ALS Paragon

Dissolved Gasses

Case Narrative

Colorado Oil & Gas Conservation Commission

Complaint 20026880

Work Order Number: 0904002

1. This report consists of 1 water sample. The sample was received cool and intact by ALS Paragon on 04/01/09. The sample was free of headspace prior to analysis. 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, laboratory control sample duplicate, and sample duplicate. Per method requirements, a matrix spike was also performed for this analysis. Since the matrix spike was not performed on a sample from this order number, the results are not included in this report. The following is the sample used for the matrix QC:

Sample ID	QC Type	Batch ID
0904002-1	DUP	HC090409-1

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.

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.

7. Sample dilutions were not required for the requested analysis.

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
Organics Primary Data Reviewer

04-13-09
Date

Dan Shenerman
Organics Final Data Reviewer

04-13-09
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

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 Analytics
LIMS Version: 6.255A

Date Printed: Monday, April 13, 2009

Paragon Analytics
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 31March09 Page 1 of 1

Originator: Retain pink copy!

Project Name/No.: _____ Sampler(s): Gintautas/Ukhanova Turnaround (circle one): **Standard** or **Rush** (Due 14 days) Dispose: Date 30 day or Return to Client

Report To: Peter Gintautas
Phone: 719-846-3091
Fax:
E-mail: peter.gintautas@state.co.us
Company: Colo. Oil & Gas Cons. Comm.
Address:

Complaint 200206880

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

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (indicate type... HCl, etc.)	No. of Containers	VOCs SW8260B	~~BTEX (only)~~ SW8021B Methanol Extract, Ethanol	SVOCs SW8270C	~~GC Pesticides~~ SW8081A TCL	~~PCBs~~ SW8082 Sulfide	Herbicides SW8151A	Explosives SW8330	TCLP Organics SW1311 SW8260B 8270C 8081A 8151A	TCLP Metals SW1311 Hg SW6010B 7470	Total Metals by ICP Hg SW6010B 7470 7471 E200.7	Dissolved Metals by ICP Hg SW6010B 7470 E200.7	Total Metals by ICP/MS SW6020A E200.8	Dissolved Metals by ICP/MS SW6020A E200.8	~~Hexavalent Chromium~~ SW7196A Alkaline Digestion HCl, pH	Inorganic Anions E300.0 (specify in comments) SW9056	Solids: Total E160.3 TDS E160.1 TSS E160.2	(pH) SW9040B SW9045C	TPH SW8015B GRO DRO (circle one or both) Diesel Range	Gross Alpha / Beta SW9310 E900.0	Actinides by Paragon SOP Pu / U / Am / Th / Cm / ___	Tritium E906.0	Total Alpha-Emitting Radium SW9315 E903.0	Radium 226 E903.1	Radium 228 E904.0	Strontium 90 (Total RadioSr) D5811-00	Gamma Isotopes E901.1	Radon 222 SM7510Rn	SAR Calc	Anion-Cation Balance	Conductivity
Ross (W)	31March	10:15	①	W					X								X		X	X	X	X	X	X								X	X	X
			②	W	HCl		X	X																	X									
			③	W	H_2SO_4					X																									
			④	W	ZnAcetate NaOH						X																								
Trip Blank			②																															

* **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
Anions = Br, Cl, F, NO_2, NO_3, SO_4
200.7 = Ba, Be, B, Ca, Cr, Co, Cu, Fe, Li, Mg, Mn, Ni, K, Na, Sr, Zn
200.8 = Sb, As, Cd, Pb, Mo, Se, Ag, Tl, U

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

Relinquished By: (1)	Relinquished By: (2)
Signature [signature]	Signature
Printed Name Peter Gintautas	Printed Name
Date 31March09 Time 15:30	Date Time
Company Colo. Oil & Gas Cons. Comm.	Company

Received By: (1)	Received By: (2)
Signature Cheryl Trimble	Signature
Printed Name Cheryl Trimble	Printed Name
Date 4-1-09 Time 0945	Date Time
Company ALS	Company

CONDITION OF SAMPLE UPON RECEIPT FORM **Paragon Analytics**

Client: COGCC Workorder No: 0904002

Project Manager: AW Initials: COT Date: 4-1-09

1. Does this project require any **special handling** in addition to standard Paragon procedures?		YES	(NO)
2. Are custody **seals** on **shipping containers** intact?	NONE	(YES)	NO
3. Are Custody seals on **sample containers** intact?	(NONE)	YES	NO
4. Is there a **COC (Chain-of-Custody) present** or other representative documents?		(YES)	NO
5. Are the **COC and bottle labels complete and legible**?		(YES)	NO
6. Is the **COC in agreement** with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		AW 4/1/09 YES	(NO)
7. Were **airbills / shipping documents** present and/or removable?	DROP OFF	(YES)	NO
8. Are all aqueous **samples requiring preservation preserved correctly?** (excluding volatiles)	N/A AW 4/1/09	YES	(NO)
9. Are all aqueous **non-preserved samples pH 4-9**?	N/A	(YES)	NO
10. Is there **sufficient sample** for the requested analyses?		(YES)	NO
11. Were all samples placed in the **proper containers** for the requested analyses?		(YES)	NO
12. Are all samples within **holding times** for the requested analyses?		(YES)	NO
13. Were all sample containers received **intact**? (not broken or leaking, etc.)		(YES)	NO
14. Are all samples requiring **no** headspace (**VOC, GRO, RSK/MEE, Rx CN/S, radon**) headspace free? **Size of bubble**: ✓ < green pea ____ > green pea	N/A	YES	(NO)
15. Do perchlorate LCMS-MS samples **have** headspace? (at least 1/3 of container required)	(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.)	(N/A)	YES	NO
17. Were the samples **shipped on ice**?		(YES)	NO
18. Were cooler temperatures measured at 0.1-6.0°C? **IR gun used*:** #2 (#4)	RAD ONLY	(YES)	NO

Cooler #:	1							
Temperature (°C):	3.8							
No. of custody seals on cooler:	1							
DOT Survey/ Acceptance Information — External µR/hr reading:	13							
Background µR/hr reading:	11							

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.

- 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 Cantautas Date/Time: e-mail 4/1/09

Project Manager Signature / Date: AW 4/1/09

*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: 0904002

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200206880

Lab ID: HC090409-1MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 09-Apr-09
Date Analyzed: 09-Apr-09
Prep Method: METHOD

Prep Batch: HC090409-1
QCBatchID: HC090409-1-1
Run ID: HC090409-1A
Cleanup: NONE
Basis: N/A
File Name: 01049.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: *HC0904002-1*

Dissolved Gasses

Method RSK175

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: 09-Apr-09
Date Analyzed: 09-Apr-09
Prep Method: METHOD

Prep Batch: HC090409-1
QCBatchID: HC090409-1-1
Run ID: HC090409-1A
Cleanup: NONE
Basis: As Received
File Name: 01051.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	1	2100	1		
74-85-1	ETHENE	1	1	1	U	
74-84-0	ETHANE	1	2	2	U	

Data Package ID: *HC0904002-1*

Dissolved Gasses

Method RSK175

Laboratory Control Sample and Laboratory Control Sample Duplicate

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

Lab ID: HC090409-1LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 04/09/2009
Date Analyzed: 04/09/2009
Prep Method: METHOD

Prep Batch: HC090409-1
QCBatchID: HC090409-1-1
Run ID: HC090409-1A
Cleanup: NONE
Basis: N/A
File Name: 01048.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	142	137	1		97	80 - 120%
74-85-1	ETHENE	249	239	1		96	80 - 120%
74-84-0	ETHANE	267	259	2		97	80 - 120%

Lab ID: HC090409-1LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 04/09/2009
Date Analyzed: 04/09/2009
Prep Method: METHOD

Prep Batch: HC090409-1
QCBatchID: HC090409-1-1
Run ID: HC090409-1A
Cleanup: NONE
Basis: N/A
File Name: 01058.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	142	156	1		110	25	13
74-85-1	ETHENE	249	268	1		108	25	11
74-84-0	ETHANE	267	295	2		111	25	13

Data Package ID: *HC0904002-1*

Dissolved Gasses

Method RSK175

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: 04/09/2009
Date Analyzed: 04/09/2009

Prep Batch: HC090409-1
QCBatchID: HC090409-1-1
Run ID: HC090409-1A
Cleanup: NONE
Basis: As Received
File Name: 01052.dat

Sample Aliquot: 38.5 ml
Final Volume: 38.5 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Sample Result	Samp Qual	Duplicate Result	Dup Qual	Reporting Limit	Dilution Factor	RPD	RPD Limit
74-82-8	METHANE	2100		2350		1	1	10	25
74-85-1	ETHENE	1	U	1	U	1	1		25
74-84-0	ETHANE	2	U	2	U	2	1		25

Data Package ID: *HC0904002-1*