

State of Colorado

Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80205 Phone: (303) 894-2100 Fax: (303) 894-2109



DE	ET	OE	ES
----	----	----	----

Document Number:

400482822

Date Received:

SUNDRY NOTICE

Submit a signed original. This form is to be used for general, technical and environmental sundry information. For proposed or completed operations, describe in full in Comments or provide as an attachment. Identify Well by API Number; identify Oil and Gas Location by Location ID Number; identify other Facility by Facility ID Number.

OGCC Operator Number:	<u>100185</u>	Contact Name	_____
Name of Operator:	<u>ENCANA OIL & GAS (USA) INC</u>	Phone:	() _____
Address:	<u>370 17TH ST STE 1700</u>	Fax:	() _____
City:	<u>DENVER</u>	State:	<u>CO</u>
Zip:	<u>80202-5632</u>	Email:	_____

Complete the Attachment
Checklist

OP OGCC

API Number :	<u>05-</u>	<u>103</u>	<u>00</u>	OGCC Facility ID Number:	<u>276675</u>
Well/Facility Name:	<u>CANARY</u>	Well/Facility Number:	<u>6601</u>		
Location QtrQtr:	<u>SENE</u>	Section:	<u>10</u>	Township:	<u>1S</u>
				Range:	<u>99W</u>
				Meridian:	<u>6</u>
County:	<u>RIO BLANCO</u>	Field Name:	<u>WILDCAT</u>		
Federal, Indian or State Lease Number:	_____				

Survey Plat		
Directional Survey		
Srvc Eqpmt Diagram		
Technical Info Page		
Other		

CHANGE OF LOCATION OR AS BUILT GPS REPORT

☐ Change of Location * ☐ As-Built GPS Location Report ☐ As-Built GPS Location Report with Survey

* Well location change requires new plat. A substantive surface location change may require new Form 2A.

SURFACE LOCATION GPS DATA Data must be provided for Change of Surface Location and As Built Reports.

Latitude _____ PDOP Reading _____ Date of Measurement _____
Longitude _____ GPS Instrument Operator's Name _____

LOCATION CHANGE (all measurements in Feet)

Well will be: _____ (Vertical, Directional, Horizontal)

Change of **Surface** Footage **From** Exterior Section Lines:

Change of **Surface** Footage **To** Exterior Section Lines:

Current **Surface** Location **From** QtrQtr SENE Sec 10

New **Surface** Location **To** QtrQtr _____ Sec _____

Change of **Top of Productive Zone** Footage **From** Exterior Section Lines:

Change of **Top of Productive Zone** Footage **To** Exterior Section Lines:

Current **Top of Productive Zone** Location **From** Sec _____

New **Top of Productive Zone** Location **To** Sec _____

Change of **Bottomhole** Footage **From** Exterior Section Lines:

Change of **Bottomhole** Footage **To** Exterior Section Lines:

Current **Bottomhole** Location Sec _____ Twp _____

New **Bottomhole** Location Sec _____ Twp _____

Is location in High Density Area? _____

Distance, in feet, to nearest building _____, public road: _____, above ground utility: _____, railroad: _____,

property line: _____, lease line: _____, well in same formation: _____

Ground Elevation _____ feet Surface owner consultation date _____

FNL/FSL		FEL/FWL	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Twp <u>1S</u>	Range <u>99W</u>	Meridian <u>6</u>	
Twp <input type="text"/>	Range <input type="text"/>	Meridian <input type="text"/>	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Twp <input type="text"/>	Range <input type="text"/>		
Twp <input type="text"/>	Range <input type="text"/>		
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Range <input type="text"/>			
Range <input type="text"/>			

**

**

** attach deviated drilling plan

OTHER CHANGES

☐ **REMOVE FROM SURFACE BOND** Signed surface use agreement is a required attachment

☐ **CHANGE OF WELL, FACILITY OR OIL & GAS LOCATION NAME OR NUMBER**

From: Name _____ Number _____ Effective Date: _____

To: Name _____ Number _____

☐ **ABANDON PERMIT: Permit can only be abandoned if the permitted operation has NOT been conducted. Field inspection will be conducted to verify site status.**

☐ WELL: Abandon Application for Permit-to-Drill (Form2) – Well API Number _____ has not been drilled.

☐ PIT: Abandon Earthen Pit Permit (Form 15) – COGCC Pit Facility ID Number _____ has not been constructed (Permitted and constructed pit requires closure per Rule 905)

☐ CENTRALIZED E&P WASTE MANAGEMENT FACILITY: Abandon Centralized E&P Waste Management Facility Permit (Form 28) – Facility ID Number _____ has not been constructed (Constructed facility requires closure per Rule 908)

OIL & GAS LOCATION ID Number: _____

☐ Abandon Oil & Gas Location Assessment (Form 2A) – Location has not been constructed and site will not be used in the future.

☐ Keep Oil & Gas Location Assessment (Form 2A) active until expiration date. This site will be used in the future.

Surface disturbance from Oil and Gas Operations must be reclaimed per Rule 1003 and Rule 1004.

☐ **REQUEST FOR CONFIDENTIAL STATUS**

☐ **DIGITAL WELL LOG UPLOAD**

☐ **DOCUMENTS SUBMITTED** Purpose of Submission: _____

RECLAMATION

INTERIM RECLAMATION

☐ Interim Reclamation will commence approximately _____

Per Rule 1003.e.(3) operator shall submit Sundry Notice reporting interim reclamation is complete and site is ready for inspection when vegetation reaches 80% coverage.

☐ Interim reclamation complete, site ready for inspection.

Per Rule 1003.e(3) describe interim reclamation procedure in Comments below or provide as an attachment and attach required location photographs.

Field inspection will be conducted to document Rule 1003.e. compliance

FINAL RECLAMATION

☐ Final Reclamation will commence approximately _____

Per Rule 1004.c.(4) operator shall submit Sundry Notice reporting final reclamation is complete and site is ready for inspection when vegetation reaches 80% coverage.

☐ Final reclamation complete, site ready for inspection. Per Rule 1004.c(4) describe final reclamation procedure in Comments below or provide as an attachment.

Field inspection will be conducted to document Rule 1004.c. compliance

Comments:

ENGINEERING AND ENVIRONMENTAL WORK

☐ NOTICE OF CONTINUED TEMPORARILY ABANDONED STATUS

Indicate why the well is temporarily abandoned and describe future plans for utilization in the COMMENTS box below or provide as an attachment, as required by Rule 319.b.(3).

Date well temporarily abandoned _____ Has Production Equipment been removed from site? _____

Mechanical Integrity Test (MIT) required if shut in longer than 2 years. Date of last MIT _____

☐ SPUD DATE: _____

TECHNICAL ENGINEERING AND ENVIRONMENTAL WORK

Details of work must be described in full in the COMMENTS below or provided as an attachment.

☐ NOTICE OF INTENT Approximate Start Date _____

☐ REPORT OF WORK DONE Date Work Completed _____

- | | | |
|--|---|--|
| <input type="checkbox"/> Intent to Recomplete (Form 2 also required) | <input type="checkbox"/> Request to Vent or Flare | <input type="checkbox"/> E&P Waste Mangement Plan |
| <input type="checkbox"/> Change Drilling Plan | <input type="checkbox"/> Repair Well | <input type="checkbox"/> Beneficial Reuse of E&P Waste |
| <input type="checkbox"/> Gross Interval Change | <input type="checkbox"/> Rule 502 variance requested. Must provide detailed info regarding request. | |
| <input type="checkbox"/> Other _____ | <input type="checkbox"/> Status Update/Change of Remediation Plans for Spills and Releases | |

COMMENTS:

H2S REPORTING

Data Fields in this section are intended to document Sample and Location Data associated with the collection of a Gas Sample that is submitted for Laboratory Analysis.

Gas Analysis Report must be attached.

H2S Concentration: _____ in ppm (parts per million) Date of Measurement or Sample Collection _____

Description of Sample Point:

Absolute Open Flow Potential _____ in CFPD (cubic feet per day)

Description of Release Potential and Duration (If flow is not open to the atmosphere, identify the duration in which the container or pipeline would likely be opened for servicing operations.):

Distance to nearest occupied residence, school, church, park, school bus stop, place of business, or other areas where the public could reasonably be expected to frequent: _____

Distance to nearest Federal, State, County, or municipal road or highway owned and principally maintained for public use: _____

COMMENTS:

--

Best Management Practices

No BMP/COA Type

Description

--	--

Operator Comments:

--

I hereby certify all statements made in this form are, to the best of my knowledge, true, correct, and complete.

Signed: _____

Print Name: _____

Title: _____

Email: _____

Date: _____

Based on the information provided herein, this Sundry Notice (Form 4) complies with COGCC Rules and applicable orders and is hereby approved.

COGCC Approved: _____

Date: _____

CONDITIONS OF APPROVAL, IF ANY:

COA Type

Description

--	--

General Comments

User Group

Comment

Comment Date

--	--	--

Total: 0 comment(s)

Attachment Check List

Att Doc Num

Name

400482824	
-----------	--

Total Attach: 1 Files

**Canary 6601 Pit Closure (Facility ID – 276675)
(COGCC Location ID – 316370)
Form 4 (Notification of Completion)**

Encana Oil & Gas (USA) Inc. (Encana) is submitting this Form 4 (Sundry Notice) to document the closure of a lined earthen pit (Facility ID: 276675) on the Canary 6601 well pad (Location ID: 316370) in Encana's Buckhorn Draw area of operation. This work was conducted in accordance with an approved Form 27 (Site Investigation and Remediation Workplan) (Remediation #: 7917).

REPORT OF WORK COMPLETED

In accordance with COGCC Rule 907 for the management of exploration and production (E&P) waste, Encana collects representative samples of potentially impacted material on each of its locations for the purpose of comparing constituent levels to the allowable limits identified by the COGCC. All samples collected on behalf of Encana's Parachute Field Office are collected and documented in accordance with the Environmental Department's Sampling Procedures. Area background samples are also collected to establish a baseline for naturally occurring concentrations/levels for applicable constituents of concern. Field sampling documentation and laboratory reports not provided with this form are kept on file at the Parachute Field Office and are available upon request.

On June 18 and 19, 2013, LTE advanced nine soil borings to depths ranging from eight (8) to 23.5 feet below ground surface (bgs). LTE contracted Site Services Drilling Company of Golden, Colorado, to install the soil borings using a CME-75 drill rig equipped with hollow-stem augers. The soil borings were logged by an LTE geologist who inspected the soil for the presence or absence of petroleum hydrocarbon odor and/or staining. The soil was characterized by visually inspecting the soil samples collected in 2-foot long split-spoon samplers and field screening the soil headspace using a photo-ionization detector (PID) to monitor for the presence of volatile organic vapors. A Site Diagram illustrating the soil boring locations is attached.

Site investigation samples collected within the pit footprint indicated the presence of material with levels of SAR (3.3 – 77), pH (8.7 – 11), and arsenic (3.4 – 7.2) above the allowable limits identified in COGCC Table 910-1. In accordance with Rule 905.c, a Form 19 (Spill #: 2145677) was submitted to document discovery of material in excess of Table 910-1 allowable concentrations. Background arsenic values for the area range from 5.7 to 8.6 mg/kg and are included in the Laboratory Results Summary Table. Consistent with Footnote 1 to Table 910-1, Encana requests that the background arsenic values be considered as alternative to the limit identified in Table 910-1. Consistent with reclamation objectives and approved handling of material with elevated levels of EC, SAR, and pH, more than three feet (3') of clean native fill was observed between the pad surface and impacted material. Soil sample results are summarized in the attached tables. Copies of the laboratory reports are also attached.

NOTIFICATION OF COMPLETION

This Sundry Notice is also being submitted as the Notification of Completion for this remediation project. If the information provided is satisfactory, please provide a letter of No Further Action (NFA) and documentation of the closure of this remediation project and pit.

ATTACHMENTS

Site Location Map
Site Diagram
Laboratory Results Summary Table
Laboratory Reports – Pit Investigation (Background Lab Reports available upon request)

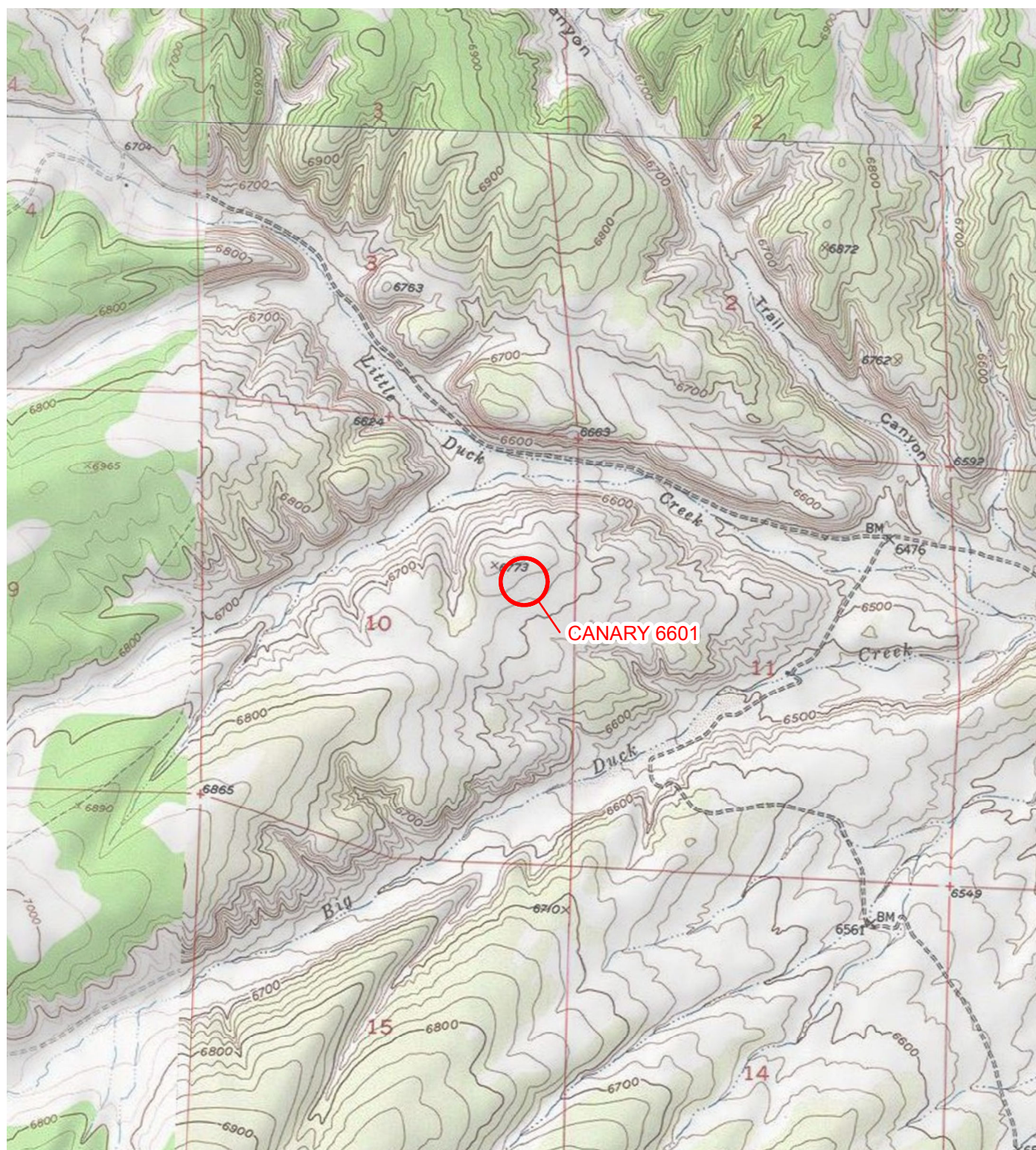


IMAGE COURTESY OF ESRI/BING MAPS

LEGEND



SITE LOCATION

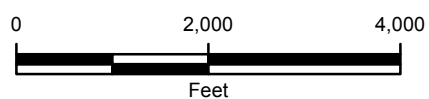
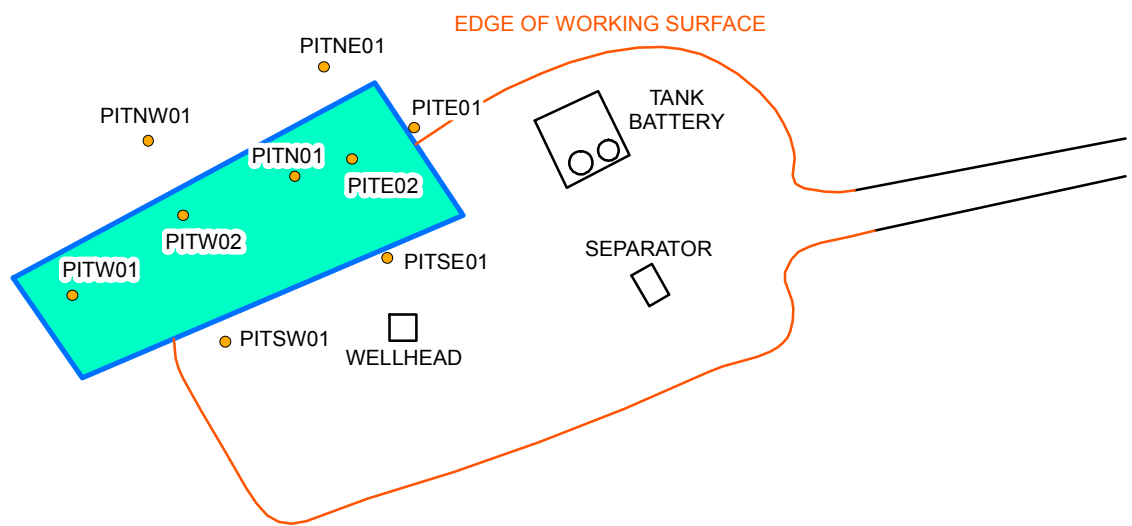




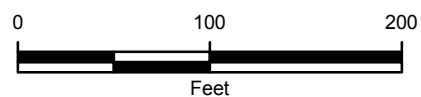
FIGURE 1
SITE LOCATION MAP
CANARY 6601
RIO BLANCO COUNTY, COLORADO

ENCANA OIL & GAS (USA) INC.



LEGEND

-  SAMPLE
-  PIT OUTLINE 2006



SITE DIAGRAM
CANARY 6601
RIO BLANCO COUNTY, COLORADO

ENCANA OIL & GAS (USA) INC.



Laboratory Results Summary Table

				Organic Compounds in Soil (mg/kg [ppm])																				Inorganics in Soil			Metals in Soil (mg/kg [ppm])												
Allowable Concentration -->				500	TPH-GRO (C6-C10) Low Fraction	TPH-DRO (C10-C36) High Fraction	0.17	85	100	175	1000	1000	0.22	0.22	2.2	0.022	22	0.022	1000	1000	0.22	23	1000		(<12)	(6-9)	0.39	15000	70	120000	23	3100	400	23	1600	390	390	23000	
Location	Sample Date:	Sample Matrix	Matrix Notes	TPH (total volatile and extractable petroleum hydrocarbons)			Benzene	Toluene	Ethylbenzene	Xylenes - total	Acenaphthene	Anthracene	Benzo(A)anthracene	Benzo(B)fluoranthene	Benzo(K)fluoranthene	Benzo(A)pyrene	Chrysene	Dibenzo(A,H)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-C,D)pyrene	Naphthalene	Pyrene	EC (<4 mmhos/cm or 2x background)	SAR (calculation)	pH	Arsenic	Barium - EPA Total Barium	Cadmium	Chromium (III)	Chromium (VI)	Copper	Lead (inorganic)	Mercury	Nickel (soluble salts)	Selenium	Silver	Zinc	
Canary 6601	06/19/13	Pit	soil boring SW 01 [8-10']	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.32	3.3	9	3.4	530	BDL	12	BDL	6	2.4	BDL	4.1	BDL	BDL	19		
Canary 6601	06/19/13	Pit	soil boring N 01 [14-16']	BDL	BDL	BDL	0.0047	BDL	BDL	0.016	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	1.4	77	11	6.3	410	BDL	21	BDL	8.7	9.7	BDL	8.6	BDL	BDL	31		
Canary 6601	06/19/13	Pit	soil boring NE 01 [7-9']	34.4	BDL	34.4	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.79	9.6	8.7	7.2	1600	BDL	11	BDL	7.8	3.2	BDL	5.5	BDL	BDL	22		
Canary 6601	06/18/13	Pit	soil boring W 1 [12.5']	BDL	BDL	BDL	BDL	BDL	BDL	BDL																													
Canary 6601	06/18/13	Pit	soil boring W 2 [15-17']	84	BDL	84	BDL	BDL	BDL	BDL																													
Canary 6601	06/18/13	Pit	soil boring W 2 [23.5']	BDL	BDL	BDL	BDL	BDL	BDL	BDL																													
Canary 6601	06/18/13	Pit	soil boring NW 1 [7.5-9.5']	BDL	BDL	BDL	BDL	BDL	BDL	BDL																													
Canary 6601	06/19/13	Pit	soil boring E 01 [11-12.5']	BDL	BDL	BDL	BDL	BDL	BDL	BDL																													
Canary 6601	06/19/13	Pit	soil boring E 02 [10-12']	328	BDL	328	BDL	BDL	BDL	BDL																													
Canary 6601	06/19/13	Pit	soil boring E 02 [15-17']	55	BDL	55	BDL	BDL	BDL	BDL																													
Canary 6601	06/19/13	Pit	soil boring SE 01 [6-8']	BDL	BDL	BDL	BDL	BDL	BDL	BDL																													
Canary 6601	07/23/13	Background																								5.7													
Canary 6601	07/23/13	Background																								6.4													
Canary 6601	07/23/13	Background																								6.4													
Canary 6601	07/23/13	Background																								6.5													
Canary 6601	07/23/13	Background	E																							6.7													
Canary 6601	07/23/13	Background																								7.4													
Canary 6601	07/23/13	Background	Mid E																							7.7													
Canary 6601	07/23/13	Background																								7.8													
Canary 6601	07/23/13	Background																								7.8													
Canary 6601	07/23/13	Background																								8.3													
Canary 6601	07/23/13	Background																								8.4													
Canary 6601	07/23/13	Background																								8.4													
Canary 6601	07/23/13	Background																								8.6													
Canary 6601	07/23/13	Background																								BDL													
Canary 6601	07/23/13	Background	Mid																							BDL													
Canary 6601	07/23/13	Background																								BDL													
Canary 6601	07/23/13	Background																								BDL													
Canary 6601	07/23/13	Background	Mid W																							BDL													
Canary 6601	07/23/13	Background																								BDL													
Canary 6601	07/23/13	Background																								BDL													
Canary 6601	07/23/13	Background																								BDL													
Canary 6601	07/23/13	Background	W																							BDL													



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Chris McKisson / Rob Fishburn (LT Env)
EnCana Oil & Gas Inc. - CO
143 Diamond Avenue
Parachute, CO 81635

Report Summary

Friday June 28, 2013

Report Number: L642376

Samples Received: 06/20/13

Client Project: CANARY 6601 PIT

Description: Canary 6601

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 - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-IN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364

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.



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Chris McKisson / Rob Fishburn (LT E
EnCana Oil & Gas Inc. - CO
143 Diamond Avenue
Parachute, CO 81635

June 28, 2013

Date Received : June 20, 2013
Description : Canary 6601
Sample ID : 061813-CANARY 6601 (PITW01) 12.5 FT
Collected By : Dustin Held
Collection Date : 06/18/13 12:15

ESC Sample # : L642376-01

Site ID : CANARY 6601

Project # : CANARY 6601 PIT

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Standard Plate Count	16000		col/g	9215B	06/20/13	10000
Nitrate	BDL	1.0	mg/kg	9056	06/22/13	1
Sulfate	110	50.	mg/kg	9056	06/22/13	1
Iron	5500	5.0	mg/kg	6010B	06/28/13	1
Benzene	BDL	0.0025	mg/kg	8021/8015	06/22/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	06/22/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	06/22/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	06/22/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	06/22/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	92.5		% Rec.	8021/8015	06/22/13	5
a,a,a-Trifluorotoluene(PID)	97.7		% Rec.	8021/8015	06/22/13	5
Diesel and Oil Ranges						
C10-C28 Diesel Range	BDL	4.0	mg/kg	8015	06/27/13	1
C28-C40 Oil Range	BDL	4.0	mg/kg	8015	06/27/13	1
Surrogate Recovery						
o-Terphenyl	70.9		% Rec.	8015	06/27/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 06/28/13 12:35 Printed: 06/28/13 12:35



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Chris McKisson / Rob Fishburn (LT E
EnCana Oil & Gas Inc. - CO
143 Diamond Avenue
Parachute, CO 81635

June 28, 2013

Date Received : June 20, 2013
Description : Canary 6601
Sample ID : 061813-CANARY 6601 (PITW02) 15-17 FT
Collected By : Dustin Held
Collection Date : 06/18/13 13:50

ESC Sample # : L642376-02

Site ID : CANARY 6601

Project # : CANARY 6601 PIT

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Standard Plate Count	12000		col/g	9215B	06/20/13	10000
Nitrate	BDL	1.0	mg/kg	9056	06/22/13	1
Sulfate	600	50.	mg/kg	9056	06/22/13	1
Iron	9500	5.0	mg/kg	6010B	06/28/13	1
Benzene	BDL	0.0025	mg/kg	8021/8015	06/22/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	06/22/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	06/22/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	06/22/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	06/22/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	92.8		% Rec.	8021/8015	06/22/13	5
a,a,a-Trifluorotoluene(PID)	98.1		% Rec.	8021/8015	06/22/13	5
Diesel and Oil Ranges						
C10-C28 Diesel Range	72.	4.0	mg/kg	8015	06/27/13	1
C28-C40 Oil Range	12.	4.0	mg/kg	8015	06/27/13	1
Surrogate Recovery						
o-Terphenyl	56.8		% Rec.	8015	06/27/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 06/28/13 12:35 Printed: 06/28/13 12:35



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Chris McKisson / Rob Fishburn (LT E
EnCana Oil & Gas Inc. - CO
143 Diamond Avenue
Parachute, CO 81635

June 28, 2013

Date Received : June 20, 2013
Description : Canary 6601
Sample ID : 061813-CANARY 6601 (PITW02) 23.5 FT
Collected By : Dustin Held
Collection Date : 06/18/13 14:20

ESC Sample # : L642376-03

Site ID : CANARY 6601

Project # : CANARY 6601 PIT

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Standard Plate Count	75.		col/g	9215B	06/20/13	1000
Nitrate	BDL	1.0	mg/kg	9056	06/22/13	1
Sulfate	120	50.	mg/kg	9056	06/22/13	1
Iron	17000	5.0	mg/kg	6010B	06/28/13	1
Benzene	BDL	0.0025	mg/kg	8021/8015	06/22/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	06/22/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	06/22/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	06/22/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	06/22/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	92.5		% Rec.	8021/8015	06/22/13	5
a,a,a-Trifluorotoluene(PID)	97.7		% Rec.	8021/8015	06/22/13	5
Diesel and Oil Ranges						
C10-C28 Diesel Range	BDL	4.0	mg/kg	8015	06/27/13	1
C28-C40 Oil Range	BDL	4.0	mg/kg	8015	06/27/13	1
Surrogate Recovery						
o-Terphenyl	63.3		% Rec.	8015	06/27/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 06/28/13 12:35 Printed: 06/28/13 12:35



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Chris McKisson / Rob Fishburn (LT E
EnCana Oil & Gas Inc. - CO
143 Diamond Avenue
Parachute, CO 81635

June 28, 2013

Date Received : June 20, 2013
Description : Canary 6601
Sample ID : 061813-CANARY 6601 (PITNW01) 7.5-9.5 FT
Collected By : Dustin Held
Collection Date : 06/18/13 15:00

ESC Sample # : L642376-04

Site ID : CANARY 6601

Project # : CANARY 6601 PIT

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Standard Plate Count	100		col/g	9215B	06/20/13	1000
Nitrate	BDL	1.0	mg/kg	9056	06/22/13	1
Sulfate	69.	50.	mg/kg	9056	06/22/13	1
Iron	6800	5.0	mg/kg	6010B	06/28/13	1
Benzene	BDL	0.0025	mg/kg	8021/8015	06/22/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	06/22/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	06/22/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	06/22/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	06/22/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	92.6		% Rec.	8021/8015	06/22/13	5
a,a,a-Trifluorotoluene(PID)	97.6		% Rec.	8021/8015	06/22/13	5
Diesel and Oil Ranges						
C10-C28 Diesel Range	BDL	4.0	mg/kg	8015	06/27/13	1
C28-C40 Oil Range	BDL	4.0	mg/kg	8015	06/27/13	1
Surrogate Recovery						
o-Terphenyl	79.2		% Rec.	8015	06/27/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 06/28/13 12:35 Printed: 06/28/13 12:35

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L642376-01	WG668639	SAMP	Standard Plate Count	R2721480	T8
L642376-02	WG668639	SAMP	Standard Plate Count	R2721480	T8
L642376-03	WG668639	SAMP	Standard Plate Count	R2721480	T8
L642376-04	WG668639	SAMP	Standard Plate Count	R2721480	T8

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
06/28/13 at 12:35:39

TSR Signing Reports: 358
R5 - Desired TAT

Log ALL samples for EDD (COGCC EDD). Log all PAHs as PAHSIM. DRO and DRO-SGT needed if TPH is listed twice on COC, one being TPH-GEL EXTRACT.

Sample: L642376-01 Account: ENCANACO Received: 06/20/13 09:30 Due Date: 06/27/13 00:00 RPT Date: 06/28/13 12:35

Sample: L642376-02 Account: ENCANACO Received: 06/20/13 09:30 Due Date: 06/27/13 00:00 RPT Date: 06/28/13 12:35

Sample: L642376-03 Account: ENCANACO Received: 06/20/13 09:30 Due Date: 06/27/13 00:00 RPT Date: 06/28/13 12:35

Sample: L642376-04 Account: ENCANACO Received: 06/20/13 09:30 Due Date: 06/27/13 00:00 RPT Date: 06/28/13 12:35



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Chris McKisson / Rob Fishburn (LT Env)
EnCana Oil & Gas Inc. - CO
143 Diamond Avenue
Parachute, CO 81635

Report Summary

Wednesday July 03, 2013

Report Number: L642913


Samples Received: 06/21/13

Client Project: CANARY 6601 PIT

Description: CANARY 6601 PIT

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 - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-IN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/BIO041, ND - R-140, NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364

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.



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Chris McKisson / Rob Fishburn (LT E
EnCana Oil & Gas Inc. - CO
143 Diamond Avenue
Parachute, CO 81635

July 03, 2013

Date Received : June 21, 2013
Description : CANARY 6601 PIT
Sample ID : 061913-CANARY 6601 (PITN01) 14-16 FT
Collected By : Dustin Held
Collection Date : 06/19/13 09:00

ESC Sample # : L642913-01
Site ID : CANARY 6601 PIT
Project # : CANARY 6601 PIT

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Standard Plate Count	<19		col/g	9215B	06/22/13	1000
Nitrate	BDL	1.0	mg/kg	9056	06/23/13	1
Sulfate	180	50.	mg/kg	9056	06/23/13	1
Chromium,Hexavalent	BDL	2.0	mg/kg	3060A/7196A	06/28/13	1
Chromium,Trivalent	21.	2.0	mg/kg	Calc.	07/03/13	1
ORP	-10.		mV	2580 B-2011	06/27/13	1
pH	11.		su	9045D	06/27/13	1
Sodium Adsorption Ratio	77.			Calc.	06/25/13	1
Specific Conductance	1400		umhos/cm	9050AMod	06/25/13	1
Mercury	BDL	0.020	mg/kg	7471	06/26/13	1
Arsenic	6.3	1.0	mg/kg	6010B	07/03/13	1
Barium	410	0.25	mg/kg	6010B	07/03/13	1
Cadmium	BDL	0.25	mg/kg	6010B	07/03/13	1
Chromium	21.	0.50	mg/kg	6010B	07/03/13	1
Copper	8.7	1.0	mg/kg	6010B	07/03/13	1
Iron	14000	5.0	mg/kg	6010B	07/03/13	1
Lead	9.7	0.25	mg/kg	6010B	07/03/13	1
Nickel	8.6	1.0	mg/kg	6010B	07/03/13	1
Selenium	BDL	1.0	mg/kg	6010B	07/03/13	1
Silver	BDL	0.50	mg/kg	6010B	07/03/13	1
Zinc	31.	1.5	mg/kg	6010B	07/03/13	1
Benzene	0.0047	0.0025	mg/kg	8021/8015	06/26/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	06/26/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	06/26/13	5
Total Xylene	0.016	0.0075	mg/kg	8021/8015	06/26/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	06/26/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	100.		% Rec.	8021/8015	06/26/13	5
a,a,a-Trifluorotoluene(PID)	100.		% Rec.	8021/8015	06/26/13	5
Diesel and Oil Ranges						
C10-C28 Diesel Range	BDL	4.0	mg/kg	8015	06/27/13	1
C28-C40 Oil Range	BDL	4.0	mg/kg	8015	06/27/13	1
Surrogate Recovery						

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
L642913-01 (PH) - 11@23.3c



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Chris McKisson / Rob Fishburn (LT E
EnCana Oil & Gas Inc. - CO
143 Diamond Avenue
Parachute, CO 81635

July 03, 2013

Date Received : June 21, 2013
Description : CANARY 6601 PIT
Sample ID : 061913-CANARY 6601 (PITN01) 14-16 FT
Collected By : Dustin Held
Collection Date : 06/19/13 09:00

ESC Sample # : L642913-01
Site ID : CANARY 6601 PIT
Project # : CANARY 6601 PIT

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
o-Terphenyl	71.4		% Rec.	8015	06/27/13	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	06/28/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	06/28/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	06/28/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	06/28/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	06/28/13	1
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	06/28/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	06/28/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	06/28/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	06/28/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	06/28/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	06/28/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	06/28/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	06/28/13	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	06/28/13	1
Phenanthrene	0.012	0.0060	mg/kg	8270C-SIM	06/28/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	06/28/13	1
1-Methylnaphthalene	0.026	0.020	mg/kg	8270C-SIM	06/28/13	1
2-Methylnaphthalene	0.032	0.020	mg/kg	8270C-SIM	06/28/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	06/28/13	1
Surrogate Recovery						
Nitrobenzene-d5	71.8		% Rec.	8270C-SIM	06/28/13	1
2-Fluorobiphenyl	79.1		% Rec.	8270C-SIM	06/28/13	1
p-Terphenyl-d14	60.3		% Rec.	8270C-SIM	06/28/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 07/03/13 17:12 Printed: 07/03/13 17:13
L642913-01 (PH) - 11@23.3c



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Chris McKisson / Rob Fishburn (LT E
EnCana Oil & Gas Inc. - CO
143 Diamond Avenue
Parachute, CO 81635

July 03, 2013

Date Received : June 21, 2013
Description : CANARY 6601 PIT
Sample ID : 061913-CANARY 6601 (PITE01) 11-12.5 FT
Collected By : Dustin Held
Collection Date : 06/19/13 10:30

ESC Sample # : L642913-02
Site ID : CANARY 6601 PIT
Project # : CANARY 6601 PIT

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Standard Plate Count	31.		col/g	9215B	06/22/13	1000
Nitrate	BDL	1.0	mg/kg	9056	06/23/13	1
Sulfate	130	50.	mg/kg	9056	06/23/13	1
Iron	9800	5.0	mg/kg	6010B	07/03/13	1
Benzene	BDL	0.0025	mg/kg	8021/8015	06/26/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	06/26/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	06/26/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	06/26/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	06/26/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	101.		% Rec.	8021/8015	06/26/13	5
a,a,a-Trifluorotoluene(PID)	99.7		% Rec.	8021/8015	06/26/13	5
Diesel and Oil Ranges						
C10-C28 Diesel Range	BDL	4.0	mg/kg	8015	06/27/13	1
C28-C40 Oil Range	BDL	4.0	mg/kg	8015	06/27/13	1
Surrogate Recovery						
o-Terphenyl	56.5		% Rec.	8015	06/27/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 07/03/13 17:12 Printed: 07/03/13 17:13



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Chris McKisson / Rob Fishburn (LT E
EnCana Oil & Gas Inc. - CO
143 Diamond Avenue
Parachute, CO 81635

July 03, 2013

Date Received : June 21, 2013
Description : CANARY 6601 PIT
Sample ID : 061913-CANARY 6601 (PITE02) 10-12 FT
Collected By : Dustin Held
Collection Date : 06/19/13 11:20

ESC Sample # : L642913-03

Site ID : CANARY 6601 PIT

Project # : CANARY 6601 PIT

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Standard Plate Count	4100		col/g	9215B	06/22/13	1000
Nitrate	BDL	1.0	mg/kg	9056	06/23/13	1
Sulfate	4200	250	mg/kg	9056	06/26/13	5
Iron	13000	5.0	mg/kg	6010B	07/03/13	1
Benzene	BDL	0.0025	mg/kg	8021/8015	06/26/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	06/26/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	06/26/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	06/26/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	06/26/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	101.		% Rec.	8021/8015	06/26/13	5
a,a,a-Trifluorotoluene(PID)	100.		% Rec.	8021/8015	06/26/13	5
Diesel and Oil Ranges						
C10-C28 Diesel Range	270	20.	mg/kg	8015	06/27/13	5
C28-C40 Oil Range	58.	4.0	mg/kg	8015	06/27/13	1
Surrogate Recovery						
o-Terphenyl	92.9		% Rec.	8015	06/27/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 07/03/13 17:12 Printed: 07/03/13 17:13



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Chris McKisson / Rob Fishburn (LT E
EnCana Oil & Gas Inc. - CO
143 Diamond Avenue
Parachute, CO 81635

July 03, 2013

Date Received : June 21, 2013
Description : CANARY 6601 PIT
Sample ID : 061913-CANARY 6601 (PITE02) 15-17 FT
Collected By : Dustin Held
Collection Date : 06/19/13 11:35

ESC Sample # : L642913-04

Site ID : CANARY 6601 PIT

Project # : CANARY 6601 PIT

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0025	mg/kg	8021/8015	06/26/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	06/26/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	06/26/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	06/26/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	06/26/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	101.		% Rec.	8021/8015	06/26/13	5
a,a,a-Trifluorotoluene(PID)	101.		% Rec.	8021/8015	06/26/13	5
Diesel and Oil Ranges						
C10-C28 Diesel Range	38.	4.0	mg/kg	8015	06/27/13	1
C28-C40 Oil Range	17.	4.0	mg/kg	8015	06/27/13	1
Surrogate Recovery						
o-Terphenyl	74.1		% Rec.	8015	06/27/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 07/03/13 17:12 Printed: 07/03/13 17:13



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Chris McKisson / Rob Fishburn (LT E
EnCana Oil & Gas Inc. - CO
143 Diamond Avenue
Parachute, CO 81635

July 03, 2013

Date Received : June 21, 2013
Description : CANARY 6601 PIT
Sample ID : 061913-CANARY 6601 (PITNE01) 7-9 FT
Collected By : Dustin Held
Collection Date : 06/19/13 12:50

ESC Sample # : L642913-05
Site ID : CANARY 6601 PIT
Project # : CANARY 6601 PIT

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Standard Plate Count	3700		col/g	9215B	06/22/13	1000
Nitrate	BDL	1.0	mg/kg	9056	06/23/13	1
Sulfate	420	50.	mg/kg	9056	06/23/13	1
Chromium,Hexavalent	BDL	2.0	mg/kg	3060A/7196A	06/28/13	1
Chromium,Trivalent	11.	2.0	mg/kg	Calc.	07/03/13	1
ORP	190		mV	2580 B-2011	06/28/13	1
pH	8.7		su	9045D	06/27/13	1
Sodium Adsorption Ratio	9.6			Calc.	06/25/13	1
Specific Conductance	790		umhos/cm	9050AMod	06/25/13	1
Mercury	BDL	0.020	mg/kg	7471	06/26/13	1
Arsenic	7.2	1.0	mg/kg	6010B	07/03/13	1
Barium	1600	0.25	mg/kg	6010B	07/03/13	1
Cadmium	BDL	0.25	mg/kg	6010B	07/03/13	1
Chromium	11.	0.50	mg/kg	6010B	07/03/13	1
Copper	7.8	1.0	mg/kg	6010B	07/03/13	1
Iron	8000	5.0	mg/kg	6010B	07/03/13	1
Lead	3.2	0.25	mg/kg	6010B	07/03/13	1
Nickel	5.5	1.0	mg/kg	6010B	07/03/13	1
Selenium	BDL	1.0	mg/kg	6010B	07/03/13	1
Silver	BDL	0.50	mg/kg	6010B	07/03/13	1
Zinc	22.	1.5	mg/kg	6010B	07/03/13	1
Benzene	BDL	0.0025	mg/kg	8021/8015	06/26/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	06/26/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	06/26/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	06/26/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	06/26/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	101.		% Rec.	8021/8015	06/26/13	5
a,a,a-Trifluorotoluene(PID)	100.		% Rec.	8021/8015	06/26/13	5
Diesel and Oil Ranges						
C10-C28 Diesel Range	29.	4.0	mg/kg	8015	06/28/13	1
C28-C40 Oil Range	5.4	4.0	mg/kg	8015	06/28/13	1
Surrogate Recovery						

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
L642913-05 (PH) - 8.7@23.5c



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Chris McKisson / Rob Fishburn (LT E
EnCana Oil & Gas Inc. - CO
143 Diamond Avenue
Parachute, CO 81635

July 03, 2013

Date Received : June 21, 2013
Description : CANARY 6601 PIT
Sample ID : 061913-CANARY 6601 (PITNE01) 7-9 FT
Collected By : Dustin Held
Collection Date : 06/19/13 12:50

ESC Sample # : L642913-05
Site ID : CANARY 6601 PIT
Project # : CANARY 6601 PIT

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
o-Terphenyl	82.3		% Rec.	8015	06/28/13	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	06/28/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	06/28/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	06/28/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	06/28/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	06/28/13	1
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	06/28/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	06/28/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	06/28/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	06/28/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	06/28/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	06/28/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	06/28/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	06/28/13	1
Naphthalene	0.028	0.020	mg/kg	8270C-SIM	06/28/13	1
Phenanthrene	0.020	0.0060	mg/kg	8270C-SIM	06/28/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	06/28/13	1
1-Methylnaphthalene	0.042	0.020	mg/kg	8270C-SIM	06/28/13	1
2-Methylnaphthalene	0.082	0.020	mg/kg	8270C-SIM	06/28/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	06/28/13	1
Surrogate Recovery						
Nitrobenzene-d5	77.4		% Rec.	8270C-SIM	06/28/13	1
2-Fluorobiphenyl	76.1		% Rec.	8270C-SIM	06/28/13	1
p-Terphenyl-d14	75.1		% Rec.	8270C-SIM	06/28/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 07/03/13 17:12 Printed: 07/03/13 17:13
L642913-05 (PH) - 8.7@23.5c



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Chris McKisson / Rob Fishburn (LT E
EnCana Oil & Gas Inc. - CO
143 Diamond Avenue
Parachute, CO 81635

July 03, 2013

Date Received : June 21, 2013
Description : CANARY 6601 PIT
Sample ID : 061913-CANARY 6601 (PITSW01) 8-10 FT
Collected By : Dustin Held
Collection Date : 06/19/13 14:45

ESC Sample # : L642913-06
Site ID : CANARY 6601 PIT
Project # : CANARY 6601 PIT

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Standard Plate Count	19.		col/g	9215B	06/22/13	1000
Nitrate	BDL	1.0	mg/kg	9056	06/23/13	1
Sulfate	52.	50.	mg/kg	9056	06/23/13	1
Chromium,Hexavalent	BDL	2.0	mg/kg	3060A/7196A	06/28/13	1
Chromium,Trivalent	12.	2.0	mg/kg	Calc.	07/03/13	1
ORP	40.		mV	2580 B-2011	06/27/13	1
pH	9.0		su	9045D	06/27/13	1
Sodium Adsorption Ratio	3.3			Calc.	06/25/13	1
Specific Conductance	320		umhos/cm	9050AMod	06/25/13	1
Mercury	BDL	0.020	mg/kg	7471	06/26/13	1
Arsenic	3.4	1.0	mg/kg	6010B	07/03/13	1
Barium	530	0.25	mg/kg	6010B	07/03/13	1
Cadmium	BDL	0.25	mg/kg	6010B	07/03/13	1
Chromium	12.	0.50	mg/kg	6010B	07/03/13	1
Copper	6.0	1.0	mg/kg	6010B	07/03/13	1
Iron	7000	5.0	mg/kg	6010B	07/03/13	1
Lead	2.4	0.25	mg/kg	6010B	07/03/13	1
Nickel	4.1	1.0	mg/kg	6010B	07/03/13	1
Selenium	BDL	1.0	mg/kg	6010B	07/03/13	1
Silver	BDL	0.50	mg/kg	6010B	07/03/13	1
Zinc	19.	1.5	mg/kg	6010B	07/03/13	1
Benzene	BDL	0.0025	mg/kg	8021/8015	06/28/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	06/28/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	06/28/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	06/28/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	06/28/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	101.		% Rec.	8021/8015	06/28/13	5
a,a,a-Trifluorotoluene(PID)	100.		% Rec.	8021/8015	06/28/13	5
Diesel and Oil Ranges						
C10-C28 Diesel Range	BDL	4.0	mg/kg	8015	06/28/13	1
C28-C40 Oil Range	BDL	4.0	mg/kg	8015	06/28/13	1
Surrogate Recovery						

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
L642913-06 (PH) - 9.0@22.8c



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Chris McKisson / Rob Fishburn (LT E
EnCana Oil & Gas Inc. - CO
143 Diamond Avenue
Parachute, CO 81635

July 03, 2013

Date Received : June 21, 2013
Description : CANARY 6601 PIT
Sample ID : 061913-CANARY 6601 (PITSW01) 8-10 FT
Collected By : Dustin Held
Collection Date : 06/19/13 14:45

ESC Sample # : L642913-06
Site ID : CANARY 6601 PIT
Project # : CANARY 6601 PIT

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
o-Terphenyl	71.2		% Rec.	8015	06/28/13	1
Polynuclear Aromatic Hydrocarbons						
Anthracene	BDL	0.0060	mg/kg	8270C-SIM	07/02/13	1
Acenaphthene	BDL	0.0060	mg/kg	8270C-SIM	07/02/13	1
Acenaphthylene	BDL	0.0060	mg/kg	8270C-SIM	07/02/13	1
Benzo(a)anthracene	BDL	0.0060	mg/kg	8270C-SIM	07/02/13	1
Benzo(a)pyrene	BDL	0.0060	mg/kg	8270C-SIM	07/02/13	1
Benzo(b)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	07/02/13	1
Benzo(g,h,i)perylene	BDL	0.0060	mg/kg	8270C-SIM	07/02/13	1
Benzo(k)fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	07/02/13	1
Chrysene	BDL	0.0060	mg/kg	8270C-SIM	07/02/13	1
Dibenz(a,h)anthracene	BDL	0.0060	mg/kg	8270C-SIM	07/02/13	1
Fluoranthene	BDL	0.0060	mg/kg	8270C-SIM	07/02/13	1
Fluorene	BDL	0.0060	mg/kg	8270C-SIM	07/02/13	1
Indeno(1,2,3-cd)pyrene	BDL	0.0060	mg/kg	8270C-SIM	07/02/13	1
Naphthalene	BDL	0.020	mg/kg	8270C-SIM	07/02/13	1
Phenanthrene	BDL	0.0060	mg/kg	8270C-SIM	07/02/13	1
Pyrene	BDL	0.0060	mg/kg	8270C-SIM	07/02/13	1
1-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	07/02/13	1
2-Methylnaphthalene	BDL	0.020	mg/kg	8270C-SIM	07/02/13	1
2-Chloronaphthalene	BDL	0.020	mg/kg	8270C-SIM	07/02/13	1
Surrogate Recovery						
Nitrobenzene-d5	96.6		% Rec.	8270C-SIM	07/02/13	1
2-Fluorobiphenyl	95.1		% Rec.	8270C-SIM	07/02/13	1
p-Terphenyl-d14	92.7		% Rec.	8270C-SIM	07/02/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 07/03/13 17:12 Printed: 07/03/13 17:13
L642913-06 (PH) - 9.0@22.8c



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Chris McKisson / Rob Fishburn (LT E
EnCana Oil & Gas Inc. - CO
143 Diamond Avenue
Parachute, CO 81635

July 03, 2013

Date Received : June 21, 2013
Description : CANARY 6601 PIT
Sample ID : 061913-CANARY 6601 (PITSE01) 6-8 FT
Collected By : Dustin Held
Collection Date : 06/19/13 15:45

ESC Sample # : L642913-07

Site ID : CANARY 6601 PIT

Project # : CANARY 6601 PIT

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Standard Plate Count	84.		col/g	9215B	06/22/13	1000
Nitrate	BDL	1.0	mg/kg	9056	06/23/13	1
Sulfate	96.	50.	mg/kg	9056	06/23/13	1
Iron	8300	5.0	mg/kg	6010B	07/03/13	1
Benzene	BDL	0.0025	mg/kg	8021/8015	06/28/13	5
Toluene	BDL	0.025	mg/kg	8021/8015	06/28/13	5
Ethylbenzene	BDL	0.0025	mg/kg	8021/8015	06/28/13	5
Total Xylene	BDL	0.0075	mg/kg	8021/8015	06/28/13	5
TPH (GC/FID) Low Fraction	BDL	0.50	mg/kg	GRO	06/28/13	5
Surrogate Recovery-%						
a,a,a-Trifluorotoluene(FID)	102.		% Rec.	8021/8015	06/28/13	5
a,a,a-Trifluorotoluene(PID)	101.		% Rec.	8021/8015	06/28/13	5
Diesel and Oil Ranges						
C10-C28 Diesel Range	BDL	4.0	mg/kg	8015	06/28/13	1
C28-C40 Oil Range	BDL	4.0	mg/kg	8015	06/28/13	1
Surrogate Recovery						
o-Terphenyl	88.3		% Rec.	8015	06/28/13	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 07/03/13 17:12 Printed: 07/03/13 17:13

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L642913-01	WG669199	SAMP	p-Terphenyl-d14	R2726601	J2
	WG668641	SAMP	Standard Plate Count	R2721481	T8
L642913-02	WG668641	SAMP	Standard Plate Count	R2721481	T8
L642913-03	WG668641	SAMP	Standard Plate Count	R2721481	T8
L642913-05	WG668641	SAMP	Standard Plate Count	R2721481	T8
L642913-06	WG668641	SAMP	Standard Plate Count	R2721481	T8
L642913-07	WG668641	SAMP	Standard Plate Count	R2721481	T8

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
07/03/13 at 17:13:17

TSR Signing Reports: 358
RX - Priority Rush

Log ALL samples for EDD (COGCC EDD). Log all PAHs as PAHSIM. DRO and DRO-SGT needed if TPH is listed twice on COC, one being TPH-GEL EXTRACT.

Sample: L642913-01 Account: ENCANACO Received: 06/21/13 09:30 Due Date: 07/05/13 00:00 RPT Date: 07/03/13 17:12
Added CRICP per JW. AV 6/27
Sample: L642913-02 Account: ENCANACO Received: 06/21/13 09:30 Due Date: 07/05/13 00:00 RPT Date: 07/03/13 17:12
Sample: L642913-03 Account: ENCANACO Received: 06/21/13 09:30 Due Date: 07/05/13 00:00 RPT Date: 07/03/13 17:12
Sample: L642913-04 Account: ENCANACO Received: 06/21/13 09:30 Due Date: 07/01/13 00:00 RPT Date: 07/03/13 17:12
Sample: L642913-05 Account: ENCANACO Received: 06/21/13 09:30 Due Date: 07/05/13 00:00 RPT Date: 07/03/13 17:12
Added CRICP per JW. AV 6/27
Sample: L642913-06 Account: ENCANACO Received: 06/21/13 09:30 Due Date: 07/05/13 00:00 RPT Date: 07/03/13 17:12
Added CRICP per JW. AV 6/27
Sample: L642913-07 Account: ENCANACO Received: 06/21/13 09:30 Due Date: 07/05/13 00:00 RPT Date: 07/03/13 17:12