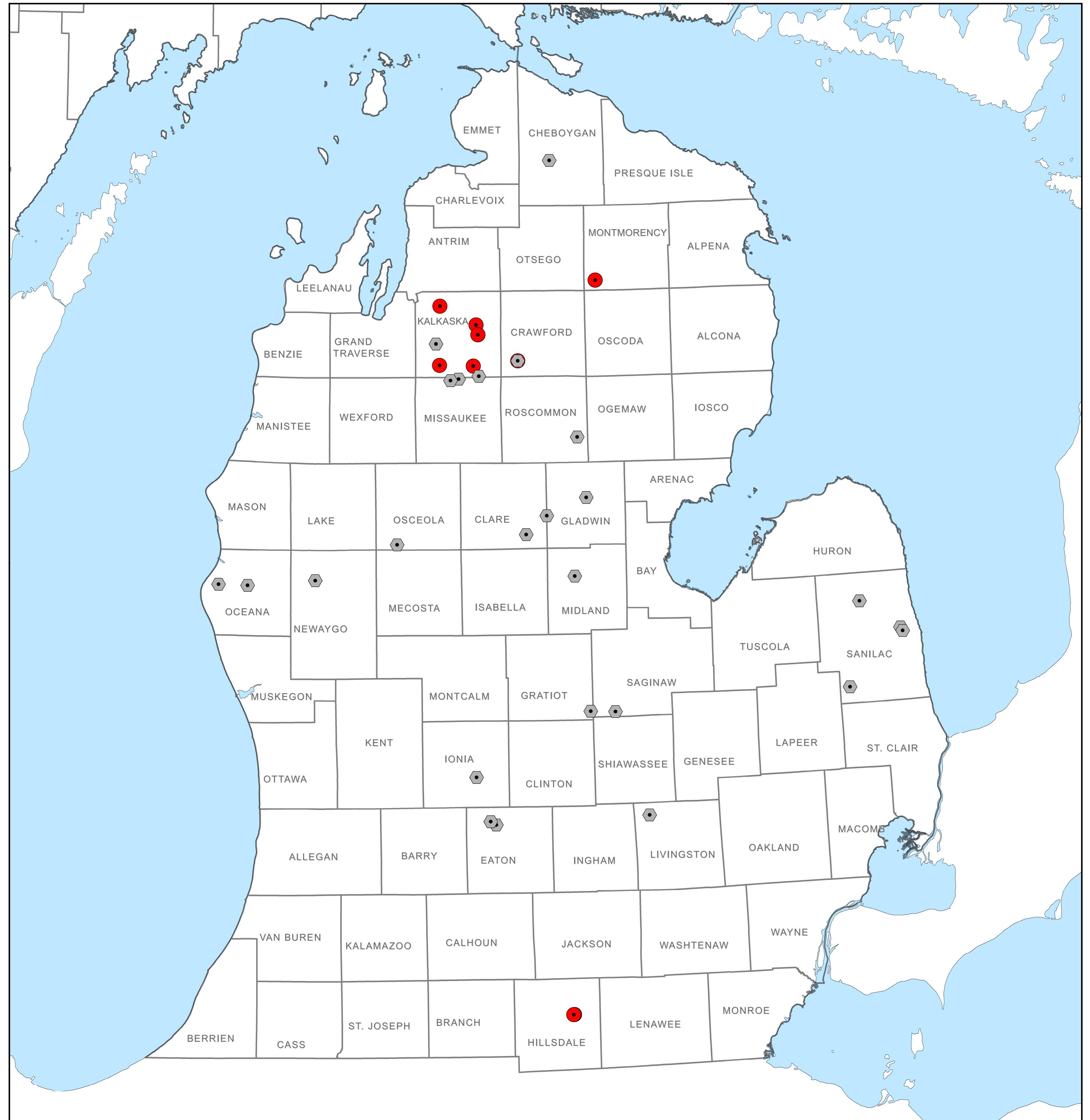
HIGH VOLUME HYDRAULIC FRACTURING

ACTIVITY IN MICHIGAN - SINCE 2008*

UPDATED - 12/2019



53588 54696 59112 59173 59979 60041 60041	LAMBDA ENERGY RESOURCES LLC*** MISSAUKEE OIL AND GAS COMPANY, LLC*** WHITING OIL AND GAS CORPORATION CIMAREX ENERGY CO MARATHON OIL COMPANY***	USA BIG CREEK STATE GARFIELD & TIGER SCHULTZ	3-16	OSCODA							
59112 59173 59979 60041 60041	WHITING OIL AND GAS CORPORATION CIMAREX ENERGY CO			OCCODIN	25N 2E 16	NA	Rework via high volume hydraulic fracturing	Richfield	OIL	Producing	1
59173 59979 60041 60041	CIMAREX ENERGY CO	SCHULTZ	1-14	KALKASKA	25N 6W 14	NA	Well completed Oct. 2013	Collingwood	Gas	Producing	
59979 60041 60041			136	SANILAC	12N 15E 36	NA	Well completed Feb. 2012	A1 Carbonate	Oil	Plugging Approved	
59979 60041 60041	MARATHON OIL COMPANY***	SOPER	1-25 HD1	OSCEOLA	17N 10W 25	ACOW	Well completed Aug. 2008	Antrim	Gas	Plugging Complete	
60041 60041		PIONEER	1-3 HD1	MISSAUKEE	24N 7W 3	59919	Well completed by Encana Feb 2010	Utica-Collingwood	Gas	Plugging Approved	
60041	LAMBDA ENERGY RESOURCES LLC***	HUBBEL	2-22 HD/HD1	MONTMORENCY	29N 1E 22	NA	Well completed June. 2010	Niagaran	Oil	Producing	
	LAMBDA ENERGY RESOURCES LLC***	HUBBEL	2-22 HD1	MONTMORENCY	29N 1E 22	60041	Well completed 2011	Niagaran	Oil	Producing	
	LAMBDA ENERGY RESOURCES LLC***	HUBBEL	2-22 HD2	MONTMORENCY	29N 1E 22	60041	Well completed 2012	Niagaran	Oil	Producing	
60161	ATLAS RESOURCES LLC	STATE NORWICH	1-6 HD1	MISSAUKEE	24N 6W 6	NA	Well not hydraulically fractured to date.	Utica-Collingwood	Dry Hole	Plugging Approved	
60170	MARATHON OIL COMPANY***	STATE KOEHLER & KENDALL	1-27 HD1	CHEBOYGAN	35N 2W 33	60133	Well completed by Encana Oct 2010		Oil		
								Utica-Collingwood		Plugging Approved	
60198	ATLAS RESOURCES LLC		1-13 HD1	KALKASKA	26N 8W 13	60138	Well not hydraulically fractured to date.	Utica-Collingwood	Gas	Plugging Approved	
60212	MERIDIAN RESOURCES LLC***	KELLY ET AL	1-26 HD1	HILLSDALE	6S 2W 26	NA	Well completed Sept. 2011	Black River (Van Wert)	Oil	Producing	
60360	CORE ENERGY LLC***	STATE EXCELSIOR	1-13 HD1	KALKASKA	27N 6W 24	60357	Well completed by Encana Nov 2011	Utica-Collingwood	Gas	Producing	
60380	DEVON ENERGY PRODUCTION COMPANY LP	CRONK	1-24 HD1	GLADWIN	19N 1W 24	60379	Well completed April/May 2012	A1 Carbonate	Gas	Plugging Approved	
60389	CORE ENERGY LLC***	STATE EXCELSIOR	1-25 HD1	KALKASKA	26N 6W 1	NA	Well completed by Encana Nov 2011	Utica-Collingwood	Gas	Producing	
60452	DEVON ENERGY PRODUCTION COMPANY LP	WILEY	1-18 HD1	GLADWIN	18N 2W 18	60451	Well completed May/June 2012	A1 Carbonate	Gas	Plugging Approved	
60537	MERIDIAN RESOURCES LLC***	MCNAIR ET AL	1-26 HD1	HILLSDALE	6S 2W 26	60536	Well completed August 2012	Black River (Van Wert)	Oil	Producing	
60545	CORE ENERGY LLC***	STATE EXCELSIOR	2-25 HD1	KALKASKA	26N 6W 1	NA	Well completed by Encana Oct 2012	Utica-Collingwood	Gas	Producing	
60546	CORE ENERGY LLC***	STATE EXCELSIOR	3-25 HD1	KALKASKA	26N 6W 1	NA	Well completed by Encana Oct 2012	Utica-Collingwood	Gas	Producing	
60560	DEVON ENERGY PRODUCTION COMPANY LP	STATE RICHFIELD	1-34 HD1	ROSCOMMON	22N 1W 27	60559	Well completed Nov 2012	Collingwood	Gas	Plugging Approved	
60575	ALTA ENERGY OPERATING LLC	RILEY	1-22 HD1	OCEANA	15N 18W 22	60574	Well completed Dec. 2012/May 2013	A1 Carbonate	Oil	Plugging Approved	
60579	MARATHON OIL COMPANY***	STATE GARFIELD	1-25 HD1	KALKASKA	25N 6W 36	NA	Well completed by Encana Dec. 2012	Utica-Collingwood	Gas	Plugging Complete	
60601	RIVERSIDE ENERGY MICHIGAN LLC***	WESTERMAN	1-32 HD1	KALKASKA	28N 8W 29	60600	Well completed by Encana May/June 2013	Utica-Collingwood	Oil	Producing	
60615	ROSETTA RESOURCES OPERATING LP	STATE ORANGE & CHRISTENSEN	1-21 HD1	IONIA	6N 6W 21	60614	Well completed June 2013	A1 Carbonate	Dry Hole	Plugging Approved	
60621	CORE ENERGY LLC***	STATE BEAVER CREEK	1-23 HD1	CRAWFORD	25N 4W 11	60620	Well completed by Encana May 2013	Utica-Collingwood	Gas	Producing	
60718	JORDAN DEVELOPMENT CO. LLC	STATE JEROME & STARNES	15-8 HD1	MIDLAND	8N 1W 8	60717	Well completed October 2013	Dundee	Oil	Plugging Complete	
60788	UNION GAS OPERATING COMPANY	MERTEN	1-24 HD1	OCEANA	15N 17W 24	60787	Well completed November 2014	A1 Carbonate	Oil	Plugging Approved	
60809	WHITING OIL AND GAS CORPORATION	WALKER	11-25 HD1	SANILAC	12N 15E 25	60808	Well completed December 2013	A1 Carbonate	Dry Hole	Plugging Approved	
60811	GEOSOUTHERN OPERATING LLC	SHERWOOD	1-22 HD1	LIVINGSTON	4N 3E 23	60804	Well completed June 2014	A1 Carbonate	Dry Hole	Plugging Approved	
60826	WHITING OIL AND GAS CORPORATION	STATE WHEATLAND & REINELT	11-7 HD1	SANILAC	13N 14E 7	60825	Not hydraulically fractured to date	A1 Carbonate	Dry Hole	Plugging Approved	
60859	O I L ENERGY CORP.	USA MERRILL	1-18A	NEWAYGO	15N 13W 18	NA	Well completed Oct. 2015	Antrim	Oil	Plugging Approved	
60955	WHITING OIL AND GAS CORPORATION	VAN DAMME	41-4 HD1/2	SANILAC	9N 13E 9	60954	Well completed November 2014	A1 Carbonate	Gas	Diversing Assessed	
61061	HSE MI LLC	SMITH	1-28	SAGINAW	9N 2E 28	NA	Well completed Feb. 2015	Antrim	Oil	Plugging Approved	
		VONDRUSKA	1-26		9N 2E 28		Well completed March 2015		Oil	Plugging Approved	
61072				GRATIOT		NA		Antrim		Plugging Approved	
61130		STATE BEAVER CREEK	1-14 HD1	CRAWFORD	25N 4W 11	NA (1152	Well completed Nov. 2015	Detroit River	Oil	Plugging Complete	
61154		SCHLABACH	1-7 HD-1	CLARE	17N 3W 18	61152	Well completed Feb. 2016	Detroit River	Oil	Plugging Complete	+
61176	INTERSTATE EXPLORATIONS LLC	ROOT	1–15	EATON	4N 5W 15	NA	Well completed July/Aug. 2016	Trenton/Black River	Oil	Plugging Approved	
61180	INTERSTATE EXPLORATIONS LLC	ROLL	228	EATON	4N 5W 28	NA	Well completed Nov. 2016	Trenton/Black River	Dry Hole	Plugging Approved	
61184	INTERSTATE EXPLORATIONS LLC	BURK	130	EATON	4N 5W 30	NA	Well completed Nov. 2016	Trenton/Black River	Dry Hole	Plugging Complete	
		HIGH VOLUN	/IE (>100,00	0 gallons) HYI	DRAULIC FRA	CTURING	PROPOSALS - ACTIVE APPLICA	ATIONS			

 \bigstar Well locations shown on this map include wells completed OR PLANNED FOR COMPLETION USING A TOTAL OF MORE THAN 100,000 GALLONS OF HYDRAULIC FRACTURING FLUID. WE MADE ALL EFFORTS TO TRACE BACK THE WELL COMPLETION RECORDS THRU 2008 TO COMPLILE THIS MAP AND LIST. THIS INFORMATION PROVIDED HEREIN IS ACCURATE TO THE BEST OF OUR KNOWLEDGE AND IS SUBJECT TO CHANGE ON A REGULAR BASIS, WITHOUT NOTICE. WHILE THE DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY - OIL, GAS, AND MINERALS DIVSION (EGLE-OGMD) MAKES EVERY EFFORT TO PROVIDE USEFUL AND ACCURATE INFORMATION, WE DO NOT WARRANT THE INFORMATION TO BE AUTHORITATIVE, COMPLETE, FACTUAL, OR TIMELY. IT IS SUGGESTED THAT THIS INFORMATION BE COMBINED WITH SECONDARY SOURCES AS A MEANS OF VERIFICATION. INFORMATION IS PROVIDED "AS IS" AND AN "AS AVAILABLE" BASIS. THE STATE OF MICHIGAN DISCLAIMS ANY LIABILITY, LOSS, INJURY, OR DAMAGE INCURRED AS A CONSEQUENCE, DIRECTLY OR INDIRECTLY, RESULTING FROM THE USE, INTERPRETATION, AND APPLICATION OF ANY OF THIS INFORMATION.



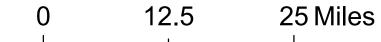




ACTIVE PERMITS/NOT COMPLETED (0)

DRILLED WELLS (0)

PLUGGED WELLS (26)





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***Well was orginally completed by another operator.