



# ALS Paragon



## Inorganics Case Narrative

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### Colorado Oil & Gas Conservation Commission

Complaint 200204222

Work Order Number: 0902200

1. This report consists of 1 water sample.
2. The sample was received cool and intact by ALS Paragon on 02/25/09.
3. 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.
4. 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
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

5. All standards and solutions were used within their recommended shelf life.
6. 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.

7. 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 with the exception of bromide for IC090225-1MB. The associated sample was below the reporting limit for bromide.
- 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 with the exception of CCB1 for chloride. The sample bracketed by this CCB contained more than ten times the concentration of chloride that was detected in the CCB.
- n All initial and continuing calibration verifications (ICV/CCV) associated with each applicable analytical batch were within the acceptance criteria for the requested analytes. This indicates a valid calibration and stable instrument conditions.

8. Matrix specific quality control procedures.

Sample 0902200-1 was designated as the quality control sample for the specific conductance, bromide, chloride, fluoride, nitrate as N, nitrite as N, and sulfate analyses. Per method requirements, matrix QC was performed for the alkalinity, bicarbonate, carbonate, pH, 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 Matrix spike recoveries could not be evaluated for the following analyte:

<u>Analyte</u>	<u>Sample ID</u>
Sulfate	0902200-1MS & MSD

The sulfate concentration in the MS/MSD was above the analytical range; therefore accurate quantitation of MS/MSD recoveries were not possible as the spike added was small relative to the unspiked sample concentration. The LCS, ICV, and CCV results indicate the procedure was in control for this analyte.

- n A sample duplicate was prepared and analyzed with the specific conductance batch. All guidance criteria for precision were met.
9. Reduced aliquots were taken of the sample for the alkalinity, bicarbonate, and carbonate analysis. Reporting limits were elevated accordingly.
10. 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

3/6/09  
Date

[Signature]  
Inorganics Final Data Reviewer

3/6/09  
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

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**Paragon OrderNum:** 0902200

**Client Name:** Colorado Oil & Gas Conservation Commission

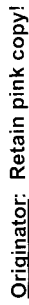
**Client Project Name:** Complaint 200204222

**Client Project Number:**

**Client PO Number:** OE PHA 09000000004

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Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
Dasko WW	0902200-1		WATER	24-Feb-09	14:37
Trip Blank	0902200-2		WATER	24-Feb-09	



nk copy

Form 202r6.xls (6/16/06)

## CONDITION OF SAMPLE UPON RECEIPT FORM

Paragon Analytics

Client: COGCC  
Project Manager: AWWorkorder No: 0902200  
Initials: LJO Date: 2/25/09

1. Does this project require any <b>special handling</b> in addition to standard Paragon procedures?	YES	<u>NO</u>
2. Are custody <b>seals</b> on <b>shipping containers</b> intact?	NONE	<u>YES</u> NO
3. Are Custody seals on <b>sample containers</b> intact?	<u>NONE</u> YES	NO
4. Is there a <b>COC (Chain-of-Custody)</b> present or other representative documents?	<u>YES</u>	NO
5. Are the <b>COC and bottle labels</b> complete and legible?	<u>YES</u>	NO
6. Is the <b>COC in agreement</b> with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)	<u>YES</u>	NO
7. Were <b>airbills / shipping documents</b> present and/or removable?	DROP OFF <u>YES</u>	NO
8. Are all aqueous <b>samples requiring preservation</b> preserved correctly? (excluding volatiles)	N/A	<u>YES</u> <u>NO</u>
9. Are all aqueous <b>non-preserved samples</b> pH 4-9?	N/A	<u>YES</u> NO
10. Is there <b>sufficient sample</b> for the requested analyses?	<u>YES</u>	NO
11. Were all samples placed in the <b>proper containers</b> for the requested analyses?	<u>YES</u>	NO
12. Are all samples within <b>holding times</b> for the requested analyses?	<u>YES</u>	NO
13. Were all sample containers received <b>intact</b> ? (not broken or leaking, etc.)	<u>YES</u>	NO
14. Are all samples requiring <b>no headspace (VOC, GRO, RSK/MEE, Rx CN/S, radon)</b> headspace free? <b>Size of bubble:</b> <u>      </u> < green pea <u>  x  </u> > green pea	N/A	YES <u>NO</u>
15. Do perchlorate LCMS-MS samples <b>have</b> headspace? (at least 1/3 of container required)	<u>N/A</u>	YES NO
16. Were samples checked for and free from the presence of <b>residual chlorine</b> ? (Applicable when PM has indicated samples are from a chlorinated water source; note if field preservation with sodium thiosulfate was not observed.)	<u>N/A</u>	YES NO
17. Were the samples <b>shipped on ice</b> ?	<u>YES</u>	NO
18. Were cooler temperatures measured at 0.1-6.0°C? IR gun used*: <u>#2</u> #4	RAD ONLY <u>YES</u>	NO
Cooler #: <u>1</u>		
Temperature (°C): <u>1.16</u>		
No. of custody seals on cooler: <u>2</u>		
External µR/hr reading: <u>14</u>		
Background µR/hr reading: <u>11</u>		
Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? <u>YES</u> NO / NA (If no. see Form 008.)		

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

- The 125 ml amber for toc analysis had no identification label.
- \* The 500 ml poly for metals analysis was received unpreserved.
- + Sample #2 (Trip Blank) 2 of 2 40 ml vial contain headspace > pea.

If applicable, was the client contacted? YES / NO / NA Contact: Peter Gintantas Date/Time: e-mailProject Manager Signature / Date: [Signature] 2/25/09

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

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

# BICARBONATE AS CaCO<sub>3</sub>

Method EPA310.1

## Sample Results

Lab Name: ALS Paragon

Client Name: Colorado Oil & Gas Conservation Commission

Client Project ID: Complaint 200204222

Work Order Number: 0902200

Final Volume: 100 ml

Reporting Basis: As Received

Matrix: WATER

Prep Method: NONE

Result Units: MG/L

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Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	Flag	Sample Aliquot
Dasko WW	0902200-1	02/24/2009	03/03/2009	03/03/2009	N/A	1	150	20		25 ml

### Comments:

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

Data Package ID: *ak0902200-1*

Date Printed: Thursday, March 05, 2009

ALS Paragon

LIMS Version: 6.248A

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# CARBONATE AS CaCO<sub>3</sub>

Method EPA310.1

## Sample Results

**Lab Name:** ALS Paragon  
**Client Name:** Colorado Oil & Gas Conservation Commission  
**Client Project ID:** Complaint 200204222  
**Work Order Number:** 0902200  
**Reporting Basis:** As Received  
**Prep Method:** NONE  
**Final Volume:** 100 ml  
**Matrix:** WATER  
**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
Dasko WW	0902200-1	02/24/2009	03/03/2009	03/03/2009	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:** *ak0902200-1*

**Date Printed:** Thursday, March 05, 2009

**ALS Paragon**  
LIMS Version: 6.248A

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# TOTAL ALKALINITY AS CaCO<sub>3</sub>

Method EPA310.1

## Sample Results

**Lab Name:** ALS Paragon  
**Client Name:** Colorado Oil & Gas Conservation Commission  
**Client Project ID:** Complaint 200204222  
**Work Order Number:** 0902200 **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
Dasko WW	0902200-1	02/24/2009	03/03/2009	03/03/2009	N/A	1	150	20		25 ml

### Comments:

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

**Data Package ID:** ak0902200-1

**Date Printed:** Thursday, March 05, 2009

**ALS Paragon**  
LIMS Version: 6.248A

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# pH

## Method EPA150.1

### Sample Results

Lab Name: ALS Paragon

Work Order Number: 0902200

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200204222

Field ID:	Dasko WW
Lab ID:	0902200-1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 24-Feb-09

Date Extracted: 25-Feb-09

Date Analyzed: 25-Feb-09

Prep Method: NONE

Prep Batch: PH090225-1

QCBatchID: PH090225-1-2

Run ID: ph090225-1a

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	8.08	0.1		

Data Package ID: *ph0902200-1*

Date Printed: Thursday, March 05, 2009

ALS Paragon  
LIMS Version: 6.248A

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# Specific Conductance in Water

Method EPA120.1

## Sample Results

Lab Name: ALS Paragon

Work Order Number: 0902200

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200204222

Field ID:	Dasko WW
Lab ID:	0902200-1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 24-Feb-09

Date Extracted: 27-Feb-09

Date Analyzed: 27-Feb-09

Prep Method: NONE

Prep Batch: SC090227-1

QCBatchID: SC090227-1-1

Run ID: sc090227-1a

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	499	1		

Data Package ID: sc0902200-1

Date Printed: Thursday, March 05, 2009

ALS Paragon

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# Total Dissolved Solids

Method EPA160.1

## Sample Results

Lab Name: ALS Paragon

Work Order Number: 0902200

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200204222

Field ID:	Dasko WW
Lab ID:	0902200-1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 24-Feb-09

Date Extracted: 25-Feb-09

Date Analyzed: 26-Feb-09

Prep Method: METHOD

Prep Batch: TD090225-1

QCBatchID: TD090225-1-2

Run ID: td090226-1a

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	300	20		

Data Package ID: *td0902200-1*

Date Printed: Thursday, March 05, 2009

ALS Paragon

LIMS Version: 6.248A

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# Ion Chromatography

Method EPA300.0 Revision 2.1

## Sample Results

Lab Name: ALS Paragon

Work Order Number: 0902200

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200204222

Field ID: Dasko WW

Lab ID: 0902200-1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 24-Feb-09

Date Extracted: 25-Feb-09

Date Analyzed: 25-Feb-09

Prep Method: NONE

Prep Batch: IC090225-1

QCBatchID: IC090225-1-1

Run ID: ic090225-1a

Cleanup: NONE

Basis: As Received

File Name: 90225\_013.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	0.6	0.1		
16887-00-6	CHLORIDE	1	8.4	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	85	1		

Data Package ID: ic0902200-1

Date Printed: Thursday, March 05, 2009

ALS Paragon

LIMS Version: 6.248A

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# BICARBONATE AS CaCO<sub>3</sub>

Method EPA310.1

Method Blank

Lab Name: ALS Paragon

Work Order Number: 0902200

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200204222

Lab ID: AK090303-1MB

Sample Matrix: WATER

% Moisture: N/A

Prep Batch: AK090303-1

QCBatchID: AK090303-1-1

Run ID: ak090303-1a

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
AK090303-1MB	3/3/2009	03/03/2009	N/A	1	5	5	U

## Comments:

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

Data Package ID: ak0902200-1

Date Printed: Thursday, March 05, 2009

ALS Paragon

LIMS Version: 6.248A

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# CARBONATE AS CaCO<sub>3</sub>

Method EPA310.1

Method Blank

Lab Name: ALS Paragon

Work Order Number: 0902200

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200204222

Lab ID: AK090303-1MB

Sample Matrix: WATER

% Moisture: N/A

Prep Batch: AK090303-1

QCBatchID: AK090303-1-1

Run ID: ak090303-1a

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
AK090303-1MB	3/3/2009	03/03/2009	N/A	1	5	5	U

## Comments:

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

Data Package ID: ak0902200-1

Date Printed: Thursday, March 05, 2009

ALS Paragon

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# TOTAL ALKALINITY AS CaCO<sub>3</sub>

Method EPA310.1

Method Blank

Lab Name: ALS Paragon

Work Order Number: 0902200

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200204222

Lab ID: AK090303-1MB

Sample Matrix: WATER

% Moisture: N/A

Prep Batch: AK090303-1

QCBatchID: AK090303-1-1

Run ID: ak090303-1a

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
AK090303-1MB	3/3/2009	03/03/2009	N/A	1	5	5	U

## Comments:

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

Data Package ID: ak0902200-1

Date Printed: Thursday, March 05, 2009

ALS Paragon

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# TOTAL ALKALINITY AS CaCO<sub>3</sub>

Method EPA310.1

## Laboratory Control Sample

Lab Name: ALS Paragon

Work Order Number: 0902200

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200204222

Lab ID: AK090303-1LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 03/03/2009

Date Analyzed: 03/03/2009

Prep Batch: AK090303-1

QCBatchID: AK090303-1-1

Run ID: ak090303-1a

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 CaCO <sub>3</sub>	100	98.2	5		98	85 - 115

Data Package ID: ak0902200-1

Date Printed: Thursday, March 05, 2009

ALS Paragon

LIMS Version: 6.248A

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# Specific Conductance in Water

Method EPA120.1

## Duplicate Sample Results

Lab Name: ALS Paragon

Work Order Number: 0902200

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200204222

Field ID: Dasko WW

Lab ID: 0902200-1D

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 02/24/2009

Date Extracted: 02/27/2009

Date Analyzed: 02/27/2009

Prep Batch: SC090227-1

QCBatchID: SC090227-1-1

Run ID: sc090227-1a

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	499		503		1	1	1	10

Data Package ID: sc0902200-1

Date Printed: Thursday, March 05, 2009

ALS Paragon

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# Total Dissolved Solids

Method EPA160.1

Method Blank

Lab Name: ALS Paragon

Work Order Number: 0902200

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200204222

Lab ID: TD090225-1MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 25-Feb-09

Date Analyzed: 26-Feb-09

Prep Method: METHOD

Prep Batch: TD090225-1

QCBatchID: TD090225-1-2

Run ID: td090226-1a

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: *td0902200-1*

Date Printed: Thursday, March 05, 2009

ALS Paragon

LIMS Version: 6.248A

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# Total Dissolved Solids

Method EPA160.1

## Laboratory Control Sample

Lab Name: ALS Paragon

Work Order Number: 0902200

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200204222

Lab ID: TD090225-1LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 02/25/2009

Date Analyzed: 02/26/2009

Prep Method: METHOD

Prep Batch: TD090225-1

QCBatchID: TD090225-1-2

Run ID: td090226-1a

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	405	20		101	85 - 115%

Data Package ID: *td0902200-1*

Date Printed: Thursday, March 05, 2009

ALS Paragon

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# Ion Chromatography

Method EPA300.0 Revision 2.1

Method Blank

Lab Name: ALS Paragon

Work Order Number: 0902200

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200204222

Lab ID: IC090225-1MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 25-Feb-09

Date Analyzed: 25-Feb-09

Prep Method: NONE

Prep Batch: IC090225-1

QCBatchID: IC090225-1-1

Run ID: ic090225-1a

Cleanup: NONE

Basis: N/A

File Name: 90225\_011.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	0.23	0.2		
14797-55-8	NITRATE AS N	1	0.2	0.2	U	
14808-79-8	SULFATE	1	1	1	U	

Data Package ID: ic0902200-1

Date Printed: Thursday, March 05, 2009

ALS Paragon

LIMS Version: 6.248A

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# Ion Chromatography

Method EPA300.0 Revision 2.1

## Laboratory Control Sample

Lab Name: ALS Paragon

Work Order Number: 0902200

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200204222

Lab ID: IC090225-1LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 02/25/2009

Date Analyzed: 02/25/2009

Prep Method: NONE

Prep Batch: IC090225-1

QCBatchID: IC090225-1-1

Run ID: ic090225-1a

Cleanup: NONE

Basis: N/A

File Name: 90225\_012.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	2.44	0.1		98	90 - 110%
16887-00-6	CHLORIDE	5	4.84	0.2		97	90 - 110%
14797-65-0	NITRITE AS N	2	2	0.1		100	90 - 110%
24959-67-9	BROMIDE	5	4.73	0.2		95	90 - 110%
14797-55-8	NITRATE AS N	5	4.76	0.2		95	90 - 110%
14808-79-8	SULFATE	25	24.1	1		96	90 - 110%

Data Package ID: ic0902200-1

Date Printed: Thursday, March 05, 2009

ALS Paragon

LIMS Version: 6.248A

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# Ion Chromatography

## Method EPA300.0 Revision 2.1

### Matrix Spike And Matrix Spike Duplicate

**Lab Name:** ALS Paragon  
**Work Order Number:** 0902200  
**Client Name:** Colorado Oil & Gas Conservation Commission  
**ClientProject ID:** Complaint 200204222

<b>Field ID:</b> Dasko WW <b>LabID:</b> 0902200-1MS	<b>Sample Matrix:</b> WATER <b>% Moisture:</b> N/A <b>Date Collected:</b> 24-Feb-09 <b>Date Extracted:</b> 25-Feb-09 <b>Date Analyzed:</b> 25-Feb-09 <b>Prep Method:</b> NONE	<b>Prep Batch:</b> IC090225-1 <b>QCBatchID:</b> IC090225-1-1 <b>Run ID:</b> ic090225-1a <b>Cleanup:</b> NONE <b>Basis:</b> As Received	<b>Sample Aliquot:</b> 5 ml <b>Final Volume:</b> 5 ml <b>Result Units:</b> MG/L <b>File Name:</b> 90225_014.DXD
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CASNO	Target Analyte	Sample Result	Samp Qual	MS Result	MS Qual	Reporting Limit	Spike Added	MS % Rec.	Control Limits
16984-48-8	FLUORIDE	0.6		2.52		0.1	2	96	85 - 115%
16887-00-6	CHLORIDE	8.4		13.4		0.2	5	101	85 - 115%
14797-65-0	NITRITE AS N	0.1	U	1.94		0.1	2	97	85 - 115%
24959-67-9	BROMIDE	0.2	U	5.15		0.2	5	103	85 - 115%
14797-55-8	NITRATE AS N	0.2	U	5.1		0.2	5	102	85 - 115%

<b>Field ID:</b> Dasko WW <b>LabID:</b> 0902200-1MSD	<b>Sample Matrix:</b> WATER <b>% Moisture:</b> N/A <b>Date Collected:</b> 24-Feb-09 <b>Date Extracted:</b> 25-Feb-09 <b>Date Analyzed:</b> 25-Feb-09 <b>Prep Method:</b> NONE	<b>Prep Batch:</b> IC090225-1 <b>QCBatchID:</b> IC090225-1-1 <b>Run ID:</b> ic090225-1a <b>Cleanup:</b> NONE <b>Basis:</b> As Received	<b>Sample Aliquot:</b> 5 ml <b>Final Volume:</b> 5 ml <b>Result Units:</b> MG/L <b>File Name:</b> 90225_015.DXD
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CASNO	Target Analyte	MSD Result	MSD Qual	Spike Added	MSD % Rec.	Reporting Limit	RPD Limit	RPD
16984-48-8	FLUORIDE	2.51		2	96	0.1	15	0
16887-00-6	CHLORIDE	13.4		5	100	0.2	15	0
14797-65-0	NITRITE AS N	1.91		2	95	0.1	15	2
24959-67-9	BROMIDE	5.1		5	102	0.2	15	1
14797-55-8	NITRATE AS N	5.01		5	100	0.2	15	2

**Data Package ID:** ic0902200-1

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