

C/025/005 Incoming

#5504



Alton Coal Development, LLC

463 North 100 West, Suite 1

Cedar City, Utah 84720

Phone (435) 867-5331 / Fax (435) 867-1192

10/13/2017

Daron R. Haddock
Coal Program Manager
Oil, Gas & Mining
1594 West North Temple, Suite 1210
Salt Lake City, UT 84114-5801

RECEIVED

OCT 17 2017

DIV. OF OIL, GAS & MINING

Subject: **Submission of Phase 1 Bond Release Clean Copies, Alton Coal Development, LLC, Coal Hollow Mine, Kane County, Utah, C/025/0005, Task Id. 5504**

Dear Mr. Haddock,

Alton Coal Development, LLC (ACD) is submitting clean copies as requested per the September 27, 2017 approval letter from the Division. Also, as per the follow-up letter from the Division on October 5, 2017, ACD has made the following changes:

- Analytical results for spoil sample locations 4, 5, and 7 have been included in Appendix 2-7
- Updated title page for Appendix 2-7
- Corrected notation on Table BRP1-12 in Appendix 2-7
- Added notation to table BRP-11 to indicate that 99,897 cu yds from subsoil stockpile #4 was distributed over the 36.2-acre Interim Reclamation Area.
- Subsoil berms along the pond 3 access road were not accounted for in table BRP1-11. This material was placed for use and accounted in the subsoil distribution for Pits 1, 2, 4, 7 and 8
- Drawing 5-76A notations have been expanded to add additional clarity to the depths of subsoil and suitable spoil placed. It should be noted that Drawing 5-76A does not indicate the placement of topsoil (18 inches in Area 1 of the North Private Lease). Four feet of cover (48 inches) as required has been achieved over unsuitable spoils. As noted, either by the placement of 30 inches of subsoil or the

use of "tested suitable spoil" and subsoil and the required 18 inches of topsoil, a 4-foot cover depth has been achieved over spoils that may have acid/toxic forming areas.

Please do not hesitate to contact me if you have any questions 435-691-1551.

Sincerely



B. Kirk Nicholes
Environmental Specialist

APPENDIX 2-7 cont.

Soil Accounting and Analytical
Results for Bond Release Areas

BRP1-11 & BRP1-12

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SPL	Topsoil	Topsoil	Topsoil	Topsoil	Subsoil	Subsoil	Subsoil	Subsoil
	Stockpile #1	Stockpile #2	Stockpile #4	Stockpile #6	Stockpile #1	Stockpile #2	Stockpile #3	Stockpile #4
Starting Stockpile Volume	25,289	82,905	50,916	0	73,077	211,207	0	0

BRP 1-9 = 9.08 ACRES

Source	Topsoil Stockpile #1	Topsoil Stockpile #2	Topsoil Stockpile #4	Topsoil Stockpile #6	Total Topsoil	Subsoil Stockpile #1	Subsoil Stockpile #2	Subsoil Stockpile #3	Subsoil Stockpile #4	Total Subsoil
	CY	CY	CY	CY	CY	CY	CY	CY	CY	CY
Stockpile volume utilized	0	0	9,761	0	9,761	0	48,806			48,806
Remaining stockpile volume	25,289	82,905	41,155	0		73,077	162,401			

Other Areas Soiled from 3/1/16 to 12/14/16

Source	Topsoil Stockpile #1	Topsoil Stockpile #2	Topsoil Stockpile #4	Topsoil Stockpile #6	Total Topsoil	Subsoil Stockpile #1	Subsoil Stockpile #2	Subsoil Stockpile #3	Subsoil Stockpile #4	Total Subsoil
	CY	CY	CY	CY	CY	CY	CY	CY	CY	CY
Stockpile used other areas*	0	9,728	41,155	0	50,883	0	60,886			60,886
Remaining stockpile volume	25,289	73,177	0	0		73,077	101,515			

*Topsoil and Subsoil placed in ROBINSON, SURF8 HAUL MAINT, PIT 4, PIT 7, PIT 8, PIT 9-B, HWT1-B, SURF-5, HWT 2-A and PIT20-B as shown on Drawing 5-19

Added to Stockpile with Mining of Pit B1

Source	Topsoil Stockpile #1	Topsoil Stockpile #2	Topsoil Stockpile #4	Topsoil Stockpile #6	Total Topsoil	Subsoil Stockpile #1	Subsoil Stockpile #2	Subsoil Stockpile #3	Subsoil Stockpile #4	Total Subsoil
	CY	CY	CY	CY	CY	CY	CY	CY	CY	CY
Stockpile volume added	0	0		6,061	6,061	0	0			99,897
Remaining stockpile volume	25,289	73,177		6,061		73,077	101,515			99,897

BRP 1-11 = 14.2 ACRES and Interim Reclamation Area = Total 36.2

Source	Topsoil Stockpile #1	Topsoil Stockpile #2	Topsoil Stockpile #4	Topsoil Stockpile #6	Total Topsoil	Subsoil Stockpile #1	Subsoil Stockpile #2	Subsoil Stockpile #3	Subsoil Stockpile #4	Total Subsoil
	CY	CY	CY	CY	CY	CY	CY	CY	CY	CY
Stockpile volume utilized*	0	0		0	0	0	0			99,897
Remaining stockpile volume	25,289	73,177		6,061		73,077	101,515	0	0	0

* Entire volume of subsoil salvaged from B1(Subsoil stock #4) was utilized to subsoil the Interim Reclamation Area (14.2 acres) for an average depth of 1.7' of cover. The top 6" will be recovered and utilized as topsoil and the remainder as subsoil at the time of Pit 10 reclamation.

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NPL AREA 1

	Topsoil Stockpile	Subsoil Stockpile
Starting Stockpile Volume	74,953	41,378

BRP 1-10 = 12.21 ACRES

Source	NL Topsoil	Livehaul Topsoil*	Total Topsoil	NL Subsoil	Livehaul Subsoil	Total Subsoil
	CY	CY	CY	CY	CY	CY
Stockpile volume utilized	18,784	0	18,784	14,071	8,459	22,530
Suitable spoil**						
Remaining stockpile volume	56,169			27,307		

*Livehaul source: Area 1

**Suitable Spoil: Surface two feet of 9.38 acres represented by Soil Sample Pits 1, 2, and 3.5N

***Average topsoil cover depth 1.08 ft.

****Subsoil redistribution depth as shown on Drawing 5-76a

Added to stockpile with addition of Area 1 Extended

Source	NL Topsoil	Livehaul Topsoil*	Total Topsoil	NL Subsoil	Livehaul Subsoil	Total Subsoil
	CY	CY	CY	CY	CY	CY
Stockpile volume added	0	0	0	36,000	0	36,000
Remaining stockpile volume	56,169			63,307		

BRP 1-12 = 16.25 ACRES

Source	NL Topsoil	Livehaul Topsoil*	Total Topsoil	NL Subsoil	Livehaul Subsoil*	Total Subsoil
	CY	CY	CY	CY	CY	CY
Stockpile volume utilized	2,968	26,205	29,173	32,919	32,410	65,329
Suitable spoil**						
Remaining stockpile volume	53,201			30,388		

*Livehaul source: Area 1 extended

**Suitable Spoil: Surface 6 inches of 1.2 acres represented by Soil Sample Pits 4

***Subsoil redistribution depth as shown on Drawing 5-76a.

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Date: 6/9/2017

CLIENT: Alton Coal Development, LLC
Project: Coal Hollow Mine
Lab Order: S1706074

CASE NARRATIVE
Report ID: S1706074001

Samples Reclaim 10, Reclaim 11, Reclaim 6, and Reclaim 8 were received on June 2, 2017.

Samples were analyzed using the methods outlined in the following references:

- U.S.E.P.A. 600/2-78-054 "Field and Laboratory Methods Applicable to Overburden and Mining Soils", 1978
- American Society of Agronomy, Number 9, Part 2, 1982
- USDA Handbook 60 "Diagnosis and Improvement of Saline and Alkali Soils", 1969
- Wyoming Department of Environmental Quality, Land Quality Division, Guideline No. 1, 1984
- New Mexico Overburden and Soils Inventory and Handling Guideline, March 1987
- State of Utah, Division of Oil, Gas, and Mining: Guidelines for Management of Topsoil and Overburden for Underground and Surface Coal Mining, April 1988
- Montana Department of State Lands, Reclamation Division: Soil, Overburden, and Regraded Spoil Guidelines, December 1994
- State of Nevada Modified Sobek Procedure
- Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition

All Quality Control parameters met the acceptance criteria defined by EPA and Inter-Mountain Laboratories except as indicated in this case narrative.

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Reviewed by: Karen A Secor
Karen Secor, Soil Lab Supervisor



Soil Analysis Report
Alton Coal Development, LLC

463 North 100 West
Suite 1
Cedar City, UT 84721

Report ID: S1706074001

Project: Coal Hollow Mine
Date Received: 6/2/2017

Date Reported: 6/9/2017
Work Order: S1706074

Table with 10 columns: Lab ID, Sample ID, Depths (Feet), pH (s.u.), Saturation (%), Electrical Conductivity (dS/m), Field Capacity (%), Wilting Point (%), Organic Matter (%), CaCO3 (%). Rows include sample IDs S1706074-001 through S1706074-016.

Vertical stamp: INTER-MOUNTAIN LABS SEP 27 2017 INCORPORATED

These results apply only to the samples tested.

Abbreviations for extractants: PE=Saturated Paste Extract, H2OSol= water soluble, AB-DTPA= Ammonium Bicarbonate-DTPA, AAO= Acid Ammonium Oxalate

Abbreviations used in acid base accounting: T.S.= Total Sulfur, AB= Acid Base, ABP= Acid Base Potential, PyrS= Pyritic Sulfur, Pyr+Org= Pyritic Sulfur + Organic Sulfur, Neutral. Pot.= Neutralization Potential

Miscellaneous Abbreviations: SAR= Sodium Adsorption Ratio, CEC= Cation Exchange Capacity, ESP= Exchangeable Sodium Percentage

Reviewed by: Karen A Secor
Karen Secor, Soil Lab Supervisor



Soil Analysis Report
Alton Coal Development, LLC

Report ID: S1706074001

463 North 100 West
Suite 1
Cedar City, UT 84721

Project: Coal Hollow Mine
Date Received: 6/2/2017

Date Reported: 6/9/2017
Work Order: S1706074

Lab ID	Sample ID	Depths Feet	Calcium	Magnesium	Potassium	Sodium	SAR
			PE	PE	PE	PE	
			meq/L	meq/L	meq/L	meq/L	
S1706074-001	Reclaim 6	0-0.5	20.2	13.8	0.78	47.4	11.5
S1706074-002	Reclaim 6	0.5-1	18.9	13.9	0.75	45.6	11.3
S1706074-003	Reclaim 6	1-2	21.9	14.1	0.76	48.6	11.5
S1706074-004	Reclaim 6	2-3	19.8	13.9	0.84	57.4	14.0
S1706074-005	Reclaim 8	0-0.5	16.7	10.6	0.77	53.3	14.4
S1706074-006	Reclaim 8	0.5-1	18.1	11.3	0.78	46.9	12.2
S1706074-007	Reclaim 8	1-2	16.2	10.8	0.79	47.2	12.8
S1706074-008	Reclaim 8	2-3	18.9	13.3	0.83	51.9	13.0
S1706074-009	Reclaim 10	0-0.5	21.1	20.1	1.27	85.0	18.7
S1706074-010	Reclaim 10	0.5-1	18.3	18.0	0.93	101	23.7
S1706074-011	Reclaim 10	1-2	18.1	12.5	0.89	70.9	18.1
S1706074-012	Reclaim 10	2-3	20.0	12.3	0.95	65.9	16.4
S1706074-013	Reclaim 11	0-0.5	8.32	4.52	0.72	57.4	22.6
S1706074-014	Reclaim 11	0.5-1	10.8	4.55	0.72	57.8	20.9
S1706074-015	Reclaim 11		7.94	3.37	0.53	45.0	18.9
S1706074-016	Reclaim 11		9.36	4.03	0.69	45.6	17.6

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Reviewed by: Karen A Secor
Karen Secor, Soil Lab Supervisor



Soil Analysis Report
Alton Coal Development, LLC

463 North 100 West
Suite 1
Cedar City, UT 84721

Report ID: S1706074001

Project: Coal Hollow Mine
Date Received: 6/2/2017

Date Reported: 6/9/2017

Work Order: S1706074

Table with 12 columns: Lab ID, Sample ID, Depths Feet, Sand %, Silt %, Clay %, Texture, Very Fine Sand %, Boron ppm, Selenium ppm, Total Carbon %, TOC %. Rows include sample IDs S1706074-001 through S1706074-016 with corresponding soil analysis data.

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These results apply only to the samples tested.

Abbreviations for extractants: PE= Saturated Paste Extract, H20Sol= water soluble, AB-DTPA= Ammonium Bicarbonate-DTPA, AAO= Acid Ammonium Oxalate

Abbreviations used in acid base accounting: T.S.= Total Sulfur, AB= Acid Base, ABP= Acid Base Potential, PyrS= Pyritic Sulfur, Pyr+Org= Pyritic Sulfur + Organic Sulfur, Neutral. Pot.= Neutralization Potential

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Karen Secor, Soil Lab Supervisor



Soil Analysis Report
Alton Coal Development, LLC

Report ID: S1706074001

463 North 100 West
Suite 1
Cedar City, UT 84721

Project: Coal Hollow Mine
Date Received: 6/2/2017

Date Reported: 6/9/2017
Work Order: S1706074

Table with 12 columns: Lab ID, Sample ID, Depths (Feet), Total Sulfur (%), T.S. AB (t/1000t), Neutral. Potential (t/1000t), T.S. ABP (t/1000t), Sulfate Sulfur (%), Pyritic Sulfur (%), Organic Sulfur (%), PyriticS AB (t/1000t), PyriticS ABP (t/1000t). Rows include sample IDs S1706074-001 through S1706074-016.

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These results apply only to the samples tested.

Abbreviations for extractants: PE= Saturated Paste Extract, H2OSol= water soluble, AB-DTPA= Ammonium Bicarbonate-DTPA, AAO= Acid Ammonium Oxalate

Abbreviations used in acid base accounting: T.S.= Total Sulfur, AB= Acid Base, ABP= Acid Base Potential, PyrS= Pyritic Sulfur, Pyr+Org= Pyritic Sulfur + Organic Sulfur, Neutral. Pot.= Neutralization Potential

Miscellaneous Abbreviations: SAR= Sodium Adsorption Ratio, CEC= Cation Exchange Capacity, ESP= Exchangeable Sodium Percentage

Reviewed by: Karen A Secor
Karen Secor, Soil Lab Supervisor



Soil Analysis Report
Alton Coal Development
463 North 100 West, Suite 1
Cedar City, UT 84721

Project ID: Coal Hollow Mine
Date Received: 6/2/2017

Report ID: S1706074001
Date Reported: 6/9/2017
Work Order: S1706074

Lab ID	Sample ID	Organic	Sand	Silt	Clay	Very	Texture	K-factor	Structure	Permeability	M
		Matter				Fine					
		%	%	%	%	Sand	(t.ac.h/100acft.tf.in)	s	p		
S1706074-001	Reclaim 6 (0-0.5)	1.1	16.3	38.8	45.0	9.0	Clay	0.29	3	6	2629.0
S1706074-002	Reclaim 6 (0.5-1)	1.0	8.8	47.5	43.8	3.4	Silty Clay	0.31	3	6	2860.6
S1706074-003	Reclaim 6 (1-2)	1.2	13.8	42.5	43.8	5.8	Silty Clay	0.26	2	6	2714.5
S1706074-004	Reclaim 6 (2-3)	1.1	13.8	40.0	46.3	5.8	Silty Clay	0.24	2	6	2459.5
S1706074-005	Reclaim 8 (0-0.5)	1.1	15.0	38.8	46.3	8.6	Clay	0.25	2	6	2545.4
S1706074-006	Reclaim 8 (0.5-1)	1.6	16.3	41.3	42.5	9.3	Silty Clay	0.27	2	6	2909.5
S1706074-007	Reclaim 8 (1-2)	1.3	11.3	45.0	43.8	5.6	Silty Clay	0.27	2	6	2843.7
S1706074-008	Reclaim 8 (2-3)	1.3	11.3	41.3	47.5	5.6	Silty Clay	0.24	2	6	2462.3
S1706074-009	Reclaim 10 (0-0.5)	0.7	11.3	37.5	51.3	4.5	Clay	0.25	3	6	2045.4
S1706074-010	Reclaim 10 (0.5-1)	1.2	16.3	33.8	50.0	8.3	Clay	0.25	3	6	2105.0
S1706074-011	Reclaim 10 (1-2)	1.4	17.5	37.5	45.0	10.6	Clay	0.28	3	6	2645.5
S1706074-012	Reclaim 10 (2-3)	1.4	18.8	36.3	45.0	12.4	Clay	0.29	3	6	2678.5
S1706074-013	Reclaim 11 (0-0.5)	1.6	23.8	43.8	32.5	18.1	Clay Loam	0.32	2	4	4178.3
S1706074-014	Reclaim 11 (0.5-1)	2.0	18.8	40.0	41.3	12.1	Silty Clay	0.27	2	6	3058.3
S1706074-015	Reclaim 11 (1-2)	2.0	16.3	41.3	42.5	10.6	Silty Clay	0.27	2	6	2984.3
S1706074-016	Reclaim 11 (2-3)	2.2	17.5	37.5	45.0	12.2	Clay	0.25	2	6	2733.5

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These Results apply only to the samples tested.

Reviewed by: Karen Secor
Karen Secor, Soil Lab Supervisor



Inter-Mountain Labs
Sheridan, WY and Gillette, WY

CHAIN OF CUSTODY RECORD -

Page 1 of 2

All shaded fields must be completed.
This is a legal document: any misrepresentation may be construed as fraud.

171683

Client Name <u>Alton Coal Development, LLC</u>		Project Identification <u>Coal Hollow Mine</u>		Sampler (Signature/Attestation of Authenticity) <u>B. Kirk Nicholes</u>		Telephone # <u>435-691-1551</u>													
Report Address <u>463 N 100 W Cedar City, Utah 84721</u>		Contact Name <u>Kirk Nicholes</u>		ANALYSES / PARAMETERS <table border="1"> <tr> <td>% Saturation</td> <td>EC</td> <td>SAR</td> <td>% CaCO₃</td> <td>Testate</td> <td>Total Organic Carbon</td> <td>Available Water</td> <td>K-Factor</td> <td>Soluble, May K₂ Mg</td> <td>Acid Base Potential</td> <td>Soluble Selenium</td> <td>Available Boron</td> </tr> </table>				% Saturation	EC	SAR	% CaCO ₃	Testate	Total Organic Carbon	Available Water	K-Factor	Soluble, May K ₂ Mg	Acid Base Potential	Soluble Selenium	Available Boron
% Saturation	EC	SAR	% CaCO ₃					Testate	Total Organic Carbon	Available Water	K-Factor	Soluble, May K ₂ Mg	Acid Base Potential	Soluble Selenium	Available Boron				
Invoice Address <u>Same</u>		Email <u>knicholes@altoncoal.com</u>		Phone <u>435-691-1551</u>															
Purchase Order #		Quote #						REMARKS											

ITEM	LAB ID (Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SAMPLE IDENTIFICATION	Matrix	# of Containers	% Saturation	EC	SAR	% CaCO ₃	Testate	Total Organic Carbon	Available Water	K-Factor	Soluble, May K ₂ Mg	Acid Base Potential	Soluble Selenium	Available Boron	REMARKS
1	<u>51706074</u>	<u>6-1-17</u>		<u>Reclaim 6 0"-6"</u>	<u>Soil</u>	<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	
2				<u>Reclaim 6 6"-12"</u>		<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	
3				<u>Reclaim 6 1'-2'</u>		<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	
4				<u>Reclaim 6 2'-3'</u>		<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	
5				<u>Reclaim 8 0"-6"</u>		<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	
6				<u>Reclaim 8 6"-12"</u>		<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	
7				<u>Reclaim 8 1'-2'</u>		<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	
8				<u>Reclaim 8 2'-3'</u>		<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	
9				<u>Reclaim 10 0"-6"</u>		<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	
10				<u>Reclaim 10 6"-12"</u>		<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	
11				<u>Reclaim 10 1'-2'</u>		<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	
12				<u>Reclaim 10 2'-3'</u>		<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	
13				<u>Reclaim 11 0"-6"</u>		<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	
14				<u>Reclaim 11 6"-12"</u>		<u>1</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>	

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SEP 27 2017

LAB COMMENTS	Relinquished By (Signature/Printed)	DATE	TIME	Received By (Signature/Printed)	DATE	TIME
	<u>B. Kirk Nicholes / B. Kirk Nicholes</u>	<u>6/1/17</u>	<u>1541</u>	<u>Karen Sean</u>	<u>6/2/17</u>	<u>1030</u>

SHIPPING INFO	MATRIX CODES	TURNAROUND TIMES	COMPLIANCE INFORMATION	ADDITIONAL REMARKS
<input type="checkbox"/> UPS <input checked="" type="checkbox"/> Fed Express <input type="checkbox"/> US Mail <input type="checkbox"/> Hand Carried <input type="checkbox"/> Other _____	Water WT Soil SL Solid SD Filter FT Other OT	<input type="checkbox"/> Check desired service <input type="checkbox"/> Standard turnaround <input type="checkbox"/> RUSH - 5 Working Days <input checked="" type="checkbox"/> URGENT - 2 Working Days <p><i>Rush & Urgent Surcharges will be applied</i></p>	Compliance Monitoring? <input checked="" type="checkbox"/> Y / <input type="checkbox"/> N Program (SDWA, NPDES,...) PWSID / Permit # Chlorinated? <input type="checkbox"/> Y / <input type="checkbox"/> N Sample Disposal: Lab <input type="checkbox"/> Client <input type="checkbox"/>	



Inter-Mountain Labs
 Sheridan, WY and Gillette, WY

CHAIN OF CUSTODY RECORD -

Page 2 of 2

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141557

Client Name <u>Alton Coal Development, LLC</u>	Project Identification <u>Coal Hollow Mine</u>	Sampler (Signature/Attestation of Authenticity) <u>B. K. Nicholes</u>	Telephone # <u>435-691-1551</u>
--	--	---	---

Report Address <u>463 N. 100 W. Cedar City, Utah 84721</u>	Contact Name <u>Kirk Nicholes</u>	ANALYSES / PARAMETERS	
Invoice Address <u>Same</u>	Email <u>knicholes@altoncoal.com</u>	<input type="checkbox"/> % Saturation	<input type="checkbox"/> pH
Phone <u>435-691-1551</u>	Quote #	<input type="checkbox"/> EC	<input type="checkbox"/> SAR
Purchase Order #	Quote #	<input type="checkbox"/> % CaCO ₃	<input type="checkbox"/> Texture
		<input type="checkbox"/> Total Organic Carbon	<input type="checkbox"/> Available Water
		<input type="checkbox"/> K-Factor	<input type="checkbox"/> Soluble Na ₂ S ₂ O ₃ mg
		<input type="checkbox"/> Acid Base Potential	<input type="checkbox"/> Soluble Selenium
		<input type="checkbox"/> Available Boron	

ITEM	LAB ID (Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SAMPLE IDENTIFICATION	Matrix	# of Containers	ANALYSES / PARAMETERS											REMARKS		
							<input type="checkbox"/> % Saturation	<input type="checkbox"/> pH	<input type="checkbox"/> EC	<input type="checkbox"/> SAR	<input type="checkbox"/> % CaCO ₃	<input type="checkbox"/> Texture	<input type="checkbox"/> Total Organic Carbon	<input type="checkbox"/> Available Water	<input type="checkbox"/> K-Factor	<input type="checkbox"/> Soluble Na ₂ S ₂ O ₃ mg	<input type="checkbox"/> Acid Base Potential		<input type="checkbox"/> Soluble Selenium	<input type="checkbox"/> Available Boron
1	<u>S1706074</u>	<u>6-1-17</u>		<u>Reclaim 11 1'-2'</u>	<u>Soil</u>	<u>1</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
2				<u>Reclaim 11 2'-3'</u>	<u>1</u>	<u>1</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
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Div. of Oil, Gas & Minr
 SEP 27 2017
 INCORPORATED

LAB COMMENTS	Relinquished By (Signature/Printed)	DATE	TIME	Received By (Signature/Printed)	DATE	TIME
				<u>Karen Alesca</u>	<u>6/2/17</u>	<u>1030</u>

SHIPPING INFO	MATRIX CODES	TURNAROUND TIMES	COMPLIANCE INFORMATION	ADDITIONAL REMARKS
<input type="checkbox"/> UPS <input checked="" type="checkbox"/> Fed Express <input type="checkbox"/> US Mail <input type="checkbox"/> Hand Carried <input type="checkbox"/> Other _____	Water WT Soil SL Solid SD Filter FT Other OT	<input type="checkbox"/> Check desired service <input type="checkbox"/> Standard turnaround <input type="checkbox"/> RUSH - 5 Working Days <input checked="" type="checkbox"/> URGENT - <u>2 Working Days</u> <i>Rush & Urgent Surcharges will be applied</i>	Compliance Monitoring? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Program (SDWA, NPDES,...) PWSID / Permit # _____ Chlorinated? <input type="checkbox"/> Y <input type="checkbox"/> N Sample Disposal: Lab <input type="checkbox"/> Client	



Date: 7/25/2017

CLIENT: Alton Coal Development, LLC
Project: Coal Hollow Mine
Lab Order: S1707211

CASE NARRATIVE
Report ID: S1707211001

Sample Reclaim 9 was received on July 17, 2017.

Samples were analyzed using the methods outlined in the following references:

- U.S.E.P.A. 600/2-78-054 "Field and Laboratory Methods Applicable to Overburden and Mining Soils", 1978
- American Society of Agronomy, Number 9, Part 2, 1982
- USDA Handbook 60 "Diagnosis and Improvement of Saline and Alkali Soils", 1969
- Wyoming Department of Environmental Quality, Land Quality Division, Guideline No. 1, 1984
- New Mexico Overburden and Soils Inventory and Handling Guideline, March 1987
- State of Utah, Division of Oil, Gas, and Mining: Guidelines for Management of Topsoil and Overburden for Underground and Surface Coal Mining, April 1988
- Montana Department of State Lands, Reclamation Division: Soil, Overburden, and Regraded Spoil Guidelines, December 1994
- State of Nevada Modified Sobek Procedure
- Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition

^" Quality Control parameters met the acceptance criteria defined by EPA and Inter-Mountain Laboratories except as cated in this case narrative.

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reviewed by: Karen A Secor
Karen Secor, Soil Lab Supervisor



Soil Analysis Report
Alton Coal Development, LLC

463 North 100 West
Suite 1
Cedar City, UT 84721

Report ID: S1707211001

Project: Coal Hollow Mine
Date Received: 7/17/2017

Date Reported: 7/25/2017
Work Order: S1707211

Table with 10 columns: Lab ID, Sample ID, Depths Inches, pH s.u., Saturation %, Electrical Conductivity dS/m, Field Capacity %, Wilting Point %, Organic Matter LOI %, CaCO3 %. Contains 4 rows of soil analysis data.

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SEP 27 2017
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These results apply only to the samples tested.

Abbreviations for extractants: PE= Saturated Paste Extract, H2Osol= water soluble, AB-DTPA= Ammonium Bicarbonate-DTPA, AAO= Acid Ammonium Oxalate
Abbreviations used in acid base accounting: T.S.= Total Sulfur, AB= Acid Base, ABP= Acid Base Potential, PyrS= Pyritic Sulfur, Pyr+Org= Pyritic Sulfur + Organic Sulfur, Neutral. Pot.= Neutralization Potential
Miscellaneous Abbreviations: SAR= Sodium Adsorption Ratio, CEC= Cation Exchange Capacity, ESP= Exchangeable Sodium Percentage

Reviewed by: Karen A Secor
Karen Secor, Soil Lab Supervisor



Soil Analysis Report
Alton Coal Development, LLC

463 North 100 West
Suite 1
Cedar City, UT 84721

Report ID: S1707211001

Project: Coal Hollow Mine
Date Received: 7/17/2017

Date Reported: 7/25/2017
Work Order: S1707211

Lab ID	Sample ID	Depths Inches	Calcium	Magnesium	Potassium	Sodium	SAR
			PE meq/L	PE meq/L	PE meq/L	PE meq/L	
S1707211-001	Reclaim 9	0-6	15.7	9.98	0.76	57.4	16.0
S1707211-002	Reclaim 9	6-12	16.9	10.3	0.84	60.0	16.2
S1707211-003	Reclaim 9	12-24	14.8	10.2	0.74	51.4	14.5
S1707211-004	Reclaim 9	24-36	17.2	11.7	0.89	61.0	16.0

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 SEP 27 2017
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These results apply only to the samples tested.

Abbreviations for extractants: PE= Saturated Paste Extract, H2Osol= water soluble, AB-DTPA= Ammonium Bicarbonate-DTPA, AAO= Acid Ammonium Oxalate

Abbreviations used in acid base accounting: T.S.= Total Sulfur, AB= Acid Base, ABP= Acid Base Potential, PyrS= Pyritic Sulfur, Pyr+Org= Pyritic Sulfur + Organic Sulfur, Neutral. Pot.= Neutralization Potential

Miscellaneous Abbreviations: SAR= Sodium Adsorption Ratio, CEC= Cation Exchange Capacity, ESP= Exchangeable Sodium Percentage

Reviewed by: Karen A Secor
Karen Secor, Soil Lab Supervisor



Soil Analysis Report
Alton Coal Development, LLC

Report ID: S1707211001

463 North 100 West
Suite 1
Cedar City, UT 84721

Project: Coal Hollow Mine
Date Received: 7/17/2017

Date Reported: 7/25/2017
Work Order: S1707211

Lab ID	Sample ID	Depths Inches	Sand %	Silt %	Clay %	Texture	Very Fine	Boron ppm	Selenium ppm	Total	TOC %
							Sand %			Carbon %	
S1707211-001	Reclaim 9	0-6	34.0	28.0	38.0	Clay Loam	29.3	0.99	0.02	1.4	0.7
S1707211-002	Reclaim 9	6-12	33.0	29.0	38.0	Clay Loam	28.3	0.90	<0.02	1.2	0.5
S1707211-003	Reclaim 9	12-24	35.0	29.0	36.0	Clay Loam	29.7	1.27	0.03	1.9	1.2
S1707211-004	Reclaim 9	24-36	34.0	27.0	39.0	Clay Loam	28.9	1.20	0.03	1.4	0.8

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These results apply only to the samples tested.

Abbreviations for extractants: PE= Saturated Paste Extract, H2OSol= water soluble, AB-DTPA= Ammonium Bicarbonate-DTPA, AAO= Acid Ammonium Oxalate

Abbreviations used in acid base accounting: T.S.= Total Sulfur, AB= Acid Base, ABP= Acid Base Potential, PyrS= Pyritic Sulfur, Pyr+Org= Pyritic Sulfur + Organic Sulfur, Neutral. Pot.= Neutralization Potential

Miscellaneous Abbreviations: SAR= Sodium Adsorption Ratio, CEC= Cation Exchange Capacity, ESP= Exchangeable Sodium Percentage

Reviewed by: Karen A Secor
Karen Secor, Soil Lab Supervisor



Soil Analysis Report
Alton Coal Development, LLC

463 North 100 West
Suite 1
Cedar City, UT 84721

Report ID: S1707211001

Project: Coal Hollow Mine
Date Received: 7/17/2017

Date Reported: 7/25/2017
Work Order: S1707211

Lab ID	Sample ID	Depths Inches	Total	T.S.	Neutral.	T.S.
			Sulfur	AB	Potential	ABP
			%	t/1000t	t/1000t	t/1000t
S1707211-001	Reclaim 9	0-6	0.51	16.0	60.2	44.2
S1707211-002	Reclaim 9	6-12	0.64	20.0	50.4	30.4
S1707211-003	Reclaim 9	12-24	0.56	17.4	57.2	39.7
S1707211-004	Reclaim 9	24-36	0.59	18.5	51.1	32.6

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These results apply only to the samples tested.

Abbreviations for extractants: PE= Saturated Paste Extract, H2Osol= water soluble, AB-DTPA= Ammonium Bicarbonate-DTPA, AAO= Acid Ammonium Oxalate

Abbreviations used in acid base accounting: T.S.= Total Sulfur, AB= Acid Base, ABP= Acid Base Potential, PyrS= Pyritic Sulfur, Pyr+Org= Pyritic Sulfur + Organic Sulfur, Neutral. Pot.= Neutralization Potential

Miscellaneous Abbreviations: SAR= Sodium Adsorption Ratio, CEC= Cation Exchange Capacity, ESP= Exchangeable Sodium Percentage

Reviewed by: Karen A Secor
Karen Secor, Soil Lab Supervisor



Soil Analysis Report
Alton Coal Development
463 North 100 West, Suite 1
Cedar City, UT 84721

Project ID: Coal Hollow Mine
Date Received: 7/17/2017

Report ID: S1707211001
Date Reported: 7/25/2017
Work Order: S1707211

Lab ID	Sample ID	Organic Matter %	Sand %	Silt %	Clay %	Very Fine Sand %	Texture	K-factor (t.ac.h/100acft.tf.in)	Structure s	Permeability p	M
S1707211-001	Reclaim 9 (0-6)	1.8	34.0	28.0	38.0	29.3	Clay Loam	0.30	3	4	3552.6
S1707211-002	Reclaim 9 (6-12)	1.6	33.0	29.0	38.0	28.3	Clay Loam	0.30	3	4	3552.6
S1707211-003	Reclaim 9 (12-24)	2.9	35.0	29.0	36.0	29.7	Clay Loam	0.28	3	4	3756.8
S1707211-004	Reclaim 9 (24-36)	2.1	34.0	27.0	39.0	28.9	Clay Loam	0.28	3	4	3409.9

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SEP 27 2017
Div. of Oil, Gas & Mining

These Results apply only to the samples tested.

Reviewed by: Karen Secor
Karen Secor, Soil Lab Supervisor



Inter-Mountain Labs, Inc.
 Sheridan, WY and Gillette, WY

- CHAIN OF CUSTODY RECORD -

All shaded fields must be completed. # WEB
 This is a legal document; any misrepresentation may be construed as fraud.

Client Name Alton Coal Development, LLC			Project Identification Coal Hollow Mine			Sampler (Signature/Affestation of Authenticity) <i>B. Kirk Nicholes</i>			Telephone # 406-681-1151											
Report Address 463 N 100 W, Suite 1 Cedar City, Utah 84721			Contact Name and Email Kirk Nicholes			ANALYSES / PARAMETERS														
Invoice Address Same			Voice FAX knicholes@altoncoal.com																	
			Purchase Order #			Quote #														
ITEM	LAB ID <small>(Lab Use Only)</small>	DATE SAMPLED	TIME	SAMPLE IDENTIFICATION		Matrix	# of Containers	% Saturation	pH	EC	SAR	%CaCO3	Texture	Total Organic Carbon	Available Water	K-Factor	Soluble Na, K, Mg	Acid Base Potential	Soluble Selenium	Available Boron
1	S1707211-001	7/11/2016		Reclaim 9	0" -6"	SL	1	X	X	X	X	X	X	X	X	X	X	X	X	X
2	002	7/11/2016		Reclaim 9	6" - 12"	SL	1	X	X	X	X	X	X	X	X	X	X	X	X	X
3	003	7/11/2016		Reclaim 9	1' - 2'	SL	1	X	X	X	X	X	X	X	X	X	X	X	X	X
4	004	7/11/2016		Reclaim 9	2' - 3'	SL	1	X	X	X	X	X	X	X	X	X	X	X	X	X
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
LAB COMMENTS		Relinquished By (Signature/Printed) <i>B. Kirk Nicholes</i> /B. Kirk Nicholes			DATE 7/12/17		TIME 0230		Received By (Signature/Printed) <i>Karen Alcega</i>			DATE 7/17/17		TIME 1030						
SHIPPING INFO		MATRIX CODES		TURN AROUND TIMES			COMPLIANCE INFORMATION			ADDITIONAL REMARKS										
<input type="checkbox"/> UPS <input checked="" type="checkbox"/> Fed Express <input type="checkbox"/> US Mail <input type="checkbox"/> Hand Carried <input type="checkbox"/> Other _____		Water WT Soil SL Solid SD Trip Blank TB Other OT		Check desired service <input type="checkbox"/> Standard turnaround <input checked="" type="checkbox"/> RUSH - 5 Working Days <input type="checkbox"/> URGENT - < 2 Working Days <i>Rush & Urgent Surcharges will be applied</i>			Compliance Monitoring ? Program (SDWA, NPDES, ...) PWSID / Permit # Chlorinated? Sample Disposal: Lab _____ Client _____			Y / N Y / N										



Date: 12/27/2016

CLIENT: Alton Coal Development, LLC
Project: Coal Hollow Reclamation
Lab Order: S1611366

CASE NARRATIVE
Report ID: S1611366001

Samples NPL Reclaim Soil Pit #4, NPL Reclaim Soil Pit #5, and NPL Reclaim Soil Pit #7 were received on November 22, 2016.

Samples were analyzed using the methods outlined in the following references:

- U.S.E.P.A. 600/2-78-054 "Field and Laboratory Methods Applicable to Overburden and Mining Soils", 1978
- American Society of Agronomy, Number 9, Part 2, 1982
- USDA Handbook 60 "Diagnosis and Improvement of Saline and Alkali Soils", 1969
- Wyoming Department of Environmental Quality, Land Quality Division, Guideline No. 1, 1984
- New Mexico Overburden and Soils Inventory and Handling Guideline, March 1987
- State of Utah, Division of Oil, Gas, and Mining: Guidelines for Management of Topsoil and Overburden for Underground and Surface Coal Mining, April 1988
- Montana Department of State Lands, Reclamation Division: Soil, Overburden, and Regraded Spoil Guidelines, December 1994
- State of Nevada Modified Sobek Procedure
- Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition

Quality Control parameters met the acceptance criteria defined by EPA and Inter-Mountain Laboratories except as indicated in this case narrative.

INCORPORATED

SEP 27 2017

Div. of Oil, Gas & Mining

Reviewed by: Karen A Secor
Karen Secor, Soil Lab Supervisor



Soil Analysis Report
Alton Coal Development, LLC

463 North 100 West
Suite 1
Cedar City, UT 84721

Report ID: S1611366001

Project: Coal Hollow Reclamation
Date Received: 11/22/2016

Date Reported: 12/27/2016
Work Order: S1611366

Table with 10 columns: Lab ID, Sample ID, Depths (Feet), pH (s.u.), Saturation (%), Electrical Conductivity (dS/m), Field Capacity (%), Wilting Point (%), LOI (%), CaCO3 (%). Rows include samples S1611366-001 through S1611366-012.

DIAGNOSTIC SOIL, GAS & METALS
SEP 27 2017
INCORPORATED

These results apply only to the samples tested.

Abbreviations for extractants: PE= Saturated Paste Extract, H2Osol= water soluble, AB-DTPA= Ammonium Bicarbonate-DTPA, AAO= Acid Ammonium Oxalate

Abbreviations used in acid base accounting: T.S.= Total Sulfur, AB= Acid Base, ABP= Acid Base Potential, PyrS= Pyritic Sulfur, Pyr+Org= Pyritic Sulfur + Organic Sulfur, Neutral. Pot.= Neutralization Potential

Miscellaneous Abbreviations: SAR= Sodium Adsorption Ratio, CEC= Cation Exchange Capacity, ESP= Exchangeable Sodium Percentage

Reviewed by: Karen A Secor
Karen Secor, Soil Lab Supervisor



Soil Analysis Report
Alton Coal Development, LLC

463 North 100 West
Suite 1
Cedar City, UT 84721

Report ID: S1611366001

Project: Coal Hollow Reclamation
Date Received: 11/22/2016

Date Reported: 12/27/2016
Work Order: S1611366

Table with 8 columns: Lab ID, Sample ID, Depths (Feet), Calcium PE (meq/L), Magnesium PE (meq/L), Potassium PE (meq/L), Sodium PE (meq/L), SAR. Rows include sample IDs S1611366-001 through S1611366-012 with corresponding soil analysis data.

These results apply only to the samples tested.

Abbreviations for extractants: PE= Saturated Paste Extract, H2OSol= water soluble, AB-DTPA= Ammonium Bicarbonate-DTPA, AAO= Acid Ammonium Oxalate

Abbreviations used in acid base accounting: T.S.= Total Sulfur, AB= Acid Base, ABP= Acid Base Potential, PyrS= Pyritic Sulfur, Pyr+Org= Pyritic Sulfur + Organic Sulfur, Neutral. Pot.= Neutralization Potential

Miscellaneous Abbreviations: SAR= Sodium Adsorption Ratio, CEC= Cation Exchange Capacity, ESP= Exchangeable Sodium Percentage

Reviewed by: Karen A Secor
Karen Secor, Soil Lab Supervisor

INCORPORATED
SEP 27 2017
Div. of Oil, Gas & Mining



Soil Analysis Report
Alton Coal Development, LLC

463 North 100 West
Suite 1
Cedar City, UT 84721

Report ID: S1611366001

Project: Coal Hollow Reclamation
Date Received: 11/22/2016

Date Reported: 12/27/2016
Work Order: S1611366

Table with 12 columns: Lab ID, Sample ID, Depths (Feet), Sand (%), Silt (%), Clay (%), Texture, Very Fine Sand (%), Boron (ppm), Selenium (ppm), Total Carbon (%), TOC (%). Rows include samples S1611366-001 through S1611366-012.

Div. of Oil, Gas & Mining
SEP 27 2017
INCORPORATED

These results apply only to the samples tested.

Abbreviations for extractants: PE= Saturated Paste Extract, H2OSol= water soluble, AB-DTPA= Ammonium Bicarbonate-DTPA, AAO= Acid Ammonium Oxalate

Abbreviations used in acid base accounting: T.S.= Total Sulfur, AB= Acid Base, ABP= Acid Base Potential, PyrS= Pyritic Sulfur, Pyr+Org= Pyritic Sulfur + Organic Sulfur, Neutral. Pot.= Neutralization Potential

Miscellaneous Abbreviations: SAR= Sodium Adsorption Ratio, CEC= Cation Exchange Capacity, ESP= Exchangeable Sodium Percentage

Reviewed by: Karen A Secor
Karen Secor, Soil Lab Supervisor



Soil Analysis Report
Alton Coal Development, LLC

463 North 100 West
Suite 1
Cedar City, UT 84721

Report ID: S1611366001

Project: Coal Hollow Reclamation
Date Received: 11/22/2016

Date Reported: 12/27/2016
Work Order: S1611366

Table with 7 columns: Lab ID, Sample ID, Depths (Feet), Total Sulfur (%), T.S. AB (t/1000t), Neutral. Potential (t/1000t), T.S. ABP (t/1000t). Rows include samples S1611366-001 through S1611366-012.

SEP 27 2017
DIV. of Oil, Gas & Mining
INCORPORATED

These results apply only to the samples tested.

Abbreviations for extractants: PE= Saturated Paste Extract, H2OSol= water soluble, AB-DTPA= Ammonium Bicarbonate-DTPA, AAO= Acid Ammonium Oxalate

Abbreviations used in acid base accounting: T.S.= Total Sulfur, AB= Acid Base, ABP= Acid Base Potential, PyrS= Pyritic Sulfur, Pyr+Org= Pyritic Sulfur + Organic Sulfur, Neutral. Pot.= Neutralization Potential

Miscellaneous Abbreviations: SAR= Sodium Adsorption Ratio, CEC= Cation Exchange Capacity, ESP= Exchangeable Sodium Percentage

Reviewed by: Karen A Secor
Karen Secor, Soil Lab Supervisor



Soil Analysis Report
Alton Coal Development
463 North 100 West, Suite 100
Cedar City, UT 84721

Project ID: Coal Hollow Reclamation
Date Received: 11/22/2016

Report ID: S1611366001
Date Reported: 12/27/2016
Work Order: S1611366

Lab ID	Sample ID	Organic Matter %	Sand %	Silt %	Clay %	Very Fine Sand %	Texture	K-factor (t.ac.ft/100acft.tf.in)	Structure s	Permeability p	M	Description
S1611366-001	NPL #4 (0-0.5)	5.8	12.0	39.0	49.0	5.6	Clay	0.19	3	6	2274.6	
S1611366-002	NPL #4 (0.5-1)	4.7	12.0	36.0	52.0	6.6	Clay	0.20	3	6	2044.8	
S1611366-003	NPL #4 (1-2)	4.2	9.0	40.0	51.0	4.1	Silty Clay	0.18	2	6	2160.9	
S1611366-004	NPL #4 (2-3)	3.8	9.0	39.0	52.0	3.8	Clay	0.18	2	6	2054.4	
S1611366-005	NPL #5 (0-0.5)	7.1	13.0	33.0	54.0	6.6	Clay	0.13	2	6	1821.6	
S1611366-006	NPL #5 (0.5-1)	3.1	25.0	41.0	34.0	15.3	Clay Loam	0.24	2	4	3715.8	
S1611366-007	NPL #5 (1-2)	2.4	29.0	43.0	28.0	16.4	Clay Loam	0.30	2	4	4276.8	
S1611366-008	NPL #5 (2-3)	3.0	13.0	48.0	39.0	8.1	Silty Clay Loam	0.28	3	5	3422.1	
S1611366-009	NPL #7 (0-0.5)	4.1	10.0	39.0	51.0	5.0	Clay	0.18	2	6	2156.0	
S1611366-010	NPL #7 (0.5-1)	5.4	10.0	42.0	48.0	3.6	Silty Clay	0.17	2	6	2371.2	
S1611366-011	NPL #7 (1-2)	5.0	12.0	42.0	46.0	6.1	Silty Clay	0.19	2	6	2597.4	
S1611366-012	NPL #7 (2-3)	4.6	10.0	42.0	48.0	5.2	Silty Clay	0.19	2	6	2454.4	

Div. of Oil, Gas & Mining

SEP 27 2017

INCORPORATED

These Results apply only to the samples tested.

Reviewed by: Karen Secor
Karen Secor, Soil Lab Supervisor



Inter-Mountain Labs
Sheridan, WY and Gillette, WY

CHAIN OF CUSTODY RECORD -

Page 1 of 1

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170138

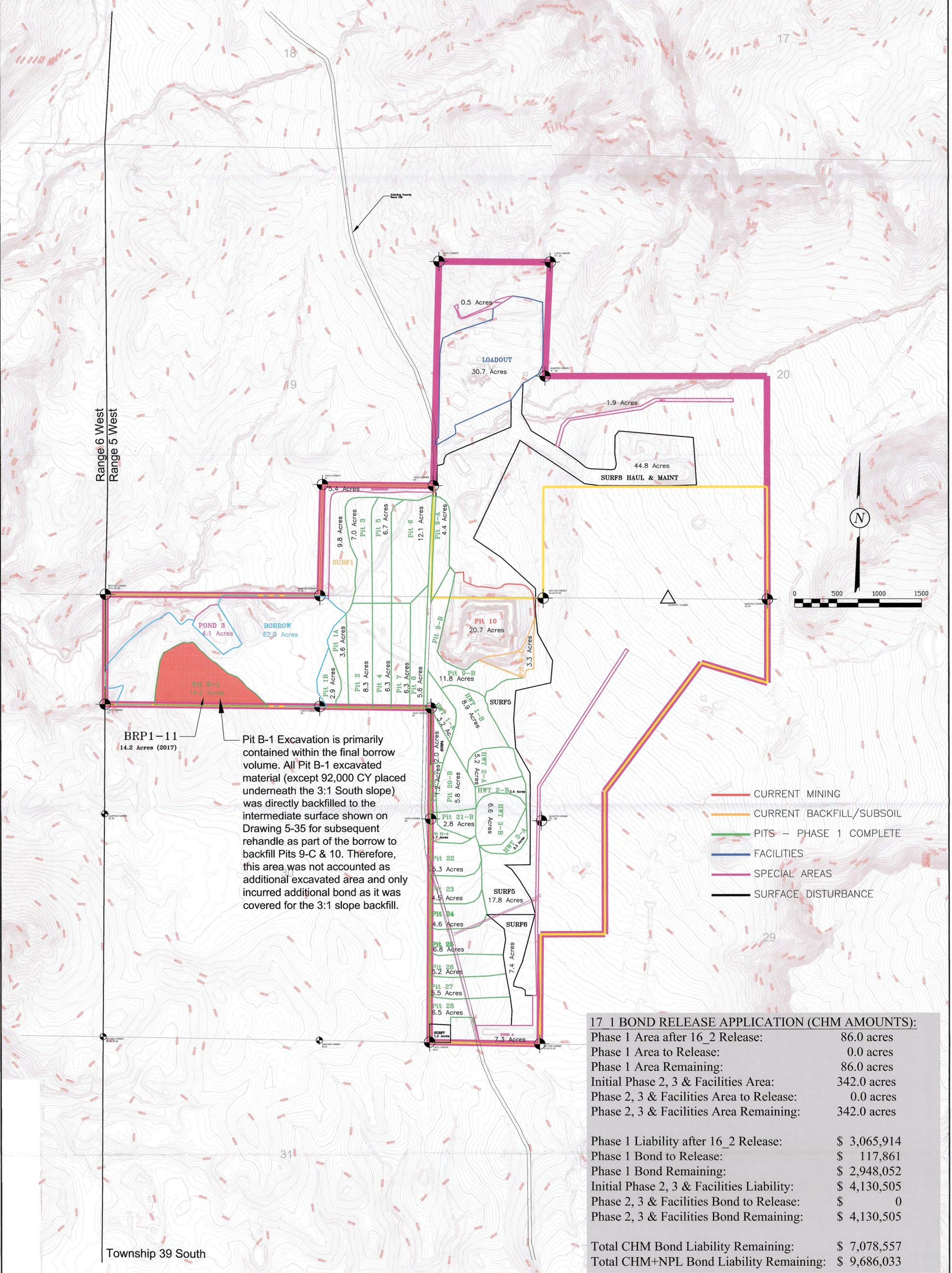
Client Name Altam Coal Development LLC	Project Identification Coal Hollow Mine	Sampler (Signature/Attestation of Authenticity) B. Kirk Nicholas	Telephone # 435-691-1551
--	---	--	------------------------------------

Report Address 463 N. 100 W. Cedar City, UT 84721	Contact Name Kirk Nicholas	ANALYSES / PARAMETERS
Invoice Address Same ↑	Email Knicholes@altamcoal.com	
Phone 435-691-1551	Quote #	

ITEM	LAB ID (Lab Use Only)	DATE SAMPLED	TIME	SAMPLE IDENTIFICATION	Matrix	# of Containers	ANALYSES / PARAMETERS										REMARKS				
							% Submittal	PA	PC	SAR	% CaCO ₃	Texture	Total Organic Carbon	Available Nitrate	K-Factor	Soluble N ₂ , K, Mg		Acid Base Potential	Soluble Selenium	Available Boron	
1	51611366-001	11-15-16		NPL Reclaim Soil #4 0"-6"	SL	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
2	002			" " " " 6"-1'		1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
3	003			" " " " 1'-2'		1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
4	004			" " " " 2'-3'		1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
5	005			NPL Reclaim Soil Pit #5 0"-6"		1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
6	006			" " " " 6"-1'		1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
7	007			" " " " 1'-2'		1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
8	008			" " " " 2'-3'		1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
9	009			NPL Reclaim Soil Pit #7 0"-6"		1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
10	010			" " " " 6"-1'		1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
11	011			" " " " 1'-2'		1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
12	012			" " " " 2'-3'		1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

LAB COMMENTS	Relinquished By (Signature/Printed) B. Kirk Nicholas / B. Kirk Nicholas	DATE 11/19/16	TIME 10:00am	Received By (Signature/Printed) Kare Wilson	DATE 11/22/16	TIME 1020
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SHIPPING INFO	MATRIX CODES	TURNAROUND TIMES	COMPLIANCE INFORMATION	ADDITIONAL REMARKS
<input type="checkbox"/> UPS <input checked="" type="checkbox"/> Fed Express <input type="checkbox"/> US Mail <input type="checkbox"/> Hand Carried <input type="checkbox"/> Other _____	Water WT Soil SL Solid SD Filter FT Other OT	<input type="checkbox"/> Check desired service <input checked="" type="checkbox"/> Standard turnaround <input type="checkbox"/> RUSH - 5 Working Days <input type="checkbox"/> URGENT - < 2 Working Days Rush & Urgent Surcharges will be applied	Compliance Monitoring? Y/N Program (SDWA, NPDES,...) PWSID / Permit # Chlorinated? Y/N Sample Disposal: Lab Client	



BRP1-11
14.2 Acres (2017)

Pit B-1 Excavation is primarily contained within the final borrow volume. All Pit B-1 excavated material (except 92,000 CY placed underneath the 3:1 South slope) was directly backfilled to the intermediate surface shown on Drawing 5-35 for subsequent rehandle as part of the borrow to backfill Pits 9-C & 10. Therefore, this area was not accounted as additional excavated area and only incurred additional bond as it was covered for the 3:1 slope backfill.

- CURRENT MINING
- CURRENT BACKFILL/SUBSOIL
- PITS — PHASE 1 COMPLETE
- FACILITIES
- SPECIAL AREAS
- SURFACE DISTURBANCE

17_1 BOND RELEASE APPLICATION (CHM AMOUNTS):

Phase 1 Area after 16_2 Release:	86.0 acres
Phase 1 Area to Release:	0.0 acres
Phase 1 Area Remaining:	86.0 acres
Initial Phase 2, 3 & Facilities Area:	342.0 acres
Phase 2, 3 & Facilities Area to Release:	0.0 acres
Phase 2, 3 & Facilities Area Remaining:	342.0 acres
Phase 1 Liability after 16_2 Release:	\$ 3,065,914
Phase 1 Bond to Release:	\$ 117,861
Phase 1 Bond Remaining:	\$ 2,948,052
Initial Phase 2, 3 & Facilities Liability:	\$ 4,130,505
Phase 2, 3 & Facilities Bond to Release:	\$ 0
Phase 2, 3 & Facilities Bond Remaining:	\$ 4,130,505
Total CHM Bond Liability Remaining:	\$ 7,078,557
Total CHM+NPL Bond Liability Remaining:	\$ 9,686,033

Contour Interval = 2'

LEGEND:

- PERMIT BOUNDARY
- PRIVATE COAL OWNERSHIP
- ULTIMATE PIT BOUNDARY
- DISTURBANCE BNDY
- SECTION LINE
- FOUND SECTION CORNER
- FOUND PROPERTY CORNER

DRAWN BY: A. Christensen	CHECKED BY: KN
DRAWING: Fig. 1	DATE: 8/2/2017
JOB NUMBER:	SHEET
SCALE: 1" = 500' Printed on 24" x36"	

REVISIONS	
DATE:	BY:
xx/xx/xx	xx

**OVERVIEW
PROPOSED
BOND RELEASE
17_1**

COAL HOLLOW
PROJECT
ALTON, UTAH

Figure 1

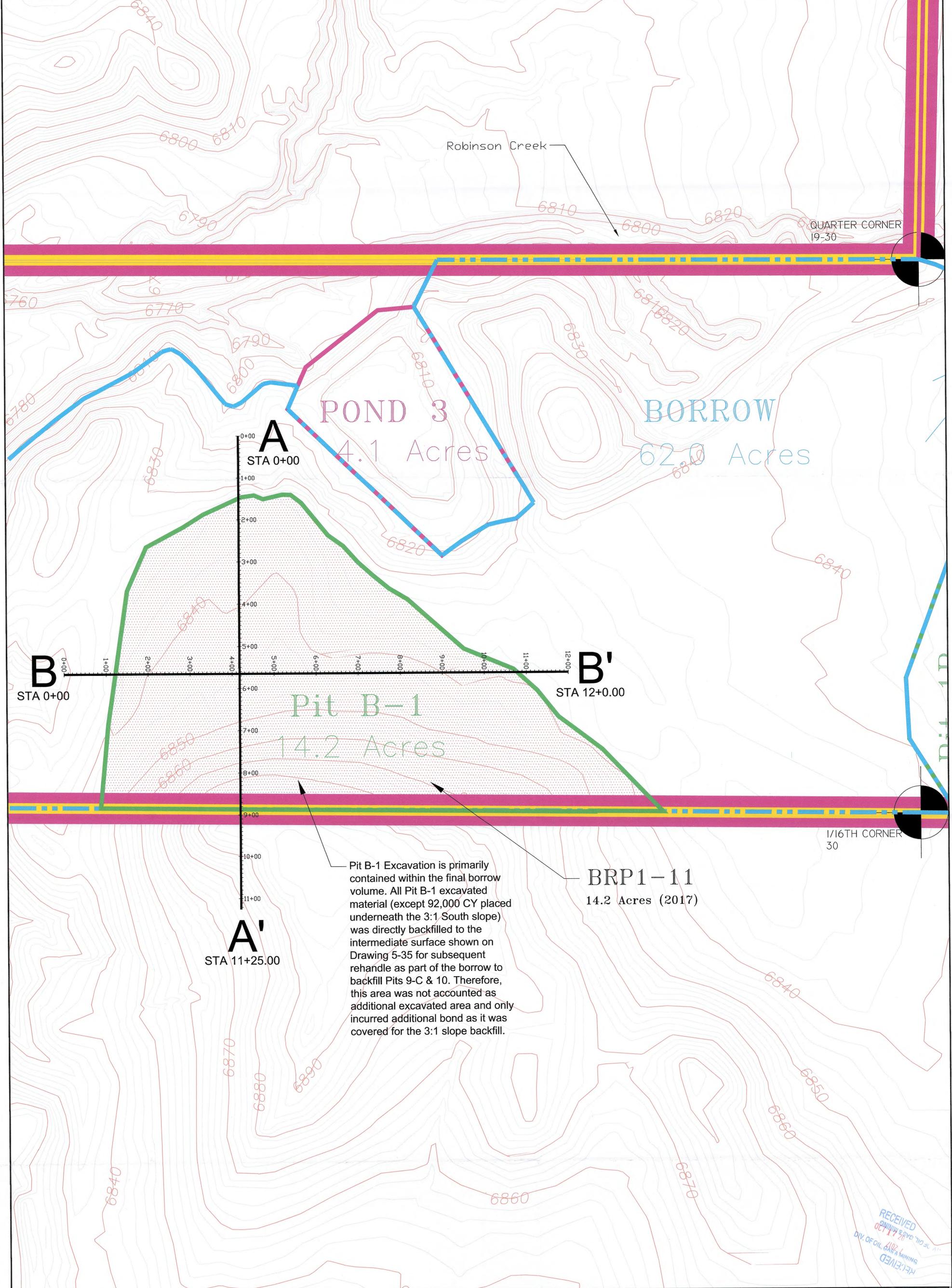
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PROFESSIONAL ENGINEER
ANDREW R. CHRISTENSEN
10/17/17
STATE OF UTAH

INCORPORATED
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**Coal Hollow
PROJECT**

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Cedar City, Utah 84721
Phone (435)867-5331
Fax (435)867-1192



Pit B-1 Excavation is primarily contained within the final borrow volume. All Pit B-1 excavated material (except 92,000 CY placed underneath the 3:1 South slope) was directly backfilled to the intermediate surface shown on Drawing 5-35 for subsequent rehandle as part of the borrow to backfill Pits 9-C & 10. Therefore, this area was not accounted as additional excavated area and only incurred additional bond as it was covered for the 3:1 slope backfill.

BRP 1-11
14.2 Acres (2017)

LEGEND:

- PERMIT BOUNDARY
- PRIVATE COAL OWNERSHIP
- ULTIMATE PIT BOUNDARY
- DISTURBANCE BNDY
- SECTION LINE
- FOUND SECTION CORNER
- FOUND PROPERTY CORNER

DRAWN BY: A. Christensen	CHECKED BY: KN
DRAWING: FIGURE 1-A	DATE: 8/2/2017
JOB NUMBER:	SCALE: 1" = 100' Printed on 24" x36"
	SHEET

REVISIONS	
DATE:	BY:
xx/xx/xx	xx

**PROPOSED
PHASE 1
BOND RELEASE
BRP 1-11**

COAL HOLLOW
PROJECT
ALTON, UTAH

FIGURE 1-A

INCORPORATED

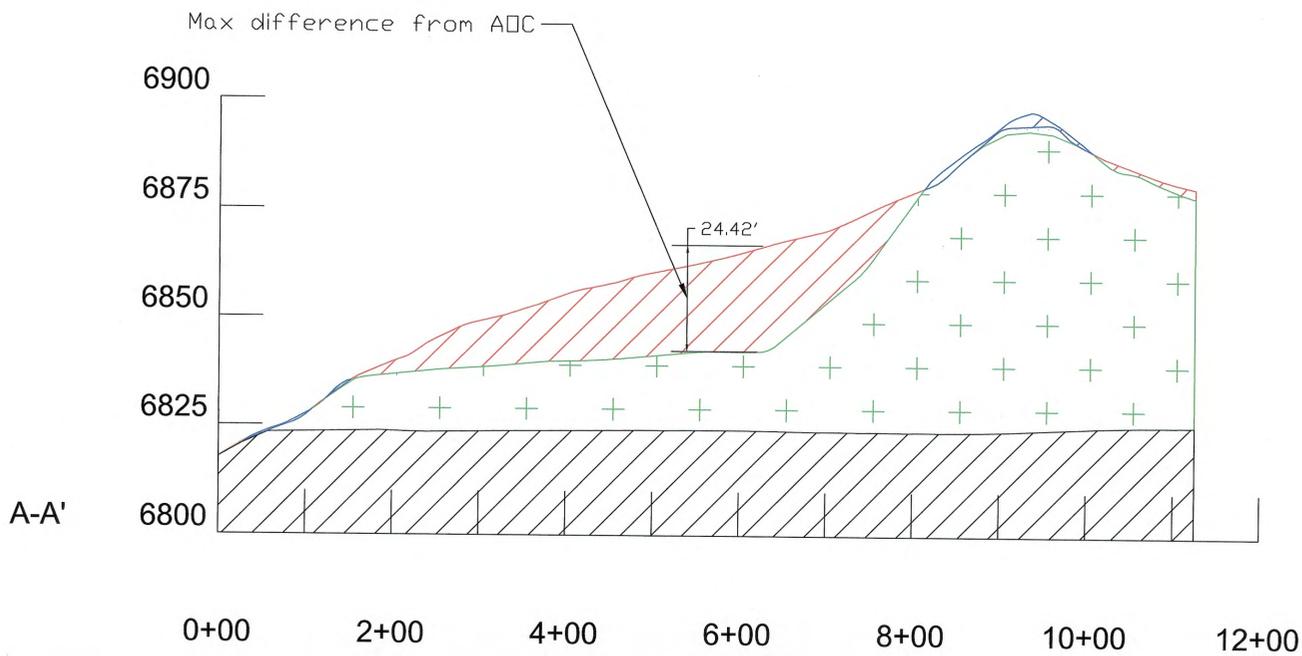
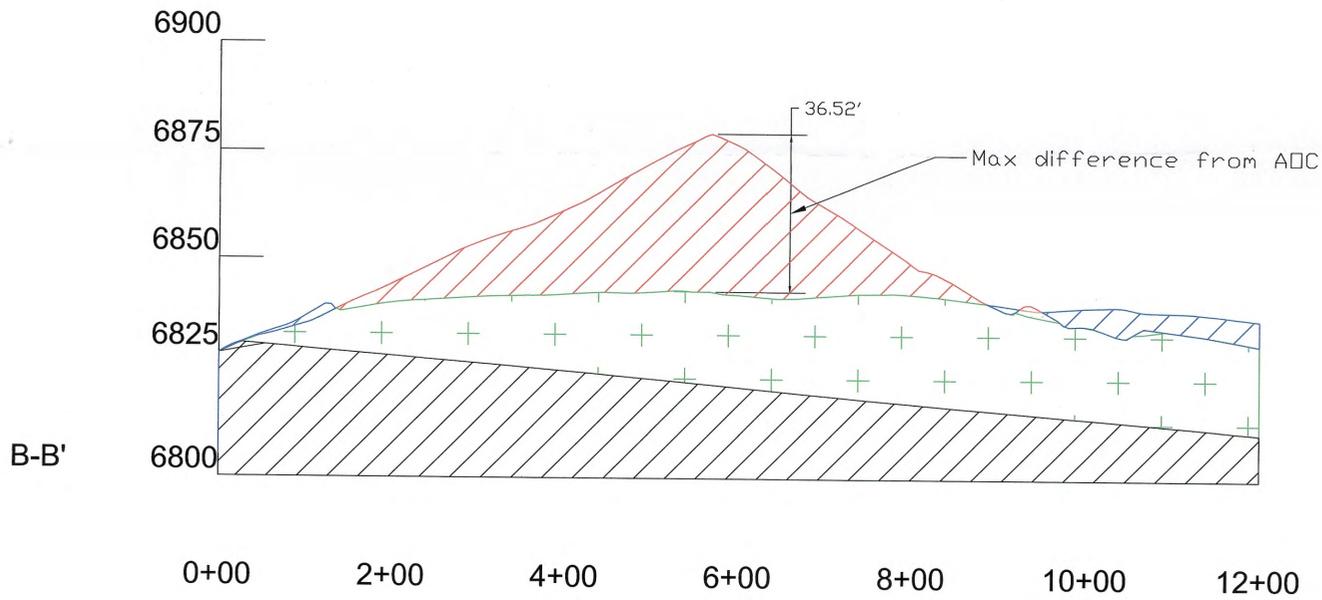
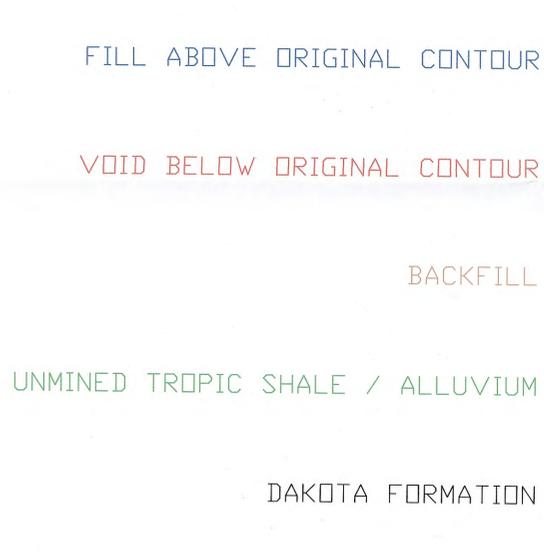
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Allow Coal Developer
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1"=20'
X-Section
Scale
1"=100'

LEGEND:

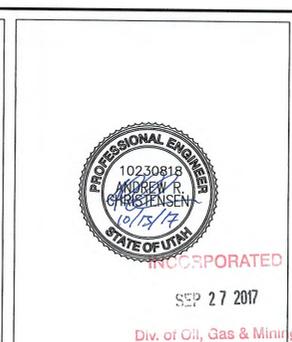
- PERMIT BOUNDARY
- PRIVATE COAL OWNERSHIP
- ULTIMATE PIT BOUNDARY
- DISTURBANCE BNDY
- SECTION LINE
- FOUND SECTION CORNER
- FOUND PROPERTY CORNER

DRAWN BY: A. Christensen	CHECKED BY: KN
DRAWING: FIGURE 1-B	DATE: 8/2/2017
JOB NUMBER:	SCALE: 1" = 100' Printed on 24" x36"
	SHEET

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DATE:	BY:
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CROSS-SECTIONS	
BOND RELEASE	
BRP 1-11	
COAL HOLLOW PROJECT ALTON, UTAH	
FIGURE 1-B	

10230818
ANDREW R. CHRISTENSEN
10/15/17
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Cedar City, Utah 84721
Phone (435)867-5331
Fax (435)867-1192



Contour Interval = 2'

STA 14+0.00

SURF 1
12.5 Acres

BRP 1-12
16.3 Acres (2017)

Pit 01 2.9 Acres

Pit 02 4.0 Acres

Pit 03 5.3 Acres

Pit 04 5.6 Acres

Pit 05 5.8 Acres

Pit 06 4.8 Acres

Pit 07 4.5 Acres

Pit 08 4.8 Acres

Pit 09 5.9 Acres

Pit 10 8.8 Acres

Pit 11 5.2 Acres

Pit 12 5.9 Acres

Pit 13 5.9 Acres

Pit 14 7.1 Acres

Pit 15 6.9 Acres

B
STA 0+00

B'
STA 8+0.00

A
STA 0+00

A'
STA 14+0.00

Permit Area 1 Boundary

- CURRENT MINING
- CURRENT BACKFILL/SUBSOIL
- PITS - PHASE 1 COMPLETE
- FACILITIES
- PIT NOT CURRENTLY BONDED
- SURFACE DISTURBANCE

17_1 BOND RELEASE APPLICATION (NPL AMOUNTS):	
Phase 1 Area Bonded:	31.5 acres
Phase 1 Area to Release:	16.3 acres
Phase 1 Area Remaining:	15.2 acres
Initial Phase 2, 3 & Facilities Area:	56.3 acres
Phase 2, 3 & Facilities Area to Release:	0.0 acres
Phase 2, 3 & Facilities Area Remaining:	56.3 acres
Phase 1 Liability Bonded:	\$ 3,953,460
Phase 1 Bond to Release:	\$ 2,012,557
Phase 1 Bond Remaining:	\$ 1,940,903
Initial Phase 2, 3 & Facilities Liability:	\$ 666,573
Phase 2, 3 & Facilities Bond to Release:	\$ 0
Phase 2, 3 & Facilities Bond Remaining:	\$ 666,573
Total NPL Bond Liability Remaining:	\$ 2,607,656
Total Combined Bond Liability Remaining:	\$ 9,686,033

LEGEND:

- PERMIT BOUNDARY
- PRIVATE COAL OWNERSHIP
- ULTIMATE PIT BOUNDARY
- DISTURBANCE BNDY
- SECTION LINE
- FOUND SECTION CORNER
- FOUND PROPERTY CORNER

DRAWN BY: A. Christensen	CHECKED BY: KN
DRAWING: Fig. 2	DATE: 8/2/2017
JOB NUMBER:	SCALE: 1" = 100' Printed on 24" x36"
	SHEET

REVISIONS	
DATE:	BY:
xx/xx/xx	xx

**OVERVIEW
PROPOSED
BOND RELEASE
17_1, BRP 1-12**

COAL HOLLOW
PROJECT
ALTON, UTAH

Figure 2

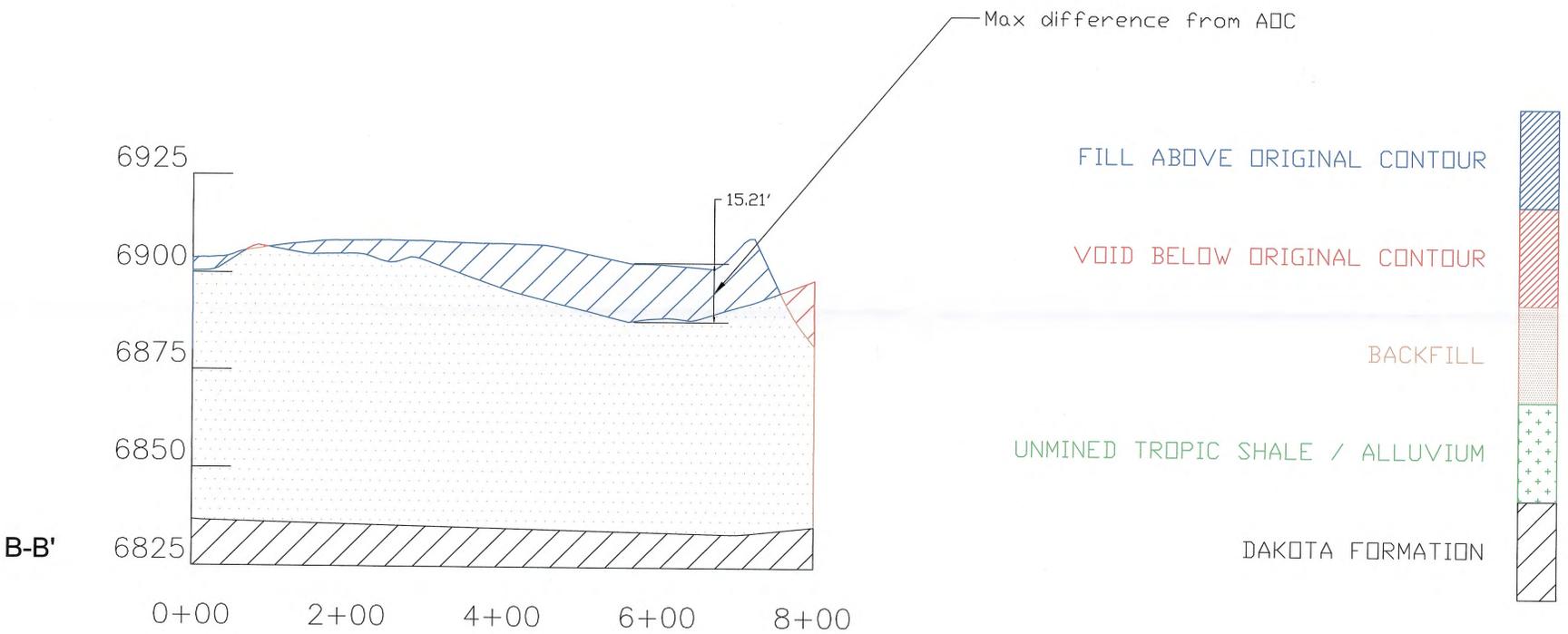
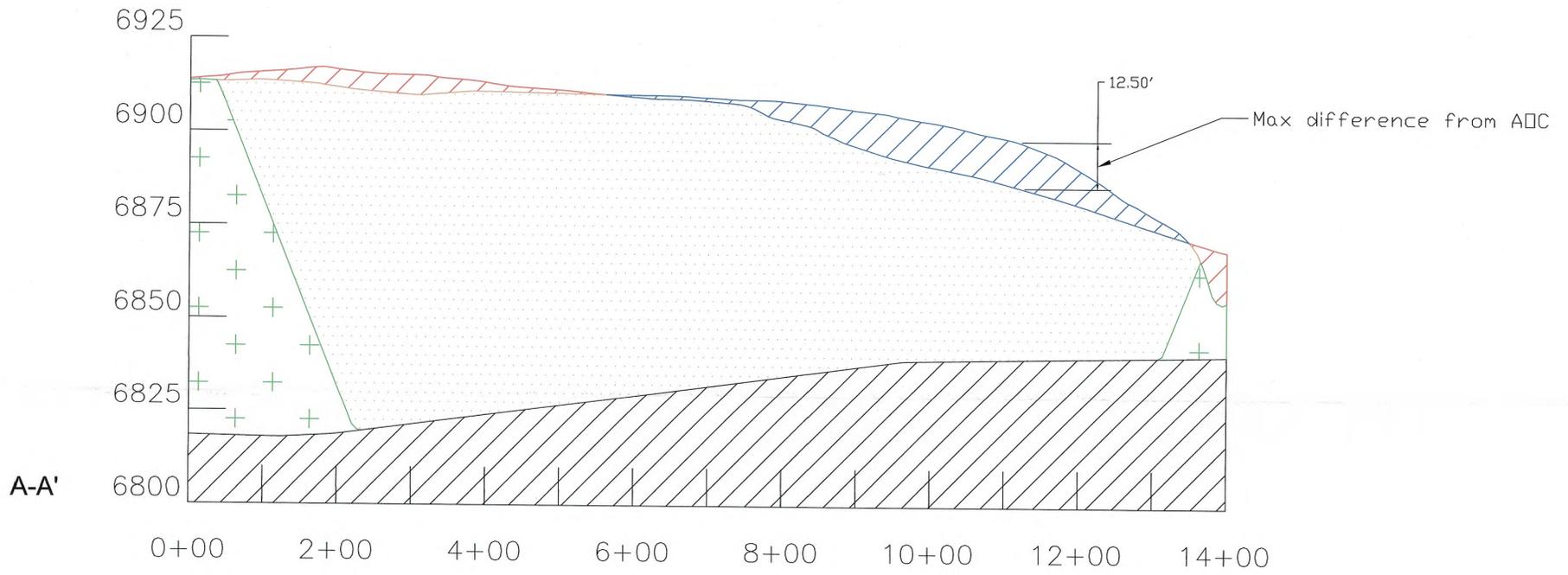
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PROFESSIONAL ENGINEER
10230818
ANDREW R. CHRISTENSEN
8/2/17
STATE OF UTAH

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SEP 27 2017
Div. of Oil, Gas & Mining

**Coal Hollow
PROJECT**

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Cedar City, Utah 84721
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Fax (435)867-1192



1"=20'
X-Section Scale
1"=100'
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LEGEND:

- PERMIT BOUNDARY
- PRIVATE COAL OWNERSHIP
- ULTIMATE PIT BOUNDARY
- DISTURBANCE BNDY
- SECTION LINE
- FOUND SECTION CORNER
- FOUND PROPERTY CORNER

DRAWN BY: A. Christensen	CHECKED BY: KN
DRAWING: FIGURE 2-A	DATE: 8/2/2017
JOB NUMBER:	SCALE: 1" = 100' Printed on 24" x36"
SHEET	

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DATE:	BY:
xx/xx/xx	xx

**CROSS-SECTIONS
BOND RELEASE
BRP 1-12**

COAL HOLLOW
PROJECT
ALTON, UTAH

FIGURE 2-A

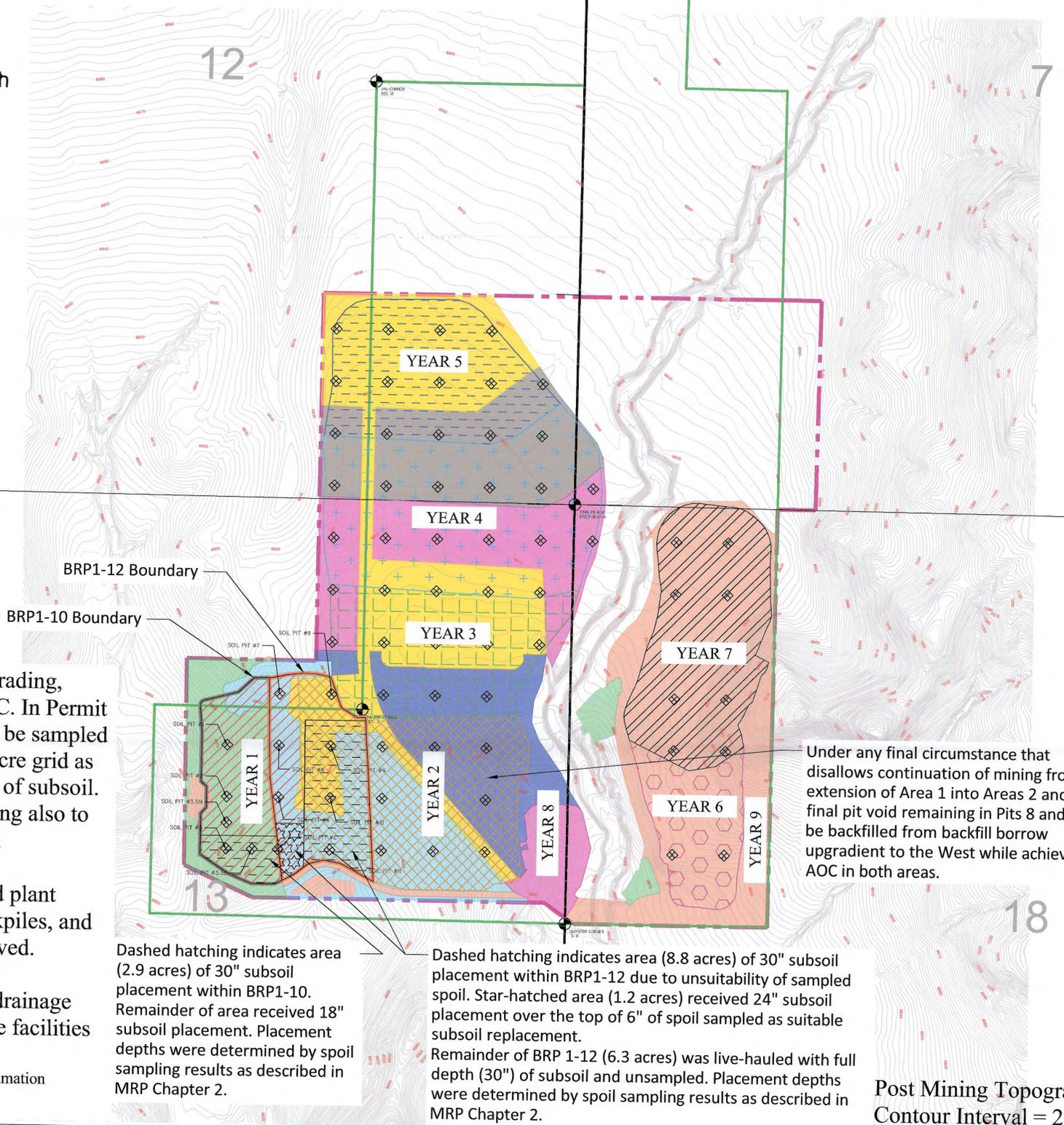
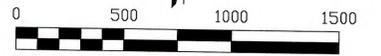
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Coal Hollow Project

463 North 100 West, Suite 1
Cedar City, Utah 84721
Phone (435)867-5331
Fax (435)867-1192

Township 39 South

Range 6 West
Range 5 West



Phase 1 indicates backfill, grading, placement of subsoil to AOC. In Permit Area 1, top 8" of Backfill to be sampled for soil suitability on a 2.5 acre grid as indicated prior to placement of subsoil. Topsoil, mulching and seeding also to occur ASAP within seasonal constraints.

Phase 2 indicates established plant growth. All haul roads, stockpiles, and non-drainage facilities removed.

Phase 3 indicates completed reclamation and acceptable drainage without erosion. All drainage facilities removed*.

* See Drawing 5-76B for Facilities Reclamation Sequence

Dashed hatching indicates area (2.9 acres) of 30" subsoil placement within BRP1-10. Remainder of area received 18" subsoil placement. Placement depths were determined by spoil sampling results as described in MRP Chapter 2.

Dashed hatching indicates area (8.8 acres) of 30" subsoil placement within BRP1-12 due to unsuitability of sampled spoil. Star-hatched area (1.2 acres) received 24" subsoil placement over the top of 6" of spoil sampled as suitable subsoil replacement. Remainder of BRP 1-12 (6.3 acres) was live-hauled with full depth (30") of subsoil and unsampled. Placement depths were determined by spoil sampling results as described in MRP Chapter 2.

Phase 1 Reclamation:

- Year 1 Reclaim = 17.9 Acres
- Year 2 Reclaim = 34.7 Acres
- Year 3 Reclaim = 24.1 Acres
- Year 4 Reclaim = 39.3 Acres
- Year 5 Reclaim = 24.3 Acres
- Year 6 Reclaim = 11.6 Acres
- Year 7 Reclaim = 26.4 Acres
- Year 8 Reclaim = 00.0 Acres
- Year 9 Reclaim = 00.0 Acres

Total Ph. 1 Reclamation = 178.4 Acres

Phase 2/Surface Mulch & Seeding:

- Year 1 Seeding = 16.2 Acres
- Year 2 Seeding = 25.0 Acres
- Year 3 Seeding = 22.3 Acres
- Year 4 Seeding = 22.2 Acres
- Year 5 Seeding = 23.8 Acres
- Year 6 Seeding = 49.3 Acres
- Year 7 Seeding = 57.8 Acres
- Year 8 Seeding = 5.8 Acres
- Year 9 Seeding = 2.5 Acres

Total Ph. 2 Reclamation = 224.9 Acres

Phase 3 Reclamation to be completed and released within the 10 year timeframe from Phase 1.

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LEGEND: PERMIT BOUNDARY PRIVATE COAL OWNERSHIP SECTION LINE FOUND SECTION CORNER FOUND PROPERTY CORNER BACKFILL SAMPLE PIT	DRAWN BY: A. CHRISTENSEN	CHECKED BY: DWG	REVISIONS		EARTHWORKS RECLAMATION SEQUENCE NORTH COAL HOLLOW PROJECT ALTON, UTAH DRAWING: 5-76A	INCORPORATED SEP 27 2017 Div. of Oil, Gas & Mining 	 463 North 100 West, Suite 1 Cedar City, Utah 84721 Phone (435)867-5331 Fax (435)867-1192
	DRAWING: 5-76A	DATE: 4/16/15	DATE:	DATE:			
	JOB NUMBER: 0001	SCALE: 1" = 400'	DATE:	DATE:			
	SHEET	DATE:	DATE:	DATE:			