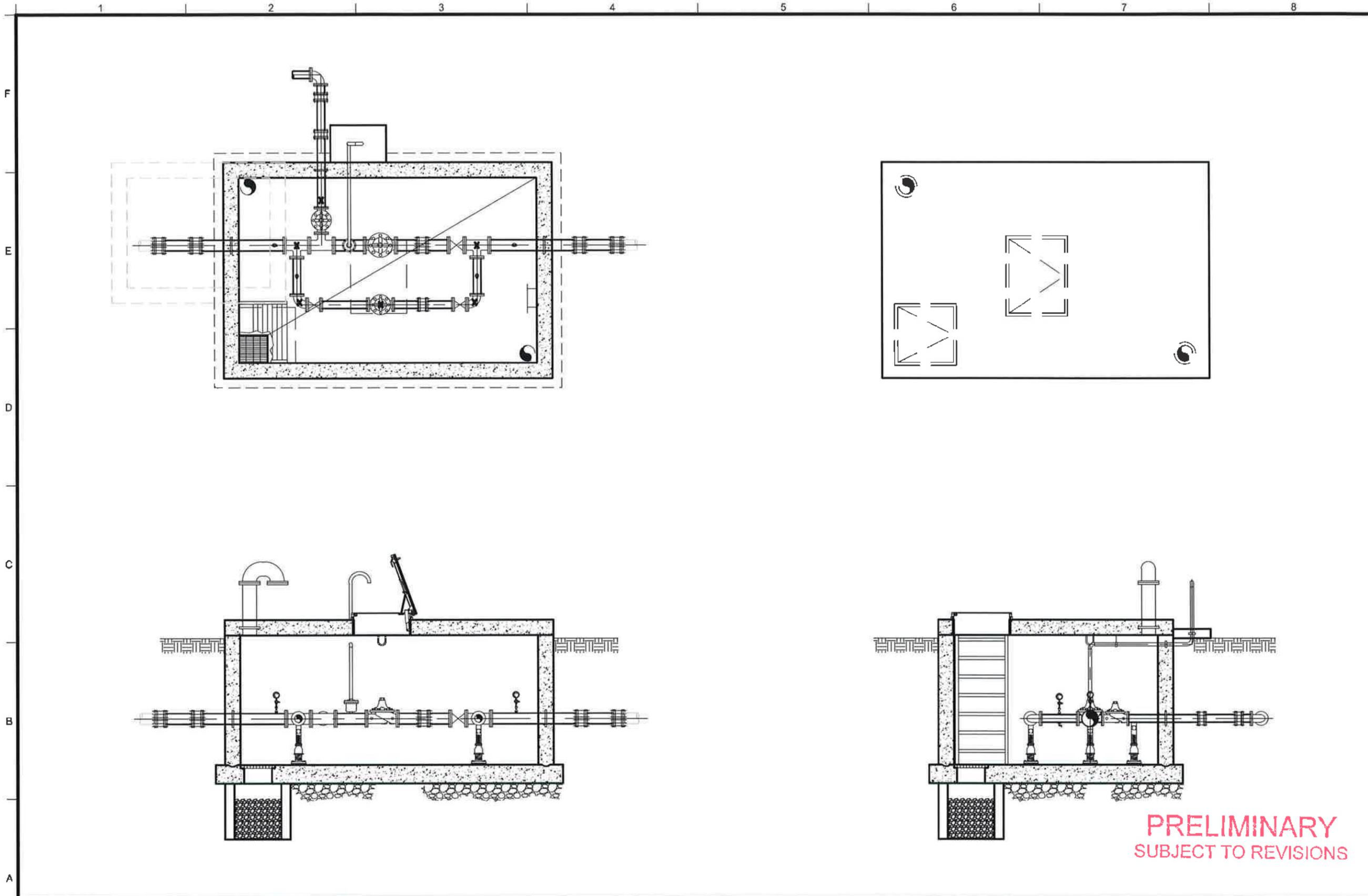
NTS

<p><b>Jones &amp; DeMille Engineering, Inc.</b> CIVIL ENGINEERING - SURVEYING - TESTING 1,800,748,2575 www.jonesanddemille.com</p>		<p>DESIGN: JA 16-08 CHECK: CF 16-09</p> <p>DRAWN: KJ 08-16 CHECK: CF 16-09</p> <p>QUANT: _____ CHECK: _____</p>	<p>REVISIONS</p> <table border="1"> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>	NO.	DATE	DESCRIPTION				<p>DATE: 08/09/2016 DWG. NAME: DR-VAL-PIPE SCALE: VARIES SHT. SET: 8MP PER. TEL: _____ PLotted: 9/12/2016</p>
NO.	DATE	DESCRIPTION								
<p>INTERWEST MINING COMPANY</p>		<p>DEER CRK MINE WTR RELIEF PIPE</p>		<p>PROJECT NUMBER: 1506-121</p>						
<p>EMERY COUNTY</p>		<p>DETAILS</p>		<p>SHEET NO. DT-07</p>						





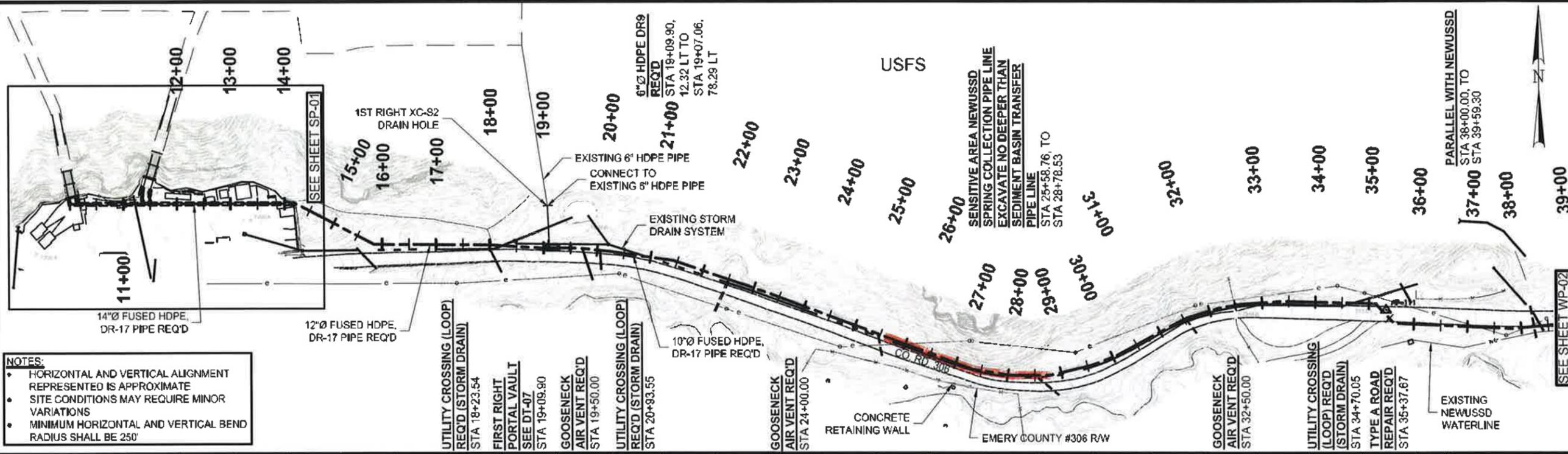




PRELIMINARY  
SUBJECT TO REVISIONS

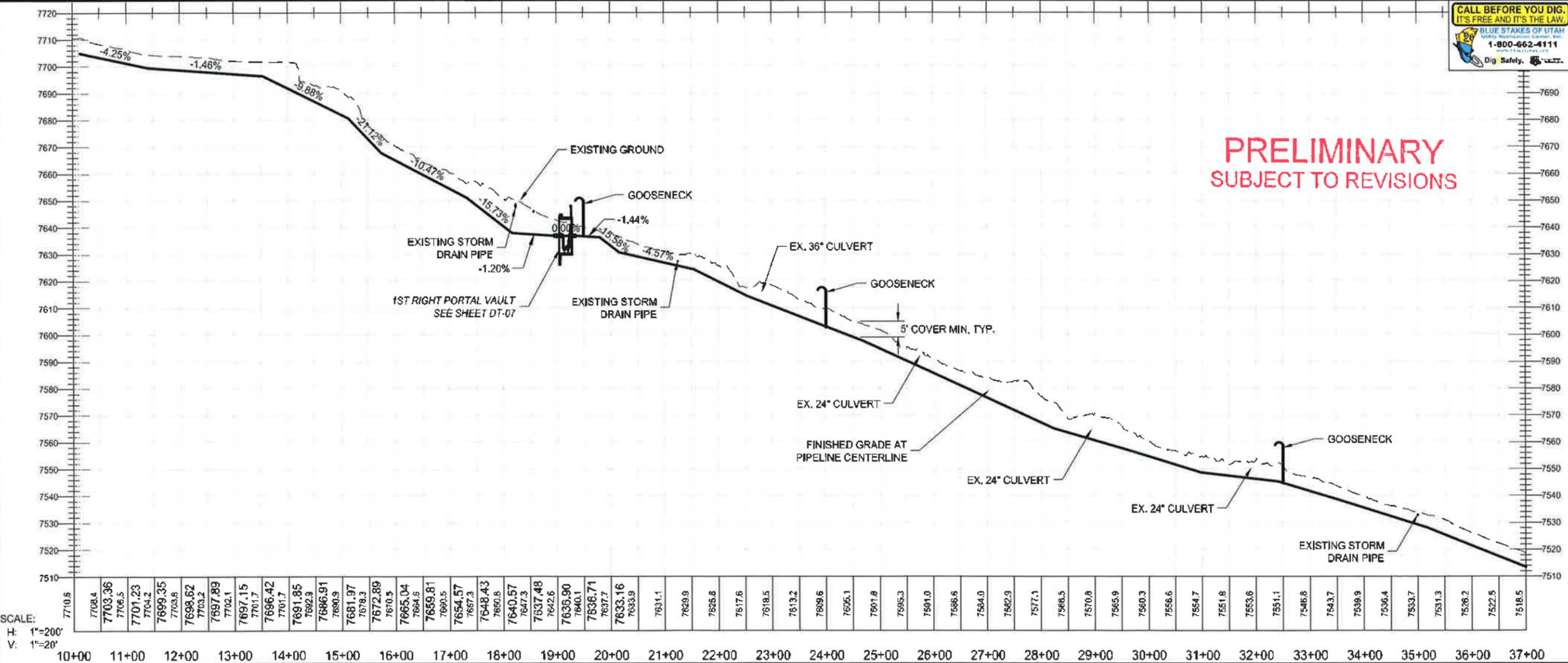
A1	TYPICAL VAULT DETAILS
NTS	

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INTERWEST MINING COMPANY DEER CRK MINE WTR RELIEF PIPE	PROJECT: DEER CRK MINE DATE: _____ DRAWN: KJ 09-16 QUANT: _____ CHECK: _____ DATE: _____ BY: _____
APPROVAL RECORD: _____ APPROVED: _____	REVIEW DATE: _____ BY: _____
REVISIONS NO. DATE DESCRIPTION 1 ORIGINAL SUBMISSION FOR AUTHORIZATION	
SCALE: VARIES DWG NAME: DETAILS.dwg DWG CREATED: 08/09/2016 UPDATED: 09/14/2016 PEN IBL: _____ PLOTTER: 9612016	
PROJECT NUMBER: 1506-121 COUNTY: EMERY SHEET NO. DT-11	



**NOTES:**

- HORIZONTAL AND VERTICAL ALIGNMENT REPRESENTED IS APPROXIMATE
- SITE CONDITIONS MAY REQUIRE MINOR VARIATIONS
- MINIMUM HORIZONTAL AND VERTICAL BEND RADIUS SHALL BE 250'

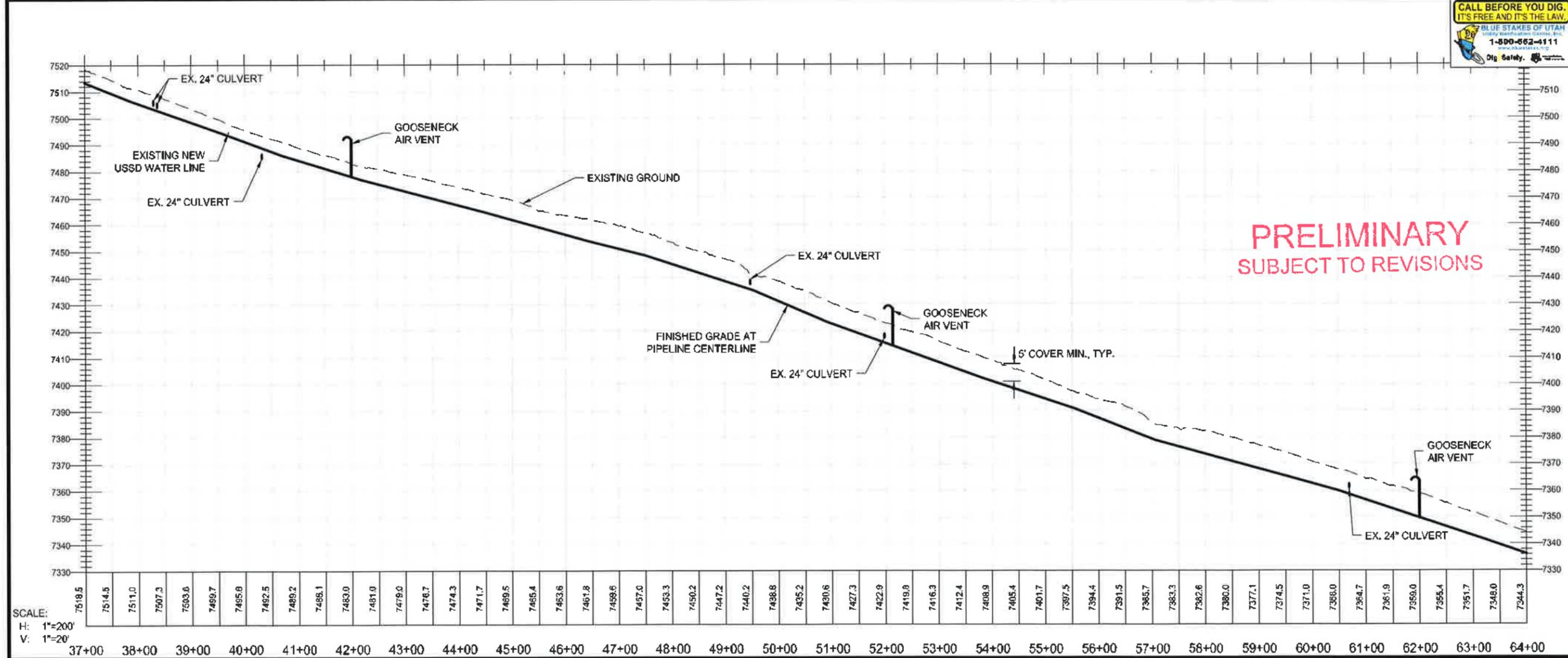
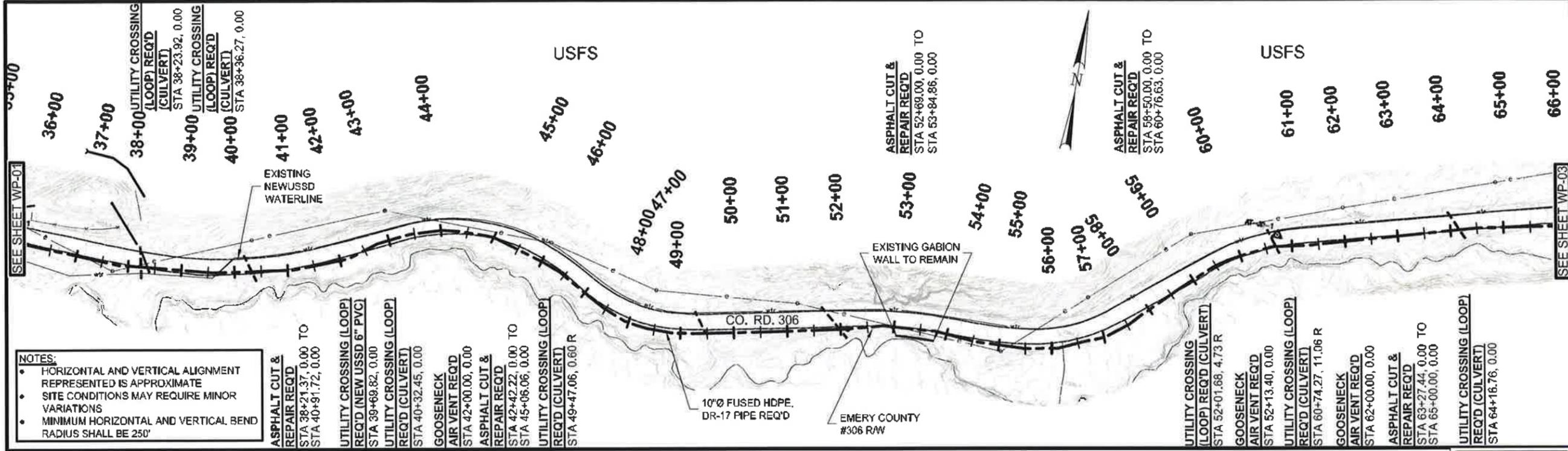


SCALE:  
 H: 1"=200'  
 V: 1"=20'

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 SUBJECT TO REVISIONS

<b>Jones &amp; DeMille Engineering, Inc.</b> CIVIL ENGINEERING - SURVEYING - TESTING 1800.748.5275 www.jonesanddemille.com		APPROVAL REGION: _____ DATE: _____ APPROVAL: _____ DATE: _____	
<b>INTERWEST MINING COMPANY</b> DEER CRK MINE WTR RELIEF PIPE		PROJECT DESIGN ENGINEER: _____ PROJECT NUMBER: 1506-121	
<b>EMERY COUNTY</b> WATER PLAN & PROFILE SHEET		SHEET NO. WP-01	
DESIGN: JA 15-10 CHECK: CF 15-10 QUANT: JA 15-10	REVIEW: _____ DATE: _____ CHECK: BB 15-10 CHECK: CF 15-10	ORIGINAL SUBMISSION FOR AUTHORIZATION: _____ SCALE: 1" = 200' DWG. CREATED: 2016/05/31 DWG. SET: 1506-WRP PEN TEL: _____ UPDATE: 9/21/2016 R. OTTER: 9/21/2016	



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GIS - ENVIRONMENTAL  
1.800.746.5275 www.jonesandmille.com

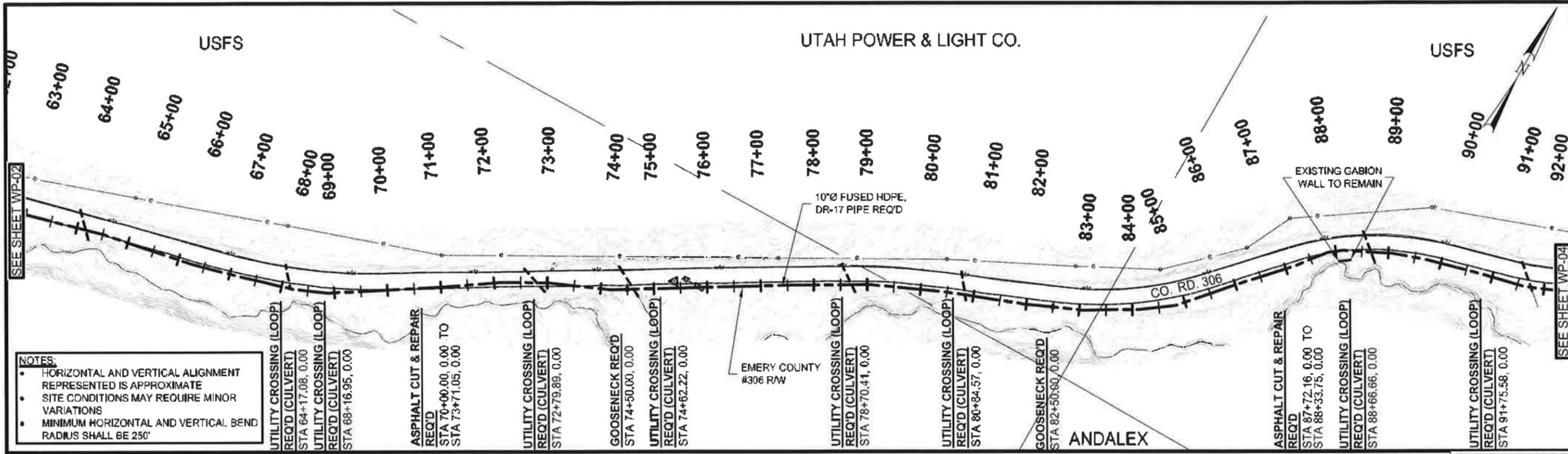
**INTERWEST MINING COMPANY**  
DEER CRK MINE WTR RELIEF PIPE  
WATER PLAN & PROFILE SHEET  
PROJECT NUMBER: 1506-121

**EMERY COUNTY**  
SHEET NO. WP-02

NO.	DATE	REVISIONS

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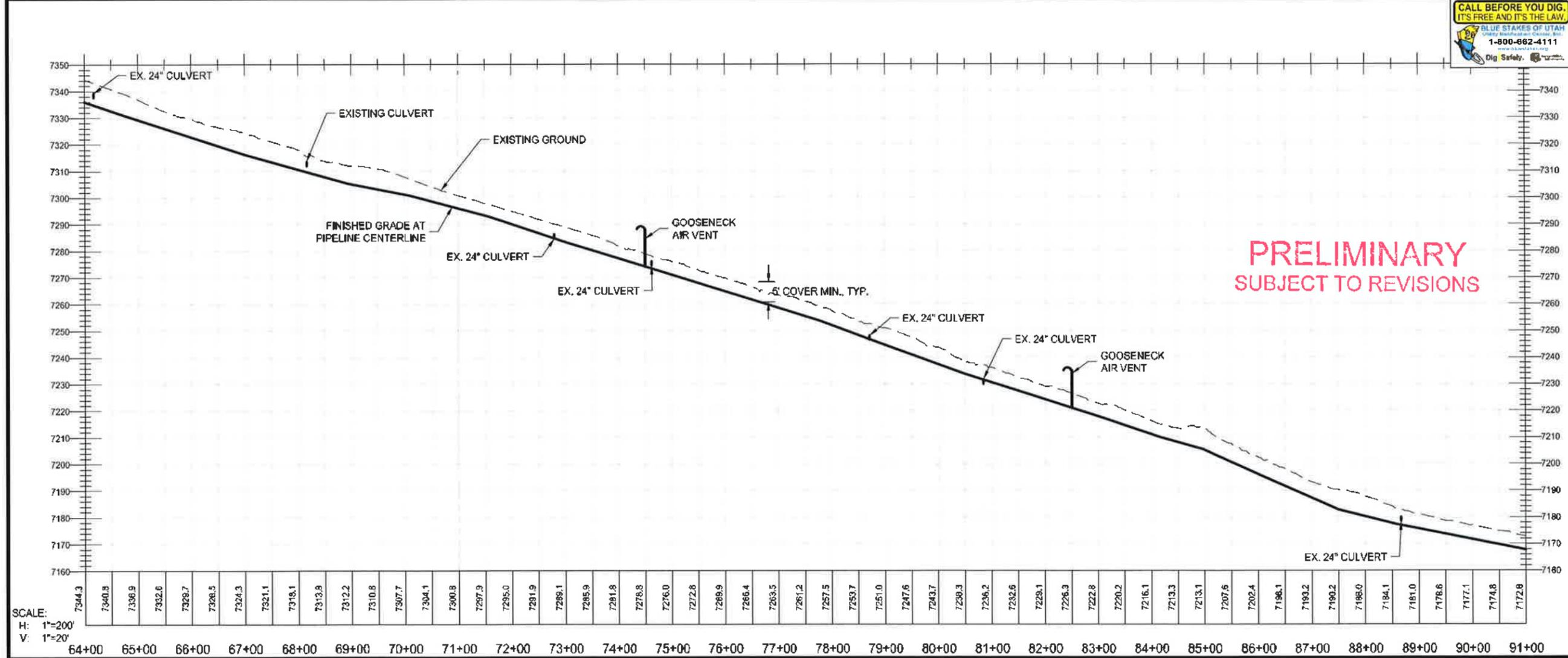
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SHT SET: wp-02p  
SCALE: 1" = 200'  
DWG CREATED: 20160531  
DWG UPDATED: 9/21/2016  
PEN: TBL  
PLOTTER: 9/21/2016



**NOTES:**

- HORIZONTAL AND VERTICAL ALIGNMENT REPRESENTED IS APPROXIMATE
- SITE CONDITIONS MAY REQUIRE MINOR VARIATIONS
- MINIMUM HORIZONTAL AND VERTICAL BEND RADIUS SHALL BE 250'

UTILITY CROSSING (LOOP) REQ'D (CULVERT) STA 64+17.08, 0.00  
 UTILITY CROSSING (LOOP) REQ'D (CULVERT) STA 68+16.95, 0.00  
 ASPHALT CUT & REPAIR REQ'D STA 70+00.00, 0.00 TO STA 73+71.05, 0.00  
 UTILITY CROSSING (LOOP) REQ'D (CULVERT) STA 72+79.89, 0.00  
 GOOSENECK REQ'D STA 74+50.00, 0.00  
 UTILITY CROSSING (LOOP) REQ'D (CULVERT) STA 74+62.22, 0.00  
 UTILITY CROSSING (LOOP) REQ'D (CULVERT) STA 78+70.41, 0.00  
 UTILITY CROSSING (LOOP) REQ'D (CULVERT) STA 80+84.57, 0.00  
 GOOSENECK REQ'D STA 82+50.80, 0.00  
 ASPHALT CUT & REPAIR REQ'D STA 87+72.16, 0.00 TO STA 88+33.75, 0.00  
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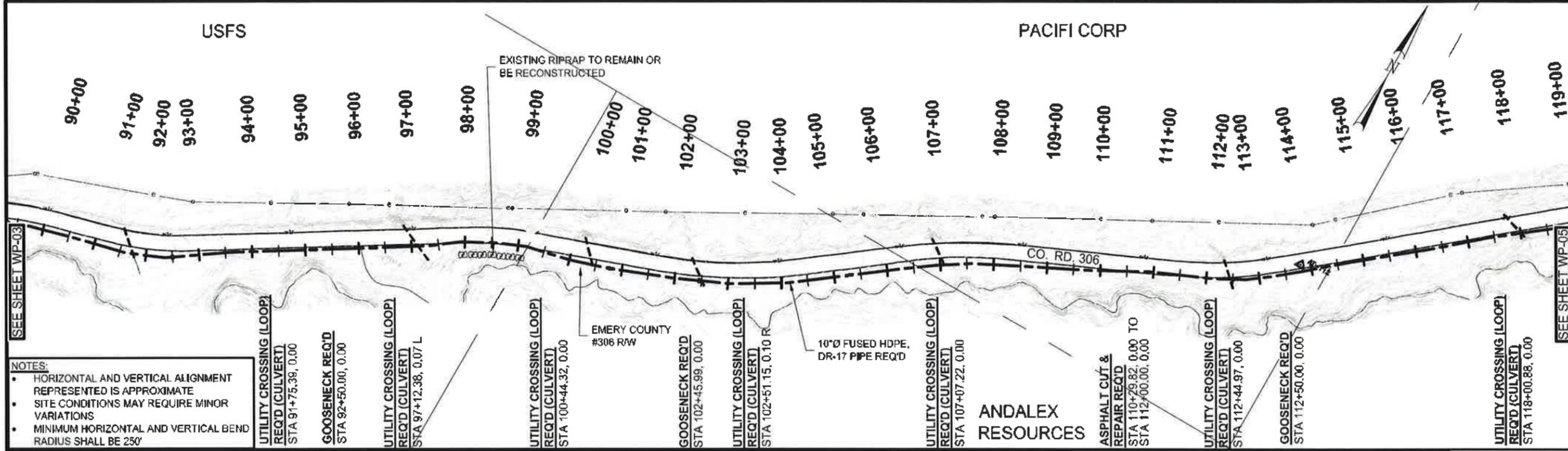


SCALE:  
 H: 1"=200'  
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**PRELIMINARY  
 SUBJECT TO REVISIONS**



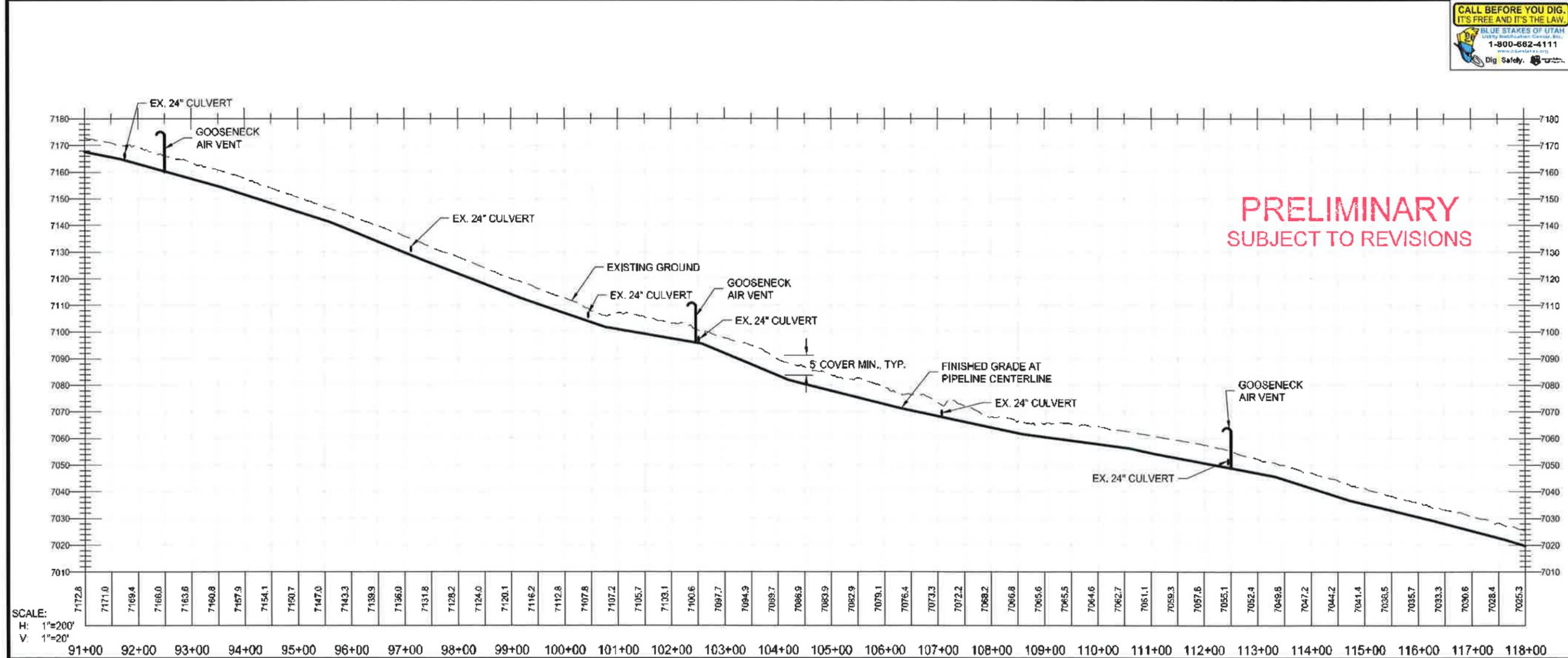
INTERWEST MINING COMPANY DEER CRK MINE WTR RELIEF PIPE WATER PLAN & PROFILE SHEET PROJECT NUMBER: 1506-121		Jones & DeMille Engineering, Inc. CIVIL ENGINEERING - SURVEYING - TESTING GIS - ENVIRONMENTAL 1.800.745.5275 www.jonesanddelle.com	
APPROVAL RECORD DATE APPROVED	PROJECT DESIGN ENGINEER DATE APPROVED	CHECKED DATE CHECKED	REVIEWED DATE CHECKED
SHEET NO. WP-03		SCALE 1" = 200' JWS NAME vpe-0 SHI SET 150-11P DWG CREATED: 20160531 PLOT DATE: 9/21/2016 PLOT TEL: 4349428002	



**NOTES:**

- HORIZONTAL AND VERTICAL ALIGNMENT REPRESENTED IS APPROXIMATE
- SITE CONDITIONS MAY REQUIRE MINOR VARIATIONS
- MINIMUM HORIZONTAL AND VERTICAL BEND RADIUS SHALL BE 250'

UTILITY CROSSING (LOOP) REQ'D (CULVERT) STA 91+75.39, 0.00  
 GOOSENECK REQ'D STA 92+50.00, 0.00  
 UTILITY CROSSING (LOOP) REQ'D (CULVERT) STA 97+12.38, 0.07 L  
 UTILITY CROSSING (LOOP) REQ'D (CULVERT) STA 100+44.32, 0.00  
 GOOSENECK REQ'D STA 102+45.99, 0.00  
 UTILITY CROSSING (LOOP) REQ'D (CULVERT) STA 102+51.15, 0.10 R  
 10" FUSED HDPE, DR-17 PIPE REQ'D  
 UTILITY CROSSING (LOOP) REQ'D (CULVERT) STA 107+07.22, 0.00  
 ASPHALT CUT & REPAIR REQ'D STA 110+29.82, 0.00 TO STA 112+00.00, 0.00  
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 GOOSENECK REQ'D STA 112+50.00, 0.00  
 UTILITY CROSSING (LOOP) REQ'D (CULVERT) STA 118+00.88, 0.00



SCALE:  
 H: 1"=200'  
 V: 1"=20'



**Jones & DeMille Engineering, Inc.**  
 CIVIL ENGINEERING - SURVEYING - TESTING  
 1800.748.5275 www.jonesandmille.com

**INTERWEST MINING COMPANY**  
 DEER CRK MINE WTR RELIEF PIPE  
 WATER PLAN & PROFILE SHEET  
 PROJECT NUMBER: 1506-121

**EMERY COUNTY**

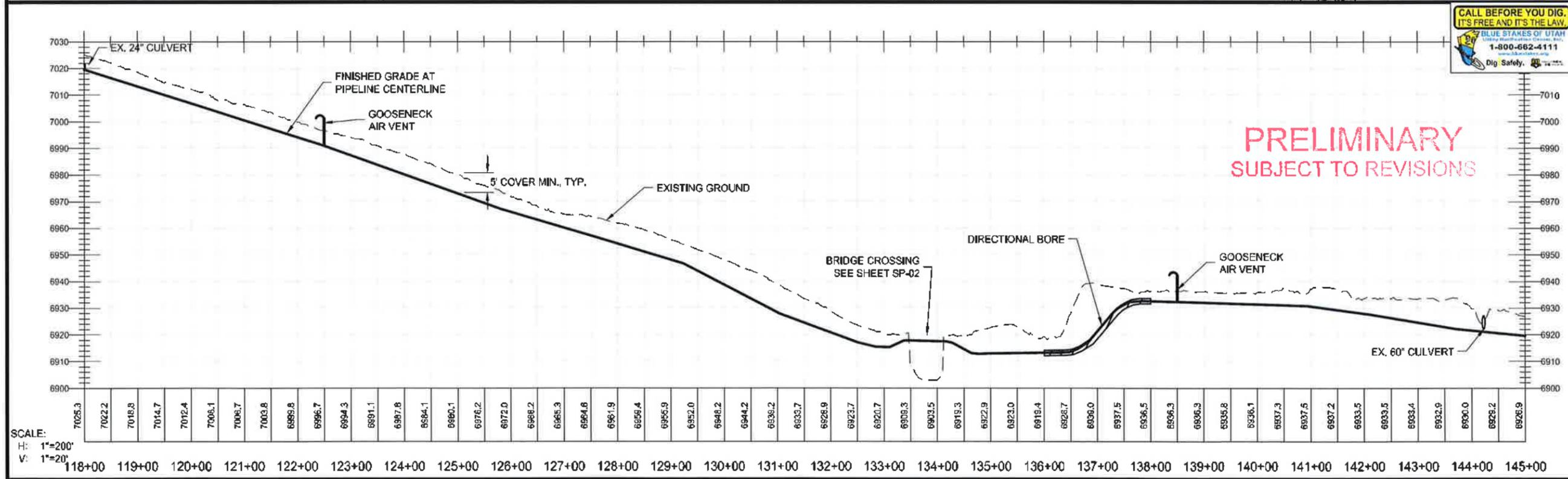
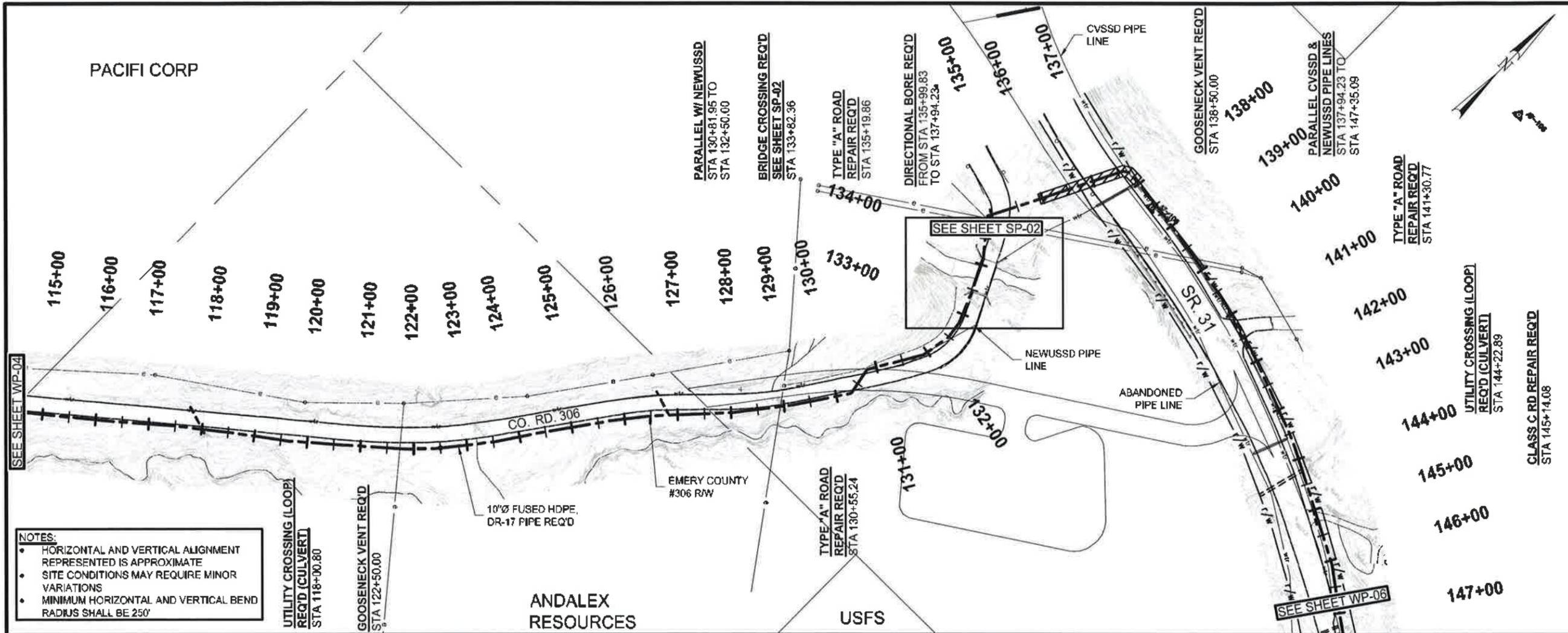
SHEET NO. WP-04

NO.	DATE	DESIGN	SCALE	REVISIONS

REVISIONS	DATE	BY	CHKD	APP'D

APPROVAL RECORD:  
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 APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

DWG NAME: WTR-04  
 SHT SET: WTR-04  
 SCALE: 1" = 200'  
 DWG CREATED: 20160531  
 DWG UPDATED: 9/21/2016  
 PLOT FILE: WTR-04.PLOT  
 PLOT FILE: 9/21/2016



NO.	DATE	REVISIONS

REMARKS

DESIGN: [ ] CHECKED: [ ] REVISIONS: [ ]

NO. DATE ORIGINAL SUBMISSION FOR AUTHORIZATION

SCALE: 1" = 200'

DWG. NAME: WP-05  
SHEET NO.: 1506-121

DWG. CREATED: 20160931  
PLOT DATE: 8/21/2016

DWG. PLOTTED: 8/21/2016

PROJECT: DEER CRK MINE WTR RELIEF PIPE

PROJECT NUMBER: 1506-121

APPROVAL RECORD:

DATE	BY	CHECKED	DATE	BY

INTEREST MINING COMPANY

DEER CRK MINE WTR RELIEF PIPE

WATER PLAN & PROFILE SHEET

EMERY COUNTY

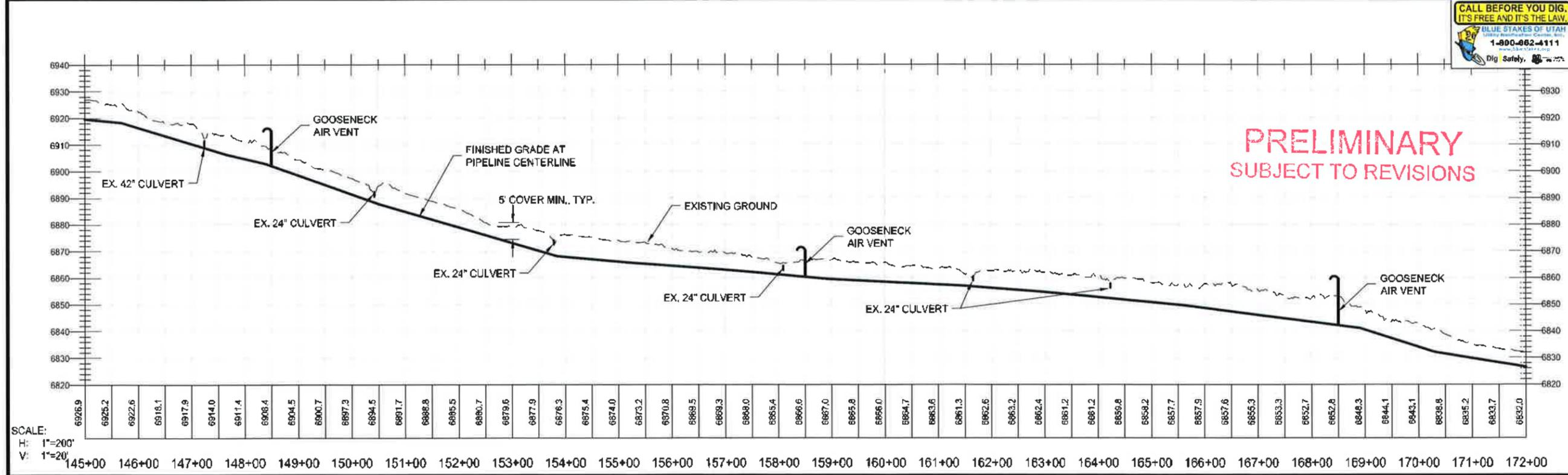
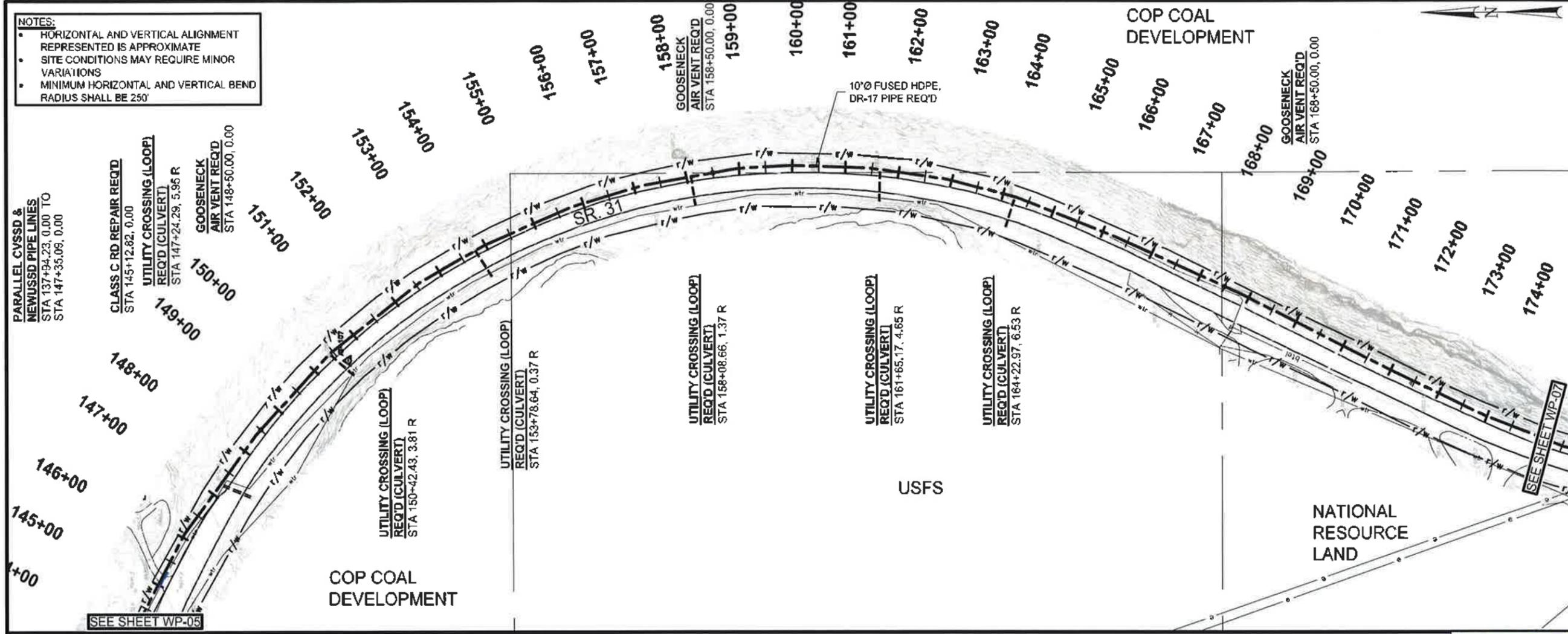
SHEET NO. WP-05

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GIS - ENVIRONMENTAL  
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Dig Safely.

**NOTES:**

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- SITE CONDITIONS MAY REQUIRE MINOR VARIATIONS
- MINIMUM HORIZONTAL AND VERTICAL BEND RADIUS SHALL BE 250'

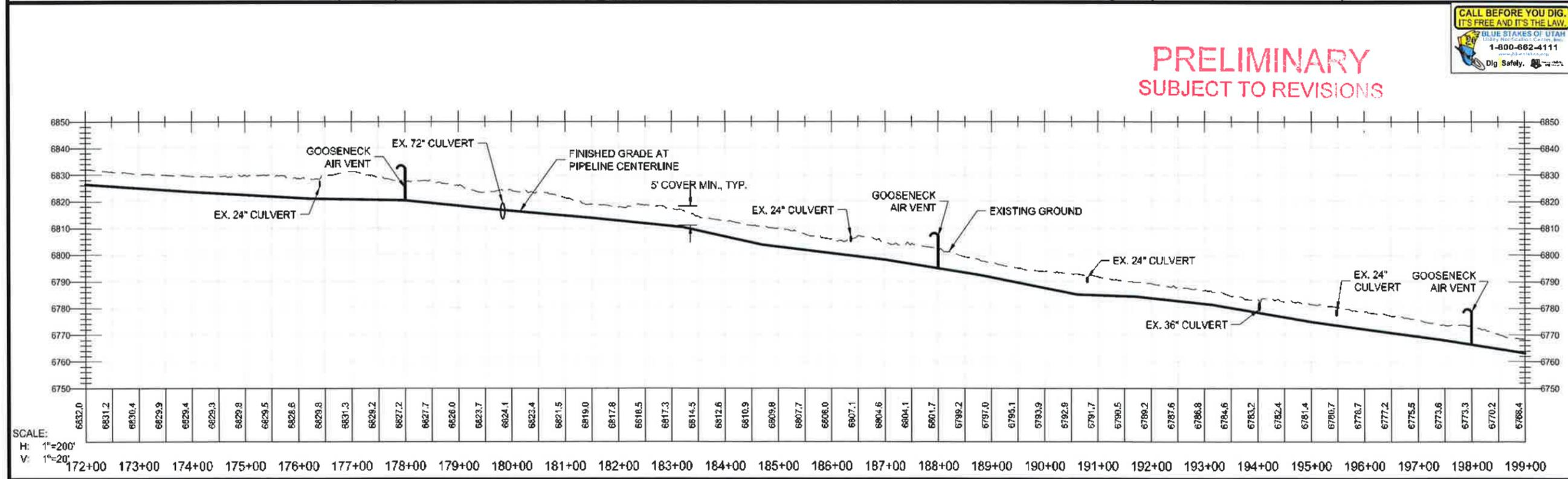
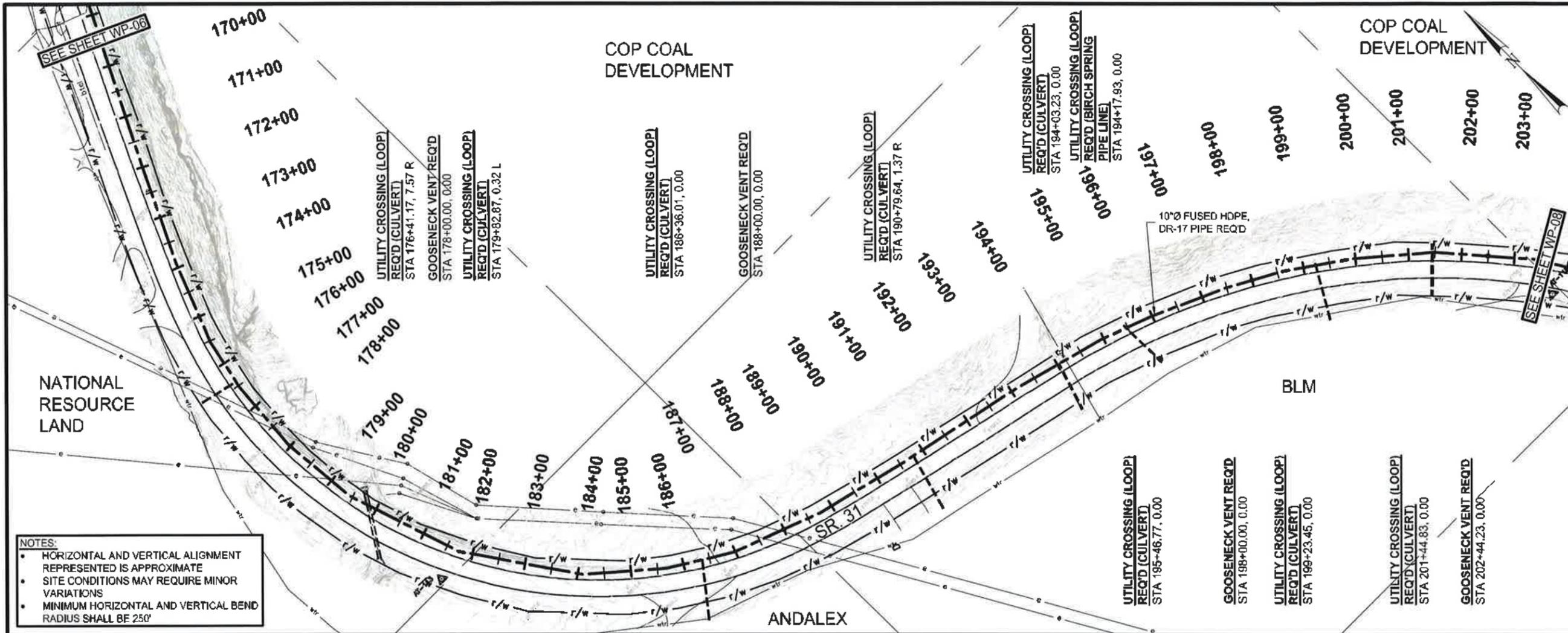


SCALE:  
H: 1"=200'  
V: 1"=20'

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**PRELIMINARY  
SUBJECT TO REVISIONS**

<p>APPROVAL</p> <p>REVISIONS</p>		<p>NO.</p> <p>DATE</p>	<p>REVISIONS</p> <p>DATE</p>
<p>APPROVED: _____</p> <p>DATE: _____</p>		<p>DATE: _____</p> <p>BY: _____</p>	<p>DATE: _____</p> <p>BY: _____</p>
<p>INTERWEST MINING COMPANY</p>		<p>Jones &amp; DeMille Engineering, Inc.</p> <p>CIVIL ENGINEERING - SURVEYING - TESTING</p> <p>GIS - ENVIRONMENTAL</p> <p>1.800.748.5275 www.jonesanddelle.com</p>	
<p>DEER CRK MINE WTR RELIEF PIPE</p>		<p>SCALE: 1" = 200'</p>	
<p>WATER PLAN &amp; PROFILE SHEET</p>		<p>PROJECT NUMBER: 1506-121</p>	
<p>EMERY</p>		<p>DATE: 20/05/21</p> <p>BY: _____</p>	
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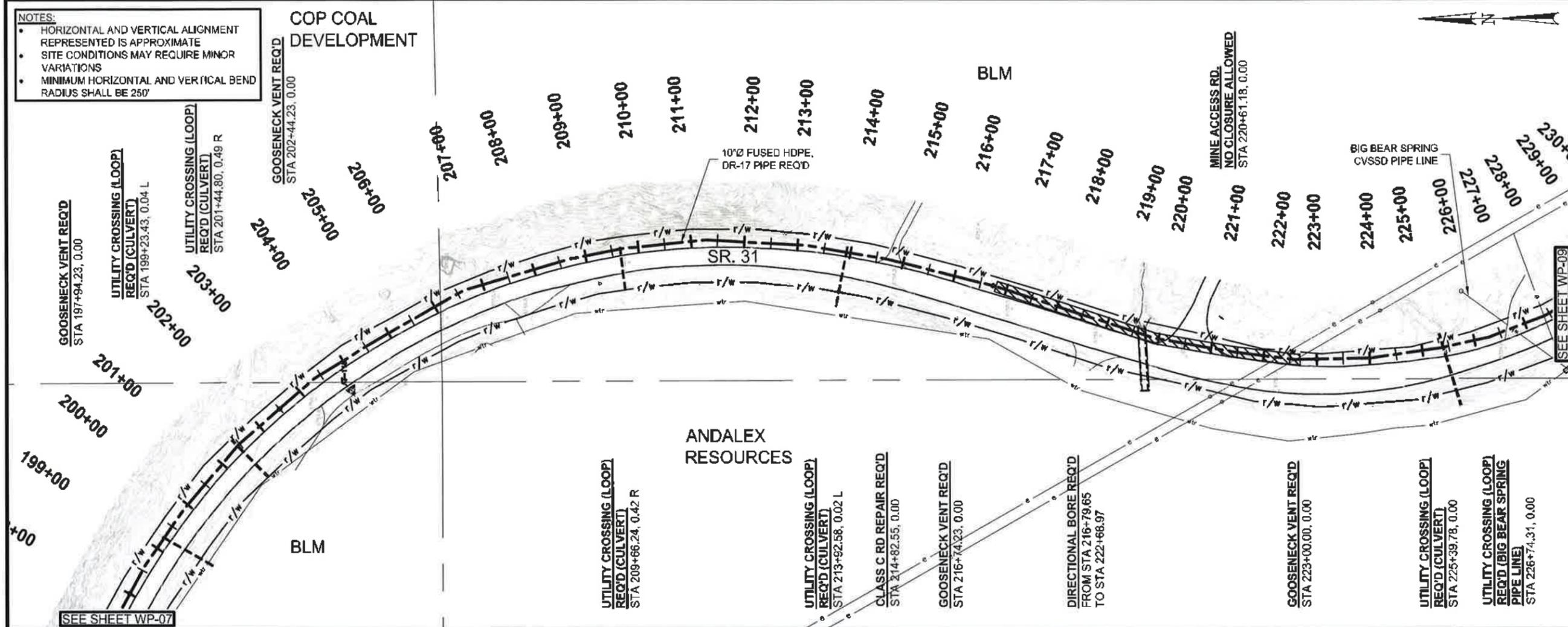
**CALL BEFORE YOU DIG.  
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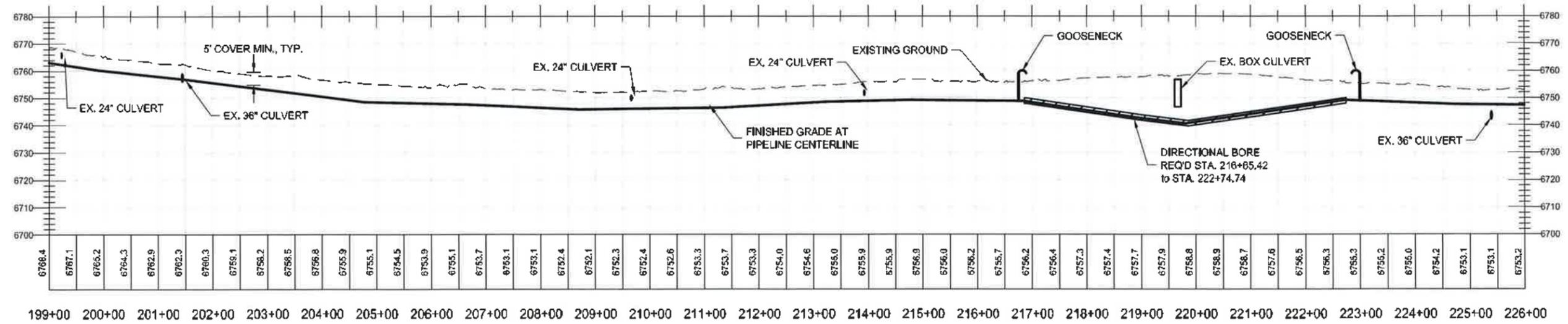
Jones & DeMille Engineering, Inc. CIVIL ENGINEERING - SURVEYING - TESTING GIS - ENVIRONMENTAL 1.800.748.5275 www.jonesanddemic.com		PROJECT DESIGN ENGINEER DATE APPROVAL REC'D	REVIEW CF 15-10 BB 15-10 CF 15-10
INTERWEST MINING COMPANY DEER CRK MINE WTR RELIEF PIPE WATER PLAN & PROFILE SHEET PROJECT NUMBER: 1506-121		PROJECT DESIGN ENGINEER DATE APPROVAL REC'D	REVIEW CF 15-10 BB 15-10 CF 15-10
EMERY COUNTY SHEET NO. WP-07		PROJECT DESIGN ENGINEER DATE APPROVAL REC'D	REVIEW CF 15-10 BB 15-10 CF 15-10

**NOTES:**

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- MINIMUM HORIZONTAL AND VERTICAL BEND RADIUS SHALL BE 250'

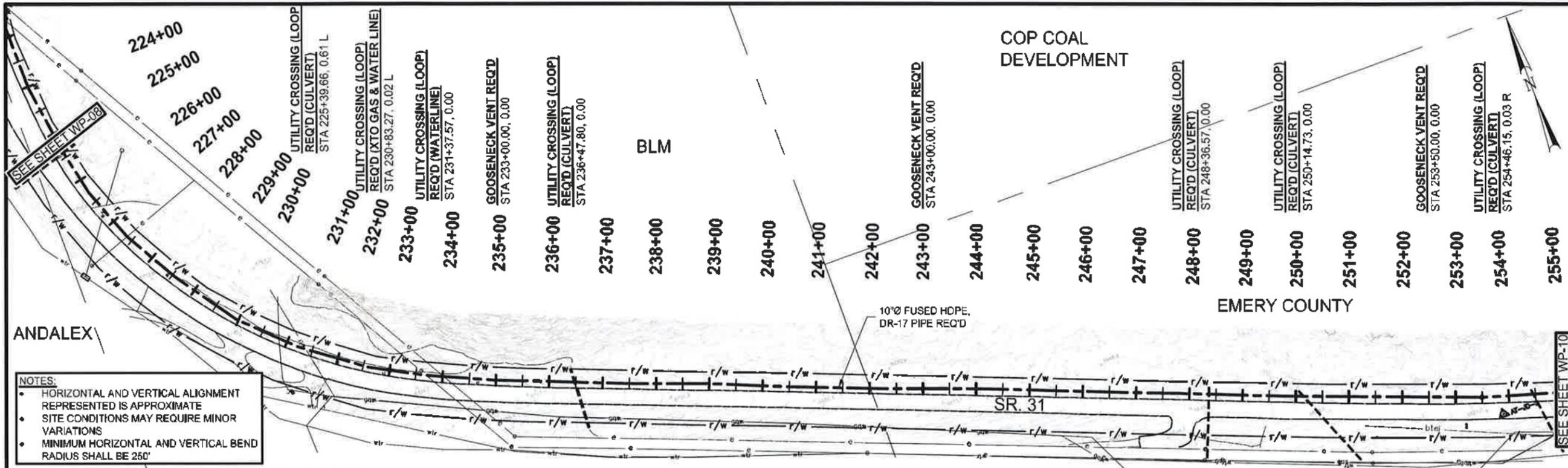


**PRELIMINARY  
SUBJECT TO REVISIONS**



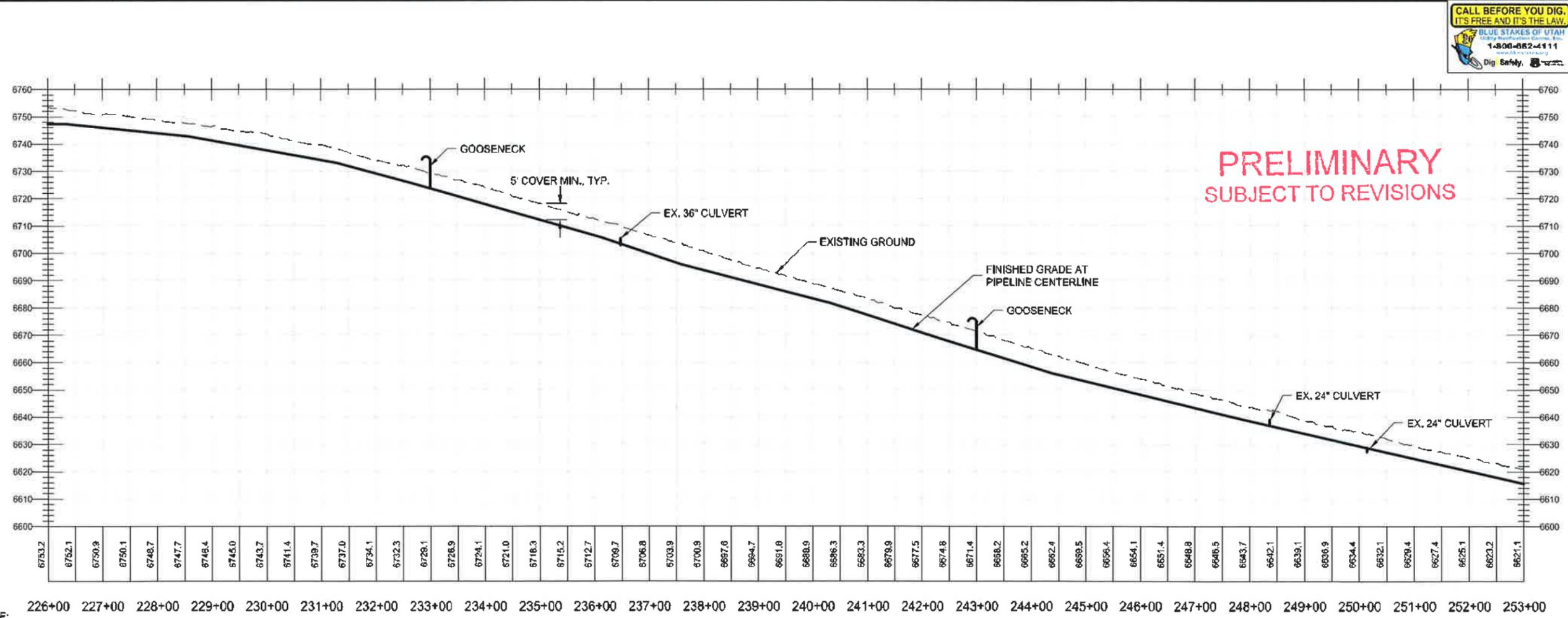
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V: 1"=20'

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<p>DRAWN: TT 16-05 CHECK: BB 15-10</p>		<p>DATE: 15-10</p>															
<p>QUANT: JA 15-10 CHECK: CF 15-10</p>		<p>DATE: 15-10</p>															
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<p>ORIGINAL SUBMISSION FOR AUTHORIZATION</p>		<p>DWG CREATED: 20180531</p>															
<p>REMARKS</p>		<p>PEN IBL: 1506-121</p>															
<p>PROJECT: DEER CRK MINE WTR RELIEF PIPE</p>		<p>PROJECT NUMBER: 1506-121</p>															
<p>INTERWEST MINING COMPANY</p>		<p>EMERY COUNTY</p>															
<p>SHEET NO. WP-08</p>		<p>DATE: 02/20/18</p>															



**NOTES:**

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SCALE:  
H: 1"=200'  
V: 1"=20'

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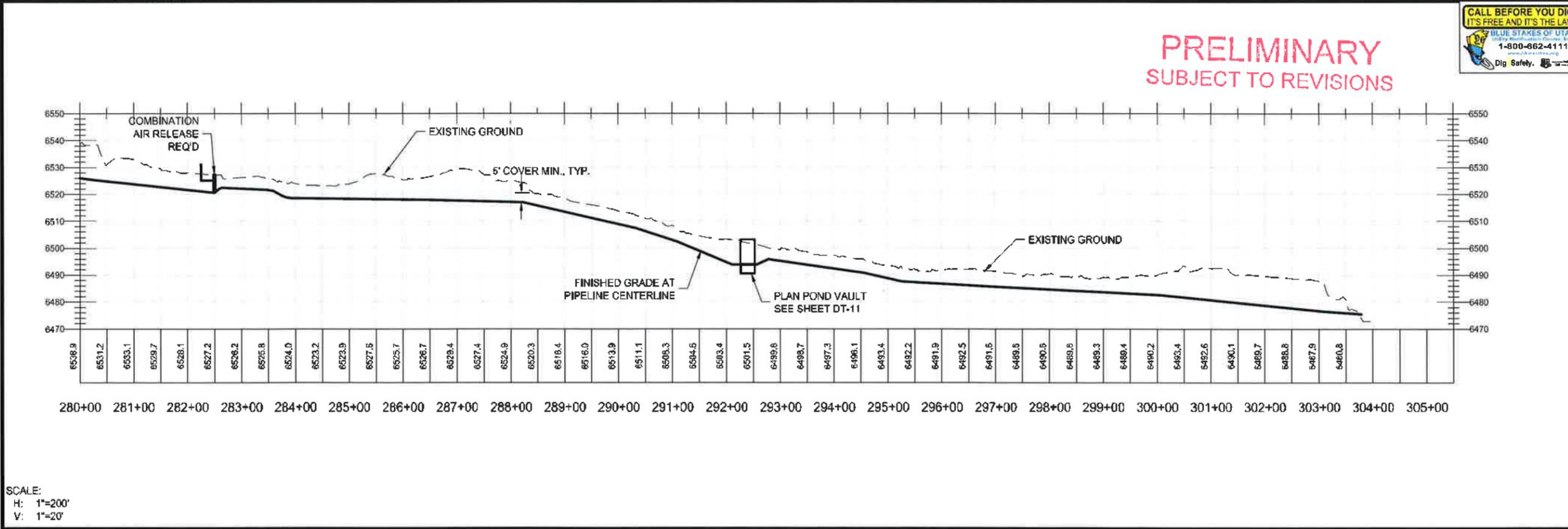
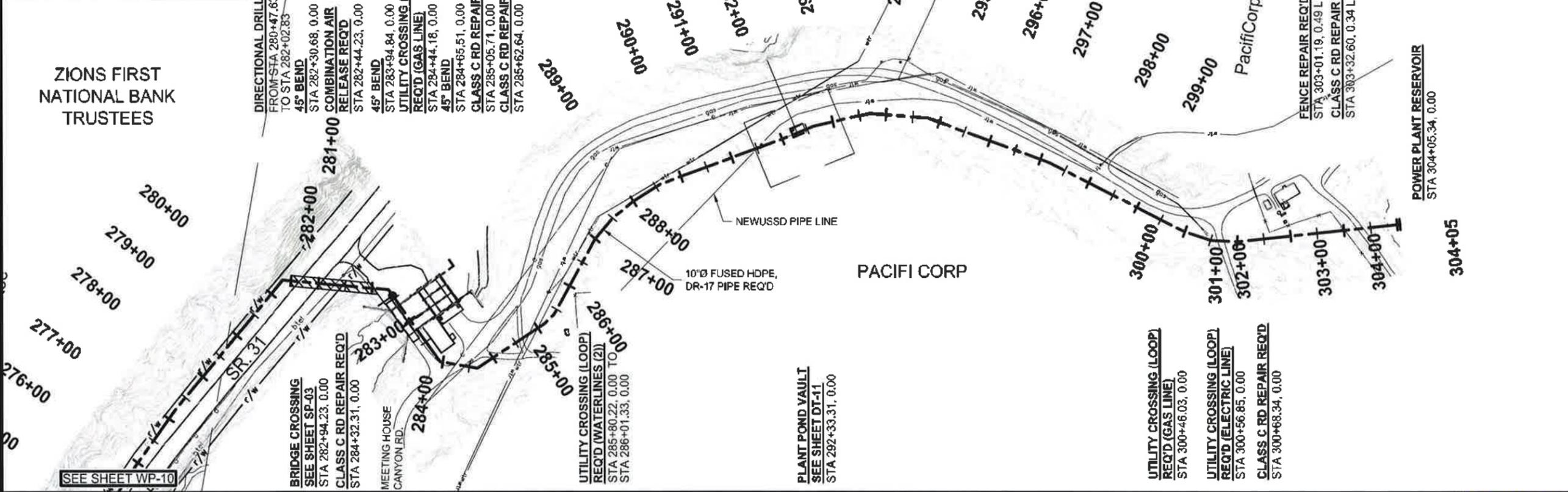
1-800-882-4111  
www.bluestakes.org

<p><b>Jones &amp; DeMille Engineering, Inc.</b> CIVIL ENGINEERING - SURVEYING - TESTING GIS - ENVIRONMENTAL 1-800-748-5275 www.jonesanddemille.com</p>		<p><b>INTERWEST MINING COMPANY</b></p>							
<p>APPROVAL RECORD: DATE PROJECT DESIGN ENGINEER APPROVED DATE</p>		<p><b>DEER CRK MINE WTR RELIEF PIPE</b></p>							
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<p>DATE CREATED: 2016-05-31 DWG CREATED BY: [Name]</p>		<p>SHEET NO. WP-09</p>							



**NOTES:**

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SCALE:  
H: 1"=200'  
V: 1"=20'

**PRELIMINARY  
SUBJECT TO REVISIONS**



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DESIGNER	JA	15-10	CHECK	CF	15-10	REVIEW	
DRAWN	TT	16-05	CHECK	BB	15-10	DATE	
QUANT.	JA	15-10	CHECK	CF	15-10	BY	

APPROVAL RECORD:  
DATE PROJECT SPECIAL INSURER  
APPROVED DATE

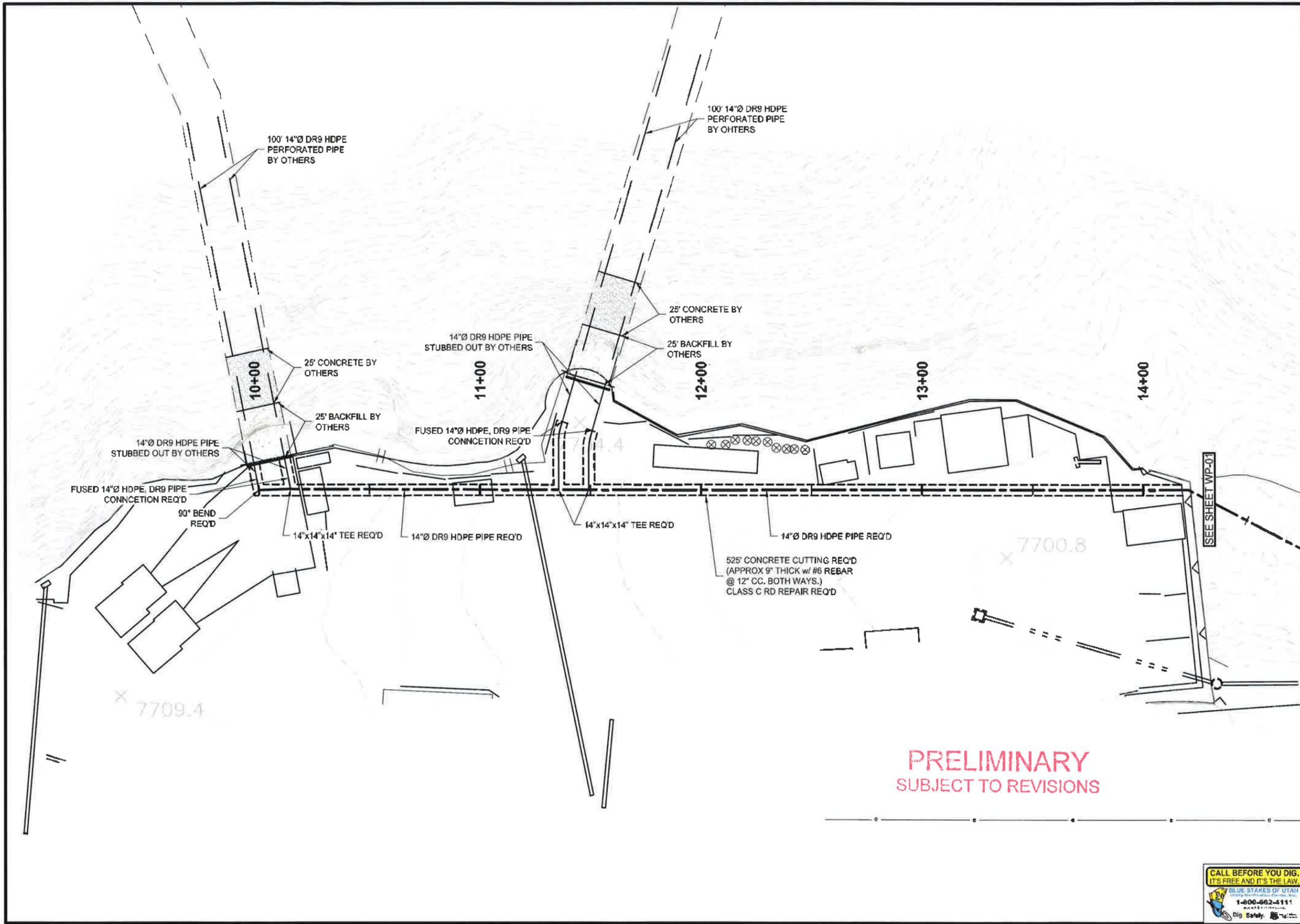
**INTERWEST MINING COMPANY**  
DEER CRK MINE WTR RELIEF PIPE  
WATER PLAN & PROFILE SHEET  
PROJECT NUMBER: 1506-121

**EMERY**  
COUNTRY

SHEET NO. **WP-11**

REVISIONS:  
DATE BY  
1 ORIGINAL SUBMISSION FOR AUTHORIZATION  
2 DWS CREATED: 30/06/2016  
3 DWS SET: 30/06/2016  
4 DWS PLOTTED: 30/06/2016

SCALE: 1" = 200'



100' 14"Ø DR9 HDPE PERFORATED PIPE BY OTHERS

100' 14"Ø DR9 HDPE PERFORATED PIPE BY OTHERS

14"Ø DR9 HDPE PIPE STUBBED OUT BY OTHERS

25' CONCRETE BY OTHERS

25' BACKFILL BY OTHERS

14"Ø DR9 HDPE PIPE STUBBED OUT BY OTHERS

FUSED 14"Ø HDPE, DR9 PIPE CONNECTION REQ'D

90° BEND REQ'D

14"x14"x14" TEE REQ'D

14"Ø DR9 HDPE PIPE REQ'D

14"x14"x14" TEE REQ'D

14"Ø DR9 HDPE PIPE REQ'D

14"Ø DR9 HDPE PIPE REQ'D

525' CONCRETE CUTTING REQ'D (APPROX 9" THICK w/ #6 REBAR @ 12" CC. BOTH WAYS.) CLASS C RD REPAIR REQ'D

14"x14"x14" TEE REQ'D

25' CONCRETE BY OTHERS

25' BACKFILL BY OTHERS

100' 14"Ø DR9 HDPE PERFORATED PIPE BY OTHERS

x 7709.4

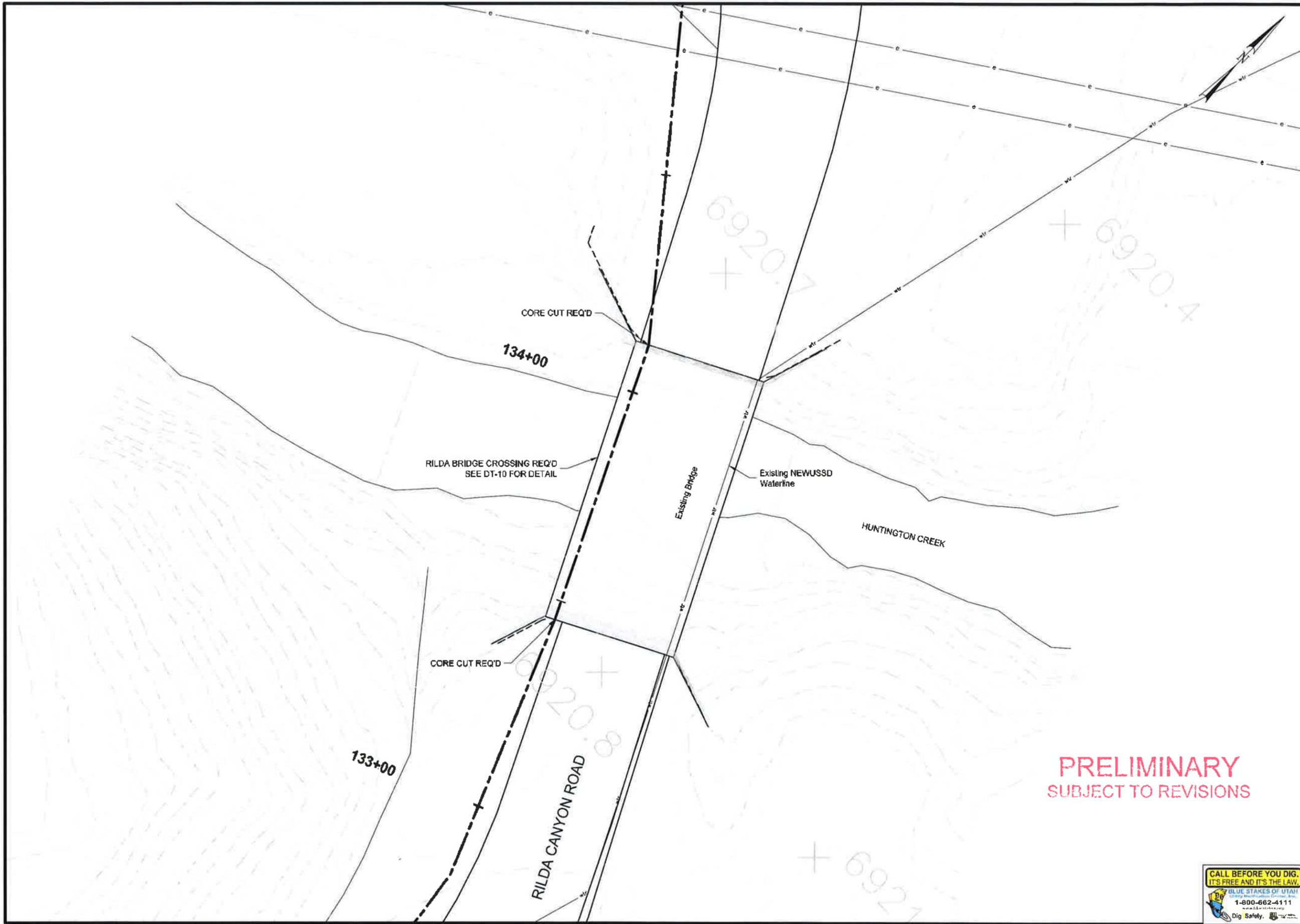
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**PRELIMINARY**  
**SUBJECT TO REVISIONS**

SEE SHEET WP-01



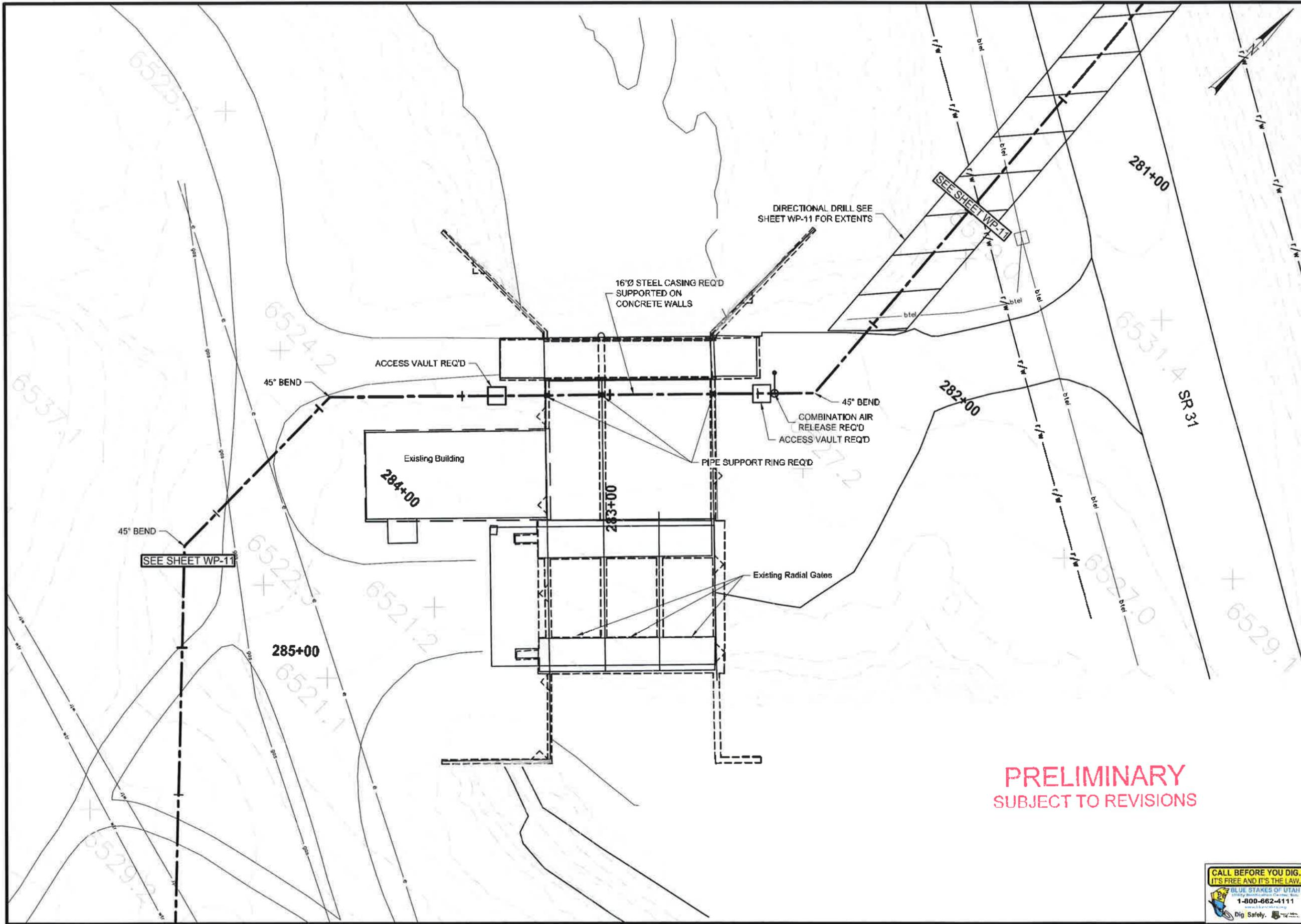
<b>INTERWEST MINING COMPANY</b> DEER CRK MINE WTR RELIEF PIPE PROJECT NUMBER: 1506-121		<b>Jones &amp; DeMille Engineering, Inc.</b> CIVIL ENGINEERING - SURVEYING - TESTING GIS - ENVIRONMENTAL 1.800.746.5275 www.jonesanddelle.com		REVISIONS NO. DATE DESCRIPTION 1 ORIGINAL SUBMISSION FOR AUTHORIZATION		DWS NAME: SP-01_PPI SHT SET: "sp-01p"	DWS CREATED: 20/06/05/01 PLOTTED: 02/12/2016 PLOTTER: "user:sp200.cb"
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PROJECT NUMBER: 1506-121		SITE PLAN		EMERY COUNTY		SHEET NO. SP-01	



**PRELIMINARY**  
SUBJECT TO REVISIONS



<b>INTERWEST MINING COMPANY</b> DEER CRK MINE WTR RELIEF PIPE		<b>Jones &amp; DeMille Engineering, Inc.</b> CIVIL ENGINEERING - SURVEYING - TESTING GIS - ENVIRONMENTAL 1.800.748.5275 www.jonesandmille.com		ORIGINAL SUBMISSION FOR AUTHORIZATION	
APPROVAL RECORD DATE	PROJECT DESIGN ENGINEER DATE	DESIGN CHECK DATE	CHECK DATE	REVIEW DATE	REMARKS
PROJECT NUMBER: <b>1506-121</b>	SITE PLAN	DESIGN CHECK DATE	CHECK DATE	REVIEW DATE	REVISIONS
COUNTY <b>EMERY</b>	SHEET NO. <b>SP-02</b>	DESIGN CHECK DATE	CHECK DATE	REVIEW DATE	CIVIL NAME SHI SET
SCALE <b>1" = 20'</b>		CIVIL NAME <b>1506-121P</b>	SHI SET <b>1506-121P</b>	CIVIL NAME <b>1506-121P</b>	DATE <b>9/13/2016</b>
PROJECT NUMBER: <b>1506-121</b>		DESIGN CHECK DATE	CHECK DATE	REVIEW DATE	DATE <b>9/13/2016</b>



**PRELIMINARY  
SUBJECT TO REVISIONS**



<b>INTERWEST MINING COMPANY</b> DEER CRK MINE WTR RELIEF PIPE PROJECT NUMBER: 1506-121		<b>EMERY</b> COUNTY SHEET NO. SP-03	
APPROVAL RECORD APPROVED	DATE DATE DATE	DESIGN CHECK DRAWN O.MIT:	REVIEW CF 15-10 BB 15-10 CF 15-10 BY
<b>Jones &amp; DeMille Engineering, Inc.</b> CIVIL ENGINEERING - SURVEYING - TESTING GIS - ENVIRONMENTAL 1.800.748.5275 www.jonesanddemic.com		ORIGINAL SUBMISSION FOR AUTHORIZATION DWS NAME: sp-03 PIPE SHT SET: 1506-121P SCALE: 1" = 30' DWS CREATED: 20/06/531 PEN TEL: 1506-121P.dwg UPDATED: 9/14/2016 PLOTTER: 9212/016	
REMARKS REVISIONS			

**Attachment G. Draft Stormwater Pollution Prevention Plan (SWPPP)**

---

# Stormwater Pollution Prevention Plan

## for:

Rilda Canyon to Huntington Pipeline  
Rilda and Huntington Canyons  
Emery County, Utah

## Operator(s):

Company

Name

Address

City, State, Zip

Phone

Email

## SWPPP Contact(s):

Company or Organization Name

Name

Address

City, State, Zip

Phone

Email

## SWPPP Preparation Date:

Date

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- Appendix A. Maps, Drawings, and BMP details
- Appendix B. Construction General Permit
- Appendix C. NOI and Acknowledgement Letter from State
- Appendix D. Project Schedules
- Appendix E. Spill Prevention and Response Plan
- Appendix F. Grading and Stabilization Activities Log
- Appendix G. Inspection Reports
- Appendix H. Corrective Action Log
- Appendix I. SWPPP Amendment Log
- Appendix J. Subcontractor Certifications/Agreements
- Appendix K. Training Log
- Appendix L. Delegation of Authority
- Appendix M. Additional Information

# Section 1. Project Site Information

## 1.1 Contact Information/Responsible Parties

### Owner:

Interwest Mining Company

Name

Address

Address

Phone

Email

### Operator(s):

Company

Name

Address

City, State, Zip

Phone

Email

Area of control (if more than one operator at site)

Repeat as necessary

### SWPPP Contact(s):

Company

Name

Address

City, State, Zip

Phone

Email

Area of control (if more than one operator at site)

Repeat as necessary

### This SWPPP was prepared by:

Jones and DeMille Engineering

Jenna Jorgensen

1535 S. 100 W.

Richfield, UT 84701

(435) 893-5203

Jenna.j@jonesanddemille.com

**Subcontractor(s):**

Company or Organization Name  
Name  
Address  
City, State, Zip  
Telephone  
Email/Fax  
Area of control (if more than one operator at site)  
Repeat as necessary

**Emergency 24-Hour Contact:**

Company or Organization Name  
Name  
Telephone

**1.2 Project Location Information**

Project Name: Rilda Canyon to Huntington Pipeline

Project Location: Rilda and Huntington Canyons

County: Emery County

Latitude/Longitude: 39.407 -111.110

Method for determining latitude/longitude: Google Earth

Is the project located in Indian country?  Yes  No

Is this project considered a federal facility?  Yes  No

UPDES project or permit tracking number<sup>1</sup>: UPDES Number

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<sup>1</sup> This is the unique identifying number assigned to your project by your permitting authority after you have applied for coverage under the appropriate Pollutant Discharge Elimination System (PDES) construction general permit.

### 1.3 Receiving Waters

Does your project/site discharge stormwater into a Municipal Separate Storm Sewer System (MS4)?  Yes  No

Description of storm sewer systems: None within project area

Description of receiving waters: Huntington Creek

Distance to the nearest waterbody: 0 feet

Category water: Category 1 within USFS boundary; Category 3 below USFS boundary.

Description of impaired waters or waters subject to TMDLs: Huntington Creek is impaired for selenium.

If there are any surface waters located within 50 feet of your construction disturbances, complete the Supplemental Form - Buffer Compliance Alternatives. (If no, you are in compliance with the buffer requirements).

### 1.4 Type of Construction Activity

Check all that apply

- Residential  Commercial  Industrial  Road  Bridge  Linear Utility  
 Contouring, Landscaping  Pipeline  
 Other (please specify):

### 1.5 Construction Site Estimates

The following are estimates of the construction site:

Total area of plot: \_\_\_\_\_ acres  
Estimated area to be disturbed: \_\_\_\_\_ acres  
Maximum area to be disturbed at any one time: \_\_\_\_\_ acres  
Percentage impervious area before construction: \_\_\_\_\_ %  
Runoff coefficient before construction: \_\_\_\_\_  
Percentage impervious area after construction: \_\_\_\_\_ %  
Runoff coefficient after construction: \_\_\_\_\_

Estimated Project Start Date: Start Date

Estimated Project End Date: End Date

## 1.6 Additional Site Characteristics

The site was previously used for existing road rights-of-way.

Soil types:

Slopes:

Drainage patterns:

Vegetation:

Other topographical features:

## 1.7 Site Features and Sensitive Areas to be Protected

Unique features to be preserved:

Measures to protect these features:

## 1.8 Potential Sources of Pollution

Potential sources of sediment to stormwater runoff:

Potential pollutants and sources, other than sediment, to stormwater runoff:

Activity and pollutants generated	Location
Clearing and grubbing – debris	
Construction – solid waste	
Construction – sanitary waste	
Chemical material storage and use	
Equipment operation	
Equipment fueling and maintenance	
Seeding – fertilizer, etc.	
Weed control - pesticide	

## 1.9 Endangered Species Certification

Are endangered or threatened species or critical habitats on or near the project area?

Yes       No

Describe how this determination was made:

If yes, describe which species or critical habitats:

If yes, describe or refer to documentation that determines the likelihood of an impact on identified species and/or habitat and the steps taken to address that impact. (Note, if species are on or near your project site, EPA strongly recommends that the site operator work closely with the appropriate field office of the U.S. Fish and Wildlife Service or National Marine Fisheries Service. For concerns related to state or tribal listing of species, please contact a state or tribal official.)

### **1.10 Historic Preservation**

Are there any historic sites on or near the construction site?

Yes       No

Describe how this determination was made:

If yes, describe or refer to documentation that determines the likelihood of an impact on this historic site and the steps taken to address that impact.

### **1.11 Applicable Federal, Tribal, State, or Local Programs**

## **Section 2. Erosion and Sediment Control BMPs**

### **2.1 Minimize Disturbed Area and Protect Natural Features and Soil**

Soil compaction will be minimized or corrected by...

Natural buffers will be delineated/marked by \_\_\_ to prevent disturbance from construction.

### **2.2 Phase Construction Activity**

- Phase I
  1. Install storm water controls
    - Describe phase
    - Duration of phase (start date, end date)
    - List BMPs associated with this phase and estimated dates
    - Describe stabilization methods and estimated dates
    - Estimated dates when stormwater controls will be removed

A detailed project schedule is included in Appendix D.

Repeat as necessary

### 2.3 Allowable Non-Stormwater Discharge Management

List allowable discharges and the measures used to eliminate or reduce them and prevent them from becoming contaminated.

Allowable discharge	Measures to eliminate/reduce discharges

Type of Allowable Non-Stormwater Discharge
Discharges from emergency fire-fighting activities
Fire hydrant flushings
Properly managed landscape irrigation
Waters used to wash vehicles and equipment – no soap or solvent
Water used to control dust
Potable water including uncontaminated water line flushings
Routine external building wash down
Pavement wash waters
Uncontaminated air conditioning or compressor condensate
Uncontaminated, non-turbid discharges of ground water or spring water
Foundation or footing drains
Construction dewatering water

(Note: You are reminded of the requirement to identify the likely locations of these allowable non-stormwater discharges on your site map.)

### 2.4 Control Stormwater Flowing onto and through the Project

<b>BMP Description:</b> Topsoil will be salvaged, and formed into a berm to prevent stormwater from flowing onto the site.	
<b>Installation Schedule:</b>	
<b>Maintenance and Inspection:</b>	
<b>Responsible Staff:</b>	Name

**BMP Description:** Temporary slope breakers are ridges or channels constructed diagonally on a slope, to reduce runoff velocity and divert water from the construction right-of-way. These may be constructed of soil, straw bales, or sand bags. Installation locations will be based on site review prior to ground disturbance, and where disturbance will occur on slopes greater than 5 percent when the base of the slope is less than 50 feet from a waterbody, wetland, or road crossing. The outfall of each breaker will be directed to a stable, well-vegetated area or

dissipating device, and will avoid discharging into waterbodies, wetlands, or other sensitive resource areas. Spacing will be based on the percent slope.

Slope (%)	Spacing (feet)
5-15	300
>15-30	200
>30	100

<b>Installation Schedule:</b>	
<b>Maintenance and Inspection:</b>	
<b>Responsible Staff:</b>	Name

**BMP Description:** Trench breakers will be installed to slow the flow of water through the open trench. Trench breakers will be constructed of sandbags. Installation locations will be based on site review and the result of inspections.

<b>Installation Schedule:</b>	
<b>Maintenance and Inspection:</b>	
<b>Responsible Staff:</b>	Name

## 2.5 Stabilize Soils

**BMP Description:** Dust will be suppressed by watering excavation faces and access roads as needed.

<b>Installation Schedule:</b>	As needed based on inspection
<b>Maintenance and Inspection:</b>	
<b>Responsible Staff:</b>	Name

**BMP Description:** Soil roughening is a temporary erosion control practice – appropriate for slopes, especially greater than 3:1, soil piles, and areas with highly erodible soils, and areas that are disturbed a lot cause it's easy to do. Roughen as soon as vegetation has been removed or grading has ceased. Careful of compacting soil, not good on rocky slopes.

<b>Installation Schedule:</b>	
<b>Maintenance and Inspection:</b>	
<b>Responsible Staff:</b>	Name

<b>BMP Description:</b> Seeding - Drill seeding is the preferred method of application unless site conditions preclude the use of drill seeding equipment. Drill seeds at the minimum rate of 45 pure live seeds (PLS) per linear foot. Seeds should be drilled to a depth of 0.25 to 0.5 inch. Areas in excess of 40% slope or that are excessively rocky will be broadcast seeded at 80-90 PLS and covered to a maximum of 0.25 inch by harrowing, drag bar, or roller. The BLM-approved seed mix will be used.	
<b>Installation Schedule:</b>	Seeding efforts should be conducted between August 15 and prior to winter freezing of the soil. Non-vegetative erosion control must be applied while seeded vegetation is becoming established, to reduce erosion and protect the seed.
<b>Maintenance and Inspection:</b>	
<b>Responsible Staff:</b>	Name

<b>BMP Description:</b> Mulch will be applied immediately after seeding. Mulch may consist of weed-free straw or hay, wood fiber hydromulch, or a functional equivalent. The contractor will provide, verify, and document that mulch is weed-free. Mulch will be spread uniformly over the area to cover at least 75 percent of the ground surface at a rate of 2 tons/acre of straw or its equivalent. Mulch will be applied before seeding if final grading and installation of permanent erosion control measures will not be completed in an area within 20 days of the trench being backfilled, or construction or restoration activity is interrupted for extended periods (e.g., when seeding cannot be completed due to seeding period restrictions). If mulch is applied before seeding, mulch application on all slopes within 100 feet of waterbodies and wetlands will be increased to a rate of 3 tons/acre of straw or equivalent. If wood chips are used as mulch, no more than 1 ton/acre will be used and no more than the equivalent of 11 lbs/acre available nitrogen (at least 50 percent of which is slow release) will be added. The contractor will ensure that mulch is adequately anchored to minimize erosion and soil loss due to wind and water. When anchoring with liquid mulch binders, the contractor will use the rates recommended by the manufacturer. Liquid mulch binders will not be used within 100 feet of wetlands or waterbodies.	
<b>Installation Schedule:</b>	
<b>Maintenance and Inspection:</b>	
<b>Responsible Staff:</b>	Name

## 2.6 Protect Slopes

<b>BMP Description:</b> Permanent slope breakers will be used to reduce runoff velocity, divert water from the right-of-way, and prevent sedimentation into sensitive resources. Diverted water will be transferred to a stable area without causing water to pool or erode behind the breaker. Slope breakers may be constructed of materials such as soil, sand bags, or a functional equivalent.
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<b>Installation Schedule:</b>	Prior to construction in applicable areas
<b>Maintenance and Inspection:</b>	
<b>Responsible Staff:</b>	Name

<b>BMP Description:</b> Pocking will be used to divert runoff and retain precipitation. The goal of pocking is to create a seedbed that is conducive to the establishment of permanent vegetation cover. Pocking consists of small depressions or terraces that are created by a backhoe, xx inches in depth. The pocks retain snow and rain, creating sites to facilitate seed germination and reduce runoff velocities. Pocks will be spaced approximately xx feet across the slope and xx feet down the slope, to minimize the potential of lower pocks failing should a pock above them fail.	
<b>Installation Schedule:</b>	On applicable slopes after topsoil has been replaced
<b>Maintenance and Inspection:</b>	
<b>Responsible Staff:</b>	Name

<b>BMP Description:</b> Bonded fiber matrix (BFM) mulch will be applied on steep slopes, immediately after seeding. Mulch will stabilize the soil surface and reduce erosion. BFM will be spread uniformly over the area at the manufacturer's recommended rates.	
<b>Installation Schedule:</b>	On applicable slopes after topsoil has been replaced
<b>Maintenance and Inspection:</b>	
<b>Responsible Staff:</b>	Name

## 2.7 Protect Storm Drain Inlets

Storm drains do not occur within the project area.

## 2.8 Establish Perimeter Controls and Sediment Barriers

<b>BMP Description:</b> Retain existing vegetative buffers. Runoff will be slowed and filtered by vegetation left adjacent to construction areas.	
<b>Installation Schedule:</b>	None required
<b>Maintenance and Inspection:</b>	None required

<b>BMP Description:</b> Silt fences and fiber rolls will be used to retain sediment on-site to the
--

maximum extent possible. The controls will be selected, installed, and maintained in accordance with the manufacturer’s specifications and good engineering practices. Controls will be refurbished when accumulated sediment reaches approximately 50 percent of the structure’s capacity. Controls will be maintained until final stabilization measures are applied, and will be removed after reclamation procedures are completed.

<b><i>Installation Schedule:</i></b>	Prior to ground disturbance on each construction spread
<b><i>Maintenance and Inspection:</i></b>	
<b><i>Responsible Staff:</i></b>	Name

## 2.9 Retain Sediment On-site

<b><i>BMP Description:</i></b>	
<b><i>Installation Schedule:</i></b>	
<b><i>Maintenance and Inspection:</i></b>	
<b><i>Responsible Staff:</i></b>	Name

<b><i>BMP Description:</i></b>	
<b><i>Installation Schedule:</i></b>	
<b><i>Maintenance and Inspection:</i></b>	
<b><i>Responsible Staff:</i></b>	Name

## 2.10 Establish Stabilized Construction Exits

<b><i>BMP Description:</i></b>	
<b><i>Installation Schedule:</i></b>	
<b><i>Maintenance and Inspection:</i></b>	
<b><i>Responsible Staff:</i></b>	Name

<b><i>BMP Description:</i></b> Monitor for sediment tracking off of the site. If necessary, implement techniques for sediment removal prior to vehicle exit. Wheel washing, rumble strips, or rattle plates may be used. If sediment is tracked off-site, collect the sediment by sweeping, shoveling, or vacuuming and dispose of in a stable location.	
<b><i>Installation Schedule:</i></b>	If needed

<b><i>Maintenance and Inspection:</i></b>	Inspect exit points (weekly or biweekly and after storms)
<b><i>Responsible Staff:</i></b>	Name

## 2.11 Additional BMPs

<b><i>BMP Description:</i></b>	
<b><i>Installation Schedule:</i></b>	
<b><i>Maintenance and Inspection:</i></b>	
<b><i>Responsible Staff:</i></b>	Name

## Section 3. Good Housekeeping BMPs

A Spill Prevention and Response Plan (SPRP) has been prepared, as is attached as Appendix E. This SPRP details requirements for:

- Spill prevention and response procedures
- Waste management procedures
- Storage of materials
- Designated staging and washout areas

## Section 4. Inspections

### 4.1 Inspections

#### Inspection Personnel

Name:

Qualifications:

#### 4.1.1 Inspection Schedule and Procedures

Inspections will be conducted once every (week or 2 weeks) and within 24 hours of storm events. “Within 24 hours of a storm event” means within 24 hours once a storm event has produced 0.5 inches, even if the storm is continuing. Inspections are only required during normal working hours. If a storm event happens after hours on Friday, it does not need to be inspected until Monday.

During the site inspection, you must at a minimum inspect the following areas:

1. All areas that have been cleared, graded, or excavated and not yet stabilized;
2. All stormwater controls that have been installed;
3. Storage and maintenance areas;
4. Areas where stormwater typically flows within the site;
5. All points of discharge from the site; and
6. All locations where stabilization measures have been implemented (unless final stabilization has been achieved).

All erosion, sediment, and pollution prevention controls must remain in effective operating condition during permit coverage and be protected from activities that would reduce their effectiveness. When problems are noted during the inspections, they will be corrected immediately and be completed by the close of the next work day. If corrections cannot be completed by the next day, the rationale shall be documented in writing and what the schedule will be to make the correction. The SWPPP Coordinator will make the corrections or will assign someone to make the corrections. The SWPPP must be modified accordingly within 7 calendar days of completing the work. Any assignments will be documented in writing. The SWPPP Coordinator will follow up to verify that the corrections were made.

A current copy of all inspection reports will be kept at the work site or an easily accessible location, so that it can be made available at the time of on-site inspection or upon request by UDWQ. Inspection reports can be found in Appendix G.

## **4.2 Delegation of Authority**

### **Duly Authorized Representative or Position:**

Company or Organization Name  
Name  
Position  
Address  
City, State, Zip  
Telephone  
Email/Fax

The Delegation of Authority form is attached as Appendix L.

## **4.3 Corrective Action Log**

A corrective action log is included as Appendix H. This log will describe repair, replacement, and maintenance of BMPs as a result of the inspections and maintenance procedures. It will also document clean-up and disposal of spills, releases, or other deposits, and remediation of any permit violation.

## **Section 5. Recordkeeping and Training**

### **5.1 Recordkeeping**

Records will be retained for a minimum period of at least 3 years after the permit is terminated.

The NOI and acknowledgment letter from the state is attached as Appendix C.

A Grading and Stabilization Activities log is included as Appendix F.

### **5.2 Log of Changes to the SWPPP**

The SWPPP is a working document, and should be updated accordingly. Some updates or changes are marked within the body of the SWPPP; these should be initialed and dated

An amendment log is included as Appendix I. This log documents additional changes and updates to the SWPPP, including the addition of new BMPs, replacement of failed BMPs, changes in activities or timing, changes in personnel, changes in inspection and maintenance, and updates to site maps. Revisions to the SWPPP must be completed within 7 calendar days of the change occurring.

### **5.3 Training**

At a minimum, personnel must be trained to understand the following if related to the scope of their job duties:

- The location of all stormwater controls on the site required by this permit, and how they are maintained;
- The proper procedures to follow with respect to the permit's pollution prevention requirements; and
- When and how to conduct inspections, record applicable findings, and take corrective actions (only applies to inspection personnel)

A log of training is included as Appendix K.

## **Section 6. Final Stabilization**

If you complete major construction activities on part of your site, you can document your final stabilization efforts for that portion of the site. You can amend or add to this section as areas of your project are finally stabilized. Update your site plans to indicate areas that have achieved final stabilization. Note that dates for areas that have achieved final stabilization should be included on the Grading and Stabilization Activities Log in Appendix F.

## Section 7. Certification and Notification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: \_\_\_\_\_ Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name: \_\_\_\_\_ Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Repeat as needed for multiple construction operators at the site

## Appendix A. Maps, Drawings, and BMP details

First map should show undeveloped site and current features.

- a. Boundaries of the property and of the locations where construction activities will occur, including:
  - i. Locations where earth-disturbing activities will occur, noting any phasing of construction activities;
  - ii. Approximate slopes before and after major grading activities. Note areas of steep slopes (15% or greater);
  - iii. Locations where sediment, soil, or other construction materials will be stockpiled;
  - iv. Locations of any crossings of surface waters;
  - v. Designated points on the site where vehicles will exit onto paved roads;
  - vi. Locations of structures and other impervious surfaces upon completion of construction; and
  - vii. Locations of construction support activity areas covered by this permit.
- b. Locations of all surface waters, including wetlands, that exist within or in the immediate vicinity of the site. Indicate which water bodies are listed as impaired, and which are identified as Category 1 or 2 waters;
- c. The boundary lines of any natural buffers provided consistent with Part 2.1.2.a.i.
- d. Topography of the site, existing vegetative cover (e.g., forest, pasture, pavement, structures), and drainage pattern(s) of storm water and authorized non-storm water flow onto, over, and from the site property before and after major grading activities;
- e. Storm water and allowable non-storm water discharge locations, including:
  - i. Locations of any storm drain inlets on the site and in the immediate vicinity of the site; and
  - ii. Locations where storm water or allowable non-storm water will be discharged to surface waters (including storm sewer systems and/or wetlands) on or near the site.
- f. Locations of all potential pollutant-generating activities identified in Part 7.2.6;
- g. Locations of storm water control measures; and
- h. Locations where tackifiers, polymers, flocculants, fertilizers, or other treatment chemicals will be used and stored.

## **Appendix B. Construction General Permit**

The Construction General Permit UTRC00000 can be accessed at:

<http://www.waterquality.utah.gov/UPDES/docs/2014/07Jul/FinalSWConstructionGenPermit.pdf>

DRAFT

**Appendix C. NOI and Acknowledgement Letter from State**

DRAFT

**Appendix D. Project Schedules**

DRAFT

**Appendix E. Spill Prevention and Response Plan**

DRAFT

**Appendix F. Grading and Stabilization Activities Log**

DRAFT

**Appendix G. Inspection Reports**

DRAFT

**Appendix H. Corrective Action Log**

DRAFT

**Appendix I. SWPPP Amendment Log**

DRAFT

## **Appendix J. Subcontractor Certifications/Agreements**

### **SAMPLE**

Project Number:

Project Title:

Operator(s):

As a subcontractor, you are required to comply with the Stormwater Pollution Prevention Plan (SWPPP) for any work that you perform on-site. Any person or group who violates any condition of the SWPPP may be subject to substantial penalties or loss of contract. You are encouraged to advise each of your employees working on this project of the requirements of the SWPPP. A copy of the SWPPP is available for your review at the office trailer.

Each subcontractor engaged in activities at the construction site that could impact stormwater must be identified and sign the following certification statement:

**I certify under the penalty of law that I have read and understand the terms and conditions of the SWPPP for the above designated project and agree to follow the BMPs and practices described in the SWPPP.**

This certification is hereby signed in reference to the above named project.

Company:

Address:

Telephone Number:

Type of construction service to be provided:

Signature: \_\_\_\_\_

Title:

Date: \_\_\_\_\_

**Appendix K. Training Log**

DRAFT

## Appendix L. Delegation of Authority

I, Name, hereby designate the person or specifically described position below to be a duly authorized representative for the purpose of overseeing compliance with environmental requirements, including the Construction General Permit, at the Rilda Canyon to Huntington Pipeline construction site. The designee is authorized to sign any reports, stormwater pollution prevention plans, and all other documents required by the permit.

Name

Company or Organization Name

Address

City, State, Zip

Phone

Email

By signing this authorization, I confirm that I meet the requirements to make such a designation as set forth in the General Permit No. UTRC00000, and that the designee above meets the definition of a “duly authorized representative” as set forth in the same permit.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name:

Company:

Title:

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**Appendix M. Additional Information**

DRAFT

## Inspection Report – UPDES Number

<b>Date of Inspection</b>		<b>Start/End Time</b>	
<b>Inspector's Name(s)</b>			
<b>Inspector's Title(s)</b>			
<b>Describe present phase of construction</b>			
<b>Type of Inspection:</b>			
<input type="checkbox"/> Regular <input type="checkbox"/> Pre-storm event <input type="checkbox"/> During storm event <input type="checkbox"/> Post-storm event			
<b>Weather Information</b>			
<b>Has there been a storm event since the last inspection?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No			
<b>If yes, provide:</b>			
Storm Start Date & Time:	Storm Duration (hrs):	Approximate Amount of Precipitation (in):	
<b>Weather at time of this inspection?</b>			
<input type="checkbox"/> Clear <input type="checkbox"/> Cloudy <input type="checkbox"/> Rain <input type="checkbox"/> Sleet <input type="checkbox"/> Fog <input type="checkbox"/> Snowing <input type="checkbox"/> High Winds			
<input type="checkbox"/> Other:		Temperature:	
<b>Have any discharges occurred since the last inspection?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No			
<b>If yes, describe:</b>			
<b>Are there any discharges at the time of inspection?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No			
<b>If yes, describe:</b>			

### Site-specific BMPs

- *Number the structural and non-structural BMPs identified in your SWPPP on your site map and list them below (add as many BMPs as necessary). Carry a copy of the numbered site map with you during your inspections. This list will ensure that you are inspecting all required BMPs at your site.*
- *Describe corrective actions initiated, date completed, and note the person that completed the work in the Corrective Action Log.*

BMP	Installed?	Maintenance Required?	Corrective Action Needed and Notes
1	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
5	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
6	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
7	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
8	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
9	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
10	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
11	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
12	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	

BMP	Installed?	Maintenance Required?	Corrective Action Needed and Notes
13	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
14	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
15	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
16	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
17	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
18	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
19	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
20	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	

### Overall Site Issues

*Below are some general site issues that should be assessed during inspections. Customize this list as needed for conditions at your site.*

	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
Are all slopes and disturbed areas not actively being worked properly stabilized?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Are discharge points and receiving waters free of any sediment deposits?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Are storm drain inlets properly protected?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Is the construction exit preventing sediment from being tracked into the street?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Is trash/litter from work areas collected and placed in covered dumpsters?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Are washout facilities (e.g., paint, stucco, concrete) available, clearly marked, and maintained?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other deleterious material?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Are materials that are potential stormwater contaminants stored inside or under cover?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	

	<b>Implemented?</b>	<b>Maintenance Required?</b>	<b>Corrective Action Needed and Notes</b>
Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Are there any conditions that could lead to spills, leaks, or other accumulations of pollutants on the site?		<input type="checkbox"/> Yes <input type="checkbox"/> No	
Are there any locations where new stormwater controls are necessary?		<input type="checkbox"/> Yes <input type="checkbox"/> No	
Is there any visible erosion or sedimentation that is due to work at your site?		<input type="checkbox"/> Yes <input type="checkbox"/> No	

**Non-Compliance**

Describe any incidents of non-compliance not described above:



Inspector's printed name: \_\_\_\_\_

Inspector's signature: \_\_\_\_\_ Date: \_\_\_\_\_

Operator's signature: \_\_\_\_\_ Date: \_\_\_\_\_

## SWPPP Training Log

Instructor's Name(s): \_\_\_\_\_

Instructor's Title(s): \_\_\_\_\_

Course location: \_\_\_\_\_ Date: \_\_\_\_\_

Course length (hours): \_\_\_\_\_

Stormwater Training Topic: (check as appropriate)

- Erosion Control BMPs       Emergency Procedures
- Sediment Control BMPs       Good Housekeeping BMPs
- Non-Stormwater BMPs

Specific Training Objective: \_\_\_\_\_  
\_\_\_\_\_

Attendee Roster: (attach additional pages as necessary)

No.	Name of Attendee	Company
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		







## Supplemental Form - Buffer Compliance Alternatives

These requirements only apply when a surface water is located within 50 feet of your project's earth disturbances, and in the case of intermittent waters, only to surface waters that have visible water flowing or that typically flow continuously more than two months out of the year.

*Note: Areas that you do not own or that are otherwise outside your operational control may be considered areas of undisturbed natural buffer for purposes of compliance with this part.*

You must ensure that any discharges to surface waters through the area between the disturbed portions of the property and any surface waters located within 50 feet of your site are treated by an area of undisturbed natural buffer and/or additional erosion and sediment controls in order to achieve a reduction in sediment load equivalent to that achieved by a 50-foot natural buffer.

You can comply with this requirement in one of the following ways; check the compliance alternative that you have chosen:

- I will provide and maintain a 50-foot undisturbed natural buffer.
- You must show the 50-foot boundary line of the natural buffer on your site map.
  - You must delineate and clearly mark off, with flags, tape, or other similar marking device, all natural buffer areas.
  - Where there is a concentrated storm water discharge leaving the site's disturbed area and crossing the natural buffer area, the concentrated flow must have treatment or BMPs to minimize sediment transport, found in the area generating the flow and not just as it crosses the buffer area. Additionally, velocity dissipation devices must be used where erosion is caused by the flow as it crosses the buffer area.
- I will provide and maintain an undisturbed natural buffer that is less than 50 feet and is supplemented by additional erosion and sediment controls, which in combination achieves the sediment load reduction equivalent to a 50-foot undisturbed natural buffer.
- You must show the boundary line of the natural buffer on your site map.
  - You must delineate and clearly mark off, with flags, tape, or other similar marking device, all natural buffer areas.
  - Where there is a concentrated storm water discharge leaving the site's disturbed area and crossing the natural buffer area, the concentrated flow must have treatment or BMPs to minimize sediment transport, found in the area generating the flow and not just as it crosses the buffer area. Additionally, velocity dissipation devices must be used where erosion is caused by the flow as it crosses the buffer area.
  - You must document any information you relied upon to demonstrate the equivalency.

Estimated sediment removal or site-specific calculation of a 50-foot buffer:

Width of natural buffer to be retained:

Description of additional erosion and sediment controls to be used in combination with the natural buffer area:

Demonstrate that the combination of your buffer and the additional controls described above will meet or exceed the sediment efficiency of a 50-foot buffer:

- It is infeasible to provide and maintain an undisturbed natural buffer of any size; therefore, I will implement erosion and sediment controls that achieve the sediment load reduction equivalent to a 50-foot undisturbed natural buffer.

Rationale for concluding that it is infeasible:

Estimated sediment removal or site-specific calculation of a 50-foot buffer:

Description of erosion and sediment controls to be used:

Demonstrate that the additional controls described above will meet or exceed the sediment efficiency of a 50-foot buffer:

- I qualify for one of the following exceptions:
- There is no discharge of stormwater to the surface water that is located 50 feet from my construction disturbances.
  - No natural buffer exists due to preexisting development disturbances that occurred prior to the initiation of planning for this project.
- For a linear project, site constraints (e.g., limited right-of-way) make it infeasible for me to meet any of the compliance alternatives.
- Describe site constraints
  - Describe buffer width retained and/or supplemental erosion and sediment controls to treat discharges to the surface water
- The project qualifies as “small residential lot” construction.
- Buffer disturbances are authorized under a CWA Section 404 permit.
- Describe permitted disturbances within the buffer area
- Buffer disturbances will occur for the construction of a water-dependent structure or water access area (e.g., pier, boat ramp, and trail).
- Describe permitted disturbances within the buffer area

**Attachment H. Draft Spill Prevention and Response Plan (SPRP)**

# Spill Prevention and Response Plan

## 1.1. General

This plan is established to provide the Contractor general guidance and procedures to manage project site operations which have potential to cause environmental damage and procedures to follow in case a hazardous spill occurs. The following discharges are prohibited from construction sites and pollution prevention standards are required whenever the sources for these potential pollutants are located on a construction site:

1. Wastewater from washout of concrete;
2. Wastewater from washout and cleanout of paint, form release oils, concrete grinding slurry, curing compounds, and other construction materials;
3. Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance;
4. Soaps, solvents, or detergents used in vehicle and equipment washing; and
5. Toxic or hazardous substances from a spill or other release.

## 1.2. Spill Prevention

### 1.2.1. Washout Practices

Provide an effective means of eliminating the discharge of contaminated water from the washout and cleanout of paint, concrete, form release oils, curing compounds, etc. by incorporating the following:

1. Direct all washwater into a leak-proof container/pit. The container or pit must be designed so that no overflows can occur due to inadequate sizing or precipitation. Segregate paint waste, oily waste, and concrete washout waste and manage the proper disposal separately.
2. Ensure liquid wastes are not dumped in storm sewers or surface waters.
3. Locate any washout or cleanout activities as far away as possible from surface waters and stormwater inlets or conveyances.

### 1.2.2. Fueling and Maintenance of Equipment or Vehicles

The contractor will designate the location, size, and use of service/refueling areas. Designated areas will be a minimum of 300 feet from perennial and intermittent stream channels, seeps and springs, wetlands, lakes, reservoirs, stock water developments, and other water features. All heavy equipment and service vehicles will have a supply of absorbent and other cleanup materials on hand for initial containment of spills.

If fueling or maintenance of equipment or vehicles occur on the project site, the following are required:

1. Ensure adequate supplies are available at all times to handle spills, leaks, and disposal of used liquids;
2. Use drip pans and absorbents under or around leaky vehicles;
3. Dispose of or recycle oil and oily wastes in accordance with other federal, state, tribal, or local requirements;
4. Clean up spills or contaminated surfaces immediately, using dry clean up measures where possible, and eliminate the source of the spill to prevent discharge or a furtherance of an ongoing discharge; and
5. Do not clean surfaces by hosing the area down.

### **1.2.3. Washing of Equipment and Vehicles**

No equipment or vehicle washing is allowed within or along the right-of-way; washing will occur at a designated location off-site. Equipment is required to be maintained, clean, operationally safe, and in good repair. All equipment will be thoroughly washed to remove accumulations of oil and grease, mud, soil, vegetative material, and noxious weed seed.

### **1.2.4. Storage of Products that have the Potential to be Hazardous or Toxic Waste**

Examples of hazardous or toxic waste that may be present at construction sites primarily include, but are not limited to, petroleum-based products used to operate and maintain construction equipment and vehicles, pipeline coating material, and paints. When storing any hazardous materials on the construction site, comply with the following:

1. Store these products in water-tight containers, and provide either cover (e.g., plastic sheeting or temporary roofs) to prevent these containers from coming into contact with rainwater or provide secondary containment (e.g., spill berms, decks, spill containment pallets). Chemicals that are not compatible (such as sodium bicarbonate and hydrochloric acid) shall be stored in segregated areas so that spilled materials cannot combine and react.
2. Materials will only be stored in clearly marked containers in designated locations.
3. Materials will be stored in secure areas to prevent damage, vandalism, or theft. During construction hours, materials may be stored temporarily on the right-of-way, but overnight storage on the right-of-way is prohibited. All storage containers will remain sealed when not in use and storage areas will be secured (gated, locked, and or guarded) at night and during periods of inactivity.
4. Materials no longer required for construction will be removed from the site as soon as practicable.

### 1.3. Spill Response

1. A leak, spill, or other release that meets any of the following measures is a hazardous spill and requires an emergency spill notification:
  - a. 25 gallons or more of fuel or oil are spilled or cause oil sheen to form on a water surface; or
  - b. Reportable quantities of substances established at 40 CFR 117.3 and 302 within a 24-hour period.
2. Emergency Spill Notification Procedures: If the spill presents a potential for harm to personnel, public, or the environment, the Contractor is not able to immediately control and clean-up the spill, and/or the spill exceeds the reportable quantity, the following actions shall be taken:
  - a. If the spill is clearly an emergency hazardous spill condition, within 24 hours the Contractor will notify:

Project Manager	
EPA - National Response Center	(800) 424-8802
Utah DEQ	(801) 536-4123
Emergency Services	911
Manti-La Sal National Forest	
BLM Price Field Office	

- b. Within 7 calendar days of the release, provide a description of, circumstances leading to, and the date of the release.
    - c. It is recommended that the Contractor use a State Certified Hazardous Materials Lab when necessary to identify an unknown spill material. Identifying the type of spill material or liquid containment can save the Contractor from increase costs for disposal if the material to be removed is known.
    - d. The Contractor is responsible for all required hazardous waste management which includes but is not limited to the transportation, storage, and disposal at a hazardous waste disposal facility.
3. Waste Disposal and Minor Spills: A minor spill is a condition that does not present potential harm to personnel and/or the environment. The Contractor has the ability to immediately control and clean-up the spill, and the spill does not meet the hazardous spill definition. Actions to control non-emergency spills involve the following activities from the Contractor:
  - a. Begin spill clean-up immediately and use trained personnel to respond to critical events involving spills.
  - b. Use contingency clean-up products and equipment to handle non-emergency spills (absorbent materials, personal protection equipment, compatible empty container to store spilled material, fire extinguisher, etc.)

- c. Spilled liquids or solids are to be properly contained in a compatible container and stored on-site until proper disposal action is taken as required by state and federal requirements. Where a spill occurs or when hazardous wastes are generated, the Contractor will fill out a hazardous waste label and establish an accumulation date.

## **1.4. Waste Management Procedures**

### **1.4.1. Disposal of Waste Products**

1. For construction and domestic waste: Provide waste containers (e.g., dumpster or trash receptacle) of sufficient size and number to contain construction and domestic wastes. In addition, clean up and dispose of waste in designated waste containers daily and clean up immediately if containers overflow.
2. For sanitary waste: Position portable toilets so that they are secure and will not be tipped or knocked over. They must be positioned at least 10 feet from any storm water conveyance, inlet, curb, or gutter, or have secondary containment.
3. Separate hazardous or toxic waste from construction and domestic waste. Mixing increases hazardous waste volume and consequent handling and disposal costs.
4. Store waste in sealed containers, which are constructed of suitable materials to prevent leakage and corrosion, and which are labeled in accordance with applicable Resource Conservation and Recovery Act (RCRA) requirements and all other applicable state or local requirements. Label hazardous waste containers as such.

## **Attachment I. Reclamation Plan**

This reclamation plan was developed in accordance with the Green River District Reclamation Guidelines, and outlines measures that will be implemented to reclaim areas disturbed by the pipeline project. The plan also includes measures to manage noxious weeds.

Reclamation will be completed on all USFS- and BLM-administered lands and disturbed private lands with approval.

Reclamation and best management practices would be implemented during and after construction activities to minimize impacts on the environment to the greatest extent practicable. Reclamation methodologies to be implemented during and after construction are described in the following sections. In addition, monitoring would be implemented to ensure that reclamation techniques are successful.

### **a. Inspection**

#### **i. Compliance Inspection Contractor (CIC)**

At least one Compliance Inspection Contractor (CIC) is required for each construction spread during construction and restoration and will be hired by the right-of-way holder. The number and experience of CICs assigned to each construction spread should be appropriate for the length of the construction spread and the resources potentially affected. Reports will be submitted to the USFS and BLM on a weekly basis.

The CIC shall have peer status with all other activity inspectors.

CIC shall have the authority to stop activities that violate the environmental conditions of the approved permit, state and federal environmental permit conditions, or landowner requirements. The CIC also has authority to order appropriate corrective action.

At a minimum, the CIC shall be responsible for:

1. Ensuring compliance with the requirements of this POD, the conditions of the right-of-way grants, other environmental permits and approvals, and environmental requirements in landowner easement agreements;
2. Identifying, documenting, and overseeing corrective actions, as necessary to bring an activity back into compliance;
3. Verifying that the limits of authorized construction work areas and locations of access roads are properly marked before clearing;
4. Verifying the location of signs and highly visible flagging marking the boundaries of sensitive resource areas, waterbodies, wetlands, or areas with special requirements along the construction work area;
5. Identifying erosion/sediment control and soil stabilization needs in all areas;
6. Ensuring that the location of dewatering structures and slope breakers will not direct water into known cultural resources sites or locations of sensitive species;
7. Verifying that trench dewatering activities do not result in the deposition of sand, silt, or sediment near the point of discharge into a wetland or waterbody. If such

deposition is occurring, the dewatering activity shall be stopped and the design of the discharge shall be changed to prevent reoccurrence;

8. Advising the construction contractor when conditions (e.g., wet weather) make it advisable to restrict construction activities to avoid excessive rutting;
9. Ensuring restoration of contours and topsoil;
10. Determining the need for and ensuring that erosion controls are properly installed, as necessary to prevent sediment flow into wetlands, waterbodies, sensitive areas, and onto roads; and
11. Identifying areas that should be given special attention to ensure stabilization and restoration after the construction phase.

## **b. Preconstruction considerations**

### **i. Construction work areas**

Ensure that appropriate surveys for biological and cultural resources have been completed. A pre-disturbance noxious weed inventory will be completed and a report submitted to the USFS and BLM. Any necessary treatment to prevent the spread of weeds that may be present will be completed prior to project disturbance.

### **ii. Road crossings and access points**

Plan for safe and accessible conditions at all roadway crossings and access points during construction and restoration.

### **iii. Disposal planning**

Determine methods and locations for the disposal of construction debris (e.g., timber, slash, mats, garbage, drilling fluids, excess rock, etc.). Off-site disposal in other than commercially operated disposal locations is subject to compliance with all applicable survey, landowner permission, and mitigation requirements.

### **iv. Stormwater Pollution Prevention Plan (SWPPP)**

A SWPPP will be prepared prior to construction and will be made available on each construction spread for compliance with the UPDES permit requirements. The SWPPP will include necessary erosion controls to prevent sediment transport from the project area. A Spill Prevention and Response Plan (SPRP) will also be included as part of the SWPPP, to reduce the risk of pollution.

## **c. Construction considerations**

### **i. Noxious weeds**

- A pre-disturbance noxious weed inventory will be conducted to determine the presence of noxious weeds prior to beginning the project, and to determine whether treatment is needed prior to disturbance. If noxious weeds are found, a report would be prepared to include the following:
  1. Location (GPS if possible);

2. Species;
  3. Canopy cover or number of plants; and
  4. Size of infestation (square feet or acres).
- All vehicles and equipment would be cleaned prior to accessing the right-of-way or ancillary facilities, either through power-washing or other approved method, to prevent weed seed introduction.
  - All vehicles, OHVs, and equipment would be power-washed after driving through a noxious weed infestation (Utah Noxious Weed Act). Travel through weed-infested areas would be avoided or minimized.
  - Certified noxious weed-free seed and mulch would be used (Utah Seed Law). Sand, gravel, borrow, and fill material would be from noxious weed-free sources to prevent the introduction and spread of weeds.
  - Staging areas would be located in weed-free sites.
  - The project area and stockpiled material would be maintained in a weed-free condition to prevent weed seed production. These include, but are not limited to, facility sites, cut and fill slopes, topsoil reserves, roadsides, and borrow areas along roads.
  - All new noxious weed infestations on USFS- and BLM-administered lands would be reported to the respective agency's weed coordinator. New infestations would be controlled when found, and before seed set if possible. Some populations may require more than one treatment per year.
  - All herbicide treatments would be applied by a Utah licensed pesticide applicator. If licensed in another state, a reciprocal license may be obtained through the Utah Department of Agriculture website.
  - A Pesticide Use Proposal must be approved prior to chemical application on BLM-administered lands. Only BLM-approved pesticides and adjuvants would be used.
  - All pesticide applications would be recorded on Pesticide Application Record (PAR) forms within 24 hours of application. All PAR forms would be returned to the BLM weed coordinator by December 1<sup>st</sup> of each year, along with an annual pesticide report.
  - Pesticides may be applied through:
    1. backpack spot sprayer (preferred)
    2. wick application (preferred)
    3. low or high boom sprayers mounted on truck or ATV
    4. aerial
    5. other label recommended method

All pesticide applications must strictly follow label instructions.

- Standard stipulations for pesticide application are as follows:
  1. Spraying or application of pesticides would not be done when wind speeds exceed 10 miles per hour or if heavy rainfall or other adverse weather conditions exist.

2. No pesticide application would occur within the following distances of open water, such as springs, wetlands, streams, ponds, or lakes, unless otherwise specified on the pesticide label:
    - 100 feet aerial application
    - 25 feet boom truck application
    - 10 feet backpack sprayer application
  3. Herbicide applications within 1,500 feet of special status plants or populations would be coordinated with the BLM weed coordinator. Additional measures may be incorporated into application plans for control around special status plants or populations.
  4. All commercial and private applicators of pesticides would be currently licensed or hold a reciprocal license with the State of Utah (Utah Pesticide Control Act).
  5. Empty containers would be disposed of in accordance with label instructions.
  6. Equipment would NOT be washed out or cleaned near streams, open water, or drainages that can carry water.
  7. Pesticides would only be transported when properly secured and with containers properly sealed and labeled.
- Invasive plants to be controlled include:
    1. All federally listed noxious weeds
    2. All state-listed noxious weeds
    3. All county-listed noxious weeds within the entire state of Utah.
    4. Other invasive plants deemed important for control by USFS and BLM, due to high risk of invasion and impact to adjacent undisturbed vegetation areas.

#### **ii. Topsoil and surface preparations**

- Topsoil will be segregated from the subsoil (without mixing them), stockpiled separately from other soil materials, and maintained for future use in rehabilitating the site.
- After construction is complete, salvaged topsoil will be re-distributed evenly over disturbed surfaces.
- Topsoil piles stored beyond one growing season will be stabilized and seeded to prevent erosion. Topsoil storage areas will be identified with appropriate signage.
- All waste material will be segregated from subsoil and topsoil, and disposed of in an authorized disposal facility in accordance with local, state, and federal requirements.

#### **d. Post-construction Considerations**

##### **i. Visuals**

- Ensure the overall location, landform, scale, shape, color, and orientation of major landscape features blends into the adjacent area and meets the needs of the planned post-disturbance land use. Specific measures to achieve this consideration include:
  1. To the extent that is safe and possible, rock scree and boulders within the right-of-way will be set aside prior to or during excavation of the pipeline trench and will be

replaced on the prepared slope during restoration to mimic the texture of the existing adjacent landscape.

2. Dead and removed wood may be stockpiled to be spread over the disturbed area after construction to provide additional texture and aid plant establishment.
3. After installation of the pipeline, the disturbed area will be graded to match existing adjacent topography.
4. Pock marks will be installed irregularly across the slope to create additional texture and create micro-habitats for re-vegetation. These will be installed to BLM specifications.

## **ii. Noxious weeds**

- All disturbance areas would be monitored for noxious weeds annually, for a minimum of three growing seasons following completion of the project or until desirable vegetation is established. If found, weeds would be treated as described above.

## **iii. Topsoil and final surface preparations**

- Salvaged topsoil would be redistributed evenly and to pre-disturbance depths. Final grading, topsoil replacement, and any permanent erosion control structures would be completed within 20 days after backfilling the trench. If seasonal or other weather conditions prevent compliance with this time frame, maintain temporary erosion controls until conditions allow completion of final surface preparations.
- Reduce soil/subsoil compaction to the anticipated root depth of the desired plant species.
  - Compaction relief typically should be designed for 18-24 inches in depth.
  - Compaction relief should be designed to create a crosshatch pattern, and distance between furrows should not be greater than 2 feet.
- Re-spread the topsoil according to the following standards.
  - If the topsoil to be re-spread is greater than 6 inches in depth, then topsoil should be applied before compaction relief is implemented.
  - If the topsoil to be re-spread is less than 6 inches, then topsoil should be applied after compaction relief is implemented.
  - If large clumps or clods occur, disking may be necessary.

## **iv. Re-vegetation**

- Drill seeding is the preferred method of seed application unless site conditions preclude the use of drill seeding equipment.
  - Drill seeds at the minimum rate of 45 pure live seeds (PLS) per linear foot. Seeds should be drilled to a depth of 0.25 to 0.5 inch.
  - Some plant seeds should not be drilled. If those species are used, the application method should fit the seed type requirements.
  - Areas in excess of 40% slope or that are excessively rocky will be broadcast seeded at 80-90 PLS and covered to a maximum of 0.25 inch by harrowing, drag bar, or roller.

- Seeding efforts should be conducted between August 15 and prior to winter freezing of the soil. If seeding cannot be completed prior to winter freezing, hydromulch with tackifier will be applied where appropriate. Roadway clear zones will be treated in accordance with UDOT and Emery County standards (typically graveled).

The final seed mix will be approved by the USFS and BLM.

#### **v. Monitoring and reporting**

- Vegetative monitoring protocol would be approved by the agencies prior to implementation of reclamation techniques. The monitoring methodology would be designed to monitor basal vegetative cover. Monitoring criteria include the following:
  1. Qualitative monitoring data should be collected after the second growing season following reclamation actions.
  2. Quantitative data should be collected after the third and fifth growing seasons, and the year that the applicant determines that reclamation meets the long-term objective of 75 percent basal cover as compared to the reference site. General view photographs of the reclaimed areas should be submitted with the quantitative data. Photographs should be taken at the same photo point each time, and as close to the same time of year as previous photos were taken to reduce differences in plant growth characteristics.
  3. If after three growing seasons there is less than 30 percent of the basal cover based on comparison to the reference site, then the Authorized Officer may require additional reclamation efforts.
  4. All seed utilized will be tested prior to application to ensure that the agency and State of Utah specifications for PLS, purity, and noxious weeds have been met.
  5. As determined by the Authorized Officer, temporary fencing may be required to exclude livestock/big game grazing until seeded species have become established.
  6. As determined by the Authorized Officer, mulching may be required.
    - If utilized, mulch should be applied within 24 hours following completion of seeding. Mulching should consist of crimping certified weed-free straw or certified weed-free native grass hay into the soil.
    - Hydro-mulching may be used in areas where crimping is impracticable, in areas of interim reclamation that were hydro-seeded, and in areas of temporary seeding regardless of seeding method.
- The process of monitoring, evaluating, documenting, and implementing reclamation measures would be repeated until reclamation goals are achieved, as determined by the appropriate Authorized Officer.
- PacifiCorp would be responsible to ensure that revegetated areas would be inspected annually and monitored to document location and extent of areas with successful revegetation, and areas needing further reclamation (for a minimum of 3 years after construction completion). An annual reclamation report would be submitted to the Authorized Officer by March 31 of each year.
- Prior to any surface disturbance, vegetative monitoring locations and undisturbed reference sites would be identified by the right-of-way holder and approved by the agencies.

1. Reference sites will be permanently marked and the location recorded by GPS in North American Datum 1983.
  2. A photograph consisting of a general view of the marked reference site should be submitted with the reference site data.
  3. All linear rights-of-way will have one monitoring transect per each NRCS ecological site that the right-of-way passes through for greater than 0.75 mile.
- PacifiCorp will submit all reclamation efforts annually to the Green River District Data Management System (GRDMS) and a report will be submitted to the Manti-La Sal National Forest and BLM Price Field Office by March 1. Reclamation efforts will include:
    1. Document compliance with all aspects of the reclamation goals, objectives, and actions and describe the reclamation accomplished.
    2. Document the results of the noxious weed inventory; and
    3. Recommend revised reclamation strategies, if necessary.
  - Implement revised reclamation strategies as needed.
  - PacifiCorp will repeat the process of monitoring, evaluating, documenting/reporting, and implementing, until reclamation goals are achieved, as determined by the Authorized Officer.

## **Attachment J. Cultural Resources Discovery Plan**

In the event than an unanticipated buried cultural resource (referred to hereafter as a discovery) is identified during surface-disturbing activities, this discovery protocol will be followed to ensure the proper identification, evaluation, and mitigation of adverse impacts to the resource.

### **Discovery Protocol**

All project activity within 100 feet of the discovery will cease immediately. Work may not resume until the resource can be identified and evaluated by the archaeological contractor and the appropriate government archaeologist. In direct consultation with the BLM, USFS, or other appropriate surface management agency, the SHPO, owner, and the archaeological contractor will develop an emergency treatment strategy. Efforts will be made to expedite resumption of construction without further adverse impacts to the cultural resource. The following six steps must be completed before work can resume in the vicinity of the discovery:

1. Cease all activity within 100 feet of the discovery. Work can continue outside the 100-foot buffer if an archaeological monitor is present and has determined that no additional impacts to the discovery will occur.
2. Notification:
  - a. If the discovery is on BLM-administered lands, notify the appropriate BLM Field Office and SHPO of the discovery within 24 hours.
  - b. If the discovery is on USFS-administered lands, notify the Manti-La Sal National Forest and SHPO of the discovery within 24 hours.
  - c. If the discovery is on UDOT land, notify UDOT and SHPO of the discovery within 24 hours.
  - d. If the discovery is on private land, notify SHPO of the discovery within 24 hours.
3. Site documentation and evaluation by an archaeological consultant and government representatives if warranted by others.
4. Determination of eligibility by others.
5. Preparation of action plan/mitigation plan by others.
6. Resumption of work upon receipt of written permission from the appropriate land management agency or SHPO.

### **Unanticipated Discovery of Human Remains and Associated Materials Protocol:**

1. Human Remains on BLM- or USFS-administered land:
  - a. Discovery Notification – If human remains, remains thought to be human, associated or unassociated funerary objects, or objects of cultural patrimony are discovered, work within 100 feet of the discovery will stop immediately. Verbal notification of the discovery will be made to the BLM, the SHPO, and owner immediately. Upon notification, the BLM would notify the appropriate law enforcement authorities, the county coroner, and appropriate Native American Graves Protection and Repatriation Act (NAGPRA) coordinator. If the remains are determined to not be of forensic importance, an assessment of the remains would be made by others.
  - b. Assessment of the Remains – An in-situ assessment of the remains would be made by others to determine the cultural affiliation of the remains, to aid in determining required actions as defined in a written NAGPRA Plan of Action (POA) prepared by the BLM. The BLM would meet all

requirement of NAGPRA for all discoveries of human remains and associated objects in accordance with 43 CFR 10 and BLM IM 2007-002, which allows for reburial of human remains and associated funerary objects excavated on BLM-administered land. All reasonable measures would be taken by the involved parties to resolve issues regarding affiliation and disposition of human remains within 30 days as required by law.

- c. Protection of Human Remains – The owner is responsible for the security and protection of human remains during NAGPRA consultations, at least until disposition of the remains is determined.
  - d. Resumption of Work – Work in the immediate vicinity of the human remains may not resume until after the disposition of the human remains is determined. Permission to proceed would come from the BLM, after consultation with SHPO and appropriate Tribal representatives. This permission can only be given after a written binding agreement is executed between the necessary parties. This agreement adopts a recovery plan for removal, treatment, and disposition of the human remains or associated objects in accordance with 43 CFR Part 10.4(e).
2. Human Remains on private land:

Treatment of human remains discovered on private land would be treated as defined by state law, State of Utah Code Annotated 9-9-401 et. Seq., 7-9-704, 9-9-305, 9-8-176.

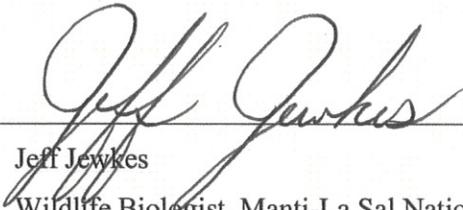
- a. Discovery Notification – If human remains, remains thought to be human, associated or unassociated funerary objects, or objects of cultural patrimony are discovered, work within 100 feet of the discovery will stop immediately. The owner will make notification, either verbal or written, of the discovery to the SHPO and the appropriate law enforcement agency. If the remains are determined to not be of forensic importance, an assessment of the remains would be made by others.
- b. Assessment of the Remains – An in-situ assessment of the remains would be made by others to determine the cultural affiliation of the remains, to aid in determining required actions as defined in a written Action Plan prepared by the SHPO. SHPO would meet all requirements of applicable state and federal laws for all discoveries of human remains and associated objects on state lands and private property. All reasonable measures would be taken by the involved parties to resolve issues regarding affiliation and disposition of human remains within 30 days as required by law.
- c. Protection of Human Remains – The owner is responsible for the security and protection of human remains during consultations if the remains are located on state or private lands.
- d. Resumption of Work – Work in the immediate vicinity of the human remains may not resume until after the disposition of the human remains. Permission to proceed would come from the SHPO in consultation with the appropriate Tribal representatives, depending on property ownership. This permission can only be given after a written binding agreement is executed between the necessary parties. This agreement adopts a recovery plan for removal, treatment, and disposition of the human remains or associated objects. Removal of human remains from state and private lands can only be executed by special permit issued by the SHPO and after consultation with the Native American Remains Committee and affiliated Tribes.

**Appendix E. Biological Assessment and Biological Evaluation**

# Deer Creek Mine Closure Water Pipeline

## Biological Assessment and Biological Evaluation of Sensitive Species

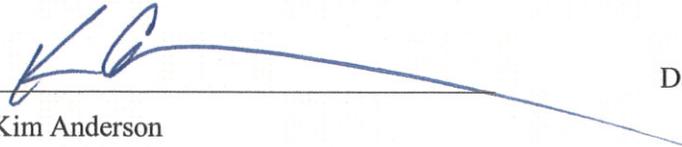
Prepared by: Jenna Jorgensen  
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Reviewed by:   
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Date: 8/26/2016

Reviewed by:   
Kim Anderson  
Botanist, Manti-La Sal National Forest

Date: 23 SEPT 2016

for:

Ferron-Price Ranger District  
Manti-La Sal National Forest

8/12/2016

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## Introduction

The biological assessment (BA) portion of this document analyzes the potential effects to listed species from the installation of the proposed Deer Creek Mine Closure Water Pipeline Project.

The biological evaluation (BE) portion of this document analyzes the potential effects of the proposed project on species listed as sensitive on the Regional Forester's Sensitive Species List for the Intermountain Region (Region 4), and to determine whether the likely effects on these species would result in a trend toward becoming federally listed.

## Project Description

### Project Location

The project area is located in Rilda and Huntington Canyons, about 10 miles west of Huntington in Emery County, Utah (see Map 1 in Appendix A). The project area is within sections 22, 23, 26, 27, 28, 29, 25, 35, and 36 of T16 S, R 7 E.

### Proposed Project

The proposed project includes construction of 5.6 miles of a 10-inch HDPE gravity flow water pipeline from the Deer Creek Mine 1st Right Portals to settling ponds at Huntington Power Plant; only 1.8 miles would cross National Forest lands. The pipeline would be constructed within the rights-of-way for Emery County Road #306 and State Route 31 (SR-31). The proposed permanent right-of-way width is 12 feet centered on the pipeline; an additional 20 feet of temporary right-of-way on the outer edge of the permanent right-of-way (away from the roadway) would allow for construction of the pipeline. The total acreage of disturbance on National Forest is estimated to be 7.0 acres. Up to 1.7 acres of the temporary disturbance would occur beyond the Emery County Road #306 right-of-way across USFS-administered land.

The pipeline will include two shut-off valves; one at the mine entrance to prevent leaks on National Forest land, and one after the first SR-31 crossing, on private land just north of National Forest land.

The trench for the pipeline would be excavated with a trenching machine or track hoe excavator. Topsoil and subsoil would be segregated and stockpiled separately adjacent to the trench. After the pipeline is installed, the stockpiled subsoil would be used to backfill the trench, and the topsoil would be replaced on the surface and graded to pre-disturbance contours.

The pipeline would be buried with at least 5 feet of cover, except at the crossings of Huntington Creek; the pipeline would be attached to an existing bridge and diversion structure at each crossing. The pipeline would not be buried at these locations. Air vents and Carsonite posts would be installed approximately every 1,000 feet along the alignment; these features would be about 4 feet high, but would be colored to be visually unobtrusive from the roadway. A tracer wire and a fiber optic conduit would also be buried with the pipeline. The conduit would allow for installation of a telecommunications cable in the future without requiring excavation of the entire length of line.

Directional drilling would be applied to install the pipeline under Emery County Road #306, SR-31, and Bear Canyon Road; these drilling locations are on private or BLM-administered land. A stormwater pollution prevention plan (SWPPP) and spill prevention and response plan (SPRP) would be prepared and implemented to ensure compliance with the Clean Water Act during construction.

Construction is anticipated to take 2 to 3 months in the fall and early winter of 2016. Disturbed areas will be reclaimed upon project completion. After construction, PacifiCorp would maintain the right-of-way

and allow the pipeline to operate continuously. If the power plant were to shut down, continuing water treatment would be required at the plant if compliance with water quality standards could not be met. The pipeline would be intended to be permanent; if the pipeline were decommissioned, it would be left in the ground to avoid further ground disturbance.

## **Project Action Area**

The project action area includes the proposed pipeline right-of-way and extends one-half (0.5) linear mile for potential noise disturbance impacts. This area includes Huntington Creek, cliffs, and forested areas in both canyons.

Ongoing activities include grazing, mining-related activities, dispersed camping, and frequent roadway use.

## **General Setting**

The project area is within the High Plateaus of Utah physiographic subdivision of the Colorado Plateau. More specifically, the project area is located in Rilda and Huntington Canyons, on the east side of the Wasatch Plateau. Elevation of the proposed project is between 6,500 and 7,800 feet above sea level. A majority of the project area has been previously impacted by the existing roadways within these canyons.

## **Species Considered**

### **Listed Species that May Be Present**

The total project area encompasses approximately 21.83 acres at the bottom of Rilda and Huntington Canyons. Based on the IPaC System (accessed 9-2-2016), the U.S. Fish and Wildlife Service lists fifteen species as threatened, endangered, or candidate that could occur within Emery County. These species are listed in Table 1 below.

**Table 1. Listed species that may be present in the Deer Creek Mine Closure Water Pipeline project area, and rationale for further consideration in this biological assessment.**

Species	Status	Species Likely Occurrence in the Action Area and Consideration in this BA
California condor ( <i>Gymnogyps californianus</i> )	Endangered	Not considered. Condors in the area would be incidental, and would likely avoid the highway and adjacent forested areas.
Mexican spotted owl ( <i>Strix occidentalis lucida</i> )	Threatened	Not considered. Owls are not likely to be impacted by project activities due to the lack of suitable canyon habitat within or near the project area. The nearest critical habitat is over 40 miles to the east of the project area.
Southwestern willow flycatcher ( <i>Empidonax traillii extimus</i> )	Endangered	Not considered. Mature riparian vegetation is present along Huntington Creek; however, a dense understory suitable for nesting is not present.
Yellow-billed cuckoo ( <i>Coccyzus americanus</i> )	Threatened	
Utah prairie dog ( <i>Cynomys parvidens</i> )	Threatened	Not considered. Based on the USFWS Survey Intensity Map, Utah prairie dog do not occur in the project area. The nearest habitat to require surveys is over 29 miles to the southwest.
Bonytail chub ( <i>Gila elegans</i> )	Endangered	Not considered. The four listed fish species do not occur within the project area, but Huntington Creek eventually flows into the Green River, which is designated critical habitat for each of the species. Critical habitat for these species is over 50 miles downstream. Implementation of best management practices will reduce impacts to water quality; the project will have no impact on these species.
Colorado pikeminnow ( <i>Ptychocheilus lucius</i> )	Endangered	
Humpback chub ( <i>Gila cypha</i> )	Endangered	
Razorback sucker ( <i>Xyrauchen texanus</i> )	Endangered	
Barneby reed-mustard ( <i>Schoenocrambe barnebyi</i> )	Endangered	Not considered. This species is mainly known to occur in Capitol Reef National Park; the project will not impact this species.
Jones cycladenia ( <i>Cycladenia humilis var. jonesii</i> )	Threatened	Not considered. The project area does not include the known suitable habitat characteristics for this species.
Last chance townsendia ( <i>Townsendia aprica</i> )	Threatened	Not considered. The project area does not include the known suitable habitat characteristics for this species.
San Rafael cactus ( <i>Pediocactus despainii</i> )	Endangered	Not considered. The project area does not include the known suitable habitat characteristics for this species.
Winkler cactus ( <i>Pediocactus winkleri</i> )	Threatened	Not considered. The project area does not include the known suitable habitat characteristics for this species.
Wright fishhook cactus ( <i>Sclerocactus wrightiae</i> )	Endangered	Not considered. The project area does not include the known suitable habitat characteristics for this species.

### Listed Species Carried Forward

The proposed project will not affect listed species or critical habitat. A “No Effect” determination is made for listed species.

## Sensitive Species that May Be Present

The sensitive species that may occur or have suitable habitat in and/or around the project area are shown in Table 2.

**Table 2. Regional sensitive species that may occur or have suitable habitat in or around the Deer Creek Mine Closure Water Pipeline Project.**

Species	Habitat suitability or known occurrences of listed species in or near the project area	Species to be analyzed further? (Yes or No)*
Bald eagle ( <i>Haliaeetus leucocephalus</i> )	Area may be used incidentally for foraging or scavenging, mainly during the winter.	Yes
Bighorn sheep ( <i>Ovis canadensis</i> )	Project area is outside the UDWR-mapped range of desert bighorn and Rocky Mountain bighorn sheep.	No
Flammulated owl ( <i>Otus flammeolus</i> )	Potentially suitable nesting and foraging habitat exists within the project area.	Yes
Greater sage-grouse ( <i>Centrocercus urophasianus</i> )	Suitable sagebrush habitat does not exist within the project area. The nearest UDWR-mapped habitat is over 2 air miles away.	No
Northern goshawk ( <i>Accipiter gentilis</i> )	Potentially suitable nesting and foraging habitat exists within the project area.	Yes
Peregrine falcon ( <i>Falco peregrinus anatum</i> )	Potentially suitable cliff nesting and foraging habitat exists within the project area.	Yes
Spotted bat ( <i>Euderma maculatum</i> )	Potential cliff roosting habitat is adjacent to the project area. Potential foraging habitat exists within the project area.	Yes
Three-toed woodpecker ( <i>Picoides dorsalis</i> )	Coniferous habitat above 8,000 feet in elevation does not exist within the project area.	No
Townsend's big-eared bat ( <i>Corynorhinus townsendii</i> )	Potential roosting and foraging habitat exists within the project area.	Yes
Colorado River cutthroat trout ( <i>Oncorhynchus clarki pleuriticus</i> )	These fish are known to occur in Huntington Creek; however, the proposed project will not impact the creek or aquatic habitats.	No
Bonneville cutthroat trout ( <i>Oncorhynchus clarki Utah</i> )	Does not occur in Huntington Creek	No
Southern leatherside chub ( <i>Lepidomeda aliciae</i> )	Does not occur in Huntington Creek	No
Columbia spotted frog ( <i>Rana luteiventris</i> )	No known occurrences on the Forest	No

Species	Habitat suitability or known occurrences of listed species in or near the project area	Species to be analyzed further? (Yes or No)*
Boreal toad ( <i>Bufo boreas boreas</i> )	Although the species has been observed between the left and right forks of Rilda Canyon, suitable wet habitat does not occur within the project area.	No
Chatterley Onion ( <i>Allium geyeri</i> var. <i>chatterleyi</i> )	Based on review of the Utah Natural Heritage Program and existing GIS data, there are no known occurrences of sensitive plant species in or around the project area, nor does suitable habitat occur in the area.	No
Sweet-flowered rock jasmine ( <i>Androsace chamaejasme</i> ssp. <i>carinata</i> )		
Link Trail columbine ( <i>Aquilegia flavescens</i> var. <i>rubicunda</i> )		
Isely's milkvetch ( <i>Astragalus iselyi</i> )		
Creutzfeldt-flower cryptanth ( <i>Cryptantha creutzfeldtii</i> )		
Pinnate spring-parsley ( <i>Cymopterus beckii</i> )		
Abajo peak draba ( <i>Draba abajoensis</i> )		
Abajo daisy ( <i>Erigeron abajoensis</i> )		
Carrington daisy ( <i>Erigeron carringtonae</i> )		
Kachina daisy ( <i>Erigeron kachinensis</i> )		
LaSal daisy ( <i>Erigeron mancus</i> )		
Canyon sweetvetch ( <i>Hedysarum occidentale</i> var. <i>canone</i> )		
Canyonlands lomatium ( <i>Lomatium latilobum</i> )		
Arizona willow ( <i>Salix arizonica</i> )		
Musinea groundsel ( <i>Senecio musiniensis</i> )		

Species	Habitat suitability or known occurrences of listed species in or near the project area	Species to be analyzed further? (Yes or No)*
Maguire campion ( <i>Silene petersonii</i> )		
<p>*Yes - The proposed project's potential effects on these species will be further analyzed in this document.            *No – No further analysis is necessary, and a determination of “no impact” is made.</p>		

## Current Management Direction

Current policy as stated in the Forest Service Manual (FSM 2670.32) includes the following:

1. Assist states in achieving their goals for conservation of endemic species.
2. Review programs and activities as part of the National Environmental Policy Act of 1969 process through a Biological Evaluation, to determine their potential effect on sensitive species.
3. Avoid or minimize impacts to species whose viability has been identified as a concern.
4. Analyze, if impacts cannot be avoided, the significance of potential adverse effects on the population or its habitat within the area of concern and on the species as a whole.
5. Establish management objectives in cooperation with the states when projects on National Forest system lands may have a significant effect on sensitive species, population numbers, or distributions. Establish objectives for Federal candidate species, in cooperation with FWS or NOAA Fisheries and the states.

## Existing Environment

The existing environment within the project action area includes riparian vegetation adjacent to Huntington Creek, cliff habitat through both canyons, and mature conifers within Rilda Canyon. Most areas of direct disturbance have been previously disturbed by roadways or utilities.

### Species

**Bald eagle:** No bald eagles are known to nest on the Ferron-Price Ranger District. Open habitats with available carrion could exist within the project area. Bald eagles may fly over the area and roost or perch incidentally, mainly from November through March.

**Flammulated owl:** Flammulated owls may nest in the mature forest at the bottom of Rilda Canyon, and could forage within the project area.

**Northern goshawk:** Goshawks may nest in the mature forest at the bottom of Rilda Canyon, and could forage within the project area.

**Peregrine falcon:** Potentially suitable cliff nesting habitat occurs in both Rilda and Huntington Canyons. The project area includes riparian habitat, which may provide prey for foraging falcons.

**Spotted bat:** Potential cliff roosting habitat occurs in both Rilda and Huntington Canyons. Foraging may occur throughout the riparian area.

**Townsend's big-eared bat:** Potential cavern roosting habitat is not known within the project area. Foraging may occur throughout the riparian project area.

## Direct and Indirect Effects of the Proposed Action

Up to 6.98 acres of potentially suitable habitat for sensitive species could be disturbed by implementation of the proposed project; actual impacts would likely be much less because the minimal amount of right-of-way would be cleared. In addition, a portion of the proposed right-of-way overlaps with existing roadway disturbance, which is un-vegetated and does not provide habitat value. Direct impacts to sensitive wildlife species could occur with the removal of up to 6.98 acres of vegetation on National Forest System lands that may provide suitable habitat for foraging or nesting. Habitat effectiveness in the area is likely decreased due to the existing road and associated disturbance. Disturbance to wildlife due to noise or the presence of equipment and personnel could occur, but is unlikely as most animals would likely be habituated to some level of disturbance from the existing road. Potential disturbance from construction would be short-term, and most animals would likely avoid areas where project activities were occurring. Temporary displacement would be short-term and during construction (2-3 months).

**Bald eagle:** The project area is within a forested landscape, which provides little adequate open terrain for foraging eagles. Bald eagles may fly over the project area, but would likely not remain in areas with disturbance from project activities. The proposed action would not adversely impact bald eagles.

**Flammulated owl:** Flammulated owls could occur in the project area, although suitable habitat is marginal due to proximity with the roadway and limited mature forest stands within the canyons. Disturbance could occur, but is unlikely as the proposed activities would occur during the day, when the nocturnal owls are roosting. If owls were to pass through the area at night, they would likely not be disturbed by project activities. The proposed action would not adversely impact flammulated owls.

**Northern goshawk:** Goshawks could occur in the project area, although suitable habitat is marginal due to proximity with the roadway and limited mature forest stands within the canyons. Disturbance from the proposed activities could impact goshawks if they happened to be nesting nearby, but would not cause nest abandonment as all young should be fledged and highly mobile by the time the project begins in September. Disturbance to goshawks inhabiting the area is unlikely as the birds would be habituated to noise and human presence from the existing roadway. The proposed action would not adversely impact northern goshawks.

**Peregrine falcon:** Disturbance from the proposed activities could impact falcons if they happened to be nesting nearby, but would not cause nest abandonment as all young should be fledged and highly mobile by the time project activities begin in September. In the event that a peregrine falcon was foraging in the area, suitable foraging habitat does exist. Disturbance to foraging peregrine falcons could occur as a result of the proposed activities, but is unlikely as peregrine falcons would avoid areas where project activities were occurring or the birds would likely be habituated to noise and human presence from the existing roadway. The proposed action would not adversely impact peregrine falcons.

**Spotted bat and Townsend's big-eared bat:** Bats may forage within the project area. Suitable foraging habitat exists along the extent of the riparian project area. There is little risk of disturbance from the proposed activities because these bats are nocturnal, and the proposed activities would occur during the day. If bats were to pass through the area at night, they would not be disturbed by project activities. The proposed action would not adversely impact spotted or Townsend's big-eared bats.

## Interrelated and Interdependent Effects

The project is not part of a larger action, nor would any other actions be dependent upon this project; therefore, there are no interrelated or interdependent effects of the proposed action.

## Cumulative effects

Non-federal activities that are likely to occur within the action area and that have potential to cause cumulative effects include maintenance or installation of utility lines in both canyons, and future work on the existing roadways. Cumulatively, these past and future actions will contribute to the ongoing development and associated disturbance within the project area. Due to the magnitude of existing disturbance, implementation of the proposed action will not result in cumulative adverse impacts to sensitive species.

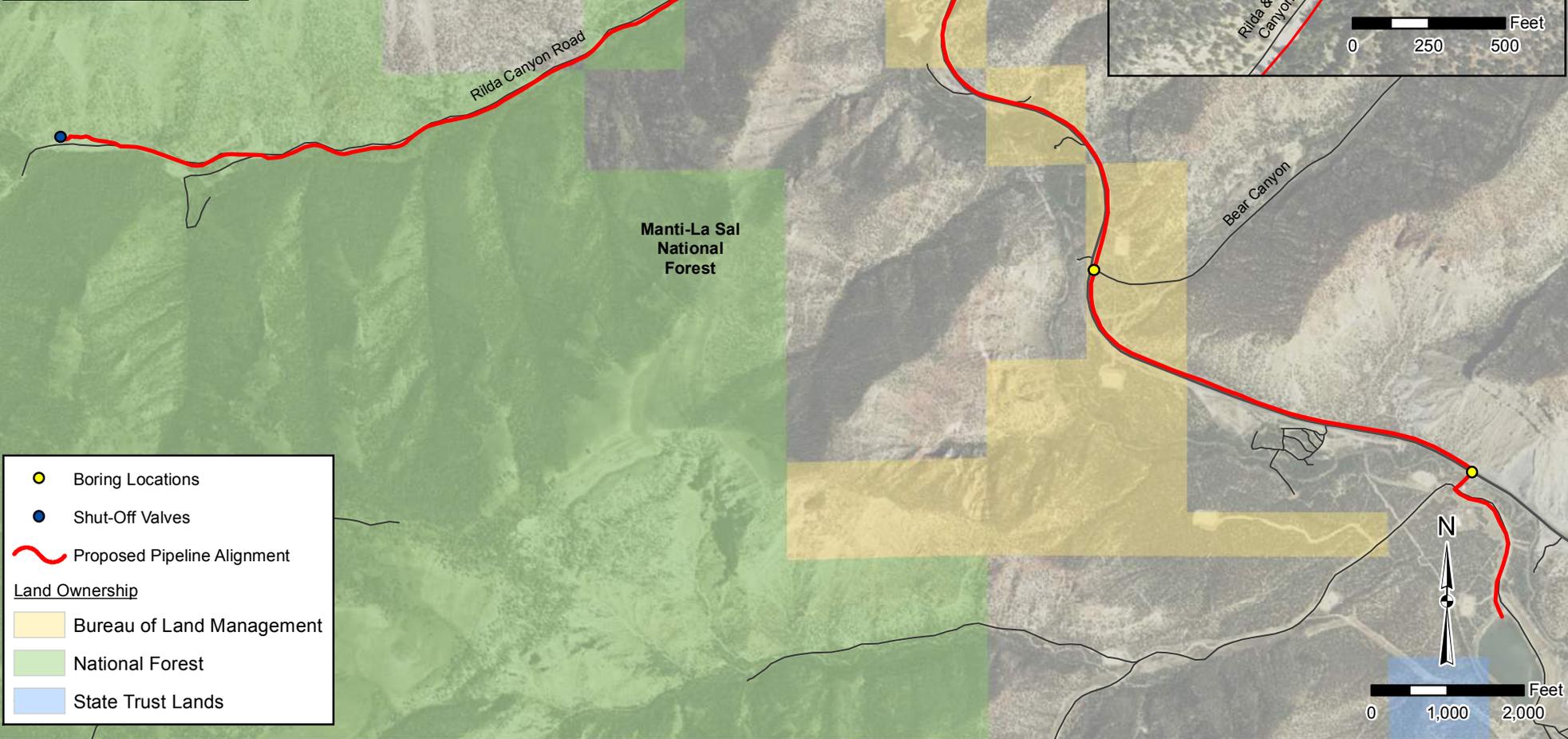
## Conclusion and Determination of Effect

As a result of this analysis, it is our professional determination that implementation of the proposed action may impact individuals or habitat of all sensitive species analyzed in this document, but will not likely contribute to a trend toward federal listing or cause a loss of persistence to these populations or species.

## Management Recommendations

Implement agreed upon habitat conservation assessments, strategies, and agreements. If, during implementation efforts, any of the species analyzed are observed, a detailed location will be provided to the appropriate district wildlife biologist.

## Appendix A. Maps



- Boring Locations
- Shut-Off Valves
- Proposed Pipeline Alignment

**Land Ownership**

- Bureau of Land Management
- National Forest
- State Trust Lands



**Jones & DeMille Engineering**

- infrastructure professionals -  
800.748.5275 www.jonesanddemille.com

**PacifiCorp**

**Deer Creek Mine - Proposed Live Water Relief Pipeline Overview**

Map Name: H:\JDI\Proj\1506-121\Design\GIS\Maps\USFS\1\_Overview.mxd  
Project Number: 1506-121 Drawn by: JWW 09-16 Last Edit: 09/19/2016

EMERY COUNTY

SCALE: 1" = 2,000'

**1**

## **Appendix F. Visual Contrast Rating Worksheet**

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date 5-11-2016

District Green River, Price Field Office

Resource Area Huntington Canyon

Activity (program)  
Buried pipeline construction

SECTION A. PROJECT INFORMATION

1. Project Name Deer Creek Mine Pipeline	4. Location Township <u>16 S</u> Range <u>7 E</u> Section <u>27</u>	5. Location Sketch See attached photos
2. Key Observation Point SR-31		
3. VRM Class II		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	Sinuuous road along canyon bottom with steep to vertical cliffs.	Complex; strips of brush and shrubs follow the curve of the canyon, with taller cottonwoods and conifers next to the creek.	Horizontal roadway is flat, vertical guardrails and delineators are low and weak.
LINE	Bold vertical lines of the canyon walls dominate weak horizontal lines and curving canyon bottom and road.	Weak horizontal lines created by changes in vegetative patterns, with vertical conifers irregularly spaced.	Roadway line is continuous, vertical features are compatible.
COLOR	Light to dark yellow to gray canyon walls and gray roadway surface.	Muted sage green, yellows, and browns, darker green conifers.	Gray roadway surface, white and silver guardrails and delineators.
TEXTURE	Medium grain variations in rugged cliffs, fine grain variation in smooth roadway surface.	Medium coarseness in immediate foreground to smooth middleground.	Uniform guardrail and posts create medium ordered contrast, but subordinate to surroundings.

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LANDWATER	2. VEGETATION	3. STRUCTURES
FORM	New pipeline ROW will be distinct and simple, but subordinate to vertical features.	Revegetated ROW will be simple, horizontal as early seral species establish.	Posts and air vents will be distinct, simple, and consistent with natural and existing man-made features.
LINE	New ROW edge will be distinct, simple, and horizontal.	Weak horizontal line will be subordinate to complex lines surrounding the area.	Vertical features are compatible.
COLOR	No change anticipated due to previous soil disturbance.	No change.	Air vents and Carsonite posts will be colored to best match natural colors in the canyon.
TEXTURE	Surface variations will be directional and continuous, subordinate to surroundings.	Fine-grained early seral species will be subordinate to more complex vegetation surrounding the road.	No change.

SECTION D. CONTRAST RATING  SHORT TERM  LONG TERM

1.	DEGREE OF CONSTRAST	FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)	
		LANDWATER BODY (1)				VEGETATION (2)				STRUCTURES (3)					
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None		
				X				X				X			
					X				X				X		
ELEMENTS	Form			X				X				X		3. Additional mitigating measures recommended? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side)	
	Line			X				X				X			
	Color				X				X				X		
	Texture			X				X					X		
												Evaluator's Names Jenna Jorgensen	Date 5-11-2016		

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**SECTION D. (Continued)**

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Comments from item 2.

Construction activities will result in a brief (2 to 5 minute) visual disturbance to the casual observer as they travel the roadway. The lines created by the excavation for the pipeline will create a contrast that will attract attention for that brief travel time; however, the bold vertical lines of the canyon walls will still dominate the view. As reseeded vegetation establishes and matures, visual contrast of the disturbed right-of-way will decrease. The level of change to the landscape will be low; changes will repeat the basic elements found in the predominant natural features. Therefore, the project will meet or exceed Class II objectives to retain the existing character of the landscape.

---

Additional Mitigating Measures (See item 3)

Reclamation of disturbed areas is a feature of the proposed action; no additional mitigation measures have been identified as feasible or effective.



