

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

February 25, 2016

Ryan Bruner
Tasman Geosciences
6899 Pecos Street
Denver, CO 80221
RE: Brereton 14-1

Enclosed are the results of analyses for samples received by Summit Scientific on 02/24/16 16:12. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury
President



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Brereton 14-1

Project Number: [none]
Project Manager: Ryan Bruner

Reported:
02/25/16 06:33

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH05@14	1602189-01	Soil	02/23/16 11:19	02/24/16 16:12

Summit Scientific

S₂

741 Corporate Circle, Suite J ♦ Golden, Colorado 80401
303-277-9310 ♦ 303-374-5933

1602189

Page 1 of 1

Client: EXTRACTION / TASMAN Project Manager: RYAN BRUNER
Address: _____ E-Mail: _____
City/State/Zip: _____
Phone: _____ Fax: _____ Project Name: BRERETON 14-1
Sampler Name: RYAN BRUNER Project Number: _____

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested				Special Instructions	
					HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	TOH / DO	GBTEX				
1	BH05@14	2-23	11:19	1			X			X			X	X				
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

Relinquished by: <u>R.B.</u>	Date/Time: <u>2/23/16 4:12</u>	Received by: <u>MA</u>	Date/Time: <u>2/23/16 16:12</u>	Turn Around Time (Check) Same Day <u>X</u> 72 hours <u>—</u> 24 hours <u>X</u> Standard <u>—</u> 48 hours <u>—</u>	Notes: <u>19.7°C</u>
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity: Temperature Upon Receipt: <u>19.7°C</u> Intact: <u>Yes</u> No	
Relinquished by:	Date/Time:	Received by:	Date/Time:		

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The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Brereton 14-1

Project Number: [none]
Project Manager: Ryan Bruner

Reported:
02/25/16 06:33

BH05@14
1602189-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 02/23/16 11:19

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1602247	02/24/16	02/24/16	8015M	

Date Sampled: 02/23/16 11:19

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		88.1 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 02/23/16 11:19

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.0087	0.0020	mg/kg	1	1602245	02/24/16	02/24/16	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.0085	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.021	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	5.1	0.50	"	"	"	"	"	"	

Date Sampled: 02/23/16 11:19

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		101 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.4 %	21-167		"	"	"	"	

Summit Scientific

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Brereton 14-1

Project Number: [none]
Project Manager: Ryan Bruner

Reported:
02/25/16 06:33

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 1602247 - EPA 3550A

Blank (1602247-BLK1)

Prepared & Analyzed: 02/24/16

C10-C28 (DRO)	ND	50	mg/kg							
Surrogate: o-Terphenyl	11.0		"	12.5		87.7	30-150			

LCS (1602247-BS1)

Prepared & Analyzed: 02/24/16

C10-C28 (DRO)	432	50	mg/kg	499		86.6	73-134			
Surrogate: o-Terphenyl	11.2		"	12.5		89.6	30-150			

Matrix Spike (1602247-MS1)

Source: 1602188-01

Prepared & Analyzed: 02/24/16

C10-C28 (DRO)	417	50	mg/kg	474	17.0	84.2	50-148			
Surrogate: o-Terphenyl	10.6		"	11.9		89.1	30-150			

Matrix Spike Dup (1602247-MSD1)

Source: 1602188-01

Prepared & Analyzed: 02/24/16

C10-C28 (DRO)	418	50	mg/kg	470	17.0	85.4	50-148	0.431	13	
Surrogate: o-Terphenyl	10.5		"	11.8		88.9	30-150			

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Brereton 14-1
Project Number: [none]
Project Manager: Ryan Bruner

Reported:
02/25/16 06:33

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 1602245 - EPA 5030 Soil MS

Blank (1602245-BLK1)

Prepared & Analyzed: 02/24/16

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0397		"	0.0400		99.2	23-173			
Surrogate: Toluene-d8	0.0389		"	0.0400		97.2	20-170			
Surrogate: 4-Bromofluorobenzene	0.0393		"	0.0400		98.2	21-167			

LCS (1602245-BS1)

Prepared & Analyzed: 02/24/16

Benzene	0.102	0.0020	mg/kg	0.100		102	58-130			
Toluene	0.0908	0.0050	"	0.100		90.8	61-134			
Ethylbenzene	0.119	0.0050	"	0.0992		120	74-139			
m,p-Xylene	0.231	0.010	"	0.200		116	73-137			
o-Xylene	0.114	0.0050	"	0.0980		117	73-141			
Xylenes (total)	0.345	0.0050	"				30-150			
Gasoline Range Hydrocarbons	2.21	0.50	"				30-150			
Surrogate: 1,2-Dichloroethane-d4	0.0397		"	0.0400		99.2	23-173			
Surrogate: Toluene-d8	0.0385		"	0.0400		96.2	20-170			
Surrogate: 4-Bromofluorobenzene	0.0394		"	0.0400		98.6	21-167			

Matrix Spike (1602245-MS1)

Source: 1602188-01

Prepared & Analyzed: 02/24/16

Benzene	0.0968	0.0020	mg/kg	0.0938	ND	103	30-131			
Toluene	0.0864	0.0050	"	0.0938	ND	92.1	30-134			
Ethylbenzene	0.113	0.0050	"	0.0931	ND	121	22-153			
m,p-Xylene	0.217	0.010	"	0.187	ND	116	10-159			
o-Xylene	0.105	0.0050	"	0.0919	ND	114	31-151			
Xylenes (total)	0.322	0.0050	"		ND		30-150			
Gasoline Range Hydrocarbons	2.11	0.50	"		0.195		30-150			
Surrogate: 1,2-Dichloroethane-d4	0.0375		"	0.0375		100	23-173			
Surrogate: Toluene-d8	0.0367		"	0.0375		97.7	20-170			
Surrogate: 4-Bromofluorobenzene	0.0374		"	0.0375		99.6	21-167			

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Brereton 14-1

Project Number: [none]
Project Manager: Ryan Bruner

Reported:
02/25/16 06:33

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 1602245 - EPA 5030 Soil MS

Matrix Spike Dup (1602245-MSD1)		Source: 1602188-01			Prepared & Analyzed: 02/24/16					
Benzene	0.101	0.0020	mg/kg	0.0984	ND	103	30-131	4.69	34	
Toluene	0.0876	0.0050	"	0.0984	ND	89.0	30-134	1.36	30	
Ethylbenzene	0.113	0.0050	"	0.0976	ND	116	22-153	0.543	24	
m,p-Xylene	0.219	0.010	"	0.196	ND	112	10-159	0.971	68	
o-Xylene	0.106	0.0050	"	0.0965	ND	110	31-151	1.42	38	
Xylenes (total)	0.325	0.0050	"		ND		30-150	1.12	20	
Gasoline Range Hydrocarbons	2.12	0.50	"		0.195		30-150	0.659	20	
Surrogate: 1,2-Dichloroethane-d4	0.0390		"	0.0394		99.1	23-173			
Surrogate: Toluene-d8	0.0383		"	0.0394		97.2	20-170			
Surrogate: 4-Bromofluorobenzene	0.0387		"	0.0394		98.4	21-167			

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Brereton 14-1

Project Number: [none]
Project Manager: Ryan Bruner

Reported:
02/25/16 06:33

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

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A handwritten signature in black ink, appearing to be 'MSM'.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

February 28, 2016

Ryan Bruner
Tasman Geosciences
6899 Pecos Street
Denver, CO 80221
RE: Brereton 14-1

Enclosed are the results of analyses for samples received by Summit Scientific on 02/26/16 15:17. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury
President



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Brereton 14-1

Project Number: [none]
Project Manager: Ryan Bruner

Reported:
02/28/16 14:24

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
N01@13	1602213-01	Soil	02/26/16 10:33	02/26/16 15:17
W01@13	1602213-02	Soil	02/26/16 12:15	02/26/16 15:17
W02@13	1602213-03	Soil	02/26/16 13:14	02/26/16 15:17

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Brereton 14-1

Project Number: [none]
Project Manager: Ryan Bruner

Reported:
02/28/16 14:24

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S₂

1602213

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303-277-9310 • 303-374-5933

Page 1 of 1

Client: EXTRACTION / TASMAN Project Manager: RYAN BRUNER
Address: _____ E-Mail: _____
City/State/Zip: _____
Phone: _____ Fax: _____ Project Name: Brereton 14-1
Sampler Name: Ryan Bruner Project Number: _____

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested						Special Instructions
					HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	TPA (DLO)	GBTEr				
1	W01013	2-26	10:33	1						X			X	X				
2	W01013		12:15	1						X								
3	W02013		1:14	1						X								
4																		
5																		
6																		
7																		
8																		
9																		
10																		

Relinquished by: <u>Ryan Bruner</u>	Date/Time: <u>2/26/17 3:17</u>	Received by: _____	Date/Time: _____	Turn Around Time (Check) Same Day <u>f</u> 72 hours _____ 24 hours _____ Standard _____ 48 hours _____	Notes:
Relinquished by: _____	Date/Time: _____	Received by: _____	Date/Time: _____	Sample Integrity: _____	
Relinquished by: _____	Date/Time: _____	Received by: <u>[Signature]</u>	Date/Time: <u>2-26-17 15:17</u>	Temperature Upon Receipt: <u>12.2</u> Intact: <u>Yes</u> No _____	

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Brereton 14-1

Project Number: [none]
Project Manager: Ryan Bruner

Reported:
02/28/16 14:24

N01@13
1602213-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 02/26/16 10:33

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1602262	02/26/16	02/27/16	8015M	

Date Sampled: 02/26/16 10:33

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		94.8 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 02/26/16 10:33

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1602261	02/26/16	02/27/16	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 02/26/16 10:33

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		112 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Brereton 14-1

Project Number: [none]
Project Manager: Ryan Bruner

Reported:
02/28/16 14:24

W01@13
1602213-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/26/16 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1602262	02/26/16	02/27/16	8015M	

Date Sampled: **02/26/16 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		91.9 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/26/16 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0018	mg/kg	1	1602261	02/26/16	02/27/16	EPA 8260B	
Toluene	ND	0.0044	"	"	"	"	"	"	
Ethylbenzene	ND	0.0044	"	"	"	"	"	"	
Xylenes (total)	ND	0.0044	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	1.9	0.44	"	"	"	"	"	"	

Date Sampled: **02/26/16 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		110 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		92.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	21-167		"	"	"	"	

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Brereton 14-1

Project Number: [none]
Project Manager: Ryan Bruner

Reported:
02/28/16 14:24

W02@13
1602213-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 02/26/16 13:14

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1602262	02/26/16	02/27/16	8015M	

Date Sampled: 02/26/16 13:14

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		86.9 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 02/26/16 13:14

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0018	mg/kg	1	1602261	02/26/16	02/27/16	EPA 8260B	
Toluene	ND	0.0045	"	"	"	"	"	"	
Ethylbenzene	ND	0.0045	"	"	"	"	"	"	
Xylenes (total)	ND	0.0045	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	2.8	0.45	"	"	"	"	"	"	

Date Sampled: 02/26/16 13:14

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		113 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	21-167		"	"	"	"	

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Brereton 14-1

Project Number: [none]
Project Manager: Ryan Bruner

Reported:
02/28/16 14:24

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 1602262 - EPA 3550A

Blank (1602262-BLK1)

Prepared & Analyzed: 02/26/16

C10-C28 (DRO)	ND	50	mg/kg							
Surrogate: o-Terphenyl	11.2		"	12.5		89.8	30-150			

LCS (1602262-BS1)

Prepared & Analyzed: 02/26/16

C10-C28 (DRO)	437	50	mg/kg	499		87.6	73-134			
Surrogate: o-Terphenyl	11.5		"	12.5		92.2	30-150			

Matrix Spike (1602262-MS1)

Source: 1602203-01

Prepared & Analyzed: 02/26/16

C10-C28 (DRO)	437	50	mg/kg	493	18.4	84.9	50-148			
Surrogate: o-Terphenyl	11.2		"	12.4		90.8	30-150			

Matrix Spike Dup (1602262-MSD1)

Source: 1602203-01

Prepared & Analyzed: 02/26/16

C10-C28 (DRO)	383	50	mg/kg	460	18.4	79.3	50-148	13.1	13	
Surrogate: o-Terphenyl	10.3		"	11.5		88.9	30-150			

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Brereton 14-1
Project Number: [none]
Project Manager: Ryan Bruner

Reported:
02/28/16 14:24

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 1602261 - EPA 5030 Soil MS

Blank (1602261-BLK1)

Prepared: 02/26/16 Analyzed: 02/27/16

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0391		"	0.0400		97.6	23-173			
Surrogate: Toluene-d8	0.0385		"	0.0400		96.3	20-170			
Surrogate: 4-Bromofluorobenzene	0.0399		"	0.0400		99.7	21-167			

LCS (1602261-BS1)

Prepared: 02/26/16 Analyzed: 02/27/16

Benzene	0.124	0.0020	mg/kg	0.100		124	58-130			
Toluene	0.109	0.0050	"	0.100		109	61-134			
Ethylbenzene	0.138	0.0050	"	0.0992		139	74-139			
m,p-Xylene	0.265	0.010	"	0.200		133	73-137			
o-Xylene	0.125	0.0050	"	0.0980		127	73-141			
Xylenes (total)	0.390	0.0050	"				30-150			
Gasoline Range Hydrocarbons	2.49	0.50	"				30-150			
Surrogate: 1,2-Dichloroethane-d4	0.0393		"	0.0400		98.2	23-173			
Surrogate: Toluene-d8	0.0392		"	0.0400		97.9	20-170			
Surrogate: 4-Bromofluorobenzene	0.0383		"	0.0400		95.7	21-167			

Matrix Spike (1602261-MS1)

Source: 1602203-01

Prepared: 02/26/16 Analyzed: 02/27/16

Benzene	0.117	0.0020	mg/kg	0.0931	ND	126	30-131			
Toluene	0.104	0.0050	"	0.0931	ND	112	30-134			
Ethylbenzene	0.137	0.0050	"	0.0924	ND	148	22-153			
m,p-Xylene	0.267	0.010	"	0.186	ND	143	10-159			
o-Xylene	0.125	0.0050	"	0.0912	ND	137	31-151			
Xylenes (total)	0.391	0.0050	"		ND		30-150			
Gasoline Range Hydrocarbons	2.43	0.50	"		ND		30-150			
Surrogate: 1,2-Dichloroethane-d4	0.0370		"	0.0372		99.4	23-173			
Surrogate: Toluene-d8	0.0355		"	0.0372		95.2	20-170			
Surrogate: 4-Bromofluorobenzene	0.0370		"	0.0372		99.4	21-167			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Brereton 14-1

Project Number: [none]
Project Manager: Ryan Bruner

Reported:
02/28/16 14:24

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 1602261 - EPA 5030 Soil MS

Matrix Spike Dup (1602261-MSD1)		Source: 1602203-01			Prepared: 02/26/16		Analyzed: 02/27/16			
Benzene	0.116	0.0018	mg/kg	0.0903	ND	128	30-131	1.30	34	
Toluene	0.102	0.0045	"	0.0903	ND	113	30-134	1.73	30	
Ethylbenzene	0.131	0.0045	"	0.0895	ND	146	22-153	4.70	24	
m,p-Xylene	0.252	0.0090	"	0.180	ND	140	10-159	5.58	68	
o-Xylene	0.119	0.0045	"	0.0884	ND	135	31-151	4.65	38	
Xylenes (total)	0.371	0.0045	"		ND		30-150	5.28	20	
Gasoline Range Hydrocarbons	2.34	0.45	"		ND		30-150	3.68	20	
Surrogate: 1,2-Dichloroethane-d4	0.0377		"	0.0361		104	23-173			
Surrogate: Toluene-d8	0.0347		"	0.0361		96.0	20-170			
Surrogate: 4-Bromofluorobenzene	0.0366		"	0.0361		101	21-167			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Brereton 14-1

Project Number: [none]
Project Manager: Ryan Bruner

Reported:
02/28/16 14:24

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

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

A handwritten signature in black ink, appearing to be 'MSM'.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

March 01, 2016

Ryan Bruner
Tasman Geosciences
6899 Pecos Street
Denver, CO 80221
RE: Brereton 14-1

Enclosed are the results of analyses for samples received by Summit Scientific on 02/29/16 15:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury
President



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Brereton 14-1

Project Number: [none]
Project Manager: Ryan Bruner

Reported:
03/01/16 06:54

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
E01@13	1602222-01	Soil	02/29/16 13:22	02/29/16 15:30

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

A handwritten signature in black ink, appearing to be 'MSM'.



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Brereton 14-1

Project Number: [none]
Project Manager: Ryan Bruner

Reported:
03/01/16 06:54

Summit Scientific

S₂

1602222

741 Corporate Circle, Suite J ♦ Golden, Colorado 80401
303-277-9310 ♦ 303-374-5933

Page 1 of 1

Client: EXTRACTION / TASMAN Project Manager: RYAN BRUNER
Address: _____ E-Mail: _____
City/State/Zip: _____
Phone: _____ Fax: _____ Project Name: BRERETON 14-1
Sampler Name: RYAN BRUNER Project Number: _____

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested				Special Instructions	
					HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	TPH (0.05)	CBTEX				
1	E01013	2-29	1:22	1						X			X	X				
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

Relinquished by: <u>Ry</u>	Date/Time: <u>3:30 2/29</u>	Received by: <u>[Signature]</u>	Date/Time: <u>1530 2/29/16</u>	Turn Around Time (Check) Same Day <u>X</u> 72 hours <u>—</u> 24 hours <u>—</u> Standard <u>—</u> 48 hours <u>—</u> Sample Integrity: Temperature Upon Receipt: <u>21.5</u> Intact: <u>Yes</u> No	Notes:
----------------------------	-----------------------------	---------------------------------	--------------------------------	--	--------

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Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Brereton 14-1

Project Number: [none]
Project Manager: Ryan Bruner

Reported:
03/01/16 06:54

Sample Receipt Checklist

S2 Work Order: 1602222

Client: Tasman

Client Project ID: Brereton 14-1

Shipped Via: HD
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Airbill #: _____

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

Cooler ID					
Temp (°C)	<u>21.5°C</u>				

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature just above 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NOTE: If samples are delivered the same day of sampling, this requirement is waived provided that there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Note the type of preservative in the Comments column – HCl, H ₂ SO ₄ , NaOH, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				
⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.				

Mindy Mach
Custodian Printed Name

[Signature]
Signature or Initials of Custodian

2/29/16 16:00
Date/Time



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Brereton 14-1

Project Number: [none]
Project Manager: Ryan Bruner

Reported:
03/01/16 06:54

E01@13
1602222-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **02/29/16 13:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	210	50	mg/kg	1	1602277	02/29/16	02/29/16	8015M	

Date Sampled: **02/29/16 13:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		71.9 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/29/16 13:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.0085	0.0020	mg/kg	1	1602278	02/29/16	02/29/16	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.066	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.32	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	57	0.50	"	"	"	"	"	"	

Date Sampled: **02/29/16 13:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		107 %	23-173		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		71.3 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		156 %	21-167		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Brereton 14-1

Project Number: [none]
Project Manager: Ryan Bruner

Reported:
03/01/16 06:54

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 1602277 - EPA 3550A

Blank (1602277-BLK1)

Prepared & Analyzed: 02/29/16

C10-C28 (DRO) ND 50 mg/kg

Surrogate: o-Terphenyl 8.73 " 12.5 69.8 30-150

LCS (1602277-BS1)

Prepared & Analyzed: 02/29/16

C10-C28 (DRO) 458 50 mg/kg 499 91.8 73-134

Surrogate: o-Terphenyl 8.85 " 12.5 70.8 30-150

Matrix Spike (1602277-MS1)

Source: 1602222-01

Prepared & Analyzed: 02/29/16

C10-C28 (DRO) 567 50 mg/kg 463 208 77.7 50-148

Surrogate: o-Terphenyl 8.05 " 11.6 69.5 30-150

Matrix Spike Dup (1602277-MSD1)

Source: 1602222-01

Prepared & Analyzed: 02/29/16

C10-C28 (DRO) 580 50 mg/kg 498 208 74.7 50-148 2.23 13

Surrogate: o-Terphenyl 8.79 " 12.5 70.5 30-150

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Brereton 14-1
Project Number: [none]
Project Manager: Ryan Bruner

Reported:
03/01/16 06:54

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 1602278 - EPA 5030 Soil MS

Blank (1602278-BLK1)

Prepared & Analyzed: 02/29/16

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0421		"	0.0396		106	23-173			
Surrogate: Toluene-d8	0.0390		"	0.0400		97.6	20-170			
Surrogate: 4-Bromofluorobenzene	0.0412		"	0.0400		103	21-167			

LCS (1602278-BS1)

Prepared & Analyzed: 02/29/16

Benzene	0.108	0.0020	mg/kg	0.100		108	58-130			
Toluene	0.103	0.0050	"	0.100		103	61-134			
Ethylbenzene	0.116	0.0050	"	0.0992		117	74-139			
m,p-Xylene	0.223	0.010	"	0.200		112	73-137			
o-Xylene	0.109	0.0050	"	0.0984		110	73-141			
Xylenes (total)	0.332	0.0050	"				30-150			
Gasoline Range Hydrocarbons	2.65	0.50	"				30-150			
Surrogate: 1,2-Dichloroethane-d4	0.0443		"	0.0396		112	23-173			
Surrogate: Toluene-d8	0.0415		"	0.0400		104	20-170			
Surrogate: 4-Bromofluorobenzene	0.0387		"	0.0400		96.8	21-167			

Matrix Spike (1602278-MS1)

Source: 1602222-01

Prepared & Analyzed: 02/29/16

Benzene	0.0935	0.0020	mg/kg	0.0971	0.00849	87.6	30-131			
Toluene	0.0878	0.0050	"	0.0971	ND	90.5	30-134			
Ethylbenzene	0.0998	0.0050	"	0.0963	0.0664	34.7	22-153			
m,p-Xylene	0.194	0.010	"	0.194	0.303	NR	10-159			
o-Xylene	0.0943	0.0050	"	0.0955	0.0128	85.3	31-151			
Xylenes (total)	0.288	0.0050	"		0.316		30-150			
Gasoline Range Hydrocarbons	2.33	0.50	"		57.1		30-150			
Surrogate: 1,2-Dichloroethane-d4	0.0421		"	0.0384		109	23-173			
Surrogate: Toluene-d8	0.0403		"	0.0388		104	20-170			
Surrogate: 4-Bromofluorobenzene	0.0374		"	0.0388		96.4	21-167			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Brereton 14-1

Project Number: [none]
Project Manager: Ryan Bruner

Reported:
03/01/16 06:54

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 1602278 - EPA 5030 Soil MS

Matrix Spike Dup (1602278-MSD1)	Source: 1602222-01			Prepared & Analyzed: 02/29/16						
Benzene	0.0953	0.0020	mg/kg	0.0938	0.00849	92.5	30-131	1.84	34	
Toluene	0.0911	0.0050	"	0.0938	ND	97.1	30-134	3.60	30	
Ethylbenzene	0.102	0.0050	"	0.0931	0.0664	38.2	22-153	2.07	24	
m,p-Xylene	0.199	0.010	"	0.187	0.303	NR	10-159	2.55	68	
o-Xylene	0.0970	0.0050	"	0.0923	0.0128	91.2	31-151	2.85	38	
Xylenes (total)	0.296	0.0050	"		0.316		30-150	2.65	20	
Gasoline Range Hydrocarbons	2.38	0.50	"		57.1		30-150	2.39	20	
Surrogate: 1,2-Dichloroethane-d4	0.0413		"	0.0371		111	23-173			
Surrogate: Toluene-d8	0.0389		"	0.0375		104	20-170			
Surrogate: 4-Bromofluorobenzene	0.0365		"	0.0375		97.4	21-167			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Brereton 14-1

Project Number: [none]
Project Manager: Ryan Bruner

Reported:
03/01/16 06:54

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

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

A handwritten signature in black ink, appearing to be 'MSM'.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

March 02, 2016

Ryan Bruner
Tasman Geosciences
6899 Pecos Street
Denver, CO 80221
RE: Brereton 14-1

Enclosed are the results of analyses for samples received by Summit Scientific on 03/01/16 11:25. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury
President

Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Brereton 14-1

Project Number: [none]
Project Manager: Ryan Bruner

Reported:
03/02/16 07:19

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S01@13	1603007-01	Soil	03/01/16 10:30	03/01/16 11:25

Summit Scientific
S₂

741 Corporate Circle, Suite J ♦ Golden, Colorado 80401
303-277-9310 ♦ 303-374-5933

1603007

Page 1 of 1

Client: EXTRACTION / TASMAR

Project Manager: KYAS 'Brewer

Address:

E-Mail:

City/State/Zip: _____

Phone:

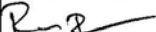
Fax:

Project Name: RECEPTION 14-1

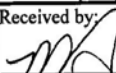
Sampler Name: Dylan Bruner

Project Number:

Sampler Name: K42		Project Number: 020002		Preservative				Matrix		Analysis Requested				Special Instructions		
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)				
1	S01013	3-1	10:30	1						X		TPH (D60)				
2												CSFET				
3																
4																
5																
6																
7																
8																
9																
10																

Relinquished by: 

Date/Time: 3-1 10:25

Received by: 

Date/Time: 3/1/16 11:25

Relinquished by:

Date/Time:

Received by:

Date/Time:

Relinquished by:

Date/Time:

Received by:

Date/Time:

Turn Around Time (Check)

Same Day ☒ 72 hours ☐

24 hours ☐ Standard ☐

48 hours ☐

Sample Integrity:

Temperature Upon Receipt: 175°C

Intact: ☒ Yes ☐ No

Notes:

www.s2scientific.com

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.





Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Brereton 14-1

Project Number: [none]
Project Manager: Ryan Bruner

Reported:
03/02/16 07:19

S01@13
1603007-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/01/16 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	140	50	mg/kg	1	1603015	03/01/16	03/01/16	8015M	

Date Sampled: **03/01/16 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		83.5 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/01/16 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1603009	03/01/16	03/01/16	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	8.9	0.50	"	"	"	"	"	"	

Date Sampled: **03/01/16 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		111 %	23-173		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		92.2 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		101 %	21-167		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Brereton 14-1

Project Number: [none]
Project Manager: Ryan Bruner

Reported:
03/02/16 07:19

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 1603015 - EPA 3550A

Blank (1603015-BLK1)

Prepared & Analyzed: 03/01/16

C10-C28 (DRO)	ND	50	mg/kg							
Surrogate: o-Terphenyl	10.1		"	12.5		80.8	30-150			

LCS (1603015-BS1)

Prepared & Analyzed: 03/01/16

C10-C28 (DRO)	485	50	mg/kg	499		97.3	73-134			
Surrogate: o-Terphenyl	11.2		"	12.5		89.6	30-150			

Matrix Spike (1603015-MS1)

Source: 1603007-01

Prepared & Analyzed: 03/01/16

C10-C28 (DRO)	567	50	mg/kg	496	136	86.7	50-148			
Surrogate: o-Terphenyl	10.4		"	12.4		83.9	30-150			

Matrix Spike Dup (1603015-MSD1)

Source: 1603007-01

Prepared & Analyzed: 03/01/16

C10-C28 (DRO)	558	50	mg/kg	487	136	86.5	50-148	1.54	13	
Surrogate: o-Terphenyl	10.5		"	12.2		85.7	30-150			

Summit Scientific

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Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: Brereton 14-1

Project Number: [none]
Project Manager: Ryan Bruner

Reported:
03/02/16 07:19

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 1603009 - EPA 5030 Soil MS

Blank (1603009-BLK1)

Prepared & Analyzed: 03/01/16

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0417		"	0.0400		104	23-173			
Surrogate: Toluene-d8	0.0400		"	0.0400		100	20-170			
Surrogate: 4-Bromofluorobenzene	0.0410		"	0.0400		103	21-167			

LCS (1603009-BS1)

Prepared & Analyzed: 03/01/16

Benzene	0.103	0.0020	mg/kg	0.100		103	58-130			
Toluene	0.0982	0.0050	"	0.100		98.2	61-134			
Ethylbenzene	0.108	0.0050	"	0.0992		109	74-139			
m,p-Xylene	0.210	0.010	"	0.200		105	73-137			
o-Xylene	0.101	0.0050	"	0.0980		103	73-141			
Xylenes (total)	0.311	0.0050	"				30-150			
Gasoline Range Hydrocarbons	2.48	0.50	"				30-150			
Surrogate: 1,2-Dichloroethane-d4	0.0454		"	0.0400		114	23-173			
Surrogate: Toluene-d8	0.0414		"	0.0400		104	20-170			
Surrogate: 4-Bromofluorobenzene	0.0380		"	0.0400		95.0	21-167			

Matrix Spike (1603009-MS1)

Source: 1603007-01

Prepared & Analyzed: 03/01/16

Benzene	0.0999	0.0020	mg/kg	0.0963	ND	104	30-131			
Toluene	0.0931	0.0050	"	0.0963	ND	96.7	30-134			
Ethylbenzene	0.106	0.0050	"	0.0956	ND	111	22-153			
m,p-Xylene	0.204	0.010	"	0.192	ND	106	10-159			
o-Xylene	0.0979	0.0050	"	0.0944	ND	104	31-151			
Xylenes (total)	0.302	0.0050	"		ND		30-150			
Gasoline Range Hydrocarbons	7.37	0.50	"		8.90		30-150			
Surrogate: 1,2-Dichloroethane-d4	0.0432		"	0.0385		112	23-173			
Surrogate: Toluene-d8	0.0376		"	0.0385		97.6	20-170			
Surrogate: 4-Bromofluorobenzene	0.0388		"	0.0385		101	21-167			

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Denver CO, 80221

Project: Brereton 14-1

Project Number: [none]
Project Manager: Ryan Bruner

Reported:
03/02/16 07:19

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 1603009 - EPA 5030 Soil MS

Matrix Spike Dup (1603009-MSD1)		Source: 1603007-01			Prepared & Analyzed: 03/01/16					
Benzene	0.104	0.0020	mg/kg	0.0984	ND	106	30-131	4.49	34	
Toluene	0.0957	0.0050	"	0.0984	ND	97.3	30-134	2.76	30	
Ethylbenzene	0.114	0.0050	"	0.0976	ND	116	22-153	7.20	24	
m,p-Xylene	0.221	0.010	"	0.196	ND	113	10-159	8.05	68	
o-Xylene	0.105	0.0050	"	0.0965	ND	109	31-151	7.40	38	
Xylenes (total)	0.327	0.0050	"		ND		30-150	7.84	20	
Gasoline Range Hydrocarbons	9.85	0.50	"		8.90		30-150	28.8	20	QM-07
Surrogate: 1,2-Dichloroethane-d4	0.0433		"	0.0394		110	23-173			
Surrogate: Toluene-d8	0.0369		"	0.0394		93.7	20-170			
Surrogate: 4-Bromofluorobenzene	0.0411		"	0.0394		104	21-167			

Summit Scientific

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Project: Brereton 14-1

Project Number: [none]
Project Manager: Ryan Bruner

Reported:
03/02/16 07:19

Notes and Definitions

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.

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

Summit Scientific

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