

August 13, 2021

**Impetro Resources**

**Trisha Fanning**

**2820 Logan Dr.**

**Loveland**

**CO 80538**

**Project Name - Walters Calhoun**

**Project Number - [none]**

Attached are your analytical results for Walters Calhoun received by Origins Laboratory, Inc. August 02, 2021. This project is associated with Origins project number Y108013-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.  
303.433.1322  
o-squad@oelabinc.com



Impetro Resources  
2820 Logan Dr.  
Loveland CO 80538

Trisha Fanning  
Project Number: [none]  
Project: Walters Calhoun

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
1-3 Jars	Y108013-01	Soil	July 30, 2021 16:00	08/02/2021 12:57
2-3 Jars	Y108013-02	Soil	July 30, 2021 16:00	08/02/2021 12:57
3-3 Jars	Y108013-03	Soil	July 30, 2021 16:00	08/02/2021 12:57
4-3 Jars	Y108013-04	Soil	July 30, 2021 16:00	08/02/2021 12:57
5-3 Jars	Y108013-05	Soil	July 30, 2021 16:00	08/02/2021 12:57

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 Project: Walters Calhoun

Origins Laboratory

F-012207-01-R1  
 Effective Date: 01/09/12

**Sample Receipt Checklist**

Origins Work Order: Y108013 Client: Impetro  
 Checklist Completed by: JG Client Project ID: Walters Calhoun  
 Date/time completed: 8/2/21 Shipped Via: FD  
 Matrix(s) Received: (Check all that apply):  Soil/Solid  Water  Other: \_\_\_\_\_  
 Cooler Number/Temperature: 1, 25.9 °C 1 °C 1 °C (Describe) °C  
 Thermometer ID: T003  
(UPS, FedEx, Hand Delivered, Pick-up, etc.)  
 Airbill #: N/A

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C <sup>(1)</sup> ?		<input checked="" type="checkbox"/>		
Is there ice present (document if blue ice is used)		<input checked="" type="checkbox"/>		
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			<input checked="" type="checkbox"/>	
Are samples preserved that require preservation and was it checked <sup>(1)</sup> ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO <sub>3</sub> ; HCL, H <sub>2</sub> SO <sub>4</sub> ) / (pH >10 for samples preserved with NaAsO <sub>2</sub> +NaOH, ZnAc+NaOH)			<input checked="" type="checkbox"/>	
Additional Comments (if any):				

<sup>(1)</sup>If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by: JM (Project Manager) Date/Time Reviewed: 8-3-21

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 2820 Logan Dr.  
 Loveland CO 80538

Trisha Fanning  
 Project Number: [none]  
 Project: Walters Calhoun

**1-3 Jars**

**7/30/2021 4:00:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y108013-01 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	<b>352</b>	50.0	mg/kg	1	B1H0405	DJL	08/04/2021	08/07/2021	
Residual Range Organics (C28-C40)	<b>907</b>	200	"	"	"	DJL	"	"	

Surrogate: o-Terphenyl 26.3 % 50-150 " " " S-04

**Metals by Saturated Paste**

Calcium	<b>1.48</b>	0.0499	meq/L	1	[CALC]	CJM	08/09/2021	08/11/2021	
Magnesium	<b>0.244</b>	0.0823	"	"	"	CJM	"	"	
Sodium	<b>6.18</b>	0.0435	"	"	"	CJM	"	"	

**SAR by 20B Saturated Paste**

SAR	<b>6.65</b>		SAR	"	B1H0910	CJM	"	"	
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 Loveland CO 80538

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 Project: Walters Calhoun

**2-3 Jars**

**7/30/2021 4:00:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y108013-02 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	<b>243</b>	50.0	mg/kg	1	B1H0405	DJL	08/04/2021	08/07/2021	
Residual Range Organics (C28-C40)	<b>685</b>	200	"	"	"	DJL	"	"	

Surrogate: *o*-Terphenyl      22.4 %      50-150      "      "      "      S-04

**Metals by Saturated Paste**

Calcium	<b>4.11</b>	0.0499	meq/L	1	[CALC]	CJM	08/09/2021	08/11/2021	
Magnesium	<b>0.657</b>	0.0823	"	"	"	CJM	"	"	
Sodium	<b>4.29</b>	0.0435	"	"	"	CJM	"	"	

**SAR by 20B Saturated Paste**

SAR	<b>2.78</b>		SAR	"	B1H0910	CJM	"	"	
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 Loveland CO 80538

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 Project Number: [none]  
 Project: Walters Calhoun

**3-3 Jars**

**7/30/2021 4:00:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y108013-03 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	<b>570</b>	50.0	mg/kg	1	B1H0405	DJL	08/04/2021	08/07/2021	
Residual Range Organics (C28-C40)	<b>1180</b>	200	"	"	"	DJL	"	"	

Surrogate: o-Terphenyl 37.8 % 50-150 " " " S-04

**Metals by Saturated Paste**

Calcium	<b>4.68</b>	0.0499	meq/L	1	[CALC]	CJM	08/09/2021	08/11/2021	
Magnesium	<b>0.861</b>	0.0823	"	"	"	CJM	"	"	
Sodium	<b>3.45</b>	0.0435	"	"	"	CJM	"	"	

**SAR by 20B Saturated Paste**

SAR	<b>2.07</b>		SAR	"	B1H0910	CJM	"	"	
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 Loveland CO 80538

Trisha Fanning  
 Project Number: [none]  
 Project: Walters Calhoun

**4-3 Jars**

**7/30/2021 4:00:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y108013-04 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	<b>528</b>	50.0	mg/kg	1	B1H0405	DJL	08/04/2021	08/07/2021	
Residual Range Organics (C28-C40)	<b>1230</b>	200	"	"	"	DJL	"	"	

Surrogate: o-Terphenyl 30.5 % 50-150 " " " S-04

**Metals by Saturated Paste**

Calcium	<b>3.25</b>	0.0499	meq/L	1	[CALC]	CJM	08/09/2021	08/11/2021	
Magnesium	<b>0.503</b>	0.0823	"	"	"	CJM	"	"	
Sodium	<b>8.33</b>	0.0435	"	"	"	CJM	"	"	

**SAR by 20B Saturated Paste**

SAR	<b>6.08</b>		SAR	"	B1H0910	CJM	"	"	
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 Project: Walters Calhoun

**5-3 Jars**

**7/30/2021 4:00:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y108013-05 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	<b>272</b>	50.0	mg/kg	1	B1H0405	DJL	08/04/2021	08/07/2021	
Residual Range Organics (C28-C40)	<b>827</b>	200	"	"	"	DJL	"	"	

Surrogate: *o*-Terphenyl      28.5 %      50-150      "      "      "      S-04

**Metals by Saturated Paste**

Calcium	<b>3.94</b>	0.0499	meq/L	1	[CALC]	CJM	08/09/2021	08/11/2021	
Magnesium	<b>0.617</b>	0.0823	"	"	"	CJM	"	"	
Sodium	<b>3.73</b>	0.0435	"	"	"	CJM	"	"	

**SAR by 20B Saturated Paste**

SAR	<b>2.47</b>		SAR	"	B1H0910	CJM	"	"	
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**Extractable Petroleum Hydrocarbons by 8015D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B1H0405 - EPA 3550B</b>										
<b>Blank (B1H0405-BLK1)</b>										
					Prepared: 08/04/2021 Analyzed: 08/05/2021					
Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	39		"	50.0		77.8	50-150			

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**Extractable Petroleum Hydrocarbons by 8015D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B1H0405 - EPA 3550B**

**LCS (B1H0405-BS1)**

Prepared: 08/04/2021 Analyzed: 08/05/2021

Diesel (C10-C28)	865	50.0	mg/kg	1000		86.5	70-130			
Residual Range Organics (C28-C40)	879	200	"	1000		87.9	70-130			
Surrogate: o-Terphenyl	42		"	50.0		84.6	50-150			

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**Extractable Petroleum Hydrocarbons by 8015D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B1H0405 - EPA 3550B**

<b>Matrix Spike (B1H0405-MS1)</b>	<b>Source: Y108005-02</b>			<b>Prepared: 08/04/2021 Analyzed: 08/05/2021</b>						
Diesel (C10-C28)	1000	50.0	mg/kg	1000	ND	100	70-130			
Residual Range Organics (C28-C40)	1050	200	"	1000	ND	105	70-130			
Surrogate: o-Terphenyl	48		"	50.0		95.9	50-150			

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**Extractable Petroleum Hydrocarbons by 8015D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B1H0405 - EPA 3550B</b>										
<b>Matrix Spike Dup (B1H0405-MSD1)</b>					<b>Source: Y108005-02</b>					Prepared: 08/04/2021 Analyzed: 08/05/2021
Diesel (C10-C28)	909	50.0	mg/kg	1000	ND	90.9	70-130	9.67	35	
Residual Range Organics (C28-C40)	1010	200	"	1000	ND	101	70-130	3.89	35	
Surrogate: o-Terphenyl	44		"	50.0		88.1	50-150			

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**Notes and Definitions**

U Sample is Non-Detect.

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

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