

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

July 13, 2018

Christine Hamlin
Tasman Geosciences
6899 Pecos St, Unit C
Denver, CO 80221
RE: Shook Pad Release

Enclosed are the results of analyses for samples received by Summit Scientific on 07/12/18 17:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Paul Shrewsbury For Ben Shrewsbury
Laboratory Manager



Tasman Geosciences
6899 Pecos St, Unit C
Denver CO, 80221

Project: Shook Pad Release

Project Number: [none]
Project Manager: Christine Hamlin

Reported:
07/13/18 06:10

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS01@1.5'	1807145-01	Soil	07/12/18 14:45	07/12/18 17:30
SS02@1.5'	1807145-02	Soil	07/12/18 14:47	07/12/18 17:30
SS03@1.5'	1807145-03	Soil	07/12/18 14:49	07/12/18 17:30
SS04@1.5'	1807145-04	Soil	07/12/18 14:51	07/12/18 17:30
SS05@1.5'	1807145-05	Soil	07/12/18 14:55	07/12/18 17:30

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.

Summit Scientific

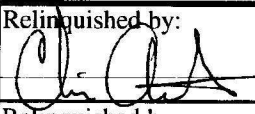

1807145

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

Page 1 of 1

Client: Tasman Geosciences
Address: _____
City/State/Zip: _____
Phone: _____ Fax: _____
Sampler Name: Chris Armbruster

Project Manager: Christine Hamlin
E-Mail: chamlin@tasman-geo.com
Project Name: Shook Pad Release
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)	GBTEXN (8260)	(TPH) DRO/GRO/OR	EC	PH		Hold For Analysis								
SS01@1.5'	7/12/2018	2:45	1			X			X				X	X	X	X									
SS02@1.5'	7/12/2018	2:47	1			X			X				X	X	X	X									
SS03@1.5'	7/13/2018	2:49	1			X			X				X	X	X	X									
SS04@1.5'	7/12/2018	2:51	1			X			X				X	X	X	X									
SS05@1.5'	7/13/2018	2:55	1			X			X				X	X	X	X									
Relinquished by: 				Date/Time: 7/12/18 17:10				Received by: 				Date/Time: 7-12-18 17:10				Turn Around Time (Check)								Notes:	
Relinquished by:				Date/Time:				Received by:				Date/Time:				Same Day <input checked="" type="checkbox"/> 72 Hours <input type="checkbox"/>									
Relinquished by:				Date/Time:				Received by:				Date/Time:				24 Hours <input type="checkbox"/> Standard <input type="checkbox"/>									
Relinquished by:				Date/Time:				Received in Lab by:				Date/Time:				48 Hours <input type="checkbox"/>									
Relinquished by:				Date/Time:				Received in Lab by:				Date/Time:				Sample Integrity: Temperature Upon Receipt: 0.0									
Relinquished by:				Date/Time:				Received in Lab by:				Date/Time:				Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>									

1807145

Sample Receipt Checklist

S2 Work Order _____

Client: Tasman Client Project ID: Shook Pad ReleaseShipped Via: P.U. Airbill #: _____
(UPS, FedEx, Hand Delivered, Pick-up, etc.)Matrix (check all that apply): Air X Soil/Solid Water Other: _____
(Describe)

Temp (°C)	<u>8.0</u>
-----------	------------

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.	X			
Were all samples received intact ⁽¹⁾ ?	X			
Was adequate sample volume provided ⁽¹⁾ ?	X			
If custody seals are present, are they intact ⁽¹⁾ ?			X	
Are samples with holding times due within 48 hours sample due within 48 hours present?	X			
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	X			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	X			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	X			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	X			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			X	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ?			X	
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⁾ ?			X	
Record the pH in Comments.				
If dissolved metals are requested, were samples field filtered?			X	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.Muri
Custodian Printed Name or InitialsMP 7-12-18
Signature of Custodian17:30
Date/Time



Tasman Geosciences
6899 Pecos St, Unit C
Denver CO, 80221

Project: Shook Pad Release
Project Number: [none]
Project Manager: Christine Hamlin

Reported:
07/13/18 06:10

SS01@1.5'
1807145-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/12/18 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1807137	07/12/18	07/12/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/12/18 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		118 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		106 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		108 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/12/18 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1807138	07/12/18	07/12/18	EPA 8015M	

Date Sampled: **07/12/18 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		102 %	30-150		"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/12/18 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.28		pH Units	1	1807135	"	07/12/18	EPA 9045D	

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 St, Unit C
Denver CO, 80221

Project: Shook Pad Release
Project Number: [none]
Project Manager: Christine Hamlin

Reported:
07/13/18 06:10

SS01@1.5'
1807145-01 (Soil)

Summit Scientific

Specific Conductance by EPA Method 120.1

Date Sampled: **07/12/18 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	9.90	0.0100	mmhos/cm	1	1807136	07/12/18	07/12/18	EPA 120.1	

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 St, Unit C
Denver CO, 80221

Project: Shook Pad Release
Project Number: [none]
Project Manager: Christine Hamlin

Reported:
07/13/18 06:10

SS02@1.5'
1807145-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/12/18 14:47									
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1807137	07/12/18	07/12/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 07/12/18 14:47									
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		113 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		103 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		108 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/12/18 14:47									
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1807138	07/12/18	07/12/18	EPA 8015M	

Date Sampled: 07/12/18 14:47									
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		99.1 %	30-150		"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 07/12/18 14:47									
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.45		pH Units	1	1807135	"	07/12/18	EPA 9045D	

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 St, Unit C
Denver CO, 80221

Project: Shook Pad Release
Project Number: [none]
Project Manager: Christine Hamlin

Reported:
07/13/18 06:10

SS02@1.5'
1807145-02 (Soil)

Summit Scientific

Specific Conductance by EPA Method 120.1

Date Sampled: **07/12/18 14:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	8.50	0.0100	mmhos/cm	1	1807136	07/12/18	07/12/18	EPA 120.1	

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 St, Unit C
Denver CO, 80221

Project: Shook Pad Release
Project Number: [none]
Project Manager: Christine Hamlin

Reported:
07/13/18 06:10

SS03@1.5'
1807145-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/12/18 14:49									
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1807137	07/12/18	07/12/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	0.54	0.50	"	"	"	"	"	"	

Date Sampled: 07/12/18 14:49									
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		119 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		106 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/12/18 14:49									
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	83	50	mg/kg	1	1807138	07/12/18	07/12/18	EPA 8015M	

Date Sampled: 07/12/18 14:49									
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		103 %	30-150		"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 07/12/18 14:49									
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.20		pH Units	1	1807135	"	07/12/18	EPA 9045D	

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 St, Unit C
Denver CO, 80221

Project: Shook Pad Release
Project Number: [none]
Project Manager: Christine Hamlin

Reported:
07/13/18 06:10

SS03@1.5'
1807145-03 (Soil)

Summit Scientific

Specific Conductance by EPA Method 120.1

Date Sampled: **07/12/18 14:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	9.40	0.0100	mmhos/cm	1	1807136	07/12/18	07/12/18	EPA 120.1	

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 St, Unit C
Denver CO, 80221

Project: Shook Pad Release
Project Number: [none]
Project Manager: Christine Hamlin

Reported:
07/13/18 06:10

SS04@1.5'
1807145-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/12/18 14:51									
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1807137	07/12/18	07/12/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 07/12/18 14:51									
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		121 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		105 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/12/18 14:51									
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1807138	07/12/18	07/12/18	EPA 8015M	

Date Sampled: 07/12/18 14:51									
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		102 %	30-150		"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 07/12/18 14:51									
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.22		pH Units	1	1807135	"	07/12/18	EPA 9045D	

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 St, Unit C
Denver CO, 80221

Project: Shook Pad Release
Project Number: [none]
Project Manager: Christine Hamlin

Reported:
07/13/18 06:10

SS04@1.5'
1807145-04 (Soil)

Summit Scientific

Specific Conductance by EPA Method 120.1

Date Sampled: **07/12/18 14:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	9.62	0.0100	mmhos/cm	1	1807136	07/12/18	07/12/18	EPA 120.1	

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 St, Unit C
Denver CO, 80221

Project: Shook Pad Release
Project Number: [none]
Project Manager: Christine Hamlin

Reported:
07/13/18 06:10

SS05@1.5'
1807145-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/12/18 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1807137	07/12/18	07/13/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/12/18 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		110 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		103 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/12/18 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1807138	07/12/18	07/12/18	EPA 8015M	

Date Sampled: **07/12/18 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		97.8 %	30-150		"	"	"	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/12/18 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.48		pH Units	1	1807135	"	07/12/18	EPA 9045D	

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 St, Unit C
Denver CO, 80221

Project: Shook Pad Release
Project Number: [none]
Project Manager: Christine Hamlin

Reported:
07/13/18 06:10

SS05@1.5'
1807145-05 (Soil)

Summit Scientific

Specific Conductance by EPA Method 120.1

Date Sampled: **07/12/18 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	9.05	0.0100	mmhos/cm	1	1807136	07/12/18	07/12/18	EPA 120.1	

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 St, Unit C
Denver CO, 80221

Project: Shook Pad Release
Project Number: [none]
Project Manager: Christine Hamlin

Reported:
07/13/18 06:10

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 1807137 - EPA 5030 Soil MS

Blank (1807137-BLK1)

Prepared & Analyzed: 07/12/18

Benzene	ND	0.0020	mg/kg
Toluene	ND	0.0050	"
Ethylbenzene	ND	0.0050	"
Xylenes (total)	ND	0.010	"
Gasoline Range Hydrocarbons	ND	0.50	"

Surrogate: 1,2-Dichloroethane-d4	0.0391		"	0.0396	98.7	23-173
Surrogate: Toluene-d8	0.0405		"	0.0400	101	20-170
Surrogate: 4-Bromofluorobenzene	0.0421		"	0.0400	105	21-167

LCS (1807137-BS1)

Prepared & Analyzed: 07/12/18

Benzene	0.0994	0.0020	mg/kg	0.100	99.4	70-130
Toluene	0.103	0.0050	"	0.100	103	70-130
Ethylbenzene	0.117	0.0050	"	0.100	117	70-130
m,p-Xylene	0.212	0.010	"	0.200	106	70-130
o-Xylene	0.102	0.0050	"	0.100	102	70-130

Surrogate: 1,2-Dichloroethane-d4	0.0416		"	0.0396	105	23-173
Surrogate: Toluene-d8	0.0401		"	0.0400	100	20-170
Surrogate: 4-Bromofluorobenzene	0.0408		"	0.0400	102	21-167

Matrix Spike (1807137-MS1)

Source: 1807144-02

Prepared: 07/12/18 Analyzed: 07/13/18

Benzene	0.101	0.0020	mg/kg	0.100	ND	101	70-130
Toluene	0.105	0.0050	"	0.100	ND	105	70-130
Ethylbenzene	0.118	0.0050	"	0.100	ND	118	70-130
m,p-Xylene	0.214	0.010	"	0.200	ND	107	70-130
o-Xylene	0.102	0.0050	"	0.100	ND	102	70-130

Surrogate: 1,2-Dichloroethane-d4	0.0417		"	0.0396	105	23-173
Surrogate: Toluene-d8	0.0404		"	0.0400	101	20-170
Surrogate: 4-Bromofluorobenzene	0.0408		"	0.0400	102	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 St, Unit C
Denver CO, 80221

Project: Shook Pad Release
Project Number: [none]
Project Manager: Christine Hamlin

Reported:
07/13/18 06:10

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 1807137 - EPA 5030 Soil MS

Matrix Spike Dup (1807137-MSD1)	Source: 1807144-02			Prepared: 07/12/18 Analyzed: 07/13/18						
Benzene	0.105	0.0020	mg/kg	0.100	ND	105	70-130	3.78	30	
Toluene	0.109	0.0050	"	0.100	ND	109	70-130	3.63	30	
Ethylbenzene	0.126	0.0050	"	0.100	ND	126	70-130	6.48	30	
m,p-Xylene	0.230	0.010	"	0.200	ND	115	70-130	7.10	30	
o-Xylene	0.110	0.0050	"	0.100	ND	110	70-130	7.31	30	
Surrogate: 1,2-Dichloroethane-d4	0.0407		"	0.0396		103	23-173			
Surrogate: Toluene-d8	0.0398		"	0.0400		99.6	20-170			
Surrogate: 4-Bromofluorobenzene	0.0394		"	0.0400		98.6	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 St, Unit C
Denver CO, 80221

Project: Shook Pad Release
Project Number: [none]
Project Manager: Christine Hamlin

Reported:
07/13/18 06:10

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 1807138 - EPA 3550A

Blank (1807138-BLK1)

Prepared: 07/12/18 Analyzed: 07/13/18

C10-C28 (DRO) ND 50 mg/kg

LCS (1807138-BS1)

Prepared: 07/12/18 Analyzed: 07/13/18

C10-C28 (DRO) 496 50 mg/kg 70-130

Matrix Spike (1807138-MS1)

Source: 1807144-02

Prepared: 07/12/18 Analyzed: 07/13/18

C10-C28 (DRO) 459 50 mg/kg 29.5 70-130

Matrix Spike Dup (1807138-MSD1)

Source: 1807144-02

Prepared: 07/12/18 Analyzed: 07/13/18

C10-C28 (DRO) 461 50 mg/kg 29.5 70-130 0.579 20

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 St, Unit C
Denver CO, 80221

Project: Shook Pad Release

Project Number: [none]

Project Manager: Christine Hamlin

Reported:
07/13/18 06:10

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

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

Batch 1807135 - General Preparation

LCS (1807135-BS1)

Prepared & Analyzed: 07/12/18

pH	9.1	pH Units	9.18	99.3	95-105
----	-----	----------	------	------	--------

Duplicate (1807135-DUP1)

Source: 1807145-01

Prepared & Analyzed: 07/12/18

pH	8.2	pH Units	8.3	1.22	20
----	-----	----------	-----	------	----

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 St, Unit C
Denver CO, 80221

Project: Shook Pad Release

Project Number: [none]
Project Manager: Christine Hamlin

Reported:
07/13/18 06:10

Specific Conductance by EPA Method 120.1 - Quality Control
Summit Scientific

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

Batch 1807136 - General Preparation

LCS (1807136-BS1)

Prepared & Analyzed: 07/12/18

Specific Conductance (EC)	0.750	0.0100	mmhos/cm				90-110		
---------------------------	-------	--------	----------	--	--	--	--------	--	--

Duplicate (1807136-DUP1)

Source: 1807145-01

Prepared & Analyzed: 07/12/18

Specific Conductance (EC)	9.86	0.0100	mmhos/cm		9.90			0.455	20
---------------------------	------	--------	----------	--	------	--	--	-------	----

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 St, Unit C
Denver CO, 80221

Project: Shook Pad Release

Project Number: [none]
Project Manager: Christine Hamlin

Reported:
07/13/18 06:10

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