



05/03/11

Technical Report for

Colorado Oil & Gas, Brighton

Burkhart 200300876

Accutest Job Number: D23015

Sampling Date: 04/28/11

Report to:

Colorado Oil & Gas, Brighton
9203 East 155th Drive
Brighton, CO 80602
john.axelson@state.co.us

ATTN: John Axelson

Total number of pages in report: 19



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

A handwritten signature in black ink, appearing to read 'J. Hamilton'.

John Hamilton
Laboratory Director

Client Service contact: Shea Greiner 303-425-6021

Certifications: CO, ID, NE, NM, ND (R-027) (PW) UT (NELAP CO00049)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.

Test results relate only to samples analyzed.

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Sample Summary

Colorado Oil & Gas, Brighton
Burkhart 200300876

Job No: D23015

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
D23015-1	04/28/11	09:53 JA	04/28/11	AQ	Ground Water	BURKHART WW
D23015-1F	04/28/11	09:53 JA	04/28/11	AQ	Groundwater Filtered	BURKHART WW

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: Colorado Oil & Gas, Brighton

Job No D23015

Site: Burkhardt 200300876

Report Dat 5/3/2011 1:29:18 PM

On 04/28/2011, one (1) sample, 0 Trip Blanks, and 0 Field Blanks were received at Accutest Mountain States (AMS) at a temperature of 4.0°C. The sample was intact and properly preserved, unless noted below. An AMS Job Number of D23015 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.

Metals By Method SW846 6010B

Matrix AQ

Batch ID: MP4586

- The sample was digested and analyzed within the recommended method holding time.
- The method blank for this batch meets method specific criteria.
- Samples D22956-1MS and D22956-1MSD were used as the QC samples for the metals analysis.

AMS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting AMS'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.

AMS 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 AMS indicated via signature on the report cover.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: BURKHART WW
Lab Sample ID: D23015-1
Matrix: AQ - Ground Water
Project: Burkhart 200300876

Date Sampled: 04/28/11
Date Received: 04/28/11
Percent Solids: n/a

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 25	25	ug/l	1	04/29/11	04/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Barium	32.5	10	ug/l	1	04/29/11	04/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Cadmium	< 10	10	ug/l	1	04/29/11	04/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Calcium	73900	400	ug/l	1	04/29/11	04/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Chromium	< 10	10	ug/l	1	04/29/11	04/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Iron	934	70	ug/l	1	04/29/11	04/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Lead	< 50	50	ug/l	1	04/29/11	04/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Magnesium	21700	200	ug/l	1	04/29/11	04/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Manganese	51.5	5.0	ug/l	1	04/29/11	04/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Potassium	5660	1000	ug/l	1	04/29/11	04/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Selenium	< 50	50	ug/l	1	04/29/11	04/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Silver	< 30	30	ug/l	1	04/29/11	04/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Sodium	65900	400	ug/l	1	04/29/11	05/02/11 GJ	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA1494

(2) Instrument QC Batch: MA1495

(3) Prep QC Batch: MP4586

RL = Reporting Limit

Report of Analysis

Client Sample ID: BURKHART WW
Lab Sample ID: D23015-1F
Matrix: AQ - Groundwater Filtered
Project: Burkhart 200300876

Date Sampled: 04/28/11
Date Received: 04/28/11
Percent Solids: n/a

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 25	25	ug/l	1	04/29/11	04/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Barium	31.9	10	ug/l	1	04/29/11	04/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Cadmium	< 10	10	ug/l	1	04/29/11	04/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Calcium	70700	400	ug/l	1	04/29/11	04/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Chromium	< 10	10	ug/l	1	04/29/11	04/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Iron	758	70	ug/l	1	04/29/11	04/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Lead	< 50	50	ug/l	1	04/29/11	04/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Magnesium	20800	200	ug/l	1	04/29/11	04/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Manganese	49.2	5.0	ug/l	1	04/29/11	04/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Potassium	5400	1000	ug/l	1	04/29/11	04/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Selenium	< 50	50	ug/l	1	04/29/11	04/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Silver	< 30	30	ug/l	1	04/29/11	04/30/11 JM	SW846 6010B ¹	SW846 3010A ³
Sodium	63100	400	ug/l	1	04/29/11	05/02/11 GJ	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA1494

(2) Instrument QC Batch: MA1495

(3) Prep QC Batch: MP4586

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D23015

Client: COGCC

Immediate Client Services Action Required: No

Date / Time Received: 4/28/2011 2:20:00 PM

No. Coolers: 1

Client Service Action Required at Login: No

Project: BURKHART 200300876

Airbill #'s: HD

<u>Cooler Security</u>	<u>Y</u>	<u>or</u>	<u>N</u>		<u>Y</u>	<u>or</u>	<u>N</u>
1. Custody Seals Present:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	3. COC Present:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Custody Seals Intact:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	4. Smpl Dates/Time OK	<input checked="" type="checkbox"/>		<input type="checkbox"/>

<u>Cooler Temperature</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Temp criteria achieved:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Cooler temp verification:			Infrared gun
3. Cooler media:			Ice (bag)

<u>Quality Control Preservation</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Trip Blank present / cooler:	<input type="checkbox"/>		<input type="checkbox"/>	
2. Trip Blank listed on COC:	<input type="checkbox"/>		<input type="checkbox"/>	
3. Samples preserved properly:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. VOCs headspace free:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

<u>Sample Integrity - Documentation</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Sample labels present on bottles:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Container labeling complete:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
3. Sample container label / COC agree:	<input checked="" type="checkbox"/>		<input type="checkbox"/>

<u>Sample Integrity - Condition</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Sample recvd within HT:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. All containers accounted for:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
3. Condition of sample:			Intact

<u>Sample Integrity - Instructions</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Analysis requested is clear:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
2. Bottles received for unspecified tests	<input type="checkbox"/>		<input checked="" type="checkbox"/>	
3. Sufficient volume rec'd for analysis:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. Compositing instructions clear:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Filtering instructions clear:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments

 Accutest Laboratories
 V:(303) 425-6021

 4036 Youngfield Street
 F: (303) 425-6854

 Wheat Ridge, CO
 www.accutest.com

Metals Analysis

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QC Data Summaries

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: D23015
Account: COGCCOB - Colorado Oil & Gas, Brighton
Project: Burkhardt 200300876

QC Batch ID: MP4586
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 04/29/11

Metal	RL	IDL	MDL	MB raw	final
Aluminum	100	5.9	5.9		
Antimony	30	3.1	3.1		
Arsenic	25	5.9	5.9	-5.5	<25
Barium	10	1.1	1.1	0.20	<10
Beryllium	10	.44	.5		
Boron	50	4.8	4.8		
Cadmium	10	.27	.27	0.60	<10
Calcium	400	9.6	15	20.0	<400
Chromium	10	.18	.79	0.30	<10
Cobalt	5.0	.35	.35		
Copper	10	.85	2.8		
Iron	70	3.4	13	6.3	<70
Lead	50	1.6	2.1	1.0	<50
Lithium	4.0	.28	1.2		
Magnesium	200	5.8	10	2.1	<200
Manganese	5.0	.053	.31	0.90	<5.0
Molybdenum	10	.45	.87		
Nickel	30	.43	1		
Phosphorus	100	11	20		
Potassium	1000	55	55	42.4	<1000
Selenium	50	3.8	3.8	2.0	<50
Silicon	50	3.8	3.8		
Silver	30	.18	.31	0.20	<30
Sodium	400	110	110	160	<400
Strontium	5.0		.25		
Thallium	10	2.9	2.9		
Tin	50	5.5	9.9		
Titanium	10	.11	.31		
Uranium	50	1.5	3.5		
Vanadium	10	.16	.22		
Zinc	30	.28	1.8		

Associated samples MP4586: D23015-1, D23015-1F

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

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D23015
Account: COGCCOB - Colorado Oil & Gas, Brighton
Project: Burkhardt 200300876

QC Batch ID: MP4586
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

5.1.1

5

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D23015
 Account: COGCCOB - Colorado Oil & Gas, Brighton
 Project: Burkhardt 200300876

QC Batch ID: MP4586
 Matrix Type: AQUEOUS

Methods: SW846 6010B
 Units: ug/l

Prep Date: 04/29/11

Metal	D22956-1 Original MS		SpikeLot MPICPALL % Rec		QC Limits
Aluminum	anr				
Antimony	anr				
Arsenic	0.0	998	1000	99.8	75-125
Barium	73.7	2080	2000	100.3	75-125
Beryllium	anr				
Boron	anr				
Cadmium	0.70	488	500	97.5	75-125
Calcium	3530	29400	25000	103.5	75-125
Chromium	0.40	486	500	97.1	75-125
Cobalt	anr				
Copper	anr				
Iron	12.9	4900	5000	97.7	75-125
Lead	0.0	1010	1000	101.0	75-125
Lithium	anr				
Magnesium	1100	26600	25000	102.0	75-125
Manganese	84.5	566	500	96.3	75-125
Molybdenum	anr				
Nickel	anr				
Phosphorus					
Potassium	122	26500	25000	105.5	75-125
Selenium	0.0	956	1000	95.6	75-125
Silicon					
Silver	0.0	203	200	101.5	75-125
Sodium	288000	309000	25000	84.0	75-125
Strontium	anr				
Thallium	anr				
Tin					
Titanium	anr				
Uranium					
Vanadium	anr				
Zinc	anr				

Associated samples MP4586: D23015-1, D23015-1F

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

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D23015
Account: COGCCOB - Colorado Oil & Gas, Brighton
Project: Burkhart 200300876

QC Batch ID: MP4586
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

5.1.2

5

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D23015
 Account: COGCCOB - Colorado Oil & Gas, Brighton
 Project: Burkhart 200300876

QC Batch ID: MP4586
 Matrix Type: AQUEOUS

Methods: SW846 6010B
 Units: ug/l

Prep Date: 04/29/11

Metal	D22956-1 Original	MSD	Spikelet MPICPAL	% Rec	MSD RPD	QC Limit
Aluminum	anr					
Antimony	anr					
Arsenic	0.0	1010	1000	101.0	1.2	20
Barium	73.7	2100	2000	101.3	1.0	20
Beryllium	anr					
Boron	anr					
Cadmium	0.70	494	500	98.7	1.2	20
Calcium	3530	30000	25000	105.9	2.0	20
Chromium	0.40	495	500	98.9	1.8	20
Cobalt	anr					
Copper	anr					
Iron	12.9	4980	5000	99.3	1.6	20
Lead	0.0	1020	1000	102.0	1.0	20
Lithium	anr					
Magnesium	1100	27100	25000	104.0	1.9	20
Manganese	84.5	576	500	98.3	1.8	20
Molybdenum	anr					
Nickel	anr					
Phosphorus						
Potassium	122	26900	25000	107.1	1.5	20
Selenium	0.0	966	1000	96.6	1.0	20
Silicon						
Silver	0.0	207	200	103.5	2.0	20
Sodium	288000	313000	25000	100.0	1.3	20
Strontium	anr					
Thallium	anr					
Tin						
Titanium	anr					
Uranium						
Vanadium	anr					
Zinc	anr					

Associated samples MP4586: D23015-1, D23015-1F

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

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D23015
Account: COGCCOB - Colorado Oil & Gas, Brighton
Project: Burkhart 200300876

QC Batch ID: MP4586
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

5.1.2

5

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D23015
 Account: COGCCOB - Colorado Oil & Gas, Brighton
 Project: Burkhardt 200300876

QC Batch ID: MP4586
 Matrix Type: AQUEOUS

Methods: SW846 6010B
 Units: ug/l

Prep Date: 04/29/11

Metal	BSP Result	Spikelot MPICPALL	% Rec	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	953	1000	95.3	80-120
Barium	1930	2000	96.5	80-120
Beryllium	anr			
Boron	anr			
Cadmium	469	500	93.8	80-120
Calcium	25700	25000	102.8	80-120
Chromium	483	500	96.6	80-120
Cobalt	anr			
Copper	anr			
Iron	4770	5000	95.4	80-120
Lead	1010	1000	101.0	80-120
Lithium	anr			
Magnesium	25200	25000	100.8	80-120
Manganese	484	500	96.8	80-120
Molybdenum	anr			
Nickel	anr			
Phosphorus				
Potassium	25600	25000	102.4	80-120
Selenium	930	1000	93.0	80-120
Silicon				
Silver	196	200	98.0	80-120
Sodium	25700	25000	102.8	80-120
Strontium	anr			
Thallium	anr			
Tin				
Titanium	anr			
Uranium				
Vanadium	anr			
Zinc	anr			

Associated samples MP4586: D23015-1, D23015-1F

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

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D23015
Account: COGCCCCOB - Colorado Oil & Gas, Brighton
Project: Burkhart 200300876

QC Batch ID: MP4586
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

5.1.3

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