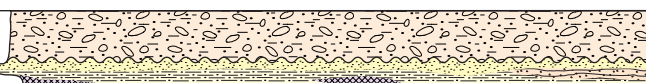
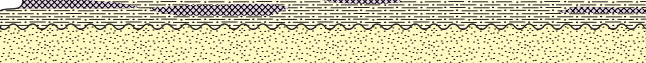
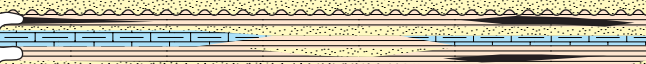
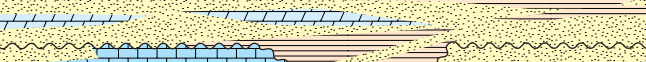
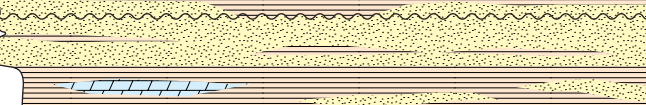
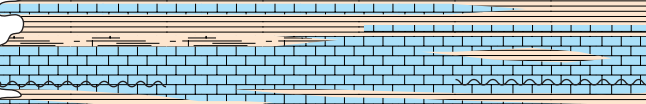
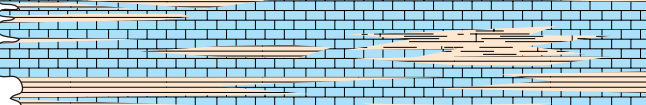
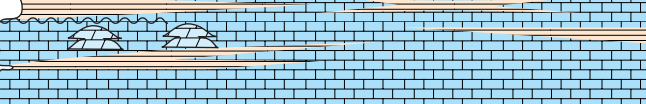
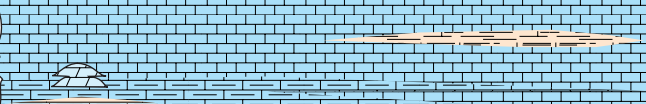
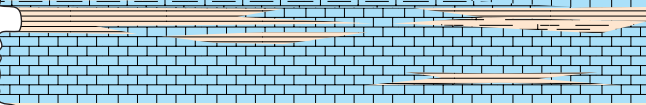
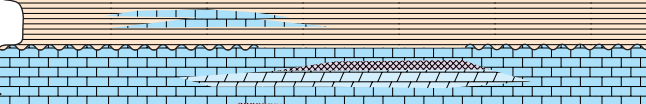
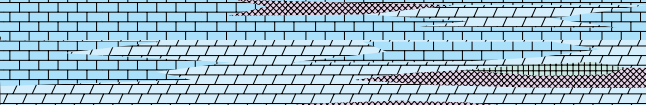
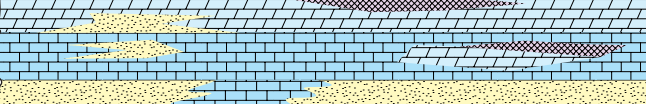
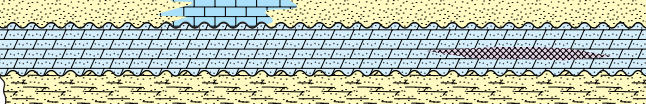
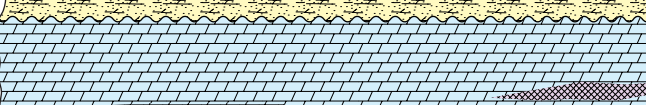
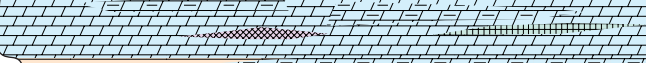
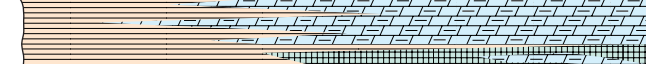
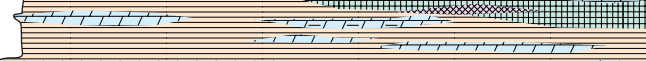
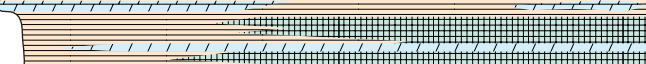
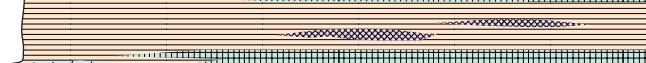
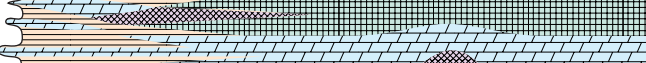
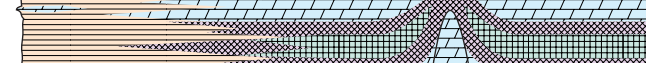
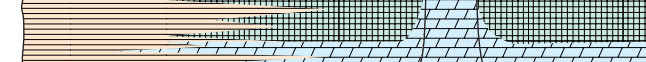
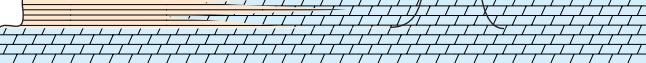
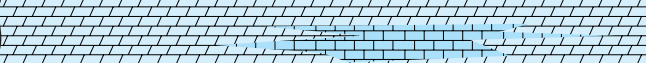
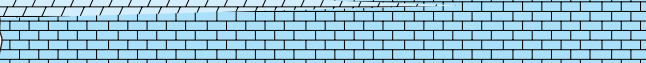
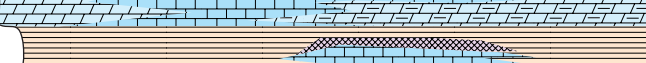
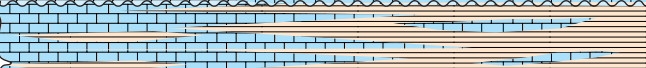
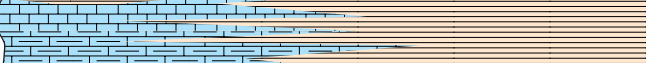
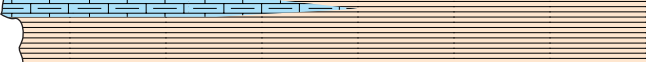
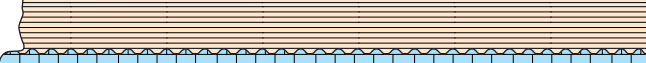
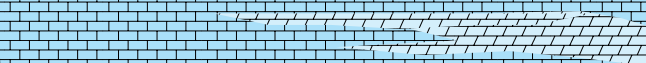
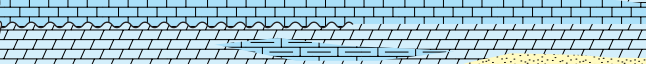
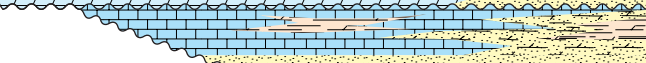
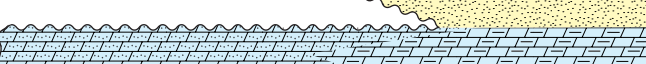
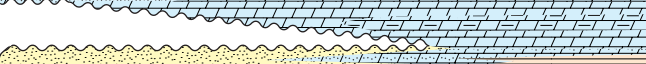
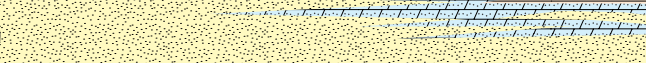
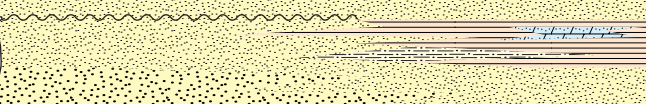
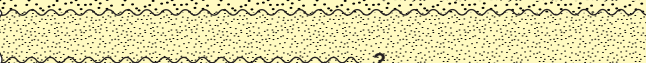
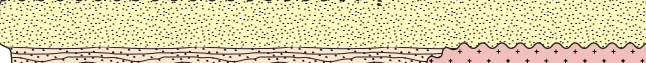


GEOLOGIC TIME				OUTCROP NOMENCLATURE				DOMINANT LITHOLOGY				SUBSURFACE NOMENCLATURE							
ERA	PERIOD	EPOCH	NORTH AMERICAN STAGES	GROUP		FORMATION		MEMBER		FORMATION				GROUP					
Cenozoic	Quaternary	Pleistocene	Wisconsinan			Glacial Drift								Glacial Drift					
Mesozoic	Jurassic	Middle	Oxfordian			Ionia Fm								Ionia Fm					
Paleozoic	Pennsylvanian	Late	Conemaugh			Grand River Fm								Grand River Fm					
		Early	Pottsville			Saginaw Fm								Saginaw Fm					
						Parma Ss								Parma Ss					
	Mississippian	Late	Meramecian			Bayport Ls								Bayport Ls					
						Michigan Fm								Michigan Fm					
		Early	Osagian			Marshall Ss								Marshall Ss					
						Coldwater Sh								Coldwater Sh					
			Kinderhookian			Sunbury Sh								Sunbury Sh					
																			
	Devonian	Late	Chautauquan			Ellsworth Sh (western)	Berea Ss (eastern)	Bedford Sh							Ellsworth Sh (western)	Berea Ss (eastern)	Bedford Sh		
																			
																			
																			
																			
																			
																			
																			
																			
																			
		Middle	Erian	Traverse Gr			Squaw Bay Ls								Squaw Bay Ls				
																			
							Partridge Point Mbr												
							Thunder Bay Ls												
							Potter Farm Mbr												
							Norway Point Mbr												
							Four Mile Dam Mbr												
							Newton Creek Mbr												
							Killians Mbr												
							Genshaw Mbr												
							Ferron Point Fm												
							Rockport Quarry Ls												
							Bell Sh								Bell Sh				
							Rogers City Ls								Dundee Ls				
							Dundee Ls												
					Early	Ulsterian	Detroit River Gr			Anderdon Ls								Lucas Fm	
										Lucas Fm									
										Amherstburg Fm									
				Sylvania Ss										Bois Blanc Fm					
				Bois Blanc Fm															
				Garden Island Fm															
		Bass Islands Gr					Rasin River Dol								undifferentiated				
			Put-in-Bay Dol																
			St. Ignace Dol																
													Salina Gr						
																			
																			
																			
																			
																			
Late	Cayugan	Salina Gr			Pte. aux Chenes Fm								Salina A-2 Carb						
																			
																			
																			
																			
																			
			Middle	Niagaran	Engadine Gr			Bush Bay Fm								Guelph Dol			
								Rapson Creek Fm											
								Rockview Fm											
					Manistique Gr			Cordell Fm								Lockport Dol			
								Schoolcraft Fm											
Burnt Bluff Gr			Hendricks Fm		Fiborn Ls Mbr						undifferentiated								
			Byron Fm																
			Lime Island Fm																
Early	Alexandrian	Cataract Gr			Cabot Head Sh								Cabot Head Sh						
					Manitoulin Dol														
Late	Cincinnatian	Richmond Gr			Big Hill Fm								Queenston Sh						
					Stonington Fm		Ogontz Mbr												
							Bay de Noc Mbr												
					Bill's Creek Sh								Utica Sh						
					Collingwood Sh														
		Middle	Mohawkian			Trenton Fm		Groos Quarry Mbr						Trenton Fm					
						Chandler Falls Mbr													
						Black River Fm								Black River Fm					
		Early	Canadian			Au Train Fm								Foster Fm					
Late	Trempealeau			Munising Fm		Miner's Castle Mbr						Franconia Fm							
Early	Whiterockian			Basal Cgl								Galesville Ss							
Middle Proterozoic Eon	Oronto Gr			Jacobsville Ss								Pre-Mt. Simon Clastics							
				Freda Ss															
				Nonesuch Sh															
				Copper Harbor Cgl															
Archean to Middle Proterozoic Eons			Precambrian Crystalline Basement Complex							Precambrian Crystalline Basement Complex									

STRATIGRAPHIC NOMENCLATURE FOR MICHIGAN

Michigan Dept. of Environmental Quality
Geological Survey Division
Harold Fitch, State Geologist
and
Michigan Basin Geological Society



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Dr. Paul A. Catacosinos, Co-chairman
Mr. Mark S. Wollensak, Co-chairman

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2000

Acknowledgements

This work is the product of the combined efforts of the geological communities of Michigan and the surrounding states and provinces. Below are given just a representative few of the contributors:

Academia: Dr. Aureal T. Cross, Michigan State University; Dr. Robert H. Dott, Jr., University of Wisconsin; Mr. William D. Everham, Ph.D. Candidate, Michigan Technological University.

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A complete listing of all contributors will be found in the Stratigraphic Lexicon for Michigan, of which this column is an integral part.

RELATED TERM CORRELATION

STRATIGRAPHIC POSITION	RELATED TERMS
Ionia Fm	Jurassic Red Beds
Michigan Fm	Clare Dolomite, Brown Lime, Stray Dolomite, Stray Sandstone, Stray-Stray Sandstone, Stray-Stray-Stray Sandstone, Triple Gyp
Coldwater Sh	Coldwater Red Rock, Speckled Dolomite, Wier Sand
Antrim Sh	Charlton Black Shale Member, Elltrim, Chester Black Shale Member, Upper Black Shale, Light Antrim, Lower Black, Lower Antrim, Middle Antrim, Middle Gray Antrim, Dark Antrim, Middle Gray Shale, Unit 1A, Unit 1B, Unit 1C, Crappo Creek Grey Shale Member
Dundee Ls	Reed City Member/Dolomite/Anhydrite
Lucas Fm	Freer Sandstone, Horner Member, Iutzi Member, Massive Salt/Anhydrite, Sour Zone, Big Anhydrite, Richfield Zone/Member/Sandstone, Big Salt
Amherstburg Fm	Filer Sandstone, Meldrum Member, Black Lime
St. Ignace Dolomite	Salina H Unit
Salina B Unit	Big Salt, B Salt
Ruff Formation	Salina A-1 Carbonate, Rabbit Ears Anhydrite,
Cain Fm	Salina A-0 Carbonate
Guelph Dolomite	Brown Niagara, Niagaran Reef, Pinnacle Reef, Engadine Dolomite
Lockport Dolomite	Gray Niagara, White Niagara
Burnt Bluff Gr	Clinton Formation
Trenton Fm	Cap Dolomite
Black River Fm	Van Wert Zone, Sneaky Peak, Black River Shale
Glenwood Fm	Goodwell Unit, Zone of Unconformity
St. Peter Sandstone	Bruggers Sandstone, Jordan Sandstone, Knox Sandstone, Massive Sand
Prairie du Chien Gr	Foster Formation, New Richmond Sandstone, Lower Knox Carbonate, St. Lawrence Formation, T-PDC, Oneota Dolomite, Brazos Shale
Trempealeau Fm	Lodi Formation
Galesville Ss	Dresbach Sandstone
Pre-Mt. Simon Clastics	Precambrian "Red Beds"

LEGEND

Sandstone		Limestone	
Limey		Shaley	
Shaley		Sandy	
Dolomitic		Dolomite	
Conglomeritic		Sandy	
Siltstone		Shaley	
Shale		Glacial Drift	
Sandy		Anhydrite/Gypsum	
Limey		Reefs/Bioherms	
Dolomitic		Basement Rocks	
Salt		Coal Bed	