



August 3, 2023

Pamela Knight
1979 CARLSON RD
PARKER, CO 80138

RE: GMT Exploration Company, LLC
Sample ID: Knight 81454-F
Water Source Sampling Results

Dear Mr. Knight:

On July 05, 2023, WSP USA Inc. (WSP), on behalf of GMT Exploration Company, LLC (GMT), sampled your water source (well permit #81454F, Receipt #3683107), located in the northeast quarter of the northeast quarter in section 26, township 6 south, and range 65 west. Per the Colorado Oil and Gas Conservation Commission (COGCC) Rule 609, the water source has been identified within ½-mile of GMT's planned drilling activity. Baseline water samples were collected on February 10, 2022, prior to initially drilling an oil and gas well. The recent post well completion samples were collected to test the water quality of aquifer in the location of your water source after the completion of well and gas drilling.

FIELD WORK

WSP documented the visual appearance and odor (if any) of the water source. Field parameters (specific conductance, dissolved oxygen, pH, and temperature) were measured with instruments calibrated in accordance with manufacturer specifications and recorded prior to sampling.

Disposable or decontaminated equipment was used to collect the sample in containers supplied by the analytical laboratory.

ANALYTICAL RESULTS

WSP submitted the sample, under chain-of-custody procedures, to SGS Laboratories in Wheat Ridge, Colorado for the required water quality analysis. The laboratory analytical report, provided by SGS laboratories, is included as an Attachment. The Colorado Water Quality Control Commission has established regulation 41, the basic standards for groundwater. These standards can be used for general comparison to private water wells and can be accessed at the following internet address:

<https://cdphe.colorado.gov/water-quality-control-commission-regulations>

WSP USA
7245 W Alaska Dr STE 200
LAKEWOOD CO 80226

Tel.: 303-980-0540

wsp.com



SUMMARY

The analytical report provided by SGS Laboratories is included as an Attachment with field sampling forms. The laboratory analytical results from the water well sampling is provided to you.

GMT and WSP appreciate your cooperation in this sampling program. Should you have any questions, feel free to call me at 929-230-4126.

Sincerely,

WSP USA Inc.

Alisha D.

Alisha Dahal
Assistant Consultant, Geologist

Enclosure:

SGS Laboratory Analytical Report and Field Notes

ENCLOSURE A – SGS LABORATORY ANALYTICAL REPORT AND
FIELD NOTES

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

WSP

Irwin Taylor/Marble Redstone

31403332.00

SGS Job Number: DA56609

Sampling Date: 07/05/23

Report to:

WSP Environmental
4600 West 60th Avenue
Arvada, CO 80003
alisha.dahal@wsp.com; david.stainback@wsp.com

ATTN: Alisha Dahal

Total number of pages in report: 45



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable unless noted in the narrative, comments or footnotes.

Eric Hoffman

Client Service contact: Kelly Blanchard 303-425-6021

Certifications: CO (CO00049), NE (NE-OS-06-04), ND (R-027), UT (NELAP CO00049)

LA (LA150028), TX (T104704511), WY (8TMS-L), HI (CO00049), NJ (CO011), NV (CO00049)

This report shall not be reproduced, except in its entirety, without the written approval of SGS.
Test results relate only to samples analyzed.

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Sample Summary

WSP

Job No: DA56609

Irwin Taylor/Marble Redstone
Project No: 31403332.00

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
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This report contains results reported as ND = Not detected. The following applies:
Organics ND = Not detected above the MDL

DA56609-1	07/05/23	14:30	AD	07/05/23	AQ	Ground Water	KNIGHT 81454-F
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CASE NARRATIVE / CONFORMANCE SUMMARY

2

Client: WSP

Job No: DA56609

Site: Irwin Taylor/Marble Redstone

Report Date 7/18/2023 3:48:00 AM

On 07/05/2023, 1 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at SGS North America Inc. (SGS) at a temperature of 4.2 °C. The samples were intact and properly preserved, unless noted below. An SGS Job Number of DA56609 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

MS Volatiles By Method SW846 8260B

Matrix: AQ

Batch ID: V5V3727

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

GC Volatiles By Method RSK175 MOD

Matrix: AQ

Batch ID: GFK291

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

GC Volatiles By Method SW846 8015D

Matrix: AQ

Batch ID: GGA2753

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

GC/LC Semi-volatiles By Method SW846-8015D

Matrix: AQ

Batch ID: OP23954

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) DA56527-8MS, DA56527-8MSD were used as the QC samples indicated.

Metals Analysis By Method EPA 200.7

Matrix: AQ

Batch ID: MP37656

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) DA56612-2MS, DA56612-2MSD were used as the QC samples for the metals analysis.

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Page 1 of 2

General Chemistry By Method EPA 365.1

Matrix: AQ

Batch ID: GP34609

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) DA56593-2DUP, DA56593-2MS, DA56593-2MSD were used as the QC samples for the Phosphorus, Total analysis.

General Chemistry By Method EPA300.0

Matrix: AQ

Batch ID: GP34612

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) DA56652-2MS, DA56652-2MSD were used as the QC samples for the Bromide, Chloride, Fluoride, Sulfate, Bromide analysis.

General Chemistry By Method SM 2320B-2011

Matrix: AQ

Batch ID: GN60617

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) DA56604-1DUP, DA56604-1MS, DA56604-1MSD were used as the QC samples for the Alkalinity, Total as CaCO₃ analysis.

Matrix: AQ

Batch ID: GN60618

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Matrix: AQ

Batch ID: GN60619

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

General Chemistry By Method SM 2540C-2011

Matrix: AQ

Batch ID: GN60640

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) DA56627-2DUP were used as the QC samples for the Solids, Total Dissolved analysis.

SGS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting SGS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by SGS indicated via signature on the report cover.

Tuesday, July 18, 2023

Page 2 of 2

Summary of Hits

Job Number: DA56609
Account: WSP
Project: Irwin Taylor/Marble Redstone
Collected: 07/05/23



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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DA56609-1 KNIGHT 81454-F

Calcium	26400	400		ug/l	EPA 200.7
Magnesium	2140	200		ug/l	EPA 200.7
Potassium	3710	1000		ug/l	EPA 200.7
Sodium	12600	400		ug/l	EPA 200.7
Fluoride	0.37	0.10		mg/l	EPA300.0
Chloride	3.3	0.50		mg/l	EPA300.0
Bromide	0.075	0.050		mg/l	EPA300.0
Sulfate	13.3	0.50		mg/l	EPA300.0
Alkalinity, Bicarbonate as CaCO3	80.0	5.0		mg/l	SM 2320B-2011
Alkalinity, Total as CaCO3	80.0	5.0		mg/l	SM 2320B-2011
Phosphorus, Total	0.023	0.010		mg/l	EPA 365.1
Solids, Total Dissolved	150	10		mg/l	SM 2540C-2011



Wheat Ridge, CO

Section 4

4

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	KNIGHT 81454-F	Date Sampled:	07/05/23
Lab Sample ID:	DA56609-1	Date Received:	07/05/23
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Irwin Taylor/Marble Redstone		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V75653.D	1	07/11/23 23:43	MB	n/a	n/a	V5V3727
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.60	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
1330-20-7	Xylene (total)	ND	1.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		70-130%
17060-07-0	1,2-Dichloroethane-D4	101%		70-130%
2037-26-5	Toluene-D8	104%		70-130%
460-00-4	4-Bromofluorobenzene	112%		70-130%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	KNIGHT 81454-F	Date Sampled:	07/05/23
Lab Sample ID:	DA56609-1	Date Received:	07/05/23
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8015D		
Project:	Irwin Taylor/Marble Redstone		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	GA61719.D	1	07/11/23 21:21	MB	n/a	n/a	GGA2753

Run #1	Purge Volume
Run #2	5.0 ml

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	0.050	0.040	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	99%		60-140%		

ND = Not detected

MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	KNIGHT 81454-F				
Lab Sample ID:	DA56609-1			Date Sampled:	07/05/23
Matrix:	AQ - Ground Water			Date Received:	07/05/23
Method:	RSK175 MOD			Percent Solids:	n/a
Project:	Irwin Taylor/Marble Redstone				

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	FK4026.D	1	07/12/23 16:30	MB	n/a	n/a	GFK291

Run #1	Initial Volume	Headspace Volume	Volume Injected	Temperature
Run #2	39.0 ml	4.0 ml	500 ul	21.6 Deg. C

Methane, Ethane and Propane

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	0.00080	0.00070	mg/l	
74-84-0	Ethane	ND	0.0016	0.0010	mg/l	
74-98-6	Propane	ND	0.0022	0.0017	mg/l	

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	KNIGHT 81454-F				
Lab Sample ID:	DA56609-1			Date Sampled:	07/05/23
Matrix:	AQ - Ground Water			Date Received:	07/05/23
Method:	SW846-8015D SW846 3510C			Percent Solids:	n/a
Project:	Irwin Taylor/Marble Redstone				

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	LW13128.D	1	07/11/23 14:57	JB	07/06/23 10:30	OP23954	GLW483

Run #1	Initial Volume	Final Volume
Run #2	1000 ml	1.0 ml

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	0.50	0.19	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	81%		10-131%		

ND = Not detected

MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	KNIGHT 81454-F	Date Sampled:	07/05/23
Lab Sample ID:	DA56609-1	Date Received:	07/05/23
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	Irwin Taylor/Marble Redstone		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	26400	400	ug/l	1	07/07/23	07/11/23	CDL EPA 200.7 ¹	EPA 200.7 ²
Magnesium	2140	200	ug/l	1	07/07/23	07/11/23	CDL EPA 200.7 ¹	EPA 200.7 ²
Potassium	3710	1000	ug/l	1	07/07/23	07/11/23	CDL EPA 200.7 ¹	EPA 200.7 ²
Sodium	12600	400	ug/l	1	07/07/23	07/11/23	CDL EPA 200.7 ¹	EPA 200.7 ²

- (1) Instrument QC Batch: MA16739
(2) Prep QC Batch: MP37656

RL = Reporting Limit

Report of Analysis

Client Sample ID:	KNIGHT 81454-F	Date Sampled:	07/05/23
Lab Sample ID:	DA56609-1	Date Received:	07/05/23
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	Irwin Taylor/Marble Redstone		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
300.0							
Fluoride	0.37	0.10	mg/l	1	07/07/23 13:17	CS	EPA300.0
Chloride	3.3	0.50	mg/l	1	07/07/23 13:17	CS	EPA300.0
Bromide	0.075	0.050	mg/l	1	07/07/23 13:17	CS	EPA300.0
Sulfate	13.3	0.50	mg/l	1	07/07/23 13:17	CS	EPA300.0
Alkalinity, Bicarbonate as CaC	80.0	5.0	mg/l	1	07/06/23 12:00	JW	SM 2320B-2011
Alkalinity, Carbonate	< 5.0	5.0	mg/l	1	07/06/23 12:00	JW	SM 2320B-2011
Alkalinity, Total as CaCO3	80.0	5.0	mg/l	1	07/06/23 12:00	JW	SM 2320B-2011
Phosphorus, Total	0.023	0.010	mg/l	1	07/07/23 12:39	MB	EPA 365.1
Solids, Total Dissolved	150	10	mg/l	1	07/07/23 08:00	JW	SM 2540C-2011

RL = Reporting Limit

4.1
4

Misc. Forms

5

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

SGS North America Inc. - Wheat Ridge
4036 Youngfield Street, Wheat Ridge, CO 80033
TEL: 303-425-6021 FAX: 303-425-6854
www.sgs.com/ehsusa

[illegible]

Current Regular COC 23MAY23.xls; FORM: EHSA-QAC-0027-01-FORM-Wheat Ridge - COC: RV 9/2/21

DA56609: Chain of Custody

Page 1 of 3

SGS Sample Receipt Summary

Job Number: DA56609

Client: WSP

Project: IRWINTAYLOR

Date / Time Received: 7/5/2023 5:00:00 PM

Delivery Method: HD

Airbill #s:

Cooler Temps (Initial/Adjusted): #1: (4.2/4.2):

Cooler Security

Y or N

Y or N

1. Custody Seals Present:

☒

☐

3. COC Present:

☒

☐

2. Custody Seals Intact:

☒

☐

4. Smpl Dates/Time OK

☒

☐

Cooler Temperature

Y or N

1. Temp criteria achieved:

☒

☐

2. Thermometer ID:

IR Gun;

3. Cooler media:

Ice (Bag)

4. No. Coolers:

1

Quality Control Preservation

Y or N

N/A

1. Trip Blank present / cooler:

☐

☒

☐

2. Trip Blank listed on COC:

☐

☒

☐

3. Samples preserved properly:

☒

☐

4. VOCs headspace free:

☒

☐

☐

Sample Integrity - Documentation

Y or N

1. Sample labels present on bottles:

☒

☐

2. Container labeling complete:

☒

☐

3. Sample container label / COC agree:

☒

☐

Sample Integrity - Condition

Y or N

1. Sample recvd within HT:

☒

☐

2. All containers accounted for:

☒

☐

3. Condition of sample:

Intact

Sample Integrity - Instructions

Y or N

N/A

1. Analysis requested is clear:

☒

☐

2. Bottles received for unspecified tests

☐

☒

3. Sufficient volume recvd for analysis:

☒

☐

4. Compositing instructions clear:

☐

☐

☒

5. Filtering instructions clear:

☐

☐

☒

Comments

Problem Resolution

Page 2 of 2

Job Number: DA56609

CSR: _____

Response Date: _____

Response:

5.1

5

DA56609: Chain of Custody
Page 3 of 3

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Page 1 of 1

Job Number: DA56609
Account: LTENCODE WSP
Project: Irwin Taylor/Marble Redstone

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V3727-MB	5V75638.D	1	07/11/23	MB	n/a	n/a	V5V3727

The QC reported here applies to the following samples:

Method: SW846 8260B

DA56609-1

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.60	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	107% 70-130%
17060-07-0	1,2-Dichloroethane-D4	104% 70-130%
2037-26-5	Toluene-D8	101% 70-130%
460-00-4	4-Bromofluorobenzene	106% 70-130%

Blank Spike/Blank Spike Duplicate Summary

Page 1 of 1

Job Number: DA56609

Account: LTENCODE WSP

Project: Irwin Taylor/Marble Redstone

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V3727-BS	5V75633A.D	1	07/11/23	MB	n/a	n/a	V5V3727
V5V3727-BSD	5V75634.D	1	07/11/23	MB	n/a	n/a	V5V3727

The QC reported here applies to the following samples:

Method: SW846 8260B

DA56609-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	50	51.7	103	51.1	102	1	70-130/30
100-41-4	Ethylbenzene	50	51.3	103	50.7	101	1	70-130/30
108-88-3	Toluene	50	51.2	102	50.8	102	1	70-130/30
1330-20-7	Xylene (total)	150	156	104	155	103	1	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	102%	101%	70-130%
17060-07-0	1,2-Dichloroethane-D4	101%	100%	70-130%
2037-26-5	Toluene-D8	99%	99%	70-130%
460-00-4	4-Bromofluorobenzene	97%	96%	70-130%

* = Outside of Control Limits.

GC Volatiles**QC Data Summaries**

Includes the following where applicable:

- **Method Blank Summaries**
- **Blank Spike Summaries**
- **Matrix Spike and Duplicate Summaries**

Method Blank Summary

Job Number: DA56609
Account: LTENCODE WSP
Project: Irwin Taylor/Marble Redstone

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGA2753-MB	GA61712.D	1	07/11/23	MB	n/a	n/a	GGA2753

The QC reported here applies to the following samples: Method: SW846 8015D

DA56609-1

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	0.050	0.040	mg/l	

CAS No.	Surrogate Recoveries	Limits
120-82-1	1,2,4-Trichlorobenzene	101% 60-140%

7.1.1
7

Method Blank Summary

Job Number: DA56609
Account: LTENCODE WSP
Project: Irwin Taylor/Marble Redstone

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFK291-MB	FK4017.D	1	07/12/23	MB	n/a	n/a	GFK291

The QC reported here applies to the following samples: Method: RSK175 MOD

DA56609-1

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	0.00080	0.00070	mg/l	
74-84-0	Ethane	ND	0.0016	0.0010	mg/l	
74-98-6	Propane	ND	0.0022	0.0017	mg/l	

7.1.2
7

Blank Spike/Blank Spike Duplicate Summary

Job Number: DA56609
Account: LTENCODE WSP
Project: Irwin Taylor/Marble Redstone

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGA2753-BS	GA61709.D	1	07/11/23	MB	n/a	n/a	GGA2753
GGA2753-BSD	GA61710.D	1	07/11/23	MB	n/a	n/a	GGA2753

The QC reported here applies to the following samples: Method: SW846 8015D

DA56609-1

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	BSD mg/l	BSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	2.2	1.77	80	1.82	83	3	64-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
120-82-1	1,2,4-Trichlorobenzene	114%	111%	60-140%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: DA56609
Account: LTENCODE WSP
Project: Irwin Taylor/Marble Redstone

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFK291-BS	FK4018.D	10	07/12/23	MB	n/a	n/a	GFK291
GFK291-BSD	FK4019.D	10	07/12/23	MB	n/a	n/a	GFK291

The QC reported here applies to the following samples:

Method: RSK175 MOD

DA56609-1

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	BSD mg/l	BSD %	RPD	Limits Rec/RPD
74-82-8	Methane	0.512	0.439	86	0.434	85	1	70-135/30
74-84-0	Ethane	0.923	0.829	90	0.822	89	1	70-147/30
74-98-6	Propane	1.38	1.13	82	1.12	81	1	70-140/30

* = Outside of Control Limits.

GC/LC Semi-volatiles**QC Data Summaries**

Includes the following where applicable:

- **Method Blank Summaries**
- **Blank Spike Summaries**
- **Matrix Spike and Duplicate Summaries**

Method Blank Summary

Job Number: DA56609
Account: LTENCODE WSP
Project: Irwin Taylor/Marble Redstone

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP23954-MB	LW12927.D	1	07/08/23	JB	07/06/23	OP23954	GLW481

The QC reported here applies to the following samples: Method: SW846-8015D

DA56609-1

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	0.20	0.19	mg/l	

CAS No.	Surrogate Recoveries	Limits
84-15-1	o-Terphenyl	71% 10-131%

Blank Spike Summary

Job Number: DA56609
Account: LTENCODE WSP
Project: Irwin Taylor/Marble Redstone

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP23954-BS	LW12928.D	1	07/08/23	JB	07/06/23	OP23954	GLW481

The QC reported here applies to the following samples: Method: SW846-8015D

DA56609-1

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	Limits
	TPH-DRO (C10-C28)	5	4.12	82	20-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	100%	10-131%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: DA56609
Account: LTENCODE WSP
Project: Irwin Taylor/Marble Redstone

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP23954-BS	LW12931.D	1	07/08/23	JB	07/06/23	OP23954	GLW481

The QC reported here applies to the following samples: Method: SW846-8015D

DA56609-1

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	Limits
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CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	90%	10-131%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: DA56609
Account: LTENCODE WSP
Project: Irwin Taylor/Marble Redstone

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP23954-MS	LW12929.D	1	07/08/23	JB	07/06/23	OP23954	GLW481
OP23954-MSD	LW12930.D	1	07/08/23	JB	07/06/23	OP23954	GLW481
DA56527-8 ^a	LW12934.D	1	07/08/23	JB	07/06/23	OP23954	GLW481

The QC reported here applies to the following samples: Method: SW846-8015D

DA56609-1

CAS No.	Compound	DA56527-8 mg/l	Spike Q mg/l	MS mg/l	MS %	Spike mg/l	MSD mg/l	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	ND	5	3.53	71	5	3.50	70	1	20-130/30

CAS No.	Surrogate Recoveries	MS	MSD	DA56527-8	Limits
84-15-1	o-Terphenyl	94%	93%	82%	10-131%

(a) Used for QC purposes only.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: DA56609
Account: LTENCODE WSP
Project: Irwin Taylor/Marble Redstone

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP23954-MS	LW12932.D	1	07/08/23	JB	07/06/23	OP23954	GLW481
OP23954-MSD	LW12933.D	1	07/08/23	JB	07/06/23	OP23954	GLW481
DA56527-8 ^a	LW12934.D	1	07/08/23	JB	07/06/23	OP23954	GLW481

The QC reported here applies to the following samples: Method: SW846-8015D

DA56609-1

CAS No.	Compound	DA56527-8 mg/l	Spike Q	mg/l	MS mg/l	MS %	Spike mg/l	MSD mg/l	MSD %	RPD	Limits Rec/RPD
CAS No.	Surrogate Recoveries	MS	MSD	DA56527-8	Limits						
84-15-1	o-Terphenyl	93%	92%	82%	10-131%						

(a) Used for QC purposes only.

* = Outside of Control Limits.

Metals Analysis

QC Data Summaries

6

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: DA56609
Account: LTENCODE - WSP
Project: Irwin Taylor/Marble Redstone

QC Batch ID: MP37656
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 07/07/23

Metal	RL	IDL	MDL	MB raw	final
Aluminum	100	46	50		
Antimony	30	14	20		
Arsenic	25	22	7		
Barium	10	.3	3		
Beryllium	10	1	2		
Boron	50	3.3	10		
Cadmium	10	1.9	5		
Calcium	400	6.6	61	-12	<400
Chromium	10	1.1	2		
Cobalt	5.0	2.7	4		
Copper	10	4.6	6		
Iron	20	8.9	10		
Lead	50	13	15		
Lithium	5.0	.6	4		
Magnesium	200	50	40	-6.5	<200
Manganese	5.0	.5	1		
Molybdenum	10	8.5	3		
Nickel	30	6.2	10		
Phosphorus	150	91	110		
Potassium	1000	84	300	-6.4	<1000
Selenium	50	30	30		
Silicon	100	41	50		
Silver	30	.6	5		
Sodium	400	13	150	17.9	<400
Strontium	5.0	.1	1		
Thallium	12	17	11		
Tin	60	41	51		
Titanium	10	.5	2		
Uranium	50	3.9	20		
Vanadium	10	.9	2		
Zinc	30	9	7		

Associated samples MP37656: DA56609-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: DA56609
Account: LTENCODE - WSP
Project: Irwin Taylor/Marble Redstone

QC Batch ID: MP37656
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 07/07/23

Metal	RL	IDL	MDL	MB raw	final
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(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA56609
 Account: LTENCODE - WSP
 Project: Irwin Taylor/Marble Redstone

QC Batch ID: MP37656
 Matrix Type: AQUEOUS

Methods: EPA 200.7
 Units: ug/l

Prep Date: 07/07/23

Metal	DA56612-2 Original MS		Spikelot ICPAL5	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic					
Barium					
Beryllium					
Boron					
Cadmium					
Calcium	3150	8410	5000	105.2	70-130
Chromium	anr				
Cobalt					
Copper					
Iron	anr				
Lead					
Lithium					
Magnesium	617	6120	5000	110.1	70-130
Manganese					
Molybdenum					
Nickel					
Phosphorus					
Potassium	503	5440	5000	98.7	70-130
Selenium					
Silicon					
Silver					
Sodium	1900	6970	5000	101.4	70-130
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP37656: DA56609-1

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA56609
Account: LTENCODE - WSP
Project: Irwin Taylor/Marble Redstone

QC Batch ID: MP37656
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 07/07/23

Metal	DA56612-2 Original MS	SpikeLot ICPAL5 % Rec	QC Limits
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(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA56609
Account: LTENCODE - WSP
Project: Irwin Taylor/Marble Redstone

QC Batch ID: MP37656
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 07/07/23

Metal	DA56612-2 Original	MSD	Spikelot ICPAL5	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic						
Barium						
Beryllium						
Boron						
Cadmium						
Calcium	3150	8660	5000	110.2	2.9	20
Chromium	anr					
Cobalt						
Copper						
Iron	anr					
Lead						
Lithium						
Magnesium	617	6310	5000	113.9	3.1	20
Manganese						
Molybdenum						
Nickel						
Phosphorus						
Potassium	503	5600	5000	101.9	2.9	20
Selenium						
Silicon						
Silver						
Sodium	1900	7160	5000	105.2	2.7	20
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP37656: DA56609-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA56609
Account: LTENCODE - WSP
Project: Irwin Taylor/Marble Redstone

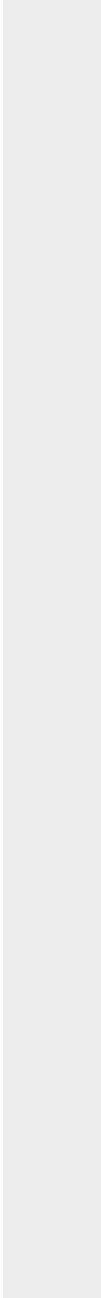
QC Batch ID: MP37656
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 07/07/23

Metal	DA56612-2 Original MSD	SpikeLot ICPALL5 % Rec	MSD RPD	QC Limit
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(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested



SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: DA56609
Account: LTENCODE - WSP
Project: Irwin Taylor/Marble Redstone

QC Batch ID: MP37656
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 07/07/23

Metal	BSP Result	Spikelot ICPALL5	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium	5270	5000	105.4	85-115
Chromium	anr			
Cobalt				
Copper				
Iron	anr			
Lead				
Lithium				
Magnesium	5530	5000	110.6	85-115
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium	5010	5000	100.2	85-115
Selenium				
Silicon				
Silver				
Sodium	5150	5000	103.0	85-115
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP37656: DA56609-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: DA56609
Account: LTENCODE - WSP
Project: Irwin Taylor/Marble Redstone

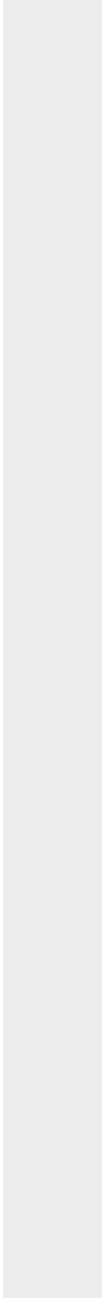
QC Batch ID: MP37656
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 07/07/23

Metal	BSP Result	Spikelot ICPALL5	% Rec	QC Limits
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(anr) Analyte not requested



General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: DA56609
Account: LTENCODE - WSP
Project: Irwin Taylor/Marble Redstone

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Alkalinity, Bicarbonate as CaC	GN60618	5.0	0.0	mg/l	100	100	100.0	90-110%
Alkalinity, Carbonate	GN60619	5.0	0.0	mg/l	100	100	100.0	90-110%
Alkalinity, Total as CaCO3	GN60617	5.0	0.0	mg/l	100	100	100.0	90-110%
Bromide	GP34612/GN60635	0.050	0.0	mg/l	0.5	0.496	99.2	90-110%
Chloride	GP34612/GN60635	0.50	0.0	mg/l	5	4.72	94.4	90-110%
Fluoride	GP34612/GN60635	0.10	0.0	mg/l	1	0.957	95.7	90-110%
Nitrogen, Nitrate	GP34612/GN60635	0.010	0.0	mg/l	0.1	0.0984	98.4	90-110%
Nitrogen, Nitrite	GP34612/GN60635	0.0040	0.0	mg/l	0.05	0.0478	95.6	90-110%
Phosphorus, Total	GP34609/GN60632	0.010	0.0	mg/l	0.2	0.199	99.5	90-110%
Solids, Total Dissolved	GN60640	10	0.0	mg/l	250	258	103.2	90-110%
Solids, Total Dissolved	GN60640	10	0.0	mg/l	250	258	103.2	90-110%
Sulfate	GP34612/GN60635	0.50	0.0	mg/l	5	4.86	97.2	90-110%

Associated Samples:

Batch GN60617: DA56609-1
Batch GN60618: DA56609-1
Batch GN60619: DA56609-1
Batch GN60640: DA56609-1
Batch GP34609: DA56609-1
Batch GP34612: DA56609-1
(*) Outside of QC limits

10.1
10

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: DA56609
Account: LTENCODE - WSP
Project: Irwin Taylor/Marble Redstone

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Alkalinity, Total as CaCO ₃	GN60617	DA56604-1	mg/l	145	145	0.0	0-20%
Phosphorus, Total	GP34609/GN60632	DA56593-2	mg/l	0.54	0.52	3.8	0-20%
Solids, Total Dissolved	GN60640	DA56627-2	mg/l	194	199	2.5	0-5.44%
Solids, Total Dissolved	GN60640	DA56627-2	mg/l	194	199	2.5	0-5.44%

Associated Samples:

Batch GN60617: DA56609-1

Batch GN60640: DA56609-1

Batch GP34609: DA56609-1

(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: DA56609
Account: LTENCODE - WSP
Project: Irwin Taylor/Marble Redstone

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Alkalinity, Total as CaCO ₃	GN60617	DA56604-1	mg/l	145	100	250	105.0	80-120%
Bromide	GP34612/GN60635	DA56652-2	mg/l	0.63 U	12.5	13.0	104.0	80-120%
Chloride	GP34612/GN60635	DA56652-2	mg/l	141	125	270	103.2	80-120%
Fluoride	GP34612/GN60635	DA56652-2	mg/l	1.3 U	25	25.7	102.8	80-120%
Nitrogen, Nitrate	GP34612/GN60635	DA56652-2	mg/l	4.4	2.5	6.9	100.0	80-120%
Nitrogen, Nitrite	GP34612/GN60635	DA56652-2	mg/l	0.48	1.25	1.7	97.6	80-120%
Phosphorus, Total	GP34609/GN60632	DA56593-2	mg/l	0.54	0.2	0.73	95.0	90-110%
Sulfate	GP34612/GN60635	DA56652-2	mg/l	190	125	318	102.4	80-120%

Associated Samples:

Batch GN60617: DA56609-1

Batch GP34609: DA56609-1

Batch GP34612: DA56609-1

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: DA56609
Account: LTENCODE - WSP
Project: Irwin Taylor/Marble Redstone

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Alkalinity, Total as CaCO3	GN60617	DA56604-1	mg/l	145	100	255	2.0	20%
Bromide	GP34612/GN60635	DA56652-2	mg/l	0.63 U	12.5	12.9	0.8	20%
Chloride	GP34612/GN60635	DA56652-2	mg/l	141	125	268	2.6	20%
Fluoride	GP34612/GN60635	DA56652-2	mg/l	1.3 U	25	25.4	1.6	20%
Nitrogen, Nitrate	GP34612/GN60635	DA56652-2	mg/l	4.4	2.5	6.9	0.0	20%
Nitrogen, Nitrite	GP34612/GN60635	DA56652-2	mg/l	0.48	1.25	1.7	19.4	20%
Phosphorus, Total	GP34609/GN60632	DA56593-2	mg/l	0.54	0.2	0.73	0.0	20%
Sulfate	GP34612/GN60635	DA56652-2	mg/l	190	125	316	5.5	20%

Associated Samples:

Batch GN60617: DA56609-1

Batch GP34609: DA56609-1

Batch GP34612: DA56609-1

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

ATTACHMENT 1 - Example Field Sampling Data Sheet

Field Sampling Data Sheet

COGCC Facility ID _____ Facility Name Irruvin Taylor Date of Sample 07/05/23
 Site Address 1979 Carlson Rd Site Contact Pam Knight Phone # 720-851-1671
 Sample Type (baseline, post-drill, etc.): Post drill O&G API Number _____
 Property Owner Name Pamela Knight Phone # _____

Mailing Address 1979 Carlson Rd, Parker, CO

Individuals Present (Who was on-site during the sampling?) Alisha Dahal

Handed Out:

Introduction Letter? Y ☒ N ☐ FAQ Sheet? Y ☒ N ☐ How Well Do You Know Your Water Well Booklet? Y ☒ N ☐

Water Well Information from Permit Records

Permit Number 81154-F Receipt Number: _____ Total Depth (ft): NA Static Water Level (ft): NA
 Yield (GPM): _____ Well Diameter (in): 4"

Water Well Information Onsite

GPS Location (field): 39.504498, -104.627960
 GPS Location (post-processed): _____
 Legal Location (qtrqtr Section Township Range): NE NE Sec 26 T6S R6SW
 Casing height (in.): _____ Ground Elevation (ft): 6222 How determined: Google Earth
 Approximate distance to the Oil & Gas well pad: 2,300

%LEL at wellhead (if measured): _____ %CH₄ (by volume) at wellhead (if measured): _____

Photo(s) Taken? Y ☒ N ☐ Weather conditions: Sunny 78°F

Where was the sample taken? (Outside Tap, Well House, Kitchen Tap, Spring, Seep, etc.) Hydrant Infront of the house

Condition of the Well, Spring or Seep (Wellhead sealed? Does the ground slope away from the well? Visible contamination of spring/seep? etc.): Good, sealed well head, hydrant in front of the house.

WSP

WELL DEVELOPMENT/PURGING FORM

PURGING REQUIREMENTS

When using bailers, remove from 3 to 5 casing volumes and sample when pH, S.C. and Temp are $\pm 10\%$ for 2 successive readings.

When using a low flow pump, there is no casing volume requirement. An equilibrium flow rate must first be established, and then sample when the following criteria are met for 3 successive readings.

Well Stabilization Criteria:

pH ± 0.1 standard units
 S.C. $\pm 3\%$ microseimens
 D.O. ± 0.3 mg/L
 ORP ± 10 millivolts
 Turbidity $\pm 10\%$ NTU's
 Discharge 0.2 to 0.5 liters/min.
 Drawdown < 0.33 ft once discharge is met

Developer's Initials: Ad

Purging Method:

Pump

Bailer

Other

Project Name:

Thuan Taylor

Project Number:

31403332

Well ID:

Knight-707136/81454-F

Date	Time	Initial Water Depth	pH	Temp (C)	S.C. (u-S)	Dissolved Oxygen (mg/L)	ORP (mV)	Volume Removed (gallons)	Casing Volumes Removed	Comments (Color, Turbidity, Odor, NAPL)
03/05/03	14:10		7.41	13.01	238	3.77	148.0	~10		Clear, NO odor
	14:15		7.38	12.91	241	3.89	120.9			Clear, NO odor
	14:20		7.38	12.92	240	2.85	118.0			Clear, NO odor
	14:25		7.35	12.96	239	2.80	115.9			Clear, NO odor
	14:30		7.35	12.93	236	2.80	113.8	~200		Samples @ 14:30
	Flow	Sg-25s								YSI calibration Temp
										ORP 1 228mV F: 220mV 20.54
										pH 7 1 - 6.89 F: 7.00 20.53
										pH 4 1 - 3.98 4.00 20.20
										Spclond 1- 142846mV F: 141345mV
										D0 3.98 7.75

Casing Volume = 0.163 (for 2" diameter wells) x (Total Depth of Well from measuring point - Initial Water Depth) = x 3 well volumes =