



# ALS Paragon



## Dissolved Gasses Case Narrative

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### **Colorado Oil & Gas Conservation Commission**

**Complaint 200205808**

**Work Order Number: 0903060**

1. This report consists of 1 water sample. The sample was received cool and intact by ALS Paragon on 03/10/09. The vials for samples 0903060-1 and -1RR1 contained headspace prior to analysis because they were not received headspace free. The sample had a pH > 2 at the time of analysis.
2. The sample was prepared and analyzed according to method RSK-175 procedures and SOP449R0.
3. The preparation batch included a method blank, laboratory control sample, and laboratory control sample duplicate. Per method requirements, matrix QC was also performed for this analysis. Since the matrix QC was not performed on a sample from this order number, the results are not included in this report.
4. All preparation QC results were within the acceptance criteria.
5. All samples are associated with one or more of the following analytical QC: initial calibrations, initial calibration verifications (ICV), and continuing calibration verifications (CCV).
6. All analytical QC were within the acceptance criteria, with the exceptions of ethene in CCV1 and methane in CCV2. Only the method blank was bracketed by these CCVs. Because the sensitivity of the instrument increased for ethene and methane, and these compounds were not detected in the method blank, no further action was taken.
7. The sample was analyzed at a dilution in order to bring methane within the calibration range of the instrument. The reporting limit has been adjusted accordingly.
8. The sample was prepared and analyzed within the established holding times.
9. 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.

Emily Knodel  
Emily Knodel  
Organics Primary Data Reviewer

03-23-09  
Date

Dan Sherman  
Dan Sherman  
Organics Final Data Reviewer

03-23-09  
Date

***ALS Paragon  
Data Qualifier Flags  
Chromatography and Mass Spectrometry***

- U or ND:** This flag indicates that the compound was analyzed for but not detected.
- J:** This flag indicates an estimated value. This flag is used as follows: (1) when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed; (2) when the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the reporting limit (RL) but greater than the method detection limit (MDL); (3) when the retention time data indicate the presence of a compound that meets the GC identification criteria, and the result is less than the RL but greater than the MDL; and (4) the reported value is estimated.
- B:** This flag is used when the analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user. This flag shall be used for a tentatively identified compound (TIC) as well as for a positively identified target compound.
- E:** This flag identifies compounds whose concentration exceeds the upper level of the calibration range.
- A:** This flag indicates that a tentatively identified compound is a suspected aldol-condensation product.
- X:** This flag indicates that the analyte was diluted below an accurate quantitation level.
- \*:** This flag indicates that a spike recovery is equal to or outside the control criteria used.
- +**: This flag indicates that the relative percent difference (RPD) equals or exceeds the control criteria.

# ALS Paragon

## Sample Number(s) Cross-Reference Table

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**Paragon OrderNum:** 0903060

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

**Client Project Name:** Complaint 200205808

**Client Project Number:**

**Client PO Number:** OE PHA 090000000004

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Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
Angely WW 1	0903060-1		WATER	09-Mar-09	9:56
Angely WW 2	0903060-2		WATER	09-Mar-09	10:30
Trip Blank	0903060-3		WATER	09-Mar-09	

Report To: Peter Gintautas  
Phone: 719-946-3091  
Fax:  
E-mail: peter.gintautas@state.co.us  
Company: Colo. Div. of Bus. Cons. Comm.  
Address:

complaint 2002-04738


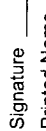

Circle method (right); provide additional information as needed (comments).

[illegible]

\* 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 + pressure metals upon receipt  
 Anions = Br, Cl, F, NO<sub>2</sub>, NO<sub>3</sub>, SO<sub>4</sub>  
 200.7 = Ba, Be, B, Ca, Cr, Cu, Fe, Li, Mg, Mn, Ni, K, Na, Zn, Sr  
 200.8 = Sb, As, Cd, Pb, Mo, Se, Ag, Te, U

Relinquished By:  (1) Signature _____ Printed Name <u>J. Gutierrez</u> Date <u>9/16/09</u> Time <u>16:30</u> Company _____	Relinquished By: _____ (2) Signature _____ Printed Name _____ Date _____ Time _____ Company _____
Relinquished By:  (1) Signature _____ Printed Name <u>J. Gutierrez</u> Date <u>9/16/09</u> Time <u>16:30</u> Company _____	Relinquished By:  (2) Signature _____ Printed Name _____ Date _____ Time _____ Company _____

## CONDITION OF SAMPLE UPON RECEIPT FORM

Paragon Analytics

Client: COC GWorkorder No: 0903060Project Manager: AWInitials: Pre Date: 3-10-09

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?	NONE	<u>YES</u>	NO
4. Is there a <b>COC (Chain-of-Custody)</b> <b>present</b> or other representative documents?		<u>YES</u>	NO
5. Are the <b>COC and bottle labels complete and legible</b> ?		<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 preserved correctly?</b> (excluding volatiles)	N/A	<u>YES</u>	NO
9. Are all aqueous <b>non-preserved samples pH 4-9?</b>	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>✓</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)	N/A	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.)	N/A	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? <b>IR gun used*:</b> <u>#2</u> <u>#4</u>	RAD ONLY	<u>YES</u>	NO
Cooler #: <u>1</u>			
Temperature (°C): <u>2.8</u>			
No. of custody seals on cooler: <u>1</u>			
External µR/hr reading: <u>12</u>			
Background µR/hr reading: <u>11</u>			
Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? 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.

3 vials for VL = Headspace &lt;green pea #4 #5 #6

3 vials for methan - #7 #8 #9 #7 huge Bubble 809 small bubbles

If applicable, was the client contacted? YES / NO / NA Contact: Peter Gintantas Date/Time: 3/10/09Project Manager Signature / Date: [Signature] 3/10/09

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

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

# Dissolved Gasses

Method RSK175

Method Blank

Lab Name: ALS Paragon

Work Order Number: 0903060

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200205808

Lab ID: HC090320-1MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 20-Mar-09

Date Analyzed: 20-Mar-09

Prep Method: METHOD

Prep Batch: HC090320-1

QCBatchID: HC090320-1-1

Run ID: HC090320-1A

Cleanup: NONE

Basis: N/A

File Name: 01008.dat

Sample Aliquot: 38.5 ml

Final Volume: 38.5 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	DF	Result	Reporting Limit	Result Qualifier	EPA Qualifier
74-82-8	METHANE	1	1	1	U	
74-85-1	ETHENE	1	1	1	U	
74-84-0	ETHANE	1	2	2	U	

Data Package ID: HC0903060-1

Date Printed: Monday, March 23, 2009

ALS Paragon

LIMS Version: 6.252A

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# Dissolved Gasses

Method RSK175

## Sample Results

Lab Name: ALS Paragon

Work Order Number: 0903060

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200205808

Field ID: Angely WW 1

Lab ID: 0903060-1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 09-Mar-09

Date Extracted: 20-Mar-09

Date Analyzed: 20-Mar-09

Prep Method: METHOD

Prep Batch: HC090320-1

QCBatchID: HC090320-1-1

Run ID: HC090320-1A

Cleanup: NONE

Basis: As Received

File Name: 01022.dat

Sample Aliquot: 38.5 ml

Final Volume: 38.5 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
74-85-1	ETHENE	1	1	1	U	
74-84-0	ETHANE	1	31	2		

Data Package ID: HC0903060-1

Date Printed: Monday, March 23, 2009

ALS Paragon

LIMS Version: 6.252A

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# Dissolved Gasses

Method RSK175

## Sample Results

Lab Name: ALS Paragon

Work Order Number: 0903060

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200205808

Field ID:	Angely WW 1
Lab ID:	0903060-1RR1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 09-Mar-09

Date Extracted: 20-Mar-09

Date Analyzed: 20-Mar-09

Prep Method: METHOD

Prep Batch: HC090320-1

QCBatchID: HC090320-1-1

Run ID: HC090320-1A

Cleanup: NONE

Basis: As Received

File Name: 01023.dat

Sample Aliquot: 38.5 ml

Final Volume: 38.5 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
74-82-8	METHANE	4	23000	4		

Data Package ID: HC0903060-1

Date Printed: Monday, March 23, 2009

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# Dissolved Gasses

## Method RSK175

### Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Paragon

Work Order Number: 0903060

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200205808

Lab ID: HC090320-1LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 03/20/2009

Date Analyzed: 03/20/2009

Prep Method: METHOD

Prep Batch: HC090320-1

QCBatchID: HC090320-1-1

Run ID: HC090320-1A

Cleanup: NONE

Basis: N/A

File Name: 01021.dat

Sample Aliquot: 38.5 ml

Final Volume: 38.5 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
74-82-8	METHANE	140	143	1		102	80 - 120%
74-85-1	ETHENE	245	269	1		110	80 - 120%
74-84-0	ETHANE	262	267	2		102	80 - 120%

Lab ID: HC090320-1LCSD

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 03/20/2009

Date Analyzed: 03/20/2009

Prep Method: METHOD

Prep Batch: HC090320-1

QCBatchID: HC090320-1-1

Run ID: HC090320-1A

Cleanup: NONE

Basis: N/A

File Name: 01024.dat

Sample Aliquot: 38.5 ml

Final Volume: 38.5 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCSD Result	Reporting Limit	Result Qualifier	LCSD % Rec.	RPD Limit	RPD
74-82-8	METHANE	140	146	1		104	25	2
74-85-1	ETHENE	245	275	1		112	25	2
74-84-0	ETHANE	262	272	2		104	25	2

Data Package ID: HC0903060-1

Date Printed: Monday, March 23, 2009

ALS Paragon

LIMS Version: 6.252A

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