

HIGH VOLUME HYDRAULICALLY FRACTURED WELL COMPLETION ACTIVE PERMITS AND APPLICATIONS 5 OF 5 (09/13)

HIGH VOLUME (>100,000 gallons) HYDRAULIC FRACTURING SINCE 2008 - ACTIVE PERMITS													
#	Permit #	Company Name	Well Name	Well No	County	Wellhead T R S	comments	target formation	Well type	Well status	Confidential		
1	59112	BEACON EXPLORATION AND PRODUCTION CO LLC	SCHULTZ	1-36	SANILAC	12N 15E 36	well completed Feb. 2012	A1 Carbonate	Oil	Shut-in	NO		
2	59173	CIMAREX ENERGY CO	SOPER	1-25 HD1	OSCEOLA	17N 10W 25	well completed Aug. 2008		Gas	Plugging complete	NO		
3	59449	O I L NIAGARAN LLC	HENKEL	D4-24	MISSAUKEE	21N 6W 24	proposed deepening of Antrim permit	Utica-Collingwood	Dry Hole	Plugging complete	NO		
4	59979	ENCANA OIL AND GAS USA INC	PIONEER	1-3 HD1	MISSAUKEE	24N 7W 3	well completed Feb 2010	Utica-Collingwood	Gas	Shut-in	NO		
5	60041	MERIT ENERGY COMPANY	HUBBEL	2-22 HD1	MONTMORENCY	29N 1E 22	well completed June. 2011		Niagaran	Oil	Producing	NO	
6	60133	ENCANA OIL AND GAS USA INC	KENDALL	1-33	CHEBOYGAN	35N 2W 33	permit for vertical well		Utica-Collingwood	Dry hole	Well complete	NO	
7	60137	ATLAS RESOURCES LLC	STATE MANCELONA	1-28	ANTRIM	29N 5W 28	permit for vertical well	PILOT - Not to be Hydraulic Fractured	Dry Hole	Temporarily abandoned	NO		
8	60138	ATLAS RESOURCES LLC	LUCAS	1-13	KALKASKA	26N 8W 13	permit for vertical well		Dry Hole	Plugging complete. HD permitted	NO		
9	60161	ATLAS RESOURCES LLC	STATE NORWICH	1-6 HD1	MISSAUKEE	24N 6W 6	permit for horizontal well		Utica-Collingwood	Dry Hole	Temporarily abandoned	NO	
10	60170	ENCANA OIL AND GAS USA INC	STATE KOEHLER & KENDALL	1-24 HD1	CHEBOYGAN	35N 2W 33	well completed Oct 2010		Utica-Collingwood	Oil	Temporarily abandoned	NO	
11	60183	ENCANA OIL AND GAS USA INC	STATE EXCELSIOR	1-24	KALKASKA	27N 6W 24	permit for vertical well		PILOT - Not to be Hydraulic Fractured	Dry Hole	Plugging complete. HD drilled	NO	
12	60198	ATLAS RESOURCES LLC	LUCAS	1-13 HD1	KALKASKA	26N 8W 13	permit for horizontal well (60138)		Utica-Collingwood	Not available	Temporarily abandoned	NO	
13	60212	CONTINENTAL RESOURCES INC	KELLY ET AL	1-26 HD1	HILLSDALE	65 2W 26	well completed Sept. 2011		Black River (Van Wert)	Oil	Producing	NO	
14	60305	ENCANA OIL AND GAS USA INC	STATE WILMOT	1-21	CHEBOYGAN	33N 3W 21	well completed July 2011		Utica-Collingwood	Oil	Plugging complete	NO	
15	60328	ENCANA OIL AND GAS USA INC	STATE TUSCARORA	1-34	CHEBOYGAN	35N 5W 34	permit for vertical well		Utica-Collingwood	Location	Permitted Well	YES	
16	60357	ENCANA OIL AND GAS USA INC	STATE OLIVER	1-1	KALKASKA	26N 6W 1	permit for vertical well	PILOT - Not to be Hydraulic Fractured	Dry Hole	Well complete. HD drilled	NO		
17	60360	ENCANA OIL AND GAS USA INC	STATE EXCELSIOR	1-13 HD1	KALKASKA	27N 6W 24	well completed Nov 2011		Utica-Collingwood	Gas	Producing	NO	
18	60379	DEVON ENERGY PRODUCTION COMPANY LP	CRONK	1-24 P	GLADWIN	19N 1W 24	permit for vertical well	PILOT - Not to be Hydraulic Fractured	Dry Hole	Well Complete	NO		
19	60380	DEVON ENERGY PRODUCTION COMPANY LP	CRONK	1-24 HD1	GLADWIN	19N 1W 24	permit for horizontal well		A1 Carbonate	Gas	Well Complete	NO	
20	60389	ENCANA OIL AND GAS USA INC	STATE EXCELSIOR	1-25 HD1	KALKASKA	26N 6W 1	well completed Nov 2011		Utica-Collingwood	Gas	Producing	NO	
21	60451	DEVON ENERGY PRODUCTION COMPANY LP	WILEY	1-18 P	GLADWIN	18N 2W 18	permit for vertical well	PILOT - Not to be Hydraulic Fractured	Other	Well Complete	NO		
22	60452	DEVON ENERGY PRODUCTION COMPANY LP	WILEY	1-18 HD1	GLADWIN	18N 2W 18	well completed may/june 2012		A1 Carbonate	Gas	Temporarily abandoned	NO	
23	60525	DEVON ENERGY PRODUCTION COMPANY LP	SCHICK	1-7P	CLARE	19N 3W 7	permit for vertical well	PILOT - Not to be Hydraulic Fractured	Other	Well Complete	NO		
24	60526	DEVON ENERGY PRODUCTION COMPANY LP	SCHICK	1-7HD1	CLARE	19N 3W 7	well not hydraulic fractured		A1 Carbonate	Other	Well Complete	NO	
25	60536	CONTINENTAL RESOURCES INC	MCNAIR ET AL	1-26 P	HILLSDALE	65 2W 26	permit for vertical well		Black River (Van Wert)	Other	Plugging complete	NO	
26	60537	CONTINENTAL RESOURCES INC	MCNAIR ET AL	1-26 HD1	HILLSDALE	65 2W 26	permit for horizontal well		Black River (Van Wert)	Oil	Producing	NO	
27	60545	ENCANA OIL AND GAS USA INC	STATE EXCELSIOR	2-25 HD1	KALKASKA	26N 6W 1	permit for horizontal well		Utica-Collingwood	Gas	Drilling complete	NO	
28	60546	ENCANA OIL AND GAS USA INC	STATE EXCELSIOR	3-25 HD1	KALKASKA	26N 6W 1	permit for horizontal well		Utica-Collingwood	Location	Drilling complete	NO	
29	60559	DEVON ENERGY PRODUCTION COMPANY LP	STATE RICHFIELD	1-27P	ROSCOMMON	22N 1W 27	permit for vertical well	PILOT - Not to be Hydraulic Fractured	Other	Well Complete	NO		
30	60560	DEVON ENERGY PRODUCTION COMPANY LP	STATE RICHFIELD	1-34 HD1	ROSCOMMON	22N 1W 27	permit for horizontal well (60559)		Collingwood	Gas	Well Complete	NO	
31	60562	ENCANA OIL AND GAS USA INC	STATE MENTOR	1-17	CHEBOYGAN	34N 3W 17	permit for vertical well		Utica-Collingwood	Location	Permitted Well	YES	
32	60574	ALTA ENERGY OPERATING LLC	RILEY	1-22	OCEANA	15N 18W 22	permit for vertical well	PILOT - Not to be Hydraulic Fractured	Other	Plugged back	NO		
33	60575	ALTA ENERGY OPERATING LLC	RILEY	1-22 HD1	OCEANA	15N 18W 22	permit for horizontal well (60574)		A1 Carbonate	Location	Drilling complete	NO	
34	60579	ENCANA OIL AND GAS USA INC	STATE GARFIELD	1-25 HD1	KALKASKA	25N 6W 36	permit for horizontal well		Utica-Collingwood	Location	Drilling complete	NO	
35	60581	DEVON ENERGY PRODUCTION COMPANY LP	DAVID'S ACRES, LLC	1-19 P	OGEAW	22N 4E 19	permit for vertical well	PILOT - Not to be Hydraulic Fractured	Other	Well Complete	NO		
36	60582	DEVON ENERGY PRODUCTION COMPANY LP	DAVID'S ACRES, LLC	1-19 HD1	OGEAW	22N 4E 19	well not hydraulic fractured		A1 Carbonate	Other	Well Complete	NO	
37	60587	COUNTRYMARK ENERGY RESOURCES LLC	ARNO	1-25 HD1	HILLSDALE	65 2W 25	permit for horizontal well		Black River (Van Wert)	Location	Permitted Well	NO	
38	60588	COUNTRYMARK ENERGY RESOURCES LLC	ARNO & TIMMONS	1-24 HD1	HILLSDALE	65 2W 24	permit for horizontal well		Black River (Van Wert)	Location	Permitted Well	NO	
39	60600	ENCANA OIL AND GAS USA INC	WESTERMAN	1-29	KALKASKA	28N 8W 29	permit for vertical well	PILOT - Not to be Hydraulic Fractured	Location	Permitted Well	YES		
40	60601	ENCANA OIL AND GAS USA INC	WESTERMAN	1-32 HD1	KALKASKA	28N 8W 29	permit for horizontal well		Utica-Collingwood	Location	Permitted Well	YES	
41	60606	ENCANA OIL AND GAS USA INC	STATE MENTOR	1-17 HD1	CHEBOYGAN	34N 3W 17	permit for horizontal well (60562)		Utica-Collingwood	Location	Permitted Well	YES	
42	60614	ROSETTA RESOURCES OPERATING LP	CHRISTENSEN	1-21 P	IONIA	6N 6W 21	permit for vertical well	PILOT - Not to be Hydraulic Fractured	Location	Permitted Well	YES		
43	60615	ROSETTA RESOURCES OPERATING LP	CHRISTENSEN	1-21 HD1	IONIA	6N 6W 21	permit for horizontal well		A1 Carbonate	Location	Permitted Well	YES	
44	60617	DEVON ENERGY PRODUCTION COMPANY LP	YOUNKMAN	1-29 HD1	MISSAUKEE	21N 8W 29	permit for horizontal well		Utica	Location	Permitted Well	YES	
45	60620	ENCANA OIL AND GAS USA INC	STATE BEAVER CREEK	C3-11	CRAWFORD	25N 4W 11	permit for vertical well	PILOT - Not to be Hydraulic Fractured	Location	Permitted Well	YES		
46	60621	ENCANA OIL AND GAS USA INC	STATE BEAVER CREEK	1-23 HD1	CRAWFORD	25N 4W 11	permit for horizontal well		Utica-Collingwood	Location	Permitted Well	YES	
47	60662	COUNTRYMARK ENERGY RESOURCES LLC	STIVERSON & FRENCH	1-25 HD1	HILLSDALE	65 2W 24	permit for horizontal well		Black River (Van Wert)	Location	Permitted Well	NO	
48	60670	ENCANA OIL AND GAS USA INC	STATE ROSCOMMON	D1-17	ROSCOMMON	21N 4W 17	permit for vertical well	PILOT - Not to be Hydraulic Fractured	Location	Permitted Well	YES		
49	60672	ENCANA OIL AND GAS USA INC	STATE ROSCOMMON	1-7 HD1	ROSCOMMON	21N 4W 17	permit for horizontal well		Utica-Collingwood	Location	Permitted Well	YES	
50	60674	MUZYL OIL CORPORATION	BURNS	A1-23 HD1	HILLSDALE	65 2W 23	permit for horizontal well		Black River (Van Wert)	location	Permitted Well	NO	
51	60685	ENCANA OIL AND GAS USA INC	STATE GARFIELD	1-26	KALKASKA	25N 6W 26	permit for vertical well	PILOT - Not to be Hydraulic Fractured	Location	Permitted Well	YES		
52	60686	ENCANA OIL AND GAS USA INC	STATE GARFIELD	1-23 HD1	HILLSDALE	25N 6W 26	permit for horizontal well		Utica-Collingwood	Location	Permitted Well	YES	
HIGH VOLUME (>100,000 gallons) HYDRAULIC FRACTURING PROPOSALS - ACTIVE APPLICATIONS													
#	App #	Company Name	Well Name	Well No	County	Wellhead T R S	target formation	comments					
1	A110068	MERIT ENERGY COMPANY	STATE MANCELONA	8-33	ANTRIM	29N 5W 33	Utica-Collingwood	application for horizontal well					
2	A120046	ENCANA OIL AND GAS USA INC	STATE WILMONT	1-6	CHEBOYGAN	33N 3W 6	Utica-Collingwood	application for vertical well					
3	A130031	ENCANA OIL AND GAS USA INC	STATE EXCELSIOR	1-14 HD1	KALKASKA	27N 6W 24	Utica-Collingwood	application for horizontal well					
4	A130032	ENCANA OIL AND GAS USA INC	STATE EXCELSIOR	1-12 HD1	KALKASKA	27N 6W 24	Utica-Collingwood	application for horizontal well					
5	A130033	ENCANA OIL AND GAS USA INC	STATE EXCELSIOR	1-11 HD1	KALKASKA	27N 6W 24	Utica-Collingwood	application for horizontal well					
6	A130034	ENCANA OIL AND GAS USA INC	STATE EXCELSIOR	2-14 HD1	KALKASKA	27N 6W 24	Utica-Collingwood	application for horizontal well					
7	A130035	ENCANA OIL AND GAS USA INC	STATE EXCELSIOR	2-12 HD1	KALKASKA	27N 6W 24	Utica-Collingwood	application for horizontal well					
8	A130037	ENCANA OIL AND GAS USA INC	STATE EXCELSIOR	3-12 HD1	KALKASKA	27N 6W 24	Utica-Collingwood	application for horizontal well					
9	A130038	ENCANA OIL AND GAS USA INC	STATE EXCELSIOR	4-12 HD1	KALKASKA	27N 6W 24	Utica-Collingwood	application for horizontal well					
10	A130039	ENCANA OIL AND GAS USA INC	STATE EXCELSIOR	5-12 HD1	KALKASKA	27N 6W 24	Utica-Collingwood	application for horizontal well					
11	A130043	ENCANA OIL AND GAS USA INC	STATE OLIVER	3-13 HD1	KALKASKA	26N 6W 1	Utica-Collingwood	application for horizontal well					
12	A130044	ENCANA OIL AND GAS USA INC	STATE EXCELSIOR	4-25 HD1	KALKASKA	26N 6W 1	Utica-Collingwood	application for horizontal well					
13	A130045	ENCANA OIL AND GAS USA INC	STATE OLIVER	2-13 HD1	KALKASKA	26N 6W 1	Utica-Collingwood	application for horizontal well					
14	A130046	ENCANA OIL AND GAS USA INC	STATE OLIVER	1-13 HD1	KALKASKA	26N 6W 1	Utica-Collingwood	application for horizontal well					
15	A130047	ENCANA OIL AND GAS USA INC	STATE EXCELSIOR	5-25 HD1	KALKASKA	26N 6W 1	Utica-Collingwood	application for horizontal well					
16	A130053	ROSETTA RESOURCES OPERATING LP	SWANSON TRUST	1-1 P	MUSKEGON	9N 14W 1	A1-Carbonate	application for pilot - not to be hydraulically fractured					
17	A130054	ROSETTA RESOURCES OPERATING LP	SWANSON TRUST	1-1 HD1	MUSKEGON	9N 14W 1	A1-Carbonate	application for horizontal well					