



Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

October 08, 2017

Brandon Bruns
Tasman Geosciences
6899 Pecos Street
Denver, CO 80221
RE: Mark 35-13

Enclosed are the results of analyses for samples received by Summit Scientific on 10/02/17 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to be 'Ben Shrewsbury', with a long, sweeping horizontal line extending to the right.

Ben Shrewsbury
Laboratory Manager



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Mark 35-13

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
10/08/17 16:49

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS03@3'	1710001-01	Soil	10/02/17 12:41	10/02/17 17:00
SS05@6'	1710001-02	Soil	10/02/17 12:45	10/02/17 17:00
SS06@2'	1710001-03	Soil	10/02/17 13:02	10/02/17 17:00
SS10@4'	1710001-04	Soil	10/02/17 13:12	10/02/17 17:00
SS11@4'	1710001-05	Soil	10/02/17 13:15	10/02/17 17:00

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1710001



741 Corporate Circle Suite I ♦ Golden, Colorado 80401

303-277-9310 ♦ 303-374-5933 Fax

Page 1 of 1

Client: Noble/Tasman
 Address: -
 City/State/Zip: -
 Phone: 303-487-1228 Fax: -
 Sampler Name: GB

Project Manager: Brandon Bruns, Invoice: Jacob Evans
 E-Mail: Bbruns@tasman-geo.com
 Project Name: mark 35-13
 Project Number: -

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix				Analyze For:								Special Instructions			
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	8260 BTEX	8260B GBTEXN	8015 DRO	pH, EC, SAR								
SS03@ 3'	10/2/17	1241	1			X			X					X	X	X							
SS05@ 6'	10/2/17	1245	1			X			X					X	X								
SS06@ 2'	10/2/17	1302	1			X			X					X	X	X							
SS10@ 4'	10/2/17	1312	1			X			X					X	X								
SS11@ 4'	10/2/17	1315	1			X			X					X	X								
Relinquished by: 				Date/Time: <u>10/2/17 1700</u>		Received by: 				Date/Time: <u>10/2/17 1700</u>		Turn Around Time (Check)								Notes: <u>on ice</u>			
Relinquished by:				Date/Time:		Received by:				Date/Time:		Same Day <input type="checkbox"/> 72 Hours <input type="checkbox"/> 24 Hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 Hours <input type="checkbox"/>											
Relinquished by:				Date/Time:		Received in Lab by:				Date/Time:		Sample Integrity: Temperature Upon Receipt: <u>4.9°C</u> Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No											

Sample Receipt Checklist

S2 Work Order:

Client: Noble/Tasman

Client Project ID: Mark 35-13

Shipped Via: P/U

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Airbill #: _____

Matrix (check all that apply): ☐ Air ☒ Soil/Solid ☐ Water ☐ Other: _____
(Describe)

Cooler ID					
Temp (°C)	4.9				

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ?	✓			
NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.				
Were all samples received intact ⁽¹⁾ ?	✓			
Was adequate sample volume provided ⁽¹⁾ ?	✓			
If custody seals are present, are they intact ⁽¹⁾ ?			✓	
Are short holding time analytes or samples with HTs due within 48 hours present?			✓	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	✓			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	✓			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	✓			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	✓			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			✓	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ?				
Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect			✓	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ?			✓	
Record the pH in Comments.				
If dissolved metals are requested, were samples field filtered?			✓	
<u>Additional Comments (if any):</u>				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

Nakita
Custodian Printed Name

Signature or Initials of Custodian

10/2/17 1740
Date/Time



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Mark 35-13
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
10/08/17 16:49

SS03@3'
1710001-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/02/17 12:41**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1710013	10/03/17	10/04/17	8015M	

Date Sampled: **10/02/17 12:41**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		112 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/02/17 12:41**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1710014	10/03/17	10/03/17	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **10/02/17 12:41**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		112 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.0 %	21-167		"	"	"	"	

Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: **10/02/17 12:41**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	300	10.9	mg/kg dry	1	1710024	10/04/17	10/04/17	EPA 6020/Mod. USDA60 6(2, 3A)	

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Project: Mark 35-13
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
10/08/17 16:49

SS03@3'
1710001-01 (Soil)

Summit Scientific

Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis

Magnesium	146	5.43	mg/kg dry	1	1710024	10/04/17	10/04/17	EPA 6020/Mod. USDA60 6(2, 3A)
Sodium	54.1	5.43	"	"	"	"	"	"
Sodium Adsorption Ratio	0.641		units	"	1710062	10/06/17	10/06/17	"

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/02/17 12:41**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	0.112	0.0100	mmhos/cm	1	1710026	10/04/17	10/05/17	SM 2510B	
% Solids	92.1		%	"	1710027	10/04/17	10/05/17	% calculation	
pH	8.92	0.100	pH Units	"	1710025	10/04/17	10/04/17	EPA 9045	

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Project: Mark 35-13
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Reported:
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SS05@6'
1710001-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/02/17 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1710013	10/03/17	10/04/17	8015M	

Date Sampled: **10/02/17 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		115 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/02/17 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1710014	10/03/17	10/03/17	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **10/02/17 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		115 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.8 %	21-167		"	"	"	"	

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Project: Mark 35-13
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
10/08/17 16:49

SS06@2'
1710001-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/02/17 13:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1710013	10/03/17	10/04/17	8015M	

Date Sampled: **10/02/17 13:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		111 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/02/17 13:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1710014	10/03/17	10/03/17	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **10/02/17 13:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		113 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.3 %	21-167		"	"	"	"	

Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: **10/02/17 13:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	433	11.1	mg/kg dry	1	1710024	10/04/17	10/04/17	EPA 6020/Mod. USDA60 6(2, 3A)	

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Project: Mark 35-13
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Reported:
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SS06@2'
1710001-03 (Soil)

Summit Scientific

Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis

Magnesium	161	5.57 mg/kg dry	1	1710024	10/04/17	10/04/17	EPA 6020/Mod. USDA60 6(2, 3A)
Sodium	293	5.57 "	"	"	"	"	"
Sodium Adsorption Ratio	3.05	units	"	1710062	10/06/17	10/06/17	"

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/02/17 13:02**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	0.302	0.0100	mmhos/cm	1	1710026	10/04/17	10/05/17	SM 2510B	
% Solids	89.7		%	"	1710027	10/04/17	10/05/17	% calculation	
pH	8.30	0.100	pH Units	"	1710025	10/04/17	10/04/17	EPA 9045	

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Project: Mark 35-13
Project Number: [none]
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Reported:
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SS10@4'
1710001-04 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/02/17 13:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1710013	10/03/17	10/04/17	8015M	

Date Sampled: **10/02/17 13:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		112 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/02/17 13:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1710014	10/03/17	10/03/17	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **10/02/17 13:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		114 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.0 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.6 %	21-167		"	"	"	"	

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Project: Mark 35-13
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Reported:
10/08/17 16:49

SS11@4'
1710001-05 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/02/17 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1710013	10/03/17	10/04/17	8015M	

Date Sampled: **10/02/17 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		113 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/02/17 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1710014	10/03/17	10/04/17	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **10/02/17 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		117 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.6 %	21-167		"	"	"	"	

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Denver CO, 80221

Project: Mark 35-13
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
10/08/17 16:49

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1710013 - EPA 3550A

Blank (1710013-BLK1)

Prepared & Analyzed: 10/03/17

C10-C28 (DRO) ND 50 mg/kg

Surrogate: o-Terphenyl 13.6 " 12.5 109 30-150

LCS (1710013-BS1)

Prepared & Analyzed: 10/03/17

C10-C28 (DRO) 474 50 mg/kg 499 95.1 73-134

Surrogate: o-Terphenyl 14.6 " 12.5 117 30-150

Matrix Spike (1710013-MS1)

Source: 1710001-01

Prepared & Analyzed: 10/03/17

C10-C28 (DRO) 478 50 mg/kg 499 7.79 94.3 50-148

Surrogate: o-Terphenyl 13.6 " 12.5 109 30-150

Matrix Spike Dup (1710013-MSD1)

Source: 1710001-01

Prepared & Analyzed: 10/03/17

C10-C28 (DRO) 502 50 mg/kg 499 7.79 99.0 50-148 4.78 20

Surrogate: o-Terphenyl 16.2 " 12.5 130 30-150

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6899 Pecos Street
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Project: Mark 35-13
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
10/08/17 16:49

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike Level	Source		%REC		RPD	
	Result	Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

Batch 1710014 - EPA 5030 Soil MS

Blank (1710014-BLK1)

Prepared & Analyzed: 10/03/17

Naphthalene	ND	0.010	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0455</i>		<i>"</i>	<i>0.0400</i>		<i>114</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0395</i>		<i>"</i>	<i>0.0400</i>		<i>98.7</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0386</i>		<i>"</i>	<i>0.0400</i>		<i>96.4</i>	<i>21-167</i>			

LCS (1710014-BS1)

Prepared & Analyzed: 10/03/17

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0753	0.0020	"	0.100		75.3	58-130			
Toluene	0.0884	0.0050	"	0.100		88.4	61-134			
Ethylbenzene	0.0937	0.0050	"	0.0992		94.5	74-139			
m,p-Xylene	0.183	0.010	"	0.200		91.7	73-137			
o-Xylene	0.0912	0.0050	"	0.0980		93.1	73-141			
Xylenes (total)	0.274	0.010	"				0-200			
Gasoline Range Hydrocarbons	1.61	0.50	"				30-150			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0444</i>		<i>"</i>	<i>0.0400</i>		<i>111</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0397</i>		<i>"</i>	<i>0.0400</i>		<i>99.3</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0381</i>		<i>"</i>	<i>0.0400</i>		<i>95.2</i>	<i>21-167</i>			

Matrix Spike (1710014-MS1)

Source: 1710001-01

Prepared & Analyzed: 10/03/17

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0737	0.0020	"	0.100	ND	73.7	30-131			
Toluene	0.0902	0.0050	"	0.100	ND	90.2	30-134			
Ethylbenzene	0.0933	0.0050	"	0.0992	ND	94.1	22-153			
m,p-Xylene	0.183	0.010	"	0.200	ND	91.5	10-159			
o-Xylene	0.0908	0.0050	"	0.0980	ND	92.7	31-151			
Xylenes (total)	0.273	0.010	"		ND		30-160			
Gasoline Range Hydrocarbons	1.60	0.50	"		ND		30-160			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0450</i>		<i>"</i>	<i>0.0400</i>		<i>113</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0397</i>		<i>"</i>	<i>0.0400</i>		<i>99.2</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0384</i>		<i>"</i>	<i>0.0400</i>		<i>96.0</i>	<i>21-167</i>			

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Mark 35-13
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
10/08/17 16:49

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1710014 - EPA 5030 Soil MS

Matrix Spike Dup (1710014-MSD1)		Source: 1710001-01			Prepared & Analyzed: 10/03/17					
Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.0778	0.0020	"	0.100	ND	77.8	30-131	5.47	34	
Toluene	0.0929	0.0050	"	0.100	ND	92.9	30-134	2.98	30	
Ethylbenzene	0.0970	0.0050	"	0.0992	ND	97.8	22-153	3.91	24	
m,p-Xylene	0.189	0.010	"	0.200	ND	94.9	10-159	3.68	68	
o-Xylene	0.0940	0.0050	"	0.0980	ND	95.9	31-151	3.44	38	
Xylenes (total)	0.283	0.010	"		ND		30-160	3.60	30	
Gasoline Range Hydrocarbons	1.62	0.50	"		ND		30-160	1.14	30	
Surrogate: 1,2-Dichloroethane-d4	0.0463		"	0.0400		116	23-173			
Surrogate: Toluene-d8	0.0410		"	0.0400		103	20-170			
Surrogate: 4-Bromofluorobenzene	0.0390		"	0.0400		97.6	21-167			

Summit Scientific

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Mark 35-13
Project Number: [none]
Project Manager: Brandon Bruns

Reported:
10/08/17 16:49

Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis - Quality Control
Summit Scientific

Reporting				Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1710024 - General Preparation

Blank (1710024-BLK1)

Prepared & Analyzed: 10/04/17

Calcium	ND	10.0	mg/kg wet
Magnesium	ND	5.00	"
Sodium	ND	5.00	"

LCS (1710024-BS1)

Prepared & Analyzed: 10/04/17

Calcium	488	10.0	mg/kg wet	500	97.6	82.9-118
Magnesium	479	5.00	"	500	95.8	77.1-123
Sodium	467	5.00	"	500	93.3	71-129

Duplicate (1710024-DUP1)

Source: 1710001-01

Prepared & Analyzed: 10/04/17

Calcium	290	10.9	mg/kg dry	300	3.30	200
Magnesium	138	5.43	"	146	5.56	200
Sodium	54.7	5.43	"	54.1	1.12	200

Matrix Spike (1710024-MS1)

Source: 1710001-01

Prepared & Analyzed: 10/04/17

Calcium	707	10.9	mg/kg dry	543	300	75.0	75-125
Magnesium	619	5.43	"	543	146	87.2	75-125
Sodium	524	5.43	"	543	54.1	86.5	75-125

Matrix Spike Dup (1710024-MSD1)

Source: 1710001-01

Prepared & Analyzed: 10/04/17

Calcium	709	10.9	mg/kg dry	543	300	75.4	75-125	0.339	25
Magnesium	603	5.43	"	543	146	84.1	75-125	2.77	25
Sodium	506	5.43	"	543	54.1	83.3	75-125	3.43	25

Summit Scientific

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Mark 35-13
Project Number: [none]
Project Manager: Brandon Brunns

Reported:
10/08/17 16:49

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

Reporting				Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch 1710025 - General Preparation

LCS (1710025-BS1)

Prepared & Analyzed: 10/04/17

pH	9.18	0.100	pH Units	9.16	100	95-105
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Duplicate (1710025-DUP1)

Source: 1710001-01

Prepared & Analyzed: 10/04/17

pH	8.85	0.100	pH Units	8.92	0.788	20
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Batch 1710026 - General Preparation

Blank (1710026-BLK1)

Prepared: 10/04/17 Analyzed: 10/05/17

Specific Conductance (EC)	ND	0.0100	mmhos/cm
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LCS (1710026-BS1)

Prepared: 10/04/17 Analyzed: 10/05/17

Specific Conductance (EC)	0.754	0.0100	mmhos/cm	0.750	100	90-110
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Duplicate (1710026-DUP1)

Source: 1710001-01

Prepared: 10/04/17 Analyzed: 10/05/17

Specific Conductance (EC)	0.106	0.0100	mmhos/cm	0.112	5.67	20
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Batch 1710027 - General Preparation

Duplicate (1710027-DUP1)

Source: 1709278-01

Prepared: 10/04/17 Analyzed: 10/05/17

% Solids	96.6		%	96.4	0.207	20
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Summit Scientific

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Mark 35-13

Project Number: [none]
Project Manager: Brandon Bruns

Reported:
10/08/17 16:49

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference