



May 27, 2022

Verdad Resources

Dean Wagoner

1125 17th St Suite 550

Denver

CO 80202

Project Name - Edna #1 Wellhead

Project Number - [none]

Attached are your analytical results for Edna #1 Wellhead received by Origins Laboratory, Inc. May 17, 2022. This project is associated with Origins project number Y205434-01.

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

Verdad Resources

1125 17th St Suite 550

Denver CO 80202

Dean Wagoner

Project Number: [none]

Project: Edna #1 Wellhead

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Edna #1 WH	Y205434-01	Soil	May 17, 2022 12:55	05/17/2022 14:40

Origins Laboratory, Inc.



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Verdad Resources
1125 17th St Suite 550
Denver CO 80202

Dean Wagoner
Project Number: [none]
Project: Edna #1 Wellhead

ORIGINS

LABORATORY, INC

www.originslaboratory.com

1205434

page of

Client: Verdad Resources
Address: 1125 17th Street, Suite 550
Denver CO 80202
Telephone Number: 720 845 6900
Email Address: McGuire.H. @ Verdad Resources .com

Project Manager: Dean Wagoner
Project Name: Edna #1 Well Head
Project Number: _____
Samples Collected By: Dean Wagoner
Dwagoner@verdadresources.com

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix		Analysis	Sample Instructions	
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil			Air Summa #
Edna #1 WH	5-17-22	1255	2						X	TPH, EC, SDR, PH, Boron, BTEX, 4-PIC, 4-PPIC, 1,3,5-Trichlorobenzene, 1,2,4-Trichlorobenzene, 1,2,3-Trichlorobenzene	1	
												2
												3
												4
												5
												6
												7
												8
												9
												10
Relinquished By: <u>Dean Wagoner</u>	Date: <u>5-17-22</u>	Time: <u>1440</u>		Received By: <u>[Signature]</u>	Date: <u>5/17/22</u>	Time: <u>1440</u>					Turnaround Time: Same Day <input type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input checked="" type="checkbox"/>	
Relinquished By:	Date:	Time:		Received By:	Date:	Time:						

Temp Received: 14.9 Date Results Needed

Origins Laboratory, Inc.

J. Bynon

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Dean Wagoner
Project Number: [none]
Project: Edna #1 Wellhead

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: Y205434

Client: Verdad Resources

Client Project ID: Edna #1 Well

Checklist Completed by: JG

Shipped Via: HD

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 5/17/12

Airbill #: N/A

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

Cooler Number/Temperature: 1 / 14.4 °C _____ / _____ °C (Describe) _____ °C

Thermometer ID: T004

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"/>		<u>Same Day</u>
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 ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<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 ⁽¹⁾ ? (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 ₃ , HCl, H ₂ SO ₄) / (pH > 10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)			<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 (Project Manager) JG

Date/Time Reviewed 5/18/12

Origins Laboratory, Inc.

J. Bynon

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Verdad Resources
1125 17th St Suite 550
Denver CO 80202

Dean Wagoner
Project Number: [none]
Project: Edna #1 Wellhead

Edna #1 WH
5/17/2022 12:55:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y205434-01 (Soil)

Boron (DTPA Sorbitol)

Boron	3.52	0.101	mg/L	1	B2E1805	KAP	05/18/2022	05/19/2022	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B2E1801	ZZZ	05/18/2022	05/19/2022	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	ZZZ	"	"	U

Surrogate: o-Terphenyl	89.5 %	50-150			"	"	"	
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B2E1802	ZZZ	05/18/2022	05/18/2022	U
1,3,5-Trimethylbenzene	ND	0.00200	"	"	"	ZZZ	"	"	U
Benzene	ND	0.00200	"	"	"	ZZZ	"	"	U
Ethylbenzene	ND	0.00200	"	"	"	ZZZ	"	"	U
Naphthalene	ND	0.00380	"	"	"	ZZZ	"	"	U
Toluene	ND	0.00200	"	"	"	ZZZ	"	"	U
Xylenes, total	ND	0.00200	"	"	"	ZZZ	"	"	U
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	ZZZ	"	"	U

Surrogate: 1,2-Dichloroethane-d4	121 %	70-130			"	"	"
Surrogate: Toluene-d8	103 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	103 %	70-130			"	"	"

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Denver CO 80202

Dean Wagoner

Project Number: [none]

Project: Edna #1 Wellhead

Edna #1 WH

5/17/2022 12:55:00PM

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

Y205434-01 (Soil)

Metals by Saturated Paste by EPA 6010

Calcium	8.92	0.499	meq/L	10	[CALC]	KAP	05/18/2022	05/19/2022
Magnesium	8.43	0.823	"	"	"	KAP	"	"
Sodium	4.97	0.435	"	"	"	KAP	"	"

pH in Soil by 9045D

pH	8.10		pH Units	1	B2E1804	ACC	05/18/2022	05/19/2022
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SAR by 20B Saturated Paste

SAR	1.69		SAR	1	B2E1803	KAP	05/18/2022	05/19/2022
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	1.96	0.00500	mmhos/cm	1	B2E1804	ACC	05/18/2022	05/19/2022
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Dean Wagoner

Project Number: [none]

Project: Edna #1 Wellhead

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
Batch B2E1801 - EPA 3580										
Blank (B2E1801-BLK1)					Prepared: 05/18/2022 Analyzed: 05/19/2022					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	25		"	24.9		99.1	50-150			

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Dean Wagoner

Project Number: [none]

Project: Edna #1 Wellhead

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 B2E1801 - EPA 3580

LCS (B2E1801-BS1)

Prepared: 05/18/2022 Analyzed: 05/19/2022

Diesel (C10-C28)	987	50.0	mg/kg	1000		98.7	70-130			
Residual Range Organics (C28-C40)	1070	200	"	1000		107	70-130			
Surrogate: o-Terphenyl	59		"	49.8		119	50-150			

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Denver CO 80202

Dean Wagoner
Project Number: [none]
Project: Edna #1 Wellhead

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 B2E1801 - EPA 3580

Matrix Spike (B2E1801-MS1)		Source: Y205434-01			Prepared: 05/18/2022 Analyzed: 05/19/2022					
Diesel (C10-C28)	977	50.0	mg/kg	1000	ND	97.7	70-130			
Residual Range Organics (C28-C40)	1040	200	"	1000	ND	104	70-130			
Surrogate: o-Terphenyl	47		"	49.8		93.9	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
Batch B2E1801 - EPA 3580										
Matrix Spike Dup (B2E1801-MSD1)		Source: Y205434-01			Prepared: 05/18/2022 Analyzed: 05/19/2022					
Diesel (C10-C28)	1020	50.0	mg/kg	1000	ND	102	70-130	4.63	35	
Residual Range Organics (C28-C40)	1030	200	"	1000	ND	103	70-130	0.462	35	
Surrogate: o-Terphenyl	47		"	49.8		93.7	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
Batch B2E1802 - EPA 5030 (soil)										
Blank (B2E1802-BLK1)					Prepared: 05/18/2022 Analyzed: 05/18/2022					
1,2,4-Trimethylbenzene	ND	0.00200	mg/kg							U
1,3,5-Trimethylbenzene	ND	0.00200	"							U
Benzene	ND	0.00200	"							U
Ethylbenzene	ND	0.00200	"							U
Naphthalene	ND	0.0100	"							U
Toluene	ND	0.00200	"							U
Xylenes, total	ND	0.00200	"							U
Gasoline Range Hydrocarbons	ND	0.200	"							U
Surrogate: 1,2-Dichloroethane-d4	0.14		"	0.125		114	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		104	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		100	70-130			

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Project Number: [none]
Project: Edna #1 Wellhead

Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2E1802 - EPA 5030 (soil)										
LCS (B2E1802-BS1)					Prepared: 05/18/2022 Analyzed: 05/18/2022					
1,2,4-Trimethylbenzene	0.0992	0.00200	mg/kg	0.100		99.2	70-130			
1,3,5-Trimethylbenzene	0.101	0.00200	"	0.100		101	70-130			
Benzene	0.101	0.00200	"	0.100		101	70-130			
Ethylbenzene	0.100	0.00200	"	0.100		100	70-130			
Naphthalene	0.101	0.0100	"	0.100		101	70-130			
Toluene	0.110	0.00200	"	0.100		110	70-130			
o-Xylene	0.101	0.00200	"	0.100		101	70-130			
m,p-Xylene	0.198	0.00400	"	0.200		99.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.14		"	0.125		114	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		103	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		101	70-130			

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Project: Edna #1 Wellhead

Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2E1802 - EPA 5030 (soil)										
Matrix Spike (B2E1802-MS1)		Source: Y205446-01			Prepared: 05/18/2022 Analyzed: 05/18/2022					
1,2,4-Trimethylbenzene	0.101	0.00200	mg/kg	0.100	ND	101	70-130			
1,3,5-Trimethylbenzene	0.103	0.00200	"	0.100	ND	103	70-130			
Benzene	0.0989	0.00200	"	0.100	ND	98.9	70-130			
Ethylbenzene	0.106	0.00200	"	0.100	ND	106	70-130			
Naphthalene	0.0981	0.0100	"	0.100	ND	98.1	70-130			
Toluene	0.111	0.00200	"	0.100	ND	111	70-130			
o-Xylene	0.105	0.00200	"	0.100	ND	105	70-130			
m,p-Xylene	0.209	0.00400	"	0.200	ND	105	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.14		"	0.125		115	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		104	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		105	70-130			

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Dean Wagoner
Project Number: [none]
Project: Edna #1 Wellhead

Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B2E1802 - EPA 5030 (soil)										
Matrix Spike Dup (B2E1802-MSD1)		Source: Y205446-01			Prepared: 05/18/2022 Analyzed: 05/18/2022					
1,2,4-Trimethylbenzene	0.0947	0.00200	mg/kg	0.100	ND	94.7	70-130	6.57	20	
1,3,5-Trimethylbenzene	0.0967	0.00200	"	0.100	ND	96.7	70-130	6.41	20	
Benzene	0.0983	0.00200	"	0.100	ND	98.3	70-130	0.669	20	
Ethylbenzene	0.0933	0.00200	"	0.100	ND	93.3	70-130	12.8	20	
Naphthalene	0.0955	0.0100	"	0.100	ND	95.5	70-130	2.64	20	
Toluene	0.106	0.00200	"	0.100	ND	106	70-130	4.31	20	
o-Xylene	0.0961	0.00200	"	0.100	ND	96.1	70-130	8.53	20	
m,p-Xylene	0.186	0.00400	"	0.200	ND	92.8	70-130	12.1	20	
Surrogate: 1,2-Dichloroethane-d4	0.14		"	0.125		113	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		102	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		99.7	70-130			

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Project Number: [none]
Project: Edna #1 Wellhead

Volatile Organic Compounds by GC/MS SW846 8260D - 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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Saturated Paste - 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 B2E1804 - NO PREP

Blank (B2E1804-BLK1)

Prepared: 05/18/2022 Analyzed: 05/19/2022

pH	0.00		pH Units
Specific Conductance (EC)	0.00100	0.0300	mmhos/cm

Duplicate (B2E1804-DUP1)

Source: Y205049-01

Prepared: 05/18/2022 Analyzed: 05/19/2022

Specific Conductance (EC)	0.864	0.0300	mmhos/cm	0.988	13.4	25
pH	8.05		pH Units	8.18	1.60	25

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1125 17th St Suite 550

Denver CO 80202

Dean Wagoner

Project Number: [none]

Project: Edna #1 Wellhead

Notes and Definitions

U Sample is Non-Detect.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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