



12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
(615) 758-5858  
1-800-767-5859  
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Tax I.D. 62-0814289

Est. 1970

Chris Hines / Jake Harris  
EnCana Oil & Gas Inc. - CO  
2717 County Road 215, Suite 100  
Parachute, CO 81635

## Report Summary

Tuesday September 06, 2011

Report Number: L533873

Samples Received: 09/01/11

Client Project:

Description: L19-Backgrounds

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Jayred Willis , ESC Representative

### Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487  
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140  
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A,  
TX - T104704245, OK-9915

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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REPORT OF ANALYSIS

Chris Hines / Jake Harris  
EnCana Oil & Gas Inc. - CO  
2717 County Road 215, Suite 100  
Parachute, CO 81635

September 06, 2011

Date Received : September 01, 2011  
Description : L19-Backgrounds  
Sample ID : L19-BGN-083111 16-18IN  
Collected By : Brennen Gaff  
Collection Date : 08/31/11 08:56

ESC Sample # : L533873-01

Site ID : L19

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	15.	1.0	mg/kg	6010B	09/02/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 09/05/11 09:03 Revised: 09/06/11 11:40



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September 06, 2011

Date Received : September 01, 2011  
Description : L19-Backgrounds  
Sample ID : L19-BGNW-083111 12-14IN  
Collected By : Brennen Gaff  
Collection Date : 08/31/11 08:56

ESC Sample # : L533873-02

Site ID : L19

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	31.	1.0	mg/kg	6010B	09/02/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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September 06, 2011

Date Received : September 01, 2011  
Description : L19-Backgrounds  
Sample ID : L19-BGW-083111 16-18IN  
Collected By : Brennen Gaff  
Collection Date : 08/31/11 08:56

ESC Sample # : L533873-03

Site ID : L19

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	22.	1.0	mg/kg	6010B	09/02/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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September 06, 2011

Date Received : September 01, 2011  
Description : L19-Backgrounds  
Sample ID : L19-BGSW-083111 18-20IN  
Collected By : Brennen Gaff  
Collection Date : 08/31/11 08:56

ESC Sample # : L533873-04

Site ID : L19

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	13.	1.0	mg/kg	6010B	09/02/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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September 06, 2011

Date Received : September 01, 2011  
Description : L19-Backgrounds  
Sample ID : L19-BGS-083111 18-20IN  
Collected By : Brennen Gaff  
Collection Date : 08/31/11 08:56

ESC Sample # : L533873-05

Site ID : L19

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	9.3	1.0	mg/kg	6010B	09/02/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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YOUR LAB OF CHOICE

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Quality Assurance Report  
Level II

L533873

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September 06, 2011

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed			
		Units	% Rec						
Arsenic	< 1	mg/kg			WG553487	09/02/11 23:15			
Analyte	Units	Duplicate		RPD	Limit	Ref Samp	Batch		
		Result	Duplicate						
Arsenic	mg/kg	15.0	15.0	2.63	20	L533863-02	WG553487		
Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch			
		Known Val	Result						
Arsenic	mg/kg	92.6	85.8	92.7	82.9-117	WG553487			
Analyte	Units	Matrix Spike		% Rec	Limit	Ref Samp	Batch		
		MS Res	Ref Res						
Arsenic	mg/kg	67.0	15.0	50	104.	75-125	L533863-02	WG553487	
Analyte	Units	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch	
		MSD	Ref						
Arsenic	mg/kg	67.5	67.0	105.	75-125	0.743	20	L533863-02	WG553487

Batch number /Run number / Sample number cross reference

WG553487: R1843694: L533873-01 02 03 04 05

\* \* Calculations are performed prior to rounding of reported values.

\* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.