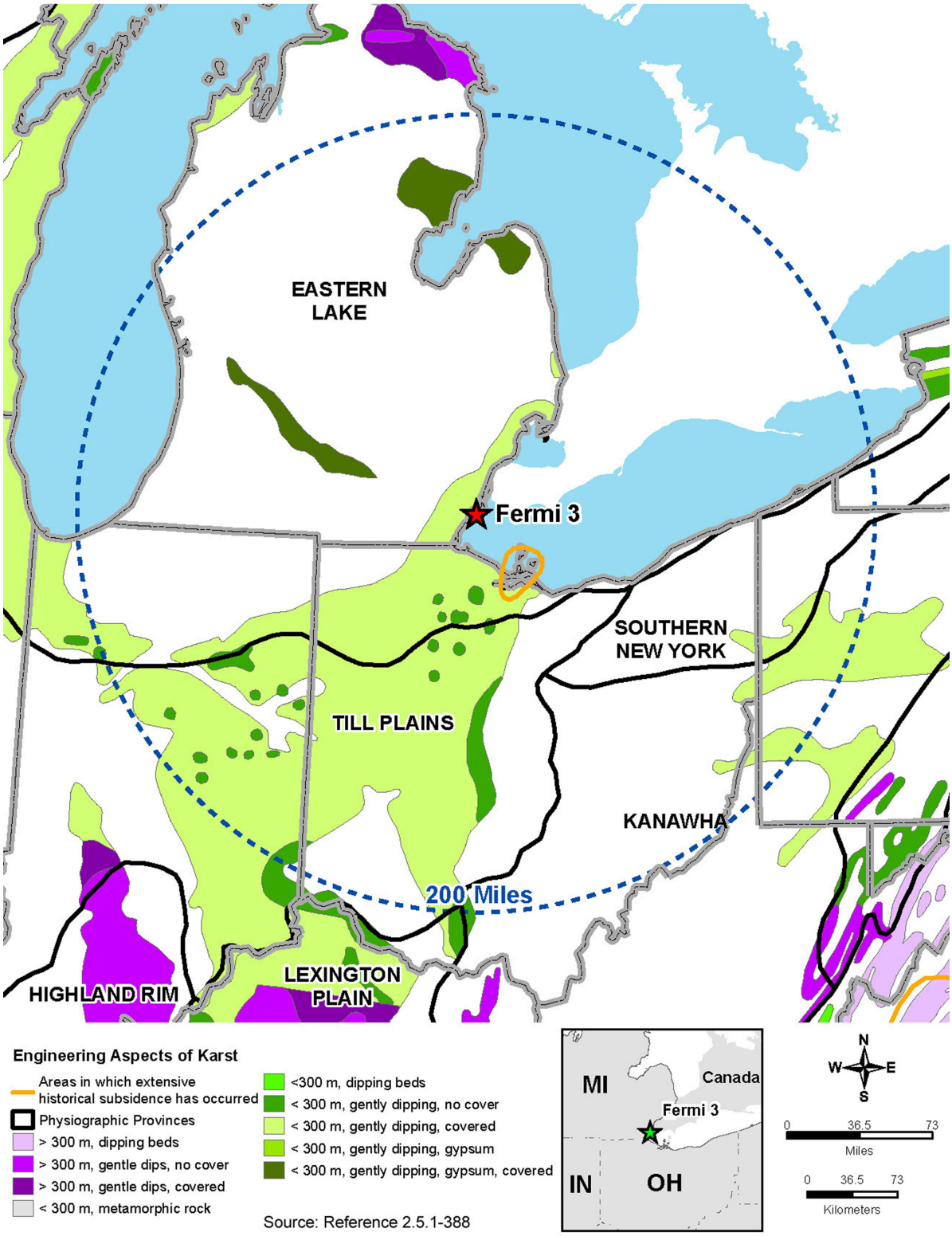
Figure 2.5.1-228 Engineering Aspects of Karst Map for the Fermi 3 Site Region



Source: Reference 2.5.1-388

Figure 2.5.1-229 Topography of the Fermi 3 Site Location

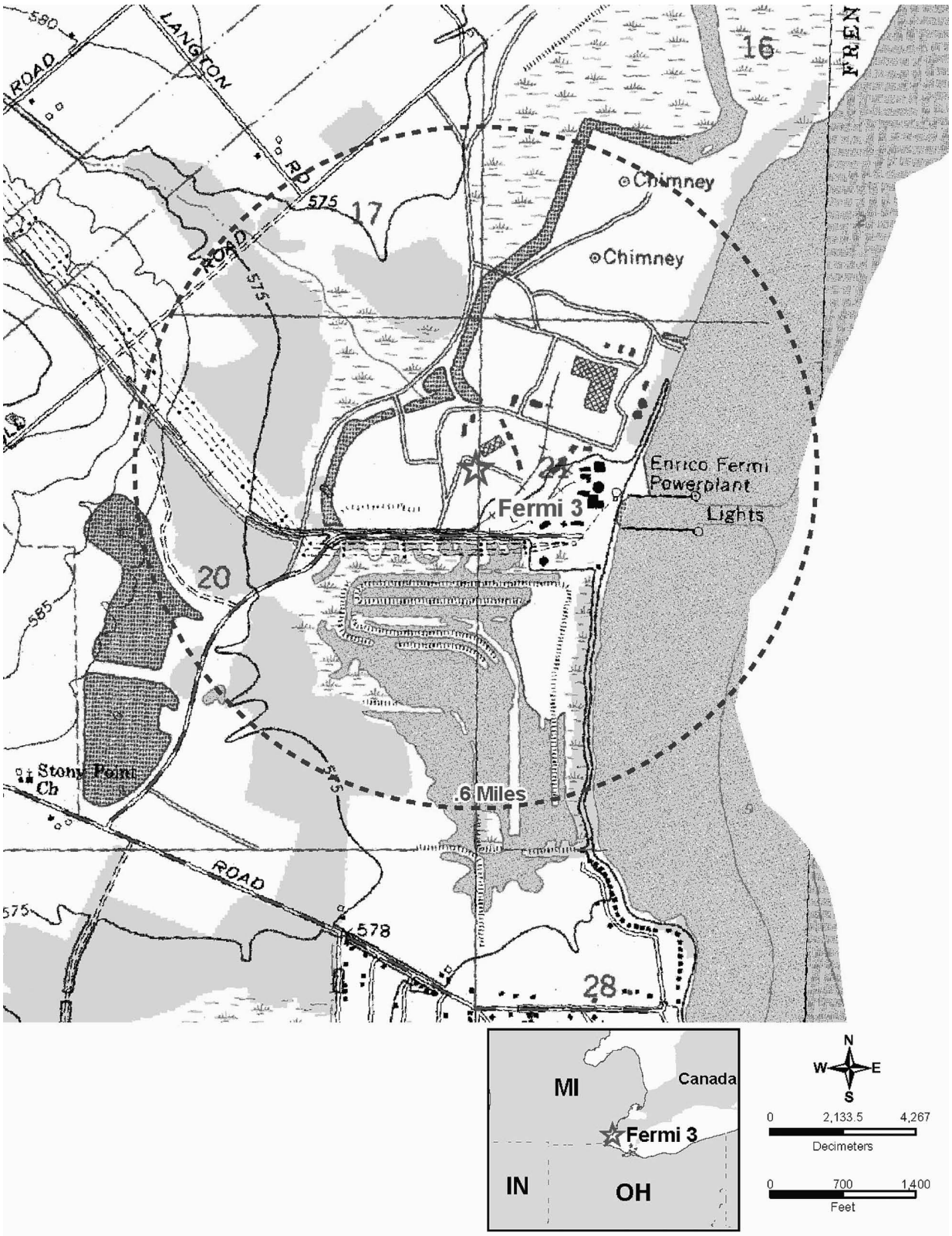


Figure 2.5.1-230 Geologic Map of the Fermi 3 Site Vicinity

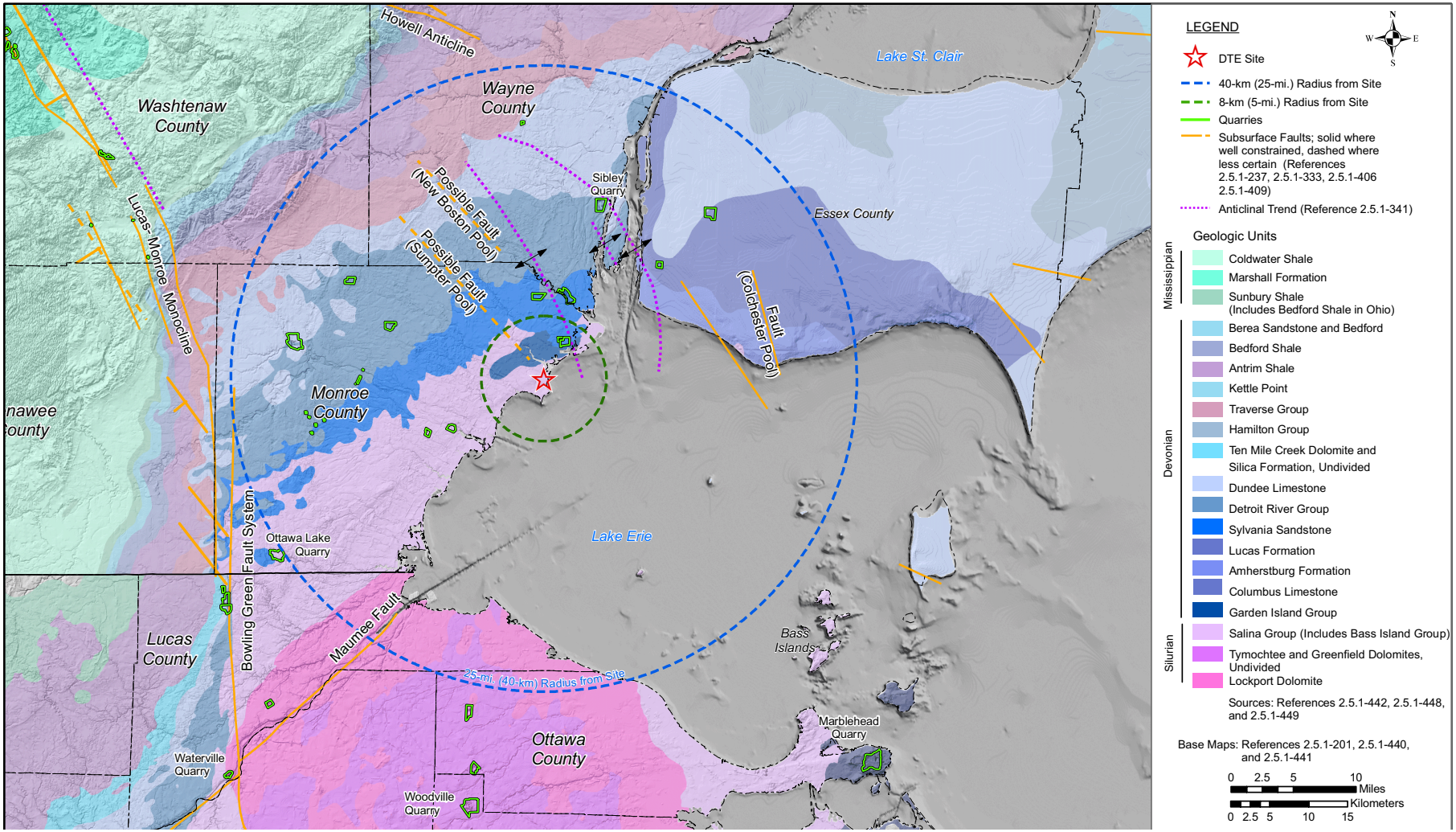


Figure 2.5.1-231 Geologic Map Showing Quaternary Features of the Fermi 3 Site Vicinity

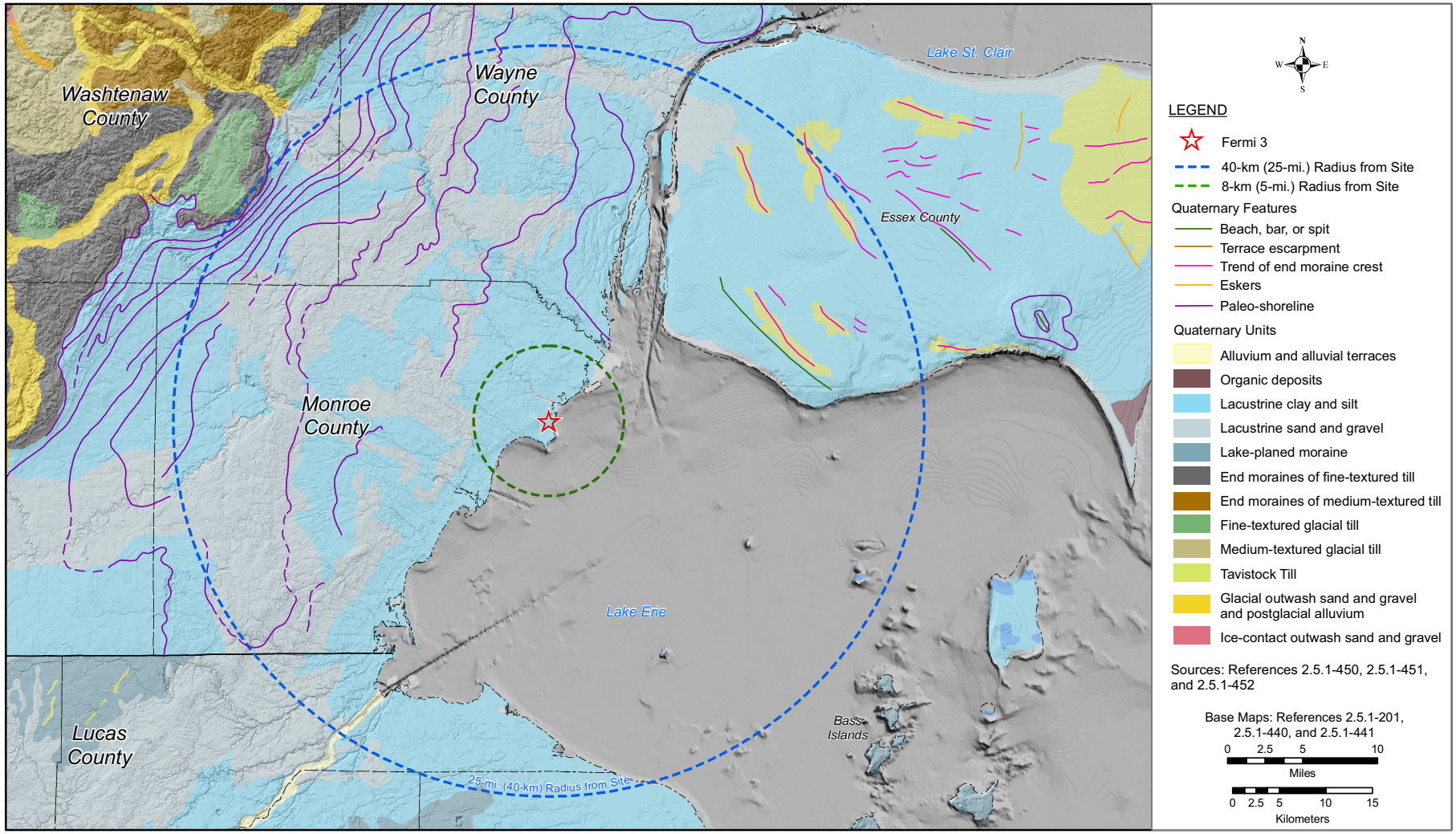
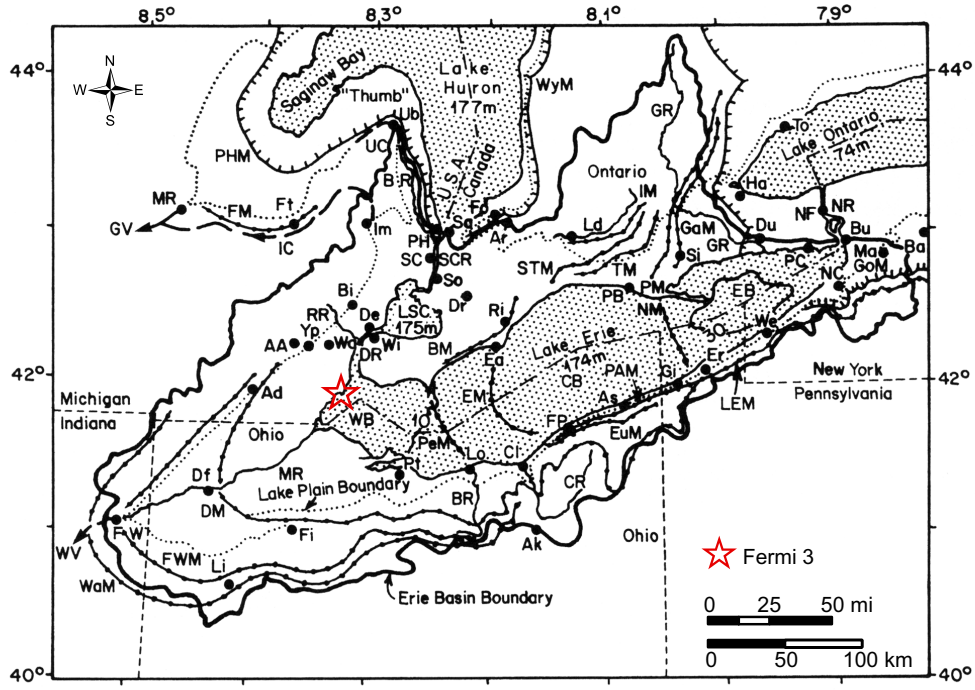


Figure 2.5.1-232 Map Showing Quaternary Features of the Erie Basin



LEGEND

Towns ●

AA	Ann Arbor	Ld	London	LSC	Lake St. Clair
Ad	Adrian	Li	Lima	Lake Erie:	
Ar	Arkona	Lo	Lorain	CB	Central Basin
As	Ashtabula	Ma	Marilla	EB	Eastern Basin
Ba	Batavia	MR	Maple Rapids	WB	Western Basin
Bi	Birmingham	NC	North Collins	30	Depth contour in meters
Bu	Buffalo	NF	Niagara Falls	BR	Black River
Cl	Cleveland	PB	Port Burwell	CR	Cuyahoga River
De	Detroit	PC	Port Colborne	DR	Detroit River
Df	Defiance	PH	Port Huron	GR	Grand River
Dr	Dresden	Pt	Parkertown	MR	Maumee River
Du	Dunnville	Ri	Ridgetown	NR	Niagara River
Ea	Erieau	Sa	Sarnia	RR	River Rouge
Er	Erie	SC	St. Clair	SCR	St. Clair River
Fi	Findlay	Si	Simcoe		
Fl	Flint	So	Sombra		
Fo	Forest	To	Toronto		
FP	Fairport-Painesville	Ub	Ubly		
FW	Fort Wayne	Wa	Wayne		
Gi	Girard	We	Westfield		
Ha	Hamilton	Wi	Windsor		
Im	Imlay	Yp	Ypsilanti		

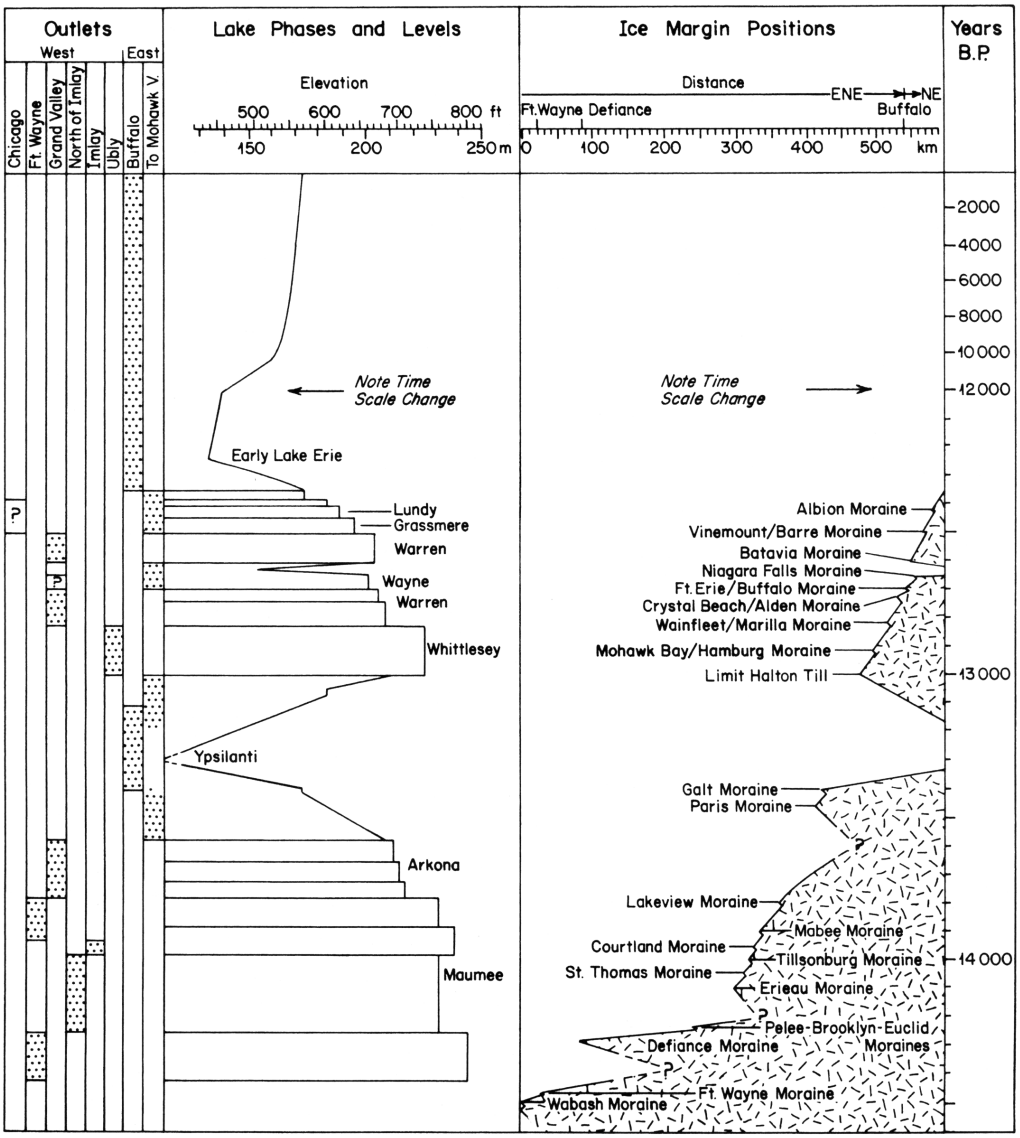
Former Outlet	
GV	Grand Valley
IC	Imlay Channel
UC	Ubly Channel
WV	Wabash Valley

Ice Margin Positions:

	Port Bruce Stadial
BM	Blenheim Moraine
DM	Defiance Moraine
EM	Erieau Moraine
EuM	Euclid Moraine
FM	Flint Moraine
FWM	Fort Wayne Moraine
GaM	Galt Moraine
IM	Ingersoll Moraine
LEM	Lake Escarpment Moraine
NM	Norfolk Moraine
PAM	Painesville & Ashtabula M.
PeM	Pelee Moraine
PM	Paris Moraine
STM	St. Thomas Moraine
TM	Tillsonburg Moraine
WaM	Wabash Moraine
	Port Huron Stadial
GoM	Gowanda Moraine
PHM	Port Huron Moraine
WyM	Wyoming Moraine

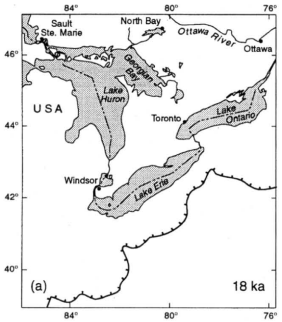
Source: Reference 2.5.1-297

Figure 2.5.1-233 Chart Showing the Lake Phases and Levels and Ice Margin Positions for the Quaternary

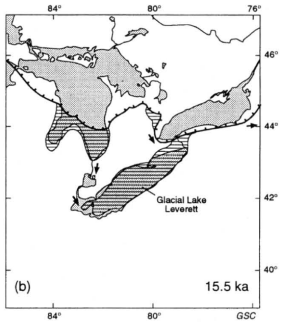


Source: Reference 2.5.1-297

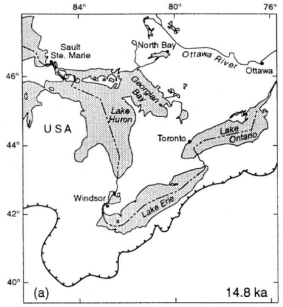
Figure 2.5.1-234 Maps Showing Late Wisconsinan Ice Margins and Proglacial Lake Shorelines (~18 ka to 5ka)



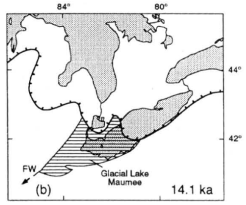
a) Ice margin at the 18,000 BP (Nissouri Stade) maximum position; no lakes are impounded as the margin lies south of the Great Lakes-Gulf of Mexico drainage.



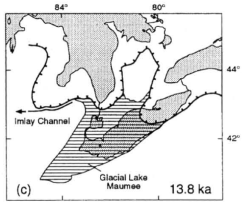
b) Maximum extent of lakes inferred for the Erie Interstade ice position.



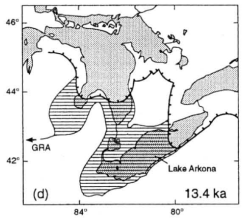
c) Port Bruce ice margin maximum at 14,800 BP drains without impoundments to Gulf of Mexico.



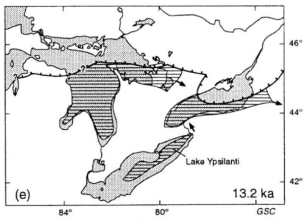
d) Highest Lake Maumee about 14,100 BP, drainage past Fort Wayne (FW) to Mississippi River.



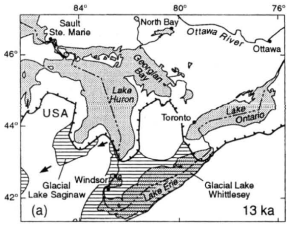
e) Final phase of Lake Maumee about 13,800 BP, drainage to the Michigan basin and Mississippi River via the Imlay channel south of Saginaw Bay.



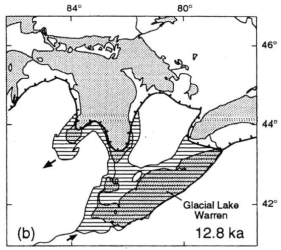
f) Early Lake Arkona about 13,400 BP impounded in the Huron and Erie basins, drainage to the Michigan basin via the Grand River Valley (GRA).



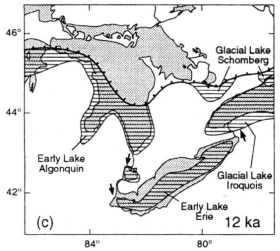
g) Low-level lakes about 13,200 BP during the Mackinaw Interstade.



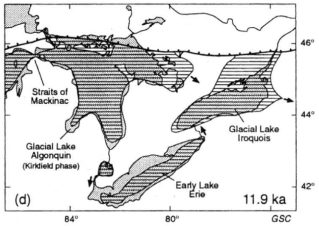
h) Glacial lakes Whittlesey and Saginaw about 13,000 BP draining to the Michigan basin.



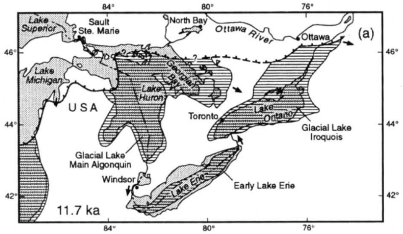
i) Highest Lake Warren about 12,800 BP, drainage to the Michigan basin.



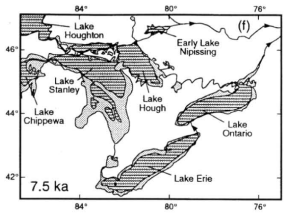
j) Early Lake Algonquin and Lake Schomberg about 12,000 BP.



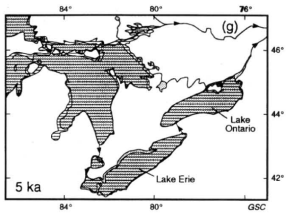
k) Early Kirkfield phase of Lake Algonquin about 11,900 BP.



l) Kirkfield phase of Lake Algonquin in the Huron basin during the Greatlakean Stade about 11,800 BP.



m) Post-Mattawa low or onset of the Nipissing transgression about 7,500 BP.



n) Nipissing Great Lakes about 5,000 BP.

Source: Reference 2.5.1-272

Figure 2.5.1-235 Site Exploration Plan

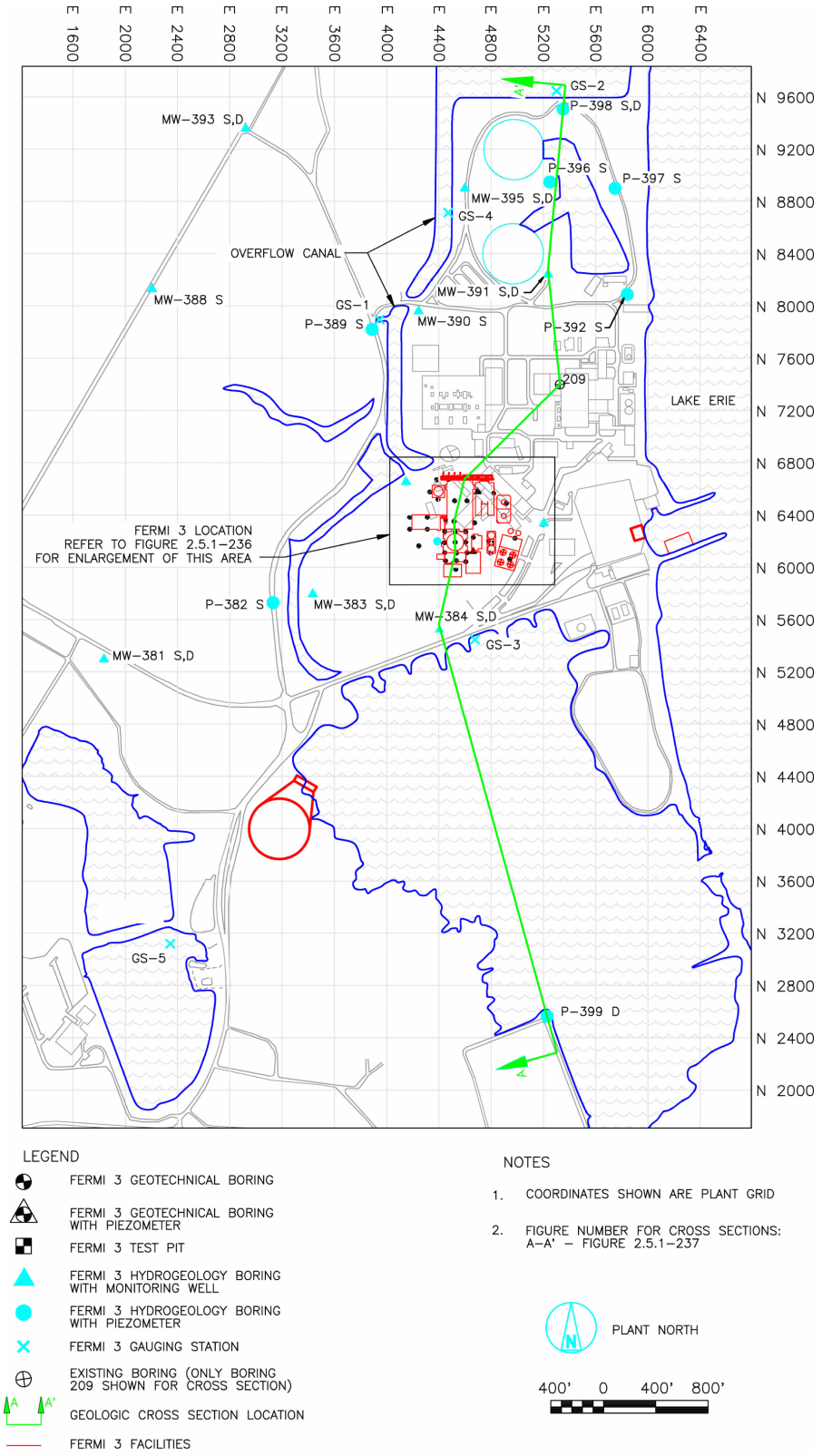


Figure 2.5.1-236 Enlargement of Site Exploration Plan

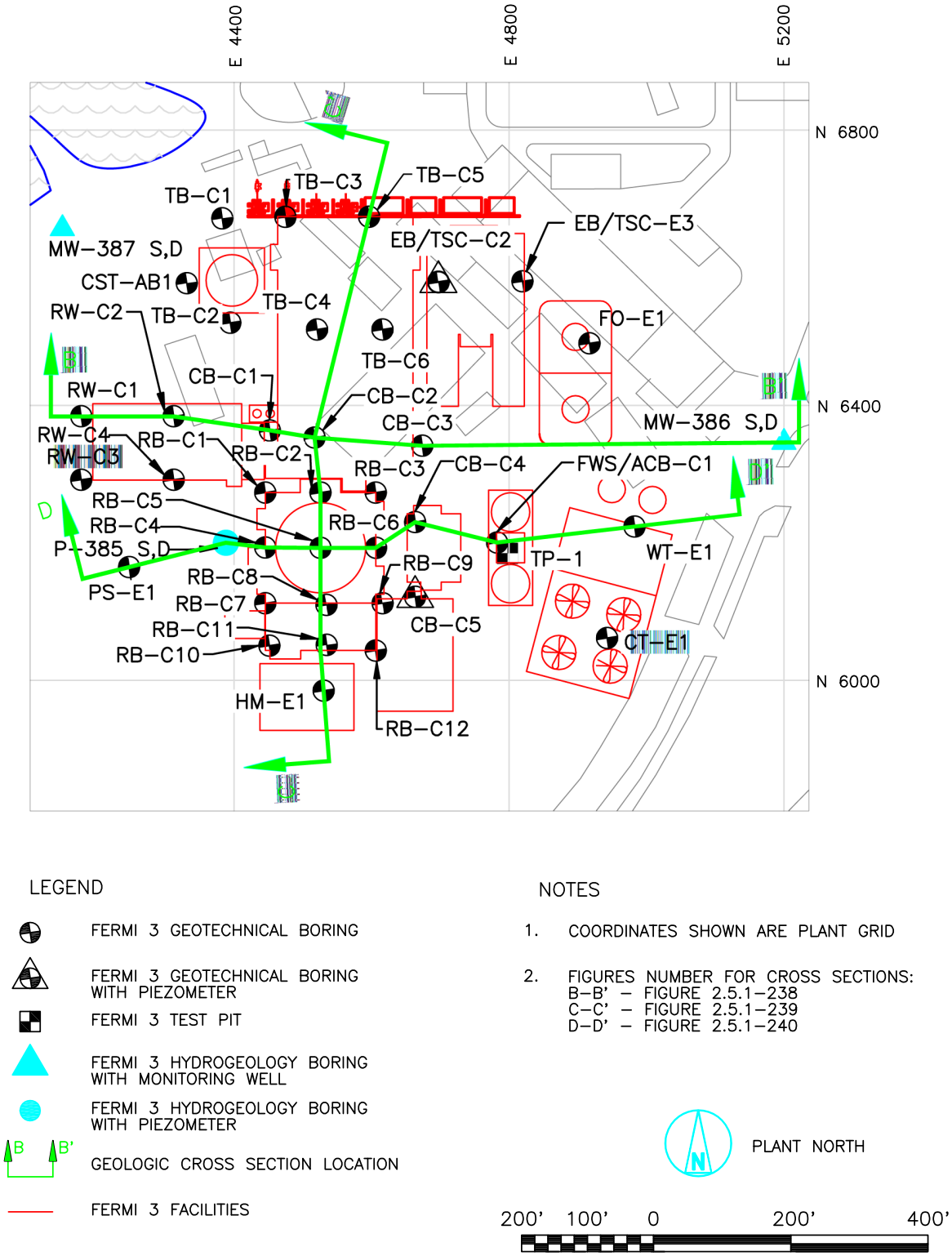


Figure 2.5.1-237 Geologic Cross Section A-A'

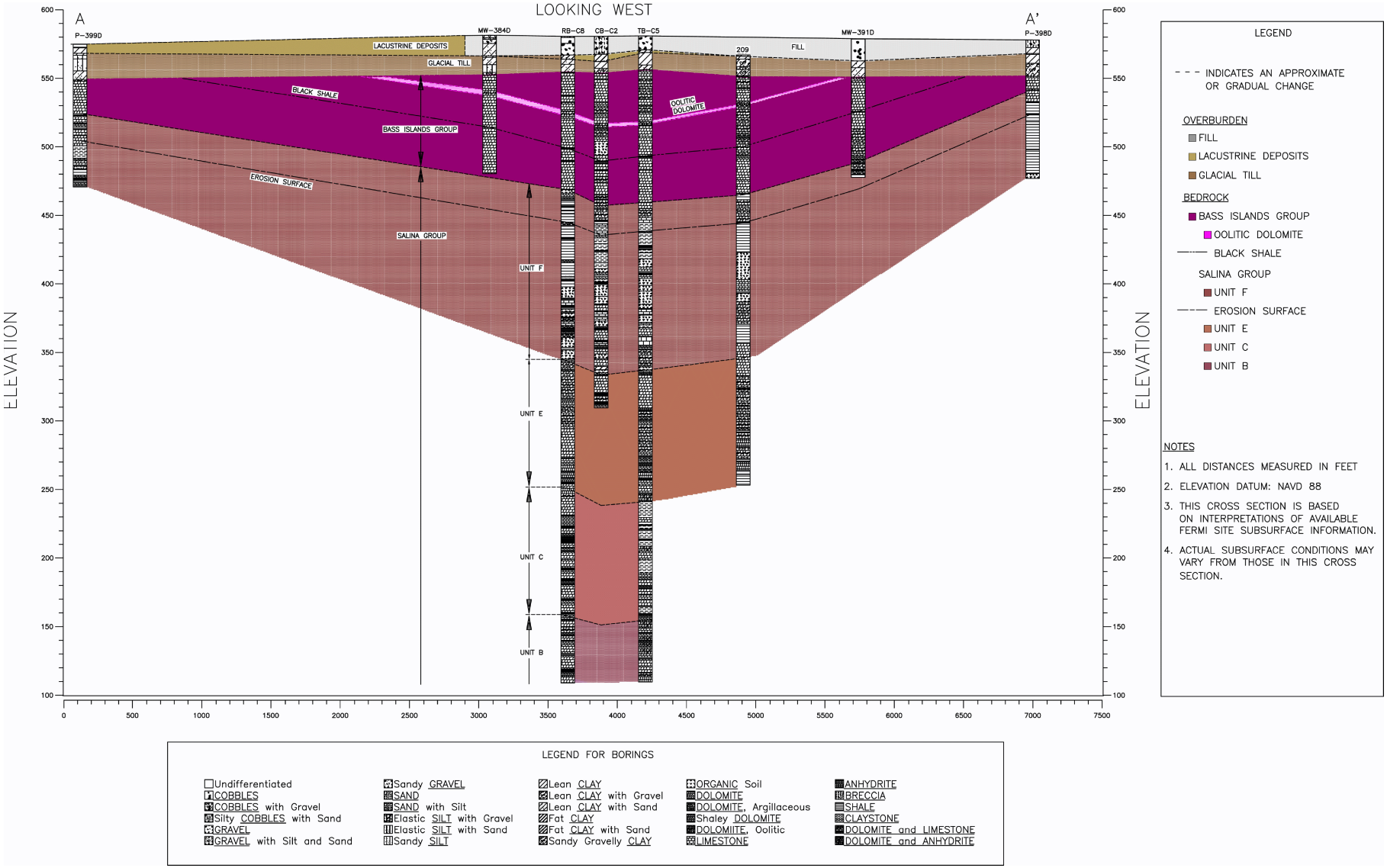


Figure 2.5.1-238 Geologic Cross Section B-B'

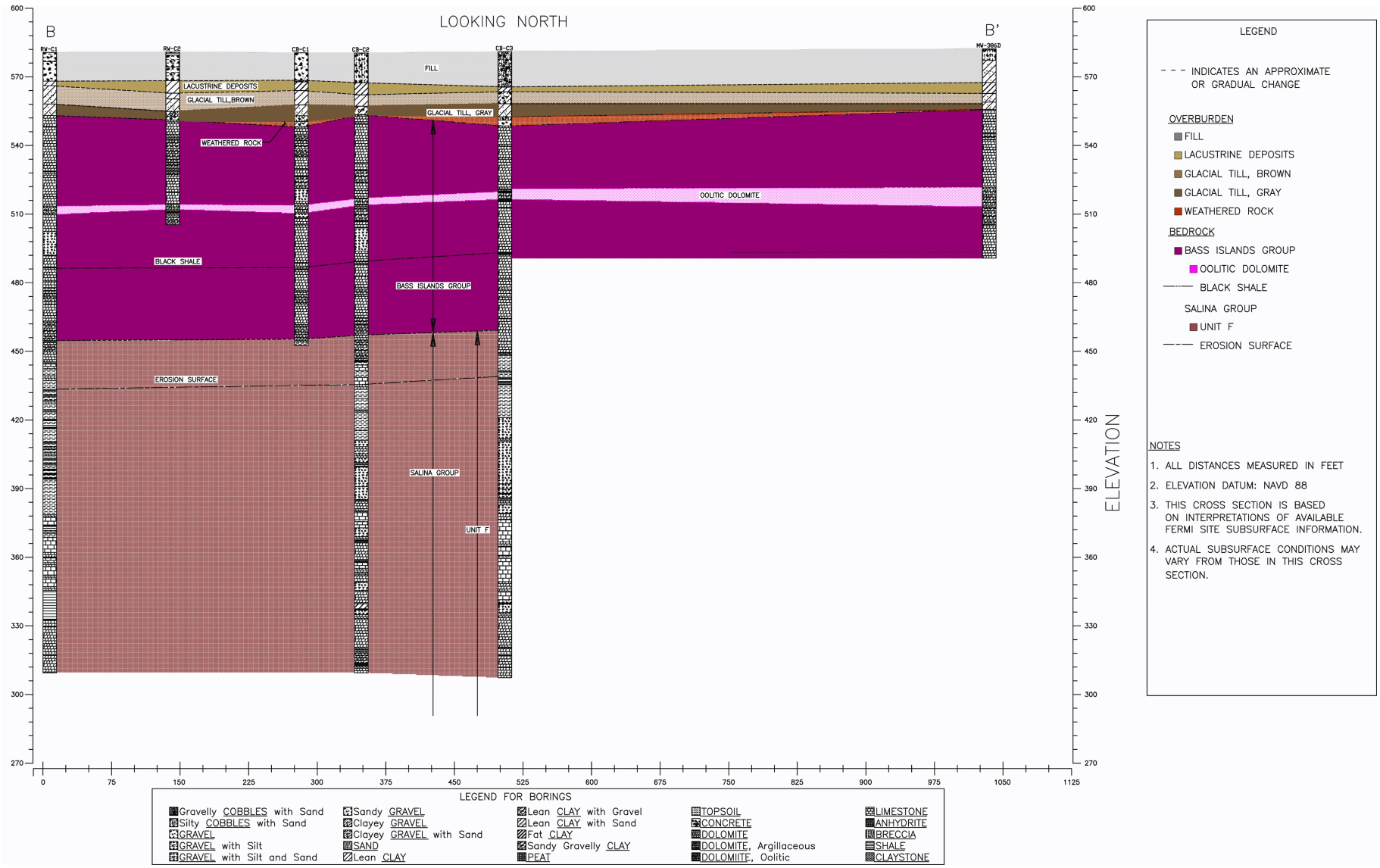


Figure 2.5.1-239 Geologic Cross Section C-C'

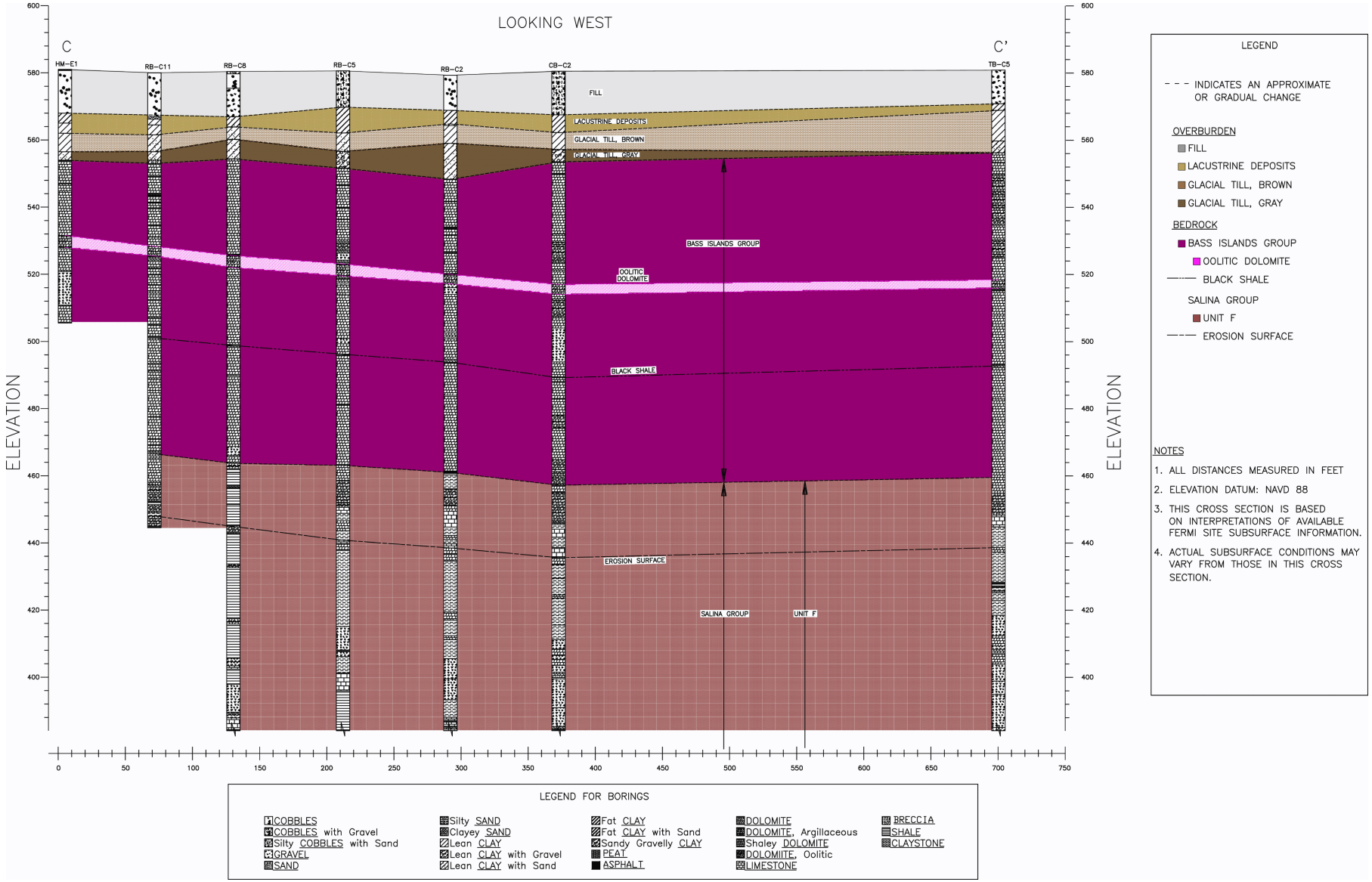


Figure 2.5.1-240 Geologic Cross Section D-D'

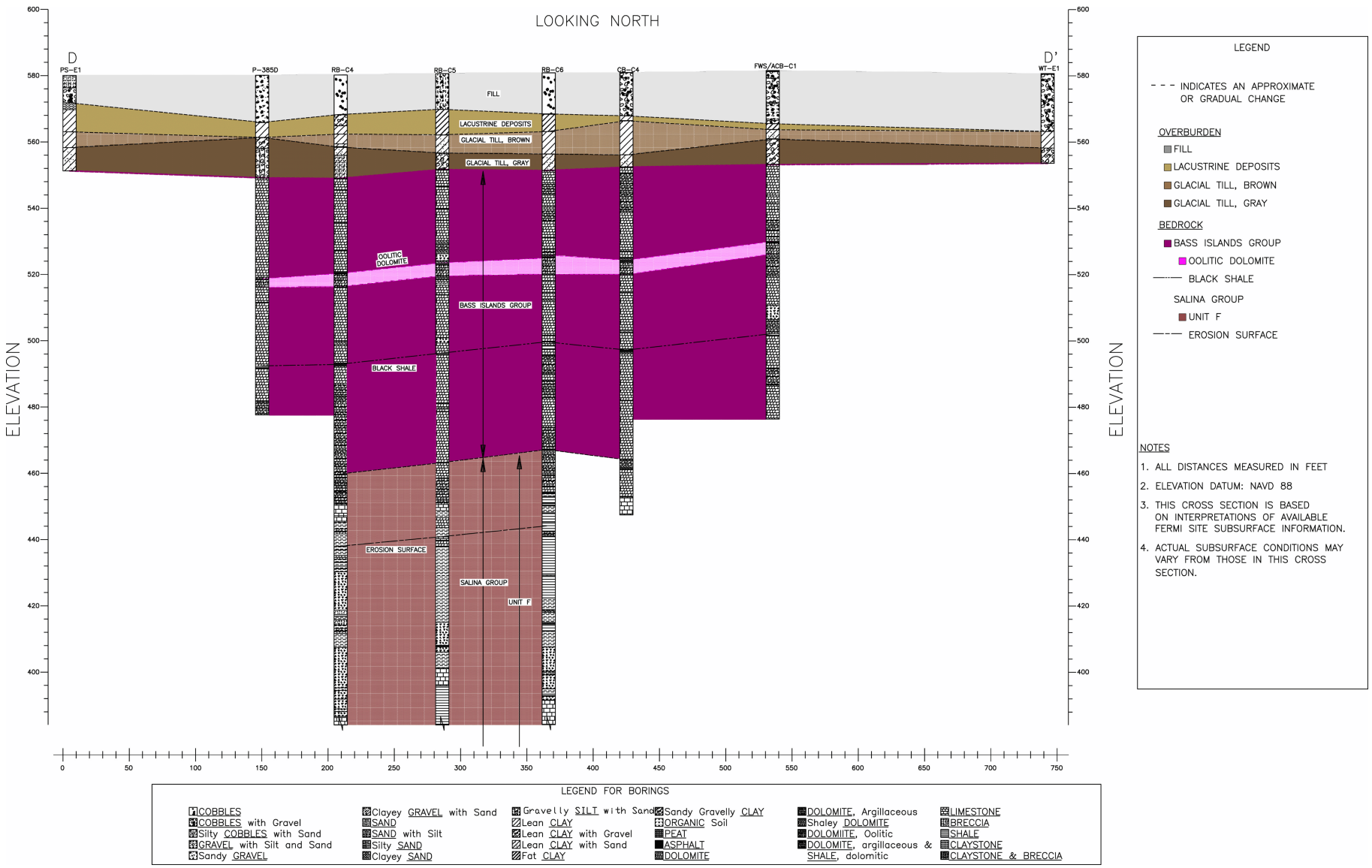


Figure 2.5.1-241 Geologic Map of the Fermi 3 Site Area

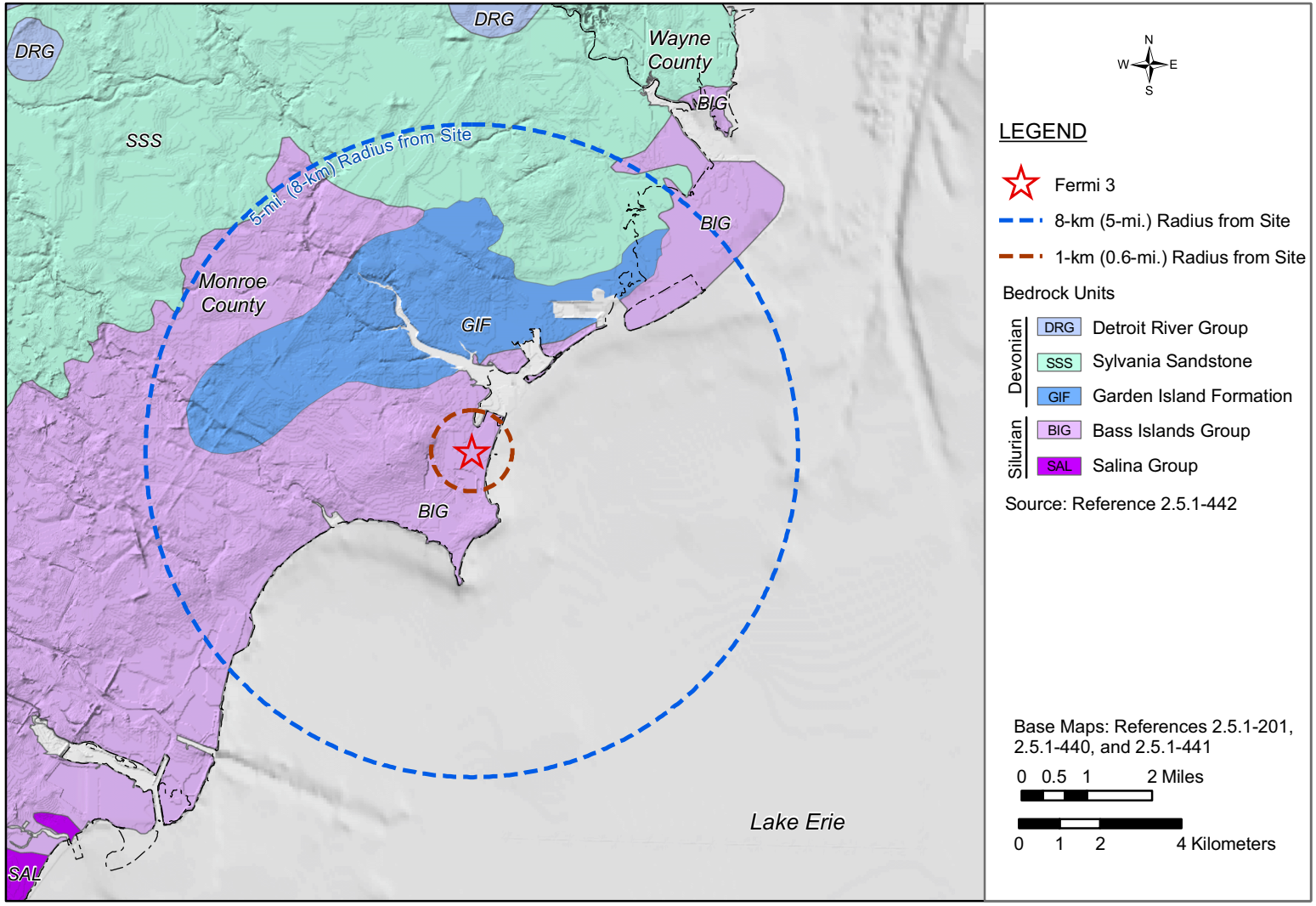


Figure 2.5.1-242 Natural Gamma Log of Fermi 3 Boring RB-C8

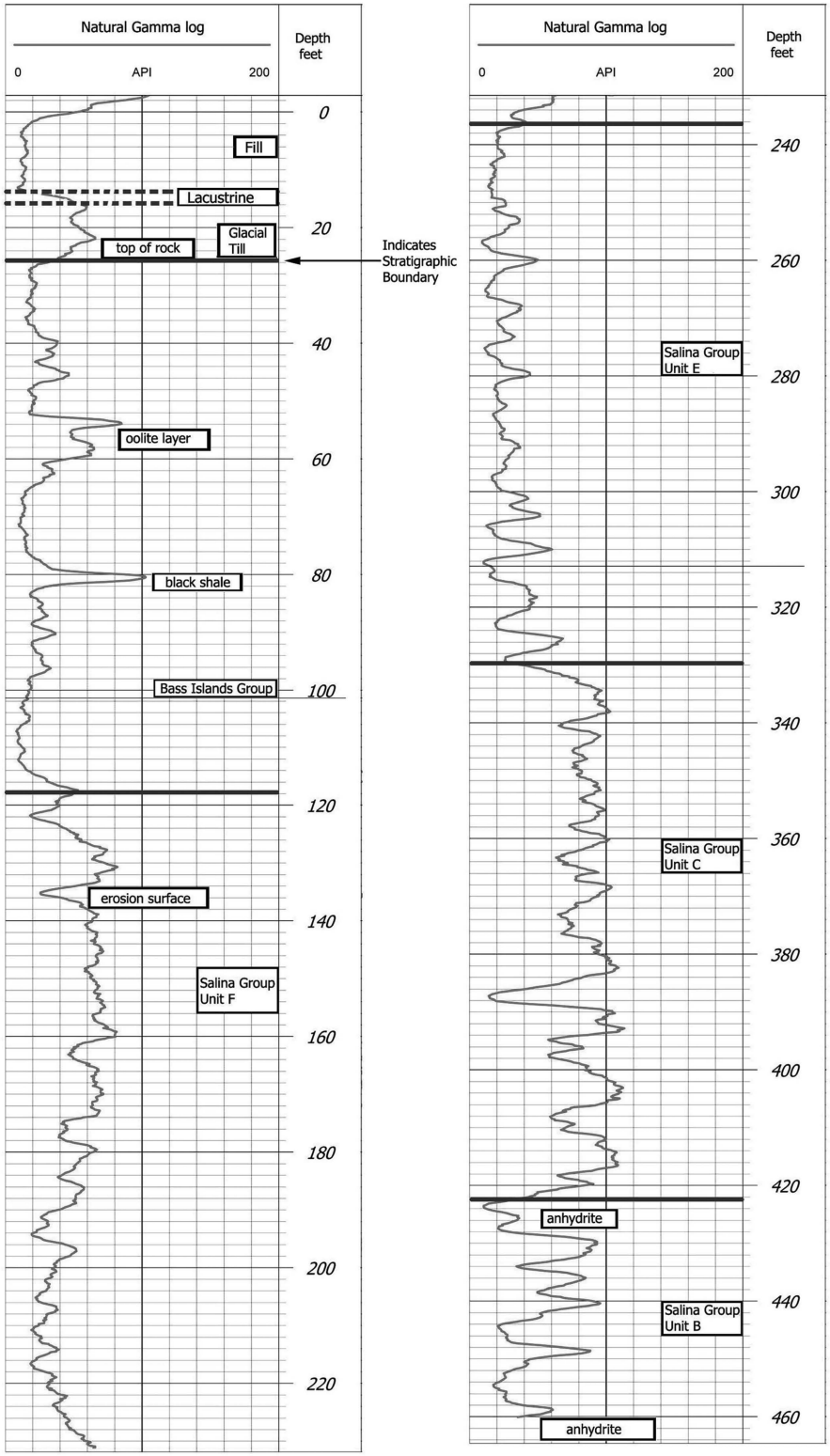
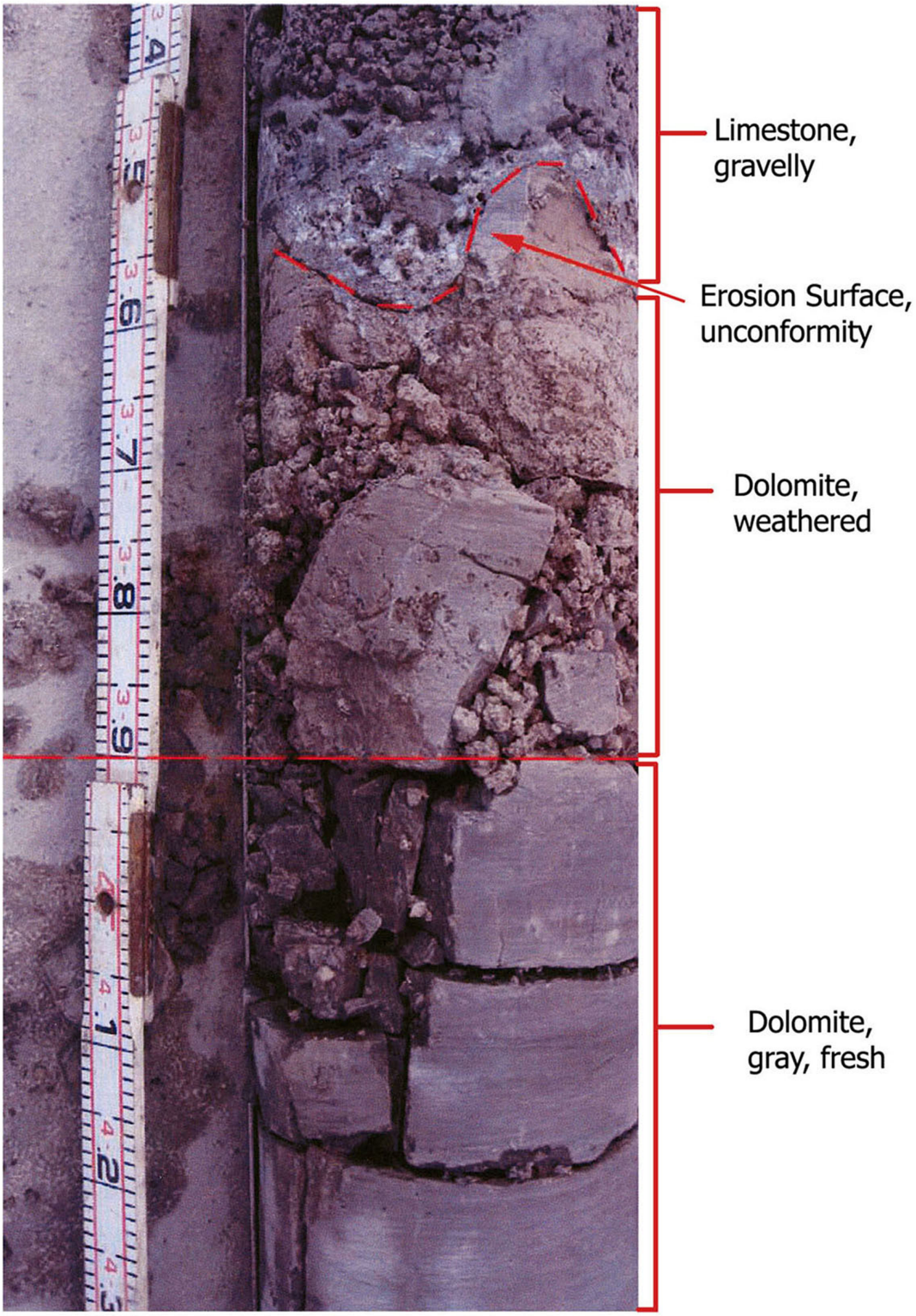


Figure 2.5.1-243 Photograph of Erosion Surface in Salina Unit F, Fermi 3 Boring CB-C2



Depth 144.3′ - 145.25′

Figure 2.5.1-244 Quaternary Geologic Map of the Site Area

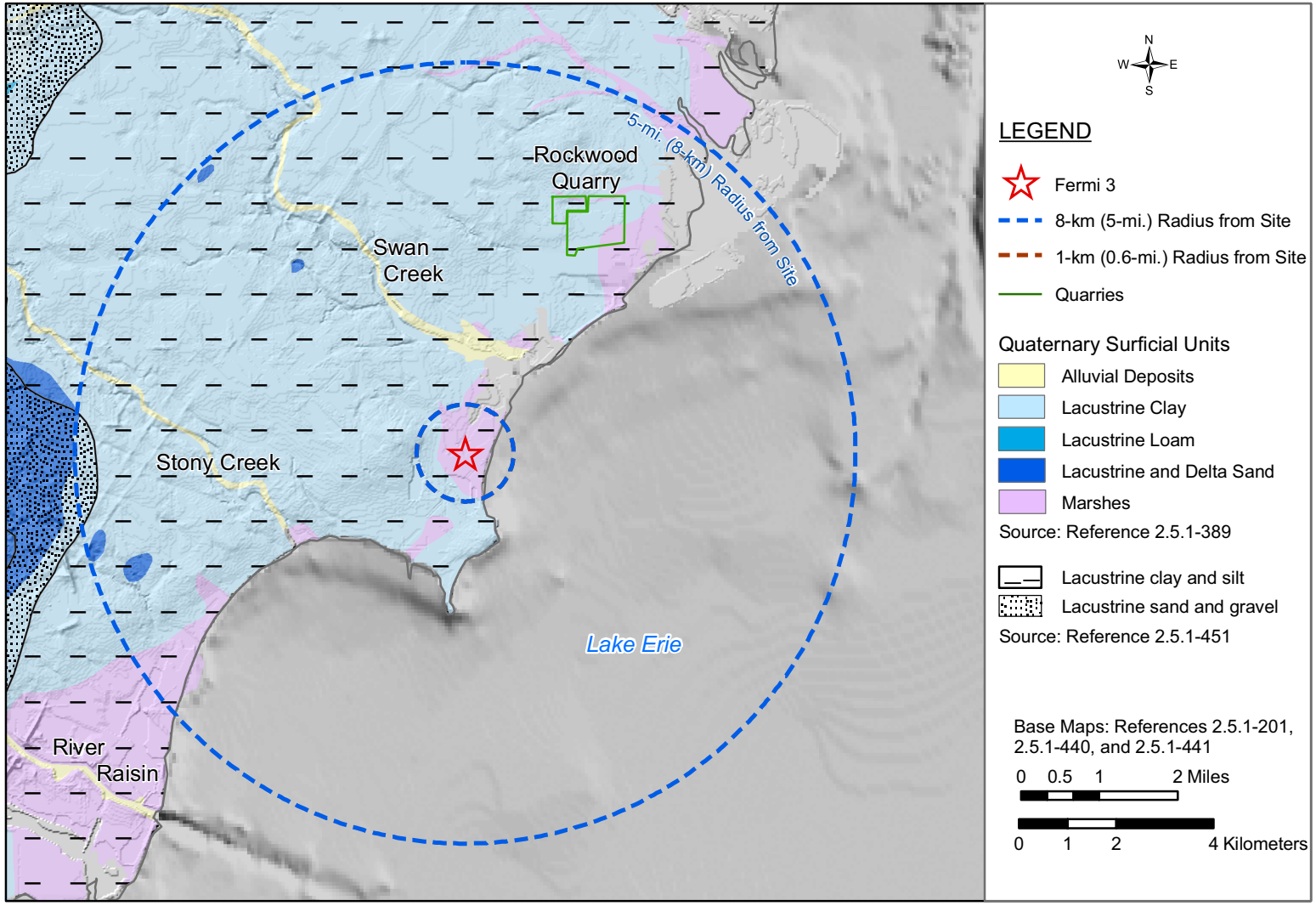


Figure 2.5.1-245 Map Showing Soils of the Fermi 3 Site Location

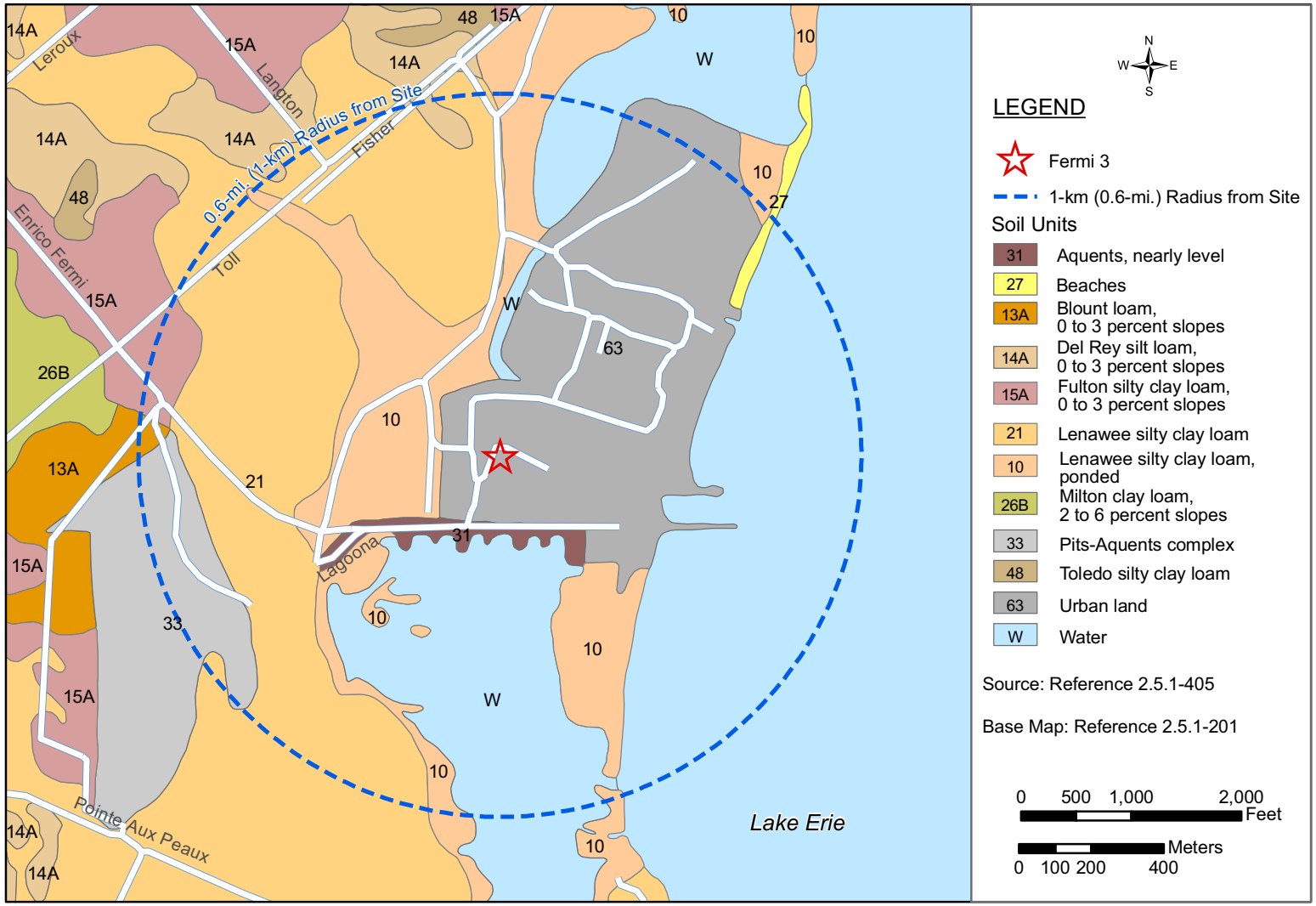


Figure 2.5.1-246 Tectonic Structures in the Fermi 3 Site Vicinity

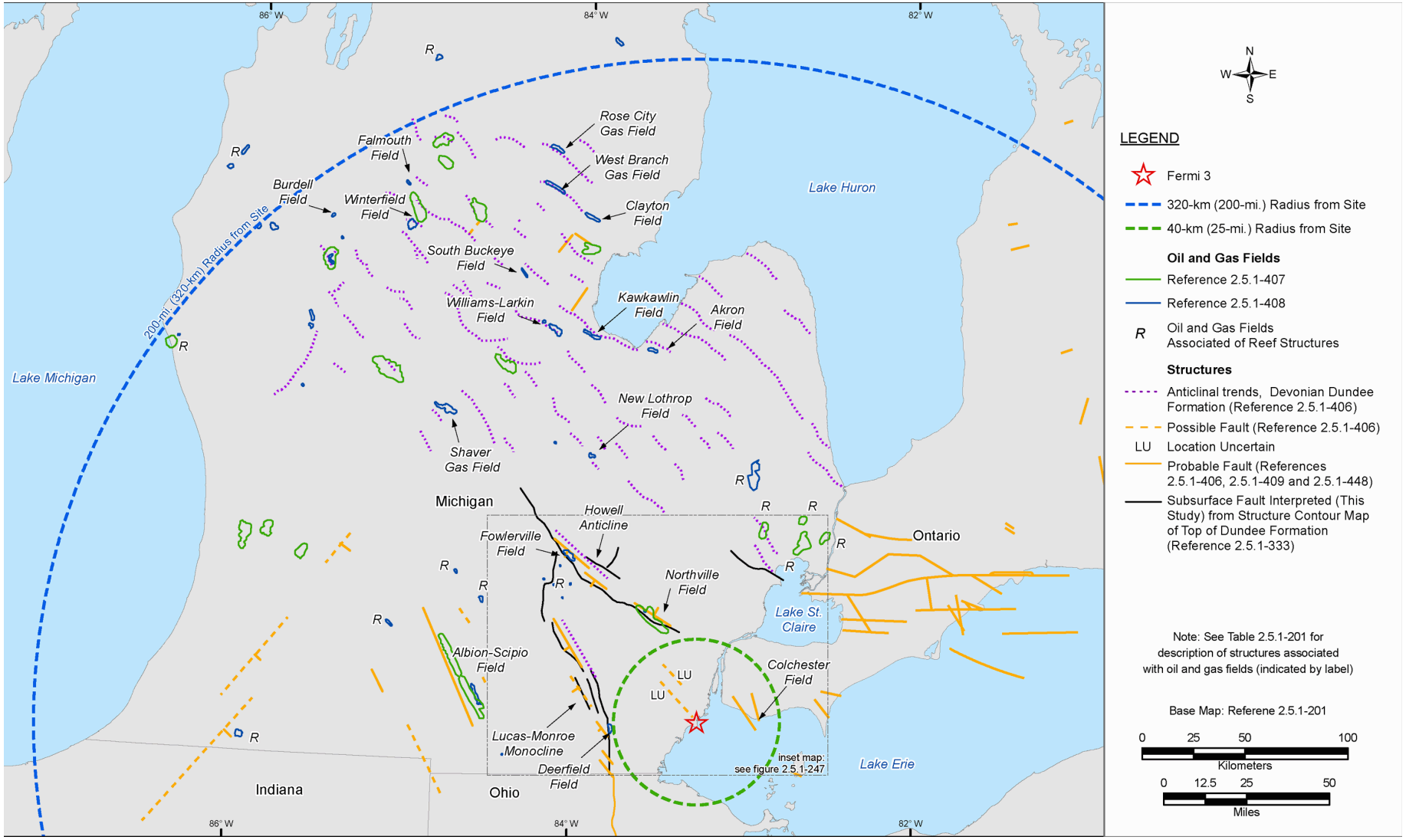


Figure 2.5.1-247 Structure Contour Maps from Monroe County, Michigan

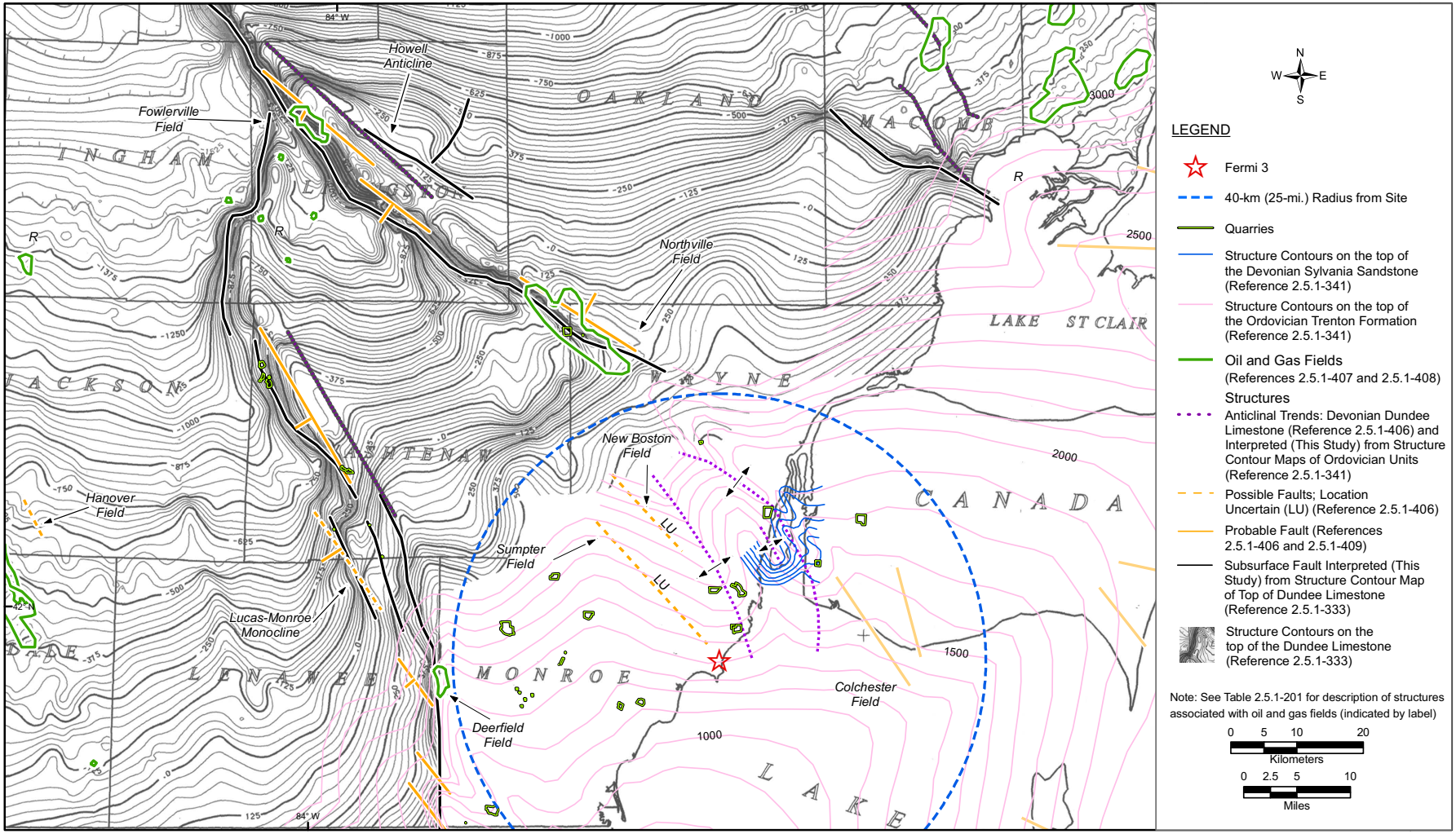
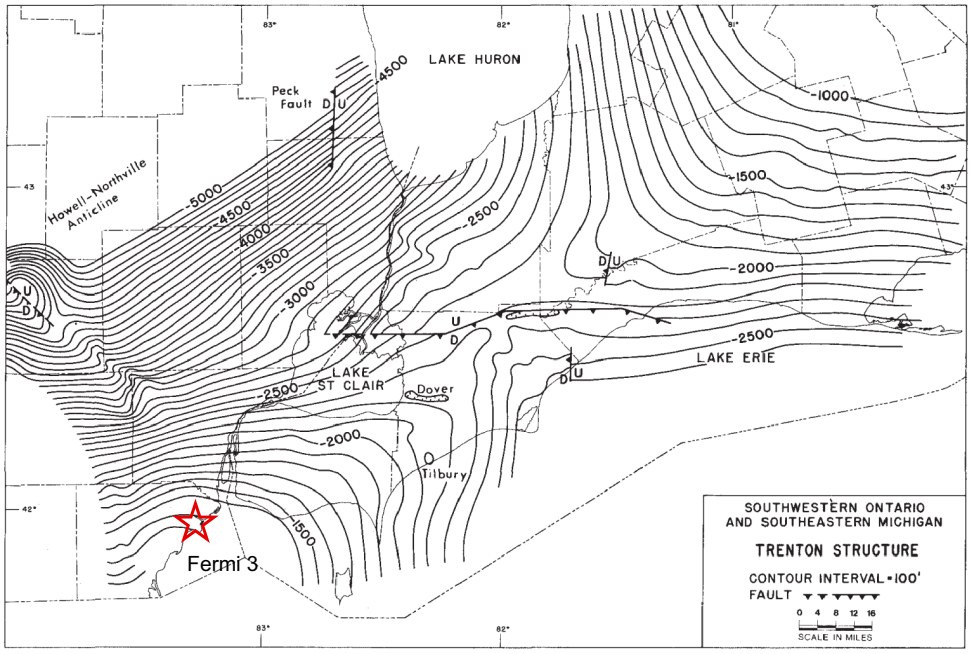
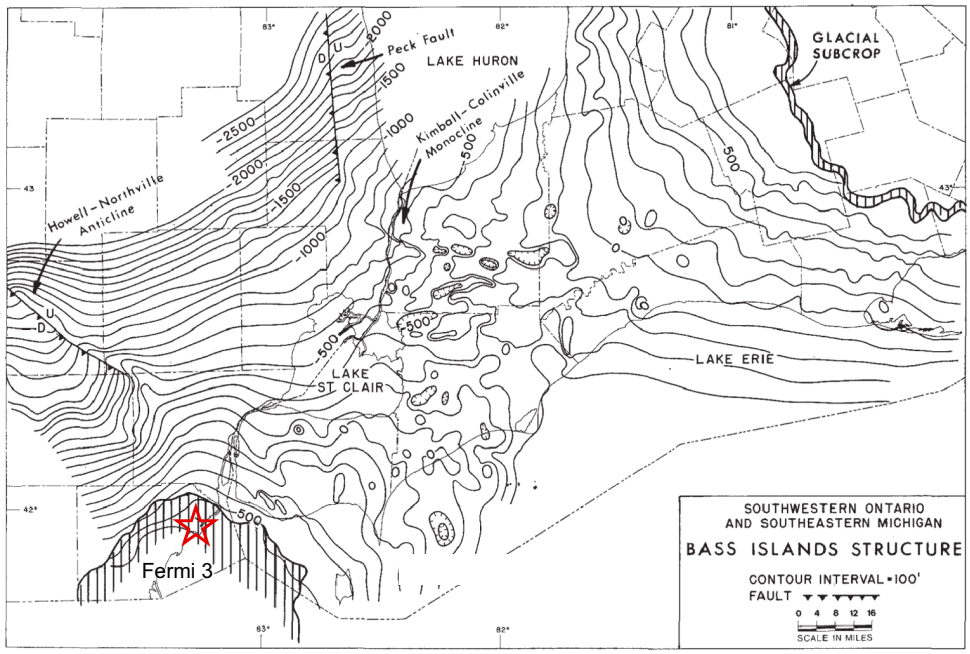


Figure 2.5.1-248 Structural Contour Maps on the Trenton Formation and Bass Islands Group



a. Structure contour on Ordovician Trenton Group



b. Structure contours on Silurian Bass Islands Formation

Figure 2.5.1-249 Structural Contour Map on the Top of the Bass Islands Group, Oolitic Dolomite Marker Horizon