



April 05, 2023

Peterson Energy Operating, Inc.

Ryan Dornbos

PO Box 2169

Loveland

CO 80539

Project Name - Church Pit

Project Number - [none]

Attached are your analytical results for Church Pit received by Origins Laboratory, Inc. April 03, 2023. This project is associated with Origins project number Y304002-01.

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



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Peterson Energy Operating, Inc.

PO Box 2169

Loveland CO 80539

Ryan Dornbos

Project Number: [none]

Project: Church Pit

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
W OF 41B-25	Y304002-01	Soil	April 3, 2023 8:00	04/03/2023 11:30
NW OF PAD	Y304002-02	Soil	April 3, 2023 8:00	04/03/2023 11:30

Origins Laboratory, Inc.



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PO Box 2169

Loveland CO 80539

Ryan Dornbos

Project Number: [none]

Project: Church Pit

ORIGINS

LABORATORY, INC

www.originslaboratory.com

4304002

page 1 of 1

Client: PETERSON ENERGY
 Address: PO BOX 2169
LOVELAND, CO 80539
 Telephone Number: 303 915 9070
 Email Address: RYAN@PEOPERATING.COM
RYAN@PEOPERATING.COM

Project Manager: RYAN DORNOS
 Project Name: CHURCH PIT
 Project Number:
 Samples Collected By: RYAN DORNOS

Fax: 303.265.9645

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions	
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa Canister #			Other
W OF 41B-25	4/13/03	0800	3	<input checked="" type="checkbox"/>									1
NW OF 9AD	4/13/03	0800	3	<input checked="" type="checkbox"/>									2
													3
													4
													5
													6
													7
													8
													9
													10

Relinquished By: RYAN DORNOS
 Relinquished By:

Date: 4/13/03
 Date:

Time: 1300
 Time:

Received By: EH
 Received By:

Date: 4/13/03
 Date:

Time: 1130
 Time:

Turnaround Time:
 Same Day ☐ 24 Hr ☐
 48 Hr ☒ 72 Hr ☐
 Standard ☐

Temp Received: 5.0 Date Results Needed

Origins Laboratory, Inc.

J. Bynon

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Peterson Energy Operating, Inc.

PO Box 2169

Loveland

CO

80539

Ryan Dornbos

Project Number: [none]

Project: Church Pit

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: 4304002

Client: Peterson Energy

Client Project ID: Church Pit

Checklist Completed by: EHS FWH

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

Date/time completed: 4/13/13

Airbill #: NA

Matrix(s) Received: (Check all that apply): ☒ Soil/Solid ☐ Water ☐ Other: _____

Cooler Number/Temperature: 1 15.0 °C 1 °C 1 °C (Describe) °C

Thermometer ID: T064

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input type="checkbox"/>	<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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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"/>	
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) 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 with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace (> ¼ inch bubble) 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 and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analysis in order to insure sample integrity)/(pH < 2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH > 10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)	<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 date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by: JB (Project Manager)

Date/Time Reviewed: 4-13-13

Origins Laboratory, Inc.

J. Bynon

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PO Box 2169

Loveland CO 80539

Ryan Dornbos

Project Number: [none]

Project: Church Pit

W OF 41B-25

4/3/2023 8:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.

Y304002-01 (Soil)

Metals by Saturated Paste by EPA 6010

Calcium	ND	0.0499	meq/L	1	[CALC]	KAP	04/04/2023	04/05/2023
Magnesium	ND	0.0823	"	"	"	KAP	"	"
Sodium	0.759	0.0435	"	"	"	KAP	"	"

SAR by 20B Saturated Paste

SAR	4.66		SAR	"	B3D0409	KAP	"	"
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Loveland CO 80539

Ryan Dornbos

Project Number: [none]

Project: Church Pit

NW OF PAD

4/3/2023 8:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.

Y304002-02 (Soil)

Metals by Saturated Paste by EPA 6010

Calcium	ND	0.0499	meq/L	1	[CALC]	KAP	04/04/2023	04/05/2023
Magnesium	ND	0.0823	"	"	"	KAP	"	"
Sodium	0.585	0.0435	"	"	"	KAP	"	"

SAR by 20B Saturated Paste

SAR	3.02		SAR	"	B3D0409	KAP	"	"
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Project Number: [none]

Project: Church Pit

Classical Chemistry Parameters - 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 B3D0409 - Saturated Paste Metals

Blank (B3D0409-BLK1)

Prepared: 04/04/2023 Analyzed: 04/05/2023

SAR	0.00		SAR
Calcium PPM	ND	1.00	mg/L
Magnesium PPM	ND	1.00	"
Sodium PPM	ND	1.00	"

Duplicate (B3D0409-DUP1)

Source: Y303819-33

Prepared: 04/04/2023 Analyzed: 04/05/2023

SAR	0.00		SAR	0.0133		200	200
Calcium PPM	4.88	1.00	mg/L	5.02		2.95	50
Magnesium PPM	0.177	1.00	"	0.178		0.169	50
Sodium PPM	0.116	1.00	"	0.111		3.88	50

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Notes and Definitions

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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