



ALS Paragon



Inorganics Case Narrative

Colorado Oil & Gas Conservation Commission

Complaint 200206880

Work Order Number: 0904002

1. This report consists of 1 water sample.
2. The sample was received cool and intact by ALS Paragon on 04/01/09.
3. The sample had been correctly preserved for the requested analyses.
4. The sample was prepared for analysis based on Methods for the Chemical Analysis of Waters and Wastes (MCAWW), May 1994 procedures and Environmental Monitoring Systems Laboratory (EMSL) Rev 2.1 procedures.
5. The sample was analyzed following MCAWW and EMSL procedures for the following methods:

<u>Analyte</u>	<u>Method</u>	<u>SOP #</u>
Alkalinity	310.1	1106 Rev 7
Bicarbonate	310.1	1106 Rev 7
Carbonate	310.1	1106 Rev 7
pH	150.1	1126 Rev 16
Specific conductance	120.1	1128 Rev 9
Sulfide	376.1	1120 Rev 5
TDS	160.1	1101 Rev 10
Bromide	300.0	1113 Rev 11
Chloride	300.0	1113 Rev 11
Fluoride	300.0	1113 Rev 11
Nitrate as N	300.0	1113 Rev 11
Nitrite as N	300.0	1113 Rev 11
Sulfate	300.0	1113 Rev 11

6. All standards and solutions were used within their recommended shelf life with the exception of the sodium thiosulfate standard solution used to standardize the iodine solution for sulfide by 376.1. The sample was a non-detect for sulfide. Re-analysis could not be performed because the sample was depleted. A Non-Conformance Report (NCR) has been included to document this occurrence.



7. The sample was prepared and analyzed within the established hold time for each analysis.

All in house quality control procedures were followed, as described below.

8. General quality control procedures.

- n A preparation (method) blank and laboratory control sample (LCS) were prepared and analyzed with the samples in each applicable preparation batch. There were not more than 20 samples in each preparation batch.
- n The method blank associated with each applicable batch was below the reporting limit for the requested analytes. This indicates that no contaminants were introduced to the samples during preparation and analysis.
- n The LCS was within the acceptance limits for each applicable analysis.
- n All initial and continuing calibration blanks (ICB/CCB) associated with each applicable analytical batch were below the reporting limit for the requested analytes.
- n All initial and continuing calibration verifications (ICV/CCV) associated with each applicable analytical batch were within the acceptance criteria for the requested analytes with the exception of CCV1 for chloride and CCV4 for bromide. None of the samples associated with this order number were bracketed by CCV1. The MS and MSD were bracketed by CCV4. A Non-Conformance Report (NCR) has been included to document this occurrence.

9. Matrix specific quality control procedures.

Sample 0904002-1 was designated as the quality control sample for the pH, specific conductance, sulfide, bromide, chloride, fluoride, nitrate as N, nitrite as N, and sulfate analyses. Per method requirements, matrix QC was performed for the alkalinity, bicarbonate, carbonate, and TDS analyses. Since a sample from this order number was not the selected quality control (QC) sample, matrix specific QC results are not included in this report.

Similarity of matrix and therefore relevance of the QC results should not be automatically inferred for any sample other than the native sample selected for QC.

- n A matrix spike (MS) and matrix spike duplicate (MSD) were prepared and analyzed with the bromide, chloride, fluoride, nitrate as N, nitrite as N, and sulfate batch. All guidance criteria for precision and accuracy were met.
- n A sample duplicate was prepared and analyzed with the pH, specific conductance, and sulfide batches. All guidance criteria for precision were met.

10. Reduced aliquots were taken of the samples for the alkalinity, bicarbonate, and carbonate analysis. Reporting limits were elevated accordingly.

11. Manual integrations are performed when needed to provide consistent and defensible data following the guidelines in SOP 939 Revision 3.



The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS Paragon certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Megan Johnson
Megan Johnson
Inorganics Primary Data Reviewer

4/13/09
Date

C.A.L.A
Inorganics Final Data Reviewer

4/13/09
Date



Inorganic Data Reporting Qualifiers

The following qualifiers are used by the laboratory when reporting results of inorganic analyses.

- Concentration qualifier -- If the analyte was analyzed for but not detected a “U” is entered.
- QC qualifier -- Specified entries and their meanings are as follows:
 - N - Spiked sample recovery not within control limits.
 - * - Duplicate analysis (relative percent difference) not within control limits.
 - Z - Calibration spike recovery not within control limits.

ALS Paragon

Sample Number(s) Cross-Reference Table

Paragon OrderNum: 0904002

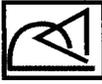
Client Name: Colorado Oil & Gas Conservation Commission

Client Project Name: Complaint 200206880

Client Project Number:

Client PO Number: OE PHA 09000000004

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
Ross WW	0904002-1		WATER	31-Mar-09	10:18
Trip Blank	0904002-2		WATER	31-Mar-09	



Paragon Analyticals

A Division of DataChem Laboratories, Inc.

225 Commerce Drive Fort Collins, CO 80524
800-443-1511 or (970) 490-1511 (970) 490-1522 Fax

Accession Number (LAB ID) 0904002

Chain-of-Custody Date 3/11/09 Page 1 of 1

Originator: Retain pink copy:

Project Name/No.: _____ Sampler(s): Contaminated Turnaround (circle one) Standard or Rush (Due 1/2 days) (Dispose: Date 3/11/09 or Return to Client)

Report To: Peter Gintantas
 Phone: 719-846-3091
 Fax: _____
 E-mail: peter.gintantas@state.co.us
 Company: Colorado Gas Cons, Comm.
 Address: _____

Circle method (right); provide additional information as needed (comments).
Complaint 200206880

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (indicate type... HCl, etc.)	No. of Containers
<u>Ross WW</u>	<u>3/11/09</u>	<u>10:10</u>	<u>1</u>	<u>W</u>	<u>HCl</u>	
<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>2</u>	<u>W</u>	<u>HCl</u>	
<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>3</u>	<u>W</u>	<u>HCl</u>	
<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>4</u>	<u>W</u>	<u>HCl</u>	
<u>Trip Blank</u>			<u>5</u>	<u>W</u>	<u>HCl</u>	

* Time Zone: EST CST (MST) PST Matrix Key: O = oil, S = soil, NS = non-soil solid, W = water, L = liquid, E = extract, F = filter

Comments:
Filter + preserve metals upon receipt
ANALYSIS = Pb, Cd, Fe, Ni, Cu, Ni, Nb, SO4
200.7 = Pb, Be, B, Ca, Cr, Co, Cu, Fe, Li, Mg, Mn, Ni, K, Na, Sr, Zn
200.8 = Sb, Ar, Cd, Pb, Mo, Se, Ag, Te, U

Method	SW#	Result
VOCs	SW82608	X
BTEX (only Methane, Ethane, Ethylene, Ethane)	SW8270C	X
SVOCs	SW8270C	X
OC Pesticides	SW8081A	X
PCBs	SW8082	X
Herbicides	SW8151A	X
Explosives	SW8330	X
TCLP Organics	SW1311	X
TCLP Metals	SW1311 Hg	X
Total Metals by ICP Hg	SW6010B 7470 7471 E200.7	X
Dissolved Metals by ICP Hg	SW6010B 7470 E200.7	X
Total Metals by ICP/MS	SW6020A E200.8	X
Dissolved Metals by ICP/MS	SW6020A E200.8	X
Inorganic Anions	SW9056 E300.0 (specify in comments)	X
Solids:	Total E160.3 DS E160.1 TSS E160.2	X
	SW9040B SW9045C	X
	SW8015B GRO DRO (circle one or both)	X
Gross Alpha / Beta	SW9310 E900.0	X
Actinides by Paragon SOP	Pu / U / Am / Th / Cm /	X
Tritium	E906.0	X
Total Alpha-Emitting Radium	SW9315 E903.0	X
Radium 226	E903.1	X
Radium 228	SW9320 E904.0	X
Strontium 90 (Total RadioSr)	D5811-00	X
Gamma Isotopes	E901.1	X
Radon 222	SM7510Rn	X

Relinquished By: P.G.
 Signature: _____
 Printed Name: Peter Gintantas
 Date: 3/11/09 Time: 15:30
 Company: Colorado Gas Cons, Comm.

Relinquished By: ALS
 Signature: _____
 Printed Name: Cheryl Trimble
 Date: 4-1-09 Time: 0445
 Company: ALS

CONDITION OF SAMPLE UPON RECEIPT FORM

Paragon Analytics

Client: COGCC

Workorder No: 0904002

Project Manager: AW

Initials: CDT Date: 4-1-09

1. Does this project require any special handling in addition to standard Paragon procedures?		YES	<input checked="" type="radio"/> NO
2. Are custody seals on shipping containers intact?		NONE	<input checked="" type="radio"/> YES NO
3. Are Custody seals on sample containers intact?		<input checked="" type="radio"/> NONE	YES NO
4. Is there a COC (Chain-of-Custody) present or other representative documents?		<input checked="" type="radio"/> YES	NO
5. Are the COC and bottle labels complete and legible ?		<input checked="" type="radio"/> YES	NO
6. Is the COC in agreement with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		<input checked="" type="radio"/> YES	<input checked="" type="radio"/> NO
7. Were airbills / shipping documents present and/or removable?	DROP OFF	<input checked="" type="radio"/> YES	NO
8. Are all aqueous samples requiring preservation preserved correctly? (excluding volatiles)	N/A	<input checked="" type="radio"/> YES	<input checked="" type="radio"/> NO
9. Are all aqueous non-preserved samples pH 4-9 ?	N/A	<input checked="" type="radio"/> YES	NO
10. Is there sufficient sample for the requested analyses?		<input checked="" type="radio"/> YES	NO
11. Were all samples placed in the proper containers for the requested analyses?		<input checked="" type="radio"/> YES	NO
12. Are all samples within holding times for the requested analyses?		<input checked="" type="radio"/> YES	NO
13. Were all sample containers received intact ? (not broken or leaking, etc.)		<input checked="" type="radio"/> YES	NO
14. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, Rx CN/S, radon) headspace free? Size of bubble: <input checked="" type="checkbox"/> < green pea <input type="checkbox"/> > green pea	N/A	YES	<input checked="" type="radio"/> NO
15. Do perchlorate LCMS-MS samples have headspace? (at least 1/3 of container required)	<input checked="" type="radio"/> N/A	YES	NO
16. Were samples checked for and free from the presence of residual chlorine ? (Applicable when PM has indicated samples are from a chlorinated water source; note if field preservation with sodium thiosulfate was not observed.)	<input checked="" type="radio"/> N/A	YES	NO
17. Were the samples shipped on ice ?		<input checked="" type="radio"/> YES	NO
18. Were cooler temperatures measured at 0.1-6.0°C? IR gun used*: #2 <input checked="" type="radio"/> #4		RAD ONLY	<input checked="" type="radio"/> YES NO
Cooler #: <u>1</u>			
Temperature (°C): <u>3.8</u>			
No. of custody seals on cooler: <u>1</u>			
External µR/hr reading: <u>13</u>			
Background µR/hr reading: <u>11</u>			
Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? <input checked="" type="radio"/> YES / NO / NA (If no. see Form 008.)			

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16.

- Headspace. 0904002-2.1 < green pea (Trip Blank - not listed on COC)
- Metals bottle received unpreserved. Filter + preserve prior to analysis.

If applicable, was the client contacted? YES / NO / NA Contact: Peter Goutantas Date/Time: e-mail 4/1/09

Project Manager Signature / Date: [Signature] 4/1/09

*IR Gun #2: Oakton, SN 29922500201-0066

*IR Gun #4: Oakton, SN 2372220101-0002

BICARBONATE AS CaCO3

Method EPA310.1

Sample Results

Lab Name: ALS Paragon
Client Name: Colorado Oil & Gas Conservation Commission
Client Project ID: Complaint 200206880
Work Order Number: 0904002 **Final Volume:** 100 ml
Reporting Basis: As Received **Matrix:** WATER
Prep Method: NONE **Result Units:** MG/L

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag	Sample Aliquot
Ross WW	0904002-1	03/31/2009	04/03/2009	04/03/2009	N/A	1	160	20		25 ml

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *ak0904002-1*

CARBONATE AS CaCO3

Method EPA310.1

Sample Results

Lab Name: ALS Paragon

Client Name: Colorado Oil & Gas Conservation Commission

Client Project ID: Complaint 200206880

Work Order Number: 0904002

Final Volume: 100 ml

Reporting Basis: As Received

Matrix: WATER

Prep Method: NONE

Result Units: MG/L

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag	Sample Aliquot
Ross WW	0904002-1	03/31/2009	04/03/2009	04/03/2009	N/A	1	20	20	U	25 ml

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *ak0904002-1*

Date Printed: Wednesday, April 08, 2009

ALS Paragon

Page 2 of 3

LIMS Version: 6.254A

TOTAL ALKALINITY AS CaCO3

Method EPA310.1

Sample Results

Lab Name: ALS Paragon

Client Name: Colorado Oil & Gas Conservation Commission

Client Project ID: Complaint 200206880

Work Order Number: 0904002

Final Volume: 100 ml

Reporting Basis: As Received

Matrix: WATER

Prep Method: NONE

Result Units: MG/L

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag	Sample Aliquot
Ross WW	0904002-1	03/31/2009	04/03/2009	04/03/2009	N/A	1	160	20		25 ml

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *ak0904002-1*

Date Printed: Wednesday, April 08, 2009

ALS Paragon

Page 3 of 3

LIMS Version: 6.254A

pH

Method EPA150.1

Sample Results

Lab Name: ALS Paragon

Work Order Number: 0904002

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200206880

Field ID:	Ross WW
Lab ID:	0904002-1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 31-Mar-09

Date Extracted: 03-Apr-09

Date Analyzed: 03-Apr-09

Prep Method: NONE

Prep Batch: PH090403-1

QCBatchID: PH090403-1-1

Run ID: ph090403-1a

Cleanup: NONE

Basis: As Received

File Name:

Sample Aliquot: 20 ml

Final Volume: 20 ml

Result Units: pH

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
10-29-7	PH	1	8.32	0.1		

Data Package ID: *ph0904002-1*

Specific Conductance in Water

Method EPA120.1

Sample Results

Lab Name: ALS Paragon

Work Order Number: 0904002

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200206880

Field ID:	Ross WW
Lab ID:	0904002-1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 31-Mar-09

Date Extracted: 03-Apr-09

Date Analyzed: 03-Apr-09

Prep Method: NONE

Prep Batch: SC090403-1

QCBatchID: SC090403-1-1

Run ID: sc090403-1a

Cleanup: NONE

Basis: As Received

File Name:

Sample Aliquot: 45 ml

Final Volume: 45 ml

Result Units: umhos/cm

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
10-34-4	SPECIFIC CONDUCTIVITY	1	464	1		

Data Package ID: sc0904002-1

Date Printed: Wednesday, April 08, 2009

ALS Paragon

Page 1 of 1

LIMS Version: 6.254A

Sulfide

Method EPA376.1

Sample Results

Lab Name: ALS Paragon

Work Order Number: 0904002

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200206880

Field ID:	Ross WW
Lab ID:	0904002-1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 31-Mar-09

Date Extracted: 01-Apr-09

Date Analyzed: 01-Apr-09

Prep Method: NONE

Prep Batch: S090401-1

QCBatchID: S090401-1-1

Run ID: s090401-2a

Cleanup: NONE

Basis: As Received

File Name:

Sample Aliquot: 200 ml

Final Volume: 200 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
18496-25-8	SULFIDE	1	2	2	U	

Data Package ID: s0904002-1

Total Dissolved Solids

Method EPA160.1

Sample Results

Lab Name: ALS Paragon

Work Order Number: 0904002

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200206880

Field ID:	Ross WW
Lab ID:	0904002-1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 31-Mar-09

Date Extracted: 01-Apr-09

Date Analyzed: 02-Apr-09

Prep Method: METHOD

Prep Batch: TD090401-1

QCBatchID: TD090401-1-1

Run ID: td090402-1a

Cleanup: NONE

Basis: As Received

File Name: Manual Entry

Sample Aliquot: 100 ml

Final Volume: 100 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
10-33-3	TOTAL DISSOLVED SOLIDS	1	280	20		

Data Package ID: *td0904002-1*

Date Printed: Wednesday, April 08, 2009

ALS Paragon

Page 1 of 1

LIMS Version: 6.254A

Ion Chromatography

Method EPA300.0 Revision 2.1

Sample Results

Lab Name: ALS Paragon

Work Order Number: 0904002

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200206880

Field ID:	Ross WW
Lab ID:	0904002-1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 31-Mar-09

Date Extracted: 01-Apr-09

Date Analyzed: 01-Apr-09

Prep Method: NONE

Prep Batch: IC090401-1

QCBatchID: IC090401-1-1

Run ID: ic090401-1a

Cleanup: NONE

Basis: As Received

File Name: 90401_022.DXD

Sample Aliquot: 5 ml

Final Volume: 5 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
16984-48-8	FLUORIDE	1	1.8	0.1		
16887-00-6	CHLORIDE	1	7.5	0.2		
14797-65-0	NITRITE AS N	1	0.1	0.1	U	
24959-67-9	BROMIDE	1	0.2	0.2	U	
14797-55-8	NITRATE AS N	1	0.2	0.2	U	
14808-79-8	SULFATE	1	74	1		

Data Package ID: *ic0904002-1*

BICARBONATE AS CaCO3

Method EPA310.1

Method Blank

Lab Name: ALS Paragon

Work Order Number: 0904002

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200206880

Lab ID: AK090403-1MB

Sample Matrix: WATER

% Moisture: N/A

Prep Batch: AK090403-1

QCBatchID: AK090403-1-1

Run ID: ak090403-1a

Cleanup: NONE

Basis: N/A

Sample Aliquot: 100 ml

Final Volume: 100 ml

Result Units: MG/L

Lab ID	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag
AK090403-1MB	4/3/2009	04/03/2009	N/A	1	5	5	U

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: ak0904002-1

Date Printed: Wednesday, April 08, 2009

ALS Paragon

LIMS Version: 6.254A

Page 1 of 3

CARBONATE AS CaCO3

Method EPA310.1

Method Blank

Lab Name: ALS Paragon

Work Order Number: 0904002

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200206880

Lab ID: AK090403-1MB

Sample Matrix: WATER

% Moisture: N/A

Prep Batch: AK090403-1

QCBatchID: AK090403-1-1

Run ID: ak090403-1a

Cleanup: NONE

Basis: N/A

Sample Aliquot: 100 ml

Final Volume: 100 ml

Result Units: MG/L

Lab ID	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag
AK090403-1MB	4/3/2009	04/03/2009	N/A	1	5	5	U

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: ak0904002-1

Date Printed: Wednesday, April 08, 2009

ALS Paragon

LIMS Version: 6.254A

Page 2 of 3

TOTAL ALKALINITY AS CaCO3

Method EPA310.1

Method Blank

Lab Name: ALS Paragon

Work Order Number: 0904002

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200206880

Lab ID: AK090403-1MB

Sample Matrix: WATER

% Moisture: N/A

Prep Batch: AK090403-1

QCBatchID: AK090403-1-1

Run ID: ak090403-1a

Cleanup: NONE

Basis: N/A

Sample Aliquot: 100 ml

Final Volume: 100 ml

Result Units: MG/L

Lab ID	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag
AK090403-1MB	4/3/2009	04/03/2009	N/A	1	5	5	U

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *ak0904002-1*

Date Printed: Wednesday, April 08, 2009

ALS Paragon

LIMS Version: 6.254A

Page 3 of 3

TOTAL ALKALINITY AS CaCO3

Method EPA310.1

Laboratory Control Sample

Lab Name: ALS Paragon

Work Order Number: 0904002

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200206880

Lab ID: AK090403-1LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 04/03/2009

Date Analyzed: 04/03/2009

Prep Batch: AK090403-1

QCBatchID: AK090403-1-1

Run ID: ak090403-1a

Cleanup: NONE

Basis: N/A

Sample Aliquot: 100 ml

Final Volume: 100 ml

Result Units: MG/L

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
11-43-8	TOTAL ALKALINITY AS CaCO3	100	98.3	5		98	85 - 115

Data Package ID: ak0904002-1

Date Printed: Wednesday, April 08, 2009

ALS Paragon

LIMS Version: 6.254A

Page 1 of 1

pH

Method EPA150.1

Duplicate Sample Results

Lab Name: ALS Paragon

Work Order Number: 0904002

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200206880

Field ID:	Ross WW
Lab ID:	0904002-1D

Sample Matrix: WATER
 % Moisture: N/A
 Date Collected: 03/31/2009
 Date Extracted: 04/03/2009
 Date Analyzed: 04/03/2009

Prep Batch: PH090403-1
 QCBatchID: PH090403-1-1
 Run ID: ph090403-1a
 Cleanup: NONE
 Basis: As Received

Sample Aliquot: 20 ml
 Final Volume: 20 ml
 Result Units: pH
 Clean DF: 1

File Name:

CASNO	Target Analyte	Sample Result	Samp Qual	Duplicate Result	Dup Qual	Reporting Limit	Dilution Factor	RPD	RPD Limit
10-29-7	PH	8.32		8.35		0.1	1		0.2

Data Package ID: *ph0904002-1*

Specific Conductance in Water

Method EPA120.1

Duplicate Sample Results

Lab Name: ALS Paragon

Work Order Number: 0904002

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200206880

Field ID: Ross WW

Lab ID: 0904002-1D

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 03/31/2009

Date Extracted: 04/03/2009

Date Analyzed: 04/03/2009

Prep Batch: SC090403-1

QCBatchID: SC090403-1-1

Run ID: sc090403-1a

Cleanup: NONE

Basis: As Received

File Name:

Sample Aliquot: 45 ml

Final Volume: 45 ml

Result Units: umhos/cm

Clean DF: 1

CASNO	Target Analyte	Sample Result	Samp Qual	Duplicate Result	Dup Qual	Reporting Limit	Dilution Factor	RPD	RPD Limit
10-34-4	SPECIFIC CONDUCTIVITY	464		468		1	1	1	10

Data Package ID: sc0904002-1

Date Printed: Wednesday, April 08, 2009

ALS Paragon

LIMS Version: 6.254A

Page 1 of 1

Sulfide

Method EPA376.1

Method Blank

Lab Name: ALS Paragon

Work Order Number: 0904002

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200206880

Lab ID: S090401-1MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 01-Apr-09

Date Analyzed: 01-Apr-09

Prep Method: NONE

Prep Batch: S090401-1

QCBatchID: S090401-1-1

Run ID: s090401-2a

Cleanup: NONE

Basis: N/A

File Name:

Sample Aliquot: 200 ml

Final Volume: 200 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	DF	Result	Reporting Limit	Result Qualifier	EPA Qualifier
18496-25-8	SULFIDE	1	2	2	U	

Data Package ID: s0904002-1

Sulfide

Method EPA376.1 Laboratory Control Sample

Lab Name: ALS Paragon

Work Order Number: 0904002

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200206880

Lab ID: S090401-1LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 04/01/2009

Date Analyzed: 04/01/2009

Prep Method: NONE

Prep Batch: S090401-1

QCBatchID: S090401-1-1

Run ID: s090401-2a

Cleanup: NONE

Basis: N/A

File Name:

Sample Aliquot: 200 ml

Final Volume: 200 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
18496-25-8	SULFIDE	15.3	15.3	2		100	80 - 120%

Data Package ID: s0904002-1

Date Printed: Wednesday, April 08, 2009

ALS Paragon

LIMS Version: 6.254A

Page 1 of 1

Sulfide

Method EPA376.1 Duplicate Sample Results

Lab Name: ALS Paragon

Work Order Number: 0904002

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200206880

Field ID: Ross WW

Lab ID: 0904002-1D

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 03/31/2009

Date Extracted: 04/01/2009

Date Analyzed: 04/01/2009

Prep Batch: S090401-1

QCBatchID: S090401-1-1

Run ID: s090401-2a

Cleanup: NONE

Basis: As Received

File Name:

Sample Aliquot: 200 ml

Final Volume: 200 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	Sample Result	Samp Qual	Duplicate Result	Dup Qual	Reporting Limit	Dilution Factor	RPD	RPD Limit
18496-25-8	SULFIDE	2	U	2	U	2	1		20

Data Package ID: s0904002-1

Date Printed: Wednesday, April 08, 2009

ALS Paragon

LIMS Version: 6.254A

Page 1 of 1

Total Dissolved Solids

Method EPA160.1

Method Blank

Lab Name: ALS Paragon

Work Order Number: 0904002

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200206880

Lab ID: TD090401-1MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 01-Apr-09

Date Analyzed: 02-Apr-09

Prep Method: METHOD

Prep Batch: TD090401-1

QCBatchID: TD090401-1-1

Run ID: td090402-1a

Cleanup: NONE

Basis: N/A

File Name: Manual Entry

Sample Aliquot: 100 ml

Final Volume: 100 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	DF	Result	Reporting Limit	Result Qualifier	EPA Qualifier
10-33-3	TOTAL DISSOLVED SOLIDS	1	20	20	U	

Data Package ID: *td0904002-1*

Date Printed: Wednesday, April 08, 2009

ALS Paragon

LIMS Version: 6.254A

Page 1 of 1

Total Dissolved Solids

Method EPA160.1

Laboratory Control Sample

Lab Name: ALS Paragon

Work Order Number: 0904002

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200206880

Lab ID: TD090401-1LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 04/01/2009

Date Analyzed: 04/02/2009

Prep Method: METHOD

Prep Batch: TD090401-1

QCBatchID: TD090401-1-1

Run ID: td090402-1a

Cleanup: NONE

Basis: N/A

File Name: Manual Entry

Sample Aliquot: 100 ml

Final Volume: 100 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
10-33-3	TOTAL DISSOLVED SOLIDS	400	406	20		102	85 - 115%

Data Package ID: *td0904002-1*

Date Printed: Wednesday, April 08, 2009

ALS Paragon

LIMS Version: 6.254A

Page 1 of 1

Ion Chromatography

Method EPA300.0 Revision 2.1

Method Blank

Lab Name: ALS Paragon

Work Order Number: 0904002

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200206880

Lab ID: IC090401-1MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 01-Apr-09

Date Analyzed: 01-Apr-09

Prep Method: NONE

Prep Batch: IC090401-1

QCBatchID: IC090401-1-1

Run ID: ic090401-1a

Cleanup: NONE

Basis: N/A

File Name: 90401_014.DXD

Sample Aliquot: 5 ml

Final Volume: 5 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	DF	Result	Reporting Limit	Result Qualifier	EPA Qualifier
16984-48-8	FLUORIDE	1	0.1	0.1	U	
16887-00-6	CHLORIDE	1	0.2	0.2	U	
14797-65-0	NITRITE AS N	1	0.1	0.1	U	
24959-67-9	BROMIDE	1	0.2	0.2	U	
14797-55-8	NITRATE AS N	1	0.2	0.2	U	
14808-79-8	SULFATE	1	1	1	U	

Data Package ID: ic0904002-1

Date Printed: Wednesday, April 08, 2009

ALS Paragon

LIMS Version: 6.254A

Page 1 of 1

Ion Chromatography

Method EPA300.0 Revision 2.1

Laboratory Control Sample

Lab Name: ALS Paragon

Work Order Number: 0904002

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200206880

Lab ID: IC090401-1LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 04/01/2009

Date Analyzed: 04/01/2009

Prep Method: NONE

Prep Batch: IC090401-1

QCBatchID: IC090401-1-1

Run ID: ic090401-1a

Cleanup: NONE

Basis: N/A

File Name: 90401_015.DXD

Sample Aliquot: 5 ml

Final Volume: 5 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
16984-48-8	FLUORIDE	2.5	2.51	0.1		100	90 - 110%
16887-00-6	CHLORIDE	5	4.92	0.2		98	90 - 110%
14797-65-0	NITRITE AS N	2	2.06	0.1		103	90 - 110%
24959-67-9	BROMIDE	5	5.05	0.2		101	90 - 110%
14797-55-8	NITRATE AS N	5	4.77	0.2		95	90 - 110%
14808-79-8	SULFATE	25	24.4	1		97	90 - 110%

Data Package ID: ic0904002-1

Date Printed: Wednesday, April 08, 2009

ALS Paragon

LIMS Version: 6.254A

Page 1 of 1

Ion Chromatography

Method EPA300.0 Revision 2.1

Matrix Spike And Matrix Spike Duplicate

Lab Name: ALS Paragon
Work Order Number: 0904002
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200206880

Field ID: Ross WW LabID: 0904002-1MS	Sample Matrix: WATER % Moisture: N/A Date Collected: 31-Mar-09 Date Extracted: 01-Apr-09 Date Analyzed: 01-Apr-09 Prep Method: NONE	Prep Batch: IC090401-1 QCBatchID: IC090401-1-1 Run ID: ic090401-1a Cleanup: NONE Basis: As Received	Sample Aliquot: 5 ml Final Volume: 5 ml Result Units: MG/L File Name: 90401_025.DXD
---	--	--	--

CASNO	Target Analyte	Sample Result	Samp Qual	MS Result	MS Qual	Reporting Limit	Spike Added	MS % Rec.	Control Limits
16984-48-8	FLUORIDE	1.8		3.72		0.1	2	97	85 - 115%
16887-00-6	CHLORIDE	7.5		12.4		0.2	5	98	85 - 115%
14797-65-0	NITRITE AS N	0.1	U	1.97		0.1	2	98	85 - 115%
24959-67-9	BROMIDE	0.2	U	5.55		0.2	5	111	85 - 115%
14797-55-8	NITRATE AS N	0.2	U	5.13		0.2	5	103	85 - 115%
14808-79-8	SULFATE	74		91.3		1	20	85	85 - 115%

Field ID: Ross WW LabID: 0904002-1MSD	Sample Matrix: WATER % Moisture: N/A Date Collected: 31-Mar-09 Date Extracted: 01-Apr-09 Date Analyzed: 01-Apr-09 Prep Method: NONE	Prep Batch: IC090401-1 QCBatchID: IC090401-1-1 Run ID: ic090401-1a Cleanup: NONE Basis: As Received	Sample Aliquot: 5 ml Final Volume: 5 ml Result Units: MG/L File Name: 90401_026.DXD
--	--	--	--

CASNO	Target Analyte	MSD Result	MSD Qual	Spike Added	MSD % Rec.	Reporting Limit	RPD Limit	RPD
16984-48-8	FLUORIDE	3.91		2	107	0.1	15	5
16887-00-6	CHLORIDE	12.6		5	102	0.2	15	2
14797-65-0	NITRITE AS N	2.01		2	100	0.1	15	2
24959-67-9	BROMIDE	5.44		5	109	0.2	15	2
14797-55-8	NITRATE AS N	5.07		5	101	0.2	15	1
14808-79-8	SULFATE	92.6		20	92	1	15	1

Data Package ID: ic0904002-1

**CONTROLLED
NON-CONFORMANCE REPORT**

Non-Conformance

Initiated By: Jason B. McNall on 4/1/2009

Event Type: Laboratory Incident/Error

Event Explanation: The sulfide analysis was performed using an expired 'sodium thiosulfate standard solution'. The solution had expired 10 days earlier on 3/21/2009. The sample has been depleted.

Action To

Prevent Recurrence: discussion with Analyst

Corrective Action

Corrective Action: Document in Narrative

Department Manager Approval: Eric A. Lintner

Approval Date: 4/3/2009

Corrective Action Comments:

Workorders Affected

Workorder -- Procedure

0904002 -- EPA376.1

Peter Gintautas was contacted on 4/1/2009

Approved By

Amy R. Wolf

Approval Date

4/1/2009

There Are No Associated Batches

NCR Approval

Project Manager Approval: ARW on 4/1/2009

Department Manager Approval: Eric A. Lintner on 4/3/2009

QA Manager Approval: Deb Scheib on 4/3/2009

CONTROLLED
NON-CONFORMANCE REPORT

Non-Conformance

Initiated By: Eric A. Lintner on 4/2/2009

Event Type: Method Requirements Not Met -- CCV

Event Explanation: The closing CCV was high for Br-, 111%. The only samples associated were the MS/MSD set. The MS/MSD passed for Br- at 111% and 109%, and the native sample was a 'ND'.

Action To Prevent Recurrence: Noted

Corrective Action

Corrective Action: Document in Narrative

Department Manager Approval: Eric A. Lintner

Approval Date: 4/3/2009

Corrective Action Comments:

Workorders Affected

Workorder -- Procedure

0904002 -- EPA300.0

Peter Gintautas was contacted on 4/3/2009

Approved By

Amy R. Wolf

Approval Date

4/3/2009

There Are No Associated Batches

NCR Approval

Project Manager Approval: ARW on 4/3/2009

Department Manager Approval: Eric A. Lintner on 4/3/2009

QA Manager Approval: Deb Scheib on 4/3/2009