

UtahAmerican Energy,



**Lila Canyon Project**  
**P. O. Box 910**  
**East Carbon, Utah 84520**  
**Phone: (435) 888-4000**  
**(435) 650-3157**  
**Fax: (435) 888-4002**

Utah Division of Oil, Gas & Mining  
Utah Coal Program  
1594 West North Temple, Suite 1210  
P.O. Box 145801  
Salt Lake City, UT 84114-5801

June 14, 2016

Attn: Daron Haddock  
Permit Supervisor

Re: Lila Canyon Mine  
Fan As-BuiltTask ID #5085

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Dear Mr. Haddock,

Attached you will find 2 clean copies and two clean maps ready for your stamp of approval.

If you have any questions, or need any additional information regarding this submittal, please contact me directly at 435-888-4000.

Sincerely,

A handwritten signature in black ink, appearing to read 'Karin Madsen', written over a horizontal line.

Karin Madsen  
Engineering Tech  
UtahAmerican Energy, Inc.



## List of Appendixes

Appendix 5-1 Inspection Form for Excess Spoil  
Appendix 5-2 Inspection Form for Impoundments  
Appendix 5-3 Coal Mine Waste Fire Extinguishing Plan  
Appendix 5-4 New Facility Designs  
Appendix 5-5 Slope Stability Analysis  
Appendix 5-6 Mine Openings (Closures)  
Appendix 5-7 Rock Slope Material (Refuse Pile)  
Appendix 5-8 Reclamation Plan

## List of Plates

Plate 5-1	Previously Mined Areas
Plate 5-1A	Premining Contours
Plate 5-2	Surface Area Lila Canyon Mine (Official Disturbed Area Boundary Map)
5-2A	IBC Area - Graben Breakout
5-2B	Fan Pad As-Built
Plate 5-3	Subsidence Control Map
Plate 5-3	CONFIDENTIAL Subsidence Control Map with Raptor Information
Plate 5-4	Coal Ownership
Plate 5-5	Mine Map
Plate 5-6	Post Mining Topography
Plate 5-7A-1	Mine Site Cross Sections
Plate 5-7A-2	Mine Site Cross Sections
Plate 5-7A-3	Mine Site Cross Sections
Plate 5-7A-4	Mine Site Cross Sections
Plate 5-7B-1	Mine Site Cross Sections
Plate 5-7B-2	Mine Site Cross Sections
Plate 5-7B-3	Mine Site Cross Sections
Plate 5-7C	Reclaimed Profile
Plate 5-8	Coal Handling Facilities
Plate 5-9	Portal Plan and Sections

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the revegetation of a more desirable seed mix and a vegetative cover in excess of what was present premining.

**553.200** Spoil and Waste.

**553.210** All underground development waste brought to the surface will be placed in the temporary rock pile and then blended back into the ROM product for sale. There will be no coal processing waste generated on the surface. Any oversized from the screens will be crushed and put back into the ROM stream.

**553.220** Since no spoil will be produced this section does not apply.

**553.221** All vegetation and /or organic material will be removed prior to any coal mine waste being stored.

**553.222** All useable topsoil or topsoil substitute will be removed from the structural fill and refuse areas prior to use. Table 2-1 shows estimates of salvageable soil by soil type based on current NRCS soil inventories. The location of the soil storage are shown on Plate 5-2. This material will be spread over the recontoured structural fill and refuse areas prior to seeding and mulching.

**553.223** Since no spoil will be produced this section does not apply.

**553.230** All recontoured areas will be compacted to minimize slippage. The area will then be over laid with topsoil and ripped. In addition the area will be "pock-marked" to minimize the potential for erosion as well as enhance revegetation establishment. It is not anticipated that soil will be disturbed in areas to steep for equipment to operate.

**553.240** The structural fill area will have slopes of less than

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8% upon final recontouring and revegetated to enhance the post mining land use of grazing and wildlife habitat.

**553.250** A need for a refuse pile at Lila Canyon is not anticipated.

**553.260** The operator will commit to all applicable R645 regulations relative to disposal of coal processing waste.

**553.300** All underground development waste brought to the surface will be placed in the temporary rock pile and then blended back into the ROM product for sale. There will be no coal processing waste generated on the surface. Any oversized from the screens will be crushed and put back into the ROM stream.

**553.400** Cut-and-fill terraces may be allowed by the Division

**553.410** No cut and fill terraces will be required.

**553.420** No terraces will be required for post mining land use.

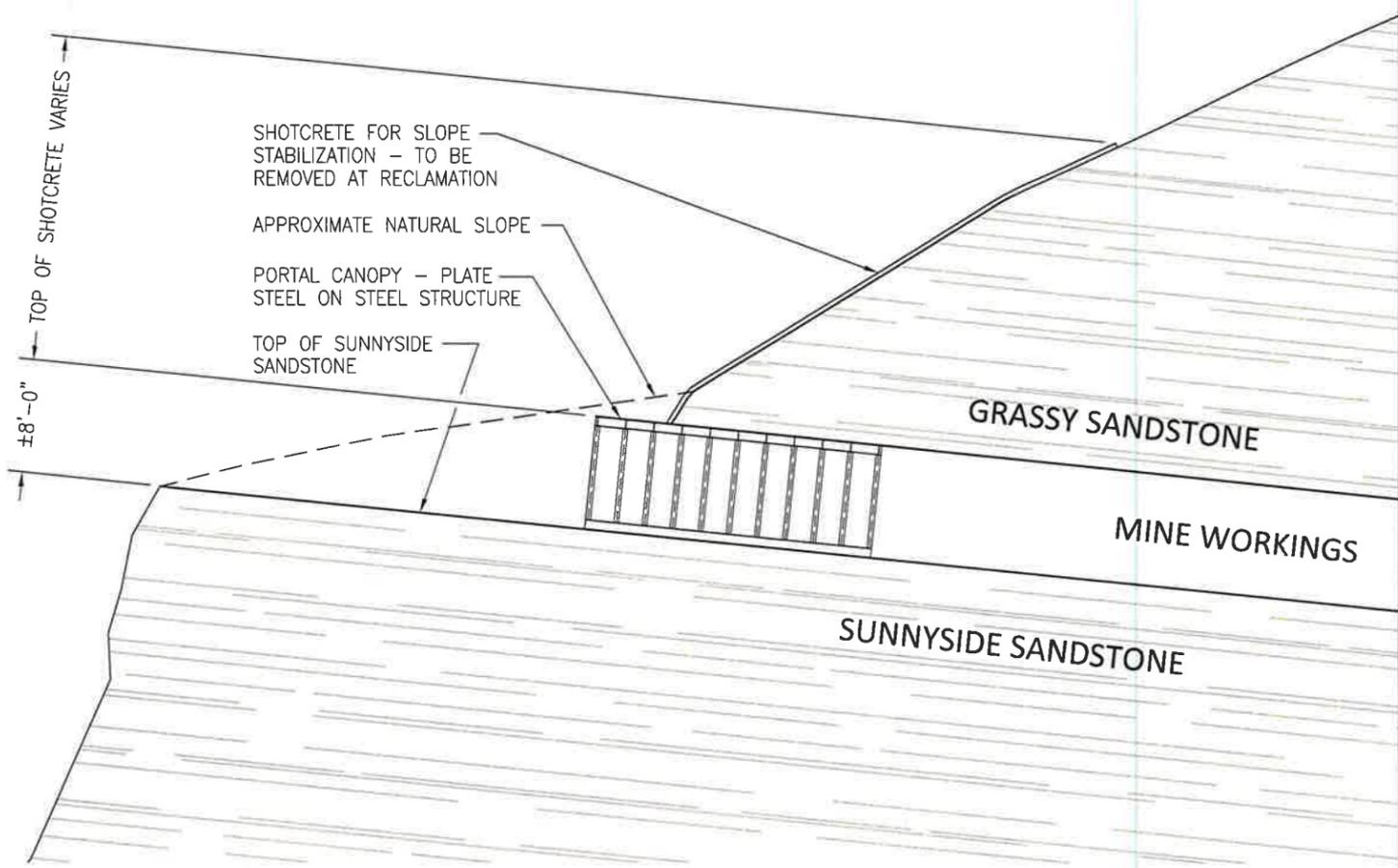
**553.500-540 and 553.600-553.650.500**

The only area that falls under these provisions are the reclaimed Horse Canyon mine which lies in the north west portion of the lease area and is addressed under approved MRP Act #0013 (Part "A").

**553.700-553.900**

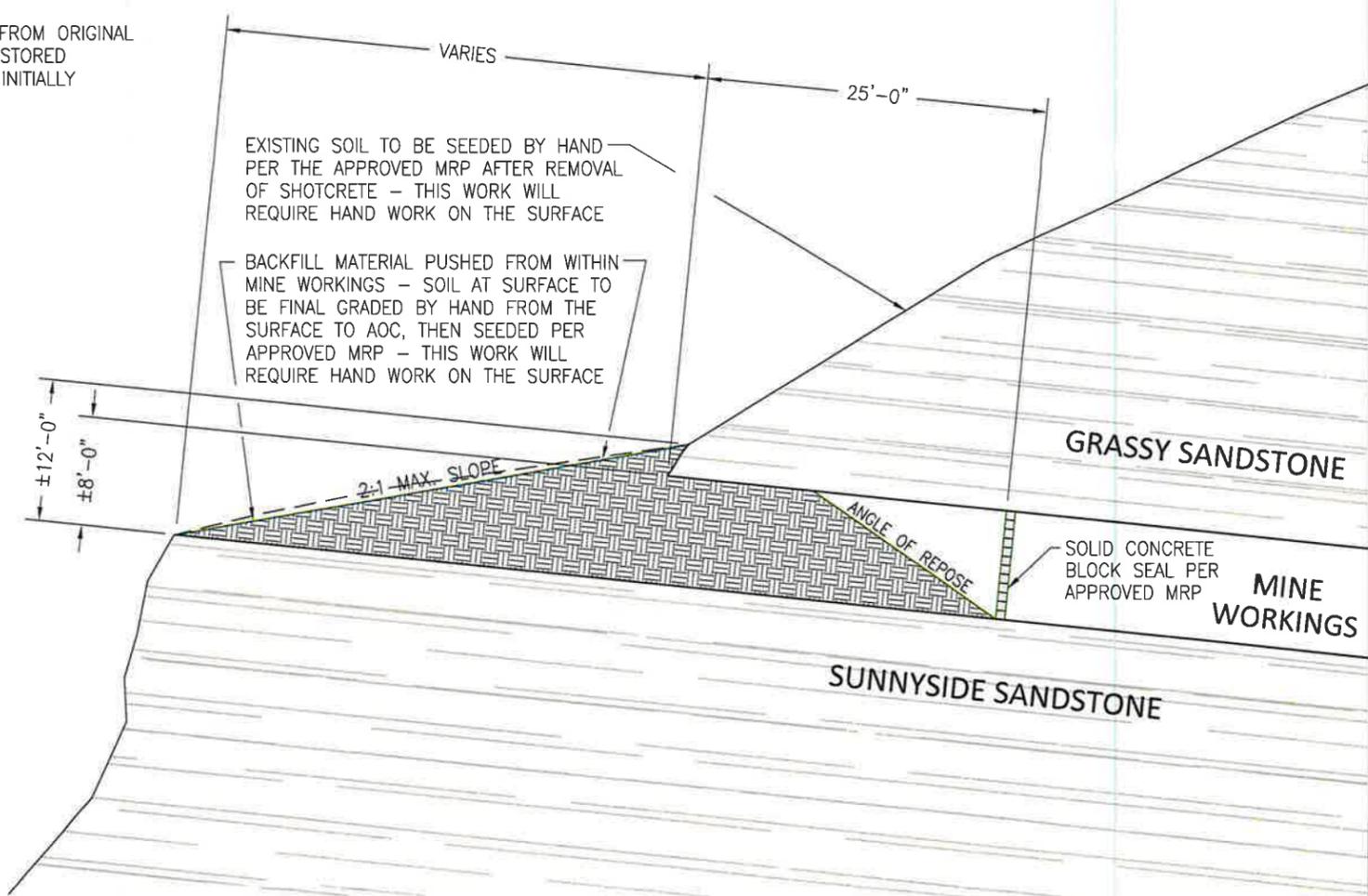
This operation will only involve underground mining and as such the above referenced regulations do not apply.

**560.** Performance Standards. Coal mining and reclamation operations will be conducted in accordance with the approved permit and requirements of R645-301-510 through R645-301-553.



**1** NORTH BREAKOUT  
**5-2B2** TYPICAL PORTAL SECTION DURING OPERATIONAL PHASE  
 SCALE: NONE

**NOTE:**  
 BACKFILL MATERIAL SHALL BE TAKEN FROM ORIGINAL SALVAGED MATERIAL RECOVERED AND STORED UNDERGROUND WHEN PORTALS WERE INITIALLY DEVELOPED - SEE 1/5-2B(1).



**2** NORTH BREAKOUT  
**5-2B2** TYPICAL PORTAL SECTION AFTER RECLAMATION IS COMPLETE  
 SCALE: NONE

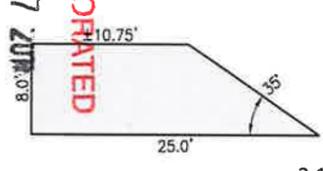


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**North Breakout Earthwork Calculations**

Comparing Grid: Working Contours.grd and Grid: Reclaimed Contours.grd  
 Pad Cut volume: 28.65 C.Y.  
 Pad Fill volume: 520.41 C.Y.  
 Total Pad Fill: 492 cy

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**Note:**  
 Cut/Fill volumes calculated using Carlson Civil 2015 software's "Civil" module. Surface grid files generated using existing and proposed reclamation contours. Grid files were then compared utilizing the software to calculate cut/fill volumes.

**TYPICAL PORTAL FILL**

Area of a trapezoid from end of opening to toe of seal, multiplied by 18.-0" (width of entries).

**TOTAL NORTH BREAKOUT FILL CALCULATIONS**

492 cy (Total Pad Fill) + 96 cy (Portal #1 Fill) + 96cy (Portal #2 Fill) = 684 cy Total Fill Required

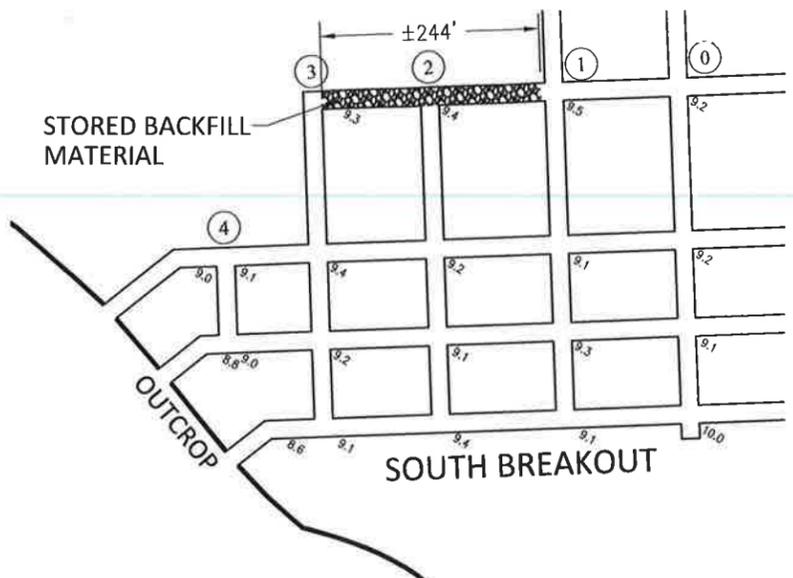
2,193cy Available per 1/5-2B1

**EXISTING BREAKOUTS**



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

TYPICAL PORTAL SECTIONS		
LILA CANYON MINE		
23415 North Lila Canyon Road Green River, Utah 84525		
MSHA MINE ID # 42-02241		
DRAWN BY	PJ	SCALE AS NOTED
APPROVED BY	DH	DATE 23 MAY 2016
SHEET		PLATE #5-2B(2)



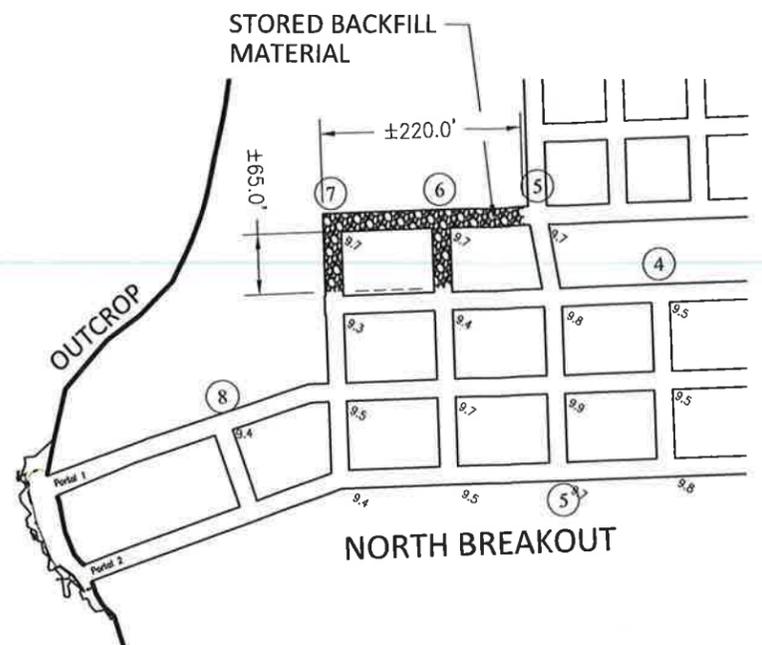
**SOUTH BREAKOUT  
STORED MATERIAL**

244.0' APPROX. LENGTH  
x 18.0' AVG. ENTRY WIDTH  
x 9.4' AVG. ENTRY HEIGHT  
41,285 CUBIC FEET

41,285cf / 27cf = 1,529cy

APPROX. 1,529cy  
AVAILABLE

**2**  
SOUTH BREAKOUT  
RECLAMATION BACKFILL MATERIAL  
5-2B1



**NORTH BREAKOUT  
STORED MATERIAL**

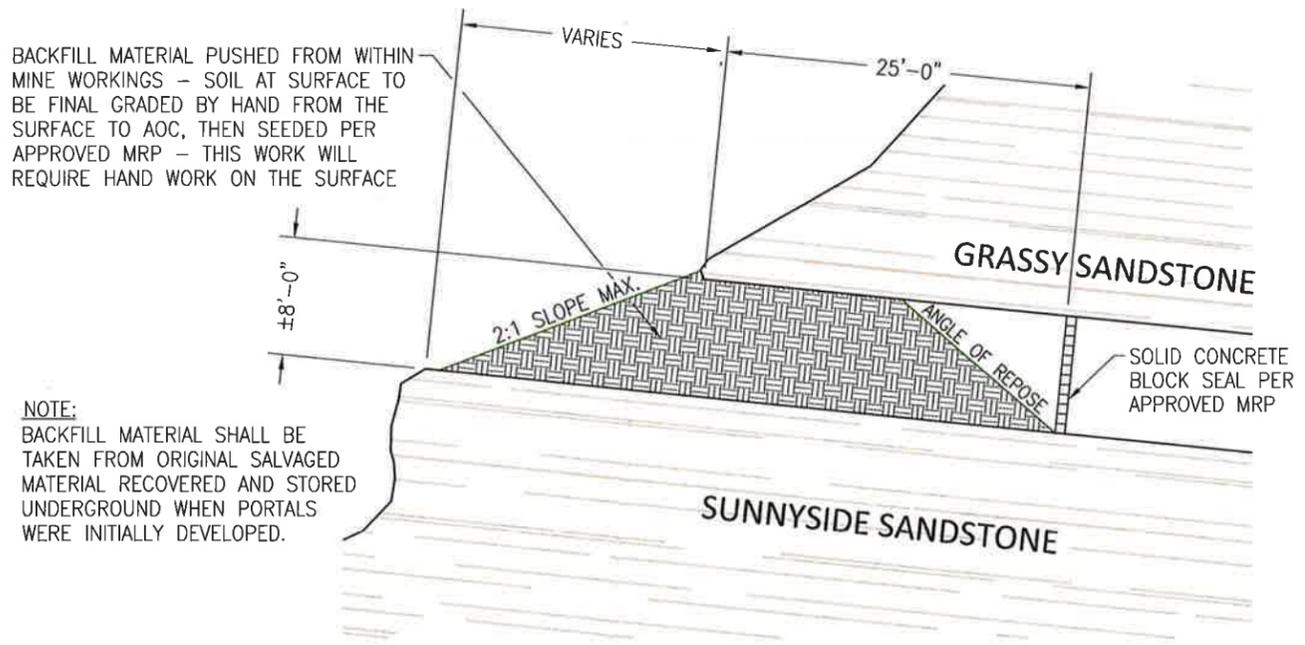
220' + 65' + 65' = 350'

350.0' APPROX. LENGTH  
x 18.0' AVG. ENTRY WIDTH  
x 9.7' AVG. ENTRY HEIGHT  
59,220 CUBIC FEET

59,220cf / 27cf = 2,193cy

APPROX. 2,193cy  
AVAILABLE

**1**  
NORTH BREAKOUT  
RECLAMATION BACKFILL MATERIAL  
5-2B1



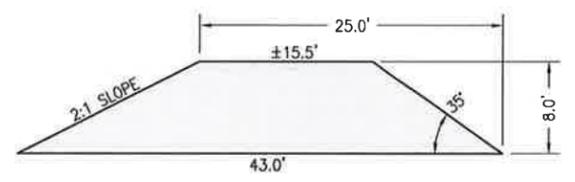
BACKFILL MATERIAL PUSHED FROM WITHIN MINE WORKINGS - SOIL AT SURFACE TO BE FINAL GRADED BY HAND FROM THE SURFACE TO AOC, THEN SEEDED PER APPROVED MRP - THIS WORK WILL REQUIRE HAND WORK ON THE SURFACE

NOTE: BACKFILL MATERIAL SHALL BE TAKEN FROM ORIGINAL SALVAGED MATERIAL RECOVERED AND STORED UNDERGROUND WHEN PORTALS WERE INITIALLY DEVELOPED.

**3**  
SOUTH BREAKOUT  
TYPICAL PORTAL SECTION AFTER RECLAMATION IS COMPLETE  
5-2B1



**SOUTH BREAKOUT BACKFILL CALCULATIONS**



**METHODOLOGY**  
AREA OF A TRAPEZOID REPRESENTING THE FILL MATERIAL AS SHOWN, MULTIPLIED BY 18'-0" (WIDTH OF ENTRIES) MULTIPLIED BY THREE (3) PORTAL OPENINGS.

235sf X 18.0 feet = 4,230 cf DIVIDED BY 27cf (CUBIC YARD) = 156.67 (ROUND TO 157cy)

157cy X 3 PORTALS = 471cy REQUIRED FOR RECLAMATION

APPROX. 1,529cy AVAILABLE PER 2/5-2B1

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**EXISTING BREAKOUTS**

UtahAmerican Energy, Inc.

**PLANS AND TYPICAL PORTAL SECTION**

LILA CANYON MINE	
23415 North Lila Canyon Road Green River, Utah 84525	
MSHA MINE ID # 42-02241	
DRAWN BY	PJ
SCALE	AS NOTED
APPROVED BY	DH
DATE	23 MAY 2016
SHEET	PLATE 5-2B (1)

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