



12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
(615) 758-5858  
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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

Friday July 15, 2011

Report Number: L525416

Samples Received: 07/12/11

Client Project:

Description: P27 Background

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:

Jared 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.

This report may not be reproduced, except in full, without written approval from ESC Lab Sciences. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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REPORT OF ANALYSIS

July 15, 2011

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2717 County Road 215, Suite 100  
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Date Received : July 12, 2011  
Description : P27 Background  
Sample ID : P27-BGN-070711 10-12IN  
Collected By : Brennen Graff  
Collection Date : 07/07/11 13:43

ESC Sample # : L525416-01

Site ID : P27

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	27.	2.0	mg/kg	6010B	07/14/11	2

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: 07/15/11 11:35 Printed: 07/15/11 12:53



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Date Received : July 12, 2011  
Description : P27 Background  
Sample ID : P27-BGNE-070711 8-10IN  
Collected By : Brennen Graff  
Collection Date : 07/07/11 13:50

ESC Sample # : L525416-02

Site ID : P27

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	24.	5.0	mg/kg	6010B	07/14/11	5

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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Date Received : July 12, 2011  
Description : P27 Background  
Sample ID : P27-BGE-070711 8-10IN  
Collected By : Brennen Graff  
Collection Date : 07/07/11 13:56

ESC Sample # : L525416-03

Site ID : P27

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	25.	2.0	mg/kg	6010B	07/14/11	2

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

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Date Received : July 12, 2011  
Description : P27 Background  
Sample ID : P27-BGSE-070711 10-12IN  
Collected By : Brennen Graff  
Collection Date : 07/07/11 14:02

ESC Sample # : L525416-04

Site ID : P27

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Arsenic	32.	1.0	mg/kg	6010B	07/14/11	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

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Reported: 07/15/11 11:35 Printed: 07/15/11 12:53

Summary of Remarks For Samples Printed  
07/15/11 at 12:53:48

TSR Signing Reports: 358  
R5 - Desired TAT

Sample: L525416-01 Account: ENCANACO Received: 07/12/11 09:00 Due Date: 07/19/11 00:00 RPT Date: 07/15/11 11:35

Sample: L525416-02 Account: ENCANACO Received: 07/12/11 09:00 Due Date: 07/19/11 00:00 RPT Date: 07/15/11 11:35

Sample: L525416-03 Account: ENCANACO Received: 07/12/11 09:00 Due Date: 07/19/11 00:00 RPT Date: 07/15/11 11:35

Sample: L525416-04 Account: ENCANACO Received: 07/12/11 09:00 Due Date: 07/19/11 00:00 RPT Date: 07/15/11 11:35



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Quality Assurance Report  
Level II

L525416

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July 15, 2011

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Arsenic	< 1	mg/kg			WG545403	07/14/11 11:52
Arsenic	< 1	mg/kg			WG545258	07/14/11 18:01

  

Analyte	Units	Duplicate			Limit	Ref Samp	Batch
		Result	Duplicate	RPD			
Arsenic	mg/kg	0.770	1.20	43.9*	20	L525589-10	WG545403
Arsenic	mg/kg	0	0	0	20	L525459-10	WG545258

  

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Arsenic	mg/kg	192	181.	94.3	78.6-120.8	WG545403
Arsenic	mg/kg	192	188.	97.9	78.6-120.8	WG545258

  

Analyte	Units	Matrix Spike				Limit	Ref Samp	Batch
		MS Res	Ref Res	TV	% Rec			
Arsenic	mg/kg	49.4	1.20	50	96.4	75-125	L525589-10	WG545403
Arsenic	mg/kg	45.9	0	10	91.8	75-125	L525459-10	WG545258

  

Analyte	Units	Matrix Spike Duplicate			Limit	RPD	Limit	Ref Samp	Batch
		MSD	Ref	%Rec					
Arsenic	mg/kg	46.9	49.4	91.4	75-125	5.19	20	L525589-10	WG545403
Arsenic	mg/kg	43.7	45.9	87.4	75-125	4.91	20	L525459-10	WG545258

Batch number /Run number / Sample number cross reference

WG545403: R1762570: L525416-04  
WG545258: R1764650: L525416-01 02 03

\* \* 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.