



Ensolum

November 01, 2024

Jeremy Espinoza

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

**Project Name - KMG - Sherwood L Fed 30-29D  
Wellhead**

**Project Number - 09A1417184**

Attached are your analytical results for KMG - Sherwood L Fed 30-29D Wellhead received by Origins Laboratory October 16, 2024. This project is associated with Origins project number E410503-01.

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  
303.433.1322  
projectmanager@originslab.com



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

Ensolum  
 11049 W 44th Avenue, Suite 103  
 Wheat Ridge CO 80033

Jeremy Espinoza  
 Project Number: 09A1417184  
 Project: KMG - Sherwood L Fed 30-29D Wellhead

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
N01(L30-30D)@4.5'	E410503-01	Soil	October 16, 2024 15:15	10/16/2024 18:06
N01(L30-30D)@4.5'-V	E410503-02	Soil	October 16, 2024 15:16	10/16/2024 18:06
E01(L30-30D)@4.5'	E410503-03	Soil	October 16, 2024 15:10	10/16/2024 18:06
E01(L30-30D)@4.5'-V	E410503-04	Soil	October 16, 2024 15:11	10/16/2024 18:06
S01(L30-30D)@4.5'	E410503-05	Soil	October 16, 2024 15:25	10/16/2024 18:06
S01(L30-30D)@4.5'-V	E410503-06	Soil	October 16, 2024 15:26	10/16/2024 18:06
W01(L30-30D)@4.5'	E410503-07	Soil	October 16, 2024 15:21	10/16/2024 18:06
W01(L30-30D)@4.5'-V	E410503-08	Soil	October 16, 2024 15:22	10/16/2024 18:06
B01(L30-30D)@9'	E410503-09	Soil	October 16, 2024 15:15	10/16/2024 18:06
B01(L30-30D)@9'-V	E410503-10	Soil	October 16, 2024 15:16	10/16/2024 18:06
N01(L30-31D)@4.5'	E410503-11	Soil	October 16, 2024 15:07	10/16/2024 18:06
N01(L30-31D)@4.5'-V	E410503-12	Soil	October 16, 2024 15:08	10/16/2024 18:06
E01(L30-31D)@4.5'	E410503-13	Soil	October 16, 2024 15:03	10/16/2024 18:06
E01(L30-31D)@4.5'-V	E410503-14	Soil	October 16, 2024 15:04	10/16/2024 18:06

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CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S01(L30-31D)@4.5'	E410503-15	Soil	October 16, 2024 14:59	10/16/2024 18:06
S01(L30-31D)@4.5'-V	E410503-16	Soil	October 16, 2024 15:00	10/16/2024 18:06
W01(L30-31D)@4.5'	E410503-17	Soil	October 16, 2024 14:52	10/16/2024 18:06
W01(L30-31D)@4.5'-V	E410503-18	Soil	October 16, 2024 14:53	10/16/2024 18:06
B01(L30-31D)@9'	E410503-19	Soil	October 16, 2024 14:58	10/16/2024 18:06
B01(L30-31D)@9'-V	E410503-20	Soil	October 16, 2024 14:59	10/16/2024 18:06
N01(L30-32D)@4.5'	E410503-21	Soil	October 16, 2024 14:26	10/16/2024 18:06
N01(L30-32D)@4.5'-V	E410503-22	Soil	October 16, 2024 14:27	10/16/2024 18:06
E01(L30-32D)@4.5'	E410503-23	Soil	October 16, 2024 14:29	10/16/2024 18:06
E01(L30-32D)@4.5'-V	E410503-24	Soil	October 16, 2024 14:30	10/16/2024 18:06
S01(L30-32D)@4.5'	E410503-25	Soil	October 16, 2024 14:33	10/16/2024 18:06
S01(L30-32D)@4.5'-V	E410503-26	Soil	October 16, 2024 14:34	10/16/2024 18:06
W01(L30-32D)@4.5'	E410503-27	Soil	October 16, 2024 14:39	10/16/2024 18:06
W01(L30-32D)@4.5'-V	E410503-28	Soil	October 16, 2024 14:40	10/16/2024 18:06

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 Project Number: 09A1417184  
 Project: KMG - Sherwood L Fed 30-29D Wellhead

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B01(L30-32D)@9'	E410503-29	Soil	October 16, 2024 14:47	10/16/2024 18:06
B01(L30-32D)@9'-V	E410503-30	Soil	October 16, 2024 14:48	10/16/2024 18:06
FL03/FL04-N02@3'	E410503-31	Soil	October 16, 2024 15:45	10/16/2024 18:06
FL03/FL04-N02@3'-V	E410503-32	Soil	October 16, 2024 15:46	10/16/2024 18:06
FL03/FL04-E02@3'	E410503-33	Soil	October 16, 2024 15:50	10/16/2024 18:06
FL03/FL04-E02@3'-V	E410503-34	Soil	October 16, 2024 15:51	10/16/2024 18:06
FL03/FL04-S02@3'	E410503-35	Soil	October 16, 2024 15:54	10/16/2024 18:06
FL03/FL04-S02@3'-V	E410503-36	Soil	October 16, 2024 15:55	10/16/2024 18:06
GW-FL03/FL04@5'	E410503-37	Water	October 16, 2024 16:10	10/16/2024 18:06
FL03/FL04-B01@6'	E410503-38	Soil	October 16, 2024 15:58	10/16/2024 18:06
FL03/FL04-B01@6'-V	E410503-39	Soil	October 16, 2024 15:59	10/16/2024 18:06

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Ensolium  
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 Wheat Ridge CO 80033

Jeremy Espinoza  
 Project Number: 09A1417184  
 Project: KMG - Sherwood L Fed 30-29D Wellhead

Page 1 of 4

ORIGINS WORK ORDER # **416503**

Client: Ensolium Project Manager: Jeremy Espinoza Key: W=Water  
 Address: \_\_\_\_\_ Project Name: Sherwood L Fed 30-29D Wellhead CW=Groundwater  
 Telephone Number: \_\_\_\_\_ Project Number: 09A1417184 SW=Surface Water  
 Email Address: KMG-Team Collected By: JL WW=Waste Water  
 Invoice/Billing Info: Impacted Oxy L=Liquid  
 S=Soil | SO=Solid | G=Oil | A=Air | G=Gas | UWP=Unpres | HCl= Hydrochloric | HNO3=Nitric | H2SO4=Sulfuric | NaOH=Sodium Hydroxide

#	Sample ID	Date Sampled	Time Sampled	# of Containers	Matrix	Preservative	Analysis							Comments	
							BTEX	THM (DBP)	PAHs	ECRAN	PH	Cl <sup>-</sup> / Nitrate	PH		
1	N01(30-30D)E45	10/16/14	1515	3	S	UMP	X	X	X	X	X	X	X	X	*80% CVT
2	N01(30-30D)E45		1516	1			X	X	X	X	X	X	X	X	add Ba to Hal following
3	F01(30-30D)E45		1510				X	X	X	X	X	X	X	X	SO(30-30D)E45-V
4	F01(30-30D)E45		1511				X	X	X	X	X	X	X	X	IMP(30-30D)E45-V
5	S01(30-30D)E45		1508				X	X	X	X	X	X	X	X	FO(30-30D)E45-V
6	S01(30-30D)E45		1516				X	X	X	X	X	X	X	X	IMP(30-30D)E45-V
7	N01(30-30D)E45		1511				X	X	X	X	X	X	X	X	add Ba to Hal to
8	N01(30-30D)E45		1512				X	X	X	X	X	X	X	X	N01(30-30D)E45-V
9	B01(30-30D)E45		1515				X	X	X	X	X	X	X	X	Per Jeremy's email
10	B01(30-30D)E45		1516				X	X	X	X	X	X	X	X	10/16/14

Relinquished By: \_\_\_\_\_ Date: 10/16/14 Time: 1806 Received By: JL Date: 10/16/14 Time: 800  
 Turnaround Time:  SAME DAY  24 Hr  
 48 Hr  72  
 Standard

1725 Elk Place Denver, Co. 80211 | # 303-433-1322 | originslab.com | Temp Received- 2.8 Received On Ice  Yes  No

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Ensolum  
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 Wheat Ridge CO 80033

Jeremy Espinoza  
 Project Number: 09A1417184  
 Project: KMG - Sherwood L Fed 30-29D Wellhead

ORIGINS LABORATORY  
 Client: Ensolum  
 Address: \_\_\_\_\_  
 Telephone Number: 720-412-1244  
 Email Address: jay@ensol.com

ORIGINS WORK ORDER # **Ensolos** Page 3 of 4

Project Manager: JEREMY ESPINOZA  
 Project Name: SHERWOOD L FED 30-29D WELLHEAD  
 Project Number: 09A1417184  
 Collected By: JE  
 Invoice/Billing Info: JEREMY@ENSOL.COM

Key:  
 W=Water  
 GW=Groundwater  
 SW=Surface Water  
 WW=Waste Water  
 L=Liquid

S=Soil | SO=Solid | O=Oil | A=Air | G=Gas | UNP=Unpres | HCl= Hydrochloric | HNO3=Nitric | H2SO4=Sulfuric | NaOH=Sodium Hydroxide

#	Sample ID	Date Sampled	Time Sampled	# of Containers	Matrix	Preservative	Analysis		Comments
							PH	PRTS	
1	W01(30-32D)0451	10/16/14	1416	3	SW	UNP	X	X	*EXCEPT
2	W01(30-32D)0454	10/16/14	1417				X	X	
3	W01(30-32D)0451	10/16/14	1418				X	X	
4	W01(30-32D)0454	10/16/14	1419				X	X	
5	W01(30-32D)0451	10/16/14	1420				X	X	
6	W01(30-32D)0454	10/16/14	1421				X	X	
7	W01(30-32D)0451	10/16/14	1422				X	X	
8	W01(30-32D)0454	10/16/14	1423				X	X	
9	W01(30-32D)0451	10/16/14	1424				X	X	
10	W01(30-32D)0454	10/16/14	1425				X	X	

Relinquished By: [Signature] Date: 10/16/14 Time: 1806  
 Received By: [Signature] Date: 10/16/14 Time: 1806  
 Turnaround Time:  SAME DAY  24 Hr  48 Hr  72  
 Standard  Non-Standard  Vial  M.L.

Temp Received: 2.8 Received On Ice?  No  Yes

For Lab Sample Receiving Only  
 1725 Elk Place Denver, Co. 80211 | # 303.433.1322 | originslab.com

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Jeremy Espinoza  
 Project Number: 09A1417184  
 Project: KMG - Sherwood L Fed 30-29D Wellhead

Page 4 of 4

ORIGINS WORK ORDER # **640502**

ORIGINS LABORATORY

Client: Ensolum  
 Address: 11049 W 44th Ave. Ste 100  
Wheat Ridge, CO 80033  
 Telephone Number:  
 Email Address: KMG@Tegim

Project Manager: Jeremy Espinoza  
 Project Name: Sherwood L Fed 30-29D Wellhead  
 Project Number: 09A1417184  
 Collected By: JRE  
 Invoice/Billing Info: Impacted/OKY

Key:  
 W= Water  
 GW=Groundwater  
 SW=Surface Water  
 WW=Waste Water  
 L=Liquid

S=Soil | SO=Solid | G=Oil | A=Air | G=Gas | UNP=Unpres | HCl= Hydrochloric | HNO3=Nitric | H2SO4=Sulfuric | NaOH=Sodium Hydroxide

#	Sample ID	Date Sampled	Time Sampled	# of Containers	Matrix Preservative	Analysis										Comments
						TOH (Drinking)	PH	DAHS	PH	Boron	Cu/Pb	Misc	Mg/Zn	OH		
1	F103/F104-Notes	10/16/24	1545	3	S UNP	X	X	X	X	X	X	X	X	X	X	
2	F103/F104-Notes		1546													
3	F103/F104-Notes		1550													
4	F103/F104-Notes		1551													
5	F103/F104-Notes		1554													
6	F103/F104-Notes		1555													
7	GW-F103/F104		1610	4												
8	F103/F104-Notes		1558	3												
9	F103/F104-Notes		1559	3												
10																

Relinquished By: [Signature] Date: 10/16/24 Time: 1806

Received By: [Signature] Date: 10/16/24 Time: 1800

Relinquished By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Turnaround Time:  SAME DAY  24 Hr  48 Hr  72

Standard

Temp Received: 2.8 Received On Ice?  Yes  No

1725 Elk Place Denver, Co. 80211 | # 303.433.1322 | originslab.com | For Lab Sample Receiving Only

Origins Laboratory  


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Jeremy Espinoza  
Project Number: 09A1417184  
Project: KMG - Sherwood L Fed 30-29D Wellhead

Origins Laboratory

Sample Receipt Checklist

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

Origins Work Order: E410503

Client: ENSOLUM  
Client Project ID: Sherwood

Checklist Completed by: ZHO/WS  
Date/time completed: 10/16/12

Shipped Via: HO  
(UPS, FedEx, Hand Delivered, Pick-up, etc.)  
Airbill #: N/A

Matrix(s) Received: (Check all that apply):  Soil/Solid \_\_\_\_\_ Water \_\_\_\_\_ Other: \_\_\_\_\_

Cooler Number/Temperature: 1 / 2.8 °C \_\_\_\_\_ °C \_\_\_\_\_ °C (Describe) \_\_\_\_\_ °C

Thermometer ID: 7004

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> ?	/			
Is there ice present (document if blue ice is used)	/			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		/		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		/		
Were all samples received intact <sup>(1)</sup> ?	/			
Was adequate sample volume provided <sup>(1)</sup> ?	/			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?		/		
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	/			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	/			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	/			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	/			
For volatiles in water – Is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			/	
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)			/	
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 (Project Manager) ZHO Date/Time Reviewed 10/16/12

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Jeremy Espinoza  
Project Number: 09A1417184  
Project: KMG - Sherwood L Fed 30-29D Wellhead

**N01(L30-30D)@4.5'**

**10/16/2024 3:15:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory  
E410503-01 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.381		0.100	mg/L	1	B4J1717	10/17/2024	10/18/2024	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND		25.0	mg/kg	1	B4J1657	10/16/2024	10/17/2024	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: <i>o</i> -Terphenyl	115 %		50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B4J1659	10/16/2024	10/17/2024	U
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	U
Benzene	ND		0.00200	"	"	"	"	"	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	ND		0.00200	"	"	"	"	"	U
Xylenes, total	ND		0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	113 %		70-130			"	"	"	
Surrogate: Toluene-d8	101 %		70-130			"	"	"	

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**N01(L30-30D)@4.5'**

**10/16/2024 3:15:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-01 (Soil)**

**GBTEX+TMBs by 8260D**

Surrogate: 4-Bromofluorobenzene	102 %	70-130		B4J16 59	10/16/2024	10/17/2024
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**PAH by EPA 8270E extracted via 3580A**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
1-Methylnaphthalene	0.003	0.002	0.002	mg/kg	1	B4J1658	10/16/2024	10/17/2024	
2-Methylnaphthalene	0.002	0.002	0.002	"	"	"	"	"	
Acenaphthene	ND	0.020	0.020	"	"	"	"	"	U
Anthracene	ND	0.020	0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND	0.005	0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND	0.020	0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND	0.020	0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND	0.020	0.020	"	"	"	"	"	U
Chrysene	ND	0.020	0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND	0.020	0.020	"	"	"	"	"	U
Fluoranthene	ND	0.020	0.020	"	"	"	"	"	U
Fluorene	ND	0.020	0.020	"	"	"	"	"	U
Indeno (1,2,3-cd) pyrene	ND	0.020	0.020	"	"	"	"	"	U
Naphthalene	ND	0.002	0.002	"	"	"	"	"	U
Pyrene	ND	0.020	0.020	"	"	"	"	"	U

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 Project: KMG - Sherwood L Fed 30-29D Wellhead

**N01(L30-30D)@4.5'**

**10/16/2024 3:15:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-01 (Soil)**

**PAH by EPA 8270E extracted via 3580A**

Surrogate: Fluorene-d10	103 %	60-130	B4J16 58	10/16/2024	10/17/2024
Surrogate: Anthracene-d10	83.7 %	60-130	"	"	"
Surrogate: Pyrene-d10	110 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	98.4 %	60-130	"	"	"

**pH in Soil by 9045D**

pH	7.90	pH Units	1	B4J2136	10/21/2024	10/21/2024
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**Table 915 metals by EPA 6020B**

Arsenic	2.05	0.243	mg/kg	10	B4J1660	10/16/2024	10/17/2024
Barium	77.5	8.38	"	"	"	"	"
Cadmium	0.200	0.0838	"	"	"	"	"
Copper	8.77	8.38	"	"	"	"	"
Lead	12.0	0.838	"	"	"	"	"
Nickel	5.62	0.838	"	"	"	"	"
Selenium	ND	0.218	"	"	"	"	"
Silver	ND	0.0838	"	"	"	"	"
Zinc	38.3	31.0	"	"	"	"	"

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Project: KMG - Sherwood L Fed 30-29D Wellhead

**N01(L30-30D)@4.5'-V**  
**10/16/2024 3:16:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-02 (Soil)**

**pH in Soil by 9045D**

pH	7.94			pH Units	1	B4J2136	10/21/2024	10/21/2024	
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Origins Laboratory



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Ensolum  
11049 W 44th Avenue, Suite 103  
Wheat Ridge CO 80033

Jeremy Espinoza  
Project Number: 09A1417184  
Project: KMG - Sherwood L Fed 30-29D Wellhead

**E01(L30-30D)@4.5'**

**10/16/2024 3:10:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory  
E410503-03 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.144		0.102	mg/L	1	B4J1717	10/17/2024	10/18/2024	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND		25.0	mg/kg	1	B4J1657	10/16/2024	10/17/2024	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl	127 %		50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B4J1659	10/16/2024	10/17/2024	U
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	U
Benzene	ND		0.00200	"	"	"	"	"	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	ND		0.00200	"	"	"	"	"	U
Xylenes, total	ND		0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	114 %		70-130			"	"	"	
Surrogate: Toluene-d8	101 %		70-130			"	"	"	

Origins Laboratory



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Ensolum  
11049 W 44th Avenue, Suite 103  
Wheat Ridge CO 80033

Jeremy Espinoza  
Project Number: 09A1417184  
Project: KMG - Sherwood L Fed 30-29D Wellhead

**E01(L30-30D)@4.5'**

**10/16/2024 3:10:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory  
E410503-03 (Soil)**

**GBTEX+TMBs by 8260D**

Surrogate: 4-Bromofluorobenzene      102 %      70-130      B4J16 59      10/16/2024      10/17/2024

**PAH by EPA 8270E extracted via 3580A**

1-Methylnaphthalene	0.004	0.002	mg/kg	1	B4J1658	10/16/2024	10/17/2024	
2-Methylnaphthalene	0.005	0.002	"	"	"	"	"	
Acenaphthene	ND	0.020	"	"	"	"	"	U
Anthracene	ND	0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND	0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	U
Chrysene	ND	0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	U
Fluoranthene	ND	0.020	"	"	"	"	"	U
Fluorene	ND	0.020	"	"	"	"	"	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	"	"	U
Naphthalene	ND	0.002	"	"	"	"	"	U
Pyrene	ND	0.020	"	"	"	"	"	U

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 Wheat Ridge CO 80033

Jeremy Espinoza  
 Project Number: 09A1417184  
 Project: KMG - Sherwood L Fed 30-29D Wellhead

**E01(L30-30D)@4.5'**

**10/16/2024 3:10:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-03 (Soil)**

**PAH by EPA 8270E extracted via 3580A**

Surrogate: Fluorene-d10	102 %	60-130	B4J16 58	10/16/2024	10/17/2024
Surrogate: Anthracene-d10	83.1 %	60-130	"	"	"
Surrogate: Pyrene-d10	105 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	98.0 %	60-130	"	"	"

**pH in Soil by 9045D**

pH	7.91	pH Units	1	B4J2136	10/21/2024	10/21/2024
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**Table 915 metals by EPA 6020B**

Arsenic	2.40	0.254	mg/kg	10	B4J1660	10/16/2024	10/17/2024
Barium	82.0	8.76	"	"	"	"	"
Cadmium	0.192	0.0876	"	"	"	"	"
Copper	ND	8.76	"	"	"	"	"
Lead	12.8	0.876	"	"	"	"	"
Nickel	6.68	0.876	"	"	"	"	"
Selenium	ND	0.228	"	"	"	"	"
Silver	ND	0.0876	"	"	"	"	"
Zinc	42.1	32.4	"	"	"	"	"

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 Project: KMG - Sherwood L Fed 30-29D Wellhead

**E01(L30-30D)@4.5'-V**  
**10/16/2024 3:11:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-04 (Soil)**

**pH in Soil by 9045D**

pH	7.93			pH Units	1	B4J2136	10/21/2024	10/21/2024	
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Jeremy Espinoza  
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 Project: KMG - Sherwood L Fed 30-29D Wellhead

**S01(L30-30D)@4.5'**

**10/16/2024 3:25:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-05 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.181	0.101	mg/L	1	B4J1717	10/17/2024	10/18/2024	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B4J1657	10/16/2024	10/17/2024	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: <i>o</i> -Terphenyl	120 %	50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B4J1659	10/16/2024	10/17/2024	U
1,3,5-Trimethylbenzene	ND	0.00200	"	"	"	"	"	U
Benzene	ND	0.00200	"	"	"	"	"	U
Ethylbenzene	ND	0.00200	"	"	"	"	"	U
Toluene	ND	0.00200	"	"	"	"	"	U
Xylenes, total	ND	0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	115 %	70-130			"	"	"	
Surrogate: Toluene-d8	101 %	70-130			"	"	"	

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 Wheat Ridge CO 80033

Jeremy Espinoza  
 Project Number: 09A1417184  
 Project: KMG - Sherwood L Fed 30-29D Wellhead

**S01(L30-30D)@4.5'**

**10/16/2024 3:25:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-05 (Soil)**

**GBTEX+TMBs by 8260D**

Surrogate: 4-Bromofluorobenzene      101 %      70-130      B4J16 59      10/16/2024      10/17/2024

**PAH by EPA 8270E extracted via 3580A**

1-Methylnaphthalene	0.026	0.002	mg/kg	1	B4J1658	10/16/2024	10/17/2024	
2-Methylnaphthalene	0.039	0.002	"	"	"	"	"	
Acenaphthene	ND	0.020	"	"	"	"	"	U
Anthracene	0.026	0.020	"	"	"	"	"	
Benzo (a) anthracene	ND	0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	U
Chrysene	ND	0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	U
Fluoranthene	ND	0.020	"	"	"	"	"	U
Fluorene	ND	0.020	"	"	"	"	"	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	"	"	U
Naphthalene	0.011	0.002	"	"	"	"	"	
Pyrene	ND	0.020	"	"	"	"	"	U

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Jeremy Espinoza  
Project Number: 09A1417184  
Project: KMG - Sherwood L Fed 30-29D Wellhead

**S01(L30-30D)@4.5'**

**10/16/2024 3:25:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory  
E410503-05 (Soil)**

**PAH by EPA 8270E extracted via 3580A**

Surrogate: Fluorene-d10	102 %		60-130			B4J16 58	10/16/2024	10/17/2024	
Surrogate: Anthracene-d10	83.1 %		60-130			"	"	"	
Surrogate: Pyrene-d10	103 %		60-130			"	"	"	
Surrogate: Benzo (a) pyrene-d12	95.9 %		60-130			"	"	"	

**pH in Soil by 9045D**

pH	7.90			pH Units	1	B4J2136	10/21/2024	10/21/2024	
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**Table 915 metals by EPA 6020B**

Arsenic	2.08	0.250	mg/kg	10	B4J1660	10/16/2024	10/17/2024	
Barium	189	8.62	"	"	"	"	"	
Cadmium	0.204	0.0862	"	"	"	"	"	
Copper	8.70	8.62	"	"	"	"	"	
Lead	10.5	0.862	"	"	"	"	"	
Nickel	5.66	0.862	"	"	"	"	"	
Selenium	ND	0.224	"	"	"	"	"	
Silver	ND	0.0862	"	"	"	"	"	
Zinc	36.8	31.9	"	"	"	"	"	

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Jeremy Espinoza  
Project Number: 09A1417184  
Project: KMG - Sherwood L Fed 30-29D Wellhead

**S01(L30-30D)@4.5'-V**  
**10/16/2024 3:26:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-06 (Soil)**

**pH in Soil by 9045D**

pH	7.88			pH Units	1	B4J2136	10/21/2024	10/21/2024	
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 Wheat Ridge CO 80033

Jeremy Espinoza  
 Project Number: 09A1417184  
 Project: KMG - Sherwood L Fed 30-29D Wellhead

**W01(L30-30D)@4.5'**  
**10/16/2024 3:21:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-07 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.187		0.101	mg/L	1	B4J1718	10/17/2024	10/18/2024	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND		25.0	mg/kg	1	B4J1657	10/16/2024	10/17/2024	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: <i>o</i> -Terphenyl	127 %		50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B4J1659	10/16/2024	10/17/2024	U
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	U
Benzene	ND		0.00200	"	"	"	"	"	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	ND		0.00200	"	"	"	"	"	U
Xylenes, total	ND		0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	115 %		70-130			"	"	"	
Surrogate: Toluene-d8	101 %		70-130			"	"	"	

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11049 W 44th Avenue, Suite 103  
Wheat Ridge CO 80033

Jeremy Espinoza  
Project Number: 09A1417184  
Project: KMG - Sherwood L Fed 30-29D Wellhead

**W01(L30-30D)@4.5'**  
**10/16/2024 3:21:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-07 (Soil)**

**GBTEX+TMBs by 8260D**

Surrogate: 4-Bromofluorobenzene      103 %      70-130      B4J16 59      10/16/2024      10/17/2024

**PAH by EPA 8270E extracted via 3580A**

1-Methylnaphthalene	ND	0.002	mg/kg	1	B4J1658	10/16/2024	10/17/2024	U
2-Methylnaphthalene	ND	0.002	"	"	"	"	"	U
Acenaphthene	ND	0.020	"	"	"	"	"	U
Anthracene	ND	0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND	0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	U
Chrysene	ND	0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	U
Fluoranthene	ND	0.020	"	"	"	"	"	U
Fluorene	ND	0.020	"	"	"	"	"	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	"	"	U
Naphthalene	ND	0.002	"	"	"	"	"	U
Pyrene	ND	0.020	"	"	"	"	"	U

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 Wheat Ridge CO 80033

Jeremy Espinoza  
 Project Number: 09A1417184  
 Project: KMG - Sherwood L Fed 30-29D Wellhead

**W01(L30-30D)@4.5'**  
**10/16/2024 3:21:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-07 (Soil)**

**PAH by EPA 8270E extracted via 3580A**

Surrogate: Fluorene-d10	93.8 %	60-130	B4J16 58	10/16/2024	10/17/2024
Surrogate: Anthracene-d10	84.0 %	60-130	"	"	"
Surrogate: Pyrene-d10	104 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	95.4 %	60-130	"	"	"

**pH in Soil by 9045D**

pH	7.97	pH Units	1	B4J2136	10/21/2024	10/21/2024
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**Table 915 metals by EPA 6020B**

Arsenic	2.08	0.251	mg/kg	10	B4J1660	10/16/2024	10/17/2024
Barium	165	8.65	"	"	"	"	"
Cadmium	0.157	0.0865	"	"	"	"	"
Copper	9.67	8.65	"	"	"	"	"
Lead	9.45	0.865	"	"	"	"	"
Nickel	6.06	0.865	"	"	"	"	"
Selenium	ND	0.225	"	"	"	"	"
Silver	ND	0.0865	"	"	"	"	"
Zinc	38.8	32.0	"	"	"	"	"

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Project Number: 09A1417184  
Project: KMG - Sherwood L Fed 30-29D Wellhead

**W01(L30-30D)@4.5'-V**  
**10/16/2024 3:22:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-08 (Soil)**

**pH in Soil by 9045D**

pH	8.01			pH Units	1	B4J2136	10/21/2024	10/21/2024	
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**Table 915 metals by EPA 6020B**

Barium	169		8.84	mg/kg	10	B4J3141	10/31/2024	11/01/2024	
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 Project Number: 09A1417184  
 Project: KMG - Sherwood L Fed 30-29D Wellhead

**B01(L30-30D)@9'**

**10/16/2024 3:15:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-09 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	ND		0.101	mg/L	1	B4J1718	10/17/2024	10/18/2024	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND		25.0	mg/kg	1	B4J1657	10/16/2024	10/17/2024	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: <i>o</i> -Terphenyl	131 %		50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B4J1659	10/16/2024	10/17/2024	U
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	U
Benzene	ND		0.00200	"	"	"	"	"	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	ND		0.00200	"	"	"	"	"	U
Xylenes, total	ND		0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	116 %		70-130			"	"	"	
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Wheat Ridge CO 80033

Jeremy Espinoza  
Project Number: 09A1417184  
Project: KMG - Sherwood L Fed 30-29D Wellhead

**B01(L30-30D)@9'**

**10/16/2024 3:15:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory  
E410503-09 (Soil)**

**GBTEX+TMBs by 8260D**

Surrogate: Toluene-d8	100 %		70-130			B4J16 59	10/16/2024	10/17/2024	
Surrogate: 4-Bromofluorobenzene	102 %		70-130			"	"	"	

**PAH by EPA 8270E extracted via 3580A**

1-Methylnaphthalene	ND		0.002	mg/kg	1	B4J1658	10/16/2024	10/17/2024	U
2-Methylnaphthalene	ND		0.002	"	"	"	"	"	U
Acenaphthene	ND		0.020	"	"	"	"	"	U
Anthracene	ND		0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND		0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND		0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND		0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND		0.020	"	"	"	"	"	U
Chrysene	ND		0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND		0.020	"	"	"	"	"	U
Fluoranthene	ND		0.020	"	"	"	"	"	U
Fluorene	ND		0.020	"	"	"	"	"	U
Indeno (1,2,3-cd) pyrene	ND		0.020	"	"	"	"	"	U
Naphthalene	ND		0.002	"	"	"	"	"	U
Pyrene	ND		0.020	"	"	"	"	"	U
Surrogate: Fluorene-d10	105 %		60-130			"	"	"	

Origins Laboratory



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Ensolum  
11049 W 44th Avenue, Suite 103  
Wheat Ridge CO 80033

Jeremy Espinoza  
Project Number: 09A1417184  
Project: KMG - Sherwood L Fed 30-29D Wellhead

**B01(L30-30D)@9'**

**10/16/2024 3:15:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory  
E410503-09 (Soil)**

**PAH by EPA 8270E extracted via 3580A**

Surrogate: Anthracene-d10	79.6 %		60-130			B4J16 58	10/16/2024	10/17/2024	
Surrogate: Pyrene-d10	109 %		60-130			"	"	"	
Surrogate: Benzo (a) pyrene-d12	100 %		60-130			"	"	"	

**pH in Soil by 9045D**

pH	8.29			pH Units	1	B4J2136	10/21/2024	10/21/2024	
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**Table 915 metals by EPA 6020B**

Arsenic	0.938	0.268	mg/kg	10	B4J1660	10/16/2024	10/17/2024	
Barium	32.3	9.24	"	"	"	"	"	
Cadmium	ND	0.0924	"	"	"	"	"	
Copper	ND	9.24	"	"	"	"	"	
Lead	4.30	0.924	"	"	"	"	"	
Nickel	2.01	0.924	"	"	"	"	"	
Selenium	ND	0.240	"	"	"	"	"	
Silver	ND	0.0924	"	"	"	"	"	
Zinc	ND	34.2	"	"	"	"	"	

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Wheat Ridge CO 80033

Jeremy Espinoza  
Project Number: 09A1417184  
Project: KMG - Sherwood L Fed 30-29D Wellhead

**B01(L30-30D)@9'-V**  
**10/16/2024 3:16:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-10 (Soil)**

**pH in Soil by 9045D**

pH	8.31			pH Units	1	B4J2136	10/21/2024	10/21/2024	
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Jeremy Espinoza  
Project Number: 09A1417184  
Project: KMG - Sherwood L Fed 30-29D Wellhead

**N01(L30-31D)@4.5'**

**10/16/2024 3:07:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory  
E410503-11 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.141		0.0998	mg/L	1	B4J1718	10/17/2024	10/18/2024	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND		25.0	mg/kg	1	B4J1657	10/16/2024	10/17/2024	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl	139 %		50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B4J1659	10/16/2024	10/17/2024	U
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	U
Benzene	ND		0.00200	"	"	"	"	"	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	ND		0.00200	"	"	"	"	"	U
Xylenes, total	ND		0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	119 %		70-130			"	"	"	
Surrogate: Toluene-d8	98.5 %		70-130			"	"	"	

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 Wheat Ridge CO 80033

Jeremy Espinoza  
 Project Number: 09A1417184  
 Project: KMG - Sherwood L Fed 30-29D Wellhead

**N01(L30-31D)@4.5'**  
**10/16/2024 3:07:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-11 (Soil)**

**GBTEX+TMBs by 8260D**

Surrogate: 4-Bromofluorobenzene      102 %      70-130      B4J16 59      10/16/2024      10/17/2024

**PAH by EPA 8270E extracted via 3580A**

1-Methylnaphthalene	ND	0.002	mg/kg	1	B4J1658	10/16/2024	10/17/2024	U
2-Methylnaphthalene	ND	0.002	"	"	"	"	"	U
Acenaphthene	ND	0.020	"	"	"	"	"	U
Anthracene	ND	0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND	0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	U
Chrysene	ND	0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	U
Fluoranthene	ND	0.020	"	"	"	"	"	U
Fluorene	ND	0.020	"	"	"	"	"	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	"	"	U
Naphthalene	ND	0.002	"	"	"	"	"	U
Pyrene	ND	0.020	"	"	"	"	"	U

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 Project Number: 09A1417184  
 Project: KMG - Sherwood L Fed 30-29D Wellhead

**N01(L30-31D)@4.5'**

**10/16/2024 3:07:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-11 (Soil)**

**PAH by EPA 8270E extracted via 3580A**

Surrogate: Fluorene-d10	98.8 %	60-130	B4J16 58	10/16/2024	10/17/2024
Surrogate: Anthracene-d10	80.0 %	60-130	"	"	"
Surrogate: Pyrene-d10	107 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	95.0 %	60-130	"	"	"

**pH in Soil by 9045D**

pH	9.24	pH Units	1	B4J2136	10/21/2024	10/21/2024
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**Table 915 metals by EPA 6020B**

Arsenic	0.832	0.269	mg/kg	10	B4J1660	10/16/2024	10/17/2024
Barium	35.5	9.28	"	"	"	"	"
Cadmium	ND	0.0928	"	"	"	"	"
Copper	ND	9.28	"	"	"	"	"
Lead	4.87	0.928	"	"	"	"	"
Nickel	2.16	0.928	"	"	"	"	"
Selenium	ND	0.241	"	"	"	"	"
Silver	ND	0.0928	"	"	"	"	"
Zinc	ND	34.3	"	"	"	"	"

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Project: KMG - Sherwood L Fed 30-29D Wellhead

**N01(L30-31D)@4.5'-V**  
**10/16/2024 3:08:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-12 (Soil)**

**pH in Soil by 9045D**

pH	9.34			pH Units	1	B4J2136	10/21/2024	10/21/2024	
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 Project: KMG - Sherwood L Fed 30-29D Wellhead

**E01(L30-31D)@4.5'**

**10/16/2024 3:03:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-13 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.121	0.0988	mg/L	1	B4J1718	10/17/2024	10/18/2024
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B4J1657	10/16/2024	10/17/2024	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: <i>o</i> -Terphenyl	133 %	50-150	"	"	"	"	"
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B4J1659	10/16/2024	10/17/2024	U
1,3,5-Trimethylbenzene	ND	0.00200	"	"	"	"	"	U
Benzene	ND	0.00200	"	"	"	"	"	U
Ethylbenzene	ND	0.00200	"	"	"	"	"	U
Toluene	ND	0.00200	"	"	"	"	"	U
Xylenes, total	ND	0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	115 %	70-130	"	"	"	"	"
Surrogate: Toluene-d8	101 %	70-130	"	"	"	"	"

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Jeremy Espinoza  
 Project Number: 09A1417184  
 Project: KMG - Sherwood L Fed 30-29D Wellhead

**E01(L30-31D)@4.5'**

**10/16/2024 3:03:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-13 (Soil)**

**GBTEX+TMBs by 8260D**

Surrogate: 4-Bromofluorobenzene      102 %      70-130      B4J16 59      10/16/2024      10/17/2024

**PAH by EPA 8270E extracted via 3580A**

1-Methylnaphthalene	ND	0.002	mg/kg	1	B4J1658	10/16/2024	10/17/2024	U
2-Methylnaphthalene	ND	0.002	"	"	"	"	"	U
Acenaphthene	ND	0.020	"	"	"	"	"	U
Anthracene	ND	0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND	0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	U
Chrysene	ND	0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	U
Fluoranthene	ND	0.020	"	"	"	"	"	U
Fluorene	ND	0.020	"	"	"	"	"	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	"	"	U
Naphthalene	ND	0.002	"	"	"	"	"	U
Pyrene	ND	0.020	"	"	"	"	"	U

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Jeremy Espinoza  
Project Number: 09A1417184  
Project: KMG - Sherwood L Fed 30-29D Wellhead

**E01(L30-31D)@4.5'**

**10/16/2024 3:03:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory  
E410503-13 (Soil)**

**PAH by EPA 8270E extracted via 3580A**

Surrogate: Fluorene-d10	98.4 %		60-130			B4J16 58	10/16/2024	10/17/2024	
Surrogate: Anthracene-d10	82.7 %		60-130			"	"	"	
Surrogate: Pyrene-d10	107 %		60-130			"	"	"	
Surrogate: Benzo (a) pyrene-d12	98.3 %		60-130			"	"	"	

**pH in Soil by 9045D**

pH	8.31			pH Units	1	B4J2137	10/21/2024	10/21/2024	
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**Table 915 metals by EPA 6020B**

Arsenic	2.04	0.258	mg/kg	10	B4J1660	10/16/2024	10/17/2024	
Barium	454	8.90	"	"	"	"	"	
Cadmium	0.159	0.0890	"	"	"	"	"	
Copper	ND	8.90	"	"	"	"	"	
Lead	16.9	0.890	"	"	"	"	"	
Nickel	4.69	0.890	"	"	"	"	"	
Selenium	ND	0.231	"	"	"	"	"	
Silver	ND	0.0890	"	"	"	"	"	
Zinc	34.8	32.9	"	"	"	"	"	

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 Project: KMG - Sherwood L Fed 30-29D Wellhead

**E01(L30-31D)@4.5'-V**  
**10/16/2024 3:04:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-14 (Soil)**

**pH in Soil by 9045D**

pH	8.40			pH Units	1	B4J2137	10/21/2024	10/21/2024	
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**Table 915 metals by EPA 6020B**

Barium	50.2		8.75	mg/kg	10	B4J3141	10/31/2024	11/01/2024	
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Project Number: 09A1417184  
Project: KMG - Sherwood L Fed 30-29D Wellhead

**S01(L30-31D)@4.5'**

**10/16/2024 2:59:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory  
E410503-15 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	ND		0.0991	mg/L	1	B4J1718	10/17/2024	10/18/2024	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND		25.0	mg/kg	1	B4J1657	10/16/2024	10/17/2024	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl	141 %		50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B4J1659	10/16/2024	10/17/2024	U
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	U
Benzene	ND		0.00200	"	"	"	"	"	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	ND		0.00200	"	"	"	"	"	U
Xylenes, total	ND		0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	116 %		70-130			"	"	"	
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Jeremy Espinoza  
 Project Number: 09A1417184  
 Project: KMG - Sherwood L Fed 30-29D Wellhead

**S01(L30-31D)@4.5'**

**10/16/2024 2:59:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-15 (Soil)**

**GBTEX+TMBs by 8260D**

Surrogate: Toluene-d8	101 %	70-130			B4J16 59	10/16/2024	10/17/2024
Surrogate: 4-Bromofluorobenzene	101 %	70-130			"	"	"

**PAH by EPA 8270E extracted via 3580A**

1-Methylnaphthalene	ND	0.002	mg/kg	1	B4J1658	10/16/2024	10/17/2024	U
2-Methylnaphthalene	ND	0.002	"	"	"	"	"	U
Acenaphthene	ND	0.020	"	"	"	"	"	U
Anthracene	ND	0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND	0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	U
Chrysene	ND	0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	U
Fluoranthene	ND	0.020	"	"	"	"	"	U
Fluorene	ND	0.020	"	"	"	"	"	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	"	"	U
Naphthalene	ND	0.002	"	"	"	"	"	U
Pyrene	ND	0.020	"	"	"	"	"	U
Surrogate: Fluorene-d10	99.7 %	60-130			"	"	"	

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Jeremy Espinoza  
Project Number: 09A1417184  
Project: KMG - Sherwood L Fed 30-29D Wellhead

**S01(L30-31D)@4.5'**

**10/16/2024 2:59:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory  
E410503-15 (Soil)**

**PAH by EPA 8270E extracted via 3580A**

Surrogate: Anthracene-d10	78.3 %		60-130			B4J16 58	10/16/2024	10/17/2024	
Surrogate: Pyrene-d10	110 %		60-130			"	"	"	
Surrogate: Benzo (a) pyrene-d12	95.6 %		60-130			"	"	"	

**pH in Soil by 9045D**

pH	8.53			pH Units	1	B4J2137	10/21/2024	10/21/2024	
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**Table 915 metals by EPA 6020B**

Arsenic	0.662	0.245	mg/kg	10	B4J1660	10/16/2024	10/17/2024	
Barium	20.3	8.44	"	"	"	"	"	
Cadmium	ND	0.0844	"	"	"	"	"	
Copper	ND	8.44	"	"	"	"	"	
Lead	3.39	0.844	"	"	"	"	"	
Nickel	1.54	0.844	"	"	"	"	"	
Selenium	ND	0.220	"	"	"	"	"	
Silver	ND	0.0844	"	"	"	"	"	
Zinc	ND	31.2	"	"	"	"	"	

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Wheat Ridge CO 80033

Jeremy Espinoza  
Project Number: 09A1417184  
Project: KMG - Sherwood L Fed 30-29D Wellhead

**S01(L30-31D)@4.5'-V**  
**10/16/2024 3:00:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-16 (Soil)**

**pH in Soil by 9045D**

pH	8.45			pH Units	1	B4J2137	10/21/2024	10/21/2024	
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Ensolum  
 11049 W 44th Avenue, Suite 103  
 Wheat Ridge CO 80033

Jeremy Espinoza  
 Project Number: 09A1417184  
 Project: KMG - Sherwood L Fed 30-29D Wellhead

**W01(L30-31D)@4.5'**  
**10/16/2024 2:52:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-17 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	ND		0.0987	mg/L	1	B4J1718	10/17/2024	10/18/2024	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND		25.0	mg/kg	1	B4J1657	10/16/2024	10/17/2024	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: <i>o</i> -Terphenyl	99.7 %		50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B4J1659	10/16/2024	10/17/2024	U
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	U
Benzene	ND		0.00200	"	"	"	"	"	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	ND		0.00200	"	"	"	"	"	U
Xylenes, total	ND		0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	113 %		70-130			"	"	"	
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 Wheat Ridge CO 80033

Jeremy Espinoza  
 Project Number: 09A1417184  
 Project: KMG - Sherwood L Fed 30-29D Wellhead

**W01(L30-31D)@4.5'**  
**10/16/2024 2:52:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-17 (Soil)**

**GBTEX+TMBs by 8260D**

Surrogate: Toluene-d8	101 %	70-130			B4J16 59	10/16/2024	10/17/2024	
Surrogate: 4-Bromofluorobenzene	101 %	70-130			"	"	"	

**PAH by EPA 8270E extracted via 3580A**

1-Methylnaphthalene	ND	0.002	mg/kg	1	B4J1658	10/16/2024	10/17/2024	U
2-Methylnaphthalene	ND	0.002	"	"	"	"	"	U
Acenaphthene	ND	0.020	"	"	"	"	"	U
Anthracene	ND	0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND	0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	U
Chrysene	ND	0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	U
Fluoranthene	ND	0.020	"	"	"	"	"	U
Fluorene	ND	0.020	"	"	"	"	"	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	"	"	U
Naphthalene	ND	0.002	"	"	"	"	"	U
Pyrene	ND	0.020	"	"	"	"	"	U
Surrogate: Fluorene-d10	105 %	60-130			"	"	"	

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 Project: KMG - Sherwood L Fed 30-29D Wellhead

**W01(L30-31D)@4.5'**  
**10/16/2024 2:52:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-17 (Soil)**

**PAH by EPA 8270E extracted via 3580A**

Surrogate: Anthracene-d10	80.7 %		60-130			B4J16 58	10/16/2024	10/17/2024	
Surrogate: Pyrene-d10	108 %		60-130			"	"	"	
Surrogate: Benzo (a) pyrene-d12	95.0 %		60-130			"	"	"	

**pH in Soil by 9045D**

pH	8.64			pH Units	1	B4J2137	10/21/2024	10/21/2024	
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**Table 915 metals by EPA 6020B**

Arsenic	1.62	0.252	mg/kg	10	B4J1660	10/16/2024	10/17/2024	
Barium	140	8.70	"	"	"	"	"	
Cadmium	0.112	0.0870	"	"	"	"	"	
Copper	ND	8.70	"	"	"	"	"	
Lead	7.34	0.870	"	"	"	"	"	
Nickel	3.80	0.870	"	"	"	"	"	
Selenium	ND	0.226	"	"	"	"	"	
Silver	ND	0.0870	"	"	"	"	"	
Zinc	ND	32.2	"	"	"	"	"	

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Project: KMG - Sherwood L Fed 30-29D Wellhead

**W01(L30-31D)@4.5'-V**  
**10/16/2024 2:53:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-18 (Soil)**

**pH in Soil by 9045D**

pH	8.38			pH Units	1	B4J2137	10/21/2024	10/21/2024	
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**Table 915 metals by EPA 6020B**

Barium	27.3		9.46	mg/kg	10	B4J3141	10/31/2024	11/01/2024	
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 Project: KMG - Sherwood L Fed 30-29D Wellhead

**B01(L30-31D)@9'**

**10/16/2024 2:58:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-19 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.126		0.0982	mg/L	1	B4J1718	10/17/2024	10/18/2024	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND		25.0	mg/kg	1	B4J1657	10/16/2024	10/17/2024	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: <i>o</i> -Terphenyl	110 %		50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B4J1659	10/16/2024	10/17/2024	U
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	U
Benzene	ND		0.00200	"	"	"	"	"	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	ND		0.00200	"	"	"	"	"	U
Xylenes, total	ND		0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	109 %		70-130			"	"	"	
Surrogate: Toluene-d8	101 %		70-130			"	"	"	

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 Project Number: 09A1417184  
 Project: KMG - Sherwood L Fed 30-29D Wellhead

**B01(L30-31D)@9'**

**10/16/2024 2:58:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-19 (Soil)**

**GBTEX+TMBs by 8260D**

Surrogate: 4-Bromofluorobenzene	99.8 %	70-130		B4J16 59	10/16/2024	10/17/2024
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**PAH by EPA 8270E extracted via 3580A**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
1-Methylnaphthalene	ND	0.002	0.002	mg/kg	1	B4J1658	10/16/2024	10/17/2024	U
2-Methylnaphthalene	ND	0.002	0.002	"	"	"	"	"	U
Acenaphthene	ND	0.020	0.020	"	"	"	"	"	U
Anthracene	ND	0.020	0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND	0.005	0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND	0.020	0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND	0.020	0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND	0.020	0.020	"	"	"	"	"	U
Chrysene	ND	0.020	0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND	0.020	0.020	"	"	"	"	"	U
Fluoranthene	ND	0.020	0.020	"	"	"	"	"	U
Fluorene	ND	0.020	0.020	"	"	"	"	"	U
Indeno (1,2,3-cd) pyrene	ND	0.020	0.020	"	"	"	"	"	U
Naphthalene	ND	0.002	0.002	"	"	"	"	"	U
Pyrene	ND	0.020	0.020	"	"	"	"	"	U

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 Project Number: 09A1417184  
 Project: KMG - Sherwood L Fed 30-29D Wellhead

**B01(L30-31D)@9'**

**10/16/2024 2:58:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-19 (Soil)**

**PAH by EPA 8270E extracted via 3580A**

Surrogate: Fluorene-d10	103 %		60-130			B4J16 58	10/16/2024	10/17/2024	
Surrogate: Anthracene-d10	74.9 %		60-130			"	"	"	
Surrogate: Pyrene-d10	108 %		60-130			"	"	"	
Surrogate: Benzo (a) pyrene-d12	95.7 %		60-130			"	"	"	

**pH in Soil by 9045D**

pH	11.1			pH Units	1	B4J2137	10/21/2024	10/21/2024	
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**Table 915 metals by EPA 6020B**

Arsenic	1.12	0.269	mg/kg	10	B4J1660	10/16/2024	10/17/2024	
Barium	44.9	9.28	"	"	"	"	"	
Cadmium	ND	0.0928	"	"	"	"	"	
Copper	ND	9.28	"	"	"	"	"	
Lead	4.56	0.928	"	"	"	"	"	
Nickel	2.35	0.928	"	"	"	"	"	
Selenium	ND	0.241	"	"	"	"	"	
Silver	ND	0.0928	"	"	"	"	"	
Zinc	ND	34.3	"	"	"	"	"	

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Project: KMG - Sherwood L Fed 30-29D Wellhead

**B01(L30-31D)@9'-V**  
**10/16/2024 2:59:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-20 (Soil)**

**pH in Soil by 9045D**

pH	10.6			pH Units	1	B4J2137	10/21/2024	10/21/2024	
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 Project: KMG - Sherwood L Fed 30-29D Wellhead

**N01(L30-32D)@4.5'**

**10/16/2024 2:26:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-21 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.279		0.0982	mg/L	1	B4J1718	10/17/2024	10/18/2024	
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**PAH by EPA 8270E extracted via 3580A**

1-Methylnaphthalene	0.004		0.002	mg/kg	1	B4J1658	10/16/2024	10/17/2024	
2-Methylnaphthalene	0.004		0.002	"	"	"	"	"	
Acenaphthene	ND		0.020	"	"	"	"	"	U
Anthracene	ND		0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND		0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND		0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND		0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND		0.020	"	"	"	"	"	U
Chrysene	ND		0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND		0.020	"	"	"	"	"	U
Fluoranthene	ND		0.020	"	"	"	"	"	U
Fluorene	ND		0.020	"	"	"	"	"	U
Indeno (1,2,3-cd) pyrene	ND		0.020	"	"	"	"	"	U
Naphthalene	ND		0.002	"	"	"	"	"	U
Pyrene	ND		0.020	"	"	"	"	"	U

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Project Number: 09A1417184  
Project: KMG - Sherwood L Fed 30-29D Wellhead

**N01(L30-32D)@4.5'**

**10/16/2024 2:26:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory  
E410503-21 (Soil)**

**PAH by EPA 8270E extracted via 3580A**

Surrogate: Fluorene-d10	97.2 %	60-130	B4J16 58	10/16/2024	10/17/2024
Surrogate: Anthracene-d10	88.9 %	60-130	"	"	"
Surrogate: Pyrene-d10	99.4 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	106 %	60-130	"	"	"

**Table 915 metals by EPA 6020B**

Arsenic	4.79	0.262	mg/kg	10	B4J1660	10/16/2024	10/17/2024
Barium	87.4	9.02	"	"	"	"	"
Cadmium	0.740	0.0902	"	"	"	"	"
Copper	14.6	9.02	"	"	"	"	"
Lead	67.3	0.902	"	"	"	"	"
Nickel	11.9	0.902	"	"	"	"	"
Selenium	0.892	0.235	"	"	"	"	"
Silver	0.171	0.0902	"	"	"	"	"
Zinc	55.9	33.4	"	"	"	"	"

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 Project: KMG - Sherwood L Fed 30-29D Wellhead

**N01(L30-32D)@4.5'-V**  
**10/16/2024 2:27:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-22 (Soil)**

**pH in Soil by 9045D**

pH	8.19			pH Units	1	B4J2137	10/21/2024	10/21/2024	
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**Table 915 metals by EPA 6020B**

Arsenic	8.17	0.275	mg/kg	10	B4J3141	10/31/2024	11/01/2024	
Cadmium	1.45	0.0950	"	"	"	"	"	"
Lead	46.0	0.950	"	"	"	"	"	"
Selenium	1.75	0.247	"	"	"	"	"	"

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 Project: KMG - Sherwood L Fed 30-29D Wellhead

**E01(L30-32D)@4.5'**

**10/16/2024 2:29:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-23 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.152		0.101	mg/L	1	B4J1718	10/17/2024	10/18/2024	
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**PAH by EPA 8270E extracted via 3580A**

1-Methylnaphthalene	ND		0.002	mg/kg	1	B4J1658	10/16/2024	10/17/2024	U
2-Methylnaphthalene	ND		0.002	"	"	"	"	"	U
Acenaphthene	ND		0.020	"	"	"	"	"	U
Anthracene	ND		0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND		0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND		0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND		0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND		0.020	"	"	"	"	"	U
Chrysene	ND		0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND		0.020	"	"	"	"	"	U
Fluoranthene	ND		0.020	"	"	"	"	"	U
Fluorene	ND		0.020	"	"	"	"	"	U
Indeno (1,2,3-cd) pyrene	ND		0.020	"	"	"	"	"	U
Naphthalene	ND		0.002	"	"	"	"	"	U
Pyrene	ND		0.020	"	"	"	"	"	U

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 Project Number: 09A1417184  
 Project: KMG - Sherwood L Fed 30-29D Wellhead

**E01(L30-32D)@4.5'**

**10/16/2024 2:29:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-23 (Soil)**

**PAH by EPA 8270E extracted via 3580A**

Surrogate: Fluorene-d10	94.5 %		60-130			B4J16 58	10/16/2024	10/17/2024	
Surrogate: Anthracene-d10	87.0 %		60-130			"	"	"	
Surrogate: Pyrene-d10	97.9 %		60-130			"	"	"	
Surrogate: Benzo (a) pyrene-d12	108 %		60-130			"	"	"	

**Table 915 metals by EPA 6020B**

Arsenic	1.10	0.285	mg/kg	10	B4J1660	10/16/2024	10/17/2024
Barium	38.2	9.82	"	"	"	"	"
Cadmium	0.136	0.0982	"	"	"	"	"
Copper	ND	9.82	"	"	"	"	"
Lead	4.84	0.982	"	"	"	"	"
Nickel	2.62	0.982	"	"	"	"	"
Selenium	ND	0.255	"	"	"	"	"
Silver	ND	0.0982	"	"	"	"	"
Zinc	ND	36.3	"	"	"	"	"

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 Project Number: 09A1417184  
 Project: KMG - Sherwood L Fed 30-29D Wellhead

**E01(L30-32D)@4.5'-V**  
**10/16/2024 2:30:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-24 (Soil)**

**pH in Soil by 9045D**

pH	8.49			pH Units	1	B4J2137	10/21/2024	10/21/2024	
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Origins Laboratory



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Ensolum  
 11049 W 44th Avenue, Suite 103  
 Wheat Ridge CO 80033

Jeremy Espinoza  
 Project Number: 09A1417184  
 Project: KMG - Sherwood L Fed 30-29D Wellhead

**S01(L30-32D)@4.5'**

**10/16/2024 2:33:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-25 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.173		0.0994	mg/L	1	B4J1718	10/17/2024	10/18/2024	
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**PAH by EPA 8270E extracted via 3580A**

1-Methylnaphthalene	0.004		0.002	mg/kg	1	B4J1658	10/16/2024	10/17/2024	
2-Methylnaphthalene	0.003		0.002	"	"	"	"	"	
Acenaphthene	ND		0.020	"	"	"	"	"	U
Anthracene	ND		0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND		0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND		0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND		0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND		0.020	"	"	"	"	"	U
Chrysene	ND		0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND		0.020	"	"	"	"	"	U
Fluoranthene	ND		0.020	"	"	"	"	"	U
Fluorene	ND		0.020	"	"	"	"	"	U
Indeno (1,2,3-cd) pyrene	ND		0.020	"	"	"	"	"	U
Naphthalene	ND		0.002	"	"	"	"	"	U
Pyrene	ND		0.020	"	"	"	"	"	U

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Ensolum  
11049 W 44th Avenue, Suite 103  
Wheat Ridge CO 80033

Jeremy Espinoza  
Project Number: 09A1417184  
Project: KMG - Sherwood L Fed 30-29D Wellhead

**S01(L30-32D)@4.5'**

**10/16/2024 2:33:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory  
E410503-25 (Soil)**

**PAH by EPA 8270E extracted via 3580A**

Surrogate: Fluorene-d10	99.4 %		60-130			B4J16 58	10/16/2024	10/17/2024	
Surrogate: Anthracene-d10	88.2 %		60-130			"	"	"	
Surrogate: Pyrene-d10	88.8 %		60-130			"	"	"	
Surrogate: Benzo (a) pyrene-d12	106 %		60-130			"	"	"	

**Table 915 metals by EPA 6020B**

Arsenic	3.05	0.249	mg/kg	10	B4J1660	10/16/2024	10/17/2024
Barium	237	8.58	"	"	"	"	"
Cadmium	0.300	0.0858	"	"	"	"	"
Copper	14.9	8.58	"	"	"	"	"
Lead	16.9	0.858	"	"	"	"	"
Nickel	8.22	0.858	"	"	"	"	"
Selenium	0.259	0.223	"	"	"	"	"
Silver	0.0866	0.0858	"	"	"	"	"
Zinc	75.2	31.7	"	"	"	"	"

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 Project Number: 09A1417184  
 Project: KMG - Sherwood L Fed 30-29D Wellhead

**S01(L30-32D)@4.5'-V**  
**10/16/2024 2:34:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-26 (Soil)**

**pH in Soil by 9045D**

pH	8.29			pH Units	1	B4J2137	10/21/2024	10/21/2024	
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**Table 915 metals by EPA 6020B**

Barium	252		9.72	mg/kg	10	B4J3141	10/31/2024	11/01/2024	
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 Project Number: 09A1417184  
 Project: KMG - Sherwood L Fed 30-29D Wellhead

**W01(L30-32D)@4.5'**  
**10/16/2024 2:39:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-27 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	ND		0.0992	mg/L	1	B4J1718	10/17/2024	10/18/2024	
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**PAH by EPA 8270E extracted via 3580A**

1-Methylnaphthalene	ND		0.002	mg/kg	1	B4J1658	10/16/2024	10/17/2024	U
2-Methylnaphthalene	ND		0.002	"	"	"	"	"	U
Acenaphthene	ND		0.020	"	"	"	"	"	U
Anthracene	ND		0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND		0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND		0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND		0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND		0.020	"	"	"	"	"	U
Chrysene	ND		0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND		0.020	"	"	"	"	"	U
Fluoranthene	ND		0.020	"	"	"	"	"	U
Fluorene	ND		0.020	"	"	"	"	"	U
Indeno (1,2,3-cd) pyrene	ND		0.020	"	"	"	"	"	U
Naphthalene	ND		0.002	"	"	"	"	"	U
Pyrene	ND		0.020	"	"	"	"	"	U

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Jeremy Espinoza  
Project Number: 09A1417184  
Project: KMG - Sherwood L Fed 30-29D Wellhead

**W01(L30-32D)@4.5'**  
**10/16/2024 2:39:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-27 (Soil)**

**PAH by EPA 8270E extracted via 3580A**

Surrogate: Fluorene-d10	97.3 %		60-130			B4J16 58	10/16/2024	10/17/2024	
Surrogate: Anthracene-d10	83.7 %		60-130			"	"	"	
Surrogate: Pyrene-d10	99.6 %		60-130			"	"	"	
Surrogate: Benzo (a) pyrene-d12	102 %		60-130			"	"	"	

**Table 915 metals by EPA 6020B**

Arsenic	1.14	0.263	mg/kg	10	B4J1660	10/16/2024	10/17/2024
Barium	38.5	9.08	"	"	"	"	"
Cadmium	ND	0.0908	"	"	"	"	"
Copper	ND	9.08	"	"	"	"	"
Lead	6.86	0.908	"	"	"	"	"
Nickel	2.86	0.908	"	"	"	"	"
Selenium	ND	0.236	"	"	"	"	"
Silver	ND	0.0908	"	"	"	"	"
Zinc	ND	33.6	"	"	"	"	"

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Project Number: 09A1417184  
Project: KMG - Sherwood L Fed 30-29D Wellhead

**W01(L30-32D)@4.5'-V**  
**10/16/2024 2:40:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-28 (Soil)**

**pH in Soil by 9045D**

pH	8.69			pH Units	1	B4J2137	10/21/2024	10/21/2024	
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 Project: KMG - Sherwood L Fed 30-29D Wellhead

**B01(L30-32D)@9'**

**10/16/2024 2:47:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-29 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	ND		0.0994	mg/L	1	B4J1718	10/17/2024	10/18/2024	
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**PAH by EPA 8270E extracted via 3580A**

1-Methylnaphthalene	ND		0.002	mg/kg	1	B4J1658	10/16/2024	10/17/2024	U
2-Methylnaphthalene	ND		0.002	"	"	"	"	"	U
Acenaphthene	ND		0.020	"	"	"	"	"	U
Anthracene	ND		0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND		0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND		0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND		0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND		0.020	"	"	"	"	"	U
Chrysene	ND		0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND		0.020	"	"	"	"	"	U
Fluoranthene	ND		0.020	"	"	"	"	"	U
Fluorene	ND		0.020	"	"	"	"	"	U
Indeno (1,2,3-cd) pyrene	ND		0.020	"	"	"	"	"	U
Naphthalene	ND		0.002	"	"	"	"	"	U
Pyrene	ND		0.020	"	"	"	"	"	U

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Jeremy Espinoza  
Project Number: 09A1417184  
Project: KMG - Sherwood L Fed 30-29D Wellhead

**B01(L30-32D)@9'**

**10/16/2024 2:47:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-29 (Soil)**

**PAH by EPA 8270E extracted via 3580A**

Surrogate: Fluorene-d10	96.3 %		60-130			B4J16 58	10/16/2024	10/17/2024	
Surrogate: Anthracene-d10	85.5 %		60-130			"	"	"	
Surrogate: Pyrene-d10	102 %		60-130			"	"	"	
Surrogate: Benzo (a) pyrene-d12	103 %		60-130			"	"	"	

**Table 915 metals by EPA 6020B**

Arsenic	<b>0.590</b>	0.264	mg/kg	10	B4J1660	10/16/2024	10/17/2024
Barium	<b>28.2</b>	9.12	"	"	"	"	"
Cadmium	ND	0.0912	"	"	"	"	"
Copper	ND	9.12	"	"	"	"	"
Lead	<b>3.36</b>	0.912	"	"	"	"	"
Nickel	<b>1.71</b>	0.912	"	"	"	"	"
Selenium	ND	0.237	"	"	"	"	"
Silver	ND	0.0912	"	"	"	"	"
Zinc	ND	33.7	"	"	"	"	"

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Project Number: 09A1417184  
Project: KMG - Sherwood L Fed 30-29D Wellhead

**B01(L30-32D)@9'-V**

**10/16/2024 2:48:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-30 (Soil)**

**pH in Soil by 9045D**

pH	9.14			pH Units	1	B4J2137	10/21/2024	10/21/2024	
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Jeremy Espinoza  
 Project Number: 09A1417184  
 Project: KMG - Sherwood L Fed 30-29D Wellhead

**FL03/FL04-N02@3'**

**10/16/2024 3:45:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-31 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	ND	0.100	mg/L	1	B4J1718	10/17/2024	10/18/2024	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B4J1657	10/16/2024	10/17/2024	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: <i>o</i> -Terphenyl	107 %	50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B4J1659	10/16/2024	10/17/2024	U
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Surrogate: 1,2-Dichloroethane-d4	107 %	70-130			"	"	"	
Surrogate: Toluene-d8	103 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	100 %	70-130			"	"	"	

**PAH by EPA 8270E extracted via 3580A**

1-Methylnaphthalene	ND	0.002	mg/kg	1	B4J1658	10/16/2024	10/17/2024	U
2-Methylnaphthalene	ND	0.002	"	"	"	"	"	U
Acenaphthene	ND	0.020	"	"	"	"	"	U

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Jeremy Espinoza  
Project Number: 09A1417184  
Project: KMG - Sherwood L Fed 30-29D Wellhead

**FL03/FL04-N02@3'**

**10/16/2024 3:45:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory  
E410503-31 (Soil)**

**PAH by EPA 8270E extracted via 3580A**

Anthracene	ND	0.020	mg/kg	1	B4J1658	10/16/2024	10/17/2024	U
Benzo (a) anthracene	ND	0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	U
Chrysene	ND	0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	U
Fluoranthene	ND	0.020	"	"	"	"	"	U
Fluorene	ND	0.020	"	"	"	"	"	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	"	"	U
Naphthalene	ND	0.002	"	"	"	"	"	U
Pyrene	ND	0.020	"	"	"	"	"	U

Surrogate: Fluorene-d10	95.6 %	60-130	"	"	"
Surrogate: Anthracene-d10	85.5 %	60-130	"	"	"
Surrogate: Pyrene-d10	103 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	109 %	60-130	"	"	"

**pH in Soil by 9045D**

pH	<b>8.28</b>	pH Units	1	B4J2137	10/21/2024	10/21/2024
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Jeremy Espinoza  
Project Number: 09A1417184  
Project: KMG - Sherwood L Fed 30-29D Wellhead

**FL03/FL04-N02@3'**

**10/16/2024 3:45:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory  
E410503-31 (Soil)**

**Table 915 metals by EPA 6020B**

Arsenic	1.21		0.275	mg/kg	10	B4J1660	10/16/2024	10/17/2024	
Barium	31.4		9.48	"	"	"	"	"	
Cadmium	ND		0.0948	"	"	"	"	"	
Copper	ND		9.48	"	"	"	"	"	
Lead	5.46		0.948	"	"	"	"	"	
Nickel	2.64		0.948	"	"	"	"	"	
Selenium	ND		0.246	"	"	"	"	"	
Silver	ND		0.0948	"	"	"	"	"	
Zinc	ND		35.1	"	"	"	"	"	

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Project Number: 09A1417184  
Project: KMG - Sherwood L Fed 30-29D Wellhead

**FL03/FL04-N02@3'-V**  
**10/16/2024 3:46:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-32 (Soil)**

**pH in Soil by 9045D**

pH	8.25			pH Units	1	B4J2137	10/21/2024	10/21/2024	
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 Project Number: 09A1417184  
 Project: KMG - Sherwood L Fed 30-29D Wellhead

**FL03/FL04-E02@3'**

**10/16/2024 3:50:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-33 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.133		0.0994	mg/L	1	B4J1718	10/17/2024	10/18/2024	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND		25.0	mg/kg	1	B4J1657	10/16/2024	10/17/2024	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: <i>o</i> -Terphenyl	111 %		50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

Gasoline Range Hydrocarbons	ND		0.200	mg/kg	1	B4J1659	10/16/2024	10/17/2024	U
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Surrogate: 1,2-Dichloroethane-d4	108 %		70-130			"	"	"	
Surrogate: Toluene-d8	103 %		70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	99.6 %		70-130			"	"	"	

**PAH by EPA 8270E extracted via 3580A**

1-Methylnaphthalene	ND		0.002	mg/kg	1	B4J1658	10/16/2024	10/17/2024	U
2-Methylnaphthalene	ND		0.002	"	"	"	"	"	U
Acenaphthene	ND		0.020	"	"	"	"	"	U

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 Project Number: 09A1417184  
 Project: KMG - Sherwood L Fed 30-29D Wellhead

**FL03/FL04-E02@3'**

**10/16/2024 3:50:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-33 (Soil)**

**PAH by EPA 8270E extracted via 3580A**

Anthracene	ND	0.020	mg/kg	1	B4J1658	10/16/2024	10/17/2024	U
Benzo (a) anthracene	0.037	0.005	"	"	"	"	"	
Benzo (a) pyrene	0.038	0.020	"	"	"	"	"	
Benzo (b) fluoranthene	0.040	0.020	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	U
Chrysene	0.046	0.020	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	U
Fluoranthene	0.101	0.020	"	"	"	"	"	
Fluorene	ND	0.020	"	"	"	"	"	U
Indeno (1,2,3-cd) pyrene	0.025	0.020	"	"	"	"	"	
Naphthalene	ND	0.002	"	"	"	"	"	U
Pyrene	0.090	0.020	"	"	"	"	"	

Surrogate: Fluorene-d10	95.4 %	60-130	"	"	"	"	"
Surrogate: Anthracene-d10	84.6 %	60-130	"	"	"	"	"
Surrogate: Pyrene-d10	96.7 %	60-130	"	"	"	"	"
Surrogate: Benzo (a) pyrene-d12	99.5 %	60-130	"	"	"	"	"

**pH in Soil by 9045D**

pH	8.13	pH Units	1	B4J2137	10/21/2024	10/21/2024
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Ensolum  
11049 W 44th Avenue, Suite 103  
Wheat Ridge CO 80033

Jeremy Espinoza  
Project Number: 09A1417184  
Project: KMG - Sherwood L Fed 30-29D Wellhead

**FL03/FL04-E02@3'**

**10/16/2024 3:50:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory  
E410503-33 (Soil)**

**Table 915 metals by EPA 6020B**

Arsenic	3.35	0.267	mg/kg	10	B4J1660	10/16/2024	10/17/2024
Barium	61.4	9.20	"	"	"	"	"
Cadmium	0.465	0.0920	"	"	"	"	"
Copper	23.8	9.20	"	"	"	"	"
Lead	20.6	0.920	"	"	"	"	"
Nickel	4.75	0.920	"	"	"	"	"
Selenium	ND	0.239	"	"	"	"	"
Silver	0.259	0.0920	"	"	"	"	"
Zinc	67.7	34.0	"	"	"	"	"

Origins Laboratory



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Jeremy Espinoza  
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Project: KMG - Sherwood L Fed 30-29D Wellhead

**FL03/FL04-E02@3'-V**  
**10/16/2024 3:51:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-34 (Soil)**

**pH in Soil by 9045D**

pH	8.12			pH Units	1	B4J2137	10/21/2024	10/21/2024	
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 Project Number: 09A1417184  
 Project: KMG - Sherwood L Fed 30-29D Wellhead

**FL03/FL04-S02@3'**

**10/16/2024 3:54:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-35 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	ND	0.101	mg/L	1	B4J1718	10/17/2024	10/18/2024	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B4J1657	10/16/2024	10/17/2024	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: <i>o</i> -Terphenyl	101 %	50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B4J1659	10/16/2024	10/17/2024	U
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Surrogate: 1,2-Dichloroethane-d4	109 %	70-130			"	"	"	
Surrogate: Toluene-d8	102 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	101 %	70-130			"	"	"	

**PAH by EPA 8270E extracted via 3580A**

1-Methylnaphthalene	ND	0.002	mg/kg	1	B4J1658	10/16/2024	10/17/2024	U
2-Methylnaphthalene	ND	0.002	"	"	"	"	"	U
Acenaphthene	ND	0.020	"	"	"	"	"	U

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 Project Number: 09A1417184  
 Project: KMG - Sherwood L Fed 30-29D Wellhead

**FL03/FL04-S02@3'**

**10/16/2024 3:54:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-35 (Soil)**

**PAH by EPA 8270E extracted via 3580A**

Anthracene	ND	0.020	mg/kg	1	B4J1658	10/16/2024	10/17/2024	U
Benzo (a) anthracene	ND	0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	U
Chrysene	ND	0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	U
Fluoranthene	ND	0.020	"	"	"	"	"	U
Fluorene	ND	0.020	"	"	"	"	"	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	"	"	U
Naphthalene	ND	0.002	"	"	"	"	"	U
Pyrene	ND	0.020	"	"	"	"	"	U

Surrogate: Fluorene-d10	97.6 %	60-130	"	"	"
Surrogate: Anthracene-d10	84.3 %	60-130	"	"	"
Surrogate: Pyrene-d10	104 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	102 %	60-130	"	"	"

**pH in Soil by 9045D**

pH	<b>8.18</b>	pH Units	1	B4J2137	10/21/2024	10/22/2024
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Project: KMG - Sherwood L Fed 30-29D Wellhead

**FL03/FL04-S02@3'**

**10/16/2024 3:54:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory  
E410503-35 (Soil)**

**Table 915 metals by EPA 6020B**

Arsenic	1.24	0.263	mg/kg	10	B4J1660	10/16/2024	10/17/2024
Barium	41.0	9.05	"	"	"	"	"
Cadmium	0.109	0.0905	"	"	"	"	"
Copper	ND	9.05	"	"	"	"	"
Lead	7.26	0.905	"	"	"	"	"
Nickel	2.92	0.905	"	"	"	"	"
Selenium	ND	0.235	"	"	"	"	"
Silver	ND	0.0905	"	"	"	"	"
Zinc	ND	33.5	"	"	"	"	"

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Project: KMG - Sherwood L Fed 30-29D Wellhead

**FL03/FL04-S02@3'-V**  
**10/16/2024 3:55:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-36 (Soil)**

**pH in Soil by 9045D**

pH	8.21			pH Units	1	B4J2137	10/21/2024	10/22/2024	
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 Project: KMG - Sherwood L Fed 30-29D Wellhead

**GW-FL03/FL04@5'**  
**10/16/2024 4:10:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-37 (Water)**

**Anions by IC 300.0**

Chloride	283	31.2	mg/L	125	B4J1707	10/17/2024	10/17/2024	
Sulfate	319	31.2	"	"	"	"	"	

**BTEX+N+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND	2.00	ug/L	1	B4J1638	10/16/2024	10/16/2024	U
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	"	"	U
Benzene	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Naphthalene	ND	2.00	"	"	"	"	"	U
Toluene	ND	1.00	"	"	"	"	"	U
Xylenes, total	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	95.8 %	70-130	"	"	"	"	"
Surrogate: Toluene-d8	99.2 %	70-130	"	"	"	"	"
Surrogate: 4-Bromofluorobenzene	92.0 %	70-130	"	"	"	"	"

**Total Dissolved Solids by 2540C**

Total Dissolved Solids	1470	5.00	mg/L	1	B4J1702	10/17/2024	10/18/2024
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 Project: KMG - Sherwood L Fed 30-29D Wellhead

**FL03/FL04-B01@6'**

**10/16/2024 3:58:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-38 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.113		0.100	mg/L	1	B4J1718	10/17/2024	10/18/2024	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND		25.0	mg/kg	1	B4J1657	10/16/2024	10/17/2024	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: <i>o</i> -Terphenyl	95.7 %		50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

Gasoline Range Hydrocarbons	ND		0.200	mg/kg	1	B4J1659	10/16/2024	10/17/2024	U
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Surrogate: 1,2-Dichloroethane-d4	109 %		70-130			"	"	"	
Surrogate: Toluene-d8	102 %		70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	101 %		70-130			"	"	"	

**PAH by EPA 8270E extracted via 3580A**

1-Methylnaphthalene	0.002		0.002	mg/kg	1	B4J1658	10/16/2024	10/17/2024	
2-Methylnaphthalene	0.003		0.002	"	"	"	"	"	
Acenaphthene	0.032		0.020	"	"	"	"	"	

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 Wheat Ridge CO 80033

Jeremy Espinoza  
 Project Number: 09A1417184  
 Project: KMG - Sherwood L Fed 30-29D Wellhead

**FL03/FL04-B01@6'**  
**10/16/2024 3:58:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-38 (Soil)**

**PAH by EPA 8270E extracted via 3580A**

Anthracene	0.075	0.020	mg/kg	1	B4J1658	10/16/2024	10/17/2024	
Benzo (a) anthracene	0.107	0.005	"	"	"	"	"	
Benzo (a) pyrene	0.088	0.020	"	"	"	"	"	
Benzo (b) fluoranthene	0.111	0.020	"	"	"	"	"	
Benzo (k) fluoranthene	0.047	0.020	"	"	"	"	"	
Chrysene	0.118	0.020	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	U
Fluoranthene	0.391	0.020	"	"	"	"	"	
Fluorene	0.040	0.020	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	0.059	0.020	"	"	"	"	"	
Naphthalene	0.010	0.002	"	"	"	"	"	
Pyrene	0.306	0.020	"	"	"	"	"	

Surrogate: Fluorene-d10	96.7 %	60-130	"	"	"	"
Surrogate: Anthracene-d10	86.0 %	60-130	"	"	"	"
Surrogate: Pyrene-d10	98.3 %	60-130	"	"	"	"
Surrogate: Benzo (a) pyrene-d12	107 %	60-130	"	"	"	"

**pH in Soil by 9045D**

pH	8.29	pH Units	1	B4J2137	10/21/2024	10/22/2024
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**FL03/FL04-B01@6'**  
**10/16/2024 3:58:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-38 (Soil)**

**Table 915 metals by EPA 6020B**

Arsenic	2.01	0.259	mg/kg	10	B4J1660	10/16/2024	10/17/2024	
Barium	44.0	8.92	"	"	"	"	"	
Cadmium	0.294	0.0892	"	"	"	"	"	
Copper	14.5	8.92	"	"	"	"	"	
Lead	14.1	0.892	"	"	"	"	"	
Nickel	2.97	0.892	"	"	"	"	"	
Selenium	ND	0.232	"	"	"	"	"	
Silver	0.202	0.0892	"	"	"	"	"	
Zinc	42.2	33.0	"	"	"	"	"	

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**FL03/FL04-B01@6'-V**  
**10/16/2024 3:59:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410503-39 (Soil)**

**pH in Soil by 9045D**

pH	8.01			pH Units	1	B4J2138	10/21/2024	10/22/2024	
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 Project: KMG - Sherwood L Fed 30-29D Wellhead

**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B4J1638 - EPA 5030B (Water)**

**Blank (B4J1638-BLK1)**

Prepared: 10/16/2024 Analyzed: 10/16/2024

1,2,4-Trimethylbenzene	ND	2.00	ug/L							U
1,3,5-Trimethylbenzene	ND	2.00	"							U
Benzene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Naphthalene	ND	2.00	"							U
Toluene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	58		"	62.5	93.2		70-130			
Surrogate: Toluene-d8	62		"	62.5	99.4		70-130			
Surrogate: 4-Bromofluorobenzene	60		"	62.5	96.2		70-130			

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 Project: KMG - Sherwood L Fed 30-29D Wellhead

**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B4J1638 - EPA 5030B (Water)**

**LCS (B4J1638-BS1)**

Prepared: 10/16/2024 Analyzed: 10/16/2024

1,2,4-Trimethylbenzene	51.5	2.00	ug/L	50.0		103	70-130			
1,3,5-Trimethylbenzene	53.1	2.00	"	50.0		106	70-130			
Benzene	48.0	1.00	"	50.0		96.0	70-130			
Ethylbenzene	58.5	1.00	"	50.0		117	70-130			
m,p-Xylene	107	2.00	"	100		107	70-130			
Naphthalene	47.0	2.00	"	50.0		94.0	70-130			
o-Xylene	53.3	1.00	"	50.0		107	70-130			
Toluene	50.5	1.00	"	50.0		101	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	60		"	62.5		95.2	70-130			
<i>Surrogate: Toluene-d8</i>	63		"	62.5		100	70-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	67		"	62.5		107	70-130			

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**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B4J1638 - EPA 5030B (Water)**

<b>Matrix Spike (B4J1638-MS1)</b>	<b>Source: E410463-01</b>			<b>Prepared: 10/16/2024 Analyzed: 10/16/2024</b>						
1,2,4-Trimethylbenzene	37.2	2.00	ug/L	50.0	0.630	73.2	70-130			
1,3,5-Trimethylbenzene	37.3	2.00	"	50.0	0.540	73.5	70-130			
Benzene	23.5	1.00	"	50.0	0.460	46.1	70-130			QM-07
Ethylbenzene	36.4	1.00	"	50.0	ND	72.8	70-130			
m,p-Xylene	66.3	2.00	"	100	3.34	63.0	70-130			QM-07
Naphthalene	41.4	2.00	"	50.0	1.15	80.4	70-130			
o-Xylene	33.8	1.00	"	50.0	0.580	66.4	70-130			QM-07
Toluene	28.6	1.00	"	50.0	0.160	56.9	70-130			QM-07
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		98.5	70-130			
Surrogate: Toluene-d8	61		"	62.5		98.2	70-130			
Surrogate: 4-Bromofluorobenzene	68		"	62.5		109	70-130			

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Project Number: 09A1417184  
Project: KMG - Sherwood L Fed 30-29D Wellhead

**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B4J1638 - EPA 5030B (Water)**

<b>Matrix Spike Dup (B4J1638-MSD1)</b>	<b>Source: E410463-01</b>			<b>Prepared: 10/16/2024 Analyzed: 10/16/2024</b>						
1,2,4-Trimethylbenzene	46.8	2.00	ug/L	50.0	0.630	92.4	70-130	22.8	20	QR-02
1,3,5-Trimethylbenzene	48.7	2.00	"	50.0	0.540	96.4	70-130	26.7	20	QR-02
Benzene	44.2	1.00	"	50.0	0.460	87.4	70-130	61.0	20	QR-02
Ethylbenzene	51.5	1.00	"	50.0	ND	103	70-130	34.3	20	QR-02
m,p-Xylene	98.4	2.00	"	100	3.34	95.1	70-130	39.0	20	QR-02
Naphthalene	50.7	2.00	"	50.0	1.15	99.1	70-130	20.3	20	QR-02
o-Xylene	49.6	1.00	"	50.0	0.580	98.0	70-130	37.9	20	QR-02
Toluene	46.6	1.00	"	50.0	0.160	93.0	70-130	48.0	20	QR-02
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		98.4	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.6	70-130			
Surrogate: 4-Bromofluorobenzene	68		"	62.5		109	70-130			

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 Project: KMG - Sherwood L Fed 30-29D Wellhead

**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B4J1657 - EPA 3550B</b>										
<b>Blank (B4J1657-BLK1)</b>										
					Prepared: 10/16/2024 Analyzed: 10/17/2024					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	27		"	24.9		109	50-150			

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B4J1657 - EPA 3550B**

**LCS (B4J1657-BS1)**

Prepared: 10/16/2024 Analyzed: 10/17/2024

Diesel (C10-C28)	1300	50.0	mg/kg	1000		130	70-130			
Residual Range Organics (C28-C40)	1290	200	"	1000		129	70-130			
Surrogate: o-Terphenyl	67		"	49.8		136	50-150			

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B4J1657 - EPA 3550B**

<b>Matrix Spike (B4J1657-MS1)</b>	<b>Source: E410503-01</b>			<b>Prepared: 10/16/2024 Analyzed: 10/17/2024</b>						
Diesel (C10-C28)	1360	50.0	mg/kg	1000	ND	136	70-130			QM-07
Residual Range Organics (C28-C40)	1390	200	"	1000	ND	139	70-130			QM-07
Surrogate: o-Terphenyl	67		"	49.8		134	50-150			

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B4J1657 - EPA 3550B**

<b>Matrix Spike Dup (B4J1657-MSD1)</b>	<b>Source: E410503-01</b>			<b>Prepared: 10/16/2024 Analyzed: 10/17/2024</b>						
Diesel (C10-C28)	1480	50.0	mg/kg	1000	ND	148	70-130	8.34	35	QM-07
Residual Range Organics (C28-C40)	1530	200	"	1000	ND	153	70-130	9.60	35	QM-07
Surrogate: o-Terphenyl	70		"	49.8		142	50-150			

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B4J1659 - EPA 5030 (soil)**

**Blank (B4J1659-BLK1)**

Prepared: 10/16/2024 Analyzed: 10/16/2024

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	0.00380	"							U
Toluene	ND	0.00200	"							U
Xylenes, total	ND	0.00200	"							U
Gasoline Range Hydrocarbons	ND	0.200	"							U
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125	95.5		70-130			
Surrogate: Toluene-d8	0.13		"	0.125	104		70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125	101		70-130			

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**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B4J1659 - EPA 5030 (soil)**

**LCS (B4J1659-BS1)**

Prepared: 10/16/2024 Analyzed: 10/16/2024

1,2,4-Trimethylbenzene	0.113	0.00200	mg/kg	0.100		113	70-130			
1,3,5-Trimethylbenzene	0.114	0.00200	"	0.100		114	70-130			
Benzene	0.0976	0.00200	"	0.100		97.6	70-130			
Ethylbenzene	0.108	0.00200	"	0.100		108	70-130			
Naphthalene	0.110	0.00380	"	0.100		110	70-130			
Toluene	0.0993	0.00200	"	0.100		99.3	70-130			
o-Xylene	0.112	0.00200	"	0.100		112	70-130			
m,p-Xylene	0.230	0.00400	"	0.200		115	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		94.1	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		102	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		103	70-130			

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**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B4J1659 - EPA 5030 (soil)**

Matrix Spike (B4J1659-MS1)	Source: E410503-01			Prepared: 10/16/2024 Analyzed: 10/17/2024						
1,2,4-Trimethylbenzene	0.0648	0.00200	mg/kg	0.100	ND	64.8	70-130			QM-07
1,3,5-Trimethylbenzene	0.0649	0.00200	"	0.100	ND	64.9	70-130			QM-07
Benzene	0.0663	0.00200	"	0.100	ND	66.3	70-130			QM-07
Ethylbenzene	0.0707	0.00200	"	0.100	ND	70.7	70-130			
Naphthalene	0.0587	0.00380	"	0.100	ND	58.7	70-130			QM-07
Toluene	0.0644	0.00200	"	0.100	ND	64.4	70-130			QM-07
o-Xylene	0.0760	0.00200	"	0.100	ND	76.0	70-130			
m,p-Xylene	0.143	0.00400	"	0.200	ND	71.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.15		"	0.125		117	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.14		"	0.125		111	70-130			

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**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B4J1659 - EPA 5030 (soil)**

<b>Matrix Spike Dup (B4J1659-MSD1)</b>	<b>Source: E410503-01</b>		<b>Prepared: 10/16/2024 Analyzed: 10/17/2024</b>							
1,2,4-Trimethylbenzene	0.0505	0.00200	mg/kg	0.100	ND	50.5	70-130	24.8	20	QM-07
1,3,5-Trimethylbenzene	0.0502	0.00200	"	0.100	ND	50.2	70-130	25.5	20	QM-07
Benzene	0.0663	0.00200	"	0.100	ND	66.3	70-130	0.0603	20	QM-07
Ethylbenzene	0.0612	0.00200	"	0.100	ND	61.2	70-130	14.5	20	QM-07
Naphthalene	0.0488	0.00380	"	0.100	ND	48.8	70-130	18.4	20	QM-07
Toluene	0.0610	0.00200	"	0.100	ND	61.0	70-130	5.49	20	QM-07
o-Xylene	0.0676	0.00200	"	0.100	ND	67.6	70-130	11.8	20	QM-07
m,p-Xylene	0.123	0.00400	"	0.200	ND	61.5	70-130	15.1	20	QM-07
Surrogate: 1,2-Dichloroethane-d4	0.14		"	0.125		116	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.14		"	0.125		109	70-130			

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**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Metals by EPA 6000/7000 Series Methods - Quality Control**  
**Origins Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B4J1660 - EPA 3050B**

**Blank (B4J1660-BLK1)**

Prepared: 10/16/2024 Analyzed: 10/17/2024

Arsenic	ND	0.290	mg/kg							
Barium	ND	10.0	"							
Cadmium	ND	0.100	"							
Copper	ND	10.0	"							
Lead	ND	1.00	"							
Nickel	ND	1.00	"							
Selenium	ND	0.260	"							
Silver	ND	0.100	"							
Zinc	ND	37.0	"							

**LCS (B4J1660-BS1)**

Prepared: 10/16/2024 Analyzed: 10/17/2024

Arsenic	5.24	0.290	mg/kg	5.00		105	80-120			
Barium	565	10.0	"	500		113	80-120			
Cadmium	5.71	0.100	"	5.00		114	80-120			
Copper	55.1	10.0	"	50.0		110	80-120			
Lead	5.50	1.00	"	5.00		110	80-120			
Nickel	5.52	1.00	"	5.00		110	80-120			
Selenium	5.54	0.260	"	5.00		111	80-120			
Silver	5.75	0.100	"	5.00		115	80-120			
Zinc	53.5	37.0	"	50.0		107	80-120			

**Matrix Spike (B4J1660-MS1)**

**Source: E410503-35**

Prepared: 10/16/2024 Analyzed: 10/17/2024

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**Metals by EPA 6000/7000 Series Methods - Quality Control**  
**Origins Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B4J1660 - EPA 3050B**

<b>Matrix Spike (B4J1660-MS1)</b>		<b>Source: E410503-35</b>			<b>Prepared: 10/16/2024 Analyzed: 10/17/2024</b>					
Arsenic	6.29	0.280	mg/kg	4.83	1.24	105	75-125			
Barium	567	9.67	"	483	41.0	109	75-125			
Cadmium	5.53	0.0967	"	4.83	0.109	112	75-125			
Copper	58.1	9.67	"	48.3	6.25	107	75-125			
Lead	11.9	0.967	"	4.83	7.26	95.8	75-125			
Nickel	8.06	0.967	"	4.83	2.92	106	75-125			
Selenium	5.19	0.251	"	4.83	ND	107	75-125			
Silver	5.45	0.0967	"	4.83	0.0679	111	75-125			
Zinc	72.3	35.8	"	48.3	22.5	103	75-125			

<b>Matrix Spike Dup (B4J1660-MSD1)</b>		<b>Source: E410503-35</b>			<b>Prepared: 10/16/2024 Analyzed: 10/17/2024</b>					
Arsenic	7.18	0.282	mg/kg	4.86	1.24	122	75-125	13.1	20	
Barium	582	9.72	"	486	41.0	111	75-125	2.62	20	
Cadmium	5.47	0.0972	"	4.86	0.109	110	75-125	1.11	20	
Copper	62.6	9.72	"	48.6	6.25	116	75-125	7.51	20	
Lead	27.9	0.972	"	4.86	7.26	425	75-125	80.5	20	QM-07, QR-DUP
Nickel	8.25	0.972	"	4.86	2.92	109	75-125	2.32	20	
Selenium	5.24	0.253	"	4.86	ND	108	75-125	0.916	20	
Silver	5.64	0.0972	"	4.86	0.0679	115	75-125	3.45	20	
Zinc	80.9	36.0	"	48.6	22.5	120	75-125	11.3	20	

**Batch B4J3141 - EPA 3050B**

<b>Blank (B4J3141-BLK1)</b>		<b>Prepared: 10/31/2024 Analyzed: 11/01/2024</b>								
Arsenic	ND	0.290	mg/kg							
Barium	ND	10.0	"							
Cadmium	ND	0.100	"							

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**Metals by EPA 6000/7000 Series Methods - Quality Control**  
**Origins Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B4J3141 - EPA 3050B**

**Blank (B4J3141-BLK1)**

Prepared: 10/31/2024 Analyzed: 11/01/2024

Copper	ND	10.0	mg/kg							
Lead	ND	1.00	"							
Nickel	ND	1.00	"							
Selenium	ND	0.260	"							
Silver	ND	0.100	"							
Zinc	ND	37.0	"							

**LCS (B4J3141-BS1)**

Prepared: 10/31/2024 Analyzed: 11/01/2024

Arsenic	5.51	0.290	mg/kg	5.00		110	80-120			
Barium	535	10.0	"	500		107	80-120			
Cadmium	5.61	0.100	"	5.00		112	80-120			
Copper	58.4	10.0	"	50.0		117	80-120			
Lead	5.49	1.00	"	5.00		110	80-120			
Nickel	5.82	1.00	"	5.00		116	80-120			
Selenium	5.49	0.260	"	5.00		110	80-120			
Silver	5.50	0.100	"	5.00		110	80-120			
Zinc	55.6	37.0	"	50.0		111	80-120			

**Matrix Spike (B4J3141-MS1)**

**Source: E4J0012-02**

Prepared: 10/31/2024 Analyzed: 11/01/2024

Arsenic	10.9	0.252	mg/kg	4.35	5.91	115	75-125			
Barium	537	8.70	"	435	60.1	110	75-125			
Cadmium	5.19	0.0870	"	4.35	0.0893	117	75-125			
Copper	58.1	8.70	"	43.5	7.51	116	75-125			
Lead	13.8	0.870	"	4.35	8.79	115	75-125			
Nickel	15.2	0.870	"	4.35	9.69	127	75-125			QM-07
Selenium	4.76	0.226	"	4.35	0.125	107	75-125			
Silver	4.94	0.0870	"	4.35	0.0291	113	75-125			

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**Metals by EPA 6000/7000 Series Methods - Quality Control**  
**Origins Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B4J3141 - EPA 3050B**

<b>Matrix Spike (B4J3141-MS1)</b>		<b>Source: E4J0012-02</b>			<b>Prepared: 10/31/2024 Analyzed: 11/01/2024</b>					
Zinc	86.9	32.2	mg/kg	43.5	39.7	109	75-125			
<b>Matrix Spike Dup (B4J3141-MSD1)</b>		<b>Source: E4J0012-02</b>			<b>Prepared: 10/31/2024 Analyzed: 11/01/2024</b>					
Arsenic	11.4	0.264	mg/kg	4.55	5.91	121	75-125	4.31	20	
Barium	551	9.10	"	455	60.1	108	75-125	2.60	20	
Cadmium	5.38	0.0910	"	4.55	0.0893	116	75-125	3.56	20	
Copper	61.0	9.10	"	45.5	7.51	117	75-125	4.86	20	
Lead	13.5	0.910	"	4.55	8.79	104	75-125	1.95	20	
Nickel	15.5	0.910	"	4.55	9.69	128	75-125	2.14	20	QM-07
Selenium	4.74	0.237	"	4.55	0.125	101	75-125	0.444	20	
Silver	5.17	0.0910	"	4.55	0.0291	113	75-125	4.68	20	
Zinc	91.3	33.7	"	45.5	39.7	113	75-125	4.92	20	

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**EPA 8270E (SW846) - Semivolatile Organic Compounds - Quality Control**  
**Origins Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B4J1658 - EPA 3580**

**Blank (B4J1658-BLK1)**

Prepared: 10/16/2024 Analyzed: 10/17/2024

1-Methylnaphthalene	ND	0.002	mg/kg							U
2-Methylnaphthalene	ND	0.002	"							U
Acenaphthene	ND	0.020	"							U
Anthracene	ND	0.020	"							U
Benzo (a) anthracene	ND	0.005	"							U
Benzo (a) pyrene	ND	0.020	"							U
Benzo (b) fluoranthene	ND	0.020	"							U
Benzo (g,h,i) perylene	ND	0.020	"							U
Benzo (k) fluoranthene	ND	0.020	"							U
Chrysene	ND	0.020	"							U
Dibenz (a,h) anthracene	ND	0.020	"							U
Fluoranthene	ND	0.020	"							U
Fluorene	ND	0.020	"							U
Indeno (1,2,3-cd) pyrene	ND	0.020	"							U
Naphthalene	ND	0.002	"							U
Phenanthrene	ND	0.020	"							U
Pyrene	ND	0.020	"							U

Surrogate: Fluorene-d10	200		ug/kg	200	101	60-130
Surrogate: Anthracene-d10	170		"	200	83.8	60-130
Surrogate: Pyrene-d10	230		"	200	114	60-130
Surrogate: Benzo (a) pyrene-d12	190		"	200	94.2	60-130

**LCS (B4J1658-BS1)**

Prepared: 10/16/2024 Analyzed: 10/17/2024

1-Methylnaphthalene	0.160	0.002	mg/kg	0.200	80.2	70-130
2-Methylnaphthalene	0.163	0.002	"	0.200	81.5	70-130
Acenaphthene	0.169	0.020	"	0.200	84.4	70-130
Anthracene	0.169	0.020	"	0.200	84.6	70-130

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Project Number: 09A1417184  
Project: KMG - Sherwood L Fed 30-29D Wellhead

## EPA 8270E (SW846) - Semivolatile Organic Compounds - Quality Control Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B4J1658 - EPA 3580**

**LCS (B4J1658-BS1)**

Prepared: 10/16/2024 Analyzed: 10/17/2024

Benzo (a) anthracene	0.174	0.005	mg/kg	0.200		86.8	70-130			
Benzo (a) pyrene	0.178	0.020	"	0.200		88.8	70-130			
Benzo (b) fluoranthene	0.199	0.020	"	0.200		99.7	70-130			
Benzo (g,h,i) perylene	0.172	0.020	"	0.200		85.8	70-130			
Benzo (k) fluoranthene	0.187	0.020	"	0.200		93.4	70-130			
Chrysene	0.173	0.020	"	0.200		86.4	70-130			
Dibenz (a,h) anthracene	0.175	0.020	"	0.200		87.5	70-130			
Fluoranthene	0.183	0.020	"	0.200		91.3	70-130			
Fluorene	0.182	0.020	"	0.200		91.0	70-130			
Indeno (1,2,3-cd) pyrene	0.204	0.020	"	0.200		102	70-130			
Naphthalene	0.167	0.002	"	0.200		83.3	70-130			
Phenanthrene	0.169	0.020	"	0.200		84.5	70-130			
Pyrene	0.208	0.020	"	0.200		104	70-130			
Surrogate: Fluorene-d10	210		ug/kg	200		107	60-130			
Surrogate: Anthracene-d10	170		"	200		85.0	60-130			
Surrogate: Pyrene-d10	210		"	200		107	60-130			
Surrogate: Benzo (a) pyrene-d12	200		"	200		101	60-130			

**Matrix Spike (B4J1658-MS1)**

**Source: E410503-01**

Prepared: 10/16/2024 Analyzed: 10/17/2024

1-Methylnaphthalene	0.190	0.002	mg/kg	0.200	0.003	93.6	70-130			
2-Methylnaphthalene	0.193	0.002	"	0.200	0.002	95.2	70-130			
Acenaphthene	0.195	0.020	"	0.200	0.002	96.6	70-130			
Anthracene	0.187	0.020	"	0.200	ND	93.6	70-130			
Benzo (a) anthracene	0.204	0.005	"	0.200	0.003	100	70-130			
Benzo (a) pyrene	0.196	0.020	"	0.200	0.007	94.7	70-130			
Benzo (b) fluoranthene	0.216	0.020	"	0.200	0.007	105	70-130			
Benzo (g,h,i) perylene	0.194	0.020	"	0.200	0.007	93.5	70-130			

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**EPA 8270E (SW846) - Semivolatile Organic Compounds - Quality Control**  
**Origins Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B4J1658 - EPA 3580**

<b>Matrix Spike (B4J1658-MS1)</b>	<b>Source: E410503-01</b>			<b>Prepared: 10/16/2024 Analyzed: 10/17/2024</b>						
Benzo (k) fluoranthene	0.220	0.020	mg/kg	0.200	0.003	109	70-130			
Chrysene	0.222	0.020	"	0.200	0.007	107	70-130			
Dibenz (a,h) anthracene	0.191	0.020	"	0.200	0.002	94.5	70-130			
Fluoranthene	0.219	0.020	"	0.200	0.005	107	70-130			
Fluorene	0.200	0.020	"	0.200	0.0008	99.7	70-130			
Indeno (1,2,3-cd) pyrene	0.228	0.020	"	0.200	0.005	112	70-130			
Naphthalene	0.207	0.002	"	0.200	0.0009	103	70-130			
Phenanthrene	0.199	0.020	"	0.200	0.005	97.2	70-130			
Pyrene	0.241	0.020	"	0.200	0.008	117	70-130			
Surrogate: Fluorene-d10	210		ug/kg	200		103	60-130			
Surrogate: Anthracene-d10	170		"	200		83.3	60-130			
Surrogate: Pyrene-d10	220		"	200		110	60-130			
Surrogate: Benzo (a) pyrene-d12	190		"	200		94.7	60-130			

<b>Matrix Spike Dup (B4J1658-MSD1)</b>	<b>Source: E410503-01</b>			<b>Prepared: 10/16/2024 Analyzed: 10/17/2024</b>						
1-Methylnaphthalene	0.176	0.002	mg/kg	0.200	0.003	86.5	70-130	7.74	20	
2-Methylnaphthalene	0.177	0.002	"	0.200	0.002	87.5	70-130	8.34	20	
Acenaphthene	0.181	0.020	"	0.200	0.002	89.9	70-130	7.16	20	
Anthracene	0.162	0.020	"	0.200	ND	81.1	70-130	14.4	20	
Benzo (a) anthracene	0.202	0.005	"	0.200	0.003	99.3	70-130	1.02	20	
Benzo (a) pyrene	0.181	0.020	"	0.200	0.007	87.2	70-130	7.92	20	
Benzo (b) fluoranthene	0.226	0.020	"	0.200	0.007	109	70-130	4.09	20	
Benzo (g,h,i) perylene	0.196	0.020	"	0.200	0.007	94.3	70-130	0.896	20	
Benzo (k) fluoranthene	0.184	0.020	"	0.200	0.003	90.6	70-130	18.0	20	
Chrysene	0.205	0.020	"	0.200	0.007	99.0	70-130	7.67	20	
Dibenz (a,h) anthracene	0.191	0.020	"	0.200	0.002	94.6	70-130	0.0880	20	
Fluoranthene	0.196	0.020	"	0.200	0.005	95.6	70-130	10.9	20	

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**EPA 8270E (SW846) - Semivolatile Organic Compounds - Quality Control**  
**Origins Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B4J1658 - EPA 3580

Matrix Spike Dup (B4J1658-MSD1)	Source: E410503-01			Prepared: 10/16/2024 Analyzed: 10/17/2024						
Fluorene	0.189	0.020	mg/kg	0.200	0.0008	94.3	70-130	5.58	20	
Indeno (1,2,3-cd) pyrene	0.236	0.020	"	0.200	0.005	116	70-130	3.59	20	
Naphthalene	0.177	0.002	"	0.200	0.0009	88.0	70-130	15.5	20	
Phenanthrene	0.177	0.020	"	0.200	0.005	85.8	70-130	12.1	20	
Pyrene	0.198	0.020	"	0.200	0.008	95.0	70-130	19.7	20	
Surrogate: Fluorene-d10	210		ug/kg	200		104	60-130			
Surrogate: Anthracene-d10	170		"	200		84.0	60-130			
Surrogate: Pyrene-d10	190		"	200		94.3	60-130			
Surrogate: Benzo (a) pyrene-d12	200		"	200		98.7	60-130			

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**Classical Chemistry Parameters - Quality Control**  
**Origins Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B4J1702 - NO PREP</b>										
<b>Blank (B4J1702-BLK1)</b>					Prepared: 10/17/2024 Analyzed: 10/18/2024					
Total Dissolved Solids	ND	5.00	mg/L							
<b>LCS (B4J1702-BS1)</b>					Prepared: 10/17/2024 Analyzed: 10/18/2024					
Total Dissolved Solids	1020	5.00	mg/L	1000		102	90-110			
<b>Duplicate (B4J1702-DUP1)</b>					Source: E410467-01 Prepared: 10/17/2024 Analyzed: 10/18/2024					
Total Dissolved Solids	3520	5.00	mg/L		3430			2.53	10	
<b>Batch B4J1707 - Filter .45um non acidified</b>										
<b>Blank (B4J1707-BLK1)</b>					Prepared: 10/17/2024 Analyzed: 10/17/2024					
Chloride	ND	0.250	mg/L							
Sulfate	ND	0.250	"							
<b>LCS (B4J1707-BS1)</b>					Prepared: 10/17/2024 Analyzed: 10/17/2024					
Chloride	4.02	0.250	mg/L	4.00		100	90-110			
Sulfate	4.06	0.250	"	4.00		102	90-110			
<b>Matrix Spike (B4J1707-MS1)</b>					Source: E410503-37 Prepared: 10/17/2024 Analyzed: 10/18/2024					
Chloride	773		mg/L	500	283	98.0	90-110			
Sulfate	817		"	500	319	99.6	90-110			
<b>Matrix Spike Dup (B4J1707-MSD1)</b>					Source: E410503-37 Prepared: 10/17/2024 Analyzed: 10/18/2024					
Chloride	791		mg/L	500	283	102	90-110	2.31	5	
Sulfate	831		"	500	319	102	90-110	1.62	5	

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**Classical Chemistry Parameters - Quality Control**  
**Origins Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B4J1717 - DTPA Sorbitol Preparation</b>										
<b>Blank (B4J1717-BLK1)</b>					Prepared: 10/17/2024 Analyzed: 10/18/2024					
Boron	ND	0.100	mg/L							
<b>Duplicate (B4J1717-DUP1)</b>		<b>Source: E410501-07</b>			Prepared: 10/17/2024 Analyzed: 10/18/2024					
Boron	0.385	0.101	mg/L		0.380			1.32	50	
<b>Batch B4J1718 - DTPA Sorbitol Preparation</b>										
<b>Blank (B4J1718-BLK1)</b>					Prepared: 10/17/2024 Analyzed: 10/18/2024					
Boron	ND	0.100	mg/L							
<b>Duplicate (B4J1718-DUP1)</b>		<b>Source: E410503-07</b>			Prepared: 10/17/2024 Analyzed: 10/18/2024					
Boron	0.189	0.102	mg/L		0.187			0.916	50	

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**Saturated Paste - Quality Control**  
**Origins Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B4J2136 - Saturated Paste pH/EC</b>										
<b>Duplicate (B4J2136-DUP1)</b>		<b>Source: E410497-02</b>			Prepared: 10/21/2024 Analyzed: 10/21/2024					
pH	8.13		pH Units		8.14			0.123	25	
<b>Batch B4J2137 - Saturated Paste pH/EC</b>										
<b>Duplicate (B4J2137-DUP1)</b>		<b>Source: E410503-13</b>			Prepared: 10/21/2024 Analyzed: 10/21/2024					
pH	8.39		pH Units		8.31			0.958	25	
<b>Batch B4J2138 - Saturated Paste pH/EC</b>										
<b>Duplicate (B4J2138-DUP1)</b>		<b>Source: E410503-39</b>			Prepared: 10/21/2024 Analyzed: 10/22/2024					
pH	7.96		pH Units		8.01			0.626	25	

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### Notes and Definitions

U Sample is Non-Detect.

QR-DUP RPD exceeds QC acceptance criteria, this indicates source sample is not homogenous.

QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported on a wet weight basis.

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