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2044 Meadowbrook Road | P.O. Box 4657 Bridgeport, WV 26330 Phone: 304.842.5285 | Fax: 304.842.5351

### **Martinsburg Laboratory**

Ridgefield Business Center | 25 Crimson Circle Martinsburg, WV 25403 Phone: 304.596.2084 | Fax: 304.596.2086

Certifications: WV Department of Health #: 00354, 00443 | WV Department of Environmental Protection #: 158, 181 MD Department of Environment #: 336, 337 | US Environmental Protection Agency #: WV00042, WV00901

# LABORATORY REPORT SUMMARY

Client:

C06443

Monday, January 27, 2014

HALL DRILLING

981 E. WASHINGTON AVE.

**ELLENBORO** 

W 26346-

Total Number of Pages: 2 (Not including C.O.C.)

Page 1 of 2

Lab ID

Sample ID

Sample ID 2

Sample Date

206842-2014-W

TECH SERVICE CENTER 3H

**ANTERO** 

1/14/2014

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Report Reviewed By:

Olgitally signed by Tenley
Miller
DN: cn=Tenley Miller,
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cuts

Date: 2014.01.30 17:06:08 -05'00'



2044 Meadowbrook Road | P.O. Box 4657 Bridgeport, WV 26330

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HALL DRILLING 981 E. WASHINGTON AVE. Monday, January 27, 2014

Page 2 of 2

ELLENBORO,

w

26346-

Lab Number: 206842-2014-W

Sample ID:

**TECH SERVICE CENTER 3H** 

**ANTERO** 

Parameter	Value	Units	Method	Date/Time A	nalyzed	Anaiyst	MDL	MCL
Analyte Group: !norganics								
Total Organic Carbon	432	mg/l	SM5310C-00	1/20/2014	10:41	MC	0.1	
pH	# 6.02	S.U.	SM4500H+B-00	1/16/2014	15:00	KV		
Total Chloride	49985	mg/l	SM4500CLB-97	1/16/2014	10:00	KV	2.52	
Total Iron	68.9	mg/l	EPA 200.7 R4.4	1/27/2014	10:04	TH	0.004	
Total Manganese	ND	mg/l	EPA 200.7 R4.4	1/27/2014	10:04	TH	0.007	
Total Barium	442	mg/l	EPA 200.7 R4.4	1/27/2014	10:04	TH	0.003	
Total Sodium	22530	mg/l	EPA 200.7 R4.4	1/27/2014	10:04	TH	0.011	
Total Dissolved Solids	91244	mg/l	SM2540C-97	1/16/2014	12:00	CT	10	
Total Sulfate	ND	mg/l	ASTM D516-02	1/22/2014	9:00	KV	0.59	

### Remarks:

Date Sample Collected: Sample Submitted By:

1/14/2014 T. HALL

9:00

Date Sample Received:

1/15/2014

12:15

ND = Not Detected at the MDL or MRL

MDL - Minimum Detectable Limit

MRL - Minimum Reporting Limit

MCL - Maximum Contaminant Level, USEPA Regulated

[MCL] = Maximum Contaminant Level, Non-Regulated

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# LABORATORY REPORT SUMMARY

Client: C06443

Monday, February 24, 2014

HALL DRILLING

Total Number of Pages: 2

981 E. WASHINGTON AVE.

Total Number of Pages: 2 (Not Including C.O.C.)

ELLENBORO

WV 26346-

Page 1 of 2

Lab ID

Sample ID

Sample ID 2

Sample Date

207970-2014-W

**TECH SERVICE CENTER 3H** 

**ANTERO** 

2/13/2014

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Report Reviewed By: Junky Nelson

Digitally signed by Tenley Miller DN: cn=Tenley Miller, o=Reliance Laboratories, Inc., bu, email=tmiller@wvdsl.net, c=US

Date: 2014.02.25 12:45:28 -05'00'



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HALL DRILLING 981 E. WASHINGTON AVE. Monday, February 24, 2014

Page 2 of 2

ELLENBORO,

W

26346-

Lab Number: 207970-2014-W

Sample ID:

**TECH SERVICE CENTER 3H** 

**ANTERO** 

Parameter	Value	Units	Method	Date/Time A	nalyzed	Analyst	MDL	MCL
Analyte Group: <u>Inorganics</u>								
Total Organic Carbon	941	mg/l	SM5310C-00	2/21/2014	13:15	MC	0.1	
pH	# 5.98	S.U.	SM4500H+B-00	2/18/2014	10:15	KV		
Total Chloride	69978	mg/l	SM4500CLB-97	2/19/2014	13:25	KV	2.52	
Total Iron	87.0	mg/l	EPA 200.7 R4.4	2/20/2014	11:16	TH	0.004	
Total Manganese	2.80	mg/l	EPA 200.7 R4.4	2/20/2014	11:16	TH	0.007	
Total Barium	597	mg/l	EPA 200.7 R4.4	2/20/2014	11:16	TH	0.003	
Total Sodium	40580	mg/l	EPA 200.7 R4.4	2/20/2014	11:16	TH	0.011	
Total Dissolved Solids	110580	mg/l	SM2540C-97	2/17/2014	11:15	CT	10	
Total Sulfate	9.81	mg/l	ASTM D516-02	2/17/2014	9:30	KV	0.59	

### Remarks:

Date Sample Collected: Sample Submitted By:

2/13/2014 T.HALL

15:30

Date Sample Received:

2/14/2014

12:55

ND = Not Detected at the MDL or MRL

MDL - Minimum Detectable Limit

MRL - Minimum Reporting Limit

MCL - Maximum Contaminant Level, USEPA Regulated

[MCL] = Maximum Contaminant Level, Non-Regulated

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# LABORATORY REPORT SUMMARY

Client:

C06443

Thursday, March 27, 2014

HALL DRILLING

981 E. WASHINGTON AVE.

**ELLENBORO** 

WV 26346Total Number of Pages: 2 (Not Including C.O.C.)

Page 1 of 2

Lab ID

Sample ID

Sample ID 2

Sample Date

209288-2014-W

TECH SERVICE CENTER-ANTERO

3/14/2014

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Report Reviewed By: Juniphilar



2044 Meadowbrook Road | P.O. Box 4657 Bridgeport, WV 26330 Phone: 304.842.5285 | Fax: 304.842.5351

# **Martinsburg Laboratory**

Ridgefield Business Center | 25 Crimson Circle Martinsburg, WV 25403 Phone: 304.596.2084 | Fax: 304.596.2086

Date/Time Analyzed Analyst

Certifications: WV Department of Health #: 00354, 00443 | WV Department of Environmental Protection #: 158, 181 MD Department of Environment #: 336, 337 | US Environmental Protection Agency #: WV00042, WV00901

HALL DRILLING 981 E. WASHINGTON AVE.

Thursday, March 27, 2014

MDL

Page 2 of 2

MÇL

ELLENBORO,

W

26346-

Value

Lab Number:

**Parameter** 

209288-2014-W

Sample ID:

Units

**TECH SERVICE CENTER-ANTERO** 

Analyte Group: Inorganic	<u>:s</u>						
Total Organic Carbon	728	mg/l	SM5310C-00	3/26/2014	8:23	MÇ	0.1
pH	# 6.02	S.U.	SM4500H+B-00	3/18/2014	15:48	TH	,
Total Chloride	69978	mg/l	SM4500CLB-97	3/18/2014	11:45	MC	2.52
Total Iron	59.8	mg/l	EPA 200.7 R4.4	3/21/2014	14:36	TH	0.004
Total Manganese	2.71	mg/l	EPA 200.7 R4.4	3/21/2014	14:36	TH	0.007
Total Barium	417	mg/l	EPA 200.7 R4.4	3/21/2014	14:36	TH	0.003
Total Sodium	27660	mg/l	EPA 200.7 R4.4	3/21/2014	14:36	TH	0.011
Total Dissolved Solids	134380	mg/l	SM2540C-97	3/20/2014	12:00	CT	10
Total Sulfate	ND	mg/l	ASTM D516-02	3/24/2014	13:35	KV	0.59

Method

### Remarks:

Date Sample Collected:

3/14/2014

Sample Submitted By:

T. HALL

11:20

Date Sample Received: 3/14/2014 ND = Not Detected at the MDL or MRL

MDL - Minimum Detectable Limit

MCL - Maximum Contaminant Level, USEPA Regulated

MRL - Minimum Reporting Limit [MCL] = Maximum Contaminant Level, Non-Regulated

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WHITE - LABORATORY YELLOW - CLIENT



2044 Meadowbrook Road | P.O. Box 4657 Bridgeport, WV 26330 Phone: 304.842.5285 | Fax: 304.842.5351

### Martinsburg Laboratory

Ridgefield Business Center | 25 Crimson Circle Martinsburg, WV 25403 Phone: 304.596.2084 | Fax: 304.596.2086

Certifications: WV Department of Health #: 00354, 00443 | WV Department of Environmental Protection #: 158, 181 MD Department of Environment #: 336, 337 US Environmental Protection Agency #: WV00042, WV00901

# LABORATORY REPORT SUMMARY

Client:

C06443

Tuesday, April 29, 2014

HALL DRILLING

981 E. WASHINGTON AVE.

**ELLENBORO** 

26346-

Total Number of Pages: 2 (Not Including C.O.C.)

Page 1 of 2

Lab ID

Sample ID

Sample ID 2

Sample Date

210792-2014-W

**TECH SERVICE CENTER 3H** 

**ANTERO** 

4/14/2014

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Report Reviewed By: Jenke Miles

Digitally signed by Tenley DN: cn=Tenley Miller.

Inc., ou,

c=US Date: 2014.05.01 09:47:51 -04'00'



2044 Meadowbrook Road | P.O. Box 4657 Bridgeport, WV 26330 Phone: 304.842.5285 | Fax: 304.842.5351

### **Martinsburg Laboratory**

Ridgefield Business Center | 25 Crimson Circle Martinsburg, WV 25403 Phone: 304,596,2084 | Fax: 304,596,2086

Certifications: WV Department of Health #: 00354, 00443 | WV Department of Environmental Protection #: 158, 181 MD Department of Environment #: 336, 337 | US Environmental Protection Agency #: WV00042, WV00901

HALL DRILLING 981 E. WASHINGTON AVE.

Tuesday, April 29, 2014

Page 2 of 2

ELLENBORO,

W

26346-

Lab Number: 210792-2014-W

Sample ID:

**TECH SERVICE CENTER 3H** 

**ANTERO** 

			70112110					
Parameter	Value	Units	Method	Date/Time A	nalyzed	Analyst	MDL	MCL
Analyte Group: <u>inorganics</u>								
Total Organic Carbon	510	mg/l	SM5310C-00	4/18/2014	10:28	МС	0.1	••••
рН	# 5.89	S.U.	SM4500H+B-00	4/28/2014	11:35	KD		
Total Chloride	73977	mg/l	SM4500CLB-97	4/24/2014	14:00	KV	2.52	
Total Iron	85.2	mg/l	EPA 200.7 R4.4	4/25/2014	13:02	TH	0.004	
Total Manganese	8.50	mg/l	EPA 200.7 R4.4	4/25/2014	13:02	TH	0.007	
Total Barium	578	mg/l	EPA 200.7 R4.4	4/25/2014	13:02	TH	0.003	
Total Sodium	30080	mg/l	EPA 200.7 R4.4	4/25/2014	13:02	TH	0.011	
Total Dissolved Solids	112940	mg/l	SM2540C-97	4/17/2014	11:00	CT	10	
Total Sulfate	ND	mg/l	ASTM D516-02	4/16/2014	9:40	KV	0.59	

### Remarks:

Date Sample Collected: Sample Submitted By:

4/14/2014 TJH

16:00

Date Sample Received:

4/15/2014

12:45

Sample temp. upon receipt: 16.8 Deg C

ND = Not Detected at the MDL or MRL

MDL - Minimum Detectable Limit

MRL - Minimum Reporting Limit

MCL - Maximum Contaminant Level, USEPA Regulated

[MCL] = Maximum Contaminant Level, Non-Regulated

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WHITE-LABORATORY YELLOW-CLIENT



2044 Meadowbrook Road | P.O. Box 4657 Bridgeport, WV 26330

Phone: 304.842.5285 | Fax: 304.842.5351

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# LABORATORY REPORT SUMMARY

Client:

C06443

Tuesday, May 27, 2014

HALL DRILLING

981 E. WASHINGTON AVE.

**ELLENBORO** 

26346-

Total Number of Pages: 2 (Not Including C.O.C.)

Page 1 of 2

Lab ID

Sample ID

Sample ID 2

Sample Date

212324-2014-W

TECH SVC CTR 3H

**ANTERO** 

5/15/2014

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Report Reviewed By: Jerly Melin

Digitally signed by Tenley ou, emall=tmiller@wvdsl,net. c=US

C=05 Date; 2014.05.30 15:07:26 -04'00'



2044 Meadowbrook Road | P.O. Box 4657 Bridgeport, WV 26330 Phone: 304.842.5285 | Fax: 304.842.5351

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HALL DRILLING 981 E. WASHINGTON AVE.

Tuesday, May 27, 2014

Page 2 of 2

ELLENBORO.

W

26346-

Lab Number: 212324-2014-W

Sample ID:

**TECH SVC CTR 3H** 

**ANTERO** 

Parameter	Value	Units	Method	Date/Time A	nalyzed	Analyst	MDL	MCL
Analyte Group: <u>Inorganics</u>								
Total Organic Carbon	473	mg/l	SM5310C-00	5/21/2014	8:52	MC	0.1	
pH	# 5.82	S.U.	SM4500H+B-00	5/19/2014	15:40	KV	-	
Total Chloride	8122	mg/l	SM4500CLB-97	5/21/2014	9:00	KV	2.52	
Total Iron	92.3	mg/l	EPA 200.7 R4.4	5/23/2014	10:11	TH	0.004	
Total Manganese	9.29	mg/l	EPA 200.7 R4.4	5/23/2014	10:11	TH	0.007	
Total Barium	627	mg/l	EPA 200.7 R4.4	5/23/2014	10:11	TH	0.003	
Total Sodium	29560	mg/l	EPA 200.7 R4.4	5/23/2014	10:11	TH	0.011	
Total Dissolved Solids	146540	mg/l	SM2540C-97	5/19/2014	11:15		10	
Total Sulfate	ND	mg/l	ASTM D516-02	5/20/2014	13:45	KV	0.59	

### Remarks:

Date Sample Collected: Sample Submitted By:

5/15/2014

14:30

Date Sample Received:

T. HALL 5/16/2014

Sample temp, upon receipt: 19.4 Deg C

11:20

MDL - Minimum Detectable Limit

ND = Not Detected at the MDL or MRL MRL - Minimum Reporting Limit

MCL - Maximum Contaminant Level, USEPA Regulated

[MCL] = Maximum Contaminant Level, Non-Regulated

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2044 Meadowbrook Road | P.O. Box 4657 Bridgeport, WV 26330 Phone: 304.842.5285 | Fax: 304.842.5351

## **Martinsburg Laboratory**

Ridgefield Business Center | 25 Crimson Circle Martinsburg, WV 25403 Phone: 304.596.2084 | Fax: 304.596.2086

Certifications: WV Department of Health #: 00354, 00443 | WV Department of Environmental Protection #: 158, 181 MD Department of Environment #: 336, 337 | US Environmental Protection Agency #: WV00042, WV00801

# LABORATORY REPORT SUMMARY

Client: C0

C06443

981 E. WASHINGTON AVE.

HALL DRILLING

**ELLENBORO** 

NV 26346-

Monday, June 30, 2014

Total Number of Pages: 2 (Not Including C.O.C.)

Page 1 of 2

Lab ID

Sample ID

Sample ID 2

Sample Date

213936-2014-W

**TECH SERVICE CENTER 3H** 

ANTERO

6/15/2014

The enclosed results have been analyzed according to the referenced method and SOP. Any deviations to the method have been noted on the report. Unless otherwise noted, all results have been verified to meet quality control requirements of the method. This report may not be reproduced, except in full, without written approval of Reliance Laboratories, Inc.

Report Reviewed By:

Tenles Relev

Digitally signed by Tenley Miller DN: cn=Teniey Miller, o=Reliance Laboratories, Inc., ou, email=umiller@wvdsi.net, c=US Date: 2014.07.02 12:59:45 -04:00'



2044 Meadowbrook Road | P.O. Box 4657 Bridgeport, WV 26330 Phone: 304.842.5285 | Fax: 304.842.5351

### Martinsburg Laboratory

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HALL DRILLING 981 E. WASHINGTON AVE.

Monday, June 30, 2014

Page 2 of 2

ELLENBORO,

W

26346-

Lab Number: 213936-2014-W

Sample ID:

**TECH SERVICE CENTER 3H** 

**ANTERO** 

			ANTENO					
Parameter	Value	Units	Method	Date/Time /	nalyzed	Analyst	MDL	MCL
Analyte Group: <u>inorganics</u>								
Total Organic Carbon	438	mg/l	SM5310C-00	6/24/2014	9:42	MC	0.1	
рН	# 5.46	S.U.	SM4500H+B-00	6/17/2014	15:43	KV		
Total Chloride	65980	mg/l	SM4500CLB-97	6/18/2014	12:50	KV	2.52	
Total Iron	115	mg/l	EPA 200.7 R4.4	6/27/2014	10:53	TH	0.004	<del></del>
Total Manganese	1.90	mg/l	EPA 200.7 R4.4	6/27/2014	10:53	TH	0.007	
Total Barium	564	mg/l	EPA 200.7 R4.4	6/27/2014	10:53	TH	0.003	
Total Sodium	23500	mg/l	EPA 200.7 R4.4	6/27/2014	10:53	TH	0.011	
Total Dissolved Solids	113805	mg/l	SM2540C-97	6/19/2014	11:00	CT	10	<del></del>
Total Sulfate	ND	mg/l	ASTM D516-02	6/23/2014	12:30	KV	0.59	

### Remarks:

Date Sample Collected: Sample Submitted By:

6/15/2014

16:30

Date Sample Received:

TJH 6/17/2014

12:05

Sample temp. upon receipt: 26.8 Deg C

ND = Not Detected at the MDL or MRL

MDL - Minimum Detectable Limit

MRL - Minimum Reporting Limit

MCL - Maximum Contaminant Level, USEPA Regulated

[MCL] = Maximum Contaminant Level, Non-Regulated

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WHITE - LABORATORY YELLOW - CLIENT



2044 Meadowbrook Road | P.O. Box 4657 Bridgeport, WV 26330 Phone: 304.842.5285 | Fax: 304.842.5351

### **Martinsburg Laboratory**

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Certifications: WV Department of Health #: 00354, 00443 | WV Department of Environmental Protection #: 158, 181 MD Department of Environment #: 336, 337 | US Environmental Protection Agency #: WV00042, WV00901

# LABORATORY REPORT SUMMARY

Client: C06443

HALL DRILLING 981 E. WASHINGTON AVE.

**ELLENBORO** 

26346-

Thursday, July 31, 2014

Total Number of Pages: 2 (Not Including C.O.C.)

Page 1 of 2

Lab ID

Sample ID

Sample ID 2

Sample Date

215384-2014-W

TECH SERVICE CENTER 3H

**ANTERO** 

7/14/2014

The enclosed results have been analyzed according to the referenced method and SOP. Any deviations to the method have been noted on the report. Unless otherwise noted, all results have been verified to meet quality control requirements of the method. This report may not be reproduced, except in full, without written approval of Reliance Laboratories, Inc.

Report Reviewed By: Juny Mar

Digitally signed by Tenley Miller
DN: cn=Tenley Miller,
o=Reliance Laboratories, inc., ou, email-tmiller@wvdsi.n c=US Date: 2014.08.11 10:08:54



2044 Meadowbrook Road [ P.O. Box 4657 Bridgeport, WV 26330

Phone: 304.842,5285 | Fax: 304.842,5351

# **Martinsburg Laboratory**

Ridgefield Business Center | 25 Crimson Circle Martinsburg, WV 25403

Phone: 304.596,2084 | Fax: 304.596,2086

Certifications: WV Department of Health #: 00354, 00443 | WV Department of Environmental Protection #: 158, 181 MD Department of Environment # 338, 337 US Environmental Protection Agency #: WV00042, WV00901

HALL DRILLING 981 E. WASHINGTON AVE.

Thursday, July 31, 2014

Page 2 of 2

**ELLENBORO** 

WV

26346-

Lab Number: 215384-2014-W

Sample ID:

**TECH SERVICE CENTER 3H** 

**ANTERO** 

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Parameter	Value	Units	Method	Date/Time #	nalyzed	Analyst	MDL	MCL
Analyte Group: <u>Inorganics</u>								
Total Organic Carbon	397	mg/l	SM5310C-00	7/17/2014	9:06	TH	0.1	
pH	# 5.22	S.U.	SM4500H+B-00	7/17/2014	11:53	KV		
Total Dissolved Solids	149264	mg/l	SM2540C-97	7/17/2014	10:30	CT	10	
Total Chloride	73977	mg/l	SM4500CLB-97	7/23/2014	9:45	ΚV	2.52	
Total Sulfate	295	mg/l	EPA 300.0 R2.1	7/29/2014	15:33	KD	0.05	
Total Iron	112	mg/l	EPA 200.7 R4.4	7/21/2014	13:05	TH	0.004	
Total Manganese	3.48	mg/l	EPA 200.7 R4.4	7/21/2014	13:05	TH	0.007	
Total Barium	503	mg/l	EPA 200.7 R4.4	7/21/2014	13:05	TH	0.003	
Total Sodium	21520	mg/l	EPA 200.7 R4.4	7/21/2014	13:05	TH	0.011	
Total Sodium	21520	mg/l	EPA 200.7 R4.4	7/21/2014		13:05	13:05 TH	13:05 TH 0.011

### Remarks:

Date Sample Collected: Sample Submitted By:

7/14/2014 TJH

10:30

Date Sample Received: 7/15/2014 11:00

Sample temp. upon receipt: 21.4 Deg C

ND = Not Detected at the MDL or MRL

MDL - Minimum Detectable Limit

MRL - Minimum Reporting Limit

MCL - Maximum Contaminant Level, USEPA Regulated

[MCL] = Maximum Contaminant Level, Non-Regulated

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WHITE - LABORATORY YELLOW - CLIENT



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# LABORATORY REPORT SUMMARY

Client:

C06443

HALL DRILLING

981 E. WASHINGTON AVE.

**ELLENBORO** 

w

26346-

Thursday, August 28, 2014

Total Number of Pages: 2 (Not Including C.O.C.)

Page 1 of 2

Lab ID

Sample ID

Sample ID 2

Sample Date

217102-2014-W

TECH SERVICE CTR 3H

ANTERO INJECTION WATER

8/14/2014

The enclosed results have been analyzed according to the referenced method and SOP. Any deviations to the method have been noted on the report. Unless otherwise noted, all results have been verified to meet quality control requirements of the method. This report may not be reproduced, except in full, without written approval of Reliance Laboratories, Inc.

Report Reviewed By:

Senlyheler

Digitally signed by Tenley Mille Dis. cn=Tenley Miller, o=Reliance Laboratories, Inc., ou, email=tmiller@wwdsl.net, c=US Date: 2014.09.02 12:18:10 -04'00'



2044 Meadowbrook Road | P.O. Box 4657 Bridgeport, WV 26330 Phone: 304.842.5285 | Fax: 304.842.5351

Ridgefield Business Center | 25 Crimson Circle Martinsburg, WV 25403 Phone: 304.596.2084 | Fax: 304.596.2086

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HALL DRILLING 981 E. WASHINGTON AVE.

Thursday, August 28, 2014

Page 2 of 2

ELLENBORO,

W

26346-

Lab Number: 217102-2014-W

Sample ID:

**TECH SERVICE CTR 3H** 

ANTERO INJECTION WATER

Parameter	Value	Units	Method	Date/Time A	nalyzed	Analyst	MDL	MCL
Analyte Group: <u>Inorganics</u>								
Total Organic Carbon	252	mg/l	SM5310C-00	8/22/2014	8:52	MC	0.1	
рН	# 5.80	S.U.	SM4500H+B-00	8/18/2014	14:54	KV		
Total Dissolved Solids	137340	mg/l	SM2540C-97	8/18/2014	14:45	CT	10	
Total Chloride	79975	mg/l	SM4500CLB-97	8/20/2014	15:00	KV	2.52	
Total Iron	134	mg/l	EPA 200.7 R4.4	8/22/2014	10:12	TH	0.004	
Total Manganese	4.20	mg/l	EPA 200.7 R4.4	8/22/2014	10:12	TH	0.007	
Total Barium	653	mg/l	EPA 200.7 R4.4	8/22/2014	10:12	TH	0.003	
Total Sodium	27450	mg/l	EPA 200.7 R4.4	8/22/2014	10:12	TH	0.011	
Total Sulfate	ND	mg/l	ASTM D516-02	8/25/2014	13:00	KV	0.59	

### Remarks:

Date Sample Collected: Sample Submitted By:

8/14/2014 TJH

15:00

Date Sample Received:

8/15/2014 11:51

Sample temp. upon receipt: 18.0 Deg C

ND = Not Detected at the MDL or MRL

MDL - Minimum Detectable Limit

MRL - Minimum Reporting Limit

MCL - Maximum Contaminant Level, USEPA Regulated

[MCL] = Maximum Contaminant Level, Non-Regulated

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2044 Meadowbrook Road | P.O. Box 4657 Bridgeport, WV 26330 Phone: 304.842.5285 | Fax: 304.842.5351

#### **Martinsburg Laboratory**

Ridgefield Business Center | 25 Crimson Circle Martinsburg, WV 25403 Phone: 304.596.2084 | Fax: 304.596.2086

Certifications: WV Department of Health #: 00354, 00443 | WV Department of Environmental Protection #: 158, 181 MD Department of Environment #: 336, 337 US Environmental Protection Agency #: WV00042, WV00901

# LABORATORY REPORT SUMMARY

Client:

C06443

Wednesday, October 01, 2014

HALL DRILLING

981 E. WASHINGTON AVE.

Total Number of Pages: 2 (Not Including C.O.C.)

**ELLENBORO** 

26346-

Page 1 of 2

Lab ID

Sample ID

Sample ID 2

Sample Date

218794-2014-W

**TECH SERVICE CENTER 3H** 

**ANTERO** 

9/15/2014

The enclosed results have been analyzed according to the referenced method and SOP. Any deviations to the method have been noted on the report. Unless otherwise noted, all results have been verified to meet quality control requirements of the method. This report may not be reproduced, except in full, without written approval of Reliance Laboratories, Inc.

Report Reviewed By: Jerly Meler

DN: cn=Tenley Miller. o=Reliance Laboratories, inc., ou, email=tmiller@wvdsl.net, c=US

Date: 2014,10,15 09:51:25 -04'00'



2044 Meadowbrook Road | P.O. Box 4657 Bridgeport, WV 26330 Phone: 304.842.5285 | Fax: 304.842.5351

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Certifications: WV Department of Health #: 00354, 00443 | WV Department of Environmental Protection #: 158, 181 MD Department of Environment #: 336, 337 | US Environmental Protection Agency #: WV00042, WV00901

HALL DRILLING 981 E. WASHINGTON AVE.

Wednesday, October 01, 2014

Page 2 of 2

ELLENBORO,

W

26346-

Lab Number: 218794-2014-W

Sample ID:

**TECH SERVICE CENTER 3H** 

**ANTERO** 

			, E. (O					
Parameter	Value	Units	Method	Date/Time Anal	yzed	Analyst	MDL	MCL
Analyte Group: <u>Inorganics</u>								
Total Organic Carbon	347	mg/l	SM5310C-00	9/26/2014	10:17	MC	0.1	
рН	# 4.90	S.U.	SM4500H+B-00	9/17/2014	11:41	KV	-	
Total Dissolved Solids	151116	mg/l	SM2540C-97	9/18/2014	11:30	СТ	10	
Total Chloride	82974	mg/l	SM4500CLB-97	9/24/2014	9:10	KV	2.52	
Total Iron	171	mg/l	EPA 200.7 R4.4	9/29/2014	14:50	МС	0.004	
Total Manganese	4.53	mg/l	EPA 200.7 R4.4	9/29/2014	14:50	MC	0.007	
Total Barium	670	mg/l	EPA 200.7 R4.4	9/29/2014	14:50	MC	0.003	
Total Sodium	39330	mg/l	EPA 200.7 R4.4	9/29/2014	14:50	MC	0.011	
Total Sulfate	ND	mg/l	ASTM D516-02	9/22/2014	14:00	KV	0.59	

### Remarks:

Date Sample Collected: Sample Submitted By:

9/15/2014

14:00

Date Sample Received:

TJH 9/16/2014

15:07

Sample temp. upon receipt: 21.8 Deg C

MDL - Minimum Detectable Limit

MRL - Minimum Reporting Limit

ND = Not Detected at the MDL or MRL

MCL - Maximum Contaminant Level, USEPA Regulated

[MCL] = Maximum Contaminant Level, Non-Regulated

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2044 Meadowbrook Road | P.O. Box 4657 Bridgeport, WV 26330

Phone: 304.842.5285 | Fax: 304.842.5351

# **Martinsburg Laboratory**

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Certifications: WV Department of Health #: 00354, 00443 | WV Department of Environmental Protection #: 158, 181 MD Department of Environment #: 336, 337 | US Environmental Protection Agency #: WV00042, WV00901

# LABORATORY REPORT SUMMARY

Client:

C06443

Thursday, October 30, 2014

HALL DRILLING

981 E. WASHINGTON AVE.

**ELLENBORO** 

26346-

Total Number of Pages: 2 (Not Including C.O.C.)

Page 1 of 2

Lab ID

Sample ID

Sample ID 2

Sample Date

220587-2014-W

ANTERO INJECTION WATER

10/15/2014

The enclosed results have been analyzed according to the referenced method and SOP. Any deviations to the method have been noted on the report. Unless otherwise noted, all results have been verified to meet quality control requirements of the method. This report may not be reproduced, except in full, without written approval of Reliance Laboratories, Inc.

Report Reviewed By: July Men

DN: cn=Tenley Miller, Date: 2014.11.04 10:12:10 -05'00'



2044 Meadowbrook Road | P.O. Box 4657 Bridgeport, WV 26330 Phone: 304.842.5285 | Fax: 304.842.5351

### **Martinsburg Laboratory**

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HALL DRILLING 981 E. WASHINGTON AVE.

Thursday, October 30, 2014

0.59

Page 2 of 2

ELLENBORO,

W

26346-

Lab Number: 220587-2014-W

Sample ID:

mg/l

ANTERO INJECTION WATER

Parameter	Value	Units	Method	Date/Time A	nalyzed	Analyst	MDL	MCL
Analyte Group: <u>Inorgani</u>	<u>cs</u>							
Total Organic Carbon	657	mg/l	SM5310C-00	10/27/2014	8:34	MC	0.1	
pH	# 5.77	S.U.	SM4500H+B-00	10/21/2014	15:10	KV		
Total Dissolved Solids	136244	mg/l	SM2540C-97	10/17/2014	9:20	CP	10	
Total Chloride	89972	mg/l	SM4500CLB-97	10/23/2014	9:30	KV	2.52	
Total Iron	139	mg/l	EPA 200.7 R4.4	10/28/2014	18:01	MC	0.004	
Total Manganese	1.24	mg/l	EPA 200.7 R4.4	10/28/2014	18:01	MC	0.007	
Total Barium	711	mg/l	EPA 200.7 R4.4	10/28/2014	18:01	MC	0.003	
Total Sodium	41020	mg/l	EPA 200.7 R4.4	10/28/2014	18:01	MC	0.011	

ASTM D516-02

10/21/2014

9:40

ΚV

### Remarks:

**Total Sulfate** 

Date Sample Collected: Sample Submitted By:

10/15/2014 TJĤ

11:50

ND

Date Sample Received: Sample temp. upon receipt: 23.6 Deg C

10/16/2014

MDL - Minimum Detectable Limit

ND = Not Detected at the MDL or MRL MRL - Minimum Reporting Limit

MCL - Maximum Contaminant Level, USEPA Regulated

[MCL] = Maximum Contaminant Level, Non-Regulated

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2044 Meadowbrook Road | P.O. Box 4657 Bridgeport, WV 26330 Phone: 304.842.5285 | Fax: 304.842.5351

### **Martinsburg Laboratory**

Ridgefield Business Center | 25 Crimson Circle Martinsburg, WV 25403 Phone: 304.596.2084 | Fax: 304.596.2086

Certifications: WV Department of Health #: 00354, 00443 | WV Department of Environmental Protection #: 158, 181 MD Department of Environment #: 336, 337 | US Environmental Protection Agency #: WV00042, WV00901

# LABORATORY REPORT SUMMARY

Client: C06443

Tuesday, November 25, 2014

HALL DRILLING

Table 1 (B o

981 E. WASHINGTON AVE.

Total Number of Pages: 2 (Not Including C.O.C.)

ELLENBORO

WV 26346-

Page 1 of 2

Lab ID

Sample ID

Sample ID 2

Sample Date

222165-2014-W

**TECH SVC CENTER 3H** 

ANTERO INJECTION WATER

11/12/2014

The enclosed results have been analyzed according to the referenced method and SOP. Any deviations to the method have been noted on the report. Unless otherwise noted, all results have been verified to meet quality control requirements of the method. This report may not be reproduced, except in full, without written approval of Reliance Laboratories, Inc.

Report Reviewed By: July Mer

Digitally signed by Tenley Miller DN: cn=Tenley Miller, o=Reliance Laboratories, inc., ou, email=tmiller@wwdsl.net, c=US Date: 2014.11.25 16:31:24



2044 Meadowbrook Road | P.O. Box 4657 Bridgeport, WV 26330 Phone: 304.842.5285 | Fax: 304.842.5351 **Martinsburg Laboratory** 

Ridgefield Business Center | 25 Crimson Circle Martinsburg, WV 25403

Phone: 304,596,2084 | Fax: 304,596,2086

Certifications: WV Department of Health #: 00354, 00443 | WV Department of Environmental Protection #: 158, 181 MD Department of Environment #: 336, 337 | US Environmental Protection Agency #: WV00042, WV00901

HALL DRILLING 981 E. WASHINGTON AVE.

Tuesday, November 25, 2014

Page 2 of 2

ELLENBORO.

W

26346-

Lab Number: 222165-2014-W

Sample ID:

**TECH SVC CENTER 3H** 

ANTERO INJECTION WATER

				-		_		
Parameter	Value	Units	Method	Date/Time A	nalyzed	Analyst	MDL	MCL
Analyte Group: <u>Inorganics</u>								
Total Organic Carbon	783	mg/l	SM5310C-00	11/17/2014	10:55	MC	0.1	
pH	# 5.68	S.U.	SM4500H+B-00	11/14/2014	14:50	KV		
Total Dissolved Solids	159148	mg/l	SM2540C-97	11/14/2014	9:30	CP	10	
Total Chloride	92471	mg/l	SM4500CLB-97	11/19/2014	15:32	МС	2.52	
Total Iron	131	mg/l	EPA 200.7 R4.4	11/19/2014	10:55	TH	0.004	
Total Manganese	5.94	mg/l	EPA 200.7 R4.4	11/19/2014	10:55	TH	0.007	
Total Barium	744	mg/l	EPA 200.7 R4.4	11/19/2014	10:55	TH	0.003	
Total Sodium	35500	mg/l	EPA 200.7 R4.4	11/19/2014	10:55	TH	0.011	-
Total Sulfate	ND	mg/l	ASTM D516-02	11/20/2014	14:30	МС	0.59	

### Remarks:

Date Sample Collected: Sample Submitted By:

11/12/2014 T.HALL

10:00

Date Sample Received:

11/13/2014

11:05

Sample temp. upon receipt: 17.2 Deg C MDL - Minimum Detectable Limit

ND = Not Detected at the MDL or MRL

MRL - Minimum Reporting Limit

MCL - Maximum Contaminant Level, USEPA Regulated

[MCL] = Maximum Contaminant Level, Non-Regulated

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# Martinsburg Laboratory

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Certifications: WV Department of Health #: 00354, 00443 | WV Department of Environmental Protection #: 158, 181 MD Department of Environment # 336, 337 | US Environmental Protection Agency #: WV00042, WV00901

# LABORATORY REPORT SUMMARY

Client:

C06443

Monday, January 05, 2015

HALL DRILLING

981 E. WASHINGTON AVE.

**ELLENBORO** 

26346-

Total Number of Pages: 2 (Not Including C.O.C.)

Page 1 of 2

Lab ID

Sample ID

Sample ID 2

Sample Date

224049-2014-W

ANTERO INJECTION WATER

12/16/2014

The enclosed results have been analyzed according to the referenced method and SOP. Any deviations to the method have been noted on the report. Unless otherwise noted, all results have been verified to meet quality control requirements of the method. This report may not be reproduced, except in full, without written approval of Reliance Laboratories, Inc.

Report Reviewed By: Jerly Melan

Miller
DN: cn=Tenley Miller,
o=Rellance Laboratories, Inc.,
ou, email=tmiller@wvdsl.net, Date: 2015.01.13 10:40:53



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HALL DRILLING 981 E. WASHINGTON AVE.

Monday, January 05, 2015

Page 2 of 2

ELLENBORO,

w

26346-

Lab Number: 224049-2014-W

**Parameter** 

Sample ID:

ANTERO INJECTION WATER

Value Units Method Date/Time Analyzed Analyst MDL MCL

#### Analyte Group: inorganics

Total Organic Carbon	3.56	mg/l	SM5310C-00	12/26/2014	10:58	MC	0.1
pH	# 5.92	S.U.	SM4500H+B-00	12/29/2014	12:30	KV	
Total Dissolved Solids	117850	mg/l	SM2540C-97	12/19/2014	9:00	CP	10
Total Chloride	78726	mg/l	SM4500CLB-97	12/26/2014	12:55	KV	2.52
Total Iron	119	mg/l	EPA 200.7 R4.4	12/23/2014	12:21	TH	0.004
Total Manganese	ND	mg/l	EPA 200.7 R4.4	12/23/2014	12:21	TH	0.007
Total Barium	560	mg/l	EPA 200.7 R4.4	12/23/2014	12:21	TH	0.003
Total Sodium	41550	mg/l	EPA 200.7 R4.4	12/23/2014	12:21	TH	0.011
Total Sulfate	ND	mg/l	ASTM D516-02	12/29/2014	11:10	MC	0.59

# Remarks:

Date Sample Collected: Sample Submitted By:

12/16/2014

5:00

Date Sample Received:

T.HALL

11:49

Sample temp. upon receipt: 18.8 Deg C

12/18/2014

ND = Not Detected at the MDL or MRL

MDL - Minimum Detectable Limit

MRL - Minimum Reporting Limit

MCL - Maximum Contaminant Level, USEPA Regulated

[MCL] = Maximum Contaminant Level, Non-Regulated

\*Method Code: STANDARD METHODS 19TH ED; US EPA METHODS FOR THE CHEMICAL ANALYSIS OF WATER AND WASTES, Rev. 83; US EPA METHODS FOR THE DETERMINATION OF METALS IN ENVIRONMENTAL SAMPLES, May 1994; TEST METHODS FOR EVALUATING SOLID WASTE, SW-846, 3rd ED; USEPA Manual for Certification of Laboratories Analyzing Drinking Water, 5th ED. In accordance with EPA Regulations, all reports, Including raw data and quality control data, are maintained by the laboratory for a minimum of 5 years. NOTE: #Holding time exceeded for this analysis.

NOTE: Sample temperature upon receipt exceeds 6 degrees C.