

Hydraulic Fracturing Fluid Product Component Information Disclosure

Last Fracture Date:	May 13, 2013
Last Submission Date:	July 08, 2013
Province:	AB
ERCB Field Centre:	Midnapore
Surface location:	06-28-027-21W4
Well Licence Number:	0455060
Licensee Name:	Encana Corporation
Unique Well Identifier:	02/12-33-027-21W4/0
Well Name:	ECA HZ 102 HUSSAR 12-33-27-21
Number of Stages:	13
Bottom Hole Latitude:	51.351046
Bottom Hole Longitude:	-112.907153
Lat/Long Projection:	NAD 83
Production Fluid Type:	CRUDE OIL
True Vertical Depth (TVD):	1,464.11
Total Water Volume (m3):	843

Hydraulic Fracturing Fluid Composition:

Fracture Start/End Date:	Component Type	Trade Name	Supplier	Purpose	Ingredient/Family Name	CAS # / HMIRC #	Concentration in Component (% by mass)	Concentration in HFF (% by mass)
May 13 2013 - May 13 2013	CARRIER FLUID				Nitrogen	7727-37-9	100.000000%	29.946512%
	CARRIER FLUID				Water	Not Available	100.000000%	66.523889%
	PROPPANT	Sand (20/40)	Trican		silica crystalline	14808-60-7	100.000000%	2.710112%
	ADDITIVE	Busan 1388	Trican	Bactericide/Biocide	glutaraldehyde	111-30-8	60.000000%	0.004429%
	ADDITIVE	Busan 1388	Trican	Bactericide/Biocide	non-hazardous ingredients	Not Available	39.000000%	0.002879%
	ADDITIVE	Busan 1388	Trican	Bactericide/Biocide	Methanol	67-56-1	1.000000%	0.000073%
	ADDITIVE	WBO-2	Trican	Breaker	sodium persulfate	7775-27-1	100.000000%	0.019957%
	ADDITIVE	CC-55	Trican	Clay Control	1,3-propanediaminium-2-substitued, -hexaalkyl-, di halide	7744	60.000000%	0.087412%
	ADDITIVE	CC-55	Trican	Clay Control	non-hazardous ingredients	Not Available	35.000000%	0.050990%
	ADDITIVE	CC-55	Trican	Clay Control	formic acid	64-18-6	5.000000%	0.007284%
	ADDITIVE	WXB-10	Trican	Crosslinker	borate salts	1319-33-1	60.000000%	0.123591%
	ADDITIVE	WXB-10	Trican	Crosslinker	distillates (petroleum), hydrotreated light	64742-47-8	60.000000%	0.123591%
	ADDITIVE	GNE-1	Trican	Demulsifier	propylene glycol	57-55-6	60.000000%	0.043158%
	ADDITIVE	GNE-1	Trican	Demulsifier	non-hazardous ingredients	Not Available	40.000000%	0.028772%

Fracture Start/End Date:	Component Type	Trade Name	Supplier	Purpose	Ingredient/Family Name	CAS # / HMIRC #	Concentration in Component (% by mass)	Concentration in HFF (% by mass)
May 13 2013 - May 13 2013	ADDITIVE	WG-111L	Trican	Gelling Agent	distillates (petroleum), hydrotreated middle	64742-46-7	60.000000%	0.221125%
	ADDITIVE	WG-111L	Trican	Gelling Agent	polysaccharide blend	Not Available	60.000000%	0.221125%

Comments:

*Information provided in this form is submitted in accordance with the requirements of ERCB Directive 59 Well Drilling and Completion Data Filing Requirements.

*Total Water Volume sources may include fresh water, produced water, recycled water, and/or other water types as listed in The "DDS Well Drilling Completion Data Submission System: A User Guide - Appendix D".

*CAS # - Chemical Abstract Service Number. Individual chemical ingredients have a unique CAS #. Specific ingredient names are shown for each CAS #. "Not Available" indicates the ingredient CAS # is not available.

*HMIRC # - Hazardous Material Information Review Commission (registry) number. The HMIRC # indicates the (hazardous) additive ingredient is considered to be confidential business information and is subject to a Hazardous Material Information Review Act claim exemption. General chemical family names are shown for each HMIRC #. "Not Available" indicates the ingredient HMIRC # is not available.

**"Trade Secret" indicates the (non-hazardous) additive ingredient is considered to be confidential business information. General chemical family names are reported for ingredients considered "Trade Secret".

*Any public concerns related to this information should be directed to the ERCB Field Centre shown on the report.

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