

# Summit Scientific

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January 25, 2016

Christine Wasko  
Tasman Geosciences  
6899 Pecos Street  
Denver, CO 80221  
RE: Walton 17-25 Wellhead

Enclosed are the results of analyses for samples received by Summit Scientific on 01/22/16 17:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury  
President



Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Walton 17-25 Wellhead

Project Number: [none]  
Project Manager: Christine Wasko

**Reported:**  
01/25/16 08:23

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS03@18"	1601191-01	Soil	01/22/16 13:50	01/22/16 17:45
SS04@18"	1601191-02	Soil	01/22/16 13:55	01/22/16 17:45

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Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Walton 17-25 Wellhead

Project Number: [none]  
Project Manager: Christine Wasko

**Reported:**  
01/25/16 08:23

**SS03@18"**  
**1601191-01 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **01/22/16 13:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1601228	01/22/16	01/23/16	8015M	

Date Sampled: **01/22/16 13:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		98.4 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **01/22/16 13:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1601229	01/22/16	01/23/16	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.019</b>	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.14</b>	0.010	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>20</b>	0.50	"	"	"	"	"	"	

Date Sampled: **01/22/16 13:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		79.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		123 %	21-167		"	"	"	"	

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Project: Walton 17-25 Wellhead

Project Number: [none]  
Project Manager: Christine Wasko

Reported:  
01/25/16 08:23

**SS04@18"**  
**1601191-02 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **01/22/16 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1601228	01/22/16	01/23/16	8015M	

Date Sampled: **01/22/16 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		99.8 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **01/22/16 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>0.061</b>	0.0020	mg/kg	1	1601229	01/22/16	01/23/16	EPA 8260B	
<b>Toluene</b>	<b>0.54</b>	0.0050	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.47</b>	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>2.7</b>	0.010	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>88</b>	0.50	"	"	"	"	"	"	

Date Sampled: **01/22/16 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		97.2 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		105 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		119 %	21-167		"	"	"	"	

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**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

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

**Batch 1601228 - EPA 3550A**

**Blank (1601228-BLK1)**

Prepared: 01/22/16 Analyzed: 01/23/16

C10-C28 (DRO)	ND	50	mg/kg								
Surrogate: <i>o</i> -Terphenyl	11.0		"	12.5		87.6	30-150				

**LCS (1601228-BS1)**

Prepared: 01/22/16 Analyzed: 01/23/16

C10-C28 (DRO)	415	50	mg/kg	499		83.1	73-134				
Surrogate: <i>o</i> -Terphenyl	11.2		"	12.5		89.7	30-150				

**Matrix Spike (1601228-MS1)**

Source: 1601188-01

Prepared: 01/22/16 Analyzed: 01/23/16

C10-C28 (DRO)	411	50	mg/kg	473	16.5	83.4	50-148				
Surrogate: <i>o</i> -Terphenyl	10.6		"	11.9		89.6	30-150				

**Matrix Spike Dup (1601228-MSD1)**

Source: 1601188-01

Prepared: 01/22/16 Analyzed: 01/23/16

C10-C28 (DRO)	430	50	mg/kg	467	16.5	88.5	50-148	4.49	13		
Surrogate: <i>o</i> -Terphenyl	10.6		"	11.7		90.3	30-150				

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Project: Walton 17-25 Wellhead

Project Number: [none]  
Project Manager: Christine Wasko

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

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

**Batch 1601229 - EPA 5030 Soil MS**

**Blank (1601229-BLK1)**

Prepared & Analyzed: 01/22/16

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>0.0420</i>		<i>"</i>	<i>0.0400</i>		<i>105</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>0.0399</i>		<i>"</i>	<i>0.0400</i>		<i>99.8</i>	<i>21-167</i>			

**LCS (1601229-BS1)**

Prepared & Analyzed: 01/22/16

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.113	0.0020	"	0.100		113	58-130			
Toluene	0.122	0.0050	"	0.100		122	61-134			
Ethylbenzene	0.130	0.0050	"	0.0992		131	74-139			
m,p-Xylene	0.245	0.010	"	0.200		123	73-137			
o-Xylene	0.119	0.0050	"	0.0984		121	73-141			
Xylenes (total)	0.363	0.010	"				0-200			
Gasoline Range Hydrocarbons	2.59	0.50	"				30-150			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0398</i>		<i>"</i>	<i>0.0400</i>		<i>99.6</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0405</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0398</i>		<i>"</i>	<i>0.0400</i>		<i>99.6</i>	<i>21-167</i>			

**Matrix Spike (1601229-MS1)**

Source: 1601188-01

Prepared & Analyzed: 01/22/16

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.111	0.0020	"	0.0949	ND	117	30-131			
Toluene	0.118	0.0050	"	0.0949	ND	125	30-134			
Ethylbenzene	0.129	0.0050	"	0.0941	ND	137	22-153			
m,p-Xylene	0.244	0.010	"	0.189	ND	129	10-159			
o-Xylene	0.119	0.0050	"	0.0934	ND	128	31-151			
Xylenes (total)	0.363	0.010	"		0.00		30-160			
Gasoline Range Hydrocarbons	2.64	0.50	"		ND		30-160			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0406</i>		<i>"</i>	<i>0.0380</i>		<i>107</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0383</i>		<i>"</i>	<i>0.0380</i>		<i>101</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0379</i>		<i>"</i>	<i>0.0380</i>		<i>99.8</i>	<i>21-167</i>			

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**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
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Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

**Batch 1601229 - EPA 5030 Soil MS**

<b>Matrix Spike Dup (1601229-MSD1)</b>	<b>Source: 1601188-01</b>			<b>Prepared &amp; Analyzed: 01/22/16</b>						
Naphthalene	ND	0.010	mg/kg	ND	ND	104	23-173			42
Benzene	0.108	0.0020	"	0.0924	ND	117	30-131	2.47		34
Toluene	0.114	0.0050	"	0.0924	ND	124	30-134	3.25		30
Ethylbenzene	0.127	0.0050	"	0.0917	ND	139	22-153	1.44		24
m,p-Xylene	0.239	0.010	"	0.184	ND	129	10-159	2.23		68
o-Xylene	0.116	0.0050	"	0.0909	ND	127	31-151	3.00		38
Xylenes (total)	0.355	0.010	"	0.00	ND		30-160	2.48		30
Gasoline Range Hydrocarbons	2.50	0.50	"	ND	ND		30-160	5.19		30
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0386</i>		<i>"</i>	<i>0.0370</i>		<i>104</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0365</i>		<i>"</i>	<i>0.0370</i>		<i>98.8</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0371</i>		<i>"</i>	<i>0.0370</i>		<i>100</i>	<i>21-167</i>			

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### 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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