

State Project No. U-16-EZ-0363bfps

Report Title: A CULTURAL RESOURCE INVENTORY OF THE PROPOSED RILDA CANYON TO HUNTINGTON POWER PLANT PIPELINE PROJECT, EMERY COUNTY, UTAH

State Project No.: U-16-EZ-0363bfps **Organization Project No.:** EW16-01

Report Date: 7/25/2016 **County(ies):** Emery

Report Author(s): Scott Billat and Lorna Billat

Principal Investigator: Scott Billat **Field Supervisor(s):** Scott Billat

Records search date(s): May 2016 USHPO **Preservation Pro Used?** Yes No

Acres Surveyed: Intensive (<=15 m intervals): 200 **Recon/Intuitive (>15 m intervals):** _____

USGS 7.5' Series Rilda Canyon and Hiawatha, UT
Map Reference(s):

SITES REPORTED	COUNT	SMITHSONIAN SITE NUMBERS
Revisits (no site form updates)	1	42EM3284
Updates (updated site forms attached)	7	42EM1101,42EM2095, 42EM2109, 42EM2273,42EM2667,42EM2930,42EM3841
New recordings (site forms attached)	2	42EM4761, 42EM4762
Total Count of Archaeological Sites in APE	10	see above
Historic Structures (structure forms attached)	0	
Total National Register Eligible Sites	0	

CHECKLIST OF REQUIRED ITEMS FOR SUBMITTAL TO SHPO

1. Copy of the final report
2. Copy of USGS 7.5' Series basemap with investigated area clearly identified
3. Completed site forms
 - IMACS Encoding Form
 - Site Sketch Map
 - Photographs adhering to UDSH standards
 - Copy of USGS 7.5' Series basemap with site location and Smithsonian site number clearly labeled
4. CD of digital report and site documents, including shapefiles (optional)
5. Completed "Cover Page" accompanying final report and form

For UDSH office use only

**Summary Report of Cultural
Resources Inspection**

State Proj. No: 16EZ0363bfps

Report Title: A Cultural Resource Inventory of the Proposed Rilda Canyon to Huntington
Power Plant Pipeline Project, Emery County, Utah

- 1. Report Date: July 25, 2016
- 3. Date(s) of Survey: June 6 to July 10, 2016
- 4. Development Company: PacifiCorp
- 5. Responsible Institution: EnviroWest
- 6. Responsible Individuals
Principal Investigator: Scott Billat
Field Supervisor: Scott Billat
Report Author(s): Scott Billat & Lorna Billat
- 7. BLM Field Office: Price office
- 8. County(ies): Emery

9. Fieldwork Location:
USGS Map: Rilda canyon & Hiawatha

Twn:16S Range:7E Section: 22,26,27,28,29,35,36

Twn: Range: Section:

Twn: Range: Section:

10. Record Search:
Location of Records Searched: SHPO

Date of Record Search: May 2016

11. Description of Examination Procedures: The 300-ft wide APE corridor was surveyed along the entire proposed pipeline route across all ownership lands. Transects varied from 15 to 30 meters wide along the entire corridor depending on the topography and existing impacts.

12. Area Surveyed:

		BLM	OTHER FED	STATE	PRIVATE
Linear Miles	Intensive:	1.1 miles	NFS; 2 miles		2.5 miles
	Recon/Intuitive:				
Acreage	Intensive:				
	Recon/Intuitive:				

13. Sites Recorded:

		BLM	OTHER FED NFS	STATE UDOT	PRIVATE
		# Smithsonian Site Numbers	# Smithsonian Site Numbers	# Smithsonian Site Numbers	# Smithsonian Site Numbers
Revisits (no IMACS form)	NR Eligible				
	Not Eligible		42EM3284		
Revisits (updated IMACS)	NR Eligible				
	Not Eligible	42EM1101 42EM2930 42EM3841		42EM2095 42EM2109 42EM2273 42EM2667	
New Recordings (IMACS)	NR Eligible				
	Not Eligible		42EM4761		42EM4761 42EM4762

Total Number of Archeological Sites: 10

Historic Structures (USHS Form): 0

Total National Register Eligible Sites: 0

14. Description of Findings: Results of the cultural resource inventory identified eight previously recorded sites and two new sites within the 300-ft wide project corridor. The other seven previously recorded sites were updated based on their current condition. The previously recorded sites included sites 42EM1101, 42EM2095, 42EM2109, 42EM2273, 42EM2667, 42EM2930, 42EM3284, and 42EM3841. These eight sites consist of prehistoric and historic sites recorded as early as the late 1970s. The previously identified sites within the corridor are all ineligible or have been mitigated. For site 42EM2667, an old utility line was extended to .4 of a mile with additional poles. Two new sites were documented that include 42EM4761, old Rilda Canyon road, and 42EM4762, historic tent platforms and trail.

15. Collection Yes ___ No X

(If Yes) Curation Facility: NA

Accession Number(s):

Conclusion/Recommendations: EnviroWest updated seven of eight previously recorded sites and recorded two new sites. Segments of the pipeline recommended for monitoring may include the 0.6 of a mile of pipeline in Section 35 that contains sites 42EM2095 and 42EM2109 and possibly Sections 35 and 26 that include site 42EM1101, which involves about 1.2 miles of proposed pipeline, with the potential for cultural deposits to be discovered in the area, due to its proximity to Huntington Creek in the mouth of the canyon.

**A CULTURAL RESOURCE INVENTORY OF THE
PROPOSED RILDA CANYON TO HUNTINGTON
POWER PLANT PIPELINE PROJECT,
EMERY COUNTY, UTAH**

EnviroWest Cultural Resource Report 16-01

By

Scott Billat

Prepared for

PacifiCorp

15 North Main Street
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25 July 2016

Submitted by



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Under Authority of Utah State Permit Number 88

Utah Division of State History Project Number - **U16EZ0363bfps**

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ABSTRACT

On behalf of PacifiCorp, EnviroWest, Inc. conducted an archaeological inventory of the area of potential effects for the proposed Rilda Canyon to Huntington Power Plant Pipeline Project, in Huntington Canyon, in Emery County, Utah. The 5.5 mile water pipeline will bring water from Deer Creek Mine in Rilda Canyon to Huntington Power Plant in Huntington Canyon. The proposed project is on lands that include Bureau of Land Management (BLM), Manti-LaSal National Forest (NFS), Utah Department of Transportation, Region 4 (UDOT), UDOT-owned fee title lands, along with Emery County, and various private land holders. The water will be gravity-fed through a 10-inch diameter high-density polyethylene (HDPE) pipe that will follow the Rilda Canyon road right-of-way (Emery County Road 306) and then along SR-31 right-of-way to the Huntington Power Plant property. The proposed area of potential effect (APE) is a 300-ft wide corridor along the pipeline route, as defined by the federal agencies.

As a result of this inventory, EnviroWest noted eight previously recorded sites (seven of which were updated) and recorded two new sites. The previously recorded sites included sites 42EM1101, 42EM2095, 42EM2109, 42EM2273, 42EM2667, 42EM2930, 42EM3284, and 42EM3841. These eight sites consist of prehistoric and historic sites recorded as early as the late 1970s. The two new sites that were documented include 42EM4761, old Rilda Canyon road, and 42EM4762, historic tent platforms and possible mine trail. Both of these sites are recommended ineligible.

Monitoring of the pipeline route through sites 42EM2095, 42EM2109, and the surface area in the vicinity of 42EM1101 is recommended. Some portions of site 42EM4761, consisting of five identified segments of old road, would be in the direct impact area of the pipeline, however the site has already been extensively impacted by road development and recreational activities, and is recommended ineligible. Site 42EM4762, is situated outside of the direct impact of the pipeline.

TABLE OF CONTENTS

ABSTRACT..... i

TABLE OF CONTENTS..... ii

LIST OF FIGURES AND TABLES..... ii

1.0 INTRODUCTION..... 1

2.0 LOCATION 1

3.0 ENVIRONMENT 5

4.0 PREVIOUS RESEARCH 6

5.0 CULTURE HISTORY 7

6.0 INVENTORY METHODS 10

7.0 INVENTORY RESULTS 11

8.0 PALEOTOLOGICAL RESOURCES 19

9.0 SUMMARY AND CONCLUSIONS..... 20

10.0 REFERENCES 22

APPENDIX A1 - ENGINEERING MAP / APPENDIX A2 – APE 300-ft CORRIDOR
APPENDIX B – IMACS SITE FORMS (Limited Distribution)
APPENDIX C – PALEONTOLOGICAL FILE REVIEW

LIST OF FIGURES AND TABLES

Figure 1. General project location map 2

Figures 2-3. Project Area and Site Locations Maps 3-4

Figures A1-A2.Appendix A

Table 1. Project Ownership..... 5

Table 2. Sites identified in the General APE..... 7

Table 3. Cultural Resource sites from the Class III Inventory 12

1.0 INTRODUCTION

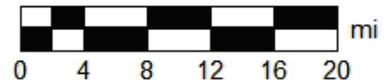
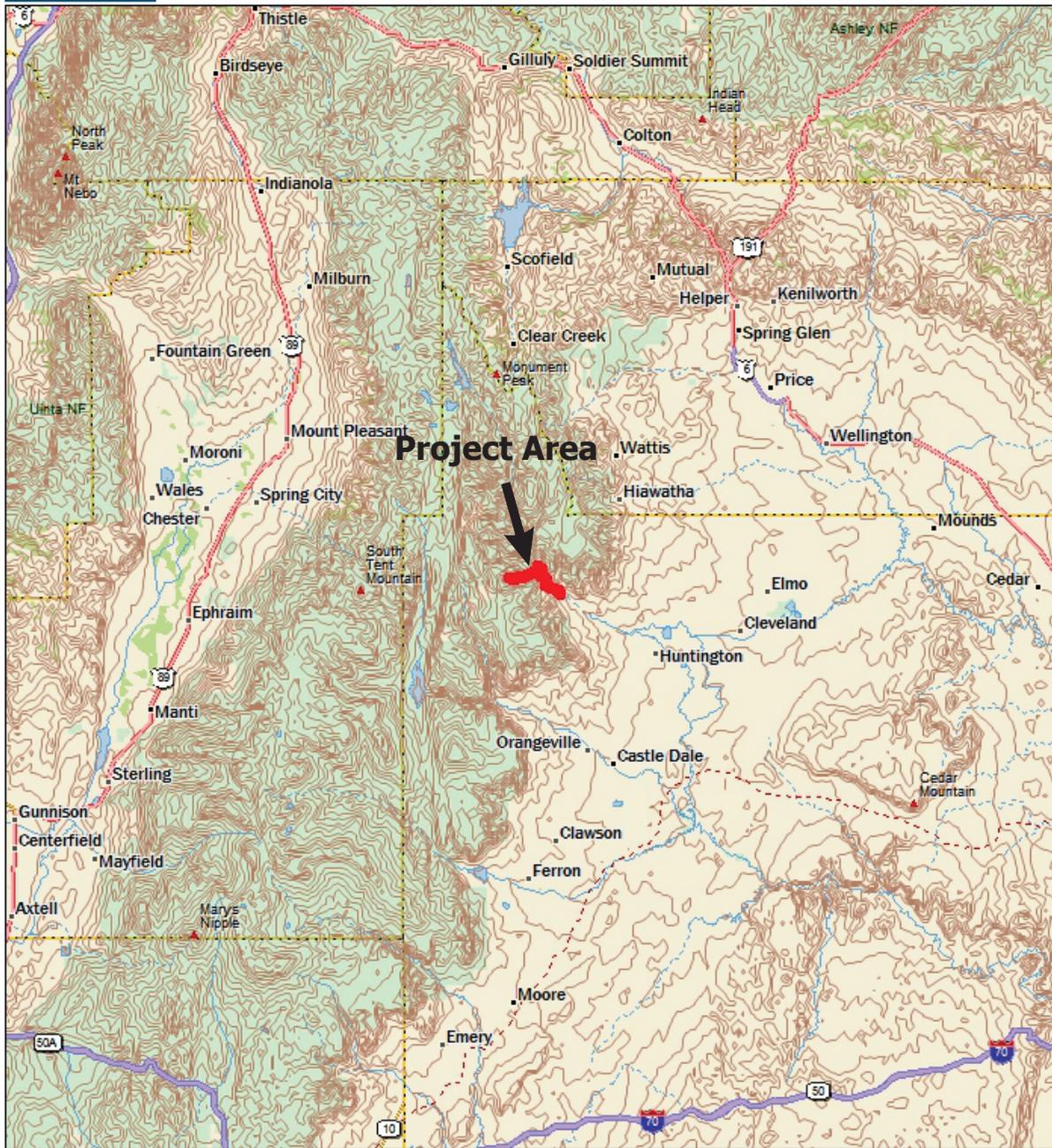
On behalf of PacifiCorp, EnviroWest, Inc. conducted an archaeological inventory of the area of potential effects for the proposed Rilda Canyon to Huntington Power Plant Pipeline Project, in Huntington Canyon, in Emery County, Utah (Figure 1). The 5.5-mile water pipeline will bring water from the Deer Creek Mine to Huntington Power Plant. The proposed project is on lands that are administered by the Bureau of Land Management (BLM), Manti-La Sal National Forest (NFS), Utah Department of Transportation, Region 4 (UDOT), Emery County, and various private land holders. The field work was completed in June 2016 by EnviroWest. The inventory was requested by Mr. Ken Fleck of PacifiCorp. The project was completed under Utah State Historic Preservation Office (SHPO) Project Authorization No. U16EZ0363bfps, Public Lands Policy Coordination Office Permit Number 88, BLM 16UT85080, UDOT Field Authorization Permit, and Manti-La Sal Permit No. RIC1602.

Proposed Impacts

The proposed pipeline will bring water from the Deer Creek Mine in Rilda Canyon to the reservoir at the Huntington Power Plant in Huntington Canyon. The water will be gravity-fed through a 10-inch diameter high density polyethylene (HDPE) pipe that will follow the Rilda Canyon road right-of-way (Emery County Road #306) and then along SR-31 right-of-way to the Huntington Power Plant property. The pipeline will be buried to a minimum depth of 5 feet, with use of a trackhoe, constructing a 3- to 7-foot wide trench along the identified road bases. The permanent right-of-way will be 12 feet wide; the temporary right-of-way will be up to an additional 20 feet wide where possible.

2.0 LOCATION

The project area is about eight miles west of Huntington, Utah, situated near the mouth of Huntington Canyon. The 5.5-mile long pipeline extends from the upper portion of Rilda Canyon-Emery County Road 306 and proceeds east 2.4 miles down the canyon to Huntington Canyon, then proceeds southeast along SR-31, for about 2.7 miles, before crossing SR-31 and proceeding 0.4 of a mile south to the Huntington Power Plant property (Figures 2-3). The breakdown of the pipeline route is as follows, 2.0 miles on NFS, 1.1 on BLM, 2.0 on private and .5 of a mile on county lands. The SR-31 highway segment is situated from 36.5 milepost to 39.5 milepost and contains a 200-ft right-of-way (100ft from centerline). As previously indicated the pipeline is situated on lands administered by various agencies including the BLM, Manti-LaSal NFS, Emery County, UDOT, UDOT-owned fee title lands, and private land owners. Table 1 describes legal ownership and locations of the pipeline are shown on maps in Appendix A. The project is found on the *Rilda Canyon* and *Hiawatha, Utah* USGS topographic 7.5-minute quadrangle maps.



Data Zoom 8-1



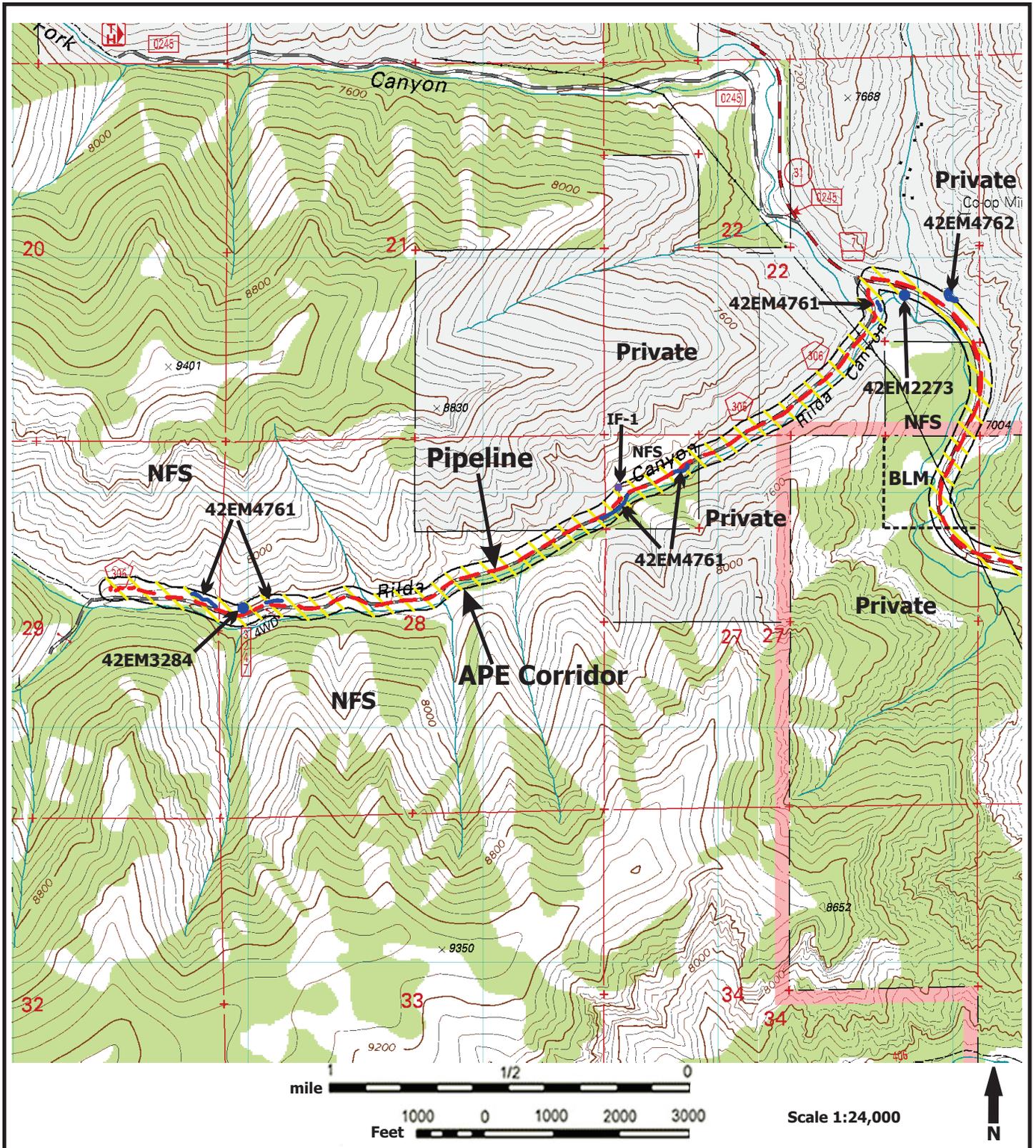
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Figure 1
Project Location

**Rilda Canyon to Huntington
Power Plant Pipeline**

Map Key:

USGS : 700,000, UT

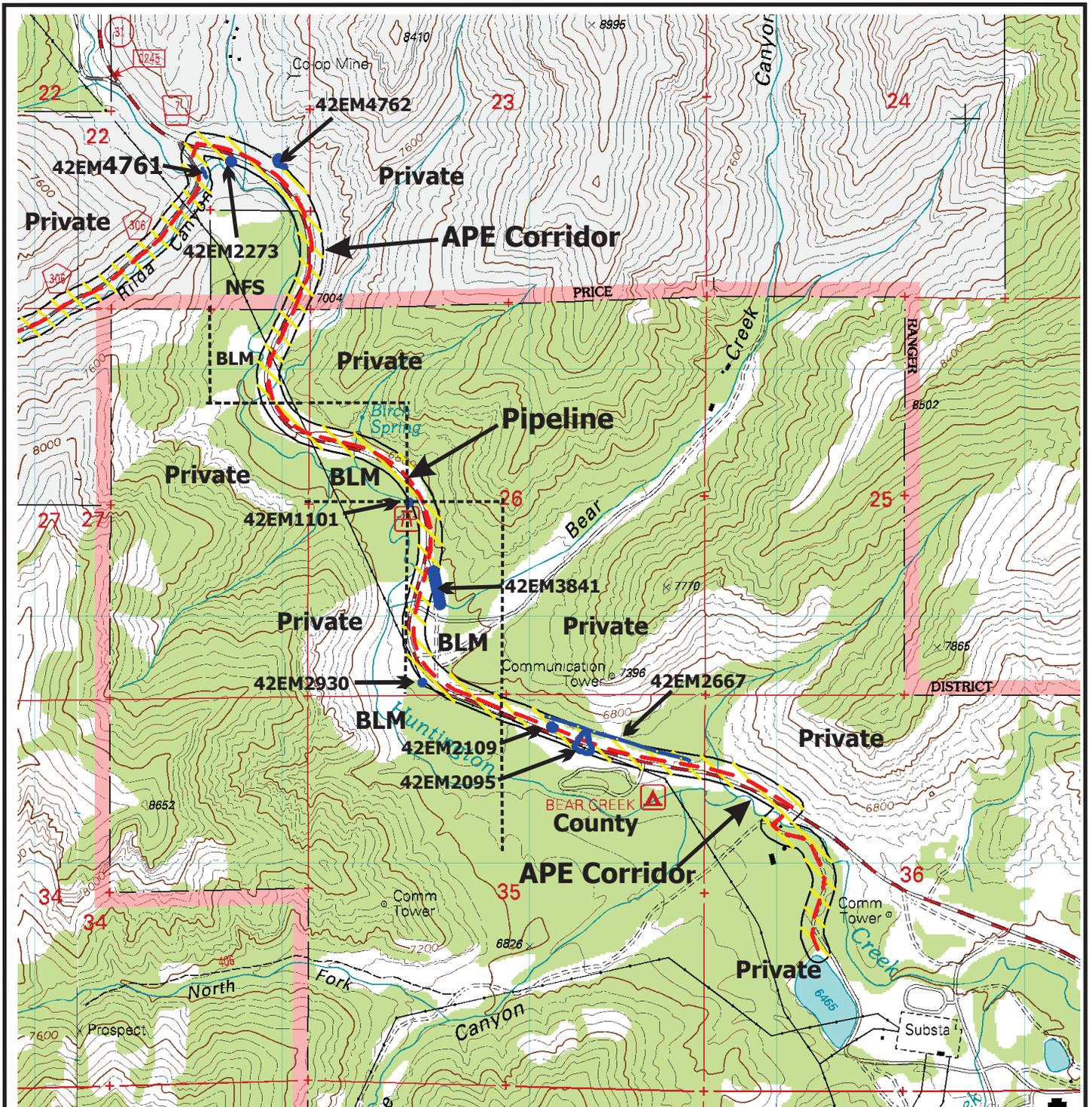


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Figure 2
Project Location
Rilda Canyon to Huntington
Power Plant Pipeline

Map Key:
 Class III

USGS Topo: Rilda Canyon & Hiawatha, UT



Scale 1:24,000



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**Figure 3
Project Location**

**Rilda Canyon to Huntington
Power Plant Pipeline**

Map Key:

 Class III

USGS Topo: Rilda Canyon & Hiawatha, UT

Table 1. Project Ownership

Pipeline Distance	Township/Range	Sections	Quarters	Owner Surface
0.26 mile	T16S R7E	29	SE1/4 SW1/4 NE1/4, S1/2 SE1/4 NE1/4	Manti-La Sal NFS
1.2 mile	T16S R7E	28	N1/2 S1/2 SW1/4 NE1/4, S1/2 NE1/4 SW1/4 NE1/4, N1/2 S1/2 SW1/4 NE1/4, N1/2 SE1/4 NE1/4	Manti-La Sal NFS
0.09 mile	T16S R7E	28	S1/2 S1/2 NW1/4	Private
0.28 mile	T16S R7E	27	S1/2 NW1/4 NW1/4, NE1/4 NW1/4 NW1/4	Manti-La Sal NFS
0.27 mile	T16S R7E	27	NE1/4 SE1/4 NE1/4, N1/2 NE1/4 NW1/4	Private
0.26 mile	T16S R7E	27	E1/2 NE1/4 NE1/4	BLM
0.85 mile	T16S R7E	22	S1/2 SE1/4 SW1/4, SW1/4 SW1/4 SE1/4, N1/2 SW1/4 SE1/4, E1/2 NW1/4 SE1/4, S1/2 NW1/4 NE1/4 SE1/4, N1/2 SW1/4 NE1/4 SE1/4, SE1/4 NE1/4 SE1/4	Private
0.28 mile	T16S R7E	22	E1/2 SE1/4 SE1/4 SE1/4, E1/2 NE1/4 SE1/4 SE1/4	Manti-La Sal NFS
0.75 mile	T16S R7E	26	W1/2 SE1/4 SW1/4, W1/2 W1/2 NE1/4 SW1/4, SE1/4 SW1/4 NW1/4, N1/2 SW1/4 NW1/4	BLM
0.06 mile	T16S R7E	26	W1/2 SW1/4 SE1/4 NW1/4	Private
0.10 mile	T16S R7E	35	NE1/4 NE1/4 NW1/4	BLM
0.50 mile	T16S R7E	35	N1/2 NW1/4 NE1/4, SE1/4 NW1/4 NE1/4, S1/2 NE1/4 NE1/4	County
0.70 mile	T16S R7E	36	S1/2 NW1/4 NW1/4, NE1/4 SW1/4 NW1/4, W1/2 NW1/4 SE1/4 NW1/4, W1/2 SW1/4SE1/4 NW1/4, W1/2 W1/2 NE1/4 SW1/4	Private

3.0 ENVIRONMENT

The general project area is situated in the central portion of Wasatch Plateau, along its eastern side, just west of Huntington Canyon. The Wasatch Plateau is a high, broad, flat area dissected by numerous streams. The high plateaus of Utah, which include the Wasatch Plateau, are thought to be a transition zone containing geologic structures common to both the Colorado Plateau Province and the Basin and Range Province to the west. The project area is in the Huntington Canyon area along the east side of the plateau. The project begins at the confluence of the right fork and left fork of Rilda Canyon, at an elevation of just below 8,000 feet and proceeds near the mouth of Huntington Canyon at elevation of 6,500 feet. Geologic formations in the Huntington

Canyon area, in ascending order, consist of the Mancos Shale, the Star Point sandstone, the coal-bearing Blackhawk Formation, and the Castlegate Sandstone Member of the Price River Formation. All of these geologic units are Cretaceous in age. The Star Point Sandstone through the Price River Formation compose the Mesa Verde Group in this locality. Mancos Shale forms the steep slopes rising from the washes which in turn are overlain by the initial cliff-forming Star Point Sandstone. The Blackhawk Formation is composed of alternating sandstones, shales, mudstones, and coal representing marine, transitional, and terrestrial varieties of sedimentation.

The project area is situated within the Transitional and Upper Sonoran Life Zones, which vegetation communities include Pinyon-Juniper, Sagebrush, Riparian, and Salt Desert Shrub. Flora includes, but is not limited to, the sagebrush community which occurs along with blackbrush, mountain mahogany, ephedra or Mormon tea, cliffrose, rabbitbrush, yucca, prickly pear cactus, snakeweed, horsebush, and winter fat. Along the major water courses is a well-developed riparian community which includes cottonwood, Russian olive, and tamarisk. At higher elevations a pinyon-juniper woodland is present, as is a ponderosa pine community.

4.0 PREVIOUS RESEARCH

A record search review was conducted by EnviroWest via the Utah Division of State History (USDH) Historical Data Management System in May 2016. The file review identified about 15 cultural resource inventories previously conducted in the project vicinity (see Section 10). These projects consisted of inventories conducted for coal exploration, oil/gas exploration, utility lines, road and highway upgrades. In 1994, McDonald conducted an inventory on the Rilda Canyon county road, from the Deer Creek Mine to SR-31. Davis conducted an inventory for the UDOT along SR-31 in 1986. The north portion of that inventory appears to end on the north section line of Section 27. Approximately 13 sites have been previously identified in the general APE for the proposed pipeline project (Table 2). These sites consist of a wide range of site types, including both historic and prehistoric sites. During the SR-31 inventory project (Davis 1986), two Fremont habitation sites were excavated that include 42EM2095 and 42EM2109 (Figure 3). A burial was recovered and reburied nearby from site 42EM2095. Two other sites, 42EM1328 and EM1329, were originally recorded in 1980 and later determined not be sites, as noted by the NFS in 1995. General Land Office (GLO) maps were checked for historic features in the project area via the BLM land records online data base. One 1901 GLO map was identified for the project area.

Table 2. Sites identified in the General APE

Site Number	Type	Eligibility	Land	APE 300'
42EM1101	Hearth	Ineligible	BLM	Yes
42EM1328	Not a site (deleted 1995)	none	NFS	No
42EM1329	Not a site (deleted 1995)	none	NFS	No
42EM1330	Lithic Scatter/Hist. Habitation	Ineligible	Private (outside ROW)	No
42EM1331	Historic Cabin	undetermined	Private (outside ROW)	No
42EM2095	Fremont habitation	Previous eligible (excavated)	UDOT	Yes
42EM2109	Fremont habitation	Previous eligible (excavated)	UDOT	Yes
42EM2273	Prehistoric sparse artifacts	Ineligible	UDOT	Yes
42EM2317	Lithic Scatter	Ineligible	BLM	No
42EM2667	Utility Line	Ineligible	UDOT/County	Yes
42EM2810	Trash scatter	Ineligible	Private (outside ROW)	No
42EM2930	Prehistoric camp/Historic debris	Destroyed	BLM	Yes
42EM3115	Historic Dugout	Ineligible	NFS	No
42EM3284	Mine	Ineligible	NFS	Yes
42EM3841	Historic Pipeline/Bridge remains	Ineligible	BLM	Yes

5.0 CULTURE HISTORY

Kinnear-Ferris and Montgomery (2002:8-10) provided a detailed cultural history for both the prehistoric and historic utilization of the area in their technical report. The following portion of their prehistoric context pertains to the general area:

Prehistoric occupation of the study area spans the last 10,000-12,000 years. Cultural remains representing the Paleoindian, Archaic, Formative, Late Prehistoric and Historic stages have been identified in the study area. The earliest known archaeological remains in central Utah are attributable to the Paleoindian stage, which have been divided into three complexes: the Llano (ca. 11,500-11,000 B.P.), the Folsom (ca. 11,000-10,000 B.P.) and the Plano (ca. 10,500-7500 B.P.). To date, in Emery County, Paleoindian artifacts have been found as surface isolated finds or lithic scatters (Copeland and Fike 1988). Megafauna have also been found in the area; in particular the mammoth carcass and partial skeleton of a short-faced bear excavated from Spring Creek in upper Huntington Canyon (Gillette 1989; Madsen 2000). Direct and indirect evidence suggest the possibility of human interactions with the Huntington Mammoth on at least a postmortem bases (e.g., cut marks on a rib and the presence of a late Paleoindian projectile point).

The termination of the Pleistocene resulted in the expansion of xeric vegetation zones, and a retreat of plant communities requiring cool and moist conditions at higher elevations. A subsistence strategy reliant upon large herd animals was replaced by a greater emphasis upon smaller, more dispersed fauna, in addition to plant resource processing. Archaic sites tend to cluster in areas which offer overview qualities, proximity to outcrops of tool quality stone, as well as nearness to major topographic features (Black and Metcalf 1986).

The Archaic stage on the northern Colorado Plateau has been divided into several phases by Schroedl (1976). These include the Black Knoll phase, the Castle Valley phase, the Green River phase, and the Dirty Devil phase. The initial Black Knoll phase (7800-5300 B.C.) sites are characterized by Pinto projectile points and a contrast in subsistence between high and low elevations in which large artiodactyla are hunted in the uplands, while wild plant gathering is emphasized at lower elevations (Schroedl 1976:61-62). The Castle Valley phase (5300-3300 B.C.) is distinguished by a lower aboriginal population on the Colorado Plateau, possibly attributed to a two-stage Altithermal drought (Black and Metcalf 1986:10). During this time period a variety of projectile point styles were employed including Rocker, Hawken, and Sudden side-notched points, as well as Humboldt and McKean basal-notched points. Slab-lined fire pits and the increasing reliance upon grasses and forbs as foodstuffs are also aspects of this phase (Schroedl 1976:63-64). The Green River phase (3300-1500 B.C.) is marked by the occurrence of Gypsum and San Rafael Side-notched projectile point types and split-twig figurines (Schroedl 1976). In this phase, hunting (especially for mountain sheep) becomes important, and amaranths (weedy plants) were a favored plant resource (Black and Metcalf 1986:11). The Dirty Devil phase (1500-300 B.C.) marks the transition into the Formative stage and is characterized by increased sedentism, as well as the introduction of corn and the bow and arrow. The most common projectile points are the Gypsum type (Schroedl 1976).

The Formative stage (A.D. 700-A.D. 1250) is marked by reliance on domesticated plants, most notably corn; settlement in sedentary or semi-sedentary hamlets near areas optimum for horticulture; and the introduction of pottery, the earliest type in the project area being Emery Gray. The study area is within the cultural area of the San Rafael Fremont, as defined by Marwitt (1970). This variant is characterized by circular, stone-lined or earthen pit dwelling, and the clay-rimmed, flagstone paved firepit. One of the highest San Rafael Fremont site densities is in Castle Valley, especially along the Ferron Creek and Muddy Creek tributaries (Black and Metcalf 1986). Sites in the area are characterized as isolated hamlets or single dwelling units, usually found on small ridges overlooking perennial water sources and arable land (Schroedl and Hogan 1975). Three San Rafael Fremont phases have been proposed for the study area based on chronology, settlement patterns, subsistence strategies, and material culture (Black and Metcalf 1986; Greubel 1996). The earliest phase has been termed by Black and Metcalf (1986) the "Proto-Formative" phase (A.D. 150 to 700), a transition stage from an Archaic to a Formative life way in which groups became more sedentary. During this phase corn horticulture increased in importance, although hunting and gathering continued to play a major role in the subsistence strategy. Common artifacts of this phase include Rose Springs Series arrow points and Emery Gray Ware (introduced between AD. 650 and 700). Recently, the Confluence phase has been proposed to encompass pre-ceramic, semi-sedentary, horticultural adaptations in the study area, beginning around A.D. 200 (Greubel 1996:516).

The Muddy Creek phase is marked by increased sedentism and greater reliance upon horticulture. In Castle Valley, the settlement strategy during this time is marked by small isolated hamlets or single dwelling units, usually found on small ridges overlooking perennial water sources and arable land. In the study area, the cultural material remains are dominated by Emery Gray Ware, some decorated by applique and incisions, and Rose Springs Series and Uinta Side-notched arrow points (Holmer and Weder 1980). The Bull Creek phase (A.D. 1000 to 1200) is distinguished by larger habitations composed of pit houses and surface masonry

structures usually used for storage of cultigens. Diagnostic artifacts of this phase include Bull Creek and Nawthis Side-notched projectile points, decorated Fremont ceramics including Ivie Creek Black-on-white, and higher frequencies of Anasazi trade wares. Black and Metcalf (1986:157) suggest that Fremont populations aggregated during this phase most likely in response to the salubrious climatic conditions (post-AD. 950). These favorable climatic conditions may have also enhanced the productivity of maize fields as evidenced by the increase of storage facilities in the area. Also during late Fremont times a linear settlement pattern is exhibited in areas where sites are clustered along drainage systems, such as Miller Creek. Sometime following A.D. 1200, the Fremont appear to have abandoned east-central Utah, attributed to both environmental and subsistence-related reasons (Lindsay 1986).

Following the Fremont abandonment of the area, a largely nomadic hunting and gathering Lifeway resumed. This occupation is attributed to the Numic-speaking peoples, a diverse group that was present throughout much of Utah upon the arrival of Europeans in the 18th century. Historic records indicate that the Ute were the primary occupants of eastern Utah and western Colorado since the late eighteenth century. Numic expansion in the archaeological records appears at approximately A.D. 1100 based on the distribution of chronometric dates associated with brown ware sherds (Reed 1994:188). The archaeological evidence of the Numic-speaking peoples consists primarily of lithic scatters, low density ceramic scatters, and the occasional wickiup. Most of the artifact scatters are in open settings, although a small number are in rockshelters. Diagnostic artifacts include Desert Side-notched, tri-notched, and Cottonwood Triangular projectile points, a fairly crude micaceous tempered pottery and distinctive rock art (Jennings 1978). On the Colorado Plateau eighteenth and nineteenth century Ute sites may also contain varying quantities of Euroamerican artifacts, such as sheet metal cone tinklers, tin cans, weaponry, and equestrian tack (Horn 1988).

An applicable historic context as provided by Geary (1996:136-138) for the area is as follows:

Mining

The first commercial mining operation in what is now Emery County, and in fact the first in the Wasatch Plateau coal field, predated the settlement era. The demand for coke by the smelters of the Salt Lake Valley led to the establishment of Connellsville in the upper reaches of Huntington Canyon by the Fairview Coal Mining and Coke Company in 1875. An 1876 report indicated that seven mines had been opened, with an aggregate of two thousand feet of tunnels, and a production of twelve-and-a-half tons of coke per day from ten ovens. The report added, "The only difficulty that is now to be overcome is to construct a railroad from Springville, on the Utah Southern, to the mines." The lack of transportation facilities, added to the poor coking quality of the coal, led to the abandonment of coke manufacturing at Connellsville. The miners moved over the mountain to Winter Quarters in 1878, and the Connellsville mine was worked only sporadically thereafter to supply heating coal for Sanpete Valley communities. The Connellsville site is now covered by the waters of Electric Lake.

Several small coal mines were opened in Emery County during the 1880s and 1890s. Mines in operation during the winter of 1897–98 included one developed by Casper Christensen near Emery; a mine near Ferron operated by the Fugate family; a mine in Rock Canyon operated by the Fullmer brothers of Orangeville; a mine in Cedar Creek Canyon developed by brothers Erin and William Howard; and a mine near Green River owned

by J. T. Farrer. Typically these mines were worked only during the fall and winter to meet local heating needs. The large commercial mines in Carbon County had a greater impact on the Emery County economy because many families divided the year between their homes and farms in Emery County and the mines at Winter Quarters and Castle Gate.

Prospectors in search of valuable minerals roamed the San Rafael Swell and Cedar Mountain areas from the beginning of the settlement period. A mining district was established in 1883 in the area between Woodside and Cedar Mountain, where "a few small veins carrying gold, silver, copper, and lead occur." By the turn of the century, the Sorrel Mule mine near the San Rafael River had reached a depth of more than a thousand feet and reported some promising signs of copper and silver. Some development had also taken place in the Copper Globe district southeast of Emery. While these prospects were a source of periodic excitement, none of them proved to be commercially successful.

Logging

The extensive construction during the period from 1880 to 1900 created a demand for lumber, most of which was supplied by small sawmills operating on the Wasatch Plateau. The sawmill installed in Rilda Canyon in 1878 by Elias Cox and Charles Hollingshead was apparently the first such operation in Emery County. Also in 1878 Abraham Day and sons set up a sawmill near the site of Huntington Reservoir, later moving it to Day Canyon. The Days were residents of Mount Pleasant at the time but continued to operate the mill after they had relocated to Lawrence. Samuel Jewkes had operated both a sawmill and a gristmill from the same water-power supply while living at Fountain Green. He established a similar arrangement on Cottonwood Creek in late 1879, choosing a site two miles west of Orangeville. The saw was operated by horse power until a mill race could be constructed. The Jewkes family continued in the sawmill business through several generations. Amasa Scovill and Will Reynolds of Mount Pleasant built a mill near the mouth of Potter's Canyon in 1880. Scovill moved his family to Orangeville shortly thereafter. With the possible exception of the Day mill, these early operations were vertical mills with a reciprocating saw powered by a simple water wheel. Such mills were slow and inefficient and were soon replaced by circular saws powered by turbine water wheels or steam engines. Among others operating lumber or shingle mills during this period were Charles Pulsipher, Andrew J. Allen, William Marshall, Alma Staker, and James W. Bradley in the Huntington Canyon area; Henning Olsen (Ungerman) and sons, Azariah Tuttle, Carl Wilberg, and Andrew Van Buren in the Cottonwood Creek drainage; Brigham H. Higgs, James Henrie, and George Petty and sons in Ferron Canyon; and Rasmus Jacobsen, Ed Torgenson, and Chris Jensen near Emery.

6.0 INVENTORY METHODS

The pedestrian Class III inventory was conducted of the project area in June of 2016, by EnviroWest archaeologists Lorna Billat and Scott Billat. The BLM and NFS requested a 300 foot (APE) wide corridor for the archaeological inventory, 150 feet from either side of centerline. The pipeline center primarily follows the south edge of the county road in Rilda Canyon and the east edge of SR-31 in Huntington Canyon, before crossing over to the south side of SR-31 to the Huntington Power Plant. The 300-ft wide corridor was

determined by utilizing a project shape file and a Trimble GeoXT unit to determine the APE during the Class III inventory. The 300-ft wide APE corridor was applied along the entire proposed pipeline route across all ownership lands.

Previous cultural resource inventories have been completed along both sides of SR-31 but not necessarily covering the total 300-ft corridor. Much of the west side of SR-31 has been impacted by pipeline developments from the Castle Valley Special Service District, North Emery Water Users Water Special Service District, and XTO Gas, as well as improvements for recreation and camping areas. Along SR-31, the 300-ft wide corridor extended on both sides of the highway. The SR-31 highway segment is situated from 36.5 milepost to 39.5 milepost and contains a 200-ft right-of-way (100ft from centerline). In Rilda Canyon, previous cultural resource inventories have been completed along both sides of the county road but again, not necessarily covering the specified 300-ft wide corridor. The 300-ft wide corridor extended on both sides of the Rilda Canyon road (Emery County Road 306). The inventory extended across most of the creek bottoms in Rilda Canyon, and on both sides of the creek. Most of the creek bottom is heavily covered with trees, brush, and ground cover. Also, the pipeline route from SR-31 to the Huntington Power Plant reservoir follows a cleared area that has been mostly disturbed from past developments.

The field inventory transect methods were governed primarily by impacts to the areas immediately adjacent to the existing roads. The entire project 300-ft corridor was examined, with the outer portions of the corridor more closely examined beyond previous inventory areas and disturbed or impacted areas.

About 15 previously recorded sites were identified from the project record search review. All of the noted sites were field-checked to determine if they were within the 300-ft wide project APE. Those sites that were within the APE were evaluated and their site forms updated. New cultural resource sites were mapped using a Trimble GeoXT unit, and documented on IMACS site forms and photographed. Isolated finds were documented and plotted on the project map utilizing a Trimble GeoXT unit.

7.0 INVENTORY RESULTS

Results of the cultural resource inventory identified eight previously recorded sites and two new sites within the 300-ft wide project corridor. The other seven previously recorded sites were updated based on their current condition. The previously recorded sites included sites 42EM1101, 42EM2095, 42EM2109, 42EM2273, 42EM2667, 42EM2930, 42EM3284, and 42EM3841. Ownership of these sites are shown in Table 3. These eight sites consist of prehistoric and historic sites recorded as early as the late 1970s. The previously identified sites within the corridor are all ineligible or have been mitigated. For site 42EM2667, an old utility line was extended to .4 of a mile with additional poles. Two new sites were documented that include 42EM4761, old Rilda Canyon road, and 42EM4762, historic tent platforms and trail.

The sites are listed in Table 3, noted on the topographic maps in Figures 2 and 3, and their descriptions are below. More detailed site documentation is found on individual site forms that are appended for limited distribution.

In addition, a single isolated find was identified during the inventory consisting of a ponderosa tree feature. IF-1 is a ponderosa tree scar that has had its bark removed on the lower base of the tree. The bark scar is 20 to 80cm wide and 260cm long. There are a number of axe cuts in the central portion of the scar. These axe cuts include the following: 40x26cm, 42x25cm, 29x11cm. The ponderosa tree is about 20 meters tall and 1.2 meters in diameter. It is at UTM coordinates 488647mE 4361810mN (Figure 2). In 2003, Senco-Phenix documented this same isolated find and two other bark scars on trees outside the current inventory corridor (Senulis 2003).

IF-1: Ponderosa tree scar



Table 3 - Cultural Resource sites from the Class III Inventory

Site No.	Site Type	Cultural Affiliation	Evaluation	Ownership
42EM1101	Hearth	Prehistoric	Ineligible	BLM
42EM2095	Fremont habitation	Fremont	mitigated	UDOT
42EM2109	Fremont habitation	Fremont	mitigated	UDOT
42EM2273	Prehistoric sparse artifacts	Prehistoric	Ineligible	UDOT
42EM2667	Utility Line	Historic	Ineligible	UDOT/County
42EM2930	Prehistoric camp/Historic debris	Prehistoric/ Historic	Ineligible	BLM
42EM3284	Mine	Historic	Ineligible	NFS
42EM3841	Historic pipeline/Bridge remains	Historic	Ineligible	BLM
42EM4761	GLO - Rilda Canyon road	Historic	Ineligible	NFS/Private
42EM4762	Possible Tent Platforms	Historic	Ineligible	Private (outside ROW)

42EM1101

The site consists of a fire hearth which was found in the profile of the bank of Huntington Creek (Figure 3). It is on BLM lands. The site was 1.5m below ground surface and contained two charcoal lenses in the profile, as identified in 1978 by Wayne Howell. No artifacts were identified. The site was determined ineligible.

Update: The remains of this site could not be found in the creek bank. It is mostly likely eroded away.

Evaluation: The site was originally determined ineligible in 1978. However, because the site could not be relocated in the field during the current inventory, it is possible that the site is likely eroded from creek bank.

42EM2095

This site is a small Fremont village reportedly located along both sides of State Route 31 in Huntington Canyon (Figure 3). It is situated on UDOT lands. The site is located about 10 feet (3 meters) north of the center line of the proposed Huntington Canyon water line right-of-way. Adverse impacts to the site which might have occurred during road construction projects were mitigated during the Cultural Data Recovery Project of SR 31 Forest Boundary to Huntington (RS 0282(4)) conducted in 1986 by Abajo Archaeology. This data recovery program will provide important information on architectural variability of Fremont dwellings and general subsistence patterns, in addition to numerous aspects of the Fremont culture. The information below is from the original site form.

Briefly, the excavation at 42EM2095 resulted in the documentation of structural units, three activity areas, three extramural hearths, numerous shallow processing pits, and three stratified middens. The most formal structural unit (Feature 10) is the well-preserved, burned pit house on the southern end of the site. The pit house measured 6.2 by 3.85 meters and included the following internal features: a one-meter wide bench with associated figurine cache, numerous shallow subfloor storage pits, a raised, clay-lined central fire hearth, and a human burial with an associated tool cache. The construction of this structure has been determined to be A.D. 1150 based on a tight group of tree ring dates and numerous comparable C-14 dates.

The earliest occupation of the site is a fairly formal surface structure (Feature 12) identified on one of the lowest stratigraphic levels and a C14 assessment of A.D. 680 (± 50) (Beta 36454) was obtained. This feature measured about 5.15 by 4.5 meters and was a roofed structure. Internally there were numerous subfloor storage pits and a raised, clay-lined fire hearth. On the northern edge of the site was a large surface structure (Feature 47) adjacent to a large sandstone boulder. The structure was roofed and at least partially walled. The feature measures about 6.5 by 4.5 meters and includes a figurine cache, numerous sub-floor storage pits, a *Canis* sp. skeleton, and a central clay and slab-lined hearth. The material culture from this site includes a tremendous amount of artifacts including chipped stone tools, lithic debitage, ground stone implements, ceramic sherds, bone tools, faunal remains, shell objects, and clay anthropomorphic figurines. The data from this site was published by Abajo Archaeology in 1991.

Update: This site was excavated in 1986, before the construction of SR-31 improvements. SR-31 splits this site in half, with the majority of the site on the south side of the highway. The current revisit of the site

indicated very few artifacts were noted on the site surface. Excavations which occurred in 1986 on both sides of SR-31 were associated with the large boulder features, rock alignments, and features at the habitation site. The data recorded and recovered from the excavations did not indicate any Fremont materials or features were found immediately along either side of the highway. It is presumed that the original highway placement and/or road fill base may have taken out any cultural remains that may have connected the site across the highway.

Evaluation: The Fremont site was originally determined eligible in 1985. The Fremont site was recorded and excavated as part of the SR-31 highway improvement for UDOT. The excavation of the site was completed by Abajo Archaeology in 1991. A burial was found and re-interred just outside the SR-31 right-of-way on county land in 1995.

42EM2109

This is a Fremont affiliated camp located along the north shoulder of Highway 31 extending to the base of the cliff slope within Huntington Canyon (Figure 3). The site is on UDOT lands. The following information is from the original site form. The site has been impacted by highway construction and a bulldozer trail. The actual extent of these impacts to the site is undetermined without subsurface testing or excavation. The site covers an area of 1,100 square meters, with its boundaries determined by several cultural features and surface artifacts. Feature 1 had a partially exposed fire hearth situated in an undisturbed portion of the site. It consists of an alignment of medium sized oxidized rocks approximately 1 meter in length with a lens of charcoal stain and ash. The majority of the hearth appears intact with good potential for yielding C-14 and pollen samples. Feature 2 is exposed along the south bank of the bulldozer trail. It is a layer of charcoal and ash measuring about 7 meters in length with +10 cm of deposition. Two biface fragments were found in association with the feature. Additional investigation is needed to determine the size, function and physical integrity of Feature 2. Along the north edge of the site are several large boulders situated on the steep talus slope. Several sherds were observed in association with these boulders. There is potential for buried cultural deposits in association with these boulders, although the flatter areas to the south probably have a higher potential for cultural features.

The majority of the artifacts are comprised of about 10 Emery Gray Ware sherds and a few flakes occur at the base of talus slope. This area is undisturbed, except for natural erosion. The site was determined to be significant and potentially eligible for nomination to the National Register of Historic Places. Based on Features 1 and 2, and to the ongoing excavation of 42EM2095 (situated in a similar topographic location), there is a potential for additional subsurface cultural features confined within the identified perimeters of 42EM2109. The excavation of 42EM2095 has revealed cultural strata and significant features (i.e., structures) from 30 to 90 cm below present ground surface. In conclusion, 42EM2109 has an excellent potential for yielding relevant information pertinent to addressing a variety of research topics concerning Fremont and possibly Archaic settlement and subsistence strategies.

The adverse impacts to the site which might have occurred during previous road construction projects were mitigated during the Cultural Data Recovery Project of SR 31 Forest Boundary to Huntington (RS - 0282(4)) conducted in 1986 by Abajo Archaeology. Two features were excavated during the data recovery program. Feature 1 is an oval-shaped fire hearth located northwest of the pit house. It measures 60 by 55 cms and was

basin-shaped in profile with a maximum depth of 20 cms. A C14 date of A.D. 910 (± 70) Krueger GX-13117) was obtained from this feature. Feature 2 is an irregular round pit structure measuring 4.10 meters in diameter. Evidence of burning occurs along the top of the north and west wall sections, and a few charred beams were noted. Several internal floor features and a central coped fire hearth were exposed within this feature. Two C14 dates were processed from charcoal materials from the floor of this structure and are A.D. 890 (+ 60) (Krueger GX-13118) and A.D. 895 (± 70) (Krueger GX-13119). The limited artifact assemblage included chipped stone cutting/scraping implements, groundstone, manos and metates, and Fremont ceramics.

Update: This site was excavated in 1986, before the construction of SR-31 improvements. This site was originally documented on the north side of SR-31 highway. The current revisit of the site indicated very few artifacts were noted on the site surface. The main feature excavated at this site, a pithouse, was situated about seven meters north of the highway edge. Very few remains of this site were noted on the current visit.

Evaluation: The Fremont site was originally determined eligible in 1985. The Fremont site was recorded and excavated as part of the SR-31 highway improvement for UDOT. The excavation of the site was completed by Abajo Archaeology in 1991.

42EM2273

The site is a sparse scatter of cultural materials which are associated with the shallow drainages that slope down to the south towards Huntington Creek from the highway (Figure 3). The site is on UDOT lands. The original form indicates that this material spread suggested a larger occupation once existed in the highway corridor and to the north of that corridor. That site has been destroyed by road construction and the operations of the adjacent coal mine. Site is mostly a series of lithic scatter concentrations defined as Units A through F. One sherd was collected on the site and it came from unit F. Some burned bone and oxidized sandstone on the site but no definitive features. Feature 1 is a concentration of rocks and cobbles which have been placed like a walkway on the surface of the ground. This feature measures ca 9 x 1.5 meters. A shovel test was placed in the northern half of the feature resulting in the determination that it has no depth. A mano had been incorporated into the rock matrix that constitutes this feature. The 1991 recordation of the site stated a complete collection of artifacts was accomplished.

Update: The 1991 recordation of the site stated a complete collection of artifacts was conducted, resulting in no surface materials.

Evaluation: The site was originally determined ineligible in 1991. The original justification stated: the site fails to meet the requirements for significance based on the Criteria as established in Title 36 CFR 60.6. It lacks depth potential and diagnostic artifacts. The site has no research potential. Test excavation and artifact mapping and collection have resulted in the depletion of contexts and associations.

42EM2667

The following description is from the original site form. This site is a dismantled utility line dated to 1952 situated in a drainage north of SR-31 (Figure 3). It is situated on both UDOT and county lands. Huntington

residents were first provided electric power by the Huntington Electric Light and Telephone Company, organized in 1915. Plans were made to install a hydroelectric plant along Huntington Creek, when in July 1915 Utah Power and Light Company announced plans to extend its lines to Carbon and Emery counties. Power was supplied from a coal-powered generator plant at Black Hawk. It was several decades (1947) before Utah Power and Light lines were extended into Huntington Canyon. In 1969, Utah Power and Light announced plans to construct a generating plant at Huntington Canyon that involved securing water rights from the Huntington-Cleveland and Cottonwood Creek Consolidated irrigation companies. The plant was situated on land homesteaded by Owen Smith at the turn of the century, and later operated by Byron Howard. Also acquired was an adjacent historic ranch which the power company used as an experimental farm to test the effects of used cooling water with its high salt content. The first unit of the plant went on-line in 1974, and the second unit was completed in 1977 (Geary 1996:238-240, 306, 359-60, 367).

During the update of the site in 2008, Montgomery noted the remains of three utility poles which were situated approximately 155 meters apart. Feature A is the base of a utility pole measuring 6 inches in diameter and rising 3 inches above ground. The center of this pole is missing due to decay. Feature B is the base of a second utility pole measuring 7 inches in diameter and has been saw cut to a height of 3 inches above ground. Feature C is the base of a third utility pole that also measures 7 inches in diameter and has been saw cut to a height of 3 inches above ground.

Update: Additional cut off wood utility poles, from the 1952 utility line, were found to extend west along the north side of SR-31. Four cut off wood utility poles have been identified that extend another 1,400 feet from the original site location. These poles are positioned along the bench area above SR-31, contained in an area of boulders and Pinyon/Juniper vegetation. The poles are approximately 70 to 95 meters apart. The poles have the same characteristics as described above from the initial recordation. So the update to this site now extends the site size from 150 meters to 580 meters in length.

Evaluation: The site was originally recommended ineligible in 2000 by Montgomery Archaeological Consultants, but the form was stamped eligible by SHPO. Another segment of the utility line noted further west than the one noted in 2000, was updated in 2008 by Montgomery. This segment was reportedly less than 50% intact and determined ineligible. The additional poles noted during the current inventory were cut off as well, and only a few remained. The site has been impacted by road development and recreational activities. The original justification stated: The utility line has been salvaged and retains minimal structural integrity except for the right-of-way. This documentation has depleted the research potential of the site. The rating of ineligible still stands.

42EM2930

This dual component site lies on a slope between Huntington Creek and SR 31 in Huntington Canyon (Figure 3). The site is situated on BLM lands. The following information is from the original site form. The site includes a hearth feature of unknown age, two pieces of lithic debitage, and historic trash. Feature 1 is a deflated hearth consisting of ca. 11 red sandstone rocks (14cm diameter and smaller) associated with dispersed pieces of charcoal. No soil staining is observed. The rocks exhibit dark coloration as a result of thermal

alteration. Historic artifacts included crushed tin cans and can fragments, pieces of glass (white milk, cobalt blue, green automobile, green beverage, brown, and clear), a clear glass reinforced extract bottle finish, seven white semi-porcelain undecorated ceramic sherds, three semi-porcelain body sherds showing a molded relief floral and dot design, two segments of stove pipe, a segment of barbed wire (5' length) (at TC-1), and a portion of an automobile window frame with green glass fragments. There are no temporally diagnostic prehistoric or historic artifacts to indicate cultural affiliation or period of occupation/use.

Update: This site has been impacted by the construction of two water pipelines and an access road along SR-31. No evidence of the artifact scatters or features were found. The original site evaluation of eligible is changed to ineligible based on the current lack of features and artifacts.

Evaluation: The site was originally determined eligible in 2002. The original justification stated: Feature 1 is a deflated hearth that may still yield chronometric and subsistence information that is pertinent to the prehistoric or historic research questions of this area. Due to the fact that the artifacts and previously mentioned hearth are no longer apparent due to the impacts of the water pipelines and access road, the site evaluation is recommended to be ineligible.

42EM3284

The form indicates that the site is an abandoned and reclaimed mine adit, most likely related to the former Leroy Mine (Figure 2). It is on Forest Service lands. There is very little remaining of the mine. There is a reclaimed adit, pieces of lumber and juniper logs, two sanitary cans, an old mine two-track, and coal fragments scattered throughout. There is the body of an old wood and metal mine cart measuring 47" x 26" x 18" on the hillslope under the adit. The site has been disturbed by heavy equipment used to close the adit. This mine was in the area that was reclaimed in 1988.

Update: This site remains in the same condition as described from its recordation in 2004. The mine has been reclaimed on the canyon slope above the main canyon road. No update form was necessary.

Evaluation: The site was originally determined ineligible in 2004. The site has been destroyed by reclamation on the mine.

42EM3841

The original form indicates that this site consists of a historic pipeline system (Features A, B, C, and D) and a pile of dismantled bridge timbers (Feature E) bisected by Bear Creek in Huntington Canyon (Figure 3). The BLM owns the land on which the site is situated. The site is distributed across an area measuring 100 ft. x 500 ft. Pipeline features include two buried segments Feature A [274 ft. long] and Feature D [132 ft. long] and two concrete pylons (Feature B [3 ft. 7 inches long x 3 ft. 6 inches wide x 1 ft. 2 inches tall]) and Feature C [5 ft. long x 4 ft. wide x 2 ft. 7 inches tall] once used to support the pipeline across Bear Creek, which have now been sawed and removed. Structural characteristics associated with the concrete pylon features (Features B and C) most likely pre-date 1940 on the basis of stylistic comparisons. The pipeline appears to have been used to carry water and is made of 5-inch diameter cast iron pipe lined with a cement material that acted as a sealant.

Feature E consists of a pile of large timbers distributed across an area measuring 51 ft. wide x 55 ft. long and may represent the structural remnants of a bridge that once crossed over Bear Creek. It is possible that the bridge could have been dismantled and deposited in 1956 with the construction of SR-31 which is located directly to the west. This is suggested by the presence of a "1956" UDOT datum that probably represents the construction date for SR-31. A recently dismantled telephone line was found consisting of a sawed-off telephone pole and a continuous 200 ft. long strand of wire.

Update: This site is primarily intact. An oil/gas well pad borders the east edge of the site and has impacted a portion of the site. The old pipe line and general site feature areas are intact. No additional materials or features were noted on revisit.

Evaluation: The site was originally determined ineligible in 2007. The original justification stated: In general the physical remains documented at this site have been dismantled and/or removed from their original context. The size and location of the pipeline indicates it had a localized function, not contributory to the economic development of the area. The bridge remnants no longer retain their original location and lack the distinctive characteristics of a type, period, or method of construction (Criterion C). The site cannot be linked to any significant event(s) or person(s) (Criteria A and B) and fails to have the potential to yield information important to the history of the area (Criterion D). Hence, the site is not recommended eligible to the NRHP.

Site 42EM4761

This site consists of five segments of old road in Rilda Canyon (Figure 2). It is on Forest Service and private lands. The road segments extend from the mouth of Rilda Canyon, from Huntington Creek, all the way to Deer Creek Mine, along about a two-mile stretch of the canyon. The 1901 GLO map indicates the road in Rilda Canyon. The five identified road segments extend over four Sections 22, 27, 28 and 29, in T16S R7E. Segment 1 extends from Huntington Creek to the south 125 feet in length. This segment has been greatly impacted by construction of the current paved road up the canyon and new bridge construction over Huntington Creek. Segment 2 is 225 feet in length along the south side of paved road in Rilda Canyon. Segment 3 is 440 feet in length along the south side of paved road in Rilda Canyon and has been impacted by recreational activities along the creek. Segment 4 is 215 feet in length above the north side of paved road in Rilda Canyon. This segment has been reclaimed and associated with the mining development of Deer Creek Mine. Segment 5 is 400 feet in length above the north side of paved road in Rilda Canyon. This segment has been reclaimed and associated with the mining development of Deer Creek Mine. The condition of all the road segments varied greatly depending on impacts and are mostly in poor condition.

Evaluation: The site likely meets criterion A for its broad association with early 20th century transportation and mining activities in the Rilda Canyon area. Unfortunately, the site integrity has been significantly diminished by road construction, recreational activities, and reclamation impacts and no longer retains aspects of design, setting, materials, workmanship feeling, and association. The site does not meet criterion B as it is not known to be associated with any locally or historically significant individuals, nor is it of unique type or method of construction and doesn't meet criterion C. It is unlikely to provide further substantive information

and therefore does not meet criterion D. The site is recommended to be ineligible for inclusion on the National Register for purposes of Section 106.

Site 42EM4762

This site consists of possible tent platform features and a mining trail situated along the slope area of Huntington Canyon (Figure 3). The site is on private land within the 300-ft corridor but outside the UDOT right of way. The possible tent platforms consist of two stone alignment features that are side by side on the surface dirt which has been formed and terraced into the slope. Each of the features are rectangular, roughly 6-7 feet wide and 12 feet long. The features are positioned between several boulders and pinyon trees. No artifacts are associated with the features. An old mining trail proceeds just to the east side of the stone features about 10 feet. The trail, about 150 feet in length, angles up from the lower portion on the slope and proceeds to a bulldozed leveled area. The original function of the bulldozed leveled area is undetermined, but it is currently occupied by multiple fenced animal pens that have been abandoned. The animal pens are likely a more recent development appear to be associated with a modern house and outbuildings beyond the drainage to the west. It is undetermined whether the leveled area is newer or associated with the mining trail. One old utility pole with cross bar is present near the lower portion of the mining trail. Coal chunks are scattered over much of the site area. The only other artifacts noted include newer glass and plastic fragments dating from the 1970 and 1980s.

Evaluation: The site is likely associated with early mining activities in the area and may meet criterion A. It does not appear to meet criteria B or C. The lack of artifacts and associated significant features suggest it is unlikely to provide substantive information and therefore does not meet criterion D. The site is recommended to be ineligible for inclusion on the National Register for purposes of Section 106.

8.0 PALEONTOLOGICAL RESOURCES

Consultation with the Utah Geological Survey in Salt Lake City was conducted regarding potential paleontological sites in the surrounding project area on July 7, 2016 (see Appendix C). There are no paleontological localities recorded in these project areas. Quaternary and Recent alluvial deposits and the Cretaceous Mancos Shale and Star Point Sandstone that are exposed along most of this project right-of-way have a low potential for yielding significant fossil localities (PFYC 2). However, there may also be some limited exposures of the Cretaceous Blackhawk Formation, near the junction of SR-30 and the Rilda Canyon road, that have a high potential for yielding significant fossil localities (PFYC 4). There may be potential impacts to paleontological resources if these deposits are disturbed. Otherwise, unless fossils are discovered as a result of construction activities this project should have no impact on paleontological resources.

9.0 SUMMARY AND CONCLUSIONS

EnviroWest conducted a cultural resource inventory for the proposed area of potential effects for the Rilda Canyon to Huntington Canyon Power Plant Pipeline Project. The 5.5-mile water pipeline will bring water from the Deer Creek Mine to Huntington Power Plant. The proposed project is on lands that are administered by the Bureau of Land Management, Manti-La Sal National Forest, Utah Department of Transportation - Region 4, Emery County, and various private land owners.

As a result of this inventory, EnviroWest updated seven of eight previously recorded sites and recorded two new sites. The previously recorded sites include 42EM1101, 42EM2095, 42EM2109, 42EM2273, 42EM2667, 42EM2930, 42EM3284, and 42EM3841. These eight sites consist of prehistoric and historic sites recorded as early as the late 1970s. Previous sites 42EM1101, 42EM2273, 42EM2667, 42EM3284, and 42EM3841 have all been determined ineligible. Site 42EM2930, which was heavily impacted by two water pipelines and an access road, is in poor condition and the evaluation has been changed to ineligible. Site 42EM2667, an abandoned utility line dating to the early 1950s, was extended for an additional 0.4 of a mile, but is still considered to be ineligible. The two new sites that were recorded during the inventory included 42EM4761, the Old Rilda Canyon Road, and 42EM4762, containing historic possible tent platforms and mine trail. Both of these sites are recommended ineligible due to generally poor conditions of the features and/or lack of diagnostic artifacts. Some portions of site 42EM4761, would be in direct impact of the pipeline trench. Site 42EM4762 is outside of the direct impact of the pipeline.

Pipeline construction will entail the pipeline be buried to a minimum depth of 5 feet, with use of a trackhoe, and constructing a 3- to 7-foot-wide trench along the identified road bases. The permanent right-of-way will be 12 feet wide; the temporary right-of-way will be up to an additional 20 feet wide where possible.

Monitoring Evaluation

Buried prehistoric cultural deposits have been identified along SR-31 as noted in past inventories and mitigation work. This data has primarily originated from the mitigation work conducted on sites 42EM2095 and 42EM2109, both of which are Fremont habitation sites located in Section 35 T16S R7E, north of the Bear Creek Campground. Excavations at site 42EM2095 also resulted in the discovery of a burial which was later reinterred to the north of the site. The possibility exists that additional cultural remains may be encountered during the proposed pipeline trenching across these sites.

Segments of the pipeline recommended for monitoring may include the 0.6 of a mile of pipeline in Section 35 that contains sites 42EM2095 and 42EM2109 and possibly Sections 35 and 26 that include site 42EM1101, which involves about 1.2 miles of proposed pipeline, with the potential for cultural deposits to be discovered in the area, due to its proximity to Huntington Creek in the mouth of the canyon.

Site 42EM2095 is situated along both sides of SR-31. This Fremont site was excavated in 1986 to mitigate potential adverse effects from the then proposed UDOT highway improvements of SR-31. The proposed

pipeline will be situated about 18 feet north of the SR-31 pavement edge. This portion of SR-31 contains about five feet of road base fill forming the elevated highway. The pipeline trench will be approximately five feet beyond the introduced road base fill, on the current ground surface. The 1986 excavation of this site identified most of the cultural deposition and features on the south side of the SR-31. Little known cultural depth was identified in 1986 on the north side of SR-31.

Site 42EM2109 is situated along the north side of SR-31. This Fremont site was excavated in 1986 from adverse effects triggered by proposed UDOT highway improvements of SR-31. The proposed pipeline trench will be situated about 22 feet north of the pavement edge of SR-31. The pipeline trench will be approximately five feet beyond the introduced road base fill, on the current ground surface, across the location the single pithouse was excavated in 1986 at the site.

Site 42EM1101, is situated on the west side of the road. Despite the fact that the hearth is likely no longer present at the site, there is some potential for cultural deposits to be discovered in the area, due to its proximity to Huntington Creek. Monitoring is also recommended along the portion of the pipeline as it is constructed in the vicinity of 42EM1101.

Despite pipeline monitoring being performed, there is always the possibility of encountering previously unidentified cultural resources during any ground disturbing activities. In order to protect any unidentified or unrecorded cultural properties that may exist, the following restrictions should apply during development of the project:

1. Personnel and equipment associated with the project should be restricted to the area cleared for the project.
2. Personnel associated with the project should refrain from collecting or otherwise disturbing cultural materials that may be encountered during development.
3. If unrecorded cultural materials are encountered during the project, activities in the affected area(s) should cease, and the Bureau of Land Management office should be notified before development in the area is resumed.
4. Human burials or other physical remains encountered during the project, require immediate cessation of activity in the affected area, as well as immediate notification of proper authorities. Native American burials or other remains must be reported to the Utah SHPO, the Bureau of Land Management, and appropriate Native American groups.

10.0 REFERENCES

Davis, W.

1986a UDOT SR-31 Huntington Canyon Project. Abajo Archaeology, Utah. (U86AS0009)

1986b UDOT SR-31 Excavations of Sites 42Em2095 and 42Em2109 in Huntington Canyon Project. Abajo Archaeology, Utah. (U86AS0563)

1990 Huntington Canyon Water Relocation Project. Abajo Archaeology, Utah. (U90AS0362)

Hauck, R.

1996 Two Escarpment and Talus Zone Drill Locations in Rilda Canyon. AERC, Utah. (U96AF0396)

McDonald, S.

1994 Rilda Canyon County Road Upgrade, Utah. Forest Service, Price, Utah. (U94FS02541)

1997 Huntington Canyon Restoration Project. Forest Service, Price, Utah. (U97FS0449)

Nielson, A.

1992 UP&L Deer Mine 12.5Kv Line in Rilda Canyon. Nielson Associates, Utah. (U92NP0516)

Montgomery, K.

2002a Cultural Resource Texaco 14 Well Locations in Huntington Canyon. MOAC, Utah. (U02MQ0092)

2002b Cultural Resource Talon Texaco Upper Huntington Canyon Drilling. MOAC, Utah. (U02MQ0758)

2007a Cultural Resource XTO Federal 16-7-26-23 Well Huntington Canyon. MOAC, Utah. (U07MQ0331)

2007b Cultural Resource XTO Pipeline and Two Wells in Huntington Canyon. MOAC, Utah. (U07MQ0827)

2009 Cultural Resource XTO Federal Two Wells in Huntington Canyon. MOAC, Utah. (U09MQ0062)

Senulis, J.

2003 Rilda Canyon Mine – Energy West. Senco-Phenix, Price, Utah. (U03SC0793)

Smith, G.

2013 Cultural Resource Survey for Huntington Canyon Debris Basins. NRCS, Utah. (U13SH0107)

Wilde, J.

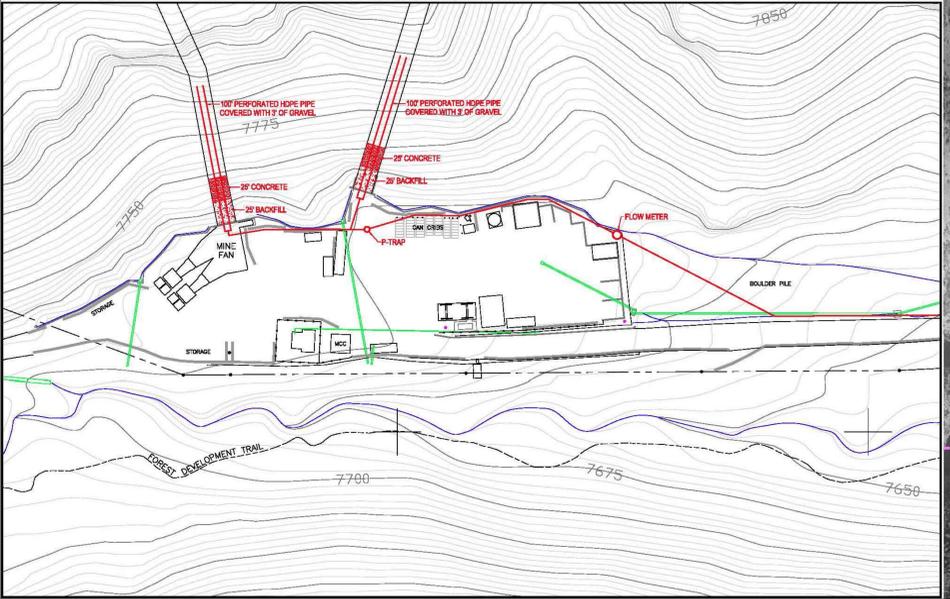
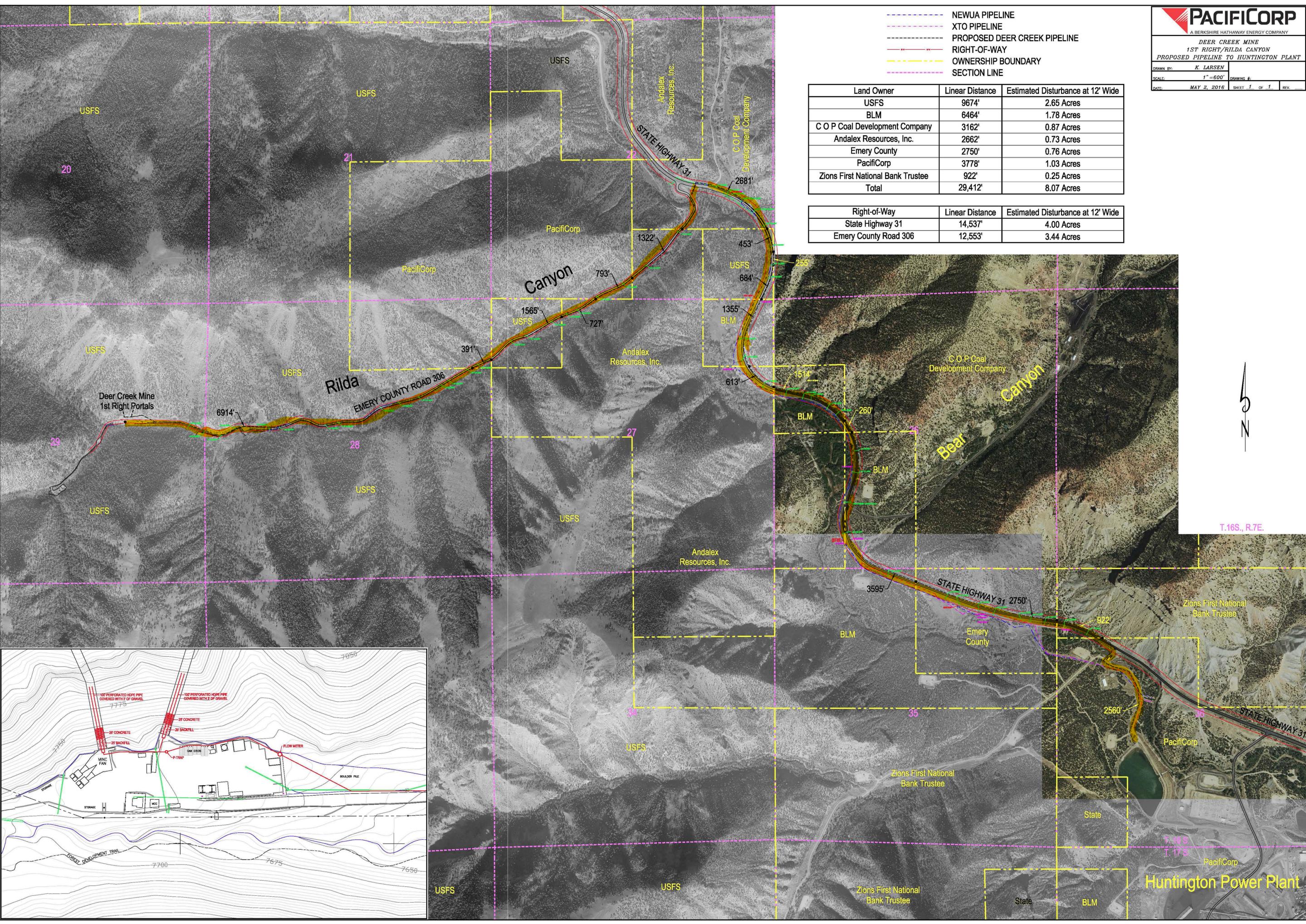
1991 Cultural Resource Rock Quarries in Huntington Canyon. OPA/BYU, Utah. (U91BC0798)

APPENDIX A1 – ENGINEERING 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
Total	29,412'	8.07 Acres

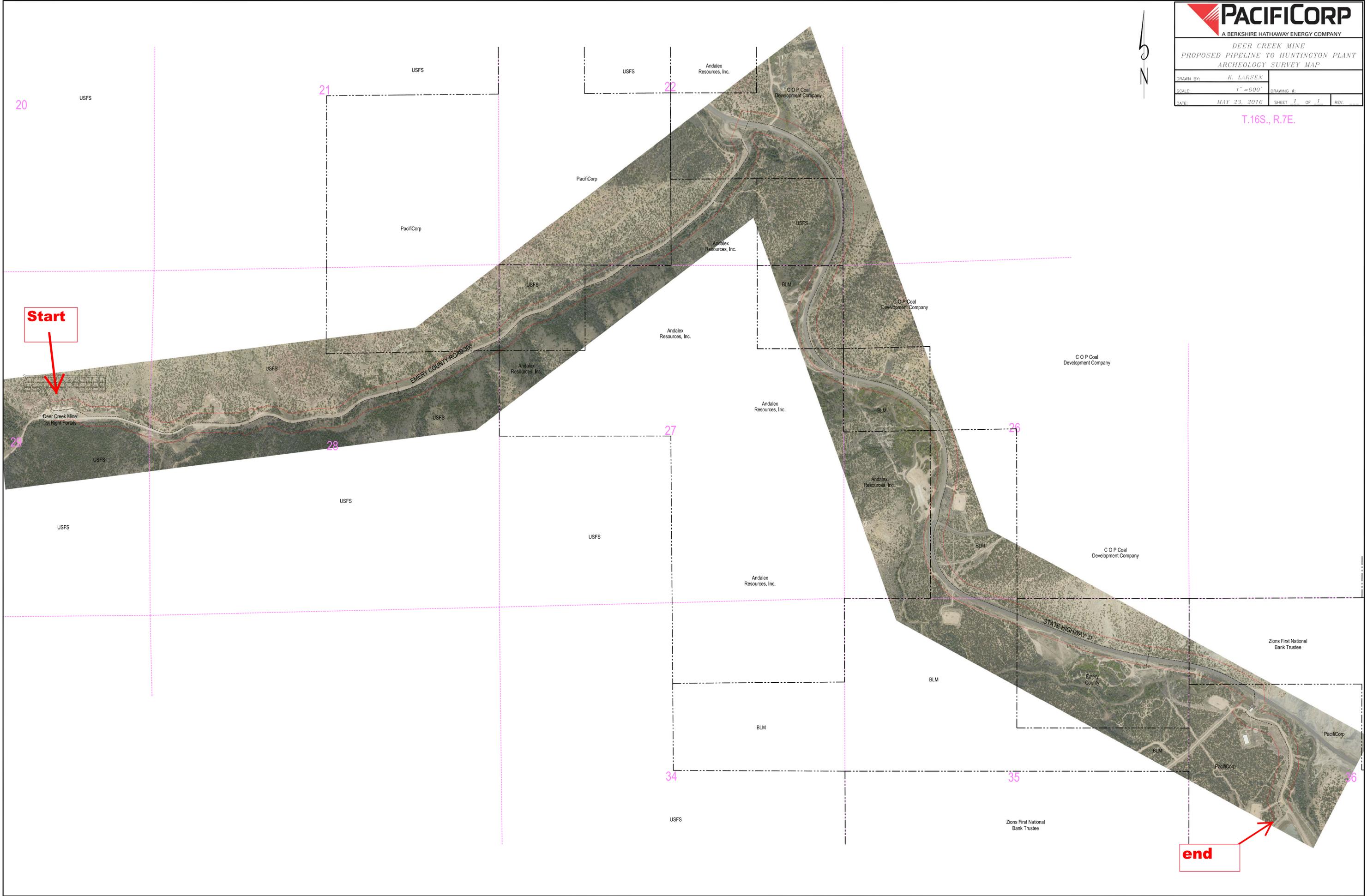
Right-of-Way	Linear Distance	Estimated Disturbance at 12' Wide
State Highway 31	14,537'	4.00 Acres
Emery County Road 306	12,553'	3.44 Acres



T.16S., R.7E.

Huntington Power Plant

APPENDIX A2 – APE 300-FT CORRIDOR MAP



Start

end

APPENDIX B – IMACS SITE FORMS
(Limited Distribution)

APPENDIX C – PALEONTOLOGICAL FILE REVIEW



GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Utah Geological Survey

RICHARD G. ALLIS
State Geologist Division Director

July 7, 2016

Scott Billat
EnviroWest
330 South Woodland Hills Drive
Woodland Hills UT 84653

RE: Paleontological file search and recommendations for the Deer Creek Mine Rilda Canyon Proposed Pipeline to Huntington Power Plant Project, Emery County, Utah
U.C.A. 79-3-508 (Paleontological) Compliance; Request for Confirmation of Literature Search according to the UDOT/UGS Memorandum of Understanding.

Dear Scott:

I have conducted a paleontological file search for the Deer Creek Mine to Huntington Power Plant Pipeline Project in response to your request of July 7, 2016. This project qualifies for treatment under the UDOT/UGS executed Memorandum of Understanding.

There are no paleontological localities recorded in our files in this project area. There are no paleontological localities recorded in our files in these project areas. Quaternary and Recent alluvial deposits and the Cretaceous Mancos Shale and Star Point Sandstone that are exposed along most of this project right-of-way have a low potential for yielding significant fossil localities (PFYC 2). However, there may also be some limited exposures of the Cretaceous Blackhawk Formation, near the junction of SR-30 and the Rilda Canyon road, that have a high potential for yielding significant fossil localities (PFYC 4). So please be aware of the potential impacts to paleontological resources if these deposits are disturbed. Otherwise, unless fossils are discovered as a result of construction activities this project should have no impact on paleontological resources.

If you have any questions, please call me at (801) 537-3311.

Sincerely,

Martha Hayden
Paleontological Assistant



Attachment 2. Photo Log

Form UT-8110-X
March 2011

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
UTAH STATE OFFICE

Appendix X, Page X

CULTURAL RESOURCE PHOTOGRAPH LOG

Field Office: Price

Recorder Name: S. Billat

Project No. : U16EZ0363bfps

No.	Date	Direction	Site Number	Subject & UTM Coordinates*
1	6/20/16	West	42EM2667	Utility pole 491355E 4360505N
2	6/20/16	South	42EM2667	Utility pole 491198E 4360550N
1	6/22/16	South	42EM4762	Feature 2 489984E 4362839N
2	6/22/16	South	42EM4762	Feature 1
3	6/22/16	South	42EM4762	Old trail
4	6/22/16	East	42EM4762	Utility pole
1	6/20/16	South	42EM4761	Road Segment 1 489688E 4362794N
2	6/20/16	East	42EM4761	Road Segment 2 488855E 4362093N
3	6/20/16	Southwest	42EM4761	Road Segment 3 488571E 4361926N
4	6/20/16	East	42EM4761	Road Segment 5 486860E 4361519N

*UTM Coordinates required for site overview photos, optional for all other photos.