



Lila Canyon Mine
794 North 'C' Canyon Road
P.O. Box 910
East Carbon, UT 84526
Phone: (435) 888-4000
Fax: (435) 888-4002

December 29, 2022

Steve Christensen
Coal Program Manager
Utah Division of Oil, Gas and Mining
1594 West North Temple
Salt Lake City, UT 84114-5801

Attn: Steve Christensen
Permit Supervisor

Subject: Minor Coal Exploration Plan, Boreholes PBH-1 thru PBH-3,
Lila Canyon Mine, DOGM Task #T-21945,
Response to Deficiency Letter

Dear Mr. Christensen:

Please see the attached responses to deficiencies related to the above matter, as outlined in your letter of December 22, 2022. Revisions to the Lila Canyon Mining and Reclamation Plan are also attached to address the necessary deficiencies, along with the C1 and C2 Forms.

Please feel free to contact me if you have any questions. We hope to begin drilling the subject boreholes early 2023.

If you have any questions, please contact me at 435-650-1850.

Sincerely,

Jesse Candelaria
Resident Agent / Environmental Tech
Emery County Coal Resources / Lila Canyon Mine

APPLICATION FOR COAL PERMIT PROCESSING

Permit Change ☐ New Permit ☐ Renewal ☐ Exploration ☒ Bond Release ☐ Transfer ☐

Permittee: Emery County Coal Resources, Inc.

Mine: Lila Canyon Mine

Permit Number: C/007/0013

Title: Minor Coal Exploration Plan : PBH -1, -2, and -3; DOGM Task #T-21945

Description, Include reason for application and timing required to implement:

Coal exploration and installation of monitoring wells

Instructions: If you answer yes to any of the first eight (gray) questions, this application may require Public Notice publication.

- ☒ Yes ☐ No 1. Change in the size of the Permit Area? Acres: _____ Disturbed Area: 0.47 ☒ increase ☐ decrease.
- ☐ Yes ☒ No 2. Is the application submitted as a result of a Division Order? DO# _____
- ☐ Yes ☒ No 3. Does the application include operations outside a previously identified Cumulative Hydrologic Impact Area?
- ☐ Yes ☒ No 4. Does the application include operations in hydrologic basins other than as currently approved?
- ☐ Yes ☒ No 5. Does the application result from cancellation, reduction or increase of insurance or reclamation bond?
- ☐ Yes ☒ No 6. Does the application require or include public notice publication?
- ☐ Yes ☒ No 7. Does the application require or include ownership, control, right-of-entry, or compliance information?
- ☐ Yes ☒ No 8. Is proposed activity within 100 feet of a public road or cemetery or 300 feet of an occupied dwelling?
- ☐ Yes ☒ No 9. Is the application submitted as a result of a Violation? NOV # _____
- ☐ Yes ☒ No 10. Is the application submitted as a result of other laws or regulations or policies?
Explain: _____
- ☒ Yes ☐ No 11. Does the application affect the surface landowner or change the post mining land use?
- ☐ Yes ☒ No 12. Does the application require or include underground design or mine sequence and timing? (Modification of R2P2)
- ☒ Yes ☐ No 13. Does the application require or include collection and reporting of any baseline information?
- ☐ Yes ☒ No 14. Could the application have any effect on wildlife or vegetation outside the current disturbed area?
- ☒ Yes ☐ No 15. Does the application require or include soil removal, storage or placement?
- ☒ Yes ☐ No 16. Does the application require or include vegetation monitoring, removal or revegetation activities?
- ☐ Yes ☒ No 17. Does the application require or include construction, modification, or removal of surface facilities?
- ☒ Yes ☐ No 18. Does the application require or include water monitoring, sediment or drainage control measures?
- ☐ Yes ☒ No 19. Does the application require or include certified designs, maps or calculation?
- ☐ Yes ☒ No 20. Does the application require or include subsidence control or monitoring?
- ☒ Yes ☐ No 21. Have reclamation costs for bonding been provided?
- ☐ Yes ☒ No 22. Does the application involve a perennial stream, a stream buffer zone or discharges to a stream?
- ☐ Yes ☒ No 23. Does the application affect permits issued by other agencies or permits issued to other entities?

Please attach one (1) review copy of the application.

I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein.

Jesse Candelaria

Print Name

Sign Name, Position, Date

Environmental Tech. 12/29/2022

Subscribed and sworn to before me this 29 day of December, 2022

Notary Public

My commission Expires:

Attest: State of Utah } ss:
County of Carbon



For Office Use Only:

Assigned Tracking
Number:

Received by Oil, Gas & Mining

Form DOGM - C2 (Revised March 12, 2002)



State of Utah

SPENCER J. COX
Governor

DEIDRE M. HENDERSON
Lieutenant Governor

Department of Natural Resources
Division of Oil, Gas and Mining

JOEL FERRY
Executive Director

JOHN R. BAZA
Division Director

December 22, 2022

Emery County Coal Resources, Inc.
Jesse Candelaria, Acting Resident Agent
P.O. Box 910
East Carbon, Utah 84520-0910

Subject: PBH-1 thru PBH-3 Boreholes, Emery County Coal Resources, Inc., Lila Canyon Mine, C/007/0013, Task #T-21945

Dear Mr. Candelaria:

The Division has reviewed your application. The Division has identified deficiencies that must be addressed before final approval can be granted. The deficiencies are listed as an attachment to this letter.

The deficiencies authors are identified so that your staff can communicate directly with that individual should questions arise. The plans as submitted are denied. Please resubmit the entire application by no later than January 23, 2023.

If you have any questions, please call me at (801) 538-5350.

Sincerely,

Steve Christensen
Coal Program Manager





State of Utah

SPENCER J. COX
Governor

DEIDRE M. HENDERSON
Lieutenant Governor

Department of Natural Resources
Division of Oil, Gas and Mining

JOEL FERRY
Executive Director

JOHN R. BAZA
Division Director

Technical Analysis and Findings

Utah Coal Regulatory Program

PID: C0070013
TaskID: T-21945
Mine Name: LILA CANYON MINE
Title: PBH-1 thru PBH-3 Boreholes
Findings Report Date:

General Contents

Right of Entry

Analysis:

The application does not meet the State of Utah R645 requirements for Right-of-Entry.

The amendment does not meet the requirements of R645-301-114.100 because the legal description for the permit area within the Right-of-Entry section on Page 1-10 of Chapter 1 has not been revised to account for boreholes PBH-1 and PBH-2.

Table 1-1 of Chapter 1 has been revised to contain Right-of-Entry information for Federal ROW UTU-96032, and the Permittee has revised the narrative on Page 1-6 to include Federal ROW UTU-96032 as well. The Bureau of Land Management Right-of-Way/Temporary Use Permit documentation for Federal ROW UTU-095176 has been included in this amendment.

However, the legal description of the permit area on Page 1-10 has not been revised to account for the addition of boreholes PBH-1 and PBH-2. The current legal description on Page 1-10 already accounts for PBH-3, but not PBH-1 and PBH-2. The legal description must be revised to include PBH-1 and PBH-2.

Additionally, the total permit area acreage provided at the top of page 1-10 (4,664.32 acres) must be increased by the amount of additional acreage introduced with boreholes PBH-1 and PBH-2 (i.e., the portion of the total 0.47 acres for all three boreholes minus the acreage of PBH-3).

Deficiencies Details:

The application does not meet the State of Utah R645 requirements for Right-of-Entry. The following deficiency must be addressed prior to final approval:

R645-301-114.100: The Permittee must revise the legal description for the permit area on page 1-10 to account for boreholes PBH-1 and PBH-2.

R645-301-114.100: The Permittee must revise the total permit area acreage on Page 1-10 of Chapter 1 by the addition of boreholes PBH-1 and PBH-2.

Justin Eatchel

Permit Term

Analysis:

The application does not meet the State of Utah R645 requirements for Permit Term.

The amendment does not meet the requirements of R645-301-116.100 because the acreage information in the Permit Term Section 1.1.6 on Page 1-10 of Chapter 1 is incorrect.

The narrative on Page 1-10 states that the anticipated total acreage to be affected during the permit term is 37.49 acres. However, Exhibit "A" of the current Lila Canyon Reclamation Agreement identifies a bonded/disturbed area of 42.6 acres. With the addition of the three boreholes, the bonded/disturbed area will need to be increased by 0.47 acres within the Reclamation Agreement as well as in the Mining and Reclamation Plan (MRP). The disturbed acreages within the MRP and Reclamation Agreement must be consistent. Therefore, the Permittee must revise the anticipated total acreage to be affected in Section 1.1.6 on page 1-10 of Chapter 1 to 43.07 acres (i.e., current Reclamation Agreement disturbed acreage of 42.6 acres plus 0.47 acres).

Deficiencies Details:

The application does not meet the State of Utah R645 requirements for Permit Term. The following deficiency must be addressed prior to final approval:

R645-301-116.100: The Permittee must revise the anticipated total acreage to be affected in Section 1.1.6 on page 1-10 of Chapter 1 to 43.07 acres (i.e., current Reclamation Agreement disturbed acreage of 42.6 acres plus 0.47 acres).

Justin Eatchel

Environmental Resource Information

Historic and Archeological Resource Information

Analysis:

The application meets the State of Utah R645-301-411 requirements for Historic and Archeological Resource Information.

The application meets the requirements because cultural resource information, including BLM acknowledgement, is included in the confidential section of the application.

Appendix 7-12, Attachment B of the confidential portion of the application contains a June 2022 cultural resource report titled "Class III Archaeological Resources Survey for the Lila Canyon Mine Borehole and Access Route Project, Emery County, Utah" by SWCA. According to the report, one new archeological site was recorded, 42EM5609, and one isolated find, IF-01, was located. Neither was recommended for inclusion in the National Register of Historic Places. SWCA recommends a finding of "No Historic Properties Affected" for the proposal. Also included in the application is a BLM Summary Report of Cultural Resources Inspection concurring with the determinations of eligibility and effect which SWCA proposed. This form is used by DOGM in the absence of SHPO concurrence due to the BLM's small scale programmatic agreement with SHPO.

Todd Miller

Soils Resource Information

Analysis:

The application meets the State of Utah R645 requirements for Soils: Environmental Description.

The general elevation is 6,700 to 6,900 ft in pinyon -juniper and open mixed-shrub habitats (App. 7.12, Appendix C, Section 1.2 p. 1 and Summary p. 5). Dominant vegetation is pinyon, juniper, big sagebrush and rubber rabbitbrush. Cryptobiotic soil crusts are present throughout the juniper stands (App. 7-12, Attach C, Section 1.2, p. 1). The annual precipitation is 12-16 inches with a frost free period of 85-120 days (App. 7-12 Attach. D, Soil Map Unit Setting).

The location of the three exploratory drill holes is shown on Figure A-1 Project Location in Attach. C of Appendix 7-12. The three drill holes will be accessed from the Turtle Canyon Road (a dirt road) accessed from county road 124. Drill holes PBH-1 and PBH 3 will be more than 100 feet from the Turtle Canyon Road. PBH-2 is located 1.5 miles up the Right Fork of Williams Draw (a dry wash bed) (App. 7.12, Appendix B, Sec. 1.1 p.1).

Environmental soils resource information for the three well sites is found in Attachment D of Appendix 7-12 Notice of Intent to Conduct Minor Coal Exploration, PBH-1, -2, AND -3. The wells are in the Williams Draw Lease Area (Chap. 2, Section 222.200, p. 5).

Attachment D Soils Information provides an Order 3 soil survey evaluation of the soils from the NRCS Web Soil Survey online tool. Soils in the vicinity of PBH-1 and PBH-3 are in soil map unit 089 which is Lilapoint fine sandy loam, 1 to 5% slopes. On average, this soil has a five-inch A horizon. This soil series has prime farmland potential, if irrigated. However, these are State lands that have never been cleared, plowed or irrigated. The ecological site is Loamy bottom (Big Sagebrush). The hydrologic soil group is B, meaning moderate runoff (infiltration rate = 0.15 - .30 in/hr. The land capability classification is 6e, meaning it is unsuitable for cultivation, primarily due to its susceptibility to erosion.

PBH-2 is located 2 miles East and ½ mile North of PBH-1 (Plate 1) in soil map unit 137 which is an association of the Rangecreek-Skein-Rabbitex soil series on 6-45% slopes. These are not prime farmland soils. These soils are a thin cover over bedrock on mountain slopes. This soil has a two-inch A horizon. Depending on the soil series, bedrock may be encountered between 10 inches (Skein soil) and 46 inches (Rabbitex). The ecological site is Upland Shallow Clay Loam (Utah Juniper-Pinyon). The hydrologic group is D, meaning very high runoff potential (infiltration rate = 0.0 - 0.05 in/hr. The land capability class is 7e, meaning it's use is limited to grazing, forestland, or wildlife, primarily due to its susceptibility to erosion.

Photographs of the proposed disturbed areas are found in Appendix B, page B-1 through B-3.

Priscilla Burton

Maps Permit Area Boundary

Analysis:

The application does not meet the State of Utah R645 requirements for Permit Area Boundary Maps.

The application does not satisfy the requirements of R645-301-521.141.

PBH-1 and PBH-2 are located outside of the currently approved permit area depicted on Plate 1-1 of the currently approved MRP and Plate 1-2A (provided with this amendment). Any disturbance associated with a coal mining and reclamation operation must be contained within the permit area boundary.

The Permittee must revise Plate 1-1 in the current MRP and Plate 1-2A (proposed with this amendment) to include PBH-1 and PBH-2 in the permit area.

This could be conveyed within the legend. A note on the plate would also be helpful to convey that PBH-1 and PBH-2 are part of the permit area.

Deficiencies Details:

The application does not meet the State of Utah R645 requirements for Permit Area Boundary Maps. The following deficiency must be addressed prior to final approval:

R645-301-521.141: The Permittee must revise Plates 1-1 and 1-2a to convey that the disturbance proposed for holes PBH-1 and PBH-2 will occur within an approved permit area.

Justin Eatchel

Maps Surface and Subsurface Ownership

Analysis:

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The application meets the State of Utah R645 requirements for Surface Ownership Maps.

The amendment meets the requirements of R645-301-521.130 thru -521.132 because Plates 4-1 and 3-2 Surface Ownership contain the correct permit area boundary information.

The redline strikeout on page 1-4 of Chapter 1 indicates that Bronco Coal Company is no longer a surface owner of record for lands contiguous to the permit area. A revised version of Plate 4-1 Surface Ownership has been provided that shows the current owners of record for lands within and adjacent to the permit area boundary. Additionally, the permit area boundary for the Lila Canyon Mine in Plate 4-1 has been revised to appear more distinct.

Previously the permit area boundary illustrated on Plate 4-1 was drawn to include Federal Lease #UTU-014218 Tract #2 and #UTU-0126947 Tract #2 even though those leases have not yet been approved and assimilated into the current MRP. That has been revised and the correct permit area boundaries are currently displayed. Leases UTU-0126947 and UTU-014218 are currently proposed for inclusion into the permit under Task T-21793 (Add Lease Modifications Turtle Canyon).

Justin Eatchel

Operation Plan

Topsoil and Subsoil

Analysis:

The application meets the State of Utah R645 requirements for Soils: Operation Plan.

The plan includes the removal of six inches of the surface soil from the access spur road and drill pads at sites PBH-1 and PBH-3 prior to construction (App. 7-12 Section R645-201-225 and R645-202-223). These drill pads will be approximately 100 x 100 feet. Salvaged soil will be protected with a silt fence or berm (App. 7-12 R645-202-223). Figure 2 shows the typical layout for PBH- 1 and PBH-3.

At remote drill pad PBH-2, the vegetation and soil will be covered with brattice cloth. This drill site will be 35 ft x 80 ft. A helicopter will deliver equipment to this site. Figure 3 shows the typical layout for site PBH-2.

Priscilla Burton

Hydrologic General

Analysis:

The application meets the State of Utah R645 requirements for Hydrologic General.

The Permittee is proposing 3 exploration boreholes with the intent to convert the boreholes to 2 monitoring wells and 1 piezometer. These boreholes, PBH-1, PBH-2, and PBH-3 will be screened in the Sunnyside sandstone formation just below the coal seam. Previous iteration of this proposed amendment proposed that all three holes would be completed as 2 inch piezometers; however, now the Permittee has proposed that PBH-1 and PBH-3 will be drilled with a nominal 8-inch hole and will be completed with a 4-inch diameter steel casing. This will allow for water quality sampling to take place

with these holes. PBH-2 will still be completed as a 2-inch piezometer. PBH-2 will be drilled with a helicopter drill rig. The supporting equipment necessary for this hole will be brought in with ATVs or walked in and a temporary flexible hose will be used to supply water to this location. PBH-1 will be 975 feet deep, PBH-2 will be 1745 feet deep, and PBH-3 will be 1040 feet deep.

Amanda Daniels

Hydrologic Transfer Wells

Analysis:

The application meets the State of Utah R645 requirements for Hydrologic Transfer Wells.

The 3 proposed PBH holes will be reclaimed as outlined in Appendix 7-12. This appendix details the holes will be plugged and abandoned with cement and/or bentonite to full depth in accordance with the Utah Division of Water Rights rules. After plugging, the surface casing will be removed to a depth of 2 feet below the ground surface.

Amanda Daniels

Hydrologic Sediment Control Measures

Analysis:

The application meets the State of Utah R645 requirements for Hydrologic Sediment Controls Measures.

The application states, in Appendix 7-12 that sediment controls will be provided at each drill site by installation of silt fence around the perimeter of each site. Figure 4 of Appendix 7-12 shows a typical installation guide for the silt fence material. Water bars will be installed at any break in the silt fences, like drill pad access points, to prevent any runoff from entering or leaving the drill pad. The application has been updated to state that silt fences will also be installed along the approximate 100 feet long access roads to pads PBH-1 and PBH-3. Figure 2 and Figure 3 give typical drill pad configurations for the truck-mounted drill rig pads and the helicopter accessed drill pads.

Amanda Daniels

Reclamation Plan

General Requirements

Analysis:

The application meets the State of Utah R645 General Reclamation Requirements.

The amendment satisfies the requirements of R645-301-542.200 because the application has been revised to describe reclamation plans for the proposed boreholes.

The narrative in Appendix 7-12 states that topsoil will be salvaged and stockpiled at PBH-1 and PBH-3. The PBH-2 drill pad will be significantly smaller and will be covered with a Brattice covering to protect the soils at that location. The topsoil stockpiles will be bermed to prevent off-site sediment transport (Appendix 7-12, p.10-11). This narrative concurs with correspondence between Matthew Efau and Tom Faddies stating that the 100' x 100' drill pads would have topsoil salvaged and stockpiled prior to drilling activities (Notice of Intention Letter to Thomas Faddies, January 21, 2019, PDF pgs. 67-68).

The reclamation plan on Appendix 7-12 Page 13 proposes to rip pads PBH-1 and PBH-3 prior to spreading the stockpiled topsoil. At PBH-2 the Brattice covering will be removed and the soils roughened. All three sites will be seeded with the final reclamation seed mix provided in Table 3.4/3.5 of the approved MRP.

Upon completion of drilling, the borings will be converted to water monitoring piezometers. Once no longer needed for monitoring, the wells will be plugged and abandoned with a cement or bentonite slurry to full depth in accordance with DOGM and DWRi regulations. The surface casing will be removed to a depth of 2 feet below the surface and a cement plug installed.

Appendix 7-12 Figure 2 has been amended to include the placement of a topsoil stockpile.

Justin Eatchel

Topsoil and Subsoil

Analysis:

The application does meets the State of Utah R645 requirements for Soils: Reclamation Plan.

The drilling disturbance at each site will last approximately 1.5 months (App. 7-12, Section R645-201-224, p. 5). All three drill holes will be retained as water monitoring wells. The drill pads will be reclaimed once piezometers are installed (Appendix 7-12 Section R645-202-240).

Equipment will be removed. Trash hauled away. Soils will be ripped and then stockpiled soil will be redistributed at PBH-1 and PBH-3. (The soils will be roughened at PBH-2). The final seed mix, listed on Tables 3.4 and Table 3.5 in the Lila Canyon MRP, will be broadcast. (Appendix 7-12 Section R645-202-240, p. 13).

At the end of the monitoring period, the surface casing will be removed to a depth of 2 feet below the surface and the wells will be plugged as shown in App. 7-12 Figure 5 (App. 7-12, p. 13-14).

The contents of the portable mud pits will be hauled to Pond #1 at the Lila Canyon Mine (App. 7-12, Section R645-301-742.410 thru 42.420, p. 15).

Priscilla Burton

Maps Bonded Area

Analysis:

The application meets the State of Utah R645 requirements for Bonded Area Maps.

The amendment satisfies the requirements of R645-301-820.113 because the amendment contains a map showing the areas where the proposed disturbance will be located. Since the proposed drill pads are adding 0.47 acres of new disturbance acreage to the permit area, the supplemental Plate 1-2a Permit Area Map has been submitted to show all disturbance within the permit area boundaries. The map shows the locations of proposed drill pads PBH-1 thru PBH-3, the location of the surface facilities, and the permit area boundaries. Only PBH-3 resides within the current permit area boundaries. The other holes PBH-1 and PBH-2 reside on SITLA lands outside of the permit area boundaries. The reclamation bond has been augmented to account for the reclamation of all three boreholes.

Table 1 Appendix 7-12 gives an acreage breakdown for all proposed drill pads. The dimensions of pads PBH-1 and PBH-3 are shown in Figures 1A and 1B respectively. The acreages for PBH-1 and PBH-3 reported in Table 1 are slightly higher than what is required to build the drill pads. The increased acreage accounts for the construction of access roads from Turtle Canyon Road to the drill pads.

Justin Eatchel

Bonding Determination of Amount

Analysis:

The application meets the State of Utah R645 requirements for Determination of Bond Amount.

The amendment satisfies the requirements of R645-301-830 because the bonding calculations have been revised to account for the reclamation of roads accessing drill pads PBH-1 and PBH-3 from Turtle Canyon Road. The bonding calculations have been increased to account for the topsoil distribution at PBH-1 and PBH-3 and overall topsoil roughening at all three pads, including access roads.

Overall, the amendment proposes to increase the bond by \$7,000 from \$2,319,000 to \$2,326,000. Since the posted bond amounts to \$2,335,000 there will be a bond surplus of \$9,000, and the Permittee is not required to post additional bond with this task.

Justin Eatchel

CHAPTER 1
LEGAL, FINANCIAL, COMPLIANCE,
AND RELATED INFORMATION

Emery County Coal Resources, Inc.
Lila Canyon Mine

~~October~~ December 2022

CHAPTER 1

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CHAPTER 1

LEGAL, FINANCIAL, COMPLIANCE, AND RELATED INFORMATION

1.1.0 Minimum Requirements

1.1.1 Introduction

This chapter provides information regarding ownership and control of the Lila Canyon Mine, located approximately 28 miles southeast of Price, Utah (see Plate 1-1). The compliance status of the operator at other locations is also provided herein.

The Lila Canyon Mine underwent a change in ownership on September 15, 2020. Therefore, this chapter also provides information pursuant to R645-030-300 of the Utah Administrative Code regarding the transfer of permit rights associated with that change in ownership. Documentation regarding the transfer of these permit rights from UtahAmerican Energy, Inc. (the former owner) to Emery County Coal Resources, Inc. (the current owner) is provided as part of the Asset Purchase Agreement provided in Appendix 1-1.

1.1.2 Identification of Interests

The applicant and operator of the Lila Canyon Mine is Emery County Coal Resources, Inc. (hereinafter referred to as “ECCR”). The corporate structure associated with ECCR is indicated in Figure 1-1. ECCR is wholly (100%) owned by ACNR Mining Corporation which itself is wholly owned by American Consolidated Natural Resources, Inc. which itself is wholly owned by Murray American Consolidated Natural Resources Holdings, Inc. which itself is wholly owned by ACNR Holdings, Inc. Invesco Oppenheimer Senior Floating Rate Fund, a publicly-traded fund, is the only entity that owns more than 10% of ACNR Holdings, Inc. No person owns 10% or more of Invesco Oppenheimer Senior Floating Rate Fund. ECCR is a Delaware corporation registered to do business in the State of Utah.

1.1.2.1 Business Entity

ECCR, ACNR Mining Corporation, American Consolidated Land Resources, Inc., Murray American Consolidated Natural Resources Holdings, Inc., and ACNR Holdings, Inc. are all corporations organized under the laws of the State of Delaware.

1.1.2.2 Applicant and Operator

The applicant and operator for this permit application is:

Emery County Coal Resources, Inc.
Lila Canyon Mine

Mining and Reclamation Plan
October 2022

Emery County Coal Resources, Inc.
46226 National Road
St. Clairsville, OH 43950
Facility Phone: (435) 888-4000
Headquarters Office Phone: (740) 338-3100

Payment of abandoned mine land reclamation fees, if any, will be the responsibility of the President of ECCR. Inquiries regarding the payment of this fee should be directed to this individual at the mailing address and phone number indicated above. The person currently occupying this position is indicated in Section 1.1.2.3.

1.1.2.3 Officers and Directors

The officers and directors of ECCR (FEIN 85-1504720), American Consolidated Natural Resources, Inc. (FEIN 85-1621594), and ACNR Mining Corporation (FEIN 85-1468710) are:

<u>Name</u>	<u>Title</u>	<u>Date position was assumed</u>
Robert D. Moore	Director	11 Sep 2020
James R. Turner, Jr.	President	11 Sep 2020
Anthony C. Vcelka, II	Treasurer	11 Sep 2020
F. Andrew Balcar	Secretary	11 Sep 2020
Guy Shelledy	Vice President, Engineering	11 Sep 2020

The officers and directors of Murray American Consolidated Natural Resources Holdings, Inc. (FEIN 85-1621749) are:

<u>Name</u>	<u>Title</u>	<u>Date position was assumed</u>
Robert D. Moore	Director, President, CEO	11 Sep 2020
Anthony C. Vcelka, II	Treasurer	11 Sep 2020
F. Andrew Balcar	Secretary	11 Sep 2020
Jeremy J. Harrison	Chief Financial Officer	11 Sep 2020
James R. Turner, Jr.	Chief Operating Officer	11 Sep 2020
Jason Adkins	Vice President, Human Resources	29 Jan 2021
Eric Grimm	Exec. Vice President, Operations	11 Sep 2020

The officers and directors of ACNR Holdings, Inc. (FEIN 85-1622371) are:

<u>Name</u>	<u>Title</u>	<u>Date position was assumed</u>
Robert D. Moore	Director, President, CEO	11 Sep 2020
Eugene I. Davis	Director	10-11-2020
Eugene I. Davis	Chairman of the Board	10-19-2010
Rafael Wallander	Director	10-19-2020
Robert E. Murray	Director	11 Sep 2020 End 10-16-20
Phillip J. Cavatoni	Director	11 Sep 2020
Richard D. Robinson	Director	11 Sep 2020
Jeffrey Ogden	Director	11 Sep 2020
Lawrence M. Clark, Jr.	Director	11 Sep 2020
Anthony C. Vcelka, II	Treasurer	11 Sep 2020
F. Andrew Balcar	Secretary	11 Sep 2020
Jeremy J. Harrison	Chief Financial Officer	11 Sep 2020
James R. Turner, Jr.	Chief Operating Officer	11 Sep 2020
Jason Adkins	Vice President, Human Resources	29 Jan 2021
Eric Grimm	Exec. Vice President, Operations	11 Sep 2020

All officers and directors are active in the companies listed above. Paul B. Piccolini served as Vice President of Human Resources for Murray American Consolidated Natural Resources Holdings, Inc. and ACNR Holdings, Inc. from September 11, 2020 until January 29, 2021. Coal mining and reclamation operations with which the above officers and directors have been involved within five years preceding the date of this application are detailed Appendix 1-2.

The addresses and phone numbers for the officers and director of ECCR, ACNR Mining Corporation, American Consolidated Natural Resources, Inc., Murray American Consolidated Natural Resources Holdings, Inc., and ACNR Holdings, Inc. are the same as those of the applicant. None of the officers or directors of ACNR Holdings, Inc. or any of its tiered subsidiaries have an ownership position in any of those companies.

Written correspondence to ECCR regarding the operations should be addressed to:

Jesse Candelaria, Resident Agent
Emery County Coal Resources, Inc.
P.O. Box 910
East Carbon, UT 84520-0910
Phone: (435) 888-4026

1.1.2.4 Coal Mining and Reclamation Operation Permit Applications

The following list represents permits issued to ECCR, along with applicable identification numbers of those permits:

<u>Permit</u>	<u>Issuing Authority</u>	<u>Status</u>
UPDES Permits (Minor Municipal Permit No., UT0026018, Biosolids Permit No. UTL0000000, Sedimentation Pond Permit No. UTG040024)	Utah Dept. Environmental Quality, Division of Water Quality	Approved
Certificate of Insurance and Business Authorization	Utah Industrial Development Commission	Approved
Mining and Reclamation Permit No. (C007013)	Utah Department of Natural Resources, Division of Oil, Gas and Mining	Update Pending

No other mining permits have been filed by the applicant or operator in any State in the United States.

1.1.2.5 Legal or Equitable Owner of the Surface and Mineral Properties to be Mined

A surface property ownership map of the permit and contiguous areas is presented as Plate 4-1. Contact information for the indicated surface owners and/or managers of record is as follows:

Josiah K Eardley
2433 S HWY 10
Route 1, Box 119
Price, Utah 84501

First Light Development, LLC
7815 Martino Circle
Naples, Florida 34112

Emery County Coal Resources, Inc.
46226 National Road
St. Clairsville, Ohio 43950

U.S. Bureau of Land Management
Utah State Office
324 South State
Salt Lake City, Utah 84111

Utah School and Institutional Trust Lands Administration (SITLA)
675 East 500 South Suite 500
Salt Lake City, Utah 84114-5703

College of Eastern Utah Foundation
451 East 400 North
Price, Utah 84501

The owners of subsurface minerals within the permit and contiguous areas are shown on Plate 5-4. Contact information for the indicated subsurface owners and/or managers of record is as follows:

Emery County Coal Resources, Inc.
46226 National Road
St. Clairsville, Ohio 43950

Bronco Coal Company
P.O. Box 217
Cleveland, Utah 84518

Utah School and Institutional Trust Lands Administration (SITLA)
675 East 500 South Suite 500
Salt Lake City, Utah 84114-5703

U.S. Bureau of Land Management
Utah State Office
324 South State
Salt Lake City, Utah 84111

College of Eastern Utah Foundation
451 East 400 North
Price, Utah 84501

No area within the lands to be affected by operations at the Lila Canyon Mine is under a real estate contract. ECCCR's right to enter the property and conduct operations thereon is not the subject of current litigation.

1.1.2.6 Owners of Record of Property Contiguous to Proposed Permit Area

In addition to some of the surface owners of record within the permit area, the following owner of surface lands is contiguous to the permit boundary:

William Marsing Livestock, Inc.
4330 E 8900 N
Price, Utah 84501

1.1.2.7 MSHA Numbers

The following MSHA identification numbers are associated with the Lila Canyon Mine:

Horse Canyon:	42-00100
Lila Canyon:	42-02241
Refuse Pile:	1211-UT-09-02241-01

1.1.2.8 Interest in Contiguous Lands

The applicant neither owns nor controls, directly or indirectly, a legal equitable interest in any lands contiguous to the permit area.

1.1.3 Violation Information

Neither ECCR nor any of its affiliates having any interest, either legal or equitable, in the Lila Canyon Mine site have had a State or Federal mining permit suspended or revoked in the five years preceding the date of submission of this application, or have forfeited a performance bond or similar security deposited in lieu of bond revoked. There are no outstanding Notices of Non-compliance associated with mining, air, or water permits issued to ECCR or related entities. Within the past three years, ECCR has had no violation notices or cessation orders pertaining to air or water environmental protection laws, rules, or regulations promulgated by United States or individual State governments in connection with any coal mining and reclamation operation.

1.1.4 Right-of-Entry Information

A copy of the purchase agreement conveying the assets of certain subsidiaries of Murray Energy Holdings, Inc to American Consolidated Natural Resources, Inc. (also known as the Stalking Horse Agreement) is provided in Appendix 1-1. This agreement included right-of-entry to the assets which are now held by ECCR. The Agreement was approved by Order dated August 31, 2020 issued by the U.S. Bankruptcy Court for the Southern District of Ohio in re Murray Energy Holdings Co. et al., Case No. 19-56885. A copy of the Assignment to ECCR from Murray Energy Holdings Co., dated as of September 16, 2020 and recorded on September 24, 2020 as Entry No. 423463 in the official records of Emery County, Utah, is provided in Appendix 1-8. Assignments of Federal and State leases allowing ECCR right-of-entry to Lila Canyon Mine resources are provided in Appendix 1-9 and Appendix 1-10, respectively.

Correspondence from the U.S. Bureau of Land Management is provided in Appendix 1-6 and Appendix 1-7 regarding the right of entry to the Federal lease areas associated with the Lila Canyon Mine. The Lila Canyon Mine is located on lands for which ECCR has a right of entry. The disturbed area associated with the Lila Canyon Mine is delineated on Plate 1-2. ECCR currently holds approximately 8,224.86 acres of State and Federal coal leases, rights-of-way, and surface area access rights as indicated on Plates 4-1 (Surface Ownership) and 5-4 (Coal Ownership) and further described in Table 1-1. An additional lease (totaling 4,191.46 acres) is pending, as indicated in Table 1-1.

TABLE 1-1
Summary of Surface and Subsurface Entry Rights
Associated with the Lila Canyon Mine

Lease Type	Original Effective Date	Lease Number	Description	Rights Claimed
Federal Lease	19 Jun 1946	UTSL-066145	1404.20 Acres; Twp. 16S/Rng. 14E Sec. 3: NE $\frac{1}{4}$ SW $\frac{1}{4}$,SE $\frac{1}{4}$ Sec. 3: Lots. 1-3,7-1 I Sec. 10: E $\frac{1}{2}$ Sec. 11: W $\frac{1}{2}$ Sec. 14: NW $\frac{1}{4}$ Sec. 15: N $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$	Underground mining and surface access
Federal Lease	1 Dec 1963	UTU-0126947 Tract 1	1059.81 Acres; Twp. 16S/Rng. 14E Sec. 13: E $\frac{1}{2}$ Sec. 24: E $\frac{1}{2}$ Sec. 25: N $\frac{1}{2}$ NE $\frac{1}{4}$,SE $\frac{1}{4}$ NE $\frac{1}{4}$ Twp. 16S/Rng. 15E Sec. 19: Lots 3-4 Sec. 19: SE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 30: Lots 1, 2 Sec. 30: E $\frac{1}{2}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$	Underground mining and surface access
Federal Lease	1 March 2021	UTU-0126947 Tract 2	954.80 Acres; Twp. 16S/Rng. 15E Sec. 18: S $\frac{1}{2}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 19: Lot 2, W $\frac{1}{2}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ NW $\frac{1}{4}$, W $\frac{1}{2}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$, W $\frac{1}{2}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 29: S $\frac{1}{2}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$ NW $\frac{1}{4}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$, W $\frac{1}{2}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$, SW $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ Sec. 30: SE $\frac{1}{4}$, N $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$	Underground mining and surface access
Federal Lease	31 Dec 1947	UTSL-066490 Tract 1	2440.00 Acres; Twp. 16S/Rng. 14E Sec. 11: E $\frac{1}{2}$ Sec. 12: W $\frac{1}{2}$ Sec. 13: W $\frac{1}{2}$ Sec. 14: E $\frac{1}{2}$,SW $\frac{1}{4}$ Sec. 15: E $\frac{1}{2}$ SE $\frac{1}{4}$ Sec. 22: NE $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 23: N $\frac{1}{2}$,E $\frac{1}{2}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$ Sec. 24: NW $\frac{1}{4}$,W $\frac{1}{2}$ SW $\frac{1}{4}$ Sec. 26: N $\frac{1}{2}$ NE $\frac{1}{4}$	Underground mining and surface access

Lease Type	Original Effective Date	Lease Number	Description	Rights Claimed
Federal Lease	1 June 2011	UTSL-066490 Tract 2	5.00 Acres; Twp. 16S/Rng. 14E Sec. 15: SE ¹ / ₄ SE ¹ / ₄ NW ¹ / ₄ SE ¹ / ₄ , NE ¹ / ₄ NE ¹ / ₄ SW ¹ / ₄ SE ¹ / ₄	Underground mining and surface access
Federal Lease	1 Feb 1955	UTU-014217	40.00 Acres; Twp. 16S/Rng. 14E Sec. 25: SW ¹ / ₄ NE ¹ / ₄	Underground mining and surface access
Federal Lease	1 Feb 1955	UTU-014218 Tract 1	320.00 Acres; Twp. 16S/Rng. 14E Sec. 12: E ¹ / ₂	Underground mining and surface access
Federal Lease	1 March 2021	UTU-014218 Tract 2	317.84 Acres; Twp. 16S/Rng. 15E Sec. 7: Lot 4 Sec. 18: Lots 1 – 4, W ¹ / ₂ NE ¹ / ₄ NW ¹ / ₄ , W ¹ / ₂ SE ¹ / ₄ NW ¹ / ₄ , SE ¹ / ₄ SE ¹ / ₄ NW ¹ / ₄ , NE ¹ / ₄ SW ¹ / ₄ , N ¹ / ₂ SE ¹ / ₄ SW ¹ / ₄ Sec. 19: Lot 1	Underground mining and surface access
Federal Lease	1 Apr 1950	UTSL-069291	280.00 Acres; Twp. 16S/Rng. 14E Sec. 24: E ¹ / ₂ SW Sec.25: NW ¹ / ₄ Sec. 26: SE ¹ / ₄ NE ¹ / ₄	Underground mining and surface access
Federal Lease	N/A (Appl. Date 1 Mar 2002)	UTU-80043 Williams Draw LBA (Pending)	4191.46 Acres Twp. 16S/Rng. 14E Sec. 25: S ¹ / ₂ Sec. 26: SE ¹ / ₄ Sec. 35: NE ¹ / ₄ Twp. 17S/Rng. 14E Sec. 1: lots 1-3, 6-8, S ¹ / ₂ NE ¹ / ₄ , SE ¹ / ₄ NW ¹ / ₄ , E ¹ / ₂ SW ¹ / ₄ , SE ¹ / ₄ Sec. 12: NE ¹ / ₄ , E ¹ / ₂ NW ¹ / ₄ , NE ¹ / ₄ SW ¹ / ₄ , N ¹ / ₂ SE ¹ / ₄ Twp. 16S/Rng. 15E Sec. 30: Lots 3, 4, E ¹ / ₂ SW ¹ / ₄ Sec. 31: All Twp. 17S/Rng. 15E Sec. 5: Lots 3, 4, SW ¹ / ₄ , S ¹ / ₂ NW ¹ / ₄ Sec. 6: All Sec. 7: All Sec. 8: W ¹ / ₂	Underground mining and surface access
State Lease	1 Oct 2018	ML-53812-OBA	1280.00 Acres; Twp. 16S/Rng. 14E Sec. 36: ALL Twp. 16/Rng. 15E Sec. 32: ALL	Underground mining and surface access
Federal ROW	27 Jul 2001	UTU-77122 ROW	40.00 Acres Twp. 16S/R. 14 E Sec. 15: NW ¹ / ₄ SE ¹ / ₄ , S ¹ / ₂ SE ¹ / ₄ , E ¹ / ₂ SW ¹ / ₄	Surface access (Surface Facilities)
Federal ROW	7 Apr 2010	UTU-087514 ROW	54.60 Acres Twp. 17S/R.13E Sec. 1: S ¹ / ₂ SE ¹ / ₄	Surface access (138kV Power Line)

Lease Type	Original Effective Date	Lease Number	Description	Rights Claimed
			Sec. 12: W $\frac{1}{2}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ SW $\frac{1}{4}$ Twp. 16S/R.14E Sec. 15: S $\frac{1}{2}$ SW $\frac{1}{4}$ Sec. 21: N $\frac{1}{2}$ NE $\frac{1}{4}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 28: W $\frac{1}{2}$ W $\frac{1}{2}$ Sec. 29 SE $\frac{1}{4}$ SE $\frac{1}{4}$ Twp. 17S/R.14E Sec. 6: SE $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 6: Lots 2, 3, 5, 6, 7	
Federal ROW	4 Feb 2011	UTU-088259 ROW	0.413 Acre Twp. 17S/Rng. 13E Sec. 12: SE $\frac{1}{4}$ SW $\frac{1}{4}$	Surface access (Transrupter Station)
Federal ROW	7 Apr 2010	UTU-087862 ROW	3.00 Acres Twp. 17S/R. 13E Sec. 12: SE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 13: W $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ NW $\frac{1}{4}$ Twp. 17S/R. 14E Sec. 18: Lots 3, 4 Sec. 19: Lots 1, 2 Sec. 19: SE $\frac{1}{4}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$	Surface access (Transrupter Station Road)
Federal ROW	25 Oct 2016	UTU-091789 ROW	2.50 Acres Twp. 16S/R. 14E Sec. 15: SE $\frac{1}{4}$ SW $\frac{1}{4}$	Surface access (Roadway and Pond #1 Dam)
Federal ROW	15 Sep 2010	UTU-088125 ROW	4.30 Acres Twp. 16S/R. 14E Sec. 15: S $\frac{1}{2}$ SW $\frac{1}{4}$ Sec. 21: N $\frac{1}{2}$ NE, $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 28: W $\frac{1}{2}$ W $\frac{1}{2}$ Sec. 29: SE $\frac{1}{4}$ SE $\frac{1}{4}$ Twp. 17S/R. 14E Sec. 6: SW $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 6: Lots 2,3,5,6,7	Surface access (Overhead Fiber Optic Line)
Federal ROW	30 Nov 2021	UTU-095176 ROW	18.40 Acres Twp. 16S/Rng.14E; Portions of: Sec. 3: SE $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$ Sec. 10: SW $\frac{1}{4}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$ Sec. 14: SW $\frac{1}{4}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 23: N $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 24: NW $\frac{1}{4}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 25: W $\frac{1}{2}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$	Surface access
<u>Federal ROW</u>	<u>14 Jul 2022</u>	<u>UTU-96032</u>	<u>2.397 Acres</u> <u>Twp. 16 S/Rng. 15E; Portions of:</u> <u>Sec 31: NE$\frac{1}{4}$NE $\frac{1}{4}$, S$\frac{1}{2}$NE $\frac{1}{4}$, NE$\frac{1}{4}$SW $\frac{1}{4}$, NW$\frac{1}{4}$SE $\frac{1}{4}$</u>	<u>Surface access with temporary surface water line</u>

The total permit area associated with the Lila Canyon Mine is 4,664.~~32~~57 acres as shown on Plate 1-1. The permit area is described as follows:

T16S R14E

Section 10: Portions of SE1/4
Section 11: E1/2 and portions of W1/2
Section 12: All
Section 13: All
Section 14: All
Section 15: Portions of E1/2 and portions of SW1/4
Section 22: NE1/4 NE1/4
Section 23: N1/2, SE1/4, and E1/2 SW1/4
Section 24: All
Section 25: N1/2
Section 26: E1/2 NE1/4
Section 36: Portion of NE1/4

T16S R15E

Section 19: W1/2 SW1/4 and SE1/4 SW1/4
Section 25: Portion of NW1/4
Section 30: NW1/4 and SW1/4 NE1/4

1.1.5 Status of Unsuitability Claims

The permit area is not located within an area that has been designated as unsuitable for mining and reclamation operations, nor is it within an area under study for designation in an administrative proceeding under R645-103-300, R645-103-400, or 30 CFR Part 769.

ECCR will not conduct mining operations within 300 feet of a currently occupied dwelling but will conduct mining or mining-related activities within 100 feet of a public road. A letter from Emery County providing permission to construct facilities and operate coal mining activities within 100 feet of a public road is provided in Appendix 1-4.

1.1.6 Permit Term

It is anticipated that this permit will be for a term of 5 years. Operations for recovery of coal from the Lila Canyon Mine are determined by economic and working conditions. The timing of termination of mining is, therefore, unknown. The anticipated total acreage to be affected during the permit term is ~~37.49~~43.07 acres.

1.1.7 Insurance and Proof of Publication

A Certificate of Insurance issued to ECCR is provided in Appendix 1-5. The following announcement will be published in the ETV News, a newspaper of general circulation in Carbon and Emery Counties, following notification that the Division had determined that this permit application is administratively complete. This announcement will be published at least once a week for four consecutive weeks. Proof of publication of this announcement will be provided in Appendix 1-5.

NOTICE OF PERMIT APPLICATION **EMERY COUNTY COAL RESOURCES, INC.**

Notice is hereby given that Emery County Coal Resources, Inc., 46226 National Road St. Clairsville, OH 43950 has submitted an application to the Utah Division of Oil, Gas and Mining (the "Division") to recover coal from the Lila Canyon Mine located approximately 28 miles southeast of Price, Utah. The disturbed area for this facility is located in Section 15, Township 16 S., Range 14 E., SLBM and contains approximately 37.49 acres.

The Division has determined that this application is administratively complete. A copy of the permit application is available for public inspection at the following location:

Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Salt Lake City, UT 84114-5801

Written comments, objections, or a request for an informal conference regarding the above application should be directed to the Division at the above address within the next 30 days.

1.1.8 Filing Fee

The permit filing fee was paid upon submittal of the application.

1.2.0 Permit Application Format and Contents

The permit application contains clear, concise, current information, in the format of the DOGM regulations.

1.3.0 Reporting of Technical Data

All technical data submitted in the permit application is accompanied by the names of persons or organizations that collected and analyzed the data. The technical data also contains the dates of collection and analysis of the data, and descriptions of the method used to collect and analyze data, as indicated in subsequent sections of this application. Professionals qualified in the subject planned or directed the technical analyses.

1.4.0 Maps and Plans

The maps submitted in this permit application comply with the format required by the regulations. The permit area boundary shown on the maps submitted in this permit application is an approximate but adequate representation of that boundary.

1.5.0 Completeness

The Applicant believes the information in this application to be complete and correct.

APPENDIX 7-12

NOTICE OF INTENT TO CONDUCT MINOR COAL EXPLORATION, PBH-1, -2, AND -3

EMERY COUNTY COAL RESOURCES, Inc.

Lila Canyon Mine

WILLIAMS DRAW LEASE AREA

~~October-December~~ 2022

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Exploration Application

APPENDIX 7-12

NOTICE OF INTENT TO CONDUCT MINOR COAL EXPLORATION, PBH-1, -2, AND -3

INTRODUCTION

Emery County Coal Resources (ECCR) is submitting this Notice of Intent to Conduct Minor Exploration to the Utah Division of Oil, Gas, and Mining (UDOGM) in order to obtain approval to conduct coal exploration, installation of water monitoring piezometers, and reclamation activities in the Summer and Fall of 2022 at the Lila Canyon Mine. The type of exploration proposed is rotary and wireline core drilling. A total of three (3) holes will be drilled - one on Bureau of Land Management (BLM) land and two on State of Utah (SITLA) land. The surface owners also own the mineral rights where the exploration holes will be drilled. This exploration work is being conducted in conjunction with a Federal on-lease exploration plan submitted to the Bureau of Land Management (BLM), and a permit from the State of Utah School and Institutional Trust Lands Administration (SITLA). This application is formatted to address the specific requirements of R645-201 through 203 and other UDOGM rules, as applicable. Other related information is given in Attachments A through D of this document.

R645-201-210 – MINOR COAL EXPLORATION

Since less than 250 tons of coal will be removed by the proposed action, the proposed exploration plan qualifies as minor exploration as defined in R645-201-210.

R645-201-221 – CONTACT INFORMATION

The name, address and telephone number of the applicant are:

Lila Canyon Mine
c/o Emery County Coal Resources, Inc.
794 North 'C' Canyon Rd, P.O. Box 910
East Carbon City, Utah 84520
Phone: 435-888-4000

The applicant is the same as the operator of the proposed exploration plan. Correspondence regarding this exploration plan should be addressed to:

Jesse Candelaria, Resident Agent
Lila Canyon Mine
c/o Emery County Coal Resources, Inc.
794 North 'C' Canyon Rd, P.O. Box 910
East Carbon City, Utah 84520
Phone: 435-888-4000
Email: jessecandelaria@acnrinc.com

R645-201-222 – APPLICANT'S REPRESENTATIVE

The name, address, and telephone number of the representative of the applicant who will be present during and be responsible for conducting the exploration is:

Jesse Candelaria, Resident Agent
Lila Canyon Mine
C/O Emery County Coal Resources, Inc.
794 North 'C' Canyon Rd, P.O. Box 910
East Carbon City, Utah 84520
Phone: 435-888-4000
Email: jesseccandelaria@acnrinc.com

At times a consulting engineer or geologist may act as representative of the applicant. The UDOGM and BLM will be notified of the consultant's name and address, if one is used.

R645-201-223 – EXPLORATION AREA

The exploration area is generally located in east-central Utah, in Emery County, approximately three miles south of East Carbon City, on the plateau above the Book Cliffs near Williams Draw (Plate 1). The legal descriptions for the boreholes on SITLA land are as follows:

PBH-1 – T 16 S, R. 14 E, Section 36, NE1/4 (SITLA Lease)

The PBH-1 pad will be located near but more than 100 feet from the existing Turtle Canyon Road as shown on Figure 1A. The only disturbance within 100 feet of the Turtle Canyon Road will be an unimproved access road from the existing road to the drill pad.

PBH-2 – T 16 S, R 15 E, Section 32, NW1/4 (SITLA Lease)

The PBH-2 pad will be located near the Left Fork of the Williams Draw drainage channel. Access to the pad will be via helicopter for the drill rig and major supplies and via foot traffic or ATV for manpower and minor supplies.

The surface lands and underground coal reserves in the locations of boreholes PBH-1 and PBH-2 are owned by SITLA, and leased to ECCR. A copy of this lease, the access right-of-way across Federal ground, and ECCR's correspondence notifying SITLA of this exploration activity are included in Attachment A.

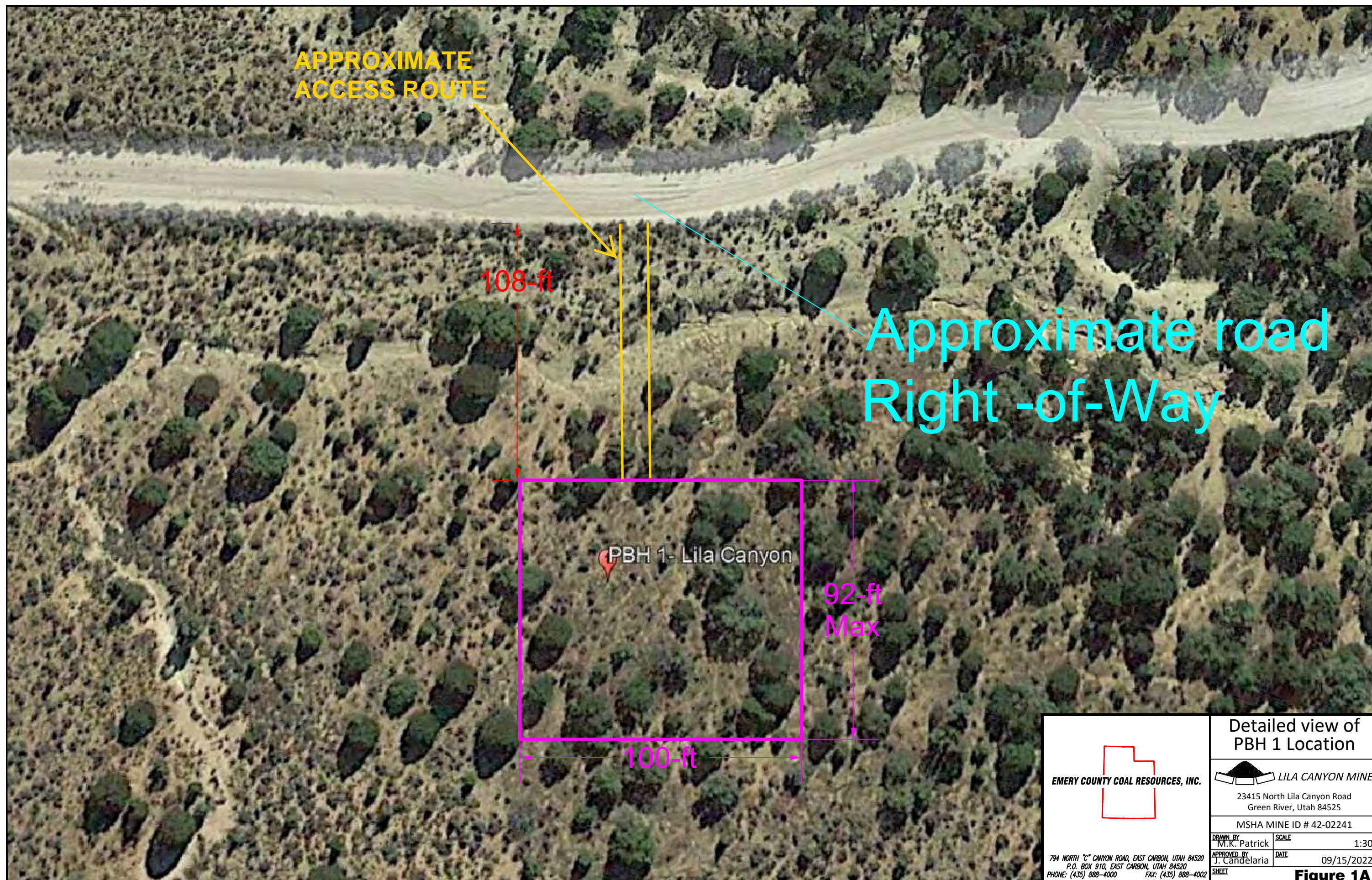
Borehole PBH-3 will be located on Federal land. The legal description for the borehole is as follows:

PBH-3 - T 16 S, R 14 E, Section 25, NW1/4 (Federal Lease)

The PBH-3 pad will be located near but more than 100 feet from the existing Turtle Canyon Road as shown on Figure 1B. The only disturbance within 100 feet of the Turtle Canyon Road will be an unimproved access road from the existing road to the drill pad.

The documents allowing minor coal exploration within the boundaries of the Federal mineral lease associated with PBH-3 (Lease UTSL-069291) are presented in Chapter 1 of the Lila Canyon Mining and Reclamation Plan. Plate 1 shows the location of the proposed boreholes.

Access to the drill site project area will be via the existing Turtle Canyon Road, from the end of County Road 124, near the old Horse Canyon mine, to the location where the Williams Draw





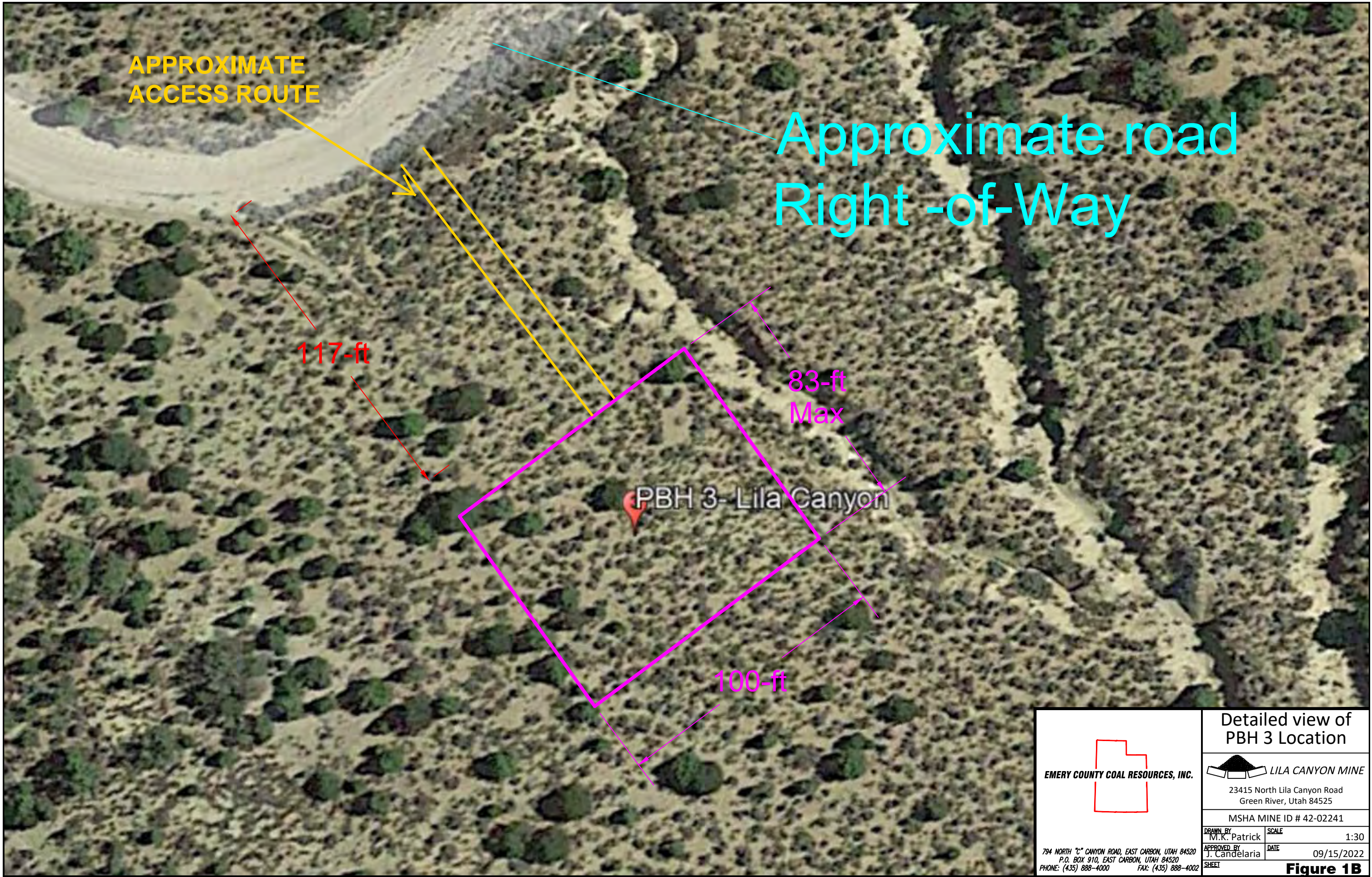
 EMERY COUNTY COAL RESOURCES, INC.	Detailed view of PBH 1 Location	
	 LILA CANYON MINE	
	23415 North Lila Canyon Road Green River, Utah 84525	
	MSHA MINE ID # 42-02241	
	<small>DRAWN BY</small> M.K. Patrick	<small>SCALE</small> 1:30
<small>APPROVED BY</small> J. Candelaria	<small>DATE</small> 09/15/2022	<small>SHEET</small>
<small>794 NORTH "C" CANYON ROAD, EAST CARBON, UTAH 84520 P.O. BOX 910, EAST CARBON, UTAH 84520 PHONE: (435) 888-4000 FAX: (435) 888-4002</small>		

Figure 1A



EMERY COUNTY COAL RESOURCES, INC.



Detailed view of
PBH 3 Location



LILA CANYON MINE

23415 North Lila Canyon Road
Green River, Utah 84525

MSHA MINE ID # 42-02241

DRAWN BY

M.K. Patrick

SCALE

1:30

APPROVED BY

J. Candelaria

DATE

09/15/2022

SHEET

Figure 1B

794 NORTH "C" CANYON ROAD, EAST CARBON, UTAH 84520
P.O. BOX 910, EAST CARBON, UTAH 84520
PHONE: (435) 888-4000 FAX: (435) 888-4002

drainage crosses the roadway. Road access improvements will not be needed for the main access road (Turtle Canyon Road), assuming that the BLM maintains the road in a usable manner.

Access to boring sites PBH-1 and PBH-3 will be immediately off the Turtle Canyon Road, so no improvement or maintenance is required.

Access to PBH-2 will be via the Turtle Canyon Road to the PBH-1 drill pad, where equipment and supplies will be stored. Additional access will be along the Turtle Canyon Road to the Williams Draw drainage channel crossing, then up the Williams Draw channel bottom to the point no longer accessible by vehicle and then by foot or ATV to the drill site. The wash bottom is about 20 to 25 feet wide with a sand bottom that was used in the past for access for prior exploration activity (see Figure 1C). It has subsequently been used by a local rancher to install and maintain a stock-water tank in the Right Fork of William Draw. Due to site access limitations, the drilling equipment and supplies will be conveyed into the PBH-2 drill site using helicopter.

R645-201-224 – PERIOD OF INTENDED EXPLORATION

A timetable for exploration related activities is given below. It is anticipated that exploration activities will occur during the ~~fall~~-winter of 2022. This schedule is an estimation only, and may have to be altered depending on such factors as contractor availability, drilling conditions, weather, water availability, etc.

Week 1:	Prepare drill pads as needed
Week 2:	Move drill and support equipment to area
Weeks 3-6:	Drill holes and complete monitor wells
Week 6:	Reclaim drill pads



Figure 1C - Little Park Wash Drainage Channel

R645-201-225 – EXPLORATION METHOD

The general method to be followed during conventional rotary drill hole exploration, reclamation, and abandonment procedure is:

- 1) Repair the existing roads where needed, and prepare the drill sites by cutting down any woody growth; then strip topsoil from the locations of PBH-1 and PBH-3 (using a dozer or other appropriate means). A mixture of topsoil and subsoil will be salvaged to a depth of 6 inches. At the PBH-2 drill site, placing a barrier membrane, such as Brattice cloth, will be placed on the pad surface. The; then mobilize drill equipment will then be mobilized onto the pads, atop the barrier membrane (Brattice cloth). No grading of the drill sites s will occur is anticipated other than stripping topsoil at PBH-1 and PBH-3.
- 2) Rotary drill, core, log and complete the exploration drill holes as water monitor wells,
- 3) Reclaim the drill sites, leaving only the surface casing exposed.

No blasting will be done for road building or repair.

Estimated depth and other drill hole information is given in Table 1. ~~Disturbed areas will include drill pads.~~ The total disturbed area acreage is estimated at 0.47 acres, as shown in Table 1.

Table 1 – Drill Site Location and Depth

Drill Site	Location	Est. Depth (ft)	Disturbed Area (acres)
PBH-1	T 16 S, R 14 E, Section 36	975	0.24
PBH-2	T 16 S, R 15 E, Section 32	1730	0.01
PBH-3	T 16 S, R 14 E, Section 25	1040	0.22
		TOTAL	0.47 acres

There are no occupied dwellings or pipelines located in the exploration area. No trenches will be dug, no structures will be constructed, and debris will not be disposed of in the exploration area. The permittee, or his representative, will have a copy of this Notice of Intention to Conduct Minor Coal Exploration while in the exploration area available for review by an authorized representative of UDOGM upon request.

Conventional truck- or track-mounted drilling will be accomplished at PBH-1 and PBH-3 utilizing rotary and continuous core drilling techniques. Drilling will involve one rotary/core rig capable of drilling to the anticipated depths, with necessary support equipment such as supply trailers, portable water tanks, fuel tanks, etc.

PBH-2 will be drilled using a smaller rig that will be helicoptered to site. Drilling supplies and materials that cannot be hand-carried will be also helicoptered in.

The drilling procedure will be to continuously core from the surface down to total depth. Drilling fluid will mainly be water with some foam, polymer, and/or mud as needed to maintain hole integrity. Water for drilling and dust suppression will be obtained from the Lila Mine site hydrant and/or other permitted sources. This water will be trucked directly to locations PBH-1 and PBH-3. Water will be delivered to PBH-2 via a temporary flexible hose laid in the access channel, as noted on Plate 1. It is anticipated that two water trucks will be used on a rotating basis to ensure that water supply is maintained.

No significant coal volume will be removed during exploration activities. Cores will nominally be 2 inches in diameter. Given the approximate projected thickness of the coal seam, averaging 8.2 feet, less than 25 lbs. of coal will be removed from each bore hole.

PBH-1 and PBH-3 drill sites will be approximately 100 ft x 100 ft in size. These dimensions ~~will be have been~~ modified as needed to keep the disturbed area within the bounds of the archaeological survey summarized in Attachment B, as noted on Figures 1A and 1B. Figure 2 shows the typical layout of a truck-mounted drill rig site. The ~~temporary drill pad will use an existing wide spot on an established dirt road for this project. Minimal to no only~~ earth excavation ~~that~~ will be necessary for either drill site will be stripping of topsoil.

PBH-2 drill site will occupy an area of approximately 35 ft x 80 ft. The drill pad layout will be similar to that shown on Figure 3. No topsoil will be stripped at this location.

The primary disturbance on the proposed drill sites will be grubbing of the larger shrubs and stripping of topsoil at PBH-1 and PBH-3. ~~Then~~ Rather than stripping topsoil at the remote site of PBH-2, ~~this~~ drill site will be ~~lined~~ protected using a non-permeable membrane, such as Brattice cloth. Minor leveling with shovels may be needed, and small shrubbery will be removed if necessary. No formal pad will be constructed at PBH-2. Cuttings from the boreholes will be contained, and any drill fluids will be retained in a portable mud pit. The mud pits will not be allowed to overflow. The exterior of the pads will be lined with either silt fencing or with a berm to contain or treat any runoff from the pad. Silt fencing will also be installed along the edges of the access routes from the Turtle Canyon Road to the PBH-1 and PBH-3 drill sites.

No in-ground mud pits will be constructed for this project. Portable mud tanks will be utilized. Cuttings will be stored and hauled away to the Lila Canyon Mine waste rock site by truck for disposal upon the completion of drilling at each site. No hazardous material or trash will be disposed of at the drill sites.

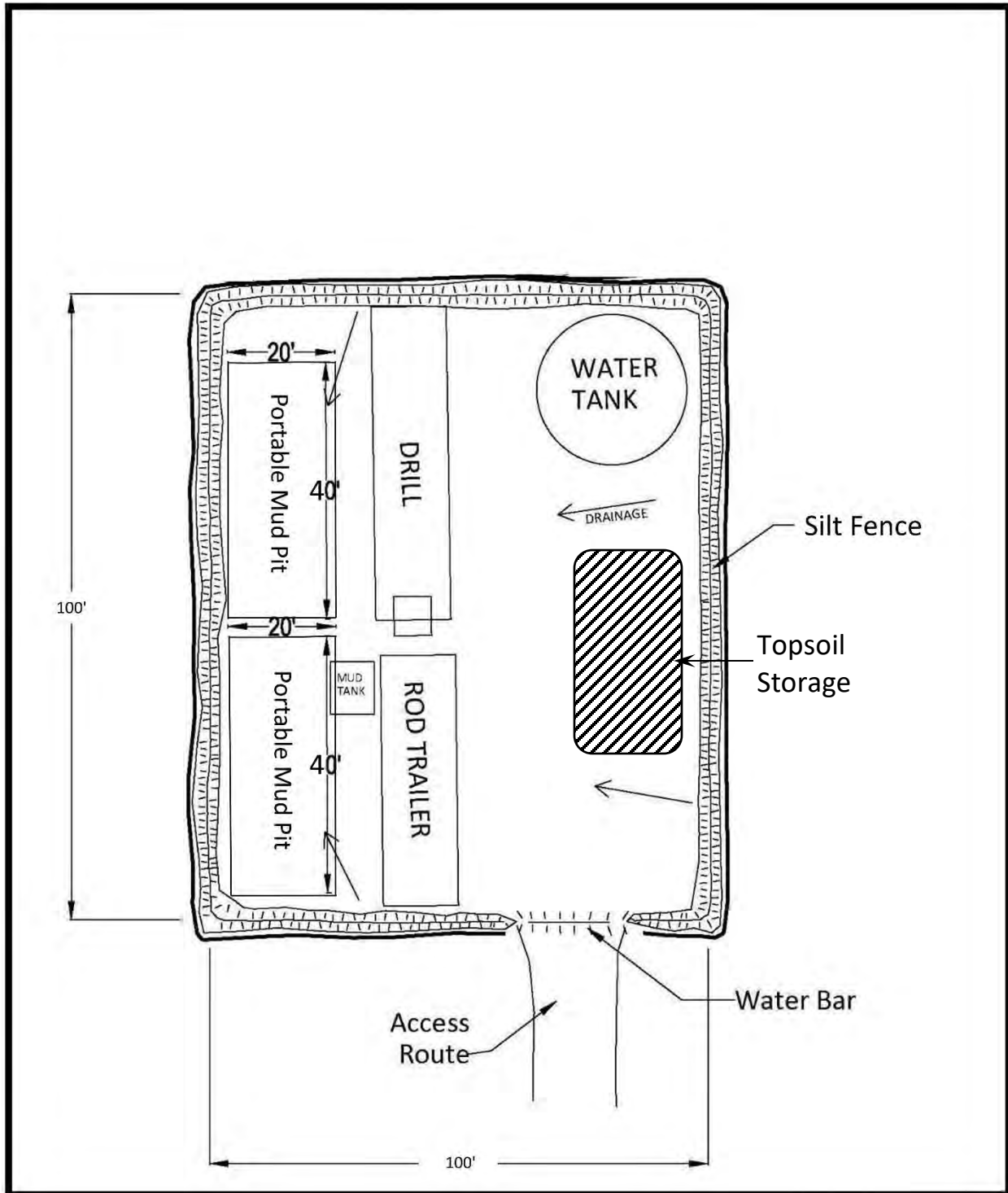
Any small leaks of petroleum products will be immediately cleaned-up with absorbent pads, and any contaminated soil will be removed from the drill site. All contaminated pads, affected soil, and rags will be hauled off the site and disposed of in an approved waste site, such as Republic Services (formerly ECDC) located in East Carbon, Utah.

No blasting will be done when constructing the drill site. The drill sites have been selected such that no trees will be removed during construction of the drill sites.

No new or temporary access roads will be constructed for this project.

Water supply for drilling will be hauled directly to the PBH-1 and PBH-3 sites via water truck. Water will be transferred to on-site storage tanks for use by the drill rig.

For PBH-2 site, it will not be possible to access the drill site with the water trucks. To provide the water to this site, a flexible, lay-flat PVC waterline will be laid along the bottom of the Williams Draw channel and connected to a water tank and pump station set up on State lands along the bottom of Williams Draw. The water truck will access this site and transfer water to the water tank. On an as needed basis, water will be pumped via the waterline to the drill site where the water will be stored in water tanks for use in the drilling.



Location of the equipment, soil piles, mud pits, and access road may vary depending on local conditions. Disturbed area boundaries will be maintained within the areas evaluated for cultural resources (see Attachment B).

Figure 2 – Proposed Typical Conventional Drill Site Layout

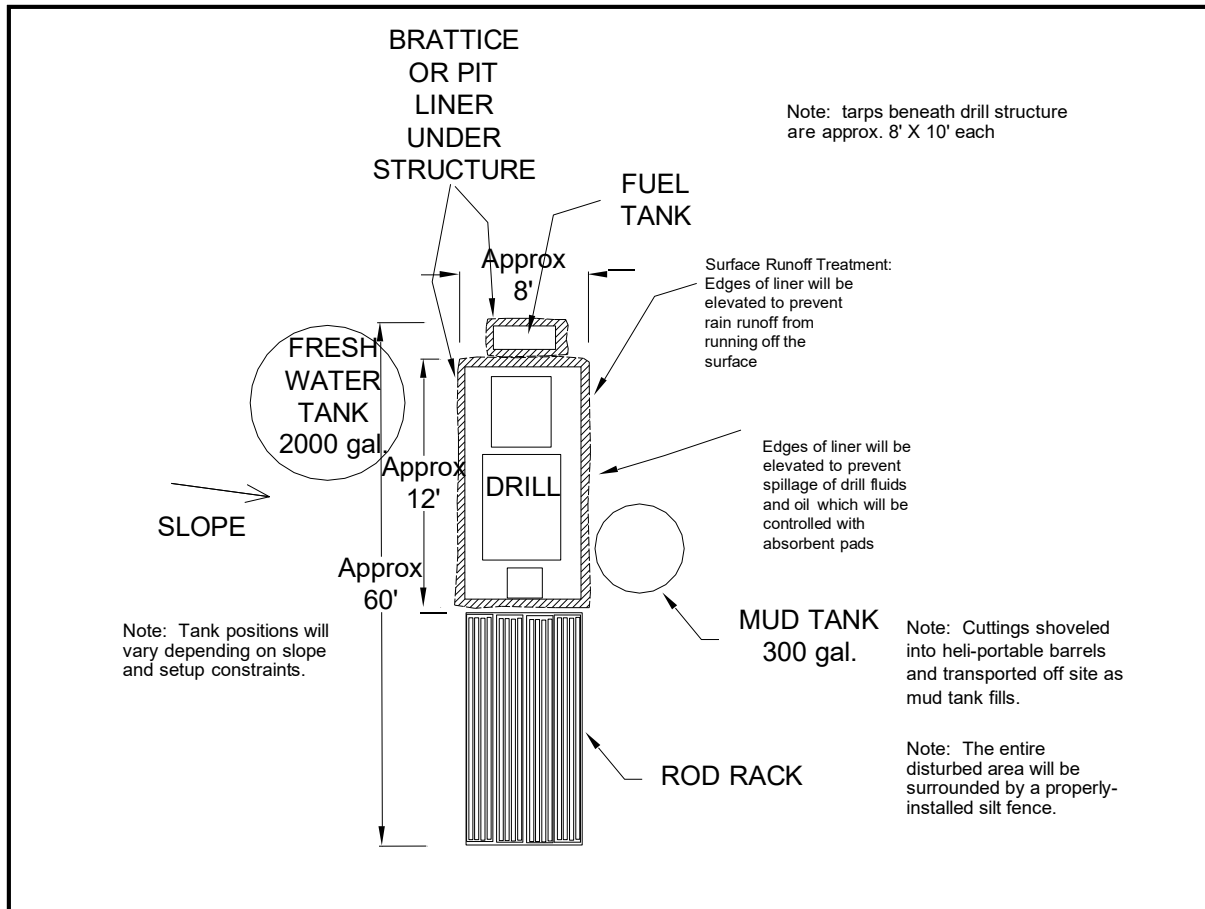


Figure 3 – Typical Helicopter Drill Site Layout

As indicated above, topsoil will be stripped from the PBH-1 and PBH-3 drill sites prior to rig access. No topsoil will be ~~disturbed~~stripped from the PBH-2 drill site. Reclamation will include restoring the Turtle Canyon Road to its previous grade, if any regrading is necessary to access the drill sites. No damage to public or private property will occur.

There will be no diversion of overland flows.

R645-202-231 – HABITAT DESCRIPTION

The proposed exploration area is located in the Little Park Wash area (Plate 1). The area lies on the plateau above the Book Cliffs. Little Park Wash drains southward to the Price River. Topography in the area is mountainous with narrow north-south trending ridges and deep canyons. Elevation ranges from approximately 5900 ft. to 8250 ft.

The exploration area is underlain by sedimentary rocks of late Cretaceous age. Several formations crop out in the area, including the coal-bearing Blackhawk Formation and the overlying Price River Formation, Green River and North Horn Formations, and the Colton Formation. In the area, the minable coal seam in the Sunnyside seam.

Strata in the area dip uniformly from 6 to 8 degrees east-northeast. Several faults have been identified in the area. Rock types anticipated to be encountered during drilling are predominantly sandstones, siltstones, shale, and coal.

Cultural - A cultural resource survey has been conducted for the area on and near the drillhole sites. A copy of the abstract of the cultural resource survey is included in Attachment B. The survey has been provided to DOGM for inclusion in the confidential file. There are no known cultural or archeological resources located within the proposed exploration boring sites or along the proposed access roads.

No districts, sites, buildings, structures, or objects listed on or eligible for listing on the National Register of Historic Places will be impacted by the proposed drilling operations.

Biology - A review of biological conditions within at and near the proposed drill sites was performed for ECCR by SWCA Environmental Consultants. This review included a desktop analysis, consultation with BLM and UDWR biologists, and field surveys. A copy of the resulting report is provided in Attachment C. As indicated therein, "no suitable habitat existed for the list of potential species with the survey area."

Vegetation in the exploration area occurs in the sagebrush/grass and pinyon/juniper plant communities. All surface vegetation will be removed from the PBH-1 and PBH-3 drill sites when topsoil is removed. No significant disturbance to site vegetation is anticipated at the PBH-2 drill site as the affected areas will be temporarily protected by the Brattice cloth covering for the short drilling period.

ECCR conducts raptor surveys on an annual basis. Results of these surveys are provided annually to UDOGM. Based on the latest survey, there are no raptor nest sites within ½ mile of the proposed drill sites.

R645-202-232 - ROADS

As previously indicated, access to the PBH-1 and PBH-3 drill sites will be via a short, temporary, two-track route off of the existing Turtle Canyon Road. No temporary drilling access road construction is planned for this project the PBH-2 drill site, as previously described.

R645-202-233 – TOPSOIL HANDLING

Information downloaded from the NRCS Web Survey¹ indicates that the PBH-1 and PBH-3 drill sites are located on soils identified as Lilapoint fine sandy loam, 1 to 5 percent slopes soils. Based on the description of this soil provided in Attachment D, the Lilapoint soils generally consist of fine sandy loam, loam, and gravelly loam to a depth of at least 60 inches. The A horizon for this soil is described as being 5 inches thick.

The PBH-2 drill site is located in soils identified as Rangecreek-Skein-Rabbitex complex, 6 to 45 percent slopes. As noted in Attachment D, these soils generally consist of gravelly loam, clay loam, paragravelly loam, and very paragravelly loam to a depth of about 27 inches, with bedrock present below this depth. The A horizon for this soil is described as being 2 inches thick.

Topsoil will be stripped from the PBH-1 and PBH-3 drill sites and short access routes prior to mobilization of the drill rig to those sites. Based on an assumed topsoil depth of 6 inches, an access route width of 10 feet and maximum length of 117 feet (at PBH-3), and a maximum

¹ <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>

planned disturbed area of 92 feet by 100 feet (at PBH-1), it is anticipated that a maximum of about 190 cubic yards of topsoil will be stripped from the PBH-1 and PBH-3 drill sites. At each drill site, this topsoil will be stored at a convenient location that will minimize the potential for disturbance. The topsoil stockpiles will be surrounded by a berm or silt fence to preclude off-site sediment transport.

~~As indicated in Section R645-201-225 of this document, no significant excavations are planned for each drill site. Therefore, no substantial soils disturbances are planned. Additionally, the~~
drill site soils at PBH-2 will be protected by use of a Brattice cloth covering. This will isolate the existing soils from the drill cuttings, drilling fluids, and any potential hydrocarbons from the drill rig. Thus, given the in-situ soil protection efforts, the remote location, and the relatively short duration of the minor disturbances at each site, no soil salvaging efforts are planned at this site.

R645-202-234 – WATER HANDLING

No drill sites will be located in a stream channel. Little Park Wash, Williams Draw, and all of the drainages tributary thereto are ephemeral drainages.

Due to the proposed locations of the drill sites, near the top of minor rises in topography, it is not anticipated that there will be any run-on to the drill sites. Therefore, no diversions of overland flows from adjacent areas are planned.

In the unanticipated event that a drill hole begins to make excess water, such water will be pumped into the temporary portable mud pits at the drill site. From there, it will be hauled to Pond #1 at the Lila Canyon Mine site for disposal. At no time will excess drill water generated in the drill hole be allowed to run on the topsoil surface outside of the drill pad.

Clean water, hauled or pumped to the drill sites to be utilized for the drilling process, may be allowed to run off the site and over topsoil, only as long as it contains no drilling additives. This may be necessary to allow cooling of the engine during rod tripping, or when water tanks overflow at the drill site. Measures will be taken to disperse the water flow over the topsoil such that no erosion occurs.

As such, no adverse impacts to stream channels are anticipated to occur during drilling activities. It is projected that approximately 0.5 acre/ft. of water will be utilized during the drilling of each hole.

R645-202-235 – PROTECTION OF THE HYDROLOGIC BALANCE

Geologic logs of drilling will be kept. Any appreciable water encountered during drilling will be logged, noting depth, geology, and estimated groundwater flow. Any such zones will be evaluated for potential water monitoring.

Based on prior drilling to the north in the Lila Canyon permit area, it is anticipated that no significant subsurface water will be encountered until the sandstone below the coal seam is encountered. Once that particular stratum is reached, a potentiometric head may exist that shows a pressure head above the coal seam.

Sediment control will be provided at each drill location by installation of a silt fence around the drill site and (in the case of PBH-1 and PBH-3) along the edges of the associated access routes. Silt fence material will be installed in general accordance with Figure 4. A water bar will be constructed at the drill site access points of PBH-1 and PBH-3 to preclude runoff from the drill site to adjacent areas at the break in the silt fence.

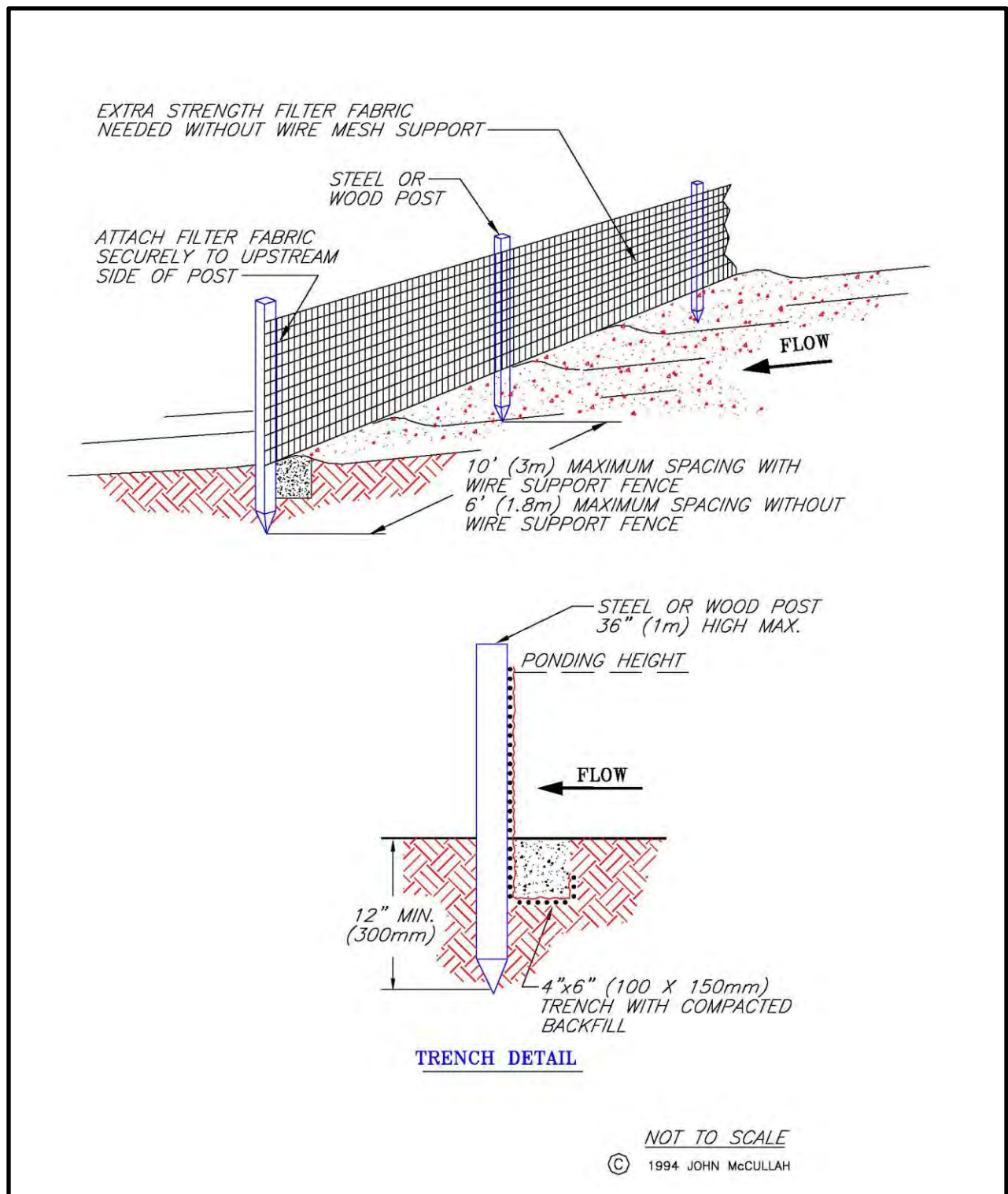


Figure 4 – Typical Silt Fence Installation Detail

R645-202-236 - ACID- OR TOXIC-FORMING MATERIALS

It is not anticipated that acid- or toxic- forming materials will be encountered during exploration because none have been encountered previously. Samples of drill core will be analyzed for acid- and toxic-forming materials. These samples will be taken from the interval above and below the Sunnyside coal seam where core recovery ~~that~~ has occurred.

Also, no hazardous or toxic materials will be used during the proposed drilling activities. To the extent feasible, ~~Aa~~ all materials that are used in the drilling process will be biodegradable.

R645-202-240 - RECLAMATION

Reclamation is an integral part of the exploration activities, and will progress as contemporaneously as practical with the exploration activities. Reclamation of drill sites will occur as soon as practical upon completion of drilling operations.

Following completion of the boreholes and piezometer installation efforts, all drilling equipment, extra drilling and well supplies, and portable mud pits will be removed from the drill sites. The Brattice cloth will then be removed from the PBH-2 drill site. All trash and other drilling debris will be hauled away. The disturbed area will be ripped and the stockpiled topsoil will be spread over the PBH-1 and PBH-3 access road and drill sites, and the ~~site affected~~ soils at the PBH-2 drill site will be ripped/roughened. The affected areas will then be broadcast seeded with the final reclamation seed mix provided in Table 3.4/3,5 of the approved Lila Canyon Mine mining and reclamation plan.

Upon completion of drilling, the borings will be converted to water monitoring piezometers. It is currently anticipated that a drill rig capable of drilling a nominal 8-inch diameter hole will be used at the PBH-1 and PBH-3 drill sites. This will allow for installation of 4-inch diameter steel casing at these locations and the collection of future groundwater quality samples. Given the smaller diameter drilling capability of the helicopter-transported rig, it is anticipated that PBH-2 will be completed with the~~As generally indicated in Figure 5, this will include~~ installation of 2-inch diameter steel casing, as generally indicated in Figure 5. In all cases, it is anticipated that the monitoring wells will be completed to a depth below the coal seam. It is planned that at least 20 feet of perforated casing will be installed in the lower portion of the casing string. If conditions permit, ~~Aa~~ gravel pack will be installed to a point at least 5 feet above the top of the perforated zone. A minimum 5-foot bentonite plug will be set on top of the gravel pack. The remainder of the well annulus will be filled with a bentonite or cement grout to 5 feet below the ground surface. The remainder of the hole will be filled with cement plug to the ground surface. In any case, the monitored zone will be isolated from adjacent zones and well completion details will be recorded. A locking surface protective casing will be installed to secure each piezometer/monitoring well.

At the end of the monitoring period, the ~~piezometers~~ monitoring wells will be plugged and abandoned with a cement, bentonite, or cement/bentonite slurry to full depth, in accordance with applicable UDOGM and Utah Division of Water Rights rules. The surface casing will be removed to a depth of 2 feet below the ground surface and a cement plug installed. A brass tag will be placed at the top of the drill hole stating the operator's name, drill hole number, and legal description. The tag will be placed in concrete at ground level.

R645-203-200 - CONFIDENTIALITY

ECCR requests that the Division not make any drilling information available for public inspection relative to coal seam thickness or quality. This information is considered confidential, and is crucial to ECCR's competitive rights.

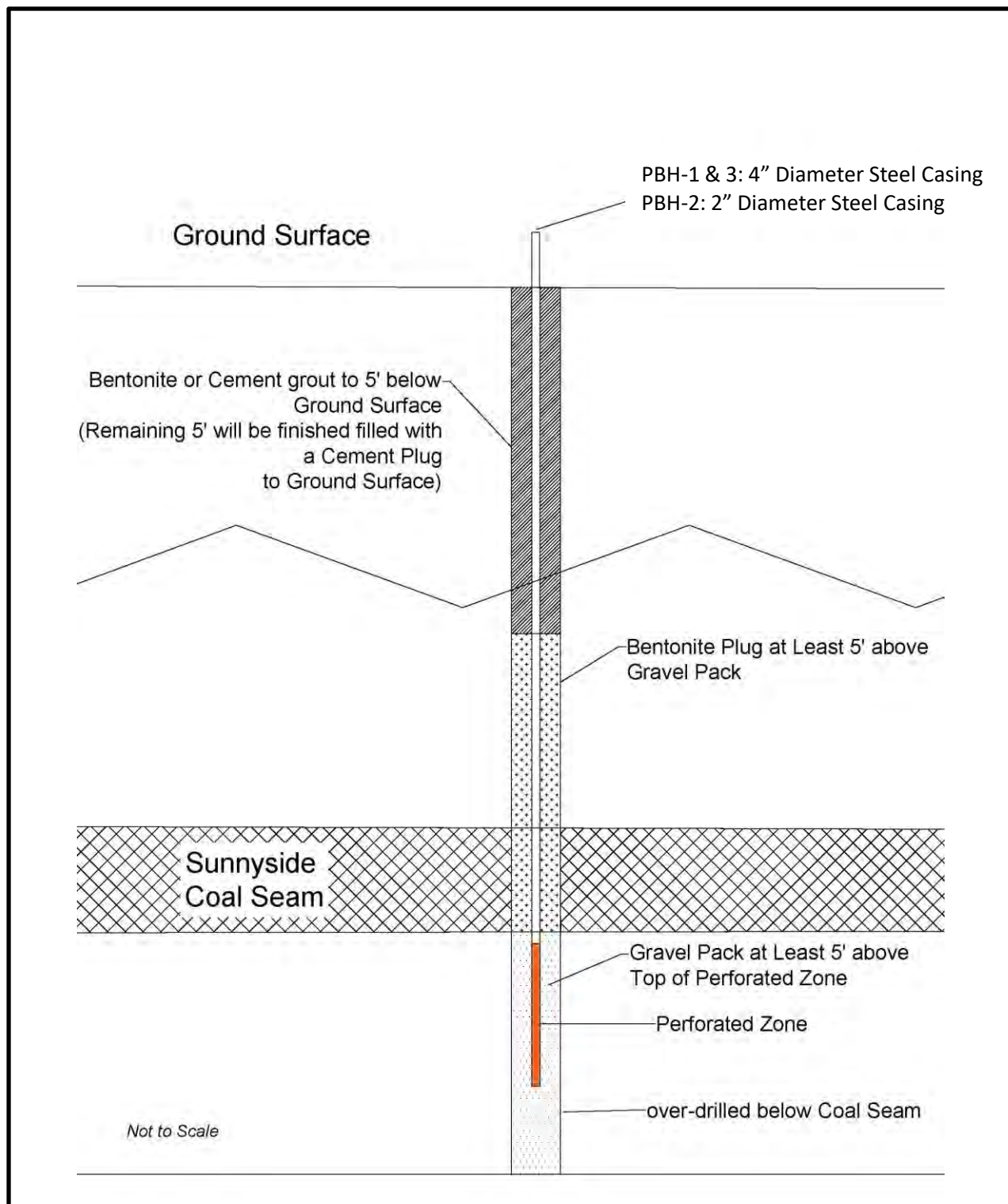


Figure 5 – Anticipated Monitoring Well Completion Diagram

ATTACHMENT A

**SURFACE ACCESS AND
RIGHT-OF-WAY AGREEMENTS**

Director's Agenda 9/4/2018

MINERAL LEASE NO. ML-53812-OBA

FUND: SCH

UTAH STATE LEASE FOR COAL

THIS COAL MINING LEASE AND AGREEMENT (the "Lease") is entered into and executed in duplicate as of October 1, 2018 (the "Effective Date") by and between the STATE OF UTAH, acting by and through the SCHOOL AND INSTITUTIONAL TRUST LANDS ADMINISTRATION, 675 East 500 South, Suite 500, Salt Lake City, Utah 84102 ("Lessor"), and UTAH AMERICAN ENERGY, INC., a Utah corporation, 794 N. "C" Canyon Road, P.O. Box 910, East Carbon, Utah 84520 ("Lessee")

WITNESSETH:

That the State of Utah, as Lessor, in consideration of the rentals, royalties, and other financial consideration paid or required to be paid by Lessee, and the covenants of Lessee set forth below, does hereby GRANT AND LEASE to Lessee the exclusive right and privilege to explore for, drill for, mine, remove, transport, convey, cross-haul, commingle, and sell the coal contained within the boundaries of the following described tract of land (the "Leased Premises") located in Emery County, State of Utah:

Township 16 South, Range 14 East, SLB&M
Section 36: All

Township 16 South, Range 15 East, SLB&M
Section 32: All

(containing 1280 acres, more or less)

Together with the right and privilege to make use of the surface (but only to the extent owned by Lessor) and subsurface of the Leased Premises for uses incident to the mining of coal by Lessee on the Leased Premises or on other lands under the control of Lessee or mined in connection with operations on the Leased Premises, including, but not limited to, conveying, storing, loading, hauling, commingling, cross-hauling, and otherwise transporting coal; excavating; removing, stockpiling, depositing and redepositing of surface materials; and the subsidence, mitigation, restoration and reclamation of the surface.

This Coal Mining Lease and Agreement is subject to, and Lessee hereby agrees to and accepts, the following covenants, terms, and conditions:

1. LEASED MINERALS.

- 1.1 Coal. This mineral lease covers coal, which shall mean and include black or brownish-black solid fossil fuels that have been subjected to the natural processes of coalification, and which fall within the classification of coal by rank as anthracitic, bituminous, sub-bituminous, or lignitic, together with closely associated substances which include, but are not limited to other hydrocarbon substances physically contained within the same geologic strata as the coal. In the event that minerals other than coal are discovered during lease operations, Lessee shall promptly notify Lessor.
- 1.2 Coalbed Methane. To the extent that Lessor owns gas, coalbed methane or coal seam gas (collectively "coalbed methane") within the Leased Premises, Lessee may vent, or flare such coalbed methane from the coal strata being mined and any overlying formations if such removal is necessary for safety reasons in the reasonable discretion of Lessee. If Lessee captures or uses such coalbed methane (including capture or flaring for the purpose of generating greenhouse gas credits or other environmental attributes), it shall pay Lessor royalties on the value of such coalbed methane at the prevailing state royalty rate for natural gas, unless such royalties are expressly waived by Lessor. In the event that Lessor does not own gas or coalbed methane within the Leased Premises, or Lessor has granted the rights to gas or coal bed methane in the Leased Premises to another party, Lessee must obtain the consent of the owner or lessee of such coalbed methane prior to removal or capture of such gas. Except as expressly granted herein, the right to extract gas, coalbed methane and coal seam gas is not granted by this Lease.
- 1.3 No Warranty of Title. Lessor claims title to the mineral estate covered by this Lease. Lessor does not warrant title nor represent that no one will dispute the title asserted by Lessor. It is expressly agreed that Lessor shall not be liable to Lessee for any alleged deficiency in title to the mineral estate, nor shall Lessee become entitled to any refund for any rentals, bonuses, or royalties paid under this Lease in the event of title failure.

2. RESERVATIONS TO LESSOR. Subject to the exclusive rights and privileges granted to Lessee under this Lease, and further provided that Lessor shall refrain from taking actions with respect to the Leased Premises that may unreasonably interfere with Lessee's operations, Lessor hereby excepts and reserves from the operation of this Lease the following rights and privileges (to the extent that Lessor has the right to grant such rights and privileges):

- 2.1 Rights-of-Way and Easements. Lessor reserves the right, following consultation with the Lessee, to establish rights-of-way and easements upon, through or over the Leased Premises, under terms and conditions that will not unreasonably interfere with operations under this Lease, for roads, pipelines, electric

transmission lines, transportation and utility corridors, mineral access, and any other purpose deemed reasonably necessary by Lessor.

- 2.2 Other Mineral Leases. Lessor reserves the right to enter into mineral leases and agreements with third parties covering minerals other than coal, under terms and conditions that will not unreasonably interfere with operations under this Lease in accordance with Lessor's regulations, if any, governing multiple mineral development.
- 2.3 Use and Disposal of Surface. To the extent that Lessor owns the surface estate of the Leased Premises and subject to the rights granted to the Lessee pursuant to this Lease, Lessor reserves the right to use, lease, sell, or otherwise dispose of the surface estate or any part thereof. Lessor shall notify Lessee of any such sale, lease, or other disposition of the surface estate.
- 2.4 Previously Authorized Improvements. If authorized improvements have been placed upon the Leased Premises by a third party prior to the commencement of this Lease, Lessee shall allow the owner of such improvements to remove them within ninety (90) days after the Lease term commences. Nothing in this paragraph shall authorize Lessee to remove surface improvements where Lessor does not own the surface estate.
- 2.5 Rights Not Expressly Granted. Lessor further reserves all rights and privileges of every kind and nature, except as specifically granted in this Lease.

3. TERM OF LEASE; READJUSTMENT.

- 3.1 Primary Term. This Lease is granted for a "primary term" of ten (10) years commencing on the Effective Date and for a "secondary term" of an additional ten (10) years, subject to Lessee's compliance with the requirements of paragraph 3.3, Diligent Operations; Minimum Royalty.
- 3.2 Extension Beyond Secondary Term. Subject to Lessee's compliance with the other provisions of this Lease, this Lease shall remain in effect beyond the secondary term and for as long thereafter as coal is produced in commercial quantities from the Leased Premises, or from lands constituting either (i) a logical mining unit approved by the Bureau of Land Management containing the Leased Premises, or (ii) a mining unit, in which the recoverable coal reserves can be developed in an efficient, economical and orderly manner as a unit with due regard to the conservation of recoverable coal reserves. The second type of mining unit requires a determination by the Lessor that the criteria set forth in item (ii) have been satisfied. The satisfaction of either (i) or (ii) above shall mean that the Lease is contained within an "approved mining unit." For the purposes of this Lease, production of coal in commercial quantities shall mean production during each lease year of at least one per cent (1%) of the original recoverable

coal reserves within the Leased Premises or within lands constituting an approved mining unit which includes the Leased Premises, as such recoverable coal reserves are determined by Lessor after consultation with Lessee, subject to adjustment from time to time based upon reasonable justification from the Lessee.

- 3.3 Diligent Operations; Minimum Royalty. In the absence of actual production in commercial quantities as set forth in paragraph 3.2, Extension Beyond Secondary Term, this Lease shall remain in effect beyond the primary term only if the Lessee is engaged in diligent operations, or development activity (which development activity shall include, but not be limited to, pursuit of required permits and approvals), which in Lessor's reasonable discretion is calculated to advance development or production of coal from the Leased Premises or lands constituting an approved mining unit which includes the Leased Premises, and Lessee pays an annual minimum royalty in advance on or before the anniversary date of the Effective Date. The minimum royalty shall be calculated by determining the production royalty that would be payable upon production of one per cent (1%) of the original recoverable coal reserves within the Leased Premises, as such recoverable coal reserves are determined by Lessor after consultation with Lessee, subject to adjustment from time to time based upon reasonable justification from the Lessee. The unit value of the recoverable coal reserves for purposes of determining the minimum royalty shall be determined by Lessor using the methodology set forth in 43 Code of Federal Regulations Section 3483.4(c)(1)-(3) (1998). Minimum royalties paid by Lessee pursuant to this paragraph may be credited against production royalties accruing during the term of this Lease.
- 3.4 Expiration; Cessation of Production. This Lease may not be extended pursuant to paragraph 3.3, Diligent Operations; Minimum Royalty, beyond the end of the twentieth year after the Effective Date except by the actual production of coal in commercial quantities from the Leased Premises or from lands constituting an approved mining unit which includes the Leased Premises. After expiration of the secondary term, this Lease will expire of its own terms, without the necessity of any notice or action by Lessor, if Lessee ceases production of coal in commercial quantities for an entire lease year, unless the Lease is suspended pursuant to paragraph 16.3, Suspension.
- 3.5 Readjustment. At the end of the primary term and at the end of each ten-year period that this lease is in effect, Lessor may readjust the terms and conditions of this Lease (including without limitation rental rates, minimum royalties, royalty rates and valuation methods, and provisions concerning reclamation). If within thirty (30) days after submission of the readjusted lease terms to the Lessee, the Lessee determines that any or all of the proposed readjusted terms and conditions are unacceptable, then Lessee shall so notify Lessor in writing and the parties shall attempt to resolve the objectionable term or condition. If the parties are unable to resolve the matter and agree upon the readjusted terms and conditions

submitted by Lessor at the end of such ten (10) year period, Lessee shall forfeit any right to the continued extension of this lease, and the lease shall automatically terminate, provided that nothing herein shall be deemed to preclude Lessee from appealing any readjustment by Lessor pursuant to applicable law

- 3.6 Relinquishment. Lessee may relinquish all or portions of this Lease at any time by filing a written notice of relinquishment with Lessor. Lessor may disapprove any relinquishment if Lessee has failed to pay all rentals, royalties, and other amounts due and owing to the Lessor, if the lease is otherwise not in good standing, or if relinquishment would in Lessors' reasonable determination cause waste of economically recoverable coal. Lessee may not relinquish parcels smaller than a quarter-quarter section or surveyed lot. Upon approval, relinquishment shall relieve the Lessee of all future rental obligations as to the relinquished lands effective as of the date of filing of the relinquishment, but shall not relieve Lessee from other obligations to the extent provided in paragraph 15.2, Effect of Termination.
4. BONUS. Lessee agrees to pay Lessor an initial bonus in the total amount of \$50,000 ("Initial Bonus"), payable on or before the Effective Date. The Initial Bonus shall be credited to the Production Royalties under paragraph 6.1. In addition to the Initial Bonus, Lessee shall also pay Lessor a deferred bonus (the "Deferred Bonus") for all coal severed and removed from the Leased Premises, payable on a per ton basis, contemporaneously with and in addition to production royalties for such coal payable under paragraph 6.1, Production Royalties. The Deferred Bonus will be \$0.416/per ton of coal produced and sold from the Leased Premises.
5. RENTALS. Lessee agrees to pay Lessor an annual rental of three dollars (\$3.00) for each acre and fractional part thereof within the Leased Premises. Lessee shall promptly pay annual rentals each year in advance on or before the anniversary date of the Effective Date. Lessee may not credit rentals against production royalties or against minimum royalties payable pursuant to paragraph 3.3, Diligent Operations; Minimum Royalty.
6. ROYALTIES.
- 6.1 Production Royalties. Lessee shall pay Lessor a production royalty of eight per cent (8%) of the value of all coal severed and removed from the Leased Premises by underground mining methods and twelve and one-half per cent (12.5%) of the value of all coal severed and removed from the Leased Premises by surface mining methods. For all coal sold pursuant to an arm's-length contract, value shall be determined on the basis of the gross proceeds received by Lessee from the sale or disposition of such coal. Gross proceeds shall include all bonuses, allowances or other consideration of any nature received by Lessee for coal actually produced. For any coal that is sold or disposed of other than by an arms-length contract, or for coal that is used within the mine permit area containing the Leased Premises for generation of electricity or for gasification,

liquefaction, in situ processing, or other method of extracting energy from such coal, the value of such coal shall be determined by Lessor with reference to (in order of priority): (i) comparable arms-length contracts or other dispositions of like-quality coal produced in the same coal field; (ii) prices reported for that coal to a public utility commission; (iii) prices reported to other governmental agencies; or (iv) other relevant information.

- 6.2 Allowable Deductions. It is expressly understood and agreed that none of Lessee's mining or production costs, including but not limited to costs for materials, labor, overhead, distribution, transportation within the mine permit area prior to the point of sale, loading, crushing, sizing, screening, or general and administrative activities, may be deducted in computing Lessor's royalty. All such costs shall be entirely borne by Lessee and are anticipated by the rate of royalty set forth in this Lease. In the event that the point of sale for coal produced from this Lease is located outside the mine permit area boundary, Lessee may deduct the reasonable, actual costs of transportation of such coal from the mine permit area boundary to the point of sale from gross proceeds in computing Lessor's royalty; provided, however, that transportation deductions for coal transported by Lessee, Lessee's affiliates, or by non-arm's-length contract are subject to review and modification by Lessor. Lessee shall be allowed to deduct its actual, reasonable washing and treatment costs from gross proceeds in computing Lessor's royalty; provided, however, that, upon Lessor's request Lessee shall provide to Lessor appropriate justification to demonstrate that Lessee's costs are reasonable.
- 6.3 Reference to Federal Regulations. It is the intent of Lessor and Lessee that the calculation of the value of coal for royalty purposes be consistent with federal coal regulations governing the valuation of coal, except where this Lease expressly provides otherwise. In no event shall the value of coal used for calculation of royalties under this Lease be less than the value which would be obtained were federal royalty valuation regulations applied.
- 6.4 Royalty Payment. For all coal severed and removed from the Leased Premises that is used, sold, transported or otherwise disposed of during a particular month, Lessee shall pay royalties to Lessor on or before the end of the next succeeding month. Royalty payments shall be accompanied by a verified statement, in a form approved by Lessor, stating the amount of coal sold or otherwise disposed of, the gross proceeds accruing to Lessee, the calculation of allowable deductions, and any other information reasonably required by Lessor to verify production and disposition of the coal or coal products. In the event that Lessee uses or disposes of coal pursuant to a non-arm's-length contract, or uses coal for generation of electricity or for gasification, liquefaction, in situ processing, or other method of extracting energy from such coal, Lessee shall notify Lessor of such use or disposal on or before the end of the next succeeding month following such use or

disposal, and shall pay royalties upon Lessee's good faith estimate of the value of such coal, subject to Lessor's right to determine the value of such coal pursuant to paragraph 6.1, Production Royalties. On or before the royalty due date each month Lessee shall also submit to Lessor a detailed mining report of such production telling and mapping the coal tonnages extracted from the mine, whether sold or stockpiled, and the exact locations within the mine from which such tonnages were extracted. Production tonnages shall be determined by volumetric measurements within the mine and shall be verified by belt-scale weighing of the production coming out of the mine.

- 6.5 Suspension, Waiver or Reduction of Rents or Royalties. Lessor, to the extent not prohibited by applicable law, is authorized to waive, suspend, or reduce the rental or minimum royalty, or reduce the royalty applicable with respect to the entire Lease, whenever in Lessor's sole judgment it is necessary to do so in order to promote development, or whenever in the Lessor's sole judgment the Lease cannot be successfully operated under the terms provided herein.

7. RECORDKEEPING; INSPECTION; AUDITS.

- 7.1 Registered Agent; Records. Lessee shall maintain a registered agent within the State of Utah to whom any and all notices may be sent by Lessor and upon whom process may be served. Lessee shall also maintain an office within the State of Utah containing originals or copies of all maps, engineering data, permitting materials, books, records or contracts (whether such documents are in paper or electronic form) generated by Lessee that pertain in any way to coal production, output and valuation; mine operations; coal sales and dispositions; transportation costs; and calculation of royalties from the Leased Premises. Lessee shall maintain such documents for at least seven years after the date of the coal production to which the documents pertain.
- 7.2 Inspection. Lessor's employees and authorized agents at Lessor's sole risk and expense shall have the right to enter the Leased Premises to check scales as to their accuracy, and to go on any part of the Leased Premises to examine, inspect, survey and take measurements for the purposes of verifying production amounts and proper lease operations. Upon reasonable notice to Lessee, Lessor's employees and authorized agents shall further have the right to audit, examine and copy (at Lessor's expense) all documents described in paragraph 7.1, Registered Agent; Records, whether such documents are located at the mine site or elsewhere. Lessee shall furnish all conveniences necessary for said inspection, survey, or examination; provided, however, that such inspections shall be conducted in a manner that is in conformance with all applicable mine safety regulations and does not unreasonably interfere with Lessee's operations.
- 7.3 Geologic Information. In the event Lessee conducts core-drilling operations or other geologic evaluation of the Leased Premises, Lessor may inspect core

samples, evaluations thereof, and proprietary geologic information concerning the Leased Premises. Upon receiving written request from Lessor, Lessee shall provide Lessor with a copy of drill logs, geotechnical analysis, and geological reports pertaining to the Leased Premises.

- 7.4 Confidentiality. Any and all documents and geologic data obtained by Lessor through the exercise of its rights as set forth in paragraphs 7.2, Inspection., and 7.3, Geologic Information., may be declared confidential information by Lessee, in which event Lessor and its authorized agents shall maintain such documents and geologic data as protected records under the Utah Governmental Records Access Management Act or other applicable privacy statute and shall not disclose the same to any third party without the written consent of Lessee, the order of a court of competent jurisdiction requiring such disclosure, or upon termination of this Lease.

8. USE OF SURFACE ESTATE.

- 8.1 Lessor-Owned Surface. If Lessor owns the surface estate of all or some portion of the Leased Premises, by issuance of this Lease the Lessee has been granted the right to make use of such lands to the extent reasonably necessary and expedient for the economic operation of the leasehold. Lessee's right to surface use of Lessor-owned surface estate shall include the right to subside the surface. Such surface uses shall be exercised subject to the rights reserved to Lessor as provided in paragraph 2, RESERVATIONS TO LESSOR, and without unreasonable interference with the rights of any prior or subsequent lessee of Lessor.
- 8.2 Split-Estate Lands. If Lessor does not own the surface estate of any portion of the Leased Premises, Lessee's access to and use of the surface of such lands shall be determined by applicable law governing mineral development on split-estate lands, including without limitation applicable statutes governing access by mineral owners to split estate lands, and reclamation and bonding requirements. Lessee shall indemnify, defend and hold Lessor harmless for all claims, causes of action, damages, costs and expenses (including attorney's fees and costs) arising out of or related to damage caused by Lessee's operations to surface lands or improvements owned by third parties.

9. APPLICABLE LAWS AND REGULATIONS; HAZARDOUS SUBSTANCES.

- 9.1 State of Utah and Trust Lands Statute and Regulations. This Lease is issued pursuant to Title 53C, Utah Code Annotated, 1953, as amended, and Lessee is subject to and shall comply with all current and future rules and regulations adopted by the School and Institutional Trust Lands Administration and its successor agencies.

- 9.2 Other Applicable Laws and Regulations. Lessee shall comply with all applicable federal, state and local statutes, regulations, and ordinances, including without limitation the Utah Coal Mining and Reclamation Act, applicable statutes and regulations relating to mine safety and health, and applicable statutes, regulations and ordinances relating to public health, pollution control, management of hazardous substances and environmental protection.
- 9.3 Hazardous Substances. Lessee or other occupant pursuant to any agreement authorizing mining] shall not keep on or about the premises any hazardous substances, as defined under 42 U.S.C. Section 9601(14) or any other Federal environmental law, any regulated substance contained in or released from any underground storage tank, as defined by the Resource Conservation and Recovery Act, 42 U.S.C. Section 6991, *et seq.*, or any substances defined and regulated as “hazardous” by applicable State law, (hereinafter, for the purposes of this Lease, collectively referred to as “Hazardous Substances”) unless such substances are reasonably necessary in Lessee’s mining operations, and the use of such substances or tanks is noted and approved in the Lessee’s mining plan, and unless Lessee fully complies with all Federal, State and local laws, regulations, statutes, and ordinances, now in existence or as subsequently enacted or amended, governing Hazardous Substances. Lessee shall immediately notify Lessor, and any other Federal, State and local agency with jurisdiction over the Leased Premises, or surface thereof, or contamination thereon, of (i) all reportable spills or releases of any Hazardous Substance affecting the Leased Premises, (ii) all failures to comply with any applicable Federal, state or local law, regulation or ordinance governing Hazardous Substances, as now enacted or as subsequently enacted or amended, (iii) all inspections of the Leased Premises by, or any correspondence, order, citations, or notifications from any regulatory entity concerning Hazardous Substances affecting the Leased Premises, (iv) all regulatory orders or fines or all response or interim cleanup actions taken by or proposed to be taken by any government entity or private Party concerning the Leased Premises.
- 9.4 Hazardous Substances Indemnity. Lessee or other occupant pursuant to any agreement authorizing mining shall indemnify, defend, and hold harmless Lessor, its agencies, employees, officers, and agents with respect to any and all damages, costs, liabilities, fees (including attorneys’ fees and costs), penalties (civil and criminal), and cleanup costs arising out of or in any way related to Lessee’s use, disposal, transportation, generation, sale or location upon or affecting the Leased Premises of Hazardous Substances, as defined in paragraph 9.3 of this Lease. This indemnity shall extend to the actions of Lessee’s employees, agents assigns, sublessees, contractors, subcontractors, licensees and invitees. Lessee shall further indemnify, defend and hold harmless Lessor and the United States from any and all damages, costs, liabilities, fees (including attorneys’ fees and costs), penalties (civil and criminal), and cleanup costs arising out of or in any way

related to any breach of the provisions of this Lease concerning Hazardous Substances. This indemnity is in addition to, and in no way limits, the general indemnity contained in paragraph 16.1 of this Lease.

- 9.5 Waste Certification. The Lessee shall provide upon abandonment, transfer of operation, assignment of rights, sealing-off of a mined area, and prior to lease relinquishment, certification to the Lessor that, based upon a complete search of all the operator's records for the Lease, and upon its knowledge of past operations, there have been no reportable quantities of hazardous substances as defined in 40 Code of Federal Regulations Section 302.4, or used oil as defined in Utah Administrative Code R315-15, discharged (as defined at 33 U.S.C. Section 1321(a)(2)), deposited or released within the Leased Premises, either on the surface or underground, and that all remedial actions necessary have been taken to protect human health and the environment with respect to such substances. Lessee shall additionally provide to Lessor a complete list of all hazardous substances, hazardous materials, and their respective Chemical Abstracts Service Registry Numbers, and oil and petroleum products used or stored on, or delivered to, the Leased Premises. Such disclosure will be in addition to any other disclosure required by law or agreement.

10. BONDING.

- 10.1 Lease Bond Required. At any time after this Lease is executed, if requested by the Lessor, Lessee shall execute and file with the Lessor a good and sufficient bond or other financial guarantee acceptable to Lessor in order to: (a) guarantee Lessee's performance of all covenants and obligations under this Lease, including Lessee's obligation to pay royalties; and (b) ensure compensation for damage, if any, to the surface estate and any surface improvements. The form of the Lease Bond shall be as prescribed or approved as to form by Lessor. Lessee shall also satisfy all reclamation bonding requirements of the Utah Division of Oil, Gas and Mining ("UDOGM") in connection with the issuance of a mine permit which includes the Leased Premises.
- 10.2 Reclamation Bonding. The bond filed with the Utah Division of Oil, Gas and Mining ("UDOGM") in connection with the issuance of a mine permit which includes the Leased Premises shall be deemed to satisfy Lessor's bonding requirements with respect to Lessee's reclamation obligations under this Lease; provided, however, upon notice to Lessee and a public hearing with respect to the basis for its decision, the Lessor may, in its reasonable discretion, determine that the bond filed with UDOGM is insufficient to protect Lessor's interests. In such an event the Lessor shall enter written findings as to the basis for its calculation of the perceived insufficiency and enter an order establishing the amount of additional bonding required. Lessee shall file any required additional bond with Lessor within thirty (30) days after demand by Lessor. Lessor may increase or

decrease the amount of any additional bond from time to time in accordance with the same procedure.

- 10.3 Release of Additional Bond. Any additional bond required by Lessor pursuant to 10.2, Reclamation Bonding, may be released by Lessor at any time and shall be released no later than the time of final bond release by UDOGM with respect to the Leased Premises.

11. WATER RIGHTS.

- 11.1 Water Rights in Name of Lessor. If Lessee files to appropriate water for coal mining operations on the Leased Premises, the filing for such water right shall be made by Lessee in the name of Lessor at no cost to Lessor, and such water right shall become an appurtenance to the Leased Premises, subject to Lessee's right to use such water right at no cost during the term of this Lease.
- 11.2 Option to Purchase. If Lessee purchases or acquires an existing water right for coal mining operations on the Leased Premises, Lessor shall have the option to acquire that portion of such water right as was used on the Leased Premises upon expiration or termination of this Lease. The option price for such water right shall be the fair market value of the water right as of the date of expiration or termination of this Lease. Upon expiration or termination of this Lease, Lessee shall notify Lessor in writing of all water rights purchased or acquired by Lessee for coal mining operations on the Leased Premises and its estimate of the fair market value of such water right. Lessor shall then have forty-five (45) days to exercise its option to acquire the water by payment to Lessee of the estimated fair market value. If Lessor disagrees with Lessee's estimate of fair market value, Lessor shall notify Lessee of its disagreement within the 45 day option exercise period. The fair market value of the water right shall then be appraised by a single appraiser mutually acceptable to both parties, which appraisal shall be final and not subject to review or appeal. If the parties cannot agree upon the choice of an appraiser, the fair market value of the water right shall be determined by a court of competent jurisdiction. Conveyance of any water right pursuant to this paragraph shall be by quit claim deed.

12. ASSIGNMENT OR SUBLEASE; OVERRIDING ROYALTIES.

- 12.1 Consent Required. Lessee shall not assign or sublease this Lease in whole or in part, or otherwise assign or convey any rights or privileges granted by this Lease, including, without limitation, creation of overriding royalties or production payments, without the prior written consent of Lessor. Any assignment, sublease or other conveyance made without prior written consent of Lessor shall have no legal effect unless and until approved in writing by Lessor. Exercise of any right with respect to the Leased Premises in violation of this provision shall constitute a default under this Lease.

- 12.2 Binding Effect. All of the terms and provisions of this Lease shall be binding upon and shall inure to the benefit of their respective successors, assigns, and sublessees.
- 12.3 Limitation on Overriding Royalties. Lessor reserves the right to disapprove the creation of an overriding royalty or production payment that would, in Lessor's reasonable discretion, constitute an unreasonable economic burden upon operation of the Lease. In exercising its discretion to disapprove the creation of an overriding royalty, Lessor shall consult with Lessee and any third parties involved and shall prepare findings to evidence the basis of its decision. Cumulative overriding royalties of 2% or less shall be deemed presumptively reasonable unless special circumstances are shown by Lessor to exist.
13. OPERATIONS.
- 13.1 Permitting. Before Lessee commences exploration, drilling, or mining operations on the Leased Premises, it shall have obtained such permits and posted such bonds as may be required under applicable provisions of the Utah Coal Mining and Reclamation Act, the Surface Mining Control and Reclamation Act, and associated regulations, together with applicable regulations of the surface management agency. Lessee shall maintain any required permits in place for the duration of mining operations and reclamation. Upon request, Lessee shall provide Lessor with a copy of all regulatory filings relating to permitting matters.
- 13.2 Plan of Operations. Prior to the commencement of any underground mining operations on the Leased Premises, Lessee shall obtain Lessor's approval of a plan of operations for the Leased Premises. The plan of operations shall contain all information required to be contained in a federal Resource Recovery and Protection Plan, as described in 43 Code of Federal Regulations Section 3482.1(b) and (c) (1998). Lessor may modify the proposed plan of operations as is needed to insure that there is no waste of economically recoverable coal reserves contained on the Leased Premises. In this context "waste" shall mean the inefficient utilization of, or the excessive or improper loss of an otherwise economically recoverable coal resource. Lessor shall notify Lessee in writing of its approval or modifications of the plan of operations. The plan of operations submitted by Lessee shall be deemed approved by Lessor if Lessor has not otherwise notified Lessee within sixty (60) days of filing.
- 13.3 Plan of Operations - Modification. In the event that material changes are required to the plan of operations during the course of mining, Lessee shall submit a modification of the plan of operations to the Lessor. Routine adjustments to the plan of operations based upon geologic circumstances encountered during day-to-day mining operations do not require the submission of a modification. If the proposed changes require emergency action by Lessor, then the Lessee shall so notify the Lessor at the time of submission of the modification and the parties

shall use their best efforts to meet the Lessee's time schedule regarding implementation of the changes. Non-emergency modifications will be reviewed promptly by Lessor to insure that there is no waste of economically recoverable coal reserves pursuant to the plan of operations, as modified, and Lessor shall notify lessee in writing of its approval or modification of the proposed modification. Modifications shall be deemed approved by Lessor if Lessor has not otherwise notified Lessee within thirty (30) days of filing with Lessor.

- 13.4 Mine Maps. Lessee shall maintain at the mine office clear, accurate, and detailed maps of all actual and planned operations prepared and maintained in the manner prescribed by 43 Code of Federal Regulations Section 3482.3. Said maps shall be stamped and certified by a Professional Engineer or Professional Geologist with experience in coal mining. Lessee shall provide copies of such maps to Lessor upon request.
- 13.5 Good Mining Practices. Lessee shall conduct exploration and mining operations on the Leased Premises in accordance with standard industry operating practices, and shall avoid waste of economically recoverable coal. Lessee shall comply with all regulations and directives of the Mine Safety and Health Administration or successor agencies for the health and safety of employees and workers. Lessee shall further comply with the performance standards for underground resource recovery set forth at 43 Code of Federal Regulations Section 3484.1(c) (1998) if mining the coal underground; provided, however, that Lessor may waive such standards from time to time in its reasonable discretion, upon request by Lessee.
- 13.6 Mining Units. Lessor may approve the inclusion of the Leased Premises in a mining unit with federal, private or other non-state lands upon terms and conditions that it deems necessary to protect the interests of the Lessor, including without limitation segregation of production, accounting for commingled coal production, and minimum production requirements or minimum royalties for the Leased Premises.

14. EQUIPMENT; RESTORATION.

- 14.1 Equipment. Upon termination of this Lease, Lessee shall remove, and shall have the right to remove, all improvements, equipment, stockpiles, and dumps from the Leased Premises within six (6) months; provided, however, that Lessor may, at Lessor's sole risk and expense, and subject to Lessee's compliance with requirements imposed by UDOGM and MSHA, require Lessee to retain in place underground timbering supports, shaft linings, rails, and other installations reasonably necessary for future mining of the Leased Premises. All improvements and equipment remaining on the Leased Premises after six (6) months may be deemed forfeited to Lessor upon written notice of such forfeiture to Lessee. Lessee may abandon underground improvements, equipment of any type, stockpiles and dumps in place if such abandonment is in compliance with

applicable law, and further provided that Lessee provides Lessor with financial or other assurances sufficient in Lessor's reasonable discretion to protect Lessor from future environmental liability with respect to such abandonment or any associated hazardous waste spills or releases. Lessee shall identify and locate on the mine map the location of all equipment abandoned on the Lease Premises.

- 14.2 Restoration and Reclamation. Upon termination of this Lease, Lessee shall reclaim the Leased Premises in accordance with the requirements of applicable law, including mine permits and reclamation plans on file with UDOGM. Lessee shall further abate any hazardous condition on or associated with the Leased Premises. Lessee and representatives of all governmental agencies having jurisdiction shall have the right to re-enter the Leased Premises for reclamation purposes for a reasonable period after termination of the Lease.

15. DEFAULT.

- 15.1 Notice of Default; Termination. Upon Lessee's violation of or failure to comply with any of the terms, conditions or covenants set forth in this Lease, Lessor shall notify Lessee of such default by registered or certified mail, return receipt requested, at the last address for Lessee set forth in Lessor's files. Lessee shall then have thirty (30) days, or such longer period as may be granted in writing by Lessor, to either cure the default or request a hearing pursuant to the Lessor's administrative adjudication rules. In the event Lessee fails to cure the default or request a hearing within the specified time period, Lessor may cancel this Lease without further notice to or appeal by Lessee.

- 15.2 Effect of Termination. The termination of this Lease for any reason, whether through expiration, cancellation or relinquishment, shall not limit the rights of the Lessor to recover any royalties and/or damages for which Lessee may be liable, to recover on any bond on file, or to seek injunctive relief to enjoin continuing violations of the Lease terms. No remedy or election under this Lease shall be deemed exclusive, but shall, wherever possible, be cumulative with all other remedies available under this Lease, at law, or in equity. Lessee shall surrender the Leased Premises upon termination; however, the obligations of Lessee with respect to reclamation, indemnification and other continuing covenants imposed by this Lease shall survive the termination.

16. MISCELLANEOUS PROVISIONS.

- 16.1 Indemnity. Except as limited by paragraph 7.2, Inspection, Lessee shall indemnify and hold Lessor harmless for, from and against each and every claim, demand, liability, loss, cost, damage and expense, including, without limitation, attorneys' fees and court costs, arising in any way out of Lessee's occupation and use of the Leased Premises, including without limitation claims for death, personal injury, property damage, and unpaid wages and benefits. Lessee further

agrees to indemnify and hold Lessor harmless for, from and against all claims, demands, liabilities, damages and penalties arising out of any failure of Lessee to comply with any of Lessee's obligations under this Lease, including without limitation attorneys' fees and court costs. Lessee may be required to obtain insurance in a type and in an amount acceptable to Lessor, naming Lessor, its employees, its Board of trustees and the State of Utah as co-insured parties under the policy.

- 16.2 Interest. Except as set forth in paragraph 4, BONUS BID, interest shall accrue and be payable on all obligations arising under this Lease at such rate as may be set from time to time by rule enacted by Lessor, or the statutory contract rate, whichever is greater. Interest shall accrue and be payable, without necessity of demand, from the date each such obligation shall arise.
- 16.3 Suspension. In the event that Lessor in its reasonable discretion determines that suspension is necessary in the interests of conservation of the coal resource, or if Lessee has been prevented from performing any of its obligations or responsibilities under this Lease or from conducting mining operations by labor strikes, fires, floods, explosions, riots, any unusual mining casualties or conditions, Acts of God, government restrictions or orders, severe weather conditions, or other extraordinary events beyond its control, then the time for performance of this Lease by Lessee shall be suspended during the continuance of such acts which prevent performance, excepting any payments due and owing to Lessor.
- 16.4 Consent to Suit; Jurisdiction (i) Lessor and Lessee agree that all disputes arising out of this Lease shall be litigated only in the Third Judicial District Court for Salt Lake County, Utah; (ii) Lessee consents to the jurisdiction of such court; and (iii) Lessee shall not bring any action against Lessor without exhaustion of available administrative remedies and compliance with applicable requirements of the Utah Governmental Immunity Act.
- 16.5 No Waiver. No waiver of the breach of any provision of this Lease shall be construed as a waiver of any preceding or succeeding breach of the same or any other provision of this Lease, nor shall the acceptance of rentals or royalties by Lessor during any period of time in which Lessee is in default be deemed to be a waiver of such default.
- 16.6 Severability. The invalidity of any provision of this Lease, as determined by a court of competent jurisdiction, shall in no way affect the validity of any other provision hereof.
- 16.7 Entire Lease. This Lease, together with any attached stipulations, sets forth the entire agreement between Lessor and Lessee with respect to the subject matter of this Lease. No subsequent alteration or amendment to this Lease shall be binding upon Lessor and Lessee unless in writing and signed by each of them.

IN WITNESS WHEREOF, the parties have executed this Lease as of the date
hereinabove first written.

THE STATE OF UTAH, acting by and through the
SCHOOL AND INSTITUTIONAL TRUST
LANDS ADMINISTRATION ("LESSOR")

DAVID URE, DIRECTOR

By: _____
THOMAS B. FADDIES
ASSISTANT DIRECTOR/MINERALS
School & Institutional Trust Lands
Administration – LESSOR

APPROVED AS TO FORM:

SEAN D. REYES
ATTORNEY GENERAL

By:  _____
Special Assistant Attorney General

Form Approved: 8/16/18

LESSEE:


By: _____

Its: _____

IN WITNESS WHEREOF, the parties have executed this Lease as of the date
hereinabove first written.

THE STATE OF UTAH, acting by and through the
SCHOOL AND INSTITUTIONAL TRUST
LANDS ADMINISTRATION ("LESSOR")

DAVID URE, DIRECTOR

By: 
THOMAS B. FADDIES
ASSISTANT DIRECTOR/MINERALS
School & Institutional Trust Lands
Administration – LESSOR

APPROVED AS TO FORM:

SEAN D. REYES
ATTORNEY GENERAL

By: 
Special Assistant Attorney General

Form Approved: 8/16/18

LESSEE: Utah American Energy, Inc.

By: 

Its: PRESIDENT / GMM

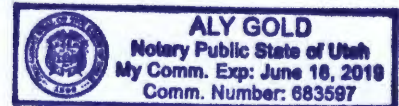
STATE OF UTAH)
 :
COUNTY OF SALT LAKE)

On the 1st day of October, 2018, personally appeared before me THOMAS B. FADDIES, the ASSISTANT DIRECTOR of Minerals of the School and Institutional Trust Lands Administration of the State of Utah (SITLA), who, his identity and position having been satisfactorily established to me, affirmed to me upon oath that the governing body of SITLA, has authorized him to execute the foregoing instrument, and did duly acknowledge in my presence having executed the same for the purpose stated therein.

Given under my hand and seal this 1st day of October, 2018.

My commission expires:

Ally Gold
Notary Public



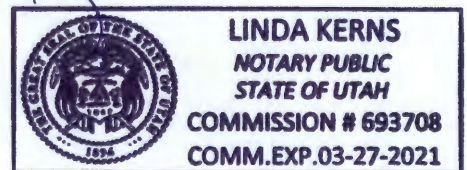
STATE OF Utah)
 :
COUNTY OF Carbon)

On the 31st day of August, 2018, personally appeared before me Matthew Eflaw, signer(s) of the above instrument, personally known to me, or whose identity has been satisfactorily established to me, who did duly acknowledge to me that (he) (she) (they) voluntarily executed the foregoing instrument for the purpose stated therein.

Given under my hand and seal this 31st day of August, 2018.

My commission expires: March 27, 2021

Linda Kerns
Notary Public



STATE OF)
 :
COUNTY OF)

On the _____ day of _____, 20____, personally appeared before me (name) _____ the (title) _____ of _____ (entity) _____ and vesting, who, his/her identity and position having been satisfactorily established to me, affirmed to me upon oath that the governing body of said entity, has authorized him/her to execute the foregoing instrument, and did duly acknowledge in my presence having executed the same for the purpose stated therein.

Given under my hand and seal this _____ day of _____, 20____.

My commission expires:

Notary Public

UtahAmerican Energy, Inc.



794 N. "C" Canyon Road, P. O. Box 910, East Carbon, Utah 84520

Phone: (435) 888-4000

Fax: (435) 888-4002

CONFIDENTIAL

PROPRIETARY AND CONFIDENTIAL

January 21, 2019

Mr. Thomas B. Faddies
Assistant Director - Hard Rock and Industrial Minerals
Utah Trust Lands Administration
675 East 500 South, Suite 500
Salt Lake City, Utah 84102

RECEIVED
JAN 22 2019
TRUST LANDS
ADMINISTRATION

Re: Notice of Intention to Commence Exploration Activities – OBA Coal Lease No.
ML 53812

Dear Tom:

UtahAmerican Energy, Inc ("UEI") plans to undertake exploration drilling activities on OBA Coal Lease No. ML 53812 ("SITLA Lease"). Consistent with Section 8.1 and 13.1 of the SITLA Lease, this letter serves to provide the Lessor with notice of the proposed exploration which will be conducted consistent with the coal mine permitting and exploration requirements of the Utah Division of Oil, Gas, and Mining (DOGM).

UEI has been requested by DOGM to install two monitoring wells during the planned geologic drilling. These wells will confirm that an aquifer extends from the Lila Canyon mine permit boundary into the South Lease area and will help to more fully define the groundwater system in this area of the Book Cliffs.

UEI is proposing to drill two geologic boreholes to collect core samples and gather additional geologic data for the South Lease Area. These boreholes will be enlarged and converted to 2-inch diameter hydrogeologic wells to monitor water levels, confirm the presence of the local aquifer and determine the gradient of the potentiometric surface. This data will be added to the information of the Lila Mine area to better define the local aquifer.

The enclosed Figure 1 shows the proposed locations of the two borehole/monitoring wells. Both of these locations are adjacent to existing roads within the SITLA Lease. The area is currently accessed by the Turtle Canyon road. Borehole PBH-1 will be located in T. 16S, R. 14E, Section 36, west of the existing Turtle Canyon roadway. PBH-2 will be located in T. 16S, R. 15E, Section 32, along the Right Fork of Williams Draw. Access will be via the secondary roadway to the Williams Draw Spring. Above the spring, the wash is wide enough for drill rig access. Some minor grading and road maintenance may be required to access these proposed drill sites.

Each drill site will consist of a 100'x100' drill pad. The area of the pad will be cleared, the topsoil salvaged and stockpiled. The pad will be roughly graded to contain drainage from the

CONFIDENTIAL

Mr. Thomas B. Faddies
January 21, 2019
Page 2

PROPRIETARY AND CONFIDENTIAL

pad. The pad will be protected with silt fencing. Drilling activities will be restricted to the drill pad area. Cuttings from the boreholes will be contained within a cuttings pit and any drill fluids will be retained in either an excavated pit or a portable mud pit.

The location of the boreholes is shown on the enclosed Figure 1. PBH-1 will be approximately 975' deep and PBH-2 will be about 1695' deep. Due to the depth of these holes and the isolated location of the sites, it will not be possible to collect water quality samples. Therefore, UEI proposes that the boreholes be completed as water level monitoring points.

The boreholes will be drilled to allow core samples to be collected from the zone 50 feet above to 50 feet below the target coal seam. After the cores are extracted, the boreholes will be enlarged to at least 8 inches in diameter. The holes will be completed as water level monitoring points by a 10-foot thick bentonite seal will be placed above the gravel pack. The remainder of the boring will be filled with bentonite/cement grout. A surface casing with a locking cap will be placed to secure the monitoring point.

Per the requirements of Section 13.1 of the SITLA Lease, UEI will provide SITLA with copies of all exploration permits and approvals required for these activities.

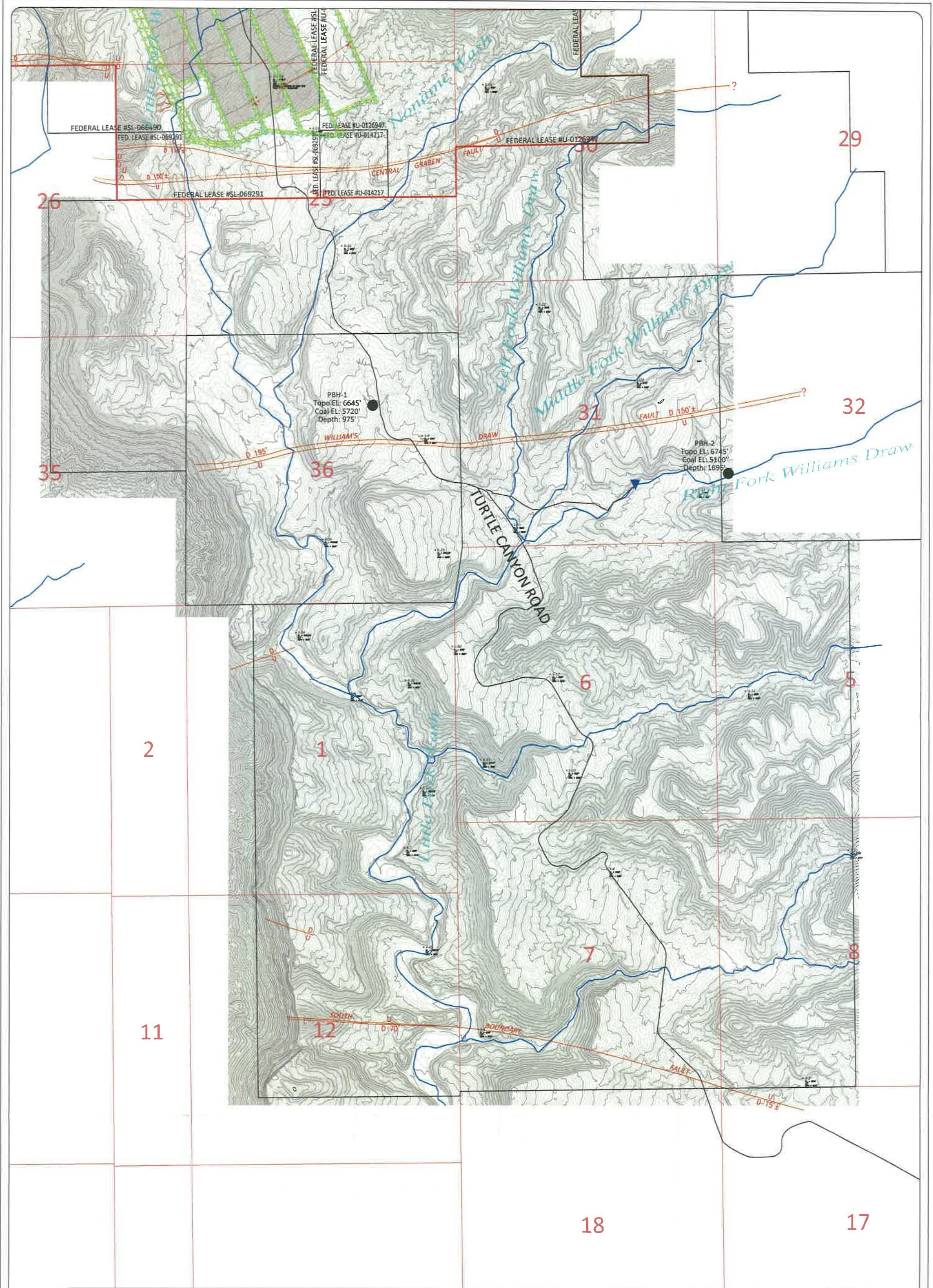
UEI requests written confirmation from you confirming that the proposed exploration as described herein is acceptable to SITLA.

Sincerely,

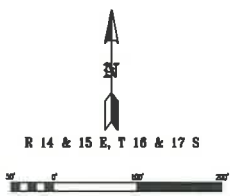


Matthew Efaw
President

ME/mkm




LEGEND:
EXISTING CONTOURS:
EXISTING ROAD:
NATURAL DRAINAGE:
PROPOSED BOREHOLE:
HISTORIC BOREHOLE:



REVISION DATE:

REV.	BY	DATE	DESCRIPTION
JAN 2019	PJ		



LILA CANYON MINE

PROPOSED
SOUTH LEASE BOREHOLE LOCATIONS

DATE	JANUARY 2019	REVISION BY	UEI
SCALE	AS SHOWN	PAGE	FIGURE 1

From: Tom Faddies <tomfaddies@utah.gov>
Sent: Tuesday, October 11, 2022 9:25 AM
To: Steve Christensen <stevechristensen@utah.gov>
Cc: Andrew Bedingfield <abedingfield@utah.gov>; rich@rbwhitepe.com
Subject: Fwd: FW: Lila Canyon Mine exploration plan - topsoil handling

The plan for drilling two exploratory boreholes on SITLA ground within the Lila Canyon Mine lease area, and the associated remediation plan meets with the approval of SITLA. If you have any questions regarding this matter I can be reached at 801 538 5150 or call Mr Andy Bedingfield at 801 538 5158. Thank you for your continued cooperation in this matter.

From: rich@rbwhitepe.com <rich@rbwhitepe.com>
Sent: Wednesday, October 5, 2022 1:23 PM
To: 'tomfaddies@utah.gov' <tomfaddies@utah.gov>
Cc: 'Betcher, Kim' <kimbetcher@acnrinc.com>; 'Candelaria, Jesse' <jessecandelaria@acnrinc.com>
Subject: Lila Canyon Mine exploration plan - topsoil handling

Dear Mr. Faddies:

Thank you for speaking with me today. As we discussed, Emery County Coal Resources ("ECCR") is planning on drilling two exploratory boreholes on SITLA ground within the Lila Canyon Mine lease area. On January 21, 2019, Matthew Efaw from the mine sent a letter to you outlining their plans for drilling of the boreholes and reclamation of the drill sites. In that letter, the mine committed to strip and stockpile topsoil prior to beginning drilling operations.

Given the short time frame of the planned drilling operations, we feel that it will be overly disruptive to strip topsoil from the sites. Therefore, ECCR now plans to cover the drill pads with Brattice cloth to protect the topsoil rather than stripping the topsoil. Once drilling is complete, ECCR will rip the affected topsoil and broadcast a local seed mix over the affected areas.

I would appreciate a response to this email indicating your approval of that change in the topsoil protection plan. Thank you for your assistance.

Rich White

Richard B. White, PE, PLLC
Consulting Civil and Environmental Engineer
13441 South Lone Peak Lane
Draper, Utah 84020
801-673-6647
www.rbwhitepe.com
rich@rbwhitepe.com

Gateway Tower West
15 West South Temple
Suite 1200
Salt Lake City, Utah 84101-1547
801.257.1900
www.swlaw.com

Denise A. Dragoo
(801) 257-1998
ddragoo@swlaw.com

DENVER
LAS VEGAS
LOS ANGELES
LOS CABOS
ORANGE COUNTY
PHOENIX
RENO
SALT LAKE CITY
TUCSON

October 25, 2019

VIA E-MAIL

Thomas B. Faddies
Assistant Director-Hard Rock and Industrial Minerals
Utah Trust Lands Administration
675 East 500 South, Suite 500
Salt Lake City, Utah 84102

Re: Notice of Intention to Commence Exploration Activities – OBA Coal Lease No.
ML 53812

Dear Tom:


On behalf of UtahAmerican Energy, Inc (“UEI”), this correspondence follows up on our letter to you dated January 21, 2019 regarding exploration drilling on SITLA Coal Lease ML - 53812. UEI is revising its exploration plan to further minimize impacts from drilling in response to the Division of Oil, Gas and Mining’s (“DOGM’s”) letter dated September 24, 2019, copy enclosed.

In addition, pursuant to Section 13.1 of ML 53812, attached is a copy of the State Engineer’s approval for UEI’s construction of non-producing wells.

Please acknowledge SITLA’s consent to the proposed exploration, subject to final approval of the exploration permit application by DOGM, by signing below.

We appreciate your assistance.

Very truly yours,



Denise A. Dragoo

cc: Karen Madsen, UEI

Thomas B. Faddies
October 25, 2019
Page 2

ACKNOWLEDGMENT

On behalf of SITLA, I hereby acknowledge receipt of UEI's Minor Coal Exploration Application and the State Engineer's Approval to Construct Non-Producing Wells. Subject to DOGM's approval of UEI's Exploration Application, SITLA consents to UEI's proposed exploration drilling on ML 53812.

So stated by the undersigned this ____ day of 2019.

(Signature)

BY: _____

(Print Name)

TITLE: _____

(Print Title)



GARY R. HERBERT
Governor
SPENCER J. COX
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

Division of Water Rights

BRIAN C. STEED
Executive Director

KENT L. JONES
State Engineer/Division Director

September 17, 2019

UTAH AMERICAN ENERGY, INC.
C/O KAREN MADSEN/CARSON POLLASTRO
PO BOX 910
EAST CARBON, UT 84520

Dear Applicant:

RE: Piezometer WELL#: 1991002M00

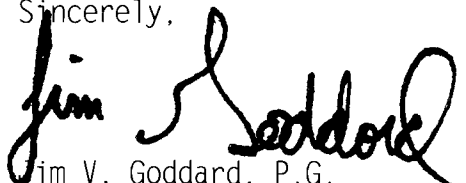
Regarding your request to drill **2 Piezometer well(s)**, the anticipated drilling depths will exceed the minimum regulated and reporting depth of 30 feet, thereby requiring permission from the Division of Water Rights to proceed with this project.

The specifications outlined in your non-production well project application meet the State Engineer's requirements and permission is **HEREBY GRANTED**. Therefore, this letter is your authorization to proceed with the construction of the well(s) in accordance with those specifications and with respect to the following provisions:

- 1) Small diameter casing is to be used in the construction of the well(s) and no more water is to be diverted than is necessary to determine the quality of the groundwater by obtaining representative samples as required by the project.
- 2) The well(s) must be drilled by a currently licensed Utah driller and must be drilled in a manner consistent with the construction standards cited in the Utah State Administrative Rules for Well Drillers (R655-4 UAC).
- 3) The enclosed Driller (START) Card form must be given to the licensed driller for his submittal prior to commencing well construction. The other enclosed form is the 'Applicant Card.' It is **YOUR RESPONSIBILITY** to sign and return this Applicant Card form to our office upon well completion.
- 4) At such time as the well(s) are no longer utilized to monitor ground water or the intent of the project is terminated, the well(s) must be permanently abandoned in a manner consistent with the Administrative Rules (R655-4 UAC).
- 5) **THIS PERMIT MAY NOT BE THE ONLY AUTHORIZATION NEEDED TO DRILL A WELL.** The applicant is responsible for obtaining other permits/authorizations from federal agencies, other state agencies, and/or local jurisdictions as applicable. Moreover, if the applicant is not the landowner, it is the applicant's responsibility to ensure that approvals/permissions have been obtained to trespass and drill a well(s) on the property. **THIS PERMIT DOES NOT GIVE AUTHORIZATION TO TRESPASS ON PRIVATE PROPERTY.**

NOTE: Please be aware that your permission to proceed with the drilling under this authorization expires September 17, 2020.

Sincerely,


Jim V. Goddard, P.G.
Well Drilling Program

APPLICANT CARD for Piezometer WELL#: 1991002M00

IMPORTANT: THIS CARD MUST BE COMPLETED, SIGNED AND RETURNED BY THE WELL
OWNER/APPLICANT AS SOON AS THE WELL IS DRILLED BY A LICENSED UTAH WATER
WELL DRILLER.

OWNER/APPLICANT NAME: UTAH AMERICAN ENERGY, INC.

MAILING ADDRESS: C/O KAREN MADSEN/CARSON POLLASTRO, PO BOX 910, EAST CARBON, UT

PHONE NUMBER: 435-888-4000

WELL LOCATION: You are authorized to drill 2 Piezometer WELLS. SEE BELOW.

WELL UTM COORDINATES:

WELL ACTIVITY: NEW ☒ REPAIR () REPLACE () ABANDON ()
CLEAN () DEEPEN ()

WELL COMPLETION DATE: _____

NAME OF DRILLING COMPANY/LICENSEE: _____

Owner/Applicant Signature

Date

***COMPLETE, SIGN AND RETURN THIS PORTION UPON FINAL WELL COMPLETION -
DO NOT GIVE THIS CARD TO LICENSED WELL DRILLER - YOU MUST RETURN IT.

STATE OF UTAH DIVISION OF WATER RIGHTS Phone No. 801-538-7416

Fax No. 801-538-7467

COMMENTS: _____

Piezometer WELL LOCATIONS:

(1) S 1390 W 1650 from the NE corner, S36 T 16S R 14E SLBM

(2) N 1300 E 110 from the SW corner, S32 T 16S R 15E SLBM

START/APPLICANT CARD INSTRUCTIONS: First, for each well, you must give a Driller (Start) Card to the licensed driller with whom you contract to construct the well. Second, it is your responsibility to sign and return this Applicant Card to this office immediately after completion of the well. **CAUTION: There may be local health requirements for the actual siting of your well. Please check with the proper local authority before construction begins. See the enclosed sheet addressing construction information.**

DRILLER (START) CARD for Piezometer WELL#: 1991002M00

IMPORTANT: THIS CARD MUST BE RECEIVED BY THE DIVISION OF WATER RIGHTS PRIOR TO
THE BEGINNING OF WELL CONSTRUCTION -- REQUIRED ONLY FOR WELLS DEEPER THAN 30 FT.
OWNER/APPLICANT NAME: UTAH AMERICAN ENERGY, INC.
MAILING ADDRESS: C/O KAREN MADSEN/CARSON POLLASTRO, PO BOX 910, EAST CARBON, UT
PHONE NUMBER: 435-888-4000
WELL LOCATION: You are authorized to drill 2 Piezometer WELLS. SEE BELOW.
WELL UTM COORDINATES:
WELL ACTIVITY: NEW ☒ REPAIR () REPLACE () ABANDON ()
CLEAN () DEEPEN ()

For surface seals in unconsolidated formations (clay, silt, sand, and gravel), will
you be using a temporary conductor casing or other formation stabilizer (e.g.,
drilling mud) in the surface seal interval to maintain the required annular space?

YES or NO (Circle one).

Answering 'NO' suggests that you will be placing the surface seal in an open and
unstabilized annular space, which may require onsite inspection of seal placement
by the State Engineer's Office.

PROPOSED START DATE: _____

PROJECTED COMPLETION DATE: _____

LICENSE #: _____ LICENSEE/COMPANY: _____

Licensee Signature

Date

NOTICE TO APPLICANT: THIS CARD IS TO BE GIVEN TO A UTAH LICENSED WATER WELL
DRILLER FOR SUBMITTAL TO THE DIVISION OF WATER RIGHTS PRIOR TO WELL CONSTRUCTION.
STATE OF UTAH DIVISION OF WATER RIGHTS Phone No. 801-538-7416
Fax No. 801-538-7467

Piezometer WELL LOCATIONS:

- (1) S 1390 W 1650 from the NE corner, S36 T 16S R 14E SLBM
- (2) N 1300 E 110 from the SW corner, S32 T 16S R 15E SLBM



United States Department of the Interior



BUREAU OF LAND MANAGEMENT
Price Field Office
125 S 600 W
Price, UT 84501-2833

JUL 14 2022

In Reply Refer To:
2800 (UT-95176 & UT-96032)

Certified Mail - Return Receipt
7020 3160 0000 0118 5404

Emery County Coal Resources, Inc.
Attn: Jesse Candelaria
PO Box 910
East Carbon, UT 84520

DECISION

:
:

Right-of-Way Grant UTU-95176 and UTU-96032 Issued

Dear Mr. Candelaria:

Enclosed is a copy of the right-of-way grants (ROW) UTU-95176 and UTU-96032 which have been approved by the Bureau of Land Management and issued under authority of Title V of the Federal Land Policy and Management Act of October 21, 1976, as amended through September 1999, (90 Stat. 2776; 43 U.S.C. 1761). The issuance of these ROW grants constitutes a final decision by the Bureau of Land Management in this matter.

This decision may be appealed to the Interior Board of Land Appeals, Office of the Secretary, in accordance with the regulations contained in 43 CFR, Part 4, and the enclosed Form 1842-1. If an appeal is taken, your notice of appeal must be filed in this office (at the above address) within 30 days from receipt of this decision. The appellant has the burden of showing that the decision appealed from is in error.

If you wish to file a petition pursuant to regulation 43 CFR 4.21 (58 FR 4939, January 19, 1993) or 43 CFR 2801.10 for a stay of the effectiveness of this decision during the time that your appeal is being reviewed by the Board, the petition for a stay must accompany your notice of appeal. A petition for a stay is required to show sufficient justification based on the standards listed below. Copies of the notice of appeal and petition for a stay must also be submitted to each party named in this decision and to the Interior Board of Land Appeals and to the appropriate Office of the Solicitor (see 43 CFR 4.413) at the same time the original documents are filed with this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

INTERIOR REGION 7 • UPPER COLORADO BASIN

COLORADO, NEW MEXICO, UTAH, WYOMING

Standards for Obtaining a Stay

Except as otherwise provided by law or other pertinent regulation, a petition for a stay of a decision pending appeal shall show sufficient justification based on the following standards:

- (1) The relative harm to the parties if the stay is granted or denied;
- (2) The likelihood of the appellant's success on the merits;
- (3) The likelihood of immediate and irreparable harm if the stay is not granted; and
- (4) Whether the public interest favors granting the stay.

Please note that under the regulations in 43 CFR Group 2800, this decision is effective even if an appeal is filed. If you have any questions, please contact Veronica Kratman, Realty Specialist, at the above address, by e-mail at vkratman@blm.gov, or by phone (435) 636-3610.

Sincerely,

A handwritten signature in blue ink, appearing to read "Kyle Beagley".

Kyle Beagley
Acting Price Field Office Manager

Enclosures(3)
--Appeals form 1842-1
--UTU-95176 Grant
--UTU-96032 Grant

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

INFORMATION ON TAKING APPEALS TO THE INTERIOR BOARD OF LAND APPEALS

DO NOT APPEAL UNLESS

1. This decision is adverse to you,
- AND
2. You believe it is incorrect

IF YOU APPEAL, THE FOLLOWING PROCEDURES MUST BE FOLLOWED

1. NOTICE OF APPEAL	A person who wishes to appeal to the Interior Board of Land Appeals must file in the office of the officer who made the decision (not the Interior Board of Land Appeals) a notice that they wish to appeal. A person served with the decision being appealed must transmit the <i>Notice of Appeal</i> in time for it to be filed in the office where it is required to be filed within 30 days after the date of service. If a decision is published in the FEDERAL REGISTER, a person not served with the decision must transmit a <i>Notice of Appeal</i> in time for it to be filed within 30 days after the date of publication (43 CFR 4.411 and 4.413).
2. WHERE TO FILE NOTICE OF APPEAL.....	Bureau of Land Management, Price Field Office, 125 South 600 West, Price, UT 84501
WITH COPY TO SOLICITOR.....	Regional Solicitor, Room 6201, 125 South State Street, Salt Lake City, UT 84111
3. STATEMENT OF REASONS	Within 30 days after filing the <i>Notice of Appeal</i> , file a complete statement of the reasons why you are appealing. This must be filed with the United States Department of the Interior, Office of Hearings and Appeals, Interior Board of Land Appeals, 801 N. Quincy Street, MS 300-QC, Arlington, Virginia 22203. If you fully stated your reasons for appealing when filing the <i>Notice of Appeal</i> , no additional statement is necessary (43 CFR 4.412 and 4.413).
WITH COPY TO SOLICITOR.....	Regional Solicitor, Room 6201, 125 South State Street, Salt Lake City, UT 84111
4. SERVICE OF DOCUMENTS	A party that files any document under 43 CFR Subpart 4, must serve a copy of it concurrently on the appropriate official of the Office of the Solicitor under 43 CFR 4.413(c) and 4.413(d). For a notice of appeal and statement of reasons, a copy must be served on each person named in the decision under appeal and for all other documents, a copy must be served on each party to the appeal (including intervenors). Service on a person or party known to be represented by counsel or other designated representative must be made on the representative. Service must be made at the last address of record of the person or party (if unrepresented) or the representative, unless the person, party or representative has notified the serving party of a subsequent change of address.
5. METHOD OF SERVICE	If the document being served is a notice of appeal, service may be made by (a) Personal delivery; (b) Registered or certified mail, return receipt requested; (c) Delivery service, delivery receipt requested, if the last address of record is not a post office box; or (d) Electronic means such as electronic mail or facsimile, if the person to be served has previously consented to that means in writing. All other documents may be served by (a) Personal delivery; (b) Mail; (c) Delivery service, if the last address of record is not a post office box; or (d) Electronic means, such as electronic mail or facsimile, if the person to be served has previously consented to that means in writing.
6. REQUEST FOR STAY	Except where program-specific regulations place this decision in full force and effect or provide for an automatic stay, the decision becomes effective upon the expiration of the time allowed for filing an appeal unless a petition for a stay is timely filed together with a Notice of Appeal (43 CFR 4.21). If you wish to file a petition for a stay of the effectiveness of this decision during the time that your appeal is being reviewed by the Interior Board of Land Appeals, the petition for a stay must accompany your Notice of Appeal (43 CFR 4.21 or 43 CFR 2801.10 or 43 CFR 2881.10). A petition for a stay is required to show sufficient justification based on the standards listed below. Copies of the Notice of Appeal and Petition for a Stay must also be submitted to each party named in this decision and to the Interior Board of Land Appeals and to the appropriate Office of the Solicitor (43 CFR 4.413) at the same time the original documents are filed with this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted. Standards for Obtaining a Stay Except as otherwise provided by law or other pertinent regulations, a petition for a stay of a decision pending appeal shall show sufficient justification based on the following standards: (1) the relative harm to the parties if the stay is granted or denied, (2) the likelihood of the appellant's success on the merits, (3) the likelihood of immediate and irreparable harm if the stay is not granted, and (4) whether the public interest favors granting the stay.

Unless these procedures are followed, your appeal will be subject to dismissal (43 CFR 4.402). Be certain that all communications are identified by serial number of the case being appealed.

NOTE: A document is not filed until it is actually received in the proper office (43 CFR 4.401(a)). See 43 CFR Part 4, Subpart B for general rules relating to procedures and practice involving appeals.

43 CFR SUBPART 1821-GENERAL INFORMATION

Sec. 1821.10 Where are BLM offices located? (a) In addition to the Headquarters Office in Grand Junction, CO and seven national level support and service centers, BLM operates 12 State Offices each having several subsidiary offices called Field Offices. The addresses of the State Offices can be found in the most recent edition of 43 CFR 1821.10. The State Office geographical areas of jurisdiction are as follows:

STATE OFFICES AND AREAS OF JURISDICTION:

Alaska State Office ----- Alaska
Arizona State Office ----- Arizona
California State Office ----- California
Colorado State Office ----- Colorado
Eastern States Office ----- Arkansas, Iowa, Louisiana, Minnesota, Missouri
and, all States east of the Mississippi River
Idaho State Office ----- Idaho
Montana State Office ----- Montana, North Dakota, and South Dakota
Nevada State Office ----- Nevada
New Mexico State Office ----- New Mexico, Kansas, Oklahoma, and Texas
Oregon State Office ----- Oregon and Washington
Utah State Office ----- Utah
Wyoming State Office ----- Wyoming and Nebraska

(b) A list of the names, addresses, and geographical areas of jurisdiction of all Field Offices of the Bureau of Land Management can be obtained at the above addresses or any office of the Bureau of Land Management, including the Headquarters Office, Bureau of Land Management, 760 Horizon Drive, Grand Junction, CO 81506.

(Form 1842-1, September 2020)

JUL 08 2022

Form 2800-14
(August 1985)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTIssuing Office **BLM**
Price Field Office **PRICE, UT**

RIGHT-OF-WAY GRANT/TEMPORARY USE PERMIT

Serial Number
UTU-95176

1. A (right-of-way) (permit) is hereby granted pursuant to:

- a. ☒ Title V of the Federal Land Policy and Management Act of October 21, 1976 (90 Stat. 2776; 43 U.S.C. 1761);
- b. ☐ Section 28 of the Mineral Leasing Act of 1920, as amended (30 U.S.C. 185);
- c. ☐ Other (describe) _____

2. Nature of Interest:

- a. By this instrument, the holder Emery County Coal Resources, Inc, PO BOX 910, East Carbon, UT 84520 receives a right to construct, operate, maintain, and terminate a an access road on public lands (or Federal land for MLA Rights-of-Way) described as follows:

Authorized November 2021:

Salt Lake Meridian, Utah

T. 16 S., R. 14 E.,

sec. 3, SE1/4NE1/4SW1/4, N1/2SE1/4;

sec. 10, SW1/4NE1/4, E1/2NW1/4, N1/2SE1/4;

sec. 14, SW1/4NW1/4, SE1/4NW1/4, N1/2SW1/4, SE1/4SW1/4;

sec. 23, N1/2NE1/4, SE1/4NE1/4, NE1/4NW1/4;

sec. 24, NW1/4SW1/4, SW1/4SW1/4, SE1/4SE1/4SW1/4;

sec. 25, E1/2NW1/4, NW1/4SE1/4, SW1/4SE1/4.

= 28,618-ft long by 28-ft wide

Amendment #1:

Salt Lake Meridian, Utah

T. 16 S., R. 15 E.,

sec. 31, lot 4.

= 1,772-ft long by 28-ft wide

The total ROW area contains 19.53 acres, more or less.

- b. The right-of-way or permit area granted herein is 28 feet wide, 30,390 feet long and contains 19.53 acres, more or less. If a site type facility, the facility contains _____ acres.
- c. This instrument shall terminate on 12/31/2050, 30 years from its effective date unless, prior thereto, it is relinquished, abandoned, terminated, or modified pursuant to the terms and conditions of this instrument or of any applicable Federal law or regulation.
- d. This instrument ☒ may ☐ may not be renewed. If renewed, the right-of-way or permit shall be subject to the regulations existing at the time of renewal and any other terms and conditions that the authorized officer deems necessary to protect the public interest.
- e. Notwithstanding the expiration of this instrument or any renewal thereof, early relinquishment, abandonment, or termination, the provisions of this instrument, to the extent applicable, shall continue in effect and shall be binding on the holder, its successors, or assigns, until they have fully satisfied the obligations and/or liabilities accruing herein before or on account of the expiration, or prior termination, of the grant.

(Continued on page 2)

3. Rental:

For and in consideration of the rights granted, the holder agrees to pay the Bureau of Land Management fair market value rental as determined by the authorized officer unless specifically exempted from such payment by regulation. Provided, however, that the rental may be adjusted by the authorized officer, whenever necessary, to reflect changes in the fair market rental value as determined by the application of sound business management principles, and so far as practicable and feasible, in accordance with comparable commercial practices.

4. Terms and Conditions:

- a. This grant or permit is issued subject to the holder's compliance with all applicable regulations contained in Title 43 Code of Federal Regulations parts 2800 and 2880
- b. Upon grant termination by the authorized officer, all improvements shall be removed from the public lands within 90 days, or otherwise disposed of as provided in paragraph (4)(d) or as directed by the authorized officer.
- c. Each grant issued pursuant to the authority of paragraph (1)(a) for a term of 20 years or more shall, at a minimum, be reviewed by the authorized officer at the end of the 20th year and at regular intervals thereafter not to exceed 10 years. Provided, however, that a right-of-way or permit granted herein may be reviewed at any time deemed necessary by the authorized officer.
- d. The stipulations, plans, maps, or designs set forth in Exhibit(s) A, B, C, dated 06/24/2022, attached hereto, are incorporated into and made a part of this grant instrument as fully and effectively as if they were set forth herein in their entirety.
- e. Failure of the holder to comply with applicable law or any provision of this right-of-way grant or permit shall constitute grounds for suspension or termination thereof.
- f. The holder shall perform all operations in a good and workmanlike manner so as to ensure protection of the environment and the health and safety of the public.

IN WITNESS WHEREOF, The undersigned agrees to the terms and conditions of this right-of-way grant or permit.

Matthew C Egan
(Signature of Holder)

General Mgr
(Title)

7/7/22
(Date)

H. C. Byles
(Signature of Authorized Officer)

Acting Field Manager
(Title)

7-13-22
(Effective Date of Grant)

Exhibit B: Plan of Development

Item 7 Response:

Emery County Coal Resources, Inc. is requesting approval of use of a portion of an existing road which currently accesses the Turtle Canyon Area, for access to the proposed borehole located on State Lands that is immediately adjacent to the existing road. ECCR has been requested by UDOGM to install a water monitoring well in Section 36, T 16 S, R 14 E of SLBM. The portion of the road to be used exists as shown on the attached Figure 1.

The road is currently a standard BLM road that is about 40 feet wide and the length of the road that will be used will be approximate 17,455 meters or about 10.85 miles long. This road will not require any maintenance, widening, or grading. It is anticipated that this well will be completed in late 2021 or early 2022 based on the permits with UDOGM and the Division of State Lands.

It is anticipated that the drilling of the monitoring well will take about 1 month. The drilling equipment will consist of the track mounted drilling rig, a water truck, and a pick-up truck. Some materials for the well will be hauled in via flat-bed truck.

After the well is completed, the road will be used for continued access to the monitoring well by ECCR for the duration of the mining and required water monitoring period. It is unknown what that duration will actually be. Typically, it is the life of mining plus 5 to 10 years after mining.

Further, it is anticipated that BLM will continue to maintain the access per standard policy. Thus, no additional road maintenance by ECCR is anticipated until reclamation of the well is required. The road will then need to be used to allow access for equipment for plugging and abandonment of the well. If during the life of the project that BLM does not maintain the road, then ECCR will have authorization to maintain the road on a as-needed basis as currently configured through the life of the project.

Access for long-term monitoring will be limited to the calendar period from April to November, though in reality to the period will be from after snow melt till first significant snows of winter. It is not anticipated that year-round access will be occurring.

As this project is to install and monitor a water well, no products will be produced from the well or transported over the road. The only transport over the road will be for supplies and equipment to drill and complete the monitoring well and then casual access to monitor the well.

A 100' by 100' drill pad will be constructed on State Lands for storage of the drilling equipment, drilling supplies and well casing. No additional temporary work areas are required.

Item 17 response:

The proposed road access would have limited environmental impact.

Air quality and visual impact would be minimal due to the remote site and minimal number of equipment. While the drilling equipment will be located immediately adjacent to the Turtle Canyon Road, the duration of the drilling activity will be about 1 month in length.

Surface water impacts would consist of increased sedimentation and potential spillage/leakage of hydrocarbon products. Streams in the area are ephemeral, so flows are limited to short duration events.

The rest of the time, these drainages are dry. The road use would not impact any of the drainages. Thus, surface water impacts would be minimized.

No groundwater impacts are anticipated as no long-term disturbances are planned. The well drilling would result in a monitoring well completed to monitor the deep groundwater systems in the area.

Noise impact would consist of a short-duration of engine noise resulting from the trucks and drill rig accessing the site and operating on the site. Such short duration is not expected to impact the animals or limited number of people using the area.

The roadway is already disturbed and would only be used for access. Vegetation and soils adjacent to the road are already disturbed and the minor disturbance from road use would not be a significant impact.

Item 18 Response:

Probable effect of the proposed project on wildlife in the area will be limited to roadway use and well construction. There are no fish, marine life, or marine mammals in the project or adjacent areas.

Minimal vegetative impact to the grasses and forbs along the edges of the roadway will be affected by roadway use. No threatened or endangered species are known to exist along the project right-of-way.

Attachment 1

Miscellaneous Attachments for SF-299 Form ECCR Right-of-way Request

Item 7 Response:

ECCR is requesting approval for the use of portions of existing roads which currently accesses the William Draw Drainage and the Turtle Canyon Area. These roads will be used to provide partial access to a proposed borehole locations on State Lands. This hole (PBH-2) will be installed on the ridge between two arms of the Williams Draw drainage in Section 32, T 16 S, R 15 E of SLBM. Additionally, as there is no road access to the proposed drill site, the drill rig and supplies will be flown into the site by helicopter. Personnel will access the site via foot or ATV.

The drill equipment will be marshalled from the PBH-1 drill pad. The helicopter will have a short shuttle from the PBH-1 location to the PBH-2 site. There are no raptor nests within one mile of the area of the proposed helicopter flight path.

Additionally, it will be necessary to provide water for drilling activities. It is proposed that a tank and pump will be located on State land at the intersection of the Williams Draw Drainage and the Turtle Canyon Road (see Figure 1). It is proposed that a temporary, flexible water hose, such as a PVC hose, will be laid on the ground surface and the water will be pumped from the distribution point via the hose to the drill site. Figure 1 shows the proposed alignment of the water hose. As can be seen, the alignment follows the existing drainage which provides an easy access to the proposed drill site.

This approach will eliminate the need to lay the water hose over hillside slopes and reduce significant damage to that vegetation during the installation and extraction of the hose. The channels in the area consist of wide, relatively flat channel bottoms. It is proposed that the water hose will be laid on the edge of the channel bottom to minimize the impact to the area vegetation and environment.

The water hose will consist of 500-foot segments that will be connected via quick release connections. These hose segments will be hauled by flatbed truck along the Turtle Canyon Road to the distribution point. Each hose segment will be carried by ATV along the alignment, connected to the previous segment, and rolled out on the ground. This will minimize damage to the vegetation along the channel banks. Such an approach will also minimize the impact on the local environment and ensure there is an efficient way of conveying the required water to the drill site.

It is proposed that the distribution point be located adjacent to the existing Turtle Canyon Road. It will consist of a location where the water trucks will be able to pump the water directly to the local tank. Then a pump on the local tank will pump the water via the water hose up to the drill site. Figure 1 shows the proposed location of the distribution site, the alignment of the water hose, and the proposed drill site.

ROAD SEGMENTS AND LENGTH

TURTLE CANYON ROAD - The portions of the Turtle Canyon Road that are planned to be used for the drilling of PBH-1 will also be used for this project and are shown on Figure 1. Based on ECCR's understanding, the ROW would only apply to those portions of the road that cross federal land. There are 6 segments or portion of this road that are located on federal land.

Segment 1	59 meters
Segment 2	1,043 meters
Segment 3	2,133 meters

Segment 4	2,840 meters
Segment 5	673 meters
Segment 6	540 meters

A legal description of the road centerline is attached as Appendix A for each road segment. The legal descriptions include the area of each roadway segment.

The road currently meets the standards for a typical BLM road. It is about 28-30 feet wide and the overall length of the road from the end of County maintenance to the edge of the State Land where the PBH-1 site is located is approximately 17,455 meters or about 10.85 miles long. From the eastern edge of the State section, an additional 540 meters or about 0.33 miles of road will be used to reach the intersection of the Williams Draw drainage and the Turtle Canyon Road. It is not anticipated that these road segments will require any maintenance, widening, or grading during the well drilling program. If there are any large precipitation events, some minor grading maybe necessary. It is anticipated that the well will be completed in the late spring and summer of 2022.

WILLIAM DRAW ACCESS - The access to PBH-2 is planned along the alignment of the existing channel of the Left Fork of the Williams Draw Channel. The lower portion of the channel is currently used by the rancher to access the water trough in the Right Fork of Williams Draw. The area of the channel that is planned to be used is presented on Figure 1. As discussed above, the distribution point and water tank will be located on State Land. From the northern edge of the State Land, along the channel, the water line will be temporarily laid along the channel bottom till it reaches the proposed drill site. The water hose segment on federal land will approximately follow the alignment shown on Figure 1 and is about 1,590 meters

A legal description of the road centerline and the water hose are attached as Appendix B for each segment. The legal descriptions include the area of each roadway segment.

EQUIPMENT DESCRIPTION

Equipment to be used for the project is anticipated to include:

- Water truck (2) 4000-gallon vac truck (3 axel) 27'x8'
- 163 Cat Road Grader (only to be used, if necessary, for maintaining main road) 8'-12' x 33'
- Skid Mounted Drill Rig 25'x8'-12'
- Flatbed truck 42'x8'

ROAD USAGE AND TIMING

It is anticipated that the channel usage for the William Draw channel will take about 1 week to place the distribution point, local water tank and pump, and layout the planned water hose. Once these are in-place, the mobilization, set-up, drilling, well completion, development, tear down, and de-mobilization of the monitoring wells will take about 2 weeks. The equipment will consist of the helicopter drilling rig, two water trucks, a flat bed truck, and a pick-up truck. Some materials for the well will be hauled and stored at the PBH-1 drill site.

After the well is completed, the Williams Draw Channel will be used for casual use access to the monitoring well by ECCR for the duration of the mining and required water monitoring period. It is

unknown what the actual duration will be. Typically, it is the life of mining plus 5 to 10 years after mining.

Further, it is anticipated that BLM will continue to maintain the Turtle Canyon Road access per standard policy. Thus, no additional road maintenance by ECCR is anticipated until reclamation of the well is required. The road will then need to be used for about a 1-month period to allow access for equipment for plugging and abandonment of the wells. If during the life of the project, the BLM does not maintain the road, then ECCR will have authorization to maintain the road on an as-needed basis as currently configured through the life of the project.

Access for long-term monitoring will be limited to the calendar period from April to November, though the period will be from after snow melt till first significant snows of winter. It is not anticipated that year-round access will be occurring.

PRODUCT TRANSPORT

As this project is to install and monitor the water wells, no products will be produced from the wells or transported over the road. The only transport over the road will be for supplies and equipment to drill and complete the monitoring wells and then casual access to monitor the wells.

TEMPORARY WORK AREAS

The temporary water line that will be located in the channel bottom is the only use planned on Federal ground. The drill pad, distribution site, and storage areas will all be located on State Lands. As described in Item 7, the temporary installation of the water hose is not expected to cause any significant disturbance along the channel bottom. Following the drilling activities, the water hose will be removed and transported back down the channel via ATV and then hauled away by the driller.

No additional temporary work areas are required.

Item 17 response:

The planned access roads would have limited environmental impact.

Air quality and visual impact would be minimal due to the remote site locations and minimal pieces of equipment used. While the drilling equipment will be located immediately adjacent to the Turtle Canyon Road, the duration of the drilling activity will be about 1 month in length at each site.

Surface water impacts would consist of increased sedimentation and potential spillage/leakage of hydrocarbon products. To address these concerns, the downstream side of the pads will be protected by a small berm that will drain toward a small sump. This sump will have an overflow that drains through a silt fence. This combination of structures will collect any sediment and potential spills from the site.

Streams in the area are ephemeral, so flows are limited to short duration events. The rest of the time, these drainages are dry. The existing roads already ford all the streams along the proposed routes, so use of the roads would not increase the impact any of the drainages. Thus, surface water impacts would be minimized.

No groundwater impacts are anticipated, as no long-term disturbances are planned. The well drilling would result in a monitoring well completed to monitor the deep groundwater systems in the area.

Noise impact would consist of a short duration of engine noise resulting from the trucks and drill rig accessing the site and operating on the site. Such short duration use is not expected to impact the animals or limited number of people using the area.

The roadways are already disturbed and would only be used for access. Vegetation and soils adjacent to the roads are already disturbed and the minor disturbance from road use would not be a significant impact.

Item 18 Response:

Probable effect of the proposed project on wildlife in the area will be limited to roadway use and well construction. There are no fish, marine life, or marine mammals in the project or adjacent areas.

Minimal vegetative impact to the grasses and forbs along the edges of the roadways will be affected by roadway use. No threatened or endangered species are known to exist along the project right-of-way.



Exhibit C Map: UTU-95176

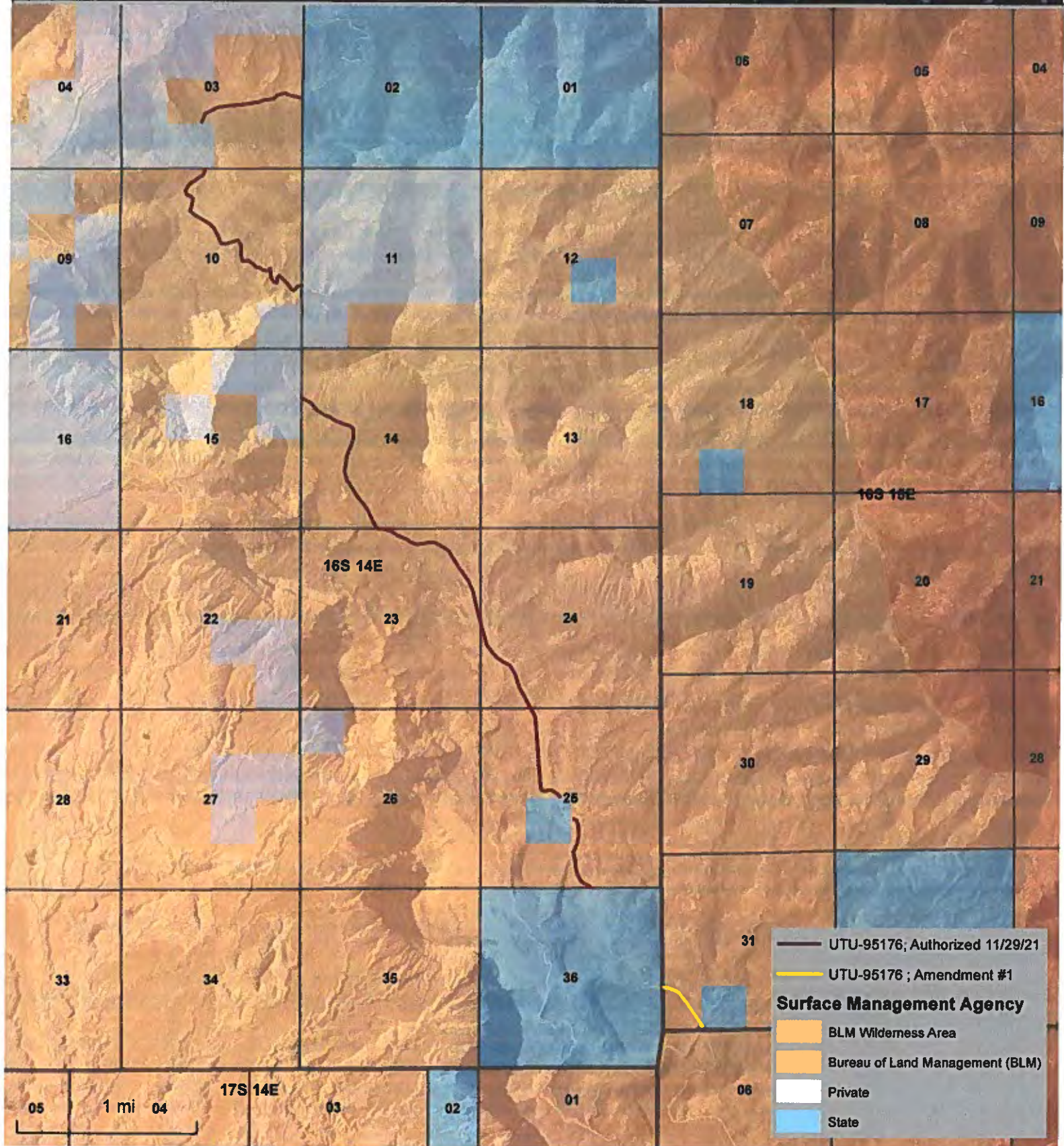
Access Road

Emery County, UT

Price Field Office
125 S. 600 W.
Price, Utah 84501
435-636-3600



No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. Original data: 6/22/2022
compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed through digital means and may be updated without notification.



JUL 08 2022

BLM

PRICE, UT

Form 2800-14
(August 1985)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RIGHT-OF-WAY GRANT/TEMPORARY USE PERMIT

Issuing Office
Price Field OfficeSerial Number
UTU-96032

1. A (right-of-way) (permit) is hereby granted pursuant to:

- a. ☒ Title V of the Federal Land Policy and Management Act of October 21, 1976 (90 Stat. 2776; 43 U.S.C. 1761);
- b. ☐ Section 28 of the Mineral Leasing Act of 1920, as amended (30 U.S.C. 185);
- c. ☐ Other (describe) _____

2. Nature of Interest:

- a. By this instrument, the holder Emery County Coal Resources, Inc, PO BOX 910, East Carbon, UT 84520 receives a right to construct, operate, maintain, and terminate a a temporary, 1.5 to 2-inch surface water pipeline on public lands (or Federal land for MLA Rights-of-Way) described as follows:

Salt Lake Meridian, Utah

T. 16 S., R. 15 E.,

sec. 31, NE1/4NE1/4, S1/2NE1/4, NE1/4SW1/4, NW1/4SE1/4.

This are contains 2.397 acres, more or less.

- b. The right-of-way or permit area granted herein is 20 feet wide, 5,220 feet long and contains 2.397 acres, more or less. If a site type facility, the facility contains _____ acres.
- c. This instrument shall terminate on 7/31/2023, 1 (one) years from its effective date unless, prior thereto, it is relinquished, abandoned, terminated, or modified pursuant to the terms and conditions of this instrument or of any applicable Federal law or regulation.
- d. This instrument ☒ may ☐ may not be renewed. If renewed, the right-of-way or permit shall be subject to the regulations existing at the time of renewal and any other terms and conditions that the authorized officer deems necessary to protect the public interest.
- e. Notwithstanding the expiration of this instrument or any renewal thereof, early relinquishment, abandonment, or termination, the provisions of this instrument, to the extent applicable, shall continue in effect and shall be binding on the holder, its successors, or assigns, until they have fully satisfied the obligations and/or liabilities accruing herein before or on account of the expiration, or prior termination, of the grant.

3. Rental:

For and in consideration of the rights granted, the holder agrees to pay the Bureau of Land Management fair market value rental as determined by the authorized officer unless specifically exempted from such payment by regulation. Provided, however, that the rental may be adjusted by the authorized officer, whenever necessary, to reflect changes in the fair market rental value as determined by the application of sound business management principles, and so far as practicable and feasible, in accordance with comparable commercial practices.

4. Terms and Conditions:

- a. This grant or permit is issued subject to the holder's compliance with all applicable regulations contained in Title 43 Code of Federal Regulations parts 2800 and 2880.
- b. Upon grant termination by the authorized officer, all improvements shall be removed from the public lands within 90 days, or otherwise disposed of as provided in paragraph (4)(d) or as directed by the authorized officer.
- c. Each grant issued pursuant to the authority of paragraph (1)(a) for a term of 20 years or more shall, at a minimum, be reviewed by the authorized officer at the end of the 20th year and at regular intervals thereafter not to exceed 10 years. Provided, however, that a right-of-way or permit granted herein may be reviewed at any time deemed necessary by the authorized officer.
- d. The stipulations, plans, maps, or designs set forth in Exhibit(s) A, B, C, dated 06/24/2022, attached hereto, are incorporated into and made a part of this grant instrument as fully and effectively as if they were set forth herein in their entirety.
- e. Failure of the holder to comply with applicable law or any provision of this right-of-way grant or permit shall constitute grounds for suspension or termination thereof.
- f. The holder shall perform all operations in a good and workmanlike manner so as to ensure protection of the environment and the health and safety of the public.

IN WITNESS WHEREOF, The undersigned agrees to the terms and conditions of this right-of-way grant or permit.

Matthew C. Egan
(Signature of Holder)

General Mgr.
(Title)

7/7/22
(Date)

Kyle B. G. S.
(Signature of Authorized Officer)

Acting Field Manager
(Title)

7-13-22
(Effective Date of Grant)

Exhibit A

Additional Terms and Conditions

UTU-96032

Emery County Coal Resources, Inc.

Definitions

1. The Price Field Manager or their designated representative is the Authorized Officer (AO) for this authorization.
2. Hereinafter, holder means any party granted this ROW, temporary use permit, or both, its agents, contractors, representatives, or other persons directed by holder to construct, maintain, repair, restore, relinquish, abandon, modify, rehabilitate, or terminate this right-of-way, and holder's successors, or assigns. For UTU-95176, "Holder" shall mean Emery County Coal Resources, Inc., or any and all their assignees, agents, contractors, subcontractors, and/or employees.
3. This grant may not be encumbered, hypothecated, assigned, subleased, or transferred without prior written approval by the AO. The holder may, with the approval of the BLM, assign, in whole or in part, any right or interest in a grant. The holder shall file an application (Standard Form 299) and an assignee consent form to the AO prior to the finalization of the assignment. The proposed assignee must also file proof of eligibility to hold a grant, and agree to accept and abide by all of the existing terms, conditions, and stipulations of the grant. The assignee may not commence operation, maintenance, or termination actions until the assignment is approved by the AO.
4. "Grant" means any authorization or instrument (e.g. easement, lease, license, or permit) the Bureau of Land Management (BLM) issues under Title V of the Federal Land Policy and Management Act, 43 U.S.C. 1761 et seq., and those authorizations and instruments BLM and its predecessors issued for purposes before October 21, 1976, under the existing statutory authority.

General

5. The holder shall notify the Bureau of Land Management (BLM) Authorized Officer (AO) within 30 calendar days when there is a change affecting their application or grant, including, but not limited to, changes in: legal name, mailing address, partners, financial conditions, business/corporate status, or other conditions as mentioned under 43 CFR 2807.11.
6. The BLM shall retain and may exercise any rights the grant does not expressly convey to the holder. These include, but are not limited to entrance upon the lands granted herein or any facility constructed on public lands, to require common use of the right-of-way, including facilities (see 43 CFR 2805.14(b)), the subsurface, and air space, collect rents for the use of the land, facilities, subsurface, and air space, retain ownership of resources found on these lands, including timber and mineral materials, and any living or non-living resources. The holder has no right to use these resources, except as noted in 43 CFR 2805.14(e). The BLM also reserves the right to determine if your grant is available for renewal and may change the terms and conditions of the authorization as a result of changes in legislation, regulation, or as otherwise necessary to protect public health or safety or the environment.

Exhibit A

7. This grant is subject to all prior valid and existing rights on the effective date of this grant, and the United States makes no representations or warranties whatever, either expressed or implied, as to the existence, or nature of such valid existing rights.

Applicable Laws

8. The holder shall comply with the regulations of the Department of the Interior and all other Federal, State, and municipal laws, ordinances, or regulations, which are applicable to the area or operations covered by this grant, whether explicitly mentioned herein or not. This authorization does not relieve the holder from securing any other permits, licenses, or other authorizations required by federal, state, or local law.
9. BLM may suspend or terminate your grant if you do not comply with applicable laws and regulations or any terms, conditions, or stipulations of the grant (such as rent payments), or if you abandon the right-of-way. Your failure to use your right-of-way for its authorized purpose for any continuous 5-year period creates a presumption of abandonment.
10. The holder of this right-of-way grant or the holder's successor in interest shall comply with Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d et seq.) and the regulations of the Secretary of the Interior issued pursuant thereto.
11. The BLM may revoke or terminate this grant in whole, or in part, upon a determination by the AO that the holder fails to comply with applicable laws and regulations, or any terms, conditions, or stipulations of the grant, the holder abandons the right-of-way, or upon determination by the AO, that the holder's action or inaction there exists a threat to human health or safety, or irreparable harm to the surrounding environment.

Construction, Operations, and Maintenance

12. The holder shall conduct all activities associated with the construction, operation, and termination of the right-of-way within the authorized limits of the right-of-way.
13. All design, material, and construction, operation, maintenance, and termination practices shall be in accordance with safe and proven engineering practices.
14. The holder shall designate a representative who shall have the authority to act upon and to implement instructions from the authorized officer. The holder's representative shall be available for communication with the authorized officer within a reasonable time when construction or other surface disturbing activities are underway.
15. The holder shall operate and maintain this right-of-way in strict conformity with the terms and conditions of this grant. Any relocation, additional construction, or use that is not in accord with the approved terms shall not be initiated without the prior written approval of the Field Manager or other authorized officer. A copy of the complete right-of-way grant, including all stipulations and maps shall be made available on the right-of-way area during construction, operation, and termination to the authorized officer. Noncompliance with the above will be grounds for an immediate temporary suspension of activities if it constitutes a threat to public health and safety or the environment.
16. The holder must submit an application to amend (SF-299) for any substantial deviation to this ROW. Per 43 CFR 2801.5, "*substantial deviation means a change in the authorized location or use which requires: (1) construction or use outside the boundaries of the right-of-way, or (2) any change from, or modification of, the authorized use. Examples of substantial deviation include: adding equipment, overhead or underground lines, pipelines, structures, or other facilities not included in the original grant.*"

Exhibit A

17. The holder shall protect all survey monuments found within the right-of-way. Survey monuments include, but are not limited to, General Land Office and Bureau of Land Management Cadastral Survey Corners, reference corners, witness points, U.S. Coastal and Geodetic benchmarks and triangulation stations, military control monuments, and recognizable civil (both public and private) survey monuments. In the event of obliteration or disturbance of any of the above, the holder shall immediately report the incident, in writing, to the authorized officer and the respective installing authority if known. Where General Land Office or Bureau of Land Management right-of-way monuments or references are obliterated during operations, the holder shall secure the services of a registered land surveyor or a Bureau cadastral surveyor to restore the disturbed monuments and references using surveying procedures found in the Manual of Surveying Instructions for the Survey of the Public Lands in the United States, latest edition. The holder shall record such survey in the appropriate county and send a copy to the authorized officer. If the Bureau cadastral surveyors or other Federal surveyors are used to restore the disturbed survey monument, the holder shall be responsible for the survey cost.
18. No routine maintenance activities shall be performed during periods when the soil is too wet to adequately support construction equipment. If such equipment creates ruts in excess of **four** inches deep, the soil shall be deemed too wet to adequately support construction equipment. The holder shall conduct all activities associated with the construction, operation, and termination.

Public Health and Safety

19. All design, material, and construction; operation, maintenance, and termination practices shall be conducted in accordance with safe and proven engineering practices.
20. The holder agrees to indemnify and hold harmless the United States Government for any and all liability, including but not limited to injury to persons or damage to property, which may result from the use permitted.
21. The right-of-way shall be maintained in a sanitary condition at all times; waste materials shall be disposed of promptly at an appropriate waste disposal site. Waste means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment. The holder is strictly prohibited from transporting, storing, or disposing of any toxic or hazardous substance on the right-of-way.
22. The AO may suspend or terminate in whole or in part any notice to proceed which has been issued when, in his or her sole judgment, unforeseen conditions arise which result in the approved terms and conditions being inadequate to protect the public health and safety or to protect the environment.
23. Holder shall maintain the right-of-way in a safe, usable condition, as directed by the authorized officer.
24. The holder shall inform the Field Manager at (435) 636-3600 within 48 hours of any reportable accidents on federal lands.
25. The holder shall permit free and unrestricted public access to and upon the right-of-way for all lawful purposes except for those specific areas designated as restricted by the Field Manager or other authorized officer to protect the public, wildlife, livestock or facilities constructed within the right-of-way.

Environmental Protection

Exhibit A

26. All activities shall be conducted with due regard for good resource management and in such a manner as not to block any stream, or drainage system, or cause the pollution or siltation of any stream or lake.
27. The holder shall meet Federal, State, and local emission standards for air quality.
28. The holder shall comply with all applicable Federal laws and regulations existing or hereinafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 U.S.C. 2601 *et seq.* (1982) with regards to any toxic substances that are used, generated by, or stored on the right-of-way or in any facilities authorized under this ROW grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (e.g. leaks or spills.) in excess of the reportable quantity established by 40 CFR 117 and 40 CFR 302 shall be reported to the AO and to the National Response Center at 687-9485 or 888-331-6337 (NDEP), as required by the Comprehensive Environmental Response, Compensation, and Liability Act, Section 102b. Notification should also be made to the Utah Department of Environmental Quality Incident Notification Line at 801-536-4123. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the AO concurrent with the filing of the reports to the involved Federal agency or State government.
29. The holder is prohibited from discharging oil or other pollutants into or upon the navigable waters of the United States, adjoining shorelines, or the waters of the contiguous zone in violation of Section 311 of the Clean Water Act as amended, 33 U.S.C. 1321, and the regulations issued there under, or applicable laws of the State and regulations issued there under. Holder shall give immediate notice of any such discharge to the authorized officer and such other Federal and State officials as are required by law to be given such notice.
30. The holder agrees to indemnify the United States Government against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, *et seq.* or the Resource Conservation and Recovery Act of 1976, 42 U.S.C. 6901 *et seq.*) on the right-of-way, unless the release or threatened release is determined to be wholly unrelated to the holder's authorized activities on the right-of-way). This agreement applies to the ROW regardless whether a release is caused by the holder, its agent, or any unrelated third parties.
31. If during any phase of the construction, operation, or termination any oil or other pollutant should be discharged from containers or vehicles and impact Federal lands, the control and total removal, disposal, and cleanup of such oil or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of holder to control, cleanup, or dispose of such discharge on or affecting Federal lands, or to repair all damages to Federal lands resulting therefrom, the authorized officer may take such measures as he deems necessary to control and cleanup the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the authorized officer shall not relieve the holder of any liability or responsibility.

Cultural and Paleontological Resources

32. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land

Exhibit A

shall be immediately reported to the authorized officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the holder.

Vegetation and Weeds

33. All activities shall be conducted to avoid or minimize disturbance to vegetation. If it becomes necessary to remove vegetation, prior approval by the AO is required.
34. The holder shall be responsible for weed control on disturbed areas within the limits of the grant. The holder is responsible for consultation with the authorized officer and/or local authorities for acceptable weed control methods (within limits imposed in the grant stipulations).
35. Equipment and vehicles shall be inspected and cleaned for vegetation matter and seeds prior to entering BLM administered lands. Clothing and animals should also be inspected for vegetation matter and seeds. Vehicles and equipment should be power washed at a commercial facility or other applicable site where invasive species/noxious weeds seeds can be flushed through a waste treatment plant, where seeds will become inert.
36. Use of pesticides or herbicides shall comply with the applicable Federal and State laws. Pesticides or herbicides shall be used in accordance with their registered uses and within limitations imposed by the Secretary of the Interior. Prior to the application of any pesticide or herbicides on the ROW, the holder shall contact the BLM authorized officer to obtain a Pesticide Use Proposal (PUP) form. Once the PUP is reviewed, approved, and returned the holder may proceed with the application of the proposed chemicals. Upon completion of the applications, the holder shall use the application record form provided during the PUP issuance and submit the form to the BLM within 7 days following the end of application.

Fire Prevention and Mitigation

37. Every reasonable effort will be made to prevent, control, or suppress any fire in the operation area. Uncontrolled fires must be immediately reported to the Moab Interagency Fire Center (435) 259-1850 (or 911) immediately with the location and status of any escaped fire.
38. The Holder or its contractors will notify the BLM of any fires and comply with all rules and regulations administered by the BLM concerning the use, prevention, and suppression of fires on Federal lands, including any fire prevention orders that may be in effect at the time of the permitted activity. The Holder or its contractors may be held liable for the cost of fire suppression, stabilization, and rehabilitation. In the event of a fire, personal safety will be the first priority of the Holder or its contractors. The Holder or its contractors will:
 - o Operate all internal and external combustion engines on federally managed lands per 43 CFR 8343.1, which requires all such engines to be equipped with a qualified spark arrester that is maintained and not modified.
 - o Carry shovels, water, and fire extinguishers that are rated at a minimum as ABC - 10 pound on all equipment and vehicles. If a fire spreads beyond the suppression capability of workers with these tools, all will cease fire suppression action and leave the area immediately via pre-identified escape routes.

Exhibit A

- Initiate fire suppression actions in the work area to prevent fire spread to or on federally administered lands.
- Notify the Moab Interagency Fire Center (435) 259-1850 (or 911) immediately of the location and status of any escaped fire.

Travel and Transportation Protective Measures

39. The holder shall not enclose or obstruct in any manner any roads or trails commonly used for public travel or access to public lands surrounding the grant. The holder shall not erect nor maintain any signs or structures on or adjacent to any roads or trails without the prior written permission of the AO.
40. The holder may not construct new access roads or travel off road by vehicle to reach the grant area without the AO's prior written approval. Access with motorized vehicles/equipment must be kept to existing or approved constructed routes, in accordance with the Plan of Development. Cross country and off-route travel is not permitted; travel is restricted to existing routes.

Transfer of Federal Ownership/Relinquishment/Assignment

41. As per 43 CFR 2807.21, any proposed transfer of any right or interest in the ROW shall be filed with the AO. An application for assignment shall be accompanied by a showing of qualifications of the Assignee. The assignment shall be supported by a stipulation that the Assignee agrees to comply with and to be bound by the terms and conditions of the grant to be assigned. No assignment shall be recognized unless and until it is approved in writing by the AO.
42. In the event that the public land underlying the right-of-way (ROW) encompassed in this grant, or a portion thereof, is conveyed out of Federal ownership and administration of the ROW or the land underlying the ROW is not being reserved to the United States in the patent/deed and/or the ROW is not within a ROW corridor being reserved to the United States in the patent/deed, the United States waives any right it has to administer the right-of-way, or portion thereof, within the conveyed land under Federal laws, statutes, and regulations, including the regulations at 43 CFR Part [2800][2880], including any rights to have the holder apply to BLM for amendments, modifications, or assignments and for BLM to approve or recognize such amendments, modifications, or assignments. At the time of conveyance, the patentee/grantee, and their successors and assigns, shall succeed to the interests of the United States in all matters relating to the right-of-way, or portion thereof, within the conveyed land and shall be subject to applicable State and local government laws, statutes, and ordinances. After conveyance, any disputes concerning compliance with the use and the terms and conditions of the ROW shall be considered a civil matter between the patentee/grantee and the ROW Holder.

Termination/Reclamation Stipulations

43. Ninety (90) days prior to termination of the right-of-way, the holder shall contact the authorized officer to arrange a pre-termination conference. This conference will be held to review the reclamation plan as well as the termination provisions of the grant.

Exhibit B: Plan of Development

Attachment 1

Miscellaneous Attachments for SF-299 Form ECCR Right-of-way Request

Item #7 Response:

Emery County Coal Resources, Inc. (ECCR) is requesting a right-of-way to use portions of an existing drainage channel of the existing William Draw drainage, for access to a proposed geologic borehole and subsurface water monitoring well for the Lila Canyon Mine. This drainage channel will be used to provide partial access to a proposed borehole location on Utah State lands. This borehole (PBH-2) will be installed adjacent to the Williams Draw drainage in the NW1/4NW1/4 of Section 32, T 16 S, R 15 E of SLBM. Additionally, as no road access exists to the proposed drill site, the drill rig and supplies will be flown to the drill site by helicopter. Personnel would access the site via foot or ATVs through the existing drainage channel. Please see the attached Figure 1 for the proposed location of drill hole PBH-2, and the proposed right-of-way alignment along the existing drainage channel.

The proposed borehole, PBH-2, is part of a larger operation by ECCR to drill three (3) boreholes above the Lila Canyon Mine's coal leases to acquire more geologic data regarding the coal seam and the strata above the coal seam. After the drilling is complete and the data collected, this borehole will be converted into a subsurface water monitoring location with the installation of a piezometer within the borehole. The piezometer will remain active throughout the life of the coal mine, and for approximately five to ten years after the mine's closure to monitor the subsurface water per reclamation requirements.

The drill equipment will be staged from the PBH-1 drill pad, see Figure 1. The helicopter will have a short shuttle from the PBH-1 location to the PBH-2 drill site. There are no raptor nests within one mile of the area of the proposed helicopter flight path, according to the latest raptor survey conducted by ECCR, and on file with the Utah Division of Oil, Gas and Mining (UDOGM).

Additionally, it will be necessary to provide water to the drill site for the drilling activities. ECCR proposes that a tank and pump will be located on Utah State land, in the SE1/4SW1/4 of Section 31, Township 16 South, Range 15 East, SLBM, at the intersection of the Williams Draw drainage and the Turtle Canyon Road (see Figure 1). It is proposed that a temporary, flexible water hose, such as a PVC hose, will be laid on the ground surface; and the water will be pumped from the distribution point on Utah State lands via the hose to the drill site, also located on Utah State land. Figure 1 shows the proposed alignment of the water hose. As can be seen, the alignment follows the existing drainage, which provides relatively easy access to the proposed drill site.

This approach will eliminate the need to lay the temporary water hose over steep hillside slopes, and reduce potentially significant damage to that vegetation during the installation and extraction of the water hose. The existing drainage channel consists of wide, relatively flat channel bottom. It is proposed that the temporary water hose will be laid on the edge of the existing channel bottom to minimize the impact to the area's vegetation and environment.

The temporary water hose will consist of 500-foot segments which will be connected via quick release connections. These hose segments will be hauled by flatbed truck along the Turtle Canyon Road to the distribution point. Each hose segment will then be carried by ATV along the

alignment, connected to the previous segment, and rolled out on the ground. This will minimize damage to the vegetation along the channel banks. Such an approach will also minimize the impact on the local environment, and ensure there is an efficient way of conveying the required water to the drill site.

It is proposed that the distribution point be located adjacent to the existing Turtle Canyon Road on Utah State land. It will consist of a location where water trucks will be able to pump the water directly to the water tank set up at the distribution point. Then, a pump connected to the water tank will pump the water, via the temporary water hose, to the drill site. Figure 1 shows the proposed location of the distribution site, the proposed alignment of the temporary water hose, and the proposed drill site (PBH-2).

WILLIAMS DRAW ACCESS - The access to PBH-2 is planned along the alignment of the existing channel of the Left Fork of the Williams Draw drainage channel. The lower portion of the channel is currently used by a rancher to access a water trough in the Right Fork of the Williams Draw drainage. The area of the channel that is planned to be used is presented on Figure 1. As discussed above, the distribution point, water tank and pump will be located on Utah State land. From the northern edge of the State land, along the existing channel, the water line will be temporarily laid along the channel bottom until it reaches the western boundary of Section 32, then continuing to the proposed drill site. The water hose segment on federal land will approximately follow the alignment of the existing drainage channel as shown on Figure 1, and is approximately 1,590 meters (5,220 feet) in length.

A legal description of the water hose alignment is attached as Appendix A.

EQUIPMENT DESCRIPTION

Equipment to be used for the project is anticipated to include:

- ATVs to lay the temporary water hose and for personnel access to the drill site

USAGE AND TIMING

It is anticipated that the drainage channel usage for the William Draw channel will take approximately one week to situate the distribution point, water tank and pump, and layout the planned temporary water hose. Once these are established, the mobilization, set-up, drilling, well completion, development, tear down, and de-mobilization of the monitoring well will take approximately two weeks. The equipment for the borehole drilling will consist of the helicopter drill rig, two water trucks, a flat-bed truck, and a pickup truck. ATVs will be used to lay the temporary water hose and provide personnel access to the drill site through the existing drainage channel. No trucks will be utilized within this right-of-way. Some materials for the well will be hauled to and stored at the PBH-1 drill site, then flown via helicopter to the PBH-2 drill site.

After the well is completed, the Williams Draw channel will only be used for casual use access to the monitoring well by ECCR personnel for the duration of the mining, as required for water monitoring purposes. Currently, the actual duration for access to the drill site is unknown. Typically, the duration of said water monitoring sites is the life of mining, plus 5 to 10 years

after mining. Further, it is anticipated the drainage channel will need to be used for approximately a one-month period at the end of this time frame to allow personnel access for plugging, abandonment and reclamation of the well.

Access for long-term monitoring will be limited to the calendar period generally from April to November, through the period from after snow melt until the first significant snows of winter. It is not anticipated that year-round access will be occurring.

PRODUCT TRANSPORT

As the scope of this project is to install and monitor the water well, products will neither be produced from the well, nor transported through the drainage channel. The only transport through the drainage channel will be for casual access of personnel to monitor the well for the long-term, with the temporary water line and drilling personnel access in the short-term.

TEMPORARY WORK AREAS

The temporary water line that will be located within the existing channel bottom, and is the only use planned on Federal ground. The drill pad, distribution site, and storage areas will all be located on Utah State lands. As described above, the temporary installation of the water hose is not expected to cause any significant disturbance along the channel bottom. Following the drilling activities, the temporary water hose will be removed and transported down the channel via ATV, and then hauled away by the driller. If any accidental disturbance does occur to the existing drainage channel, the disturbance will be repaired to pre-disturbance condition by ECCR as quickly as possible.

No additional temporary work areas are required.

Item #17 response:

The planned access, via the existing drainage channel, would have a very limited environmental impact. The water line would be temporary, and the majority of the work would be accomplished within approximately one month. The casual access to the well site would be relatively infrequent.

Air quality and visual impacts would be minimal due to the remote site locations and minimal pieces of equipment used. While the drilling equipment will be located immediately adjacent to the Turtle Canyon Road, or flown to the PBH-2 drill site, the duration of the drilling activity will be approximately one month in length at each drill site (see Figure 1).

Surface water impacts would consist of potential increased sedimentation and potential spillage/leakage of hydrocarbon products during the drilling process. To address these concerns, the downstream side of the drill pad will be protected by a small berm that will drain toward a small sump. This sump will have an overflow that drains through a silt fence. This combination of structures will collect any sediment and potential spills from the site.

Streams in the area are ephemeral, so flows are limited to short duration precipitation events. Any surface water flowing into or within the existing drainage channel would not be affected by the presence of the temporary water line during these storm events. The rest of the time, these drainages are dry. Thus, surface water impacts would be minimized.

No groundwater impacts are anticipated, as no long-term disturbances are planned. The well drilling would result in a monitoring well completed to monitor the deep groundwater systems in the area. No aquifers are known to exist in the area.

Noise impacts would consist of a short duration of engine noise resulting from the trucks and drill rig accessing the site and operating on the site, as well as the helicopter flights from the PBH-1 drill site to the PBH-2 drill site and back. Such short duration use is not expected to impact the animals or limited number of people using the area.

The existing drainage channel would only be used for personnel access and the temporary water line during the drilling process. Casual access to the well would only occur periodically. Vegetation and soils adjacent to the existing drainage channel would not be disturbed, and the minor disturbance from the temporary water line and personnel access would not be a significant impact. Any significant impacts caused to the existing drainage channel by the temporary water line, or by personnel access, would be repaired as soon as possible by ECCR.

Item #18 Response:

The probable effect of the proposed project on wildlife in the area will be limited to the temporary water line, personnel access, and well construction. There are no fish, marine life, or marine mammals in the project or adjacent areas. Minimal vegetative impact to the grasses and forbs along the edges of the existing drainage channel could possibly occur due to the temporary water line and personnel access. All efforts to diminish potential impacts to vegetation along the existing drainage channel will be utilized. No threatened or endangered species are known to exist along the project right-of-way.

Please see Appendix B, "Lila Canyon Drill Hole Project Biological Survey," performed by SWCA Environmental Consultants in March 2022 for more information.

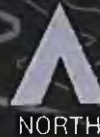


Exhibit C Map: UTU-96032

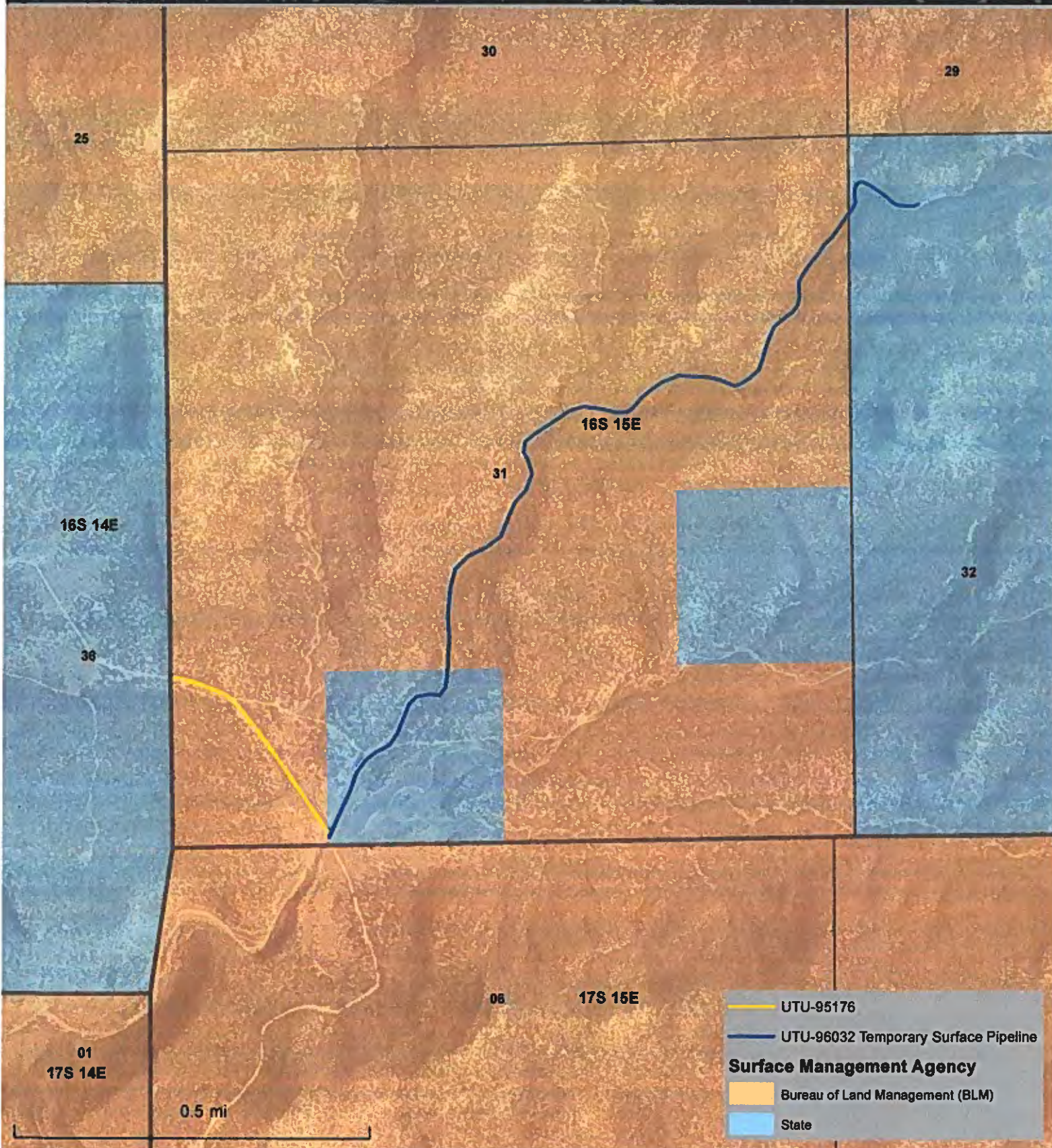
Tempoary Surface Water Pipeline

Emery County, UT

Price Field Office
125 S. 600 W
Price, Utah 84501
435 636 3600



No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. Original data 6/22/2022
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ATTACHMENT B
CULTURAL RESOURCE INVENTORY
ABSTRACT

**(FULL INVENTORY IS PROVIDED IN
CONFIDENTIAL FILES)**

CLASS III ARCHAEOLOGICAL RESOURCES SURVEY FOR THE LILA CANYON MINE BOREHOLE AND ACCESS ROUTE PROJECT, EMERY COUNTY, UTAH

Prepared for

Emery County Coal Resources, Inc.
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St. Clairsville, Ohio 43950

Submitted to

Bureau of Land Management
Price Field Office
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Utah State Antiquities Project No. U22ST0122

SWCA Project No. 72272

SWCA Cultural Resources Report No. 22-309

May 2022

ABSTRACT

Report Title. *Class III Archeological Resources Survey for the Lila Canyon Mine Borehole and Access Route Project, Emery County, Utah*

Report Date. Draft May 2022

Lead Agency Name. Bureau of Land Management (BLM), Price Field Office

Permit and Project Numbers. Utah State Antiquities Project No. U22ST0122; BLM Cultural Resource Use Permit No. 20UT55126; Public Lands Policy Coordinating Office Permit No. 96 (issued to Mike Cannon); SWCA Environmental Consultants (SWCA) Project No. 72272; SWCA Cultural Resources Report No. 22-309

Land Ownership Status. BLM, Utah School and Institutional Trust Lands Administration (SITLA)

Project Description. Emery County Coal Resources, Inc. plans to conduct exploration drilling associated with the Lila Canyon coal mine in Emery County, Utah, and requested that SWCA provide an archaeological resources survey to support permitting of the exploration program by the Utah Department of Oil, Gas and Mining. The exploration program will consist of drilling three bore holes. Drill pads for two of the bore holes will be 100 × 100 feet, and the third will be 60 × 60 feet. Two of the boreholes will be adjacent to an established road, and the third will require use of an overland access route approximately 1.3 miles long. The project is on lands administered by the BLM Price Field Office and SITLA. The archaeological survey area for the project consisted of each pad plus a 100-foot buffer around it and a 100-foot-wide corridor (50 feet on each side of the centerline) for the access route.

Survey Location. The survey area is on BLM- and SITLA-administered lands approximately 30 miles southeast of Price, Utah. The survey area is in portions of Sections 25 and 36, Township 16 South, Range 14 East, and Sections 31 and 32, Township 16 South, Range 15 East, Salt Lake Meridian, and is visible on the Lila Point, Utah, U.S. Geological Survey 7.5-minute quadrangle.

Number of Acres Surveyed. The survey area consists of 22.5 acres, consisting of 13.9 acres of BLM-administered lands and 8.6 acres of SITLA-administered lands. All 22.5 acres were surveyed at an intensive (Class III) level.


National Register of Historic Places (NRHP)–Eligible Sites. None

NRHP-Ineligible Sites. One site (42EM5609)

Summary Recommendations. One newly recorded site (42EM5609) and one isolated find (IF-01) were identified during the survey. Both the site and the IF are recommended not eligible for the NRHP. SWCA recommends a finding of no historic properties affected for the project and recommends that no further cultural resources work is required.

In the event that previously unidentified archaeological materials or human remains are discovered during implementation of the project, all activity should stop, and the applicable agency archaeologist should be notified to determine an appropriate course of action within the parameters of the Archaeological Resources Protection Act, the National Historic Preservation Act, the Native American Graves Protection and Repatriation Act, applicable BLM guidelines, and State of Utah regulations. Appropriate consultation with the Utah State Historic Preservation Office, Tribes, law enforcement (in the case of human remains), and other applicable parties must take place as required by 36 Code of Federal Regulations 800.

ATTACHMENT C
BIOLOGICAL SURVEYS



Lila Canyon Drill Hole Project Biological Survey Report

MARCH 2022

PREPARED FOR

Emery County Coal Resources, Inc.

PREPARED BY

SWCA Environmental Consultants

LILA CANYON DRILL HOLE PROJECT BIOLOGICAL SURVEY REPORT

Prepared for

Emery County Coal Resources, Inc.

P.O. Box 910

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Prepared by

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SWCA Project No. 72272

March 2022

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1 INTRODUCTION

Emery County Coal Resources (Emery) requested SWCA Environmental Consultants' (SWCA's) support to conduct biological resource surveys for the drill hole development project (project) which is part of the Lila Canyon coal mine (Lila mine). Emery plans to develop three exploratory drill holes as part of the Lila mine development. Data collected from these drill holes will be used for the Utah Department of Oil Gas and Mining (UDOGM) permit application and potential lease expansion activities.

1.1 Project Location

The Lila mine is located in the foothills of the Book Cliffs mountains approximately 35 miles southeast of Price, Utah, in an area that is also referred to as the Book Cliffs coal field. Emery is proposing three drill hole locations for the project that can be accessed via Highway 124 along an unnamed dirt road. Two of the drill holes, PBH-1 and PBH-3, are located adjacent to the existing dirt road to minimize surface disturbance from overland travel. Drill hole PBH-2 is located approximately 1.5 miles from the road up an unnamed, ephemeral wash. Emery intends to access the drill site location via the wash. Drill holes PBH-1 and PBH-2 are located on lands administered by the Utah School and Institutional Trust Lands Administration (SITLA) and PBH-3 is located on lands administered by the Bureau of Land Management (BLM) (Appendix A, Figure A-1).

1.2 Project Area Description

The three proposed drill hole locations will be placed to the east of the headwaters of Little Park Wash, an intermittent tributary to the Price River. Several ephemeral drainages flow west through the project area into Little Park Wash (see Appendix A, Figure A-1). The general vegetation community surrounding the drill hole locations is pinyon juniper habitat at an elevation of approximately 6,700 to 6,900 feet. Dominant plant species within the area include Douglas-fir (*Pseudotsuga menziesii*), pinyon pine (*Pinus edulis*), Utah juniper (*Juniperus osteosperma*), big sagebrush (*Artemisia tridentata*), and rubber rabbitbrush (*Ericameria nauseosa*).

Soils within the project area are a mix of silty loam and clay loam derived from sediments eroded from the adjacent Book Cliffs. Observations from the field surveys indicate that cryptobiotic crusts are present throughout the Utah juniper stands (Appendix B).

2 METHODS

2.1 Agency Consultation

SWCA contacted UDOGM; BLM Price Field Office (PFO); U.S. Fish and Wildlife Service, Utah Field Office (USFWS); and Utah Division of Wildlife Resources (UDWR) in preparation for the desktop analysis and site surveys for the project. Agency personnel, including wildlife biologists and botanists, were consulted for project-specific sensitive species and analysis requirements.

2.2 Desktop Analysis Methods

SWCA used information from several database systems and agency personnel to compile a list of federal and state listed species for the project.

2.2.1 U.S. Fish and Wildlife Listed Species

The USFWS Information for Planning and Consultation (IPaC) database was used to procure a list of federally listed threatened, endangered, and candidate species, and birds of conservation concern that may occur, or have critical habitat within the project area (Appendix C). Table 1 in Section 3.1.1 lists the species identified by the USFWS IPaC.

2.2.2 Bureau of Land Management Sensitive Species

Both the BLM PFO wildlife biologist and botanist were consulted to help identify sensitive species that may occur within the project area. They used habitat spatial modeling and known species occurrences to determine the final list of sensitive species with the potential to occur (Appendix D).

2.2.3 Utah State Listed Species

The Utah Natural Heritage Program (UNHP) maintains a list of Species of Greatest Conservation Need (SGCN) throughout the state of Utah. Data from the online mapping program were used to determine which state listed species have the potential to occur within the project area. SWCA reviewed the list with biologists from the UDWR Price District Office (Table 2) and consulted with the biologists regarding the potential presence of and possible survey requirements for bats. Given the relatively low volume of surface disturbance for the project, it was determined that bats would likely not be adversely affected, and surveys would not be required (see Appendix D).

2.3 Field Survey Methods

Results from the desktop analysis were used to inform suitable habitat surveys in the field. Two SWCA biologists conducted suitable habitat surveys on March 8, 2022, to confirm the presence or absence of habitat for each sensitive species. Meandering transects, in accordance with survey protocols, were walked throughout the project area. The entire project area and the associated species buffers were surveyed. Observations and data were recorded on tablets with Esri ArcGIS capabilities.

3 RESULTS

3.1 Desktop Analysis Results

3.1.1 U.S. Fish and Wildlife Listed Species

The IPaC analysis identified eight listed threatened, endangered, or candidate species with potential to occur within the project area. Additionally, one bird of conservation concern (BCC) was also identified. A summary of the IPaC results is provided in Table 1.

Table 1. IPaC Species List

Category	Common Name	Scientific Name	Status	Field Survey Required?	Habitat Description
Birds	Mexican spotted owl	<i>Strix occidentalis lucida</i>	Threatened	Yes	Rocky canyons. Nesting habitat in caves or cliff ledges in steep-walled canyons.
	Black rosy-finch	<i>Leucosticte atrata</i>	BCC	No*	Breeding habitat in areas above treeline with cliffs and rockslides
Fish	Bonytail chub	<i>Gila elegans</i>	Endangered	No*	Colorado River and perennial tributaries
	Colorado pikeminnow	<i>Ptychocheilus lucius</i>	Endangered	No*	Colorado River and perennial tributaries
	Humpback chub	<i>Gila cypha</i>	Threatened	No*	Colorado River and perennial tributaries
	Razorback sucker	<i>Xyrauchen texanus</i>	Endangered	No*	Colorado River and perennial tributaries
Insects	Monarch butterfly	<i>Danaus plexippus</i>	Candidate	Yes	Milkweed stands within prairies, meadows, grasslands and roadsides
Flowering plants	Jones cycladenia	<i>Cycladenia humilis</i> var. <i>jonesii</i>	Threatened	Yes	Mixed desert scrub habitats within Gypsiferous, saline soils of the Cutler, Summerville, and Chinle Formations
	Ute ladies'-tresses	<i>Spiranthes diluvialis</i>	Threatened	Yes	Wet, riparian habitat, most often associated with perennial streams

Source: USFWS (2022).

*Surveys for these species were not required due to lack of habitat within project area.

Field surveys were determined to be unnecessary for species that lacked suitable habitat within the project area based on SWCA's desktop analysis, habitat evaluation and agency consultation.

3.1.2 Bureau of Land Management Sensitive Species

One BLM sensitive plant species, Horse Canyon stickleaf (*Mentzelia multicaulis* var. *librina*), was identified with potential to occur within the project area (see Appendix D).

A known population of Horse Canyon stick leaf exists approximately 5 miles north of the project area. Suitable habitat for the species includes sagebrush, rabbitbrush, and pinyon-juniper communities at elevations of about 6,200 feet on the Mancos Shale and Price River Formations (Utah Native Plant Society 2020).

3.1.3 Utah State Listed Species

The UNHP database identified six SGCN with potential to occur within the project area. A summary of the SGCN is provided in Table 2.

Table 2. Utah Natural Heritage Program Species of Greatest Conservation Need List

Category	Common Name	Scientific Name	Field Survey Required?	Habitat Description
Birds	Peregrine falcon	<i>Falco peregrinus</i>	No*	Cliffs and tall, human-made structures surrounded by open or partially wooded landscapes with access to nearby riparian habitat.
	Golden eagle	<i>Aquila chrysaetos</i>	No*	Open shrub and grassland communities; often associated with prairie dog colonies.
	Burrowing owl	<i>Athene cunicularia</i>	No*	Open shrub and grassland communities; can also be found in vacant lots, pastures, and other similar areas of disturbance.
	Ferruginous hawk	<i>Buteo regalis</i>	No*	Lower-elevation grassland, shrubsteppe, and desert habitats. Winter habitat is often associated with prairie dog colonies.
Mammals	Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	No†	Cavern-like structures including mines, buildings, and rock crevices located within sagebrush, desert scrub, pinyon-juniper woodland and ponderosa pine communities.
	White-tailed prairie dog	<i>Cynomys leucurus</i>	Yes	Arid to semi-arid grassland and shrub communities between 4,200 and 7,500 feet elevation.

Sources: USFWS (2022), UDWR (2021).

*Surveys for these species were not required as Lila mine conducts raptor surveys for the general mine area.

† Surveys for these species were not required based on consultation with the UDWR (see Appendix D).

3.2 Field Survey Results

No suitable habitat was identified during the field survey for federally or state listed threatened, endangered, or sensitive species. Details of the survey results are provided in Table 3.

Habitat within the survey area consisted of open mixed shrub stands dominated by big sagebrush and rubber rabbitbrush at lower elevations. These areas transitioned to pinyon-juniper forests as elevation increased. Stands of Douglas-fir were dominant at higher elevations within the survey area.

Incidental observations of wildlife and wildlife sign were recorded for mule deer (*Odocoileus hemionus*) (tracks), coyote (*Canis latrans*) (tracks), cottontail rabbit (*Sylvilagus audubonii*) (tracks), and common raven (*Corvus corax*).

Table 3. Suitable Habitat Survey Results

Category	Common Name	Scientific Name	Listing Status	Survey Buffer	Suitable Habitat Present?	Reason
Birds	Mexican spotted owl	<i>Strix occidentalis lucida</i>	USFWS threatened	0.5 mile	No	Canyons with features consistent with Mexican spotted owl suitable habitat parameters were not present within the survey area.
Insects	Monarch butterfly	<i>Danaus plexippus</i>	USFWS candidate	N/A	No	Milkweed stands were not present within survey area.
Flowering plants	Jones cycladenia	<i>Cycladenia humilis</i> var. <i>jonesii</i>	USFWS threatened	300 feet	No	Soil types and habitats consistent with known species habitat parameters were not present within the survey area.

Category	Common Name	Scientific Name	Listing Status	Survey Buffer	Suitable Habitat Present?	Reason
	Ute ladies'-tresses	<i>Spiranthes diluvialis</i>	USFWS threatened	300 feet	No	Aquatic and riparian habitat was not present within the survey area
	Horse Canyon stickleaf	<i>Mentzelia multicaulis</i> var. <i>librina</i>	BLM sensitive	300 feet	No	Soil types and elevation gradient consistent with habitat parameters were not present within survey area.
Mammals	White-tailed prairie dog	<i>Cynomys leucurus</i>	UNHP SGCN	0.25 mile	No	No prairie dog burrows were observed within the survey area.

Sources: USFWS (2022), UDWR (2021).

N/A = not applicable

4 SUMMARY

A desktop analysis and consultation with BLM and UDWR biologists was conducted by SWCA to determine if federally and state listed species had the potential to occur within the survey area of the Lila mine project. Field surveys were conducted for Jones cycladenia, Ute ladies'-tresses, monarch butterfly, Mexican spotted owl, and white-tailed prairie dog. General habitats within the survey area consisted of Douglas-fir and pinyon-juniper forests interspersed with open mixed-shrub habitats. SWCA confirmed that no suitable habitat existed for the list of potential species within the survey area. Figures depicting the project location and survey area are located in Appendix A. Photographs of the survey area are located in Appendix B.

5 LITERATURE CITED

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APPENDIX A

Maps

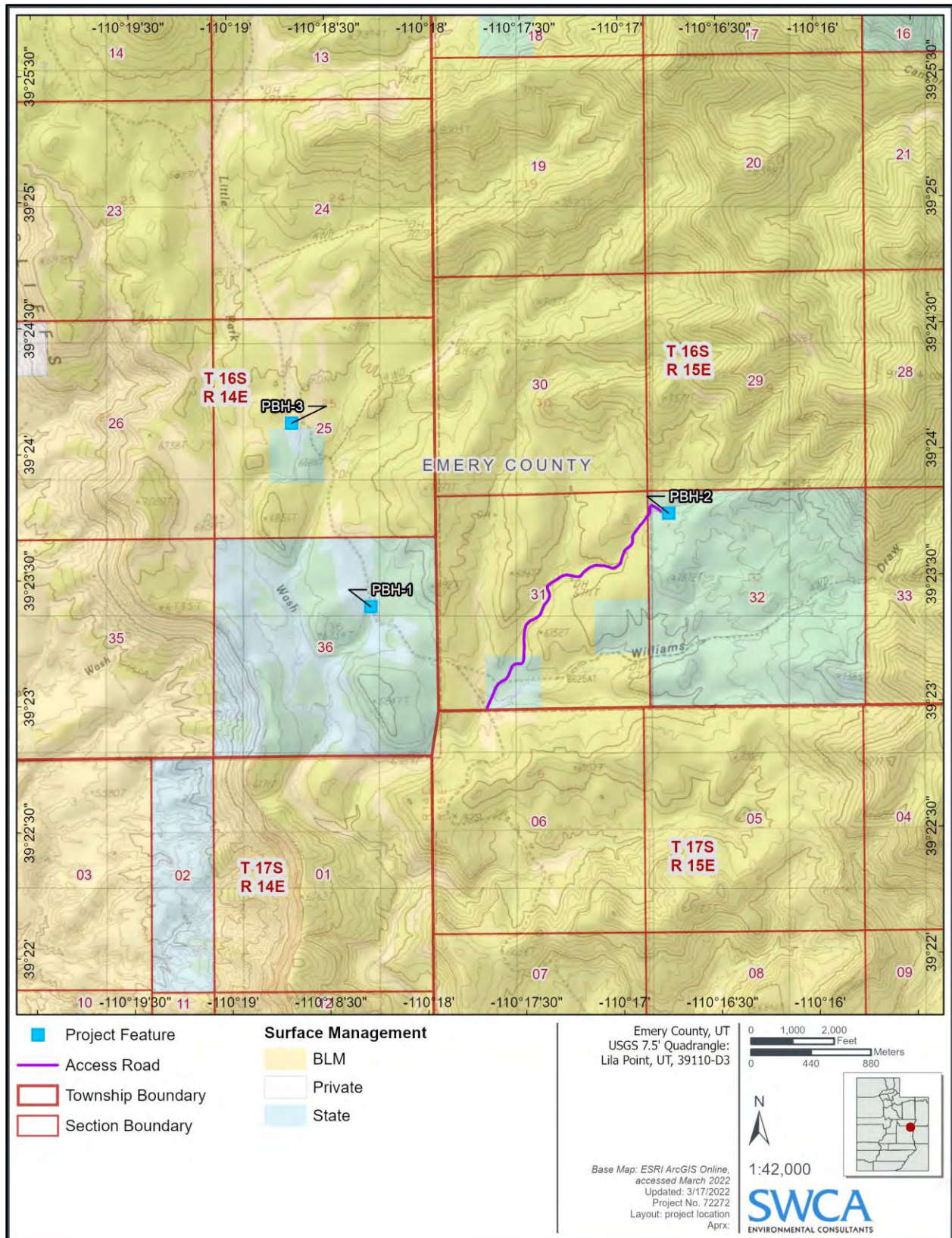


Figure A-1. Project location.

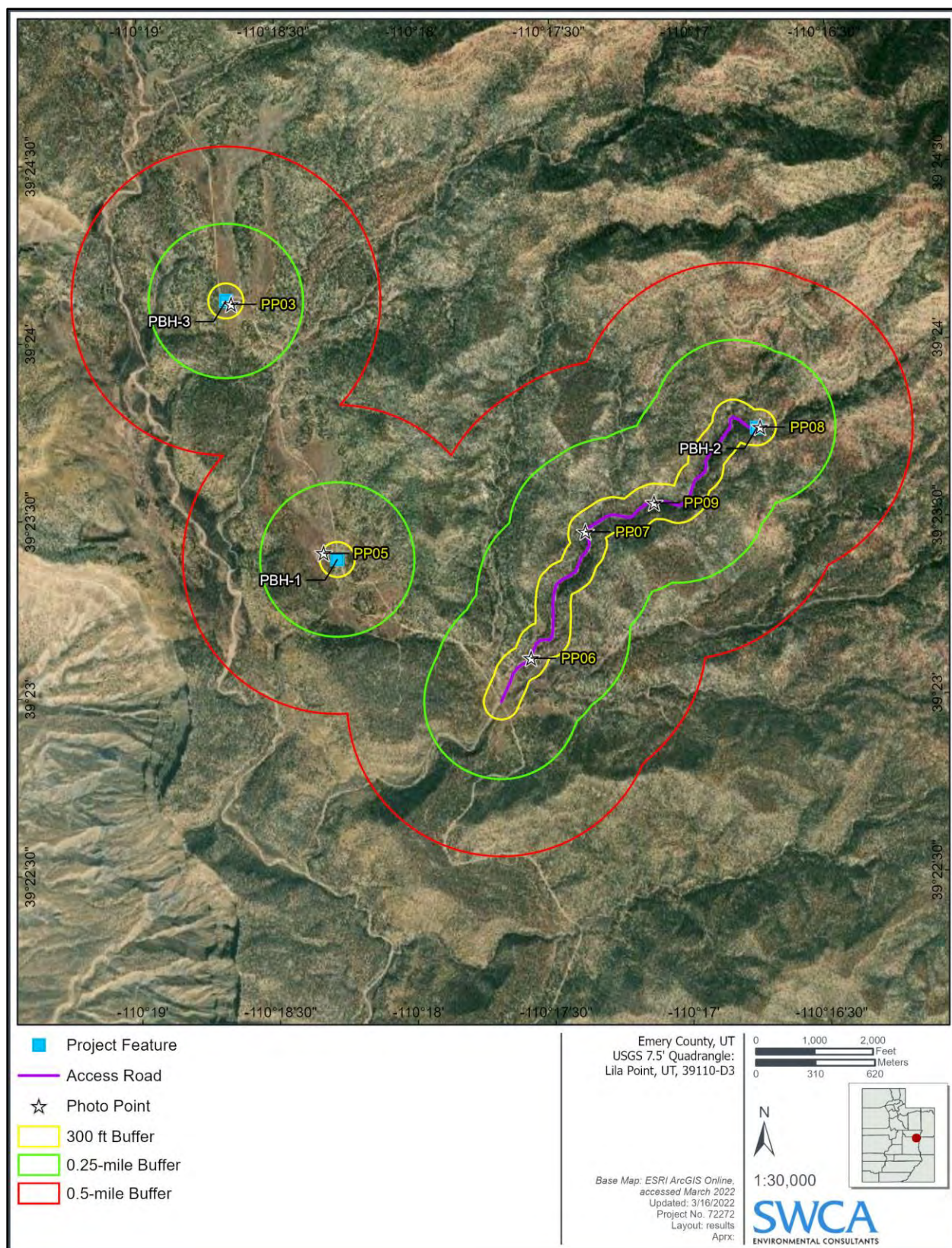


Figure A-2. Survey results.

APPENDIX B

Photographs



Figure B-1. PP03, ephemeral wash and general habitat near PBH-3.



Figure B-2. PP05, general habitat, including cryptobiotic crust near PBH-1.



Figure B-3. PP06, ephemeral wash to be used as access road for PBH-2.



Figure B-4. PP07, ephemeral wash to be used as access road for PBH-2.



Figure B-5. PP09, ephemeral wash to be used as access road for PBH-2.

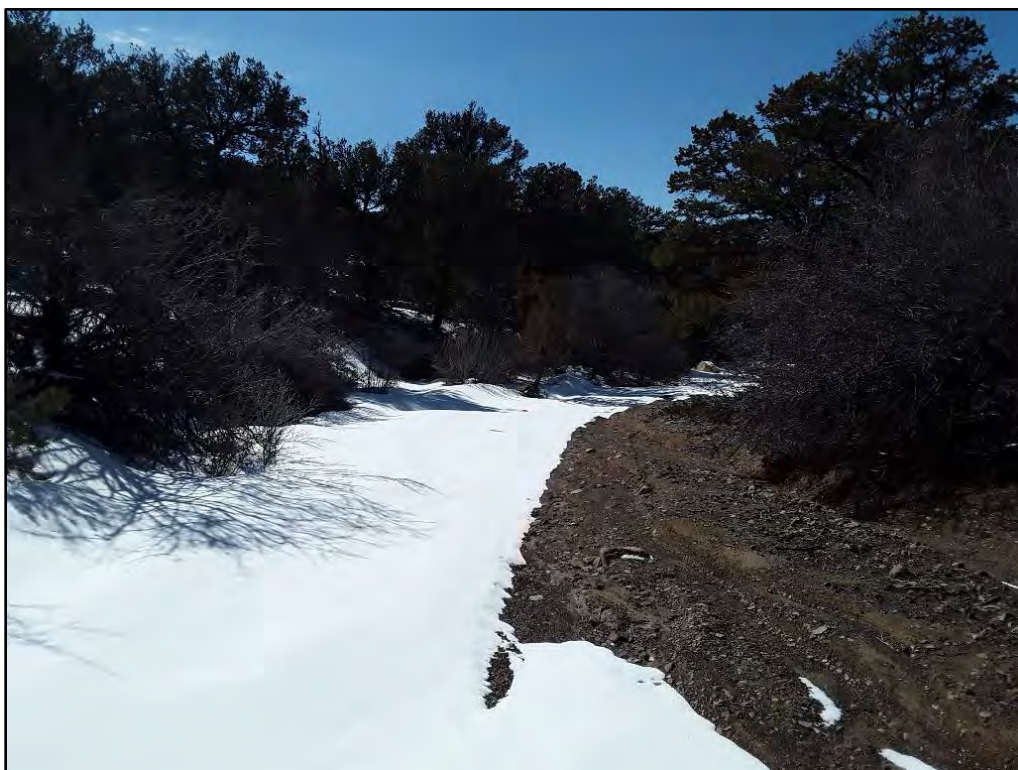


Figure B-6. PP08, habitat near PBH-2.

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APPENDIX C

U.S. Fish and Wildlife Service Information for Planning and Consultation Resource List

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Emery County, Utah



Local office

Utah Ecological Services Field Office

☎ (801) 975-3330

📅 (801) 975-3331

2369 West Orton Circle, Suite 50

West Valley City, UT 84119-7603

<http://www.fws.gov>

<http://www.fws.gov/utahfieldoffice/>

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Birds

NAME	STATUS
<p>Mexican Spotted Owl <i>Strix occidentalis lucida</i></p> <p>Wherever found</p> <p>There is final critical habitat for this species. The location of the critical habitat is not available.</p> <p>https://ecos.fws.gov/ecp/species/8196</p>	Threatened

Fishes

NAME	STATUS
<p>Bonytail <i>Gila elegans</i></p> <p>Wherever found</p> <p>There is final critical habitat for this species. The location of the critical habitat is not available.</p> <p>https://ecos.fws.gov/ecp/species/1377</p>	Endangered
<p>Colorado Pikeminnow (=squawfish) <i>Ptychocheilus lucius</i></p> <p>This species only needs to be considered if the following condition applies:</p> <ul style="list-style-type: none"> • The project depletes water from the Colorado River basin or its tributaries. <p>There is final critical habitat for this species. The location of the critical habitat is not available.</p> <p>https://ecos.fws.gov/ecp/species/3531</p>	Endangered

Humpback Chub *Gila cypha*

Threatened

Wherever found

There is **final** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/3930>

Razorback Sucker *Xyrauchen texanus*

Endangered

Wherever found

There is **final** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/530>

Insects

NAME

STATUS

Monarch Butterfly *Danaus plexippus*

Candidate

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/9743>

Flowering Plants

NAME

STATUS

Jones Cycladenia *Cycladenia humilis* var. *jonesii*

Threatened

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/3336>

Ute Ladies'-tresses *Spiranthes diluvialis*

Threatened

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/2159>

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public

have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Black Rosy-finch *Leucosticte atrata*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9460>

Breeds Jun 15 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

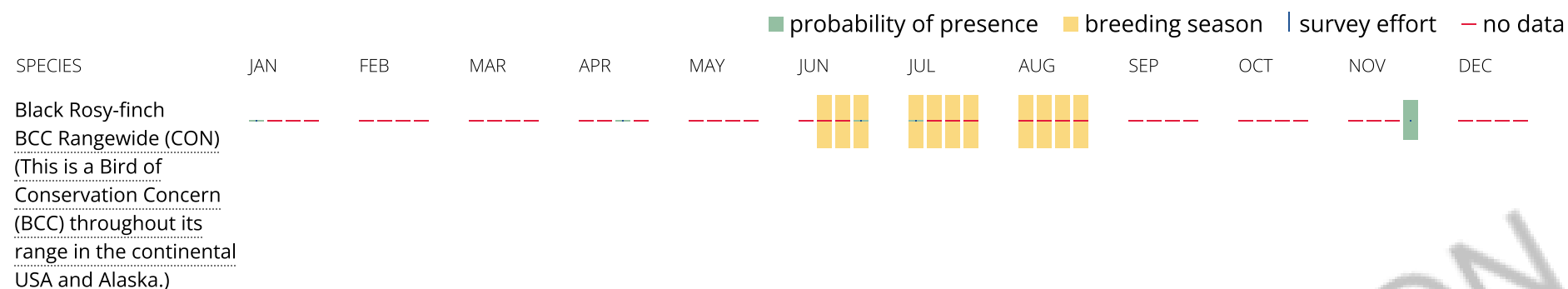
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

WETLAND INFORMATION IS NOT AVAILABLE AT THIS TIME

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the [NWI map](#) to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

APPENDIX D

Agency Correspondence Emails

From: [Burnham, Dashell A](#)
To: [Chad Incorvia](#)
Subject: Re: [EXTERNAL] Lila Canyon Mine
Date: Tuesday, February 15, 2022 9:52:19 AM
Attachments: [image001.png](#)

EXTERNAL: This email originated from outside SWCA. Please use caution when replying.

Chad,

Thank you for sending the information over. After reviewing my files, there are BLM sensitive Horse Canyon stick leaf occupied habitats to the north about 5 miles. They occur in a completely different soil type and elevation gradient, so I am doubtful that there would be suitable habitat in the proposed expansion area. That was the only other species I thought you might run into. If you could include it in the bio write up though, to show that it was looked at, but no suitable habitat determined that would work. Otherwise, plan on doing the habitat assessments for the ULT's and Cycladenia that we discussed yesterday.

Let me know if you have any other questions on this.

Thanks!

DaShell Burnham
Botanist
Bureau of Land Management
Green River District, Price Field Office
Phone: 435-636-3645

"Don't judge each day by the harvest you reap but by the seeds that you plant"
- Robert Louis

From: Chad Incorvia <Chad.Incorvia@swca.com>
Sent: Monday, February 14, 2022 12:17 PM
To: Burnham, Dashell A <dburnham@blm.gov>
Subject: [EXTERNAL] Lila Canyon Mine

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Hi Dashell,

Thanks for chatting with me today about the Lila Canyon Mine expansion.

I've attached the study area map as well as the project location maps from the EA. We are assessing the red highlighted area on the study area map. Please let me know if there are any BLM sensitive species that we should assess in our desktop review and subsequent field habitat assessment.

Thanks!

Chad Incorvia
Project Manager

SWCA Environmental Consultants
510 E Main St.
Vernal, Utah 84078
C 814-671-0698



From: [Scott Gibson](#)
To: [Chad Incorvia](#); [Kade Lazenby](#)
Subject: Re: Lila Canyon Bats
Date: Thursday, March 24, 2022 4:10:16 PM
Attachments: [image001.png](#)

EXTERNAL: This email originated from outside SWCA. Please use caution when replying.

Chad,

The main concern would be migratory birds and raptors. Given the proximity to cliffs it's possible for disturbance to nesting raptors, and migratory birds will almost assuredly be using the pinyon-juniper woodlands for nesting (keep in mind Pinyon Jays can start nesting earlier than other birds and could have a nesting colony in the area). If work was to occur in spring or early summer you would definitely run the risk of take.

I don't see any issues specific to bats.

Thanks,

Scott

Scott Gibson
Wildlife Conservation Biologist, Southeastern Region
Utah Division of Wildlife Resources
319 N. Carbonville Rd., Suite A
Price, UT 84501
435-820-6249
segibson@utah.gov

On Tue, Mar 22, 2022 at 11:30 AM Chad Incorvia <Chad.Incorvia@swca.com> wrote:

Hi Scott,

I was wondering if you had a minute to look into the project information that I sent over to you?

Thanks!

Chad Incorvia

Project Manager

SWCA Environmental Consultants

37 E Main St.
Vernal, Utah 84078
C 814-671-0698



From: Chad Incorvia
Sent: Wednesday, March 16, 2022 2:35 PM
To: Scott Gibson <segibson@utah.gov>
Cc: Kade Lazenby <klazenby@utah.gov>
Subject: RE: Lila Canyon Bats

Hi Guys,

I forgot about another project that Lila mine is proposing that I would appreciate your input on regarding bats (and other wildlife). It is a drill hole project to the south of the lease expansion area that we previously discussed. The mine intends to drill three holes to categorize the subsurface geology. The drill pads will be about 100'x100', with one temporary access road for crews to travel on. Drill equipment will be flown in with a helicopter. Attached are the KMZs for the proposed locations.

Let me know if you have any questions.

Thanks,

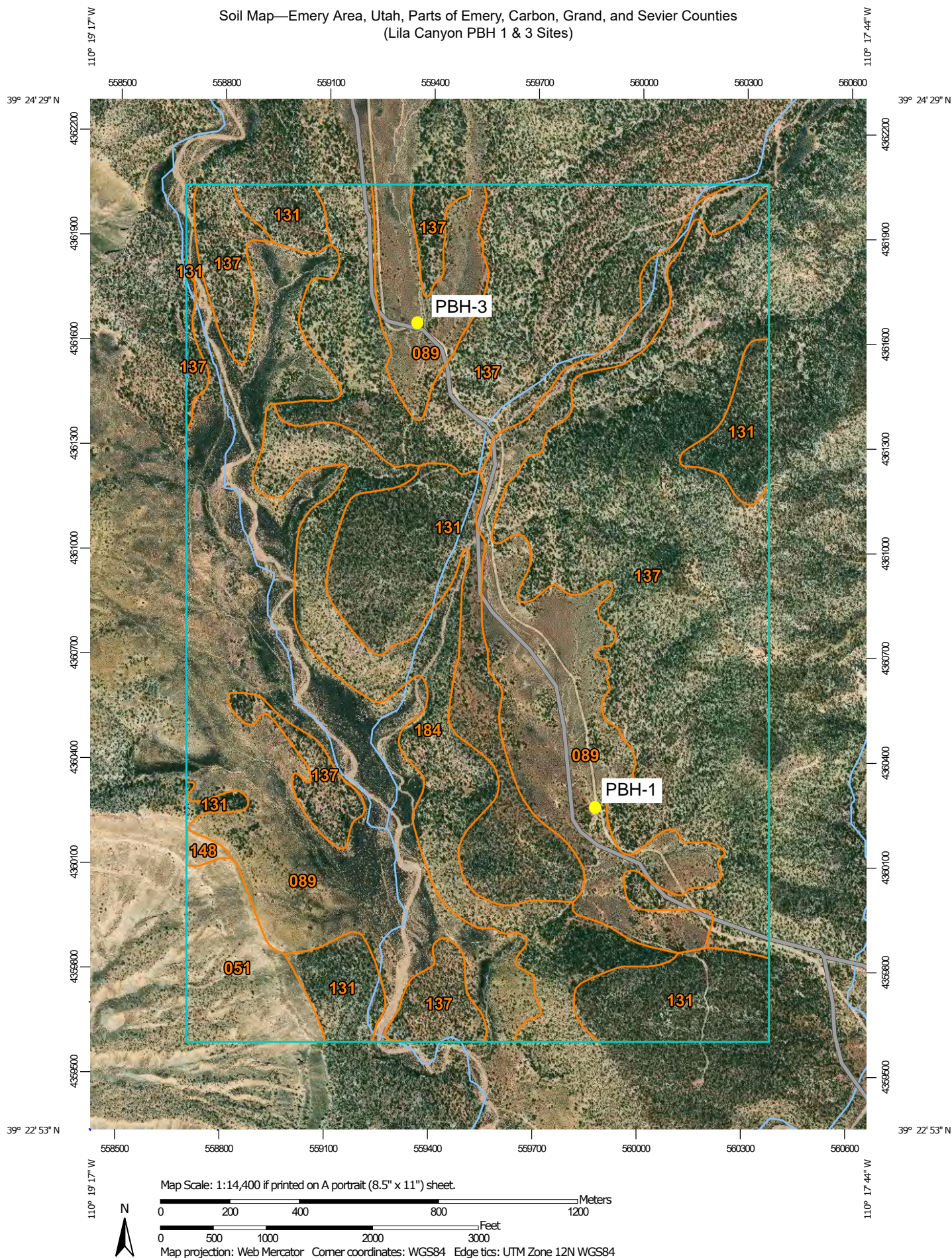
Chad Incorvia

Project Manager

SWCA Environmental Consultants
37 E Main St.
Vernal, Utah 84078

ATTACHMENT D
SOILS INFORMATION

Soil Map—Emery Area, Utah, Parts of Emery, Carbon, Grand, and Sevier Counties
(Lila Canyon PBH 1 & 3 Sites)



Soil Map—Emery Area, Utah, Parts of Emery, Carbon, Grand, and Sevier Counties
(Lila Canyon PBH 1 & 3 Sites)

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Emery Area, Utah, Parts of Emery, Carbon, Grand, and Sevier Counties

Survey Area Data: Version 10, Sep 10, 2021

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

Date(s) aerial images were photographed: Sep 2, 2010—Sep 15, 2017

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
051	Gerst-Strych-Badland complex, 30 to 70 percent slopes	34.5	3.4%
089	Lilapoint fine sandy loam, 1 to 5 percent slopes	350.8	34.4%
131	Podo-Skein-Rock outcrop complex, 3 to 15 percent slopes	148.1	14.5%
137	Rangecreek-Skein-Rabbitex complex, 6 to 45 percent slopes	393.6	38.6%
148	Rock outcrop-Cheeta-Rubble land complex, 45 to 200 percent slopes	2.0	0.2%
184	Zigzag-Badland-Rubble land complex, 15 to 50 percent slopes	91.8	9.0%
Totals for Area of Interest		1,020.8	100.0%

Emery Area, Utah, Parts of Emery, Carbon, Grand, and Sevier Counties

089—Lilapoint fine sandy loam, 1 to 5 percent slopes

Map Unit Setting

National map unit symbol: jybz
Elevation: 6,600 to 8,000 feet
Mean annual precipitation: 12 to 16 inches
Mean annual air temperature: 38 to 45 degrees F
Frost-free period: 85 to 120 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Lilapoint and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lilapoint

Setting

Landform: Drainageways
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Alluvium derived from sandstone and shale

Typical profile

A - 0 to 5 inches: fine sandy loam
Bw1 - 5 to 17 inches: loam
Bw2 - 17 to 22 inches: loam
Bw3 - 22 to 34 inches: fine sandy loam
C - 34 to 60 inches: gravelly sandy loam

Properties and qualities

Slope: 1 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: RareNone
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Moderate (about 6.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: B

Ecological site: R034BY009UT - Loamy Bottom (Basin Big
Sagebrush)

Hydric soil rating: No

Minor Components

Dancehall

Percent of map unit: 5 percent

Landform: Drainageways

Down-slope shape: Linear

Across-slope shape: Concave

Ecological site: R034BY009UT - Loamy Bottom (Basin Big
Sagebrush)

Hydric soil rating: No

Foy

Percent of map unit: 3 percent

Landform: Stream terraces

Down-slope shape: Linear

Across-slope shape: Convex

Ecological site: R034BY330UT - Upland Stony Loam (Pinyon-Utah
Juniper)

Hydric soil rating: No

Shupert

Percent of map unit: 2 percent

Landform: Drainageways

Down-slope shape: Linear

Across-slope shape: Concave

Ecological site: R034BY009UT - Loamy Bottom (Basin Big
Sagebrush)

Hydric soil rating: No

Data Source Information

Soil Survey Area: Emery Area, Utah, Parts of Emery, Carbon, Grand, and
Sevier Counties

Survey Area Data: Version 10, Sep 10, 2021

Soil Map—Emery Area, Utah, Parts of Emery, Carbon, Grand, and Sevier Counties
(PBH-2 Location)

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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

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

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

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

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

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

Soil Survey Area: Emery Area, Utah, Parts of Emery, Carbon, Grand, and Sevier Counties
Survey Area Data: Version 10, Sep 10, 2021

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

Date(s) aerial images were photographed: Sep 2, 2010—Sep 15, 2017

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
130	Podo-Rock outcrop complex, 40 to 70 percent slopes	76.8	25.0%
137	Rangecreek-Skein-Rabbitex complex, 6 to 45 percent slopes	229.2	74.6%
138	Rangecreek-Tosca-Rock outcrop complex, 35 to 75 percent slopes	1.2	0.4%
Totals for Area of Interest		307.2	100.0%

Soil Map—Emery Area, Utah, Parts of Emery, Carbon, Grand, and Sevier Counties
(PBH-2 Location)



Emery Area, Utah, Parts of Emery, Carbon, Grand, and Sevier Counties

137—Rangecreek-Skein-Rabbitex complex, 6 to 45 percent slopes

Map Unit Setting

National map unit symbol: 1r4s0

Elevation: 6,200 to 8,200 feet

Mean annual precipitation: 12 to 16 inches

Mean annual air temperature: 38 to 45 degrees F

Frost-free period: 85 to 120 days

Farmland classification: Not prime farmland

Map Unit Composition

Rangecreek and similar soils: 30 percent

Skein and similar soils: 25 percent

Rabbitex and similar soils: 15 percent

Minor components: 30 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Rangecreek

Setting

Landform: Mountain slopes, hills, structural benches

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Mountainflank, mountaintop

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Colluvium and/or slope alluvium derived from calcareous sandstone over residuum weathered from calcareous shale

Typical profile

A - 0 to 2 inches: gravelly loam

Bw - 2 to 7 inches: clay loam

C1 - 7 to 11 inches: paragravelly loam

C2 - 11 to 17 inches: very paragravelly clay loam

Cr - 17 to 27 inches: bedrock

Properties and qualities

Slope: 15 to 45 percent

Depth to restrictive feature: 8 to 20 inches to paralithic bedrock

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 18 percent

Gypsum, maximum content: 2 percent
Maximum salinity: Very slightly saline to moderately saline (2.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum: 8.0
Available water supply, 0 to 60 inches: Very low (about 2.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: D
Ecological site: R034BY315UT - Upland Shallow Clay Loam (Utah Juniper-Pinyon)
Hydric soil rating: No

Description of Skein

Setting

Landform: Structural benches
Landform position (two-dimensional): Summit
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Slope alluvium derived from calcareous sandstone over residuum weathered from sandstone and shale

Typical profile

A - 0 to 3 inches: gravelly loam
Bk - 3 to 10 inches: gravelly loam
R - 10 to 14 inches: bedrock

Properties and qualities

Slope: 6 to 40 percent
Depth to restrictive feature: 8 to 20 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Gypsum, maximum content: 3 percent
Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Very low (about 1.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: D
Ecological site: R034BY322UT - Upland Shallow Loam (Two-Needle Pinyon / Utah Juniper)
Hydric soil rating: No

Description of Rabbitex

Setting

Landform: Structural benches

Down-slope shape: Convex

Across-slope shape: Concave

Parent material: Slope alluvium derived from sandstone and shale
over residuum weathered from sandstone and shale

Typical profile

A - 0 to 8 inches: gravelly fine sandy loam

Bk1 - 8 to 15 inches: gravelly loam

Bk2 - 15 to 41 inches: channery loam

Bck - 41 to 46 inches: very stony loam

R - 46 to 50 inches: bedrock

Properties and qualities

Slope: 6 to 30 percent

Surface area covered with cobbles, stones or boulders: 1.0 percent

Depth to restrictive feature: 40 to 60 inches to lithic bedrock

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Very low
to moderately high (0.00 to 0.20 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 30 percent

Gypsum, maximum content: 4 percent

Maximum salinity: Nonsaline to moderately saline (0.0 to 8.0
mmhos/cm)

Sodium adsorption ratio, maximum: 6.0

Available water supply, 0 to 60 inches: Moderate (about 6.1
inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: B

Ecological site: R034BY334UT - Upland Stony Loam (Wyoming
big sagebrush)

Hydric soil rating: No

Minor Components

Podo

Percent of map unit: 13 percent

Landform: Mountain slopes

Landform position (three-dimensional): Mountainflank

Down-slope shape: Convex

Across-slope shape: Convex

Ecological site: R034BY322UT - Upland Shallow Loam (Two-
Needle Pinyon / Utah Juniper)

Hydric soil rating: No

Rock outcrop

Percent of map unit: 10 percent

Landform: Ledges, escarpments, erosion remnants, cliffs

Down-slope shape: Linear, convex

Across-slope shape: Linear, convex

Hydric soil rating: No

Pathead

Percent of map unit: 5 percent

Landform: Mountain slopes

Landform position (three-dimensional): Upper third of mountainflank

Down-slope shape: Convex

Across-slope shape: Convex

Ecological site: R047XC461UT - Mountain Stony Loam (Curlleaf Mountainmahogany)

Hydric soil rating: No

Helper

Percent of map unit: 2 percent

Landform: Mountain slopes

Landform position (three-dimensional): Mountainflank

Down-slope shape: Convex

Across-slope shape: Convex

Ecological site: R048AY409UT - Mountain Loam (Salina Wildrye)

Hydric soil rating: No

Data Source Information

Soil Survey Area: Emery Area, Utah, Parts of Emery, Carbon, Grand, and Sevier Counties

Survey Area Data: Version 10, Sep 10, 2021

Lila Canyon Mine Reclamation Bond Estimate

Bonding Calculations

Direct Costs

Subtotal Demolition and Removal	\$997,081.00
Subtotal Backfilling and Grading	\$598,716.00
Subtotal Revegetation	\$156,875.00

Direct Costs in 2018 Dollars	\$1,752,672.00	
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Indirect Costs

Mob/Demob	\$175,267.00	10.0%
Contingency	\$87,634.00	5.0%
Engineering Redesign	\$43,817.00	2.5%
Main Office Expense	\$119,182.00	6.8%
Project Management Fee	\$43,817.00	2.5%

Subtotal Indirect Costs 2018 Dollars	\$469,717.00	26.8%
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Total Cost	\$2,222,389.00	
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Escalation factor		0.0464
Number of years		1
Escalation	\$103,119.00	

Total Reclamation Cost 2023 Dollars	\$2,325,508.00	
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Bond Amount (rounded to nearest \$1,000)	\$2,326,000.00
2023 dollars	

Bond Posted	\$2,335,000.00
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Difference Between Posted Bond and Cost Estimate	\$9,000.00
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Lila Canyon Mine Reclamation Bond Estimate

Unit Costs

All unit costs were obtained from RS Means 2017 Site Work and Landscape Costs or RS Means 2017 Heavy Construction Costs, except as noted.
All costs include overhead and profit.

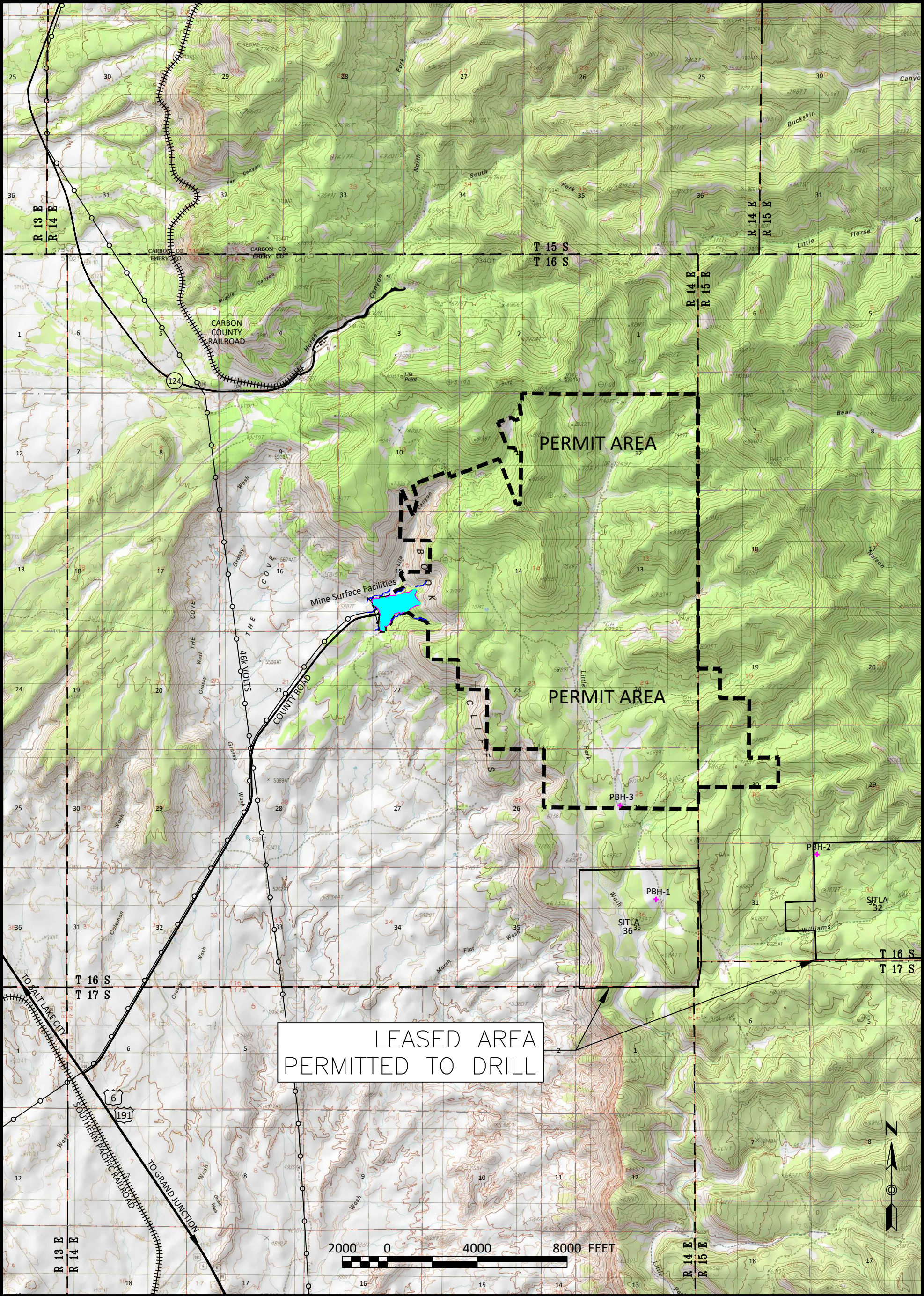
Means Number	Item	Unit Cost	Units	
32 91 13.23 3100	75 HP Dozer with scarifier	5.85	MSF	
32 91 13.16 0390	Power mulcher, large, hay 1" deep	30.50	MSF	
32 01 90.13 0180	Fertilizer, hydro spread, 1.5 lb/MSF	5.00	MSF	
32 92 19.14 4600	Hydroseeder (equipment and labor only)	22.00	MSF	
05 05 05.10 0380	Fabricated steel demo, 121-500 lb	68.00	EA.	
05 05 05.10 0390	Fabricated steel demo, 501-1000 lb	91.00	EA.	
02 41 19.27 0020	Torch cutting, steel, 1" thick plate	3.21	LF	Unit cost reduced 30% for no interior walls
02 41 16.13 0020	Building Demolition - Steel	0.27	CF	(see 02 41 16.13 5000)
02 41 16.13 0100	Building Demolition - Mixture of Types	0.40	CF	
13 05 05.50 0650	Pre-engineered steel bldg demo,>12,500 SF	1.68	SF Flr	
02 41 16.17 0280	Concrete Floor Demolition, 4" thick, reinforced	0.89	SF	
02 41 16.17 0420	Concrete Floor Demolition, 6" thick, reinforced	1.11	SF	Unit cost increased 10% for reinforcing
02 41 16.17 2500	Concrete Wall/Floor Demo, 12" thick, reinforced	1.57	SF	(see 02 41 16.17 2600)
03 05 05.10 0060	Concrete, Selective Demolition, Reinf 1-2% of X Sec	167.00	CY	
31 23 16.42 1300	Front End Loader 3CY	2.21	CY	
31 23 23.20 1014	12 CY (16 Ton) Dump Truck 1/2 rod. Trip	3.74	CY	
02 41 16.17 4200	On Site Disposal	11.40	CY	
Crew B-1	Portal seal, site preparation crew	1464.40	Day	See JennChem bid
04 22 10.34 1500	Block wall, reinforced, 4" thick (2 each seal)	8.50	SF	
JennChem	Seal portals, materials	4320.00	EA.	
JennChem	Seal portals, labor	265.00	HR	
Classic Helicopters	Portal seal support, material haulage	11965.00	Job	
23 05 05.10 3600	Mechanical Equipment Demolition, Heavy	1225.00	Ton	
26 05 05.10 1570	Demo of elec transformer, 3 ph, 750kVA	1700.00	EA.	
Crew A-3H	Hydraulic crane, 12 ton, with operator	1518.58	Day	
G1030 1100	Cut and fill common earth, 8" lift, 2 passes	7.00	CY	
31 23 16.42 0260	Excavation Bulk Bank 2 CY (322BL)	1.81	CY	
31 23 16.13 3080	Backfill Trench, min haul, FE loader 2 1/4 CY	2.50	CY	
Crew B-10M	Dozer, 300 HP, 50' haul, sandy clay and loam	2978.00	Day	
Crew B-14A	Loader, 500 HP, wheel mounted, 5 CY cap	4306.40	Day	
Crew B-10G	Sheepsfoot roller, 315 HP, 8" lifts, 2 passes	2313.60	Day	
Crew B-33K	Self-propelled scraper, 34 CY, 500 HP	418.20	HR	
Crew B-34F	Off-highway rear dump truck, 40 ton, 10 MPH	2234.80	Day	
Crew B-9A	5000 gallon water truck	2041.01	Day	
02 41 13.80 1700	Chain link removal, 8'-10' high	4.44	LF	
02 41 13.17 5050	Pavement Removal, bituminous, 4" to 6" thick	9.80	SY	See Scamp bid
02 41 13.30 1600	Median barrier, precast conc, remove and store	14.00	LF	
Scamp	Demolition debris, off-site haul and disposal	6.00	Ton	
02 41 13.80 0200	Wood utility poles, 35'-45' high	370.00	EA.	
02 41 13.80 0300	Wood cross arms, 4'-6' long	136.00	EA.	
Crew B-6	Backhoe loader, 2 laborers, equip operator	1980.00	Day	
Crew B-7	Log chipper, crew, and assoc equipment	5025.34	Day	
26 05 05.10 1900	Electrical demolition, #2 wire, from conduit	30.50	CLF	
02 65 10.30 0110	3000 to 5000 gal. undrgrnd steel tank removal	860.00	EA.	
02 65 10.30 1023	3000 to 5000 gal. tank, disposal, 100 mi RT	830.00	EA.	
02 65 10.30 0300	3000 to 5000 gal. tank, sludge removal	285.00	EA.	
02 65 10.30 0390	Dispose of sludge off site	6.80	Gal	
1305 05.75 0530	5000 to 12000 gal. abovegrnd steel tank removal	1625.00	EA.	
02 41 13.40 0110	Demolition, CMP pipe, steel, 12"	2.60	LF	
02 41 13.40 0160	Demolition, CMP pipe, steel, 18"	3.90	LF	
02 41 13.40 0170	Demolition, CMP pipe, steel, 24"	14.70	LF	
02 41 13.40 0180	Demolition, CMP pipe, steel, 30"-36"	17.65	LF	
24 41 13.40 0190	Demolition, CMP pipe, steel, 48-60"	22.00	LF	
13 05 05.60 0050	Silos, Selective Demolition, steel	2900.00	EA.	
01 52 13.20 0800	Haul Conex units offsite	12.10	Mile	
02 41 13.30 0100	Remove roadside delineator	49.35	EA.	Increased 200% per 02 41 13.30 4400
02 41 13.96 0600	Demo/Remove steps, 3 risers	94.50	EA.	
02 41 13.40 0240	Demolition, CMP end section, 60"	445.00	EA.	
31 32 19.16 1510	Geotextile fabric, heavy duty, 600 lb strength	2.36	SY	2019 Means Cost
02 41 19.20 0100	Landfill tipping fee, construction debris	81	Ton	2019 Means Cost
31 25 14.16 0710	Sediment log, filter sock, 12"	7.25	LF	
31 25 14.16 0068	Slope stakes (placed at 3'-5' intervals)	0.17	EA	
31 25 14.16 0400	Soil sealant, liquid sprayed from truck	0.90	SY	
31 25 14.16 1000	Silt Fence, install, maintain, remove	1.92	LF	
02 41 16.17 2420	Concrete Floor Demolition, 8" thick, reinforced	1.12	SF	2019 cost increased 10% for reinforcing
02 41 13.23 0015	Abandon catch basin	282.00	EA.	2019 Means Cost
Crew A-2	2 Laborers and truck	1912.37	Day	
Crew A-3A	1 Laborer and truck	878.60	Day	
02 41 13.76 0200	Demolish well riser pipe	13.40	LF	2022 Means Cost
02 41 13.76 0600	Abandon well screen (2"-8")	13.40	LF	2022 Means Cost
31 22 13.20 0120	Rough grade sites, 410-1,000 SF, hand labor	1650.00	EA.	
Crew B-10L	Equip Oper and 80 HP dozer	1449.54	Day	

Lila Canyon Mine Reclamation Bond Estimate


Demolition and Removal Cost Summary

Structure/Item	Cost (\$)
01A Silt Fence and Sediment Logs	13,776
01 Office/Bathhouse	34,634
02 ROM Coal Stockpile	0
03 Shop/Warehouse	327,646
04 Storage Shed	348
05 Conex Containers	0
05A Employee Parking	96,771
06 Truck Loading/Unloading Area	0
07 Equipment/Materials Storage Area	0
08 Potable Water Tank	3,741
09 Sewer Treatment Plant	887
10 Power Poles	14,133
11 Electrical Transformers	4,961
12 Overhead Power Lines	2,952
13 Buried Power Lines	860
14 Rock Dust Silo	6,758
15 Fuel & Oil Tanks	8,143
16 Reclaim Tunnel	23,160
17 Reclaim Conveyor	3,709
18 Conveyor to Loadout Bin	4,341
19 Crusher MCC Building	364
20 Truck Loadout	7,270
21 Refuse Conveyor	826
22 Crusher/Screen Plant	3,913
23 Reclaim Escape Tunnel	12,851
24 Reclaim Feeder Gate	137
26 Extended ROM Conveyor	3,258
27 Refuse/Non-Coal Waste Pile	0
28 Electrical Grounding Field	1,986
29 Sedimentation Pond Structures	1,583
30 Existing ROM Conveyor	6,432
31 Portal Closure	63,312
32 Concrete Conveyor Bay	371
33 ROM Coal Staking Tube	8,858
34 Mine MCC Building and Electrical Tower	1,595
35 Backup Ventilation Fans	37,668
36 Main Ventilation Fan	37,698
37 Non-Potable Water Tanks	7,670
38 Powder and Cap Magazines	4,924
39 Chain Link Fence	6,676
40 Concrete Electrical Junction Box	73
41 Loadout MCC Building	289
42 Mine Parking	36,390
43 Abandoned Concrete Reclaim Room	5,364
44 Jersey Barrier	13,020
45 Concrete Trash Chute	1,280
46 Emergency Reclaim Feeder Gate	69
47 Gantry Lift Assembly	5,727
48 Mine Substation	8,476
49 Paved Mine Roads	63,372
50 Culvert Demolition	48,570
51 Lila Old Fan Portals	24,586
52 Visual Disconnect	6,279
53 Drop Box	145
54 Rain Gauges	303
58 Storage Building	11,049
59 Catch Basins	2,815
60 Communications Tower	2,724
61 PBH Drillholes	8,082
Geotextile Removal (Culverts UC-5,6,&7)	4,257
TOTAL	997,081

[illegible]



LEGEND:

- PERMIT AREA : 
- DISTURBED AREA: 
- LEASED AREA (SITLA) PERMITTED TO DRILL: 

NOTE: Plate 1-1 is the official permit boundary map and it will be used to clarify any questions about the permit boundaries.

REVISIONS

DATE	BY
12/5/2022	NGN
12/28/2022	MKP

PERMIT
AREA MAP



LILA CANYON MINE

23415 North Lila Canyon Road
Green River, Utah 84525

DOGM PERMIT# C0070013

DESIGN BY:

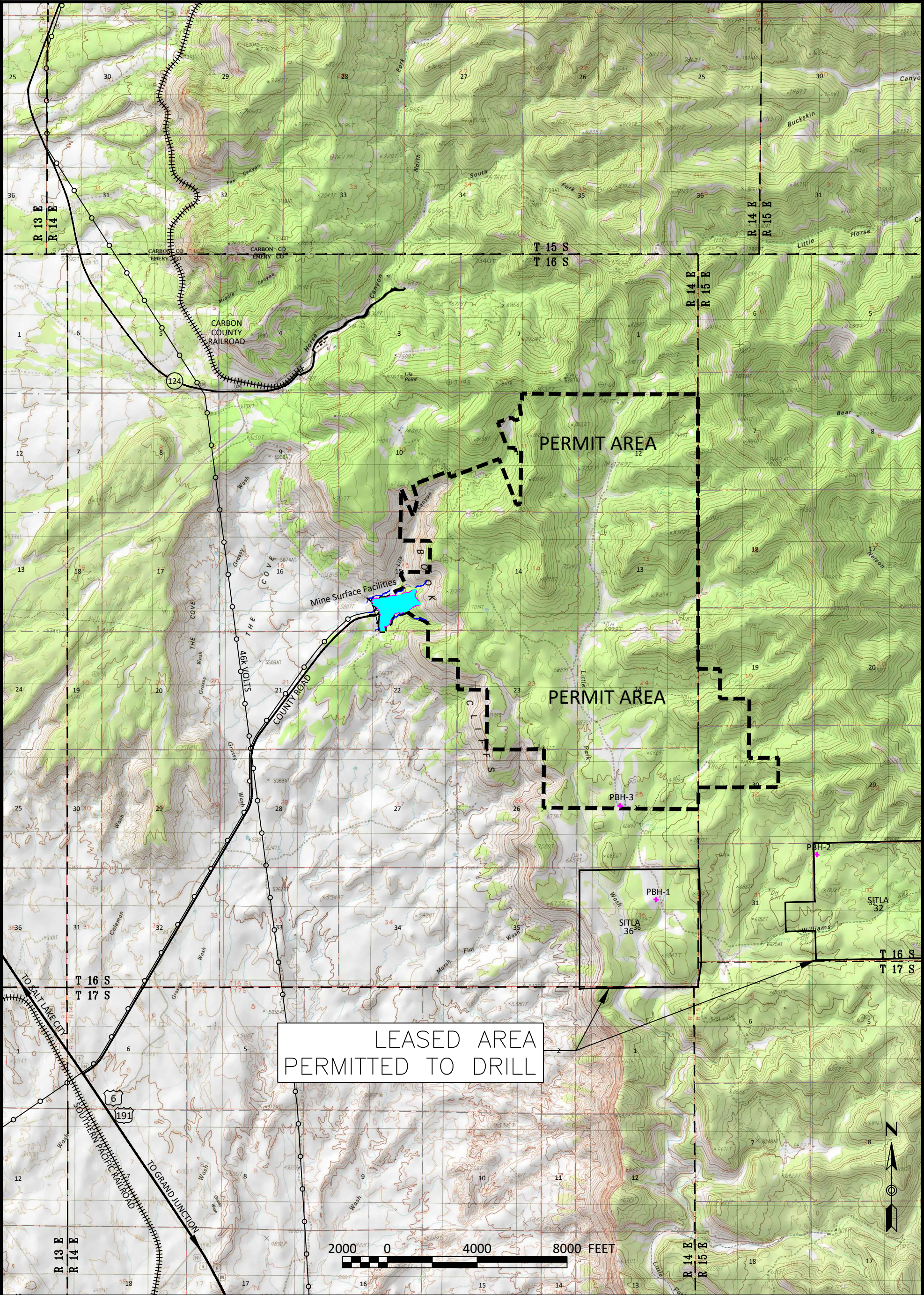
SCALE:

1" = 4,000'




ORIGINAL DATE:

SEPT. 2000

PLATE 1-1



LEGEND:


- PERMIT AREA : 
- DISTURBED AREA: 
- LEASED AREA (SITLA) PERMITTED TO DRILL: 

NOTE: Plate 1-2a is the disturbed permit boundary map and it will be used to clarify any questions about the permit boundaries. Please refer to section 1.1.6 of the Mining and Reclamation Plan

REVISIONS

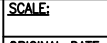
DATE	BY
12/5/2022	NGN
12/28/2022	MKP

DISTURBED PERMIT AREA MAP

 LILA CANYON MINE

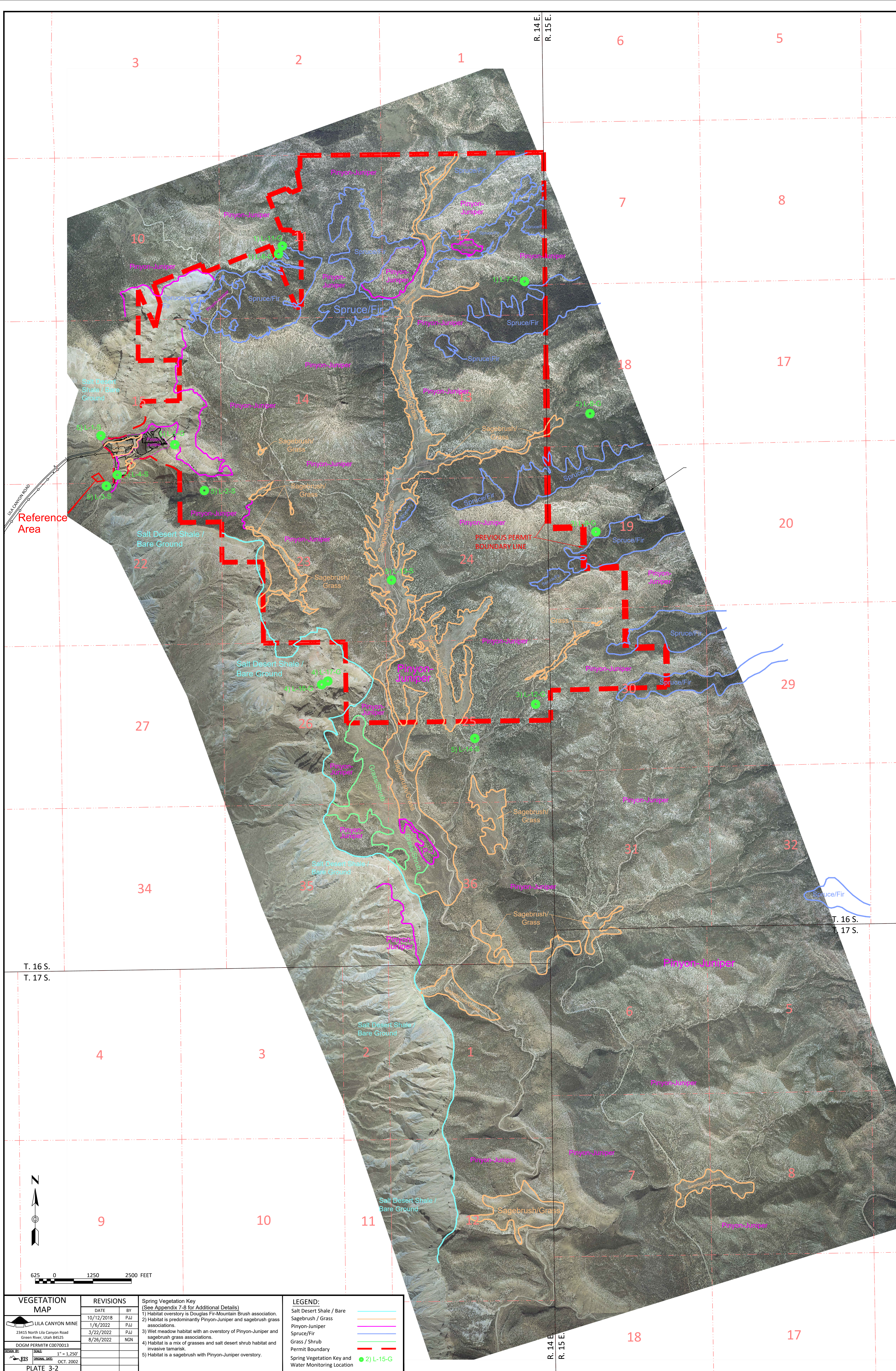
23415 North Lila Canyon Road
Green River, Utah 84525

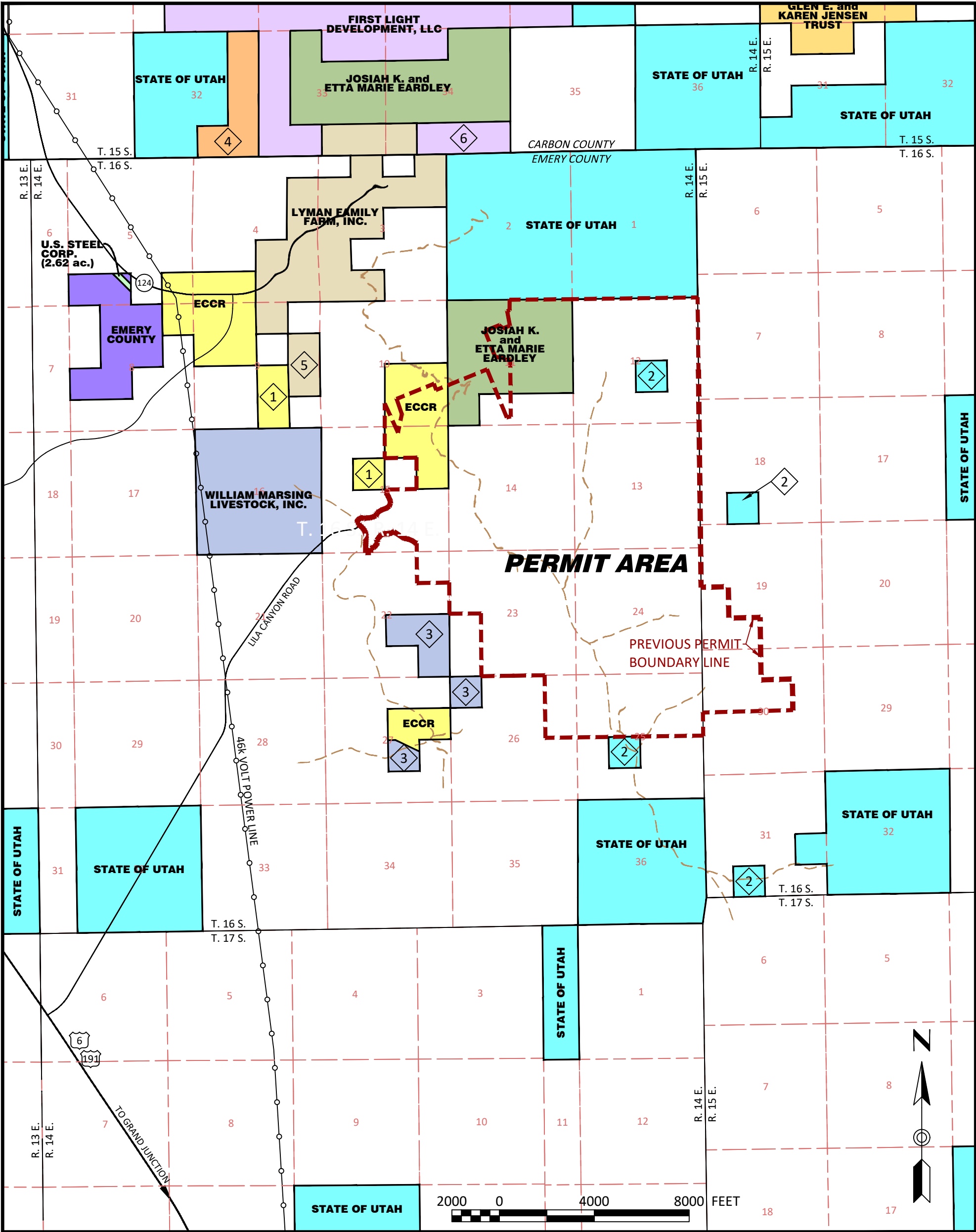
DOGM PERMIT# C0070013

DESIGN BY: 

SCALE: 1" = 4,000'

ORIGINAL DATE: SEPT. 2000





KEYED PROPERTY NOTES

- 1

EMERY COUNTY COAL RESOURCES, INC.
- 2

STATE OF UTAH
- 3

WILLIAM MARSING LIVESTOCK, INC.
- 4

LEVADA EF FIVE, LLC
- 5

LYMAN FAMILY FARM, INC.
- 6

FIRST LIGHT DEVELOPMENT, LLC

NOTE:
ALL SURFACE LANDS OWNED BY THE
BUREAU OF LAND MANAGEMENT (UNITED
STATES) UNLESS NOTED OTHERWISE.

LEGEND:

- PERMIT AREA :
- Emery County
- Lyman Family Farm, Inc.
- Josiah K. & Etta Marie Eardley
- Levada EF Five, LLC
- State of Utah
- Emery County Coal Resources, Inc. (ECCR)
- William Marsing Livestock, Inc.
- First Light Development, LLC
- U.S. Steel

REVISIONS

DATE	BY	DATE	BY
AUG. 2000	BJ	AUG. 26, 2022	NGN
DEC. 2000	BJ		
SEPT. 2002	RJM		
AUG. 2003	RJM		
DEC. 2005	RJM		
FEB. 8, 2016	PJJ		
JAN 6, 2022	PJJ		
MAR. 22, 2022	PJJ		

SURFACE OWNERSHIP



LILA CANYON MINE
23415 North Lila Canyon Road
Green River, Utah 84525

DOGM PERMIT# C0070013



SCALE: 1" = 4,000'
ORIGINAL DATE: JULY 1999

PLATE 4-1