



## Alton Coal Development, LLC

463 North 100 West, Suite 1  
Cedar City, Utah 84720  
Phone (435) 867-5311 Fax (435) 867-1192

C0250005

#5740

Date: September 18, 2018

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

**Subject: 2017 Coal Mining Annual Report; Alton Coal Development LLC, Coal Hollow Mine, C/025/0005, Task 5652**

Dear Mr. Haddock,

Alton Coal Development, LLC is providing the Drawings 18 in response to task 5696 for the 2017 Coal Mining Annual Report for the Coal Hollow Mine.

Changes to the MRP associated with this report have also been uploaded to the DOGM's server for review. Upon approval, 2 (two) clean hard copies of the text for insertion into the MRP will be submitted. Please do not hesitate to contact me if you have any questions 435-691-1551.

Sincerely

B. Kirk Nicholes  
Resident Agent

**RECEIVED**

**SEP 28 2018**

**DIV. OF OIL, GAS & MINING**

## APPLICATION FOR COAL PERMIT PROCESSING

Permit Change  New Permit  Renewal  Exploration  Bond Release  Transfer

**Permittee:** Alton Coal Development, LLC

**Mine:** Coal Hollow Mine

**Permit Number:**

C/025/0005

**Title:** MRP Annual Report 2017 amendments to permit

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

**Addition of new topsoil analysis**

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

- |                              |  |   |
|------------------------------|--|---|
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | 1. Change in the size of the Permit Area? Acres: _____ Disturbed Area: _____ <input type="checkbox"/> increase <input type="checkbox"/> decrease. |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | 2. Is the application submitted as a result of a Division Order? DO# _____  |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | 3. Does the application include operations outside a previously identified Cumulative Hydrologic Impact Area?                                     |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | 4. Does the application include operations in hydrologic basins other than as currently approved?   |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | 5. Does the application result from cancellation, reduction or increase of insurance or reclamation bond?   |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | 6. Does the application require or include public notice publication?   |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | 7. Does the application require or include ownership, control, right-of-entry, or compliance information?   |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | 8. Is proposed activity within 100 feet of a public road or cemetery or 300 feet of an occupied dwelling?   |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | 9. Is the application submitted as a result of a Violation? NOV # _____   |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | 10. Is the application submitted as a result of other laws or regulations or policies?<br><i>Explain:</i> _____                                   |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | 11. Does the application affect the surface landowner or change the post mining land use?   |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | 12. Does the application require or include underground design or mine sequence and timing? (Modification of R2P2)                                |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | 13. Does the application require or include collection and reporting of any baseline information?   |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | 14. Could the application have any effect on wildlife or vegetation outside the current disturbed area?   |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | 15. Does the application require or include soil removal, storage or placement?   |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | 16. Does the application require or include vegetation monitoring, removal or revegetation activities?  |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | 17. Does the application require or include construction, modification, or removal of surface facilities?   |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | 18. Does the application require or include water monitoring, sediment or drainage control measures?  |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | 19. Does the application require or include certified designs, maps or calculation?   |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | 20. Does the application require or include subsidence control or monitoring?   |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | 21. Have reclamation costs for bonding been provided?   |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | 22. Does the application involve a perennial stream, a stream buffer zone or discharges to a stream?  |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | 23. Does the application affect permits issued by other agencies or permits issued to other entities?   |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | 24. Does the application include confidential information and is it clearly marked and separated in the plan?                                     |

**Please attach three (3) review copies of the application. If the mine is on or adjacent to Forest Service land please submit four (4) copies, thank you.** (These numbers include a copy for the Price Field Office)

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.

<u>B. Kirk Nicholes</u>	<u>Resident Agent</u>	<u>03/23/2018</u>	<u>B. Kirk Nicholes</u>
Print Name	Position	Date	Signature (Right-click above choose certify then have notary sign below)

Subscribed and sworn to before me this 23 day of March, 2018

Notary Public: Wendy Smith, state of Utah.

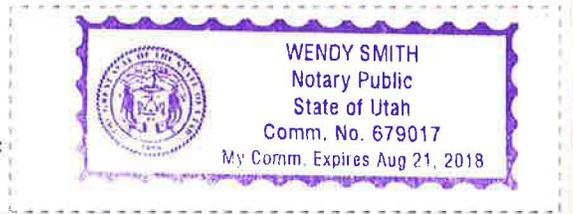
My commission Expires: 8-21-18

Commission Number: 679017

Address: 377 N Main

City: Cedar City UT Iron Co State: \_\_\_\_\_ Zip: 84721

} ss:  
}  
}



<p><b>For Office Use Only:</b></p>	<p><b>Assigned Tracking Number:</b></p>	<p><b>Received by Oil, Gas &amp; Mining</b></p>
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**Appendix 2-2 (cont.)**

2016 & 2017

Soil Analysis Results

**INCORPORATED**  
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Date: 9/29/2016

**CLIENT:** Alton Coal Development, LLC  
**Project:** Coal Hollow Reclamation  
**Lab Order:** S1608481

**CASE NARRATIVE**

**Report ID:** S1608481001

Samples 16TS-1, 16TS-10, 16TS-13, 16TS-2, 16TS-3, 16TS-4, 16TS-5, 16TS-6, and 16TS-9 were received on August 29, 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.

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**SEP 28 2018**

**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: S1608481001

Project: Coal Hollow Reclamation  
Date Received: 8/29/2016

Date Reported: 9/29/2016  
Work Order: S1608481

Lab ID	Sample ID	pH	Potassium	Phosphorus	Nitrate(as N)
		s.u.	ppm	ppm	ppm
S1608481-001	16TS-1	8.1	266	9	16.3
S1608481-002	16TS-2	8.0	273	9	12.6
S1608481-003	16TS-3	8.0	255	9	13.5
S1608481-004	16TS-4	7.9	218	7	16.6
S1608481-005	16TS-5	7.9	230	6	14.5
S1608481-006	16TS-6	8.0	243	7	13.5
S1608481-007	16TS-9	7.8	310	14	58.5
S1608481-008	16TS-10	7.9	269	9	66.5
S1608481-009	16TS-13	7.7	271	17	29.5

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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



**Inter-Mountain Labs**  
Sheridan, WY and Gillette, WY

**CHAIN OF CUSTODY RECORD -**

Page 1 of 1

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# **152498**

<b>Client Name</b> Altan Coal Development, LLC	<b>Project Identification</b> Coal Hollow Reclamation	<b>Sampler (Signature/Attestation of Authenticity)</b> B. Kit White	<b>Telephone #</b> 435-691-1551
<b>Report Address</b> 463 N 100 W Suite 1 Cedar City, Utah 84721	<b>Contact Name</b> Kirk Nicholes	<b>ANALYSES / PARAMETERS</b>	
<b>Invoice Address</b> Same ↑	<b>Email</b> Knicholes@altancoal.com	Available Phosphorus	Soluble Phosphorus
	<b>Phone</b> 435-691-1551		
	<b>Purchase Order #</b>	<b>REMARKS</b>	
	<b>Quote #</b>		

ITEM	LAB ID (Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SAMPLE IDENTIFICATION	Matrix	# of Containers	ANALYSES / PARAMETERS				REMARKS
							Available Phosphorus	Soluble Phosphorus	Nitrate-Nitrogen	Total Phosphate	
1	51608481-001	8/24/16		16TS-1	SL	1	X	X	X	X	
2	-002	Div of Oil, Gas & Min SEP 28 2018 INCORPORATED		16TS-2		1	X	X	X	X	
3	-003		16TS-3		1	X	X	X	X		
4	-004		16TS-4		1	X	X	X	X		
5	-005		16TS-5		1	X	X	X	X		
6	-006		16TS-6		1	X	X	X	X		
7	-007		16TS-9		1	X	X	X	X		
8	-008		16TS-10		1	X	X	X	X		
9	-009		16TS-13		1	X	X	X	X		
10											
11											
12											
13											
14											

LAB COMMENTS	Relinquished By (Signature/Printed)	DATE	TIME	Received By (Signature/Printed)	DATE	TIME
				Karen Secor	8/29/16	0850

SHIPPING INFO	MATRIX CODES	TURNAROUND TIMES	COMPLIANCE INFORMATION	ADDITIONAL REMARKS
<input checked="" type="checkbox"/> UPS <input 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 checked="" type="checkbox"/> RUSH - 5 Working Days <input checked="" type="checkbox"/> URGENT - < 2 Working Days Rush & Urgent Surcharges will be applied	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 _____ Client _____	



Date: 6/21/2017

CLIENT: Alton Coal Development, LLC  
Project: Coal Hollow Mine  
Lab Order: S1706077

**CASE NARRATIVE**  
Report ID: S1706077001

Samples 17TS-1, 17TS-2, 17TS-3, 17TS-4, 17TS-5, 17TS-6, 17TS-7, and 17TS-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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**SEP 28 2018**  
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: S1706077001

Date Reported: 6/21/2017

Work Order: S1706077

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

Lab ID	Sample ID	Boron	Potassium	Phosphorus	Selenium	Nitrate(as N)
		ppm	ppm	ppm	ppm	ppm
S1706077-001	17TS-1	0.74	256	10	<0.02	3.9
S1706077-002	17TS-2	0.60	224	10	<0.02	4.4
S1706077-003	17TS-3	0.66	270	8	<0.02	2.7
S1706077-004	17TS-4	0.73	279	10	<0.02	4.7
S1706077-005	17TS-5	0.53	290	11	<0.02	5.9
S1706077-006	17TS-6	0.63	307	22	<0.02	0.8
S1706077-007	17TS-7	0.77	339	11	<0.02	8.8
S1706077-008	17TS-8	0.55	251	8	<0.02	1.9

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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

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

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



**Inter-Mountain Labs**  
Sheridan, WY and Gillette, WY

**CHAIN OF CUSTODY RECORD -**

Page    of   

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# **171682**

Client Name <i>Alton Coal Development, LLC</i>	Project Identification <i>Coal Hollow Mine</i>	Sampler (Signature/Attestation of Authenticity) <i>B. Kirk Nichols</i>	Telephone # <i>435-691-1551</i>
Report Address <i>463 N 100 W Cedar City, UT 84721</i>	Contact Name <i>Kirk Nicholas</i>	<b>ANALYSES / PARAMETERS</b>	
Invoice Address	Email <i>knicholas@altoncoal.com</i>		
	Phone <i>435-691-1551</i>	Available Phosphorus	Soluble Potassium
	Purchase Order #	Ammonia-Nitrogen	Soluble Sulfur
	Quote #	Soluble Boron	
			<b>REMARKS</b>

ITEM	LAB ID <small>(Lab Use Only)</small>	DATE SAMPLED	TIME	SAMPLE IDENTIFICATION	Matrix	# of Containers	ANALYSES / PARAMETERS					REMARKS
							Available Phosphorus	Soluble Potassium	Ammonia-Nitrogen	Soluble Sulfur	Soluble Boron	
1	<i>S1706077-001</i>	<i>5-30-17</i>		<i>17TS-1</i>			X	X	X	X	X	
2	<i>002</i>			<i>17TS-2</i>			X	X	X	X	X	
3	<i>003</i>			<i>17TS-3</i>			X	X	X	X	X	
4	<i>004</i>			<i>17TS-4</i>			X	X	X	X	X	
5	<i>005</i>			<i>17TS-5</i>			X	X	X	X	X	
6	<i>006</i>			<i>17TS-6</i>			X	X	X	X	X	
7	<i>007</i>			<i>17TS-7</i>			X	X	X	X	X	
8	<i>008</i>			<i>17TS-8</i>			X	X	X	X	X	
9												
10												
11												
12												
13												
14												

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LAB COMMENTS	Relinquished By (Signature/Printed)	DATE	TIME	Received By (Signature/Printed)	DATE	TIME
	<i>B. Kirk Nichols / B. Kirk Nichols</i>	<i>5/31/17</i>	<i>4:44</i>	<i>Karen Asoco</i>	<i>6/2/17</i>	<i>1030</i>

<b>SHIPPING INFO</b> <input checked="" type="checkbox"/> UPS <input type="checkbox"/> Fed Express <input type="checkbox"/> US Mail <input type="checkbox"/> Hand Carried <input type="checkbox"/> Other _____	<b>MATRIX CODES</b> Water WT Soil SL Solid SD Filter FT Other OT	<b>TURNAROUND TIMES</b> <input checked="" type="checkbox"/> Check desired service <input checked="" type="checkbox"/> Standard turnaround <input checked="" type="checkbox"/> RUSH - 5 Working Days <input type="checkbox"/> URGENT - < 2 Working Days <i>Rush &amp; Urgent Surcharges will be applied</i>	<b>COMPLIANCE INFORMATION</b> Compliance Monitoring? <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">Y/N</span> Program (SDWA, NPDES,...) PWSID / Permit # _____ Chlorinated? <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">Y/N</span> Sample Disposal: Lab _____ Client _____	<b>ADDITIONAL REMARKS</b>   
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Date: 12/6/2017

CLIENT: Alton Coal Development, LLC  
Project: Coal Hollow Mine  
Lab Order: S1710196

**CASE NARRATIVE**

Report ID: S1710196001

Samples 17TS-09, 17TS-10, 17TS-11, 17TS-12, 17TS-13, 17TS-14, 17TS-15, 17TS-16 and 17TS-17 were received on October 11, 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 indicated in this case narrative.

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SEP 28 2018

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: S1710196001

Project: Coal Hollow Mine  
Date Received: 10/11/2017

Date Reported: 12/6/2017  
Work Order: S1710196

Lab ID	Sample ID	Boron ppm	Potassium ppm	Phosphorus ppm	Selenium ppm	Nitrate(as N) ppm
S1710196-001	17TS-09	0.94	351	9	<0.02	4.7
S1710196-002	17TS-10	0.58	298	8	<0.02	4.8
S1710196-003	17TS-11	0.47	263	11	<0.02	7.5
S1710196-004	17TS-12	0.79	327	8	<0.02	2.4
S1710196-005	17TS-13	0.81	325	8	<0.02	2.0
S1710196-006	17TS-14	0.66	288	9	<0.02	6.5
S1710196-007	17TS-15	0.60	326	8	<0.02	3.2
S1710196-008	17TS-16	0.58	300	6	<0.02	4.6
S1710196-009	17TS-17	0.69	215	7	<0.02	2.0

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Div. of Oil, Gas & Mining

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

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

Reviewed by: Karen A 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/Attestation of Authenticity) <i>B. Kirk Nicholes</i>		Telephone # 435-691-1551	
Report Address 463 N 100 W, Suite 1 Cedar City, Utah 84721		Contact Name and Email Kirk Nicholes		<b>ANALYSES / PARAMETERS</b>			
Invoice Address Same		Voice FAX knicholes@altoncoal.com					
		Purchase Order #		Quote #			

ITEM	LAB ID (Lab Use Only)	DATE SAMPLED	TIME	SAMPLE IDENTIFICATION	Matrix	# of Containers	Boron	Potassium	Phosphorus	Selenium	Nitrate (as N)				
1	51710196-001	10/5/2017		17TS-09	SL	1	X	X	X	X	X				
2	002	D/C of Oil, Gas & Mt SEP 28 2018 INCORPORATE		17TS-10	SL	1	X	X	X	X	X				
3	003			17TS-11	SL	1	X	X	X	X	X				
4	004			17TS-12	SL	1	X	X	X	X	X				
5	005			17TS-13	SL	1	X	X	X	X	X				
6	006			17TS-14	SL	1	X	X	X	X	X				
7	007			17TS-15	SL	1	X	X	X	X	X				
8	008			17TS-16	SL	1	X	X	X	X	X				
9	009			17TS-17	SL	1	X	X	X	X	X				
10															
11															
12															
13															
14															

LAB COMMENTS	Relinquished By (Signature/Printed)	DATE	TIME	Received By (Signature/Printed)	DATE	TIME
	<i>B. Kirk Nicholes</i> /B. Kirk Nicholes	10/19/17	0847	<i>Kare A. Sean</i>	10/19/17	

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	<b>Check desired service</b> <input checked="" type="checkbox"/> Standard turnaround <input type="checkbox"/> RUSH - 5 Working Days <input type="checkbox"/> URGENT - < 2 Working Days <i>Rush &amp; Urgent Surcharges will be applied</i>	Compliance Monitoring ? Program (SDWA, NPDES, ...) PWSID / Permit # Chlorinated? Sample Disposal: Lab _____ Client _____	Y / N Y / N



Date: 12/6/2017

**CLIENT:** Alton Coal Development, LLC  
**Project:** Coal Hollow Mine  
**Lab Order:** S1710196

**CASE NARRATIVE**  
**Report ID:** S1710196001

Samples 17TS-09, 17TS-10, 17TS-11, 17TS-12, 17TS-13, 17TS-14, 17TS-15, 17TS-16 and 17TS-17 were received on October 11, 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
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- New Mexico Overburden and Soils Inventory and Handling Guideline, March 1987
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- Montana Department of State Lands, Reclamation Division: Soil, Overburden, and Regraded Spoil Guidelines, December 1994
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**INCORPORATED**

**SEP 28 2018**

*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: S1710196001

Date Reported: 12/6/2017

Work Order: S1710196

Project: Coal Hollow Mine  
Date Received: 10/11/2017

Lab ID	Sample ID	Boron	Potassium	Phosphorus	Selenium	Nitrate(as N)
		ppm	ppm	ppm	ppm	ppm
S1710196-001	17TS-09	0.94	351	9	<0.02	4.7
S1710196-002	17TS-10	0.58	298	8	<0.02	4.8
S1710196-003	17TS-11	0.47	263	11	<0.02	7.5
S1710196-004	17TS-12	0.79	327	8	<0.02	2.4
S1710196-005	17TS-13	0.81	325	8	<0.02	2.0
S1710196-006	17TS-14	0.66	288	9	<0.02	6.5
S1710196-007	17TS-15	0.60	326	8	<0.02	3.2
S1710196-008	17TS-16	0.58	300	6	<0.02	4.6
S1710196-009	17TS-17	0.69	215	7	<0.02	2.0

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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



**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/Attestation of Authenticity) <i>B.K.H. Nicholes</i>				Telephone # 435-691-1551				
Report Address 463 N 100 W, Suite 1 Cedar City, Utah 84721				Contact Name and Email Kirk Nicholes				<b>ANALYSES / PARAMETERS</b>							
Invoice Address Same				Voice FAX knicholes@altoncoal.com		Purchase Order #								Quote #	
ITEM	LAB ID (Lab Use Only)	DATE SAMPLED	TIME	SAMPLE IDENTIFICATION	Matrix	# of Containers	Boron	Potassium	Phosphorus	Selenium	Nitrate (as N)				
1	51710196-001	10/5/2017		17TS-09	SL	1	X	X	X	X	X				
2	002	<div style="writing-mode: vertical-rl; transform: rotate(180deg);">           Env. of Oil, Gas &amp; M            SEP 28 2018            INCORPORATED         </div>		17TS-10	SL	1	X	X	X	X	X				
3	003			17TS-11	SL	1	X	X	X	X	X				
4	004			17TS-12	SL	1	X	X	X	X	X				
5	005			17TS-13	SL	1	X	X	X	X	X				
6	006			17TS-14	SL	1	X	X	X	X	X				
7	007			17TS-15	SL	1	X	X	X	X	X				
8	008			17TS-16	SL	1	X	X	X	X	X				
9	009			17TS-17	SL	1	X	X	X	X	X				
10															
11															
12															
13															
14															
LAB COMMENTS				Relinquished By (Signature/Printed) <i>B.K.H. Nicholes</i> /B. Kirk Nicholes		DATE 10/10/17	TIME 0847	Received By (Signature/Printed) <i>Kare A. Sean</i>				DATE 10/11/17	TIME		
<b>SHIPPING INFO</b>		<b>MATRIX CODES</b>		<b>TURN AROUND TIMES</b>		<b>COMPLIANCE INFORMATION</b>				<b>ADDITIONAL REMARKS</b>					
<input type="checkbox"/> UPS	Water	WT	Check desired service		Compliance Monitoring ?		Y / N								
<input checked="" type="checkbox"/> Fed Express	Soil	SL	<input checked="" type="checkbox"/> Standard turnaround		Program (SDWA, NPDES, ...)										
<input type="checkbox"/> US Mail	Solid	SD	<input type="checkbox"/> RUSH - 5 Working Days		PWSID / Permit #										
<input type="checkbox"/> Hand Carried	Trip Blank	TB	<input type="checkbox"/> URGENT - < 2 Working Days		Chlorinated?		Y / N								
<input type="checkbox"/> Other	Other	OT	Rush & Urgent Surcharges will be applied		Sample Disposal: Lab		Client								



Date: 12/12/2017

**CLIENT:** Alton Coal Development, LLC  
**Project:** Coal Hollow Mine  
**Lab Order:** S1711093

**CASE NARRATIVE**  
**Report ID:** S1711093001

Samples 17TS-18, 17TS-19, 17TS-20, 17TS-21, 17TS-22, 17TS-23, 17TS-24, 17TS-25, 17TS-26, 17TS-27, 17TS-31, 17TS-32 and 17TS-33 were received on November 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

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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**SEP 28 2018**

*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: S1711093001

Project: Coal Hollow Mine
Date Received: 11/2/2017

Date Reported: 12/12/2017
Work Order: S1711093

Table with 7 columns: Lab ID, Sample ID, Boron (ppm), Potassium (ppm), Phosphorus (ppm), Selenium (ppm), Nitrate(as N) (ppm). Rows 1-13 showing sample data.

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Div. of Oil, Gas & Mining

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



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

**- CHAIN OF CUSTODY RECORD -**

All shaded fields must be completed.

# WEB

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Client Name Alton Coal Development, LLC			Project Identification Coal Hollow Mine			Sampler (Signature/Attestation of Authenticity) <i>B. Kirk Nicholes</i>			Telephone # 435-691-1551									
Report Address 463 N 100 W, Suite 1 Cedar City, Utah 84721			Contact Name and Email Kirk Nicholes			<b>ANALYSES / PARAMETERS</b>												
Invoice Address Same			Voice FAX knicholes@altoncoal.com															
Purchase Order #			Quote #			Boron	Potassium	Phosphorus	Selenium	Nitrate (as N)								
ITEM	LAB ID (Lab Use Only)	DATE SAMPLED	TIME	SAMPLE IDENTIFICATION	Matrix						# of Containers							
1	5711093-1	10/27/2017		17TS-18	SL	1	X	X	X	X	X							
2	002	↓		17TS-19	SL	1	X	X	X	X	X							
3	003			17TS-20	SL	1	X	X	X	X	X							
4	004			17TS-21	SL	1	X	X	X	X	X							
5	005			17TS-22	SL	1	X	X	X	X	X							
6	006			17TS-23	SL	1	X	X	X	X	X							
7	007			17TS-24	SL	1	X	X	X	X	X							
8	008			17TS-25	SL	1	X	X	X	X	X							
9	009			17TS-26	SL	1	X	X	X	X	X							
10	010			17TS-27	SL	1	X	X	X	X	X							
11	011			17TS-31	SL	1	X	X	X	X	X							
12	012			17TS-32	SL	1	X	X	X	X	X							
13	013			17TS-33	SL	1	X	X	X	X	X							
LAB COMMENTS			Relinquished By (Signature/Printed) <i>B. Kirk Nicholes</i> /B. Kirk Nicholes			DATE TIME 10/31/17 9:00am		Received By (Signature/Printed) <i>Karen Stern</i>			DATE TIME 11/2/17 1100							
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 checked="" type="checkbox"/> Standard turnaround <input type="checkbox"/> RUSH - 5 Working Days <input type="checkbox"/> URGENT - < 2 Working Days <i>Rush &amp; Urgent Surcharges will be applied</i>		Compliance Monitoring ? Program (SDWA, NPDES, ...) PWSID / Permit # Chlorinated? Sample Disposal: Lab _____ Client _____			<input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> Y <input type="checkbox"/> N								

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 SEP 28 2018  
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Date: 12/15/2017

CLIENT: Alton Coal Development, LLC  
Project: Coal Hollow Mine  
Lab Order: S1711212

**CASE NARRATIVE**  
Report ID: S1711212001

Samples 17TS-28, 17TS-29 and 17TS-30 were received on November 14, 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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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: S1711212001

Project: Coal Hollow Mine  
Date Received: 11/14/2017

Date Reported: 12/15/2017  
Work Order: S1711212

Lab ID	Sample ID	Boron	Potassium	Phosphorus	Selenium	Nitrate(as N)
		ppm	ppm	ppm	ppm	ppm
S1711212-001	17TS-28	0.96	328	7	<0.02	3.8
S1711212-002	17TS-29	1.16	301	7	<0.02	2.7
S1711212-003	17TS-30	0.37	285	7	<0.02	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



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

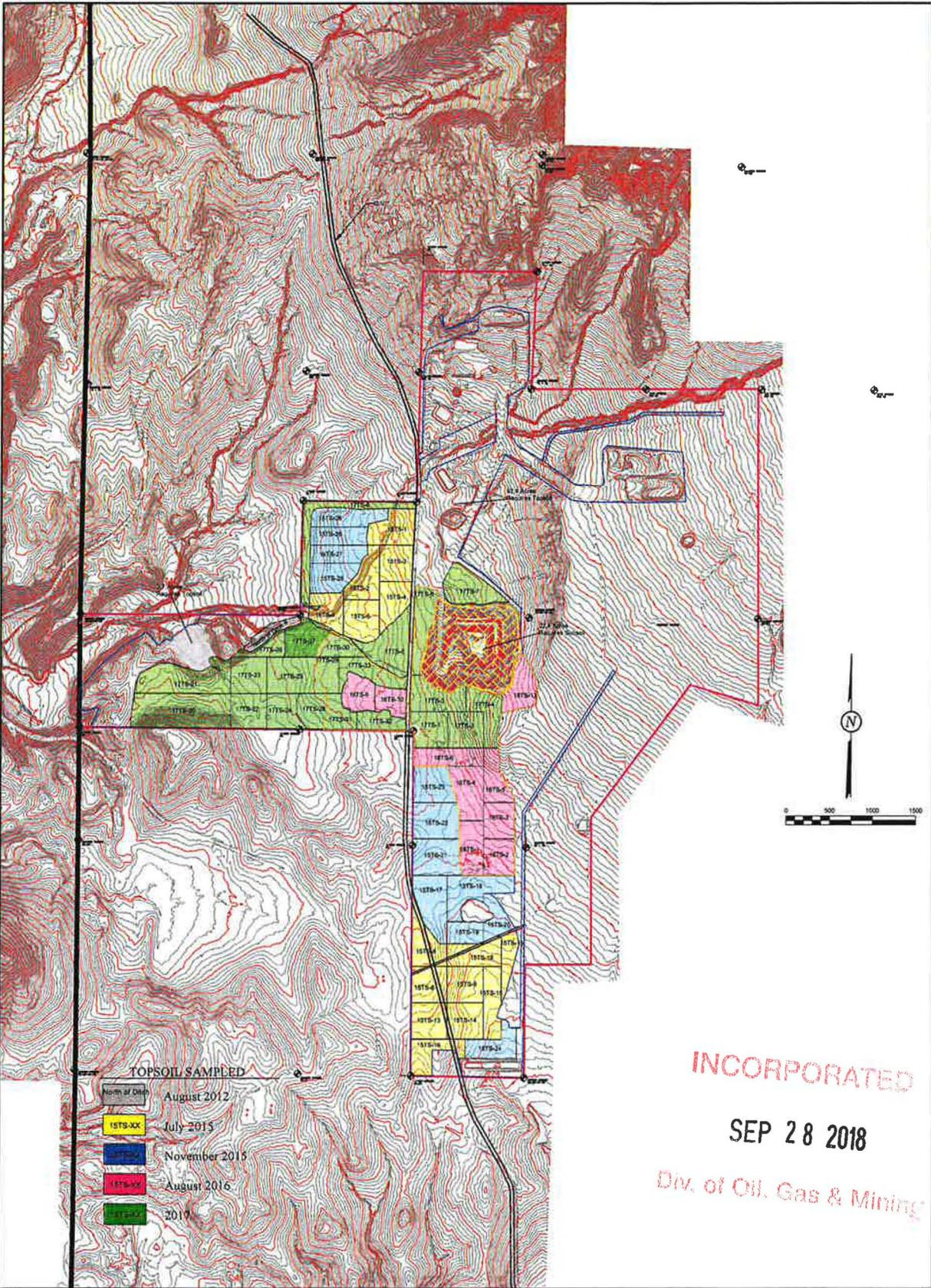
**- CHAIN OF CUSTODY RECORD -**

All shaded fields must be completed.

# **WEB**

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Client Name Alton Coal Development, LLC				Project Identification Coal Hollow Mine			Sampler (Signature/Attestation of Authenticity)					Telephone # 435-691-1551						
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 #		Boron	Potassium	Phosphorus	Selenium	Nitrate (as N)						
ITEM	LAB ID (Lab Use Only)	DATE SAMPLED	TIME	SAMPLE IDENTIFICATION		Matrix	# of Containers	Boron	Potassium	Phosphorus	Selenium	Nitrate (as N)						
1	517112125	11/10/2017		17TS-28		SL	1	X	X	X	X	X						
2	002			17TS-29		SL	1	X	X	X	X	X						
3	003			17TS-30		SL	1	X	X	X	X	X						
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
LAB COMMENTS				Relinquished By (Signature/Printed)			DATE	TIME	Received By (Signature/Printed)			DATE	TIME					
				B. Kirk Nicholes /B. Kirk Nicholes					Kare Asec			11/14/17	1015					
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 checked="" type="checkbox"/> Standard turnaround <input type="checkbox"/> RUSH - 5 Working Days <input type="checkbox"/> URGENT - < 2 Working Days <i>Rush &amp; Urgent Surcharges will be applied</i>		Compliance Monitoring ? Program (SDWA, NPDES, ...) PWSID / Permit # Chlorinated? Sample Disposal: Lab Client			<input checked="" type="checkbox"/> Y / N <input type="checkbox"/> Y / N							



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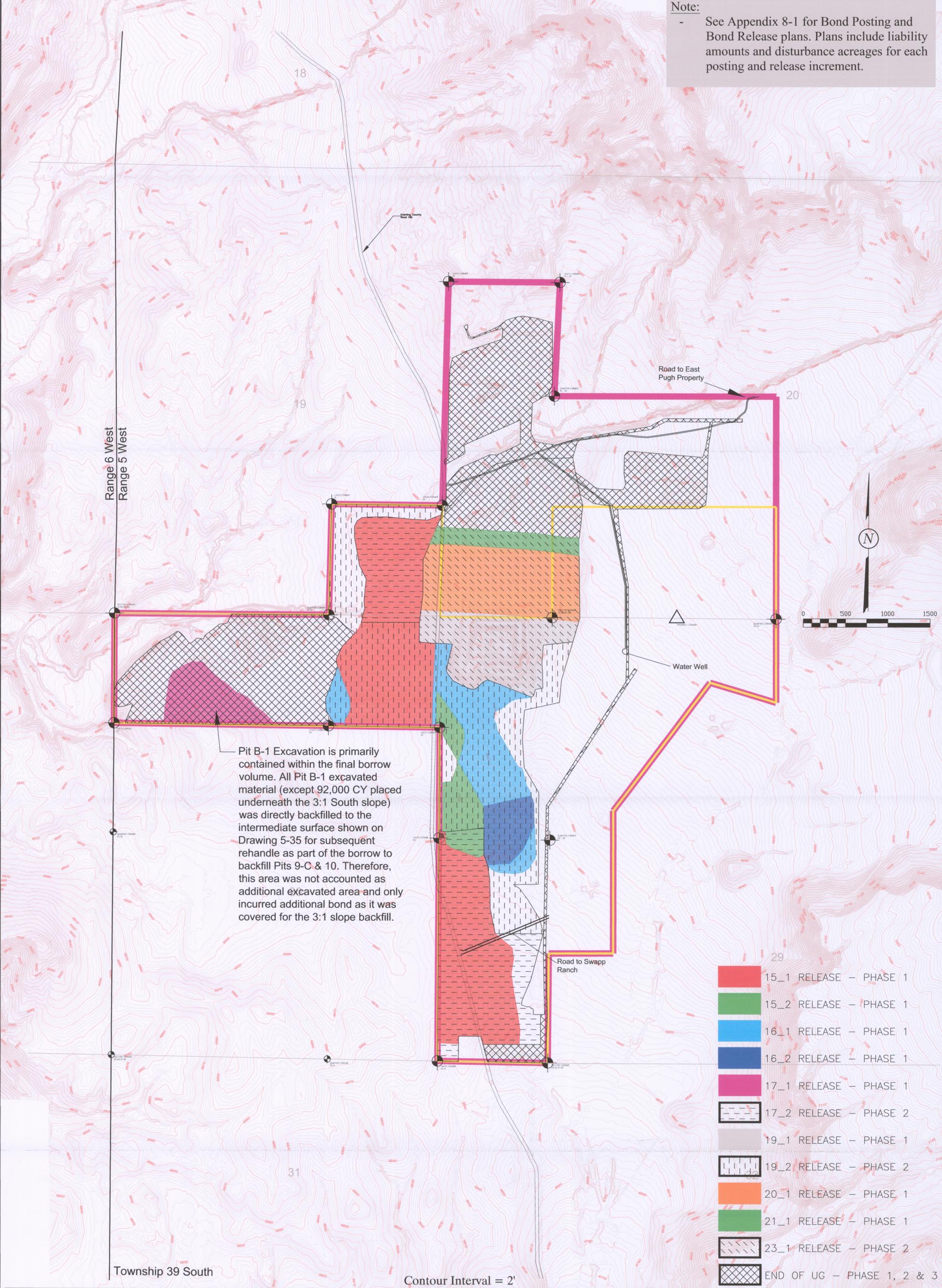
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<b>LEGEND:</b> PERMIT BOUNDARY PRIVATE COAL OWNERSHIP SECTION LINE FOUND SECTION CORNER BOUNDARY CORNER Requires Topsoil Requires Subsoil	DRAWN BY: K NICHOLAS	CHECKED BY: LWJ	<b>REVISIONS</b>		<b>TOPSOIL SAMPLING LOCATIONS</b>  SOUTH PRIVATE LEASE ALTON, UTAH <b>FIGURE 1</b>	 <small>463 North 100 West, Suite 1          Cedar City, Utah, 84721          Phone (435) 567-5331          Fax (435) 567-1192</small>
	DATE: 10/17/2015	DATE: 03/21/18	BY: KN			
	DRAWING: <b>FIGURE 1</b>	SCALE: 1" = 500' Printed on 24"x 36"				
	JOB NUMBER: 1400	SHEET				



**Note:**  
 - See Appendix 8-1 for Bond Posting and Bond Release plans. Plans include liability amounts and disturbance acreages for each posting and release increment.



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.

- 15\_1 RELEASE - PHASE 1
- 15\_2 RELEASE - PHASE 1
- 16\_1 RELEASE - PHASE 1
- 16\_2 RELEASE - PHASE 1
- 17\_1 RELEASE - PHASE 1
- 17\_2 RELEASE - PHASE 2
- 19\_1 RELEASE - PHASE 1
- 19\_2 RELEASE - PHASE 2
- 20\_1 RELEASE - PHASE 1
- 21\_1 RELEASE - PHASE 1
- 23\_1 RELEASE - PHASE 2
- END OF UG - PHASE 1, 2 & 3

Township 39 South

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: DWG
DRAWING: 5-18	DATE: 6/15/2015
JOB NUMBER: 1400	SCALE: 1" = 500' Printed on 24" x36"
	SHEET

REVISIONS	
DATE:	BY:
3/22/16	AC
5/20/16	AC
8/01/16	AC
9/20/16	AC
7/31/17	AC
1/24/18	AC
8/9/18	AC

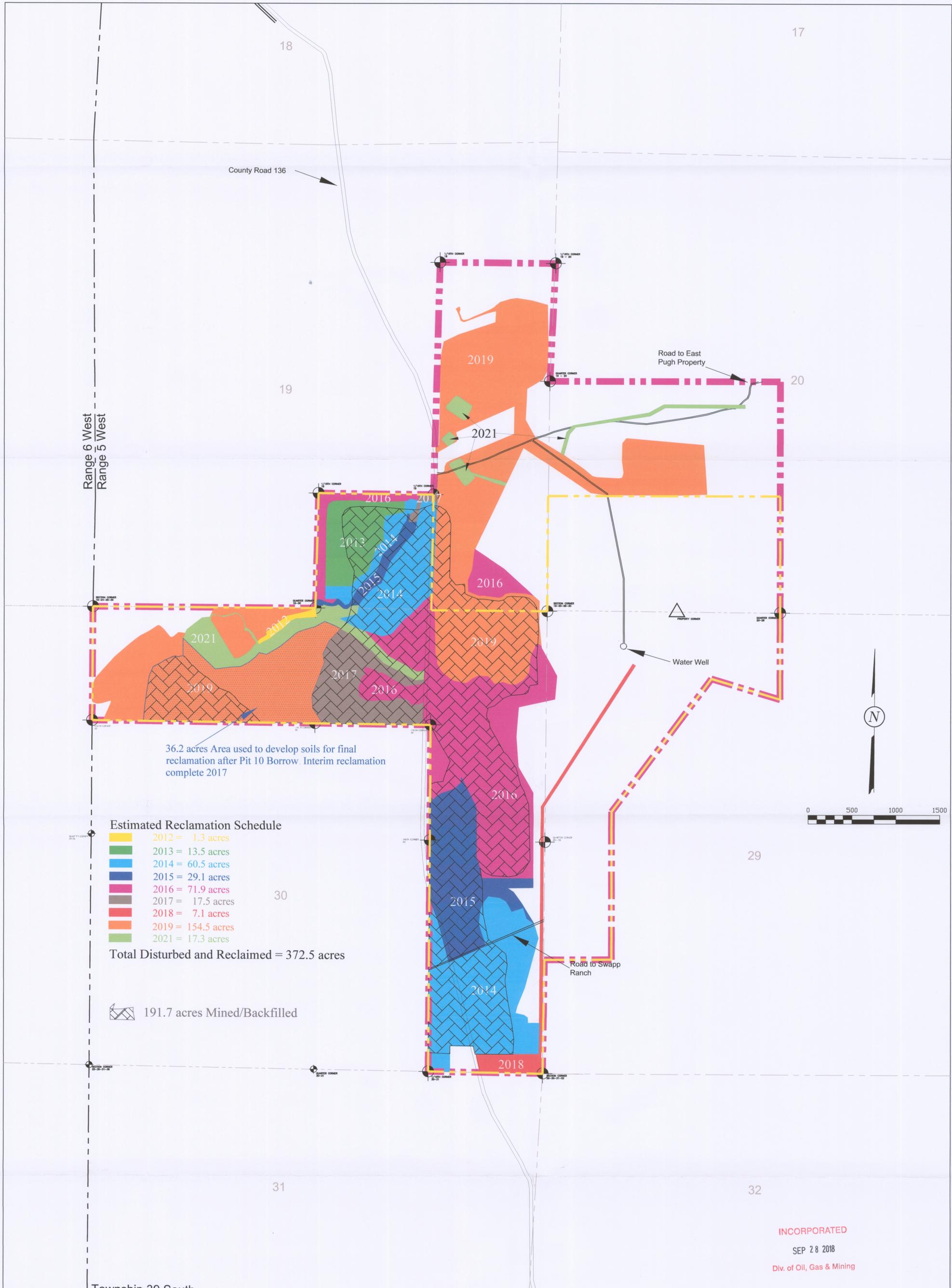
**BOND SEQUENCE**

COAL HOLLOW PROJECT  
ALTON, UTAH

**DRAWING: 5-18**

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SEP 28 2018  
Div. of Oil, Gas & Mining

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



36.2 acres Area used to develop soils for final reclamation after Pit 10 Borrow. Interim reclamation complete 2017

**Estimated Reclamation Schedule**

- 2012 = 1.3 acres
- 2013 = 13.5 acres
- 2014 = 60.5 acres
- 2015 = 29.1 acres
- 2016 = 71.9 acres
- 2017 = 17.5 acres
- 2018 = 7.1 acres
- 2019 = 154.5 acres
- 2021 = 17.3 acres

**Total Disturbed and Reclaimed = 372.5 acres**

191.7 acres Mined/Backfilled

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Div. of Oil, Gas & Mining

Township 39 South

**LEGEND:**

- PERMIT BOUNDARY
- PRIVATE COAL OWNERSHIP
- SECTION LINE
- FOUND SECTION CORNER
- FOUND PROPERTY CORNER
- POSTMINING ROADS

DRAWN BY: K. NICHOLAS	CHECKED BY: LWJ
DRAWING: 5-38	DATE: 12/18/2014
JOB NUMBER: 1400	SCALE: 1" = 500'
	SHEET

REVISIONS	
DATE:	BY:
03/05/14	KN
04/11/16	KN
07/29/16	KN
08/01/16	KN
03/31/17	KN
03/22/18	KN

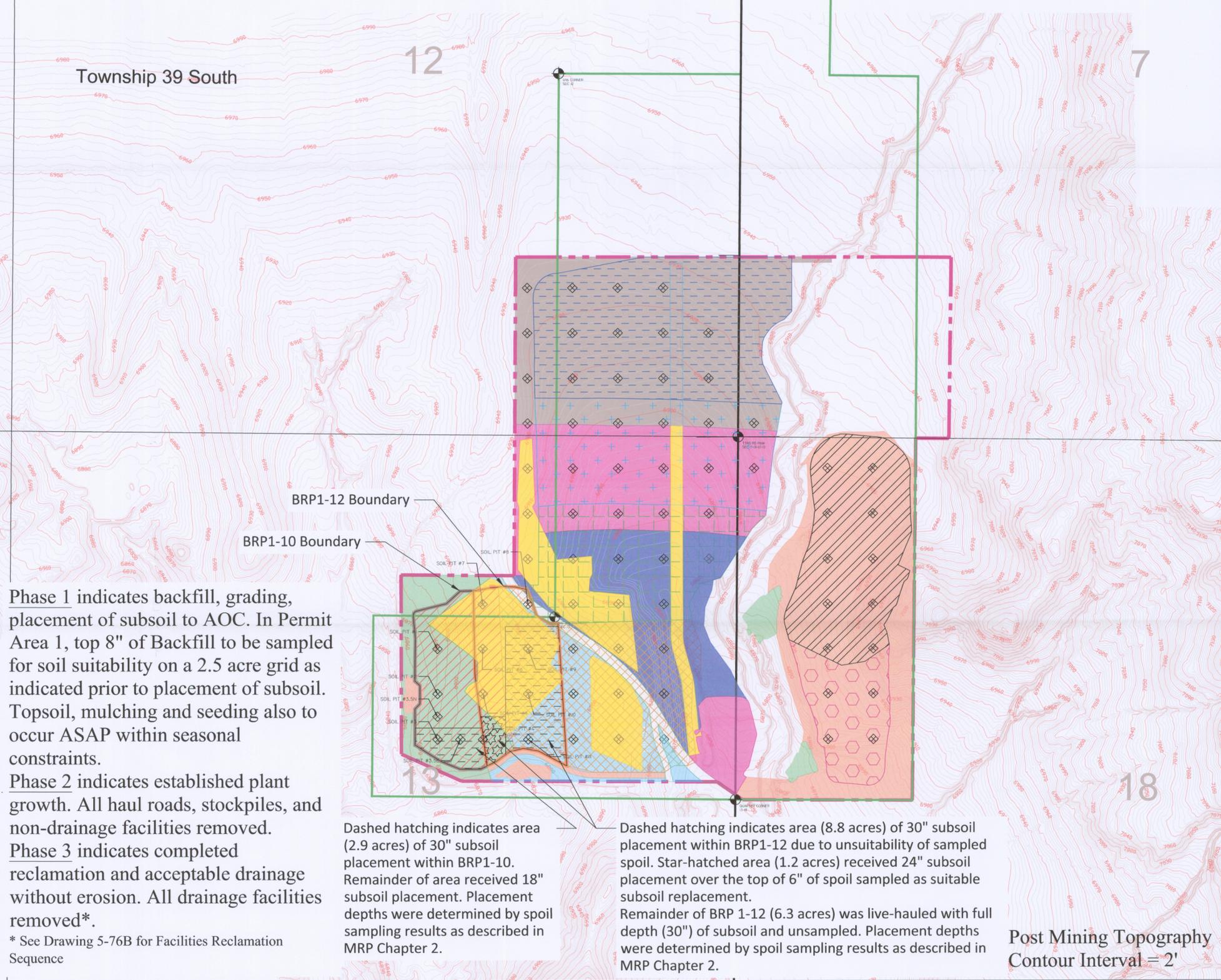
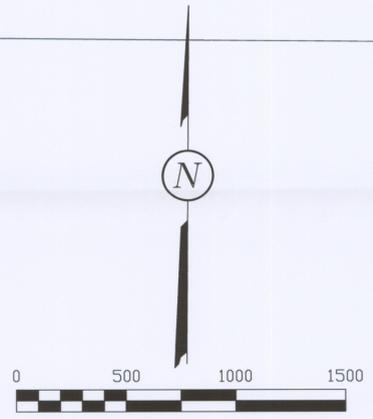
RECLAMATION SEQUENCE	
COAL HOLLOW PROJECT ALTON, UTAH	
DRAWING: 5-38	

PROFESSIONAL ENGINEER  
ANDREW R. GARRIGENSEN  
7/16/18  
STATE OF UTAH

ALTON COAL DEVELOPMENT  
**Coal Hollow**  
PROJECT

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

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.

Post Mining Topography Contour Interval = 2'

**Phase 1 Reclamation:**

- 2016 Reclaim = 17.9 Acres
- 2017 Reclaim = 34.7 Acres
- 2018 Reclaim = 26.8 Acres
- 2019 Reclaim = 30.7 Acres
- 2020 Reclaim = 41.2 Acres
- 2021 Reclaim = 11.6 Acres
- 2022 Reclaim = 26.4 Acres
- 2023 Reclaim = 00.0 Acres
- 2024 Reclaim = 00.0 Acres

Total Ph. 1 Reclamation = 189.3 Acres

**Phase 2/Surface Mulch & Seeding:**

- 2016 Seeding = 17.7 Acres
- 2017 Seeding = 12.3 Acres
- 2018 Seeding = 21.7 Acres
- 2019 Seeding = 29.5 Acres
- 2020 Seeding = 54.8 Acres
- 2021 Seeding = 34.3 Acres
- 2022 Seeding = 57.8 Acres
- 2023 Seeding = 5.5 Acres
- 2024 Seeding = 2.5 Acres
- Unseeded Road = 2.9 Acres

Total Ph. 2 Reclamation = 239.0 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
DRAWING: 5-76A	DATE: 4/16/15
JOB NUMBER: 0001	SCALE: 1" = 400'
	SHEET

REVISIONS	
DATE:	BY:
1/5/17	AC
2/2/17	AC
3/31/17	AC
5/4/17	AC
8/2/17	AC
4/6/18	AC
6/19/18	AC

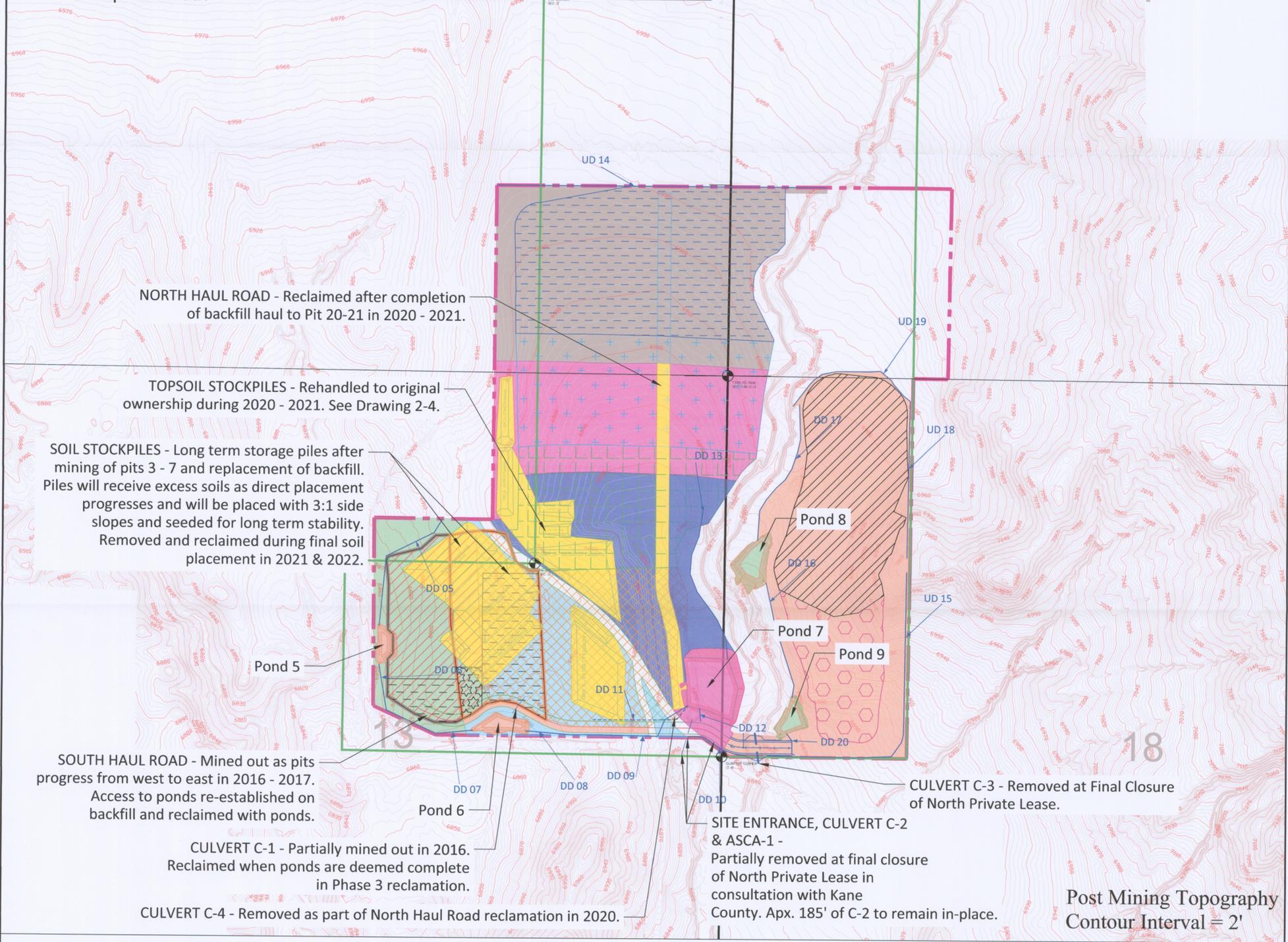
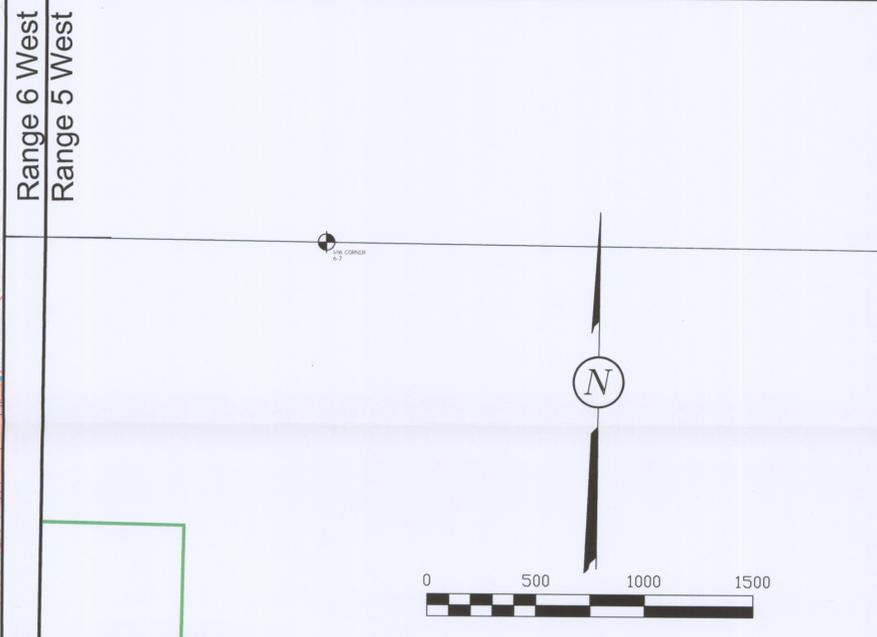
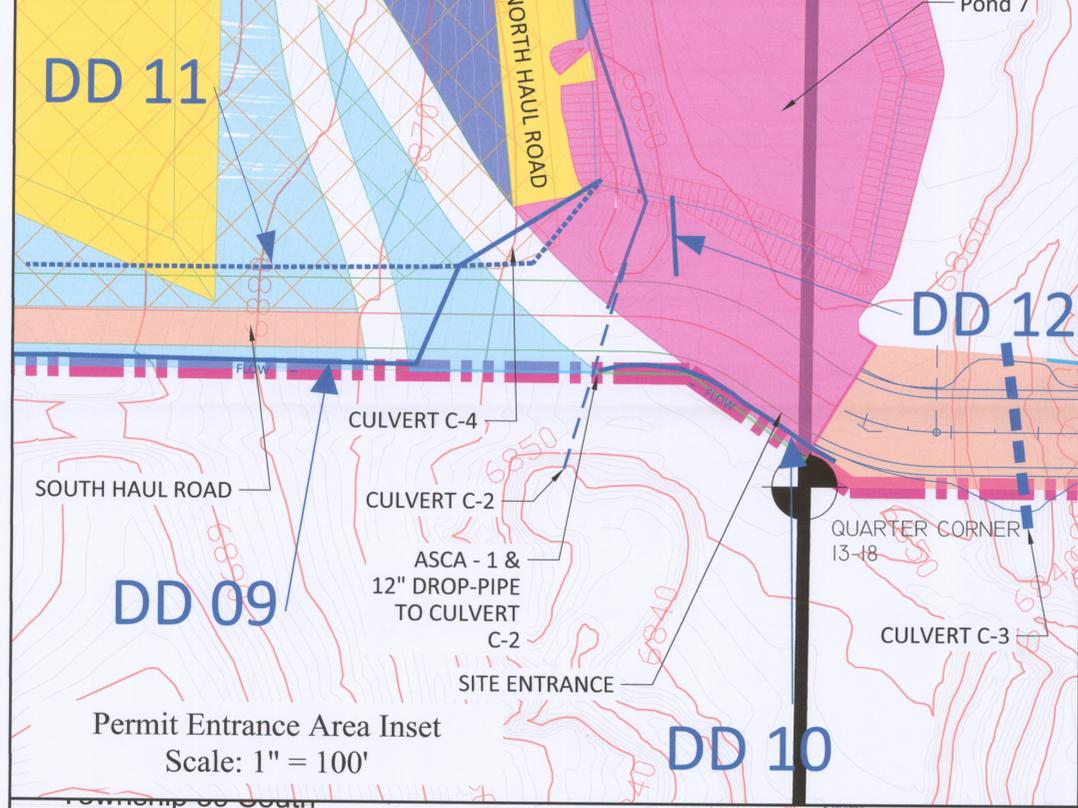
**EARTHWORKS RECLAMATION SEQUENCE**

NORTH COAL HOLLOW PROJECT  
ALTON, UTAH

**DRAWING: 5-76A**



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



**Phase 1 Reclamation:**

	2016 Reclaim = 17.9 Acres
	2017 Reclaim = 34.7 Acres
	2018 Reclaim = 26.8 Acres
	2019 Reclaim = 30.7 Acres
	2020 Reclaim = 41.2 Acres
	2021 Reclaim = 11.6 Acres
	2022 Reclaim = 26.4 Acres
	2023 Reclaim = 00.0 Acres
	2024 Reclaim = 00.0 Acres

Total Ph. 1 Reclamation = 189.3 Acres

**Phase 2/Surface Mulch & Seeding:**

	2016 Seeding = 17.7 Acres
	2017 Seeding = 12.3 Acres
	2018 Seeding = 21.7 Acres
	2019 Seeding = 29.5 Acres
	2020 Seeding = 54.8 Acres
	2021 Seeding = 34.3 Acres
	2022 Seeding = 57.8 Acres
	2023 Seeding = 5.5 Acres
	2024 Seeding = 2.5 Acres
	Unseeded Road = 2.9 Acres

Total Ph. 2 Reclamation = 239.0 Acres

**Phase 3 Reclamation** to be completed and released within the 10 year timeframe from Phase 1. **Ponds, culverts and ditches (except Area 1 extension)** to be assessed and reclaimed as Phase 3 nears completion. Area 1-A structures will be removed as mining advances.

**LEGEND:**

- PERMIT BOUNDARY
- PRIVATE COAL OWNERSHIP
- SECTION LINE
- FOUND SECTION CORNER
- FOUND PROPERTY CORNER

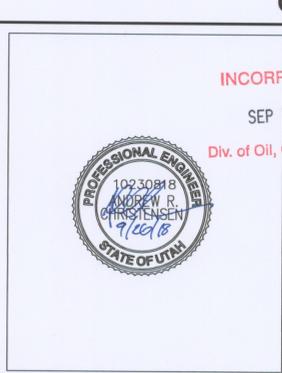
DRAWN BY:	A. CHRISTENSEN	CHECKED BY:	DWG
DRAWING:	5-76B	DATE:	10/12/15
JOB NUMBER:	0001	SCALE:	1" = 400'
		SHEET	

REVISIONS	
DATE:	BY:
8/15/16	AC
9/7/16	AC
10/3/16	AC
3/31/16	AC
5/4/17	AC
4/6/18	AC
6/19/18	AC

**FACILITIES RECLAMATION SEQUENCE**

NORTH COAL HOLLOW PROJECT  
ALTON, UTAH

**DRAWING: 5-76B**



INCORPORATED  
SEP 28 2018  
Div. of Oil, Gas & Mining

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