

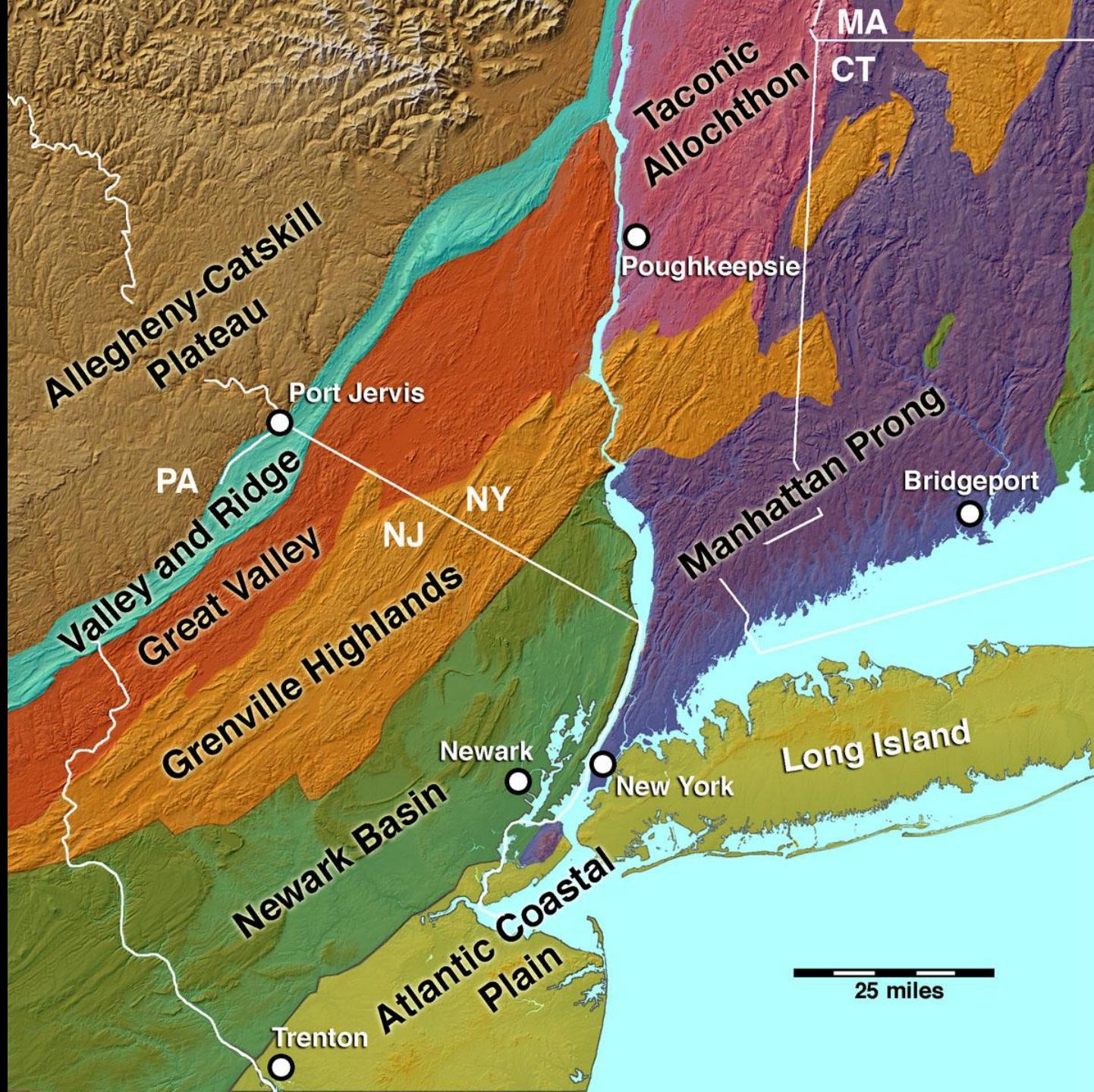
Connecticut Mines and Minerals

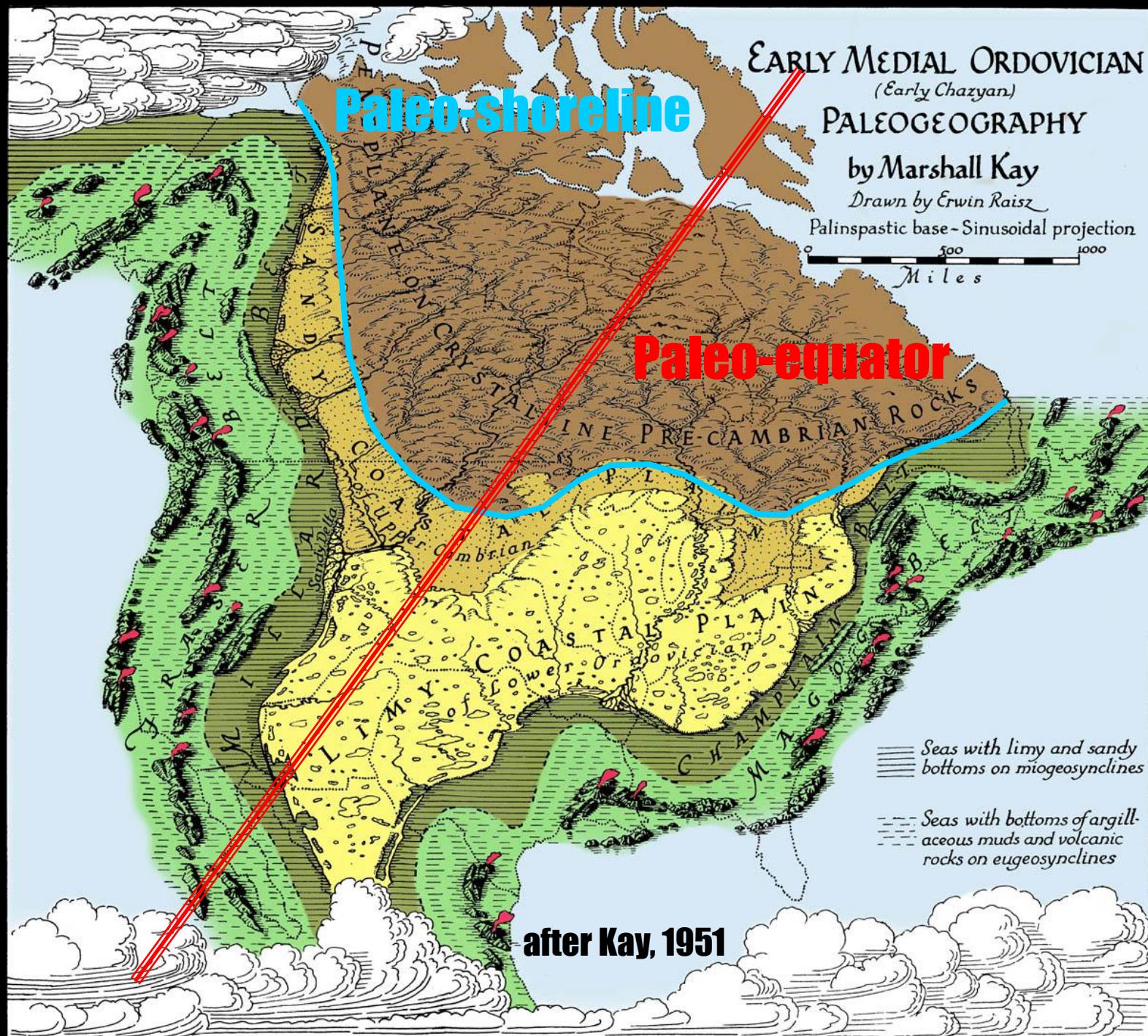
Charles Merguerian

Franklin-Ogdensburg Mineralogical Society

19 May 2012







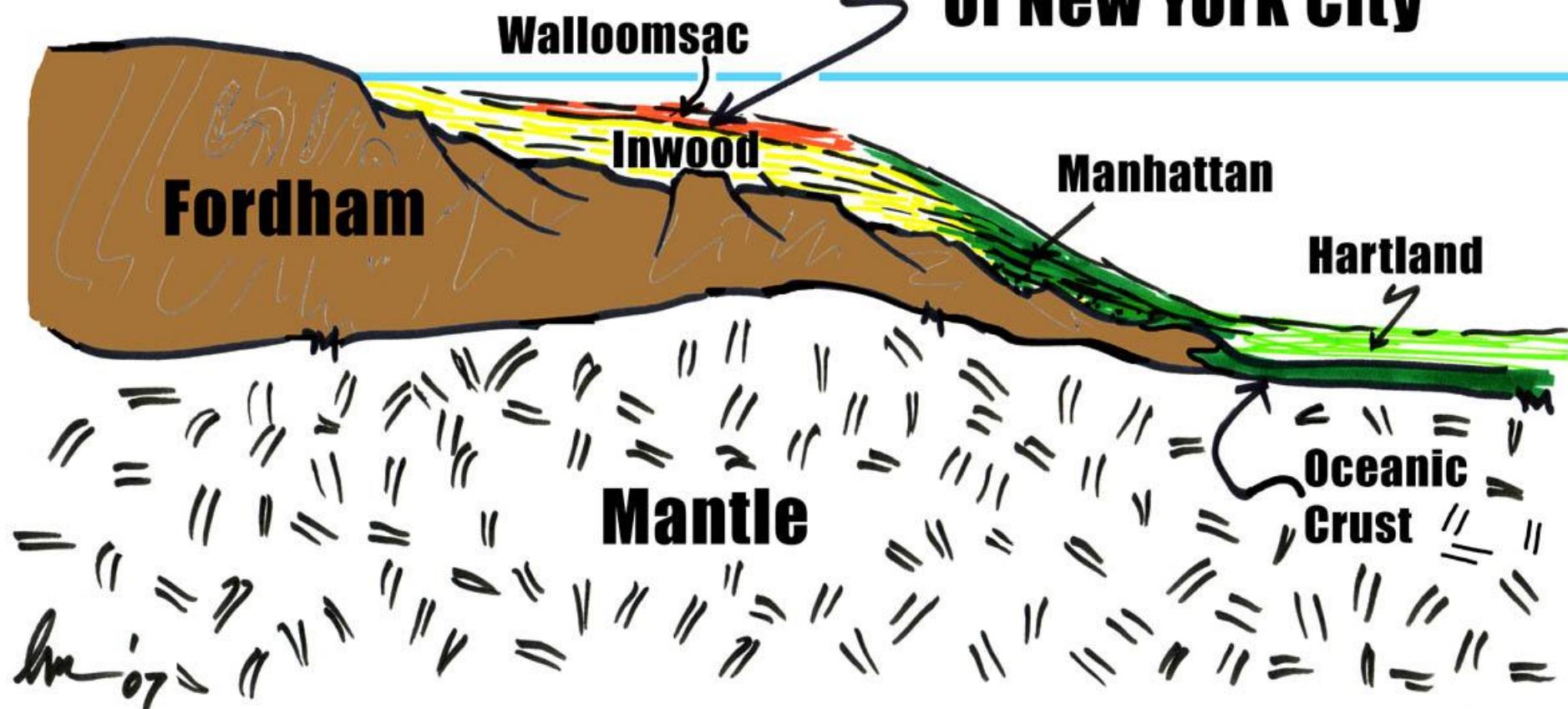


**Let's Go Back
In Time From
Today to the
Cambrian!**

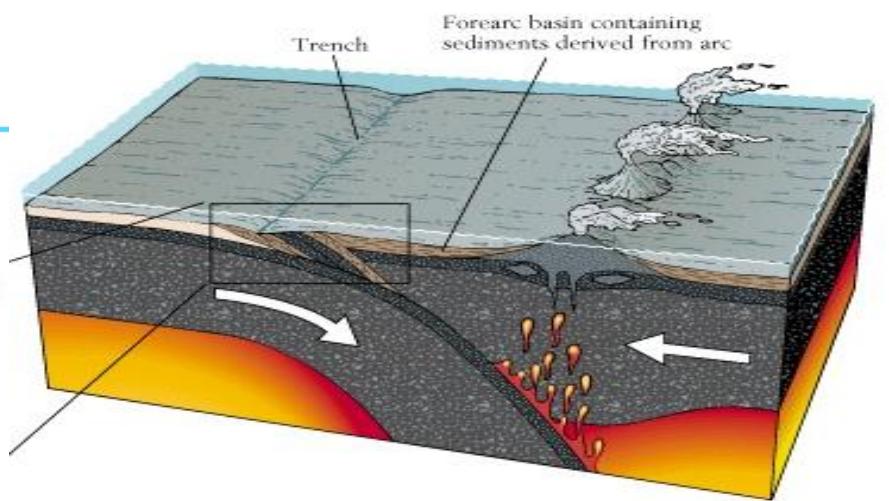
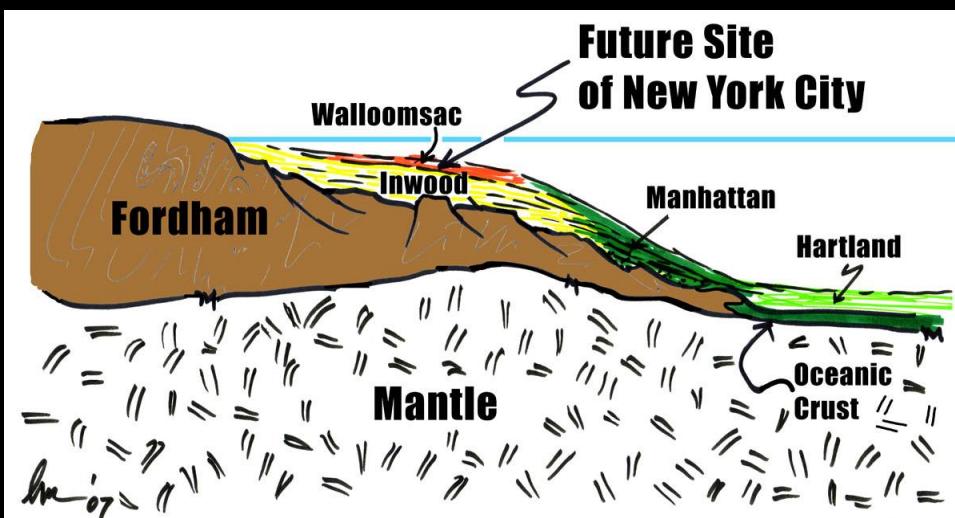
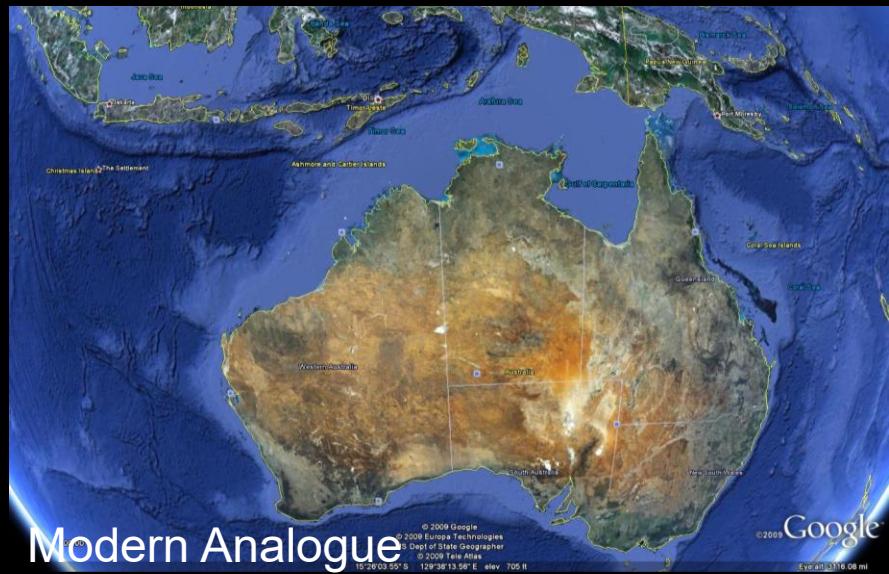


**Club Med
Conditions**

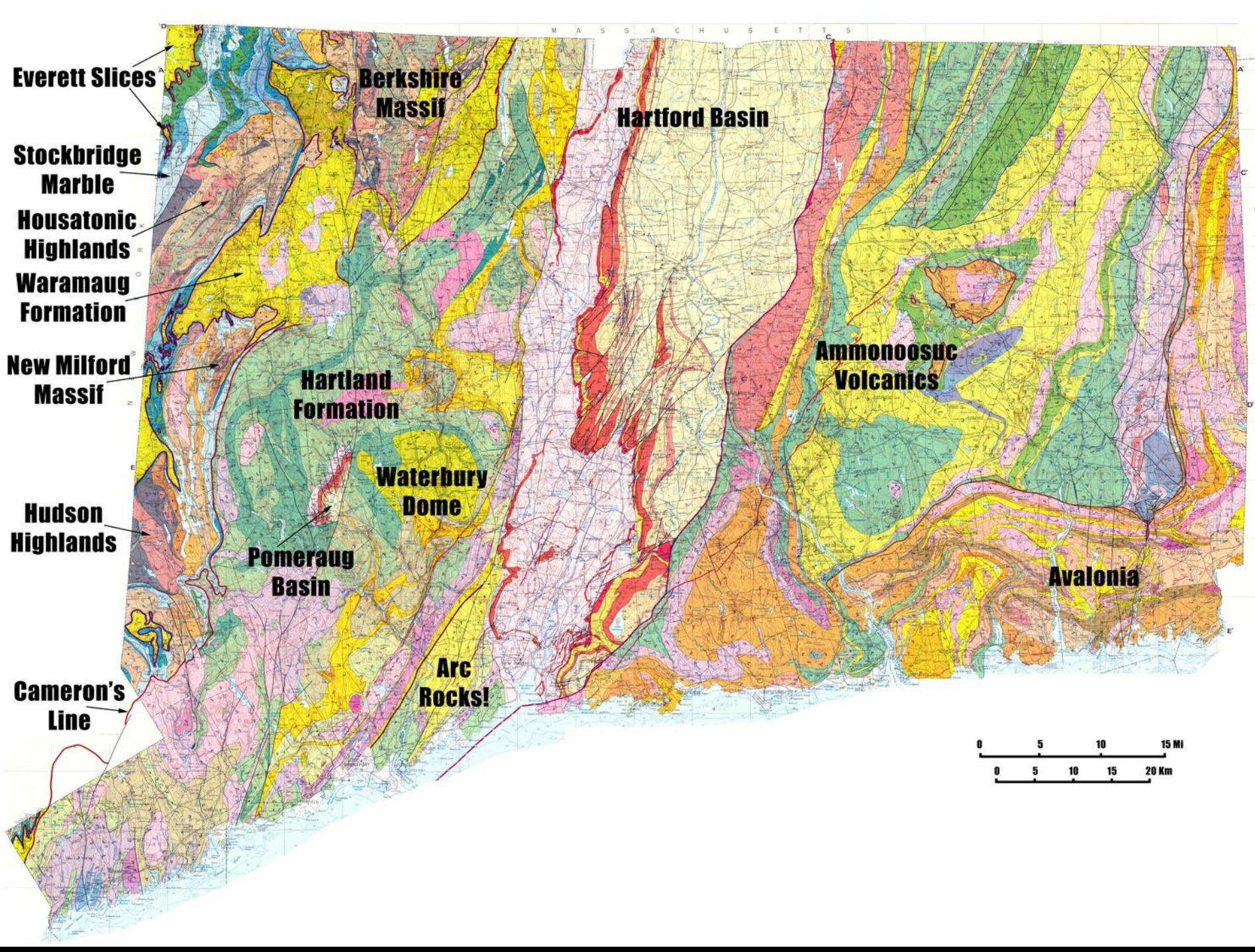
Future Site of New York City

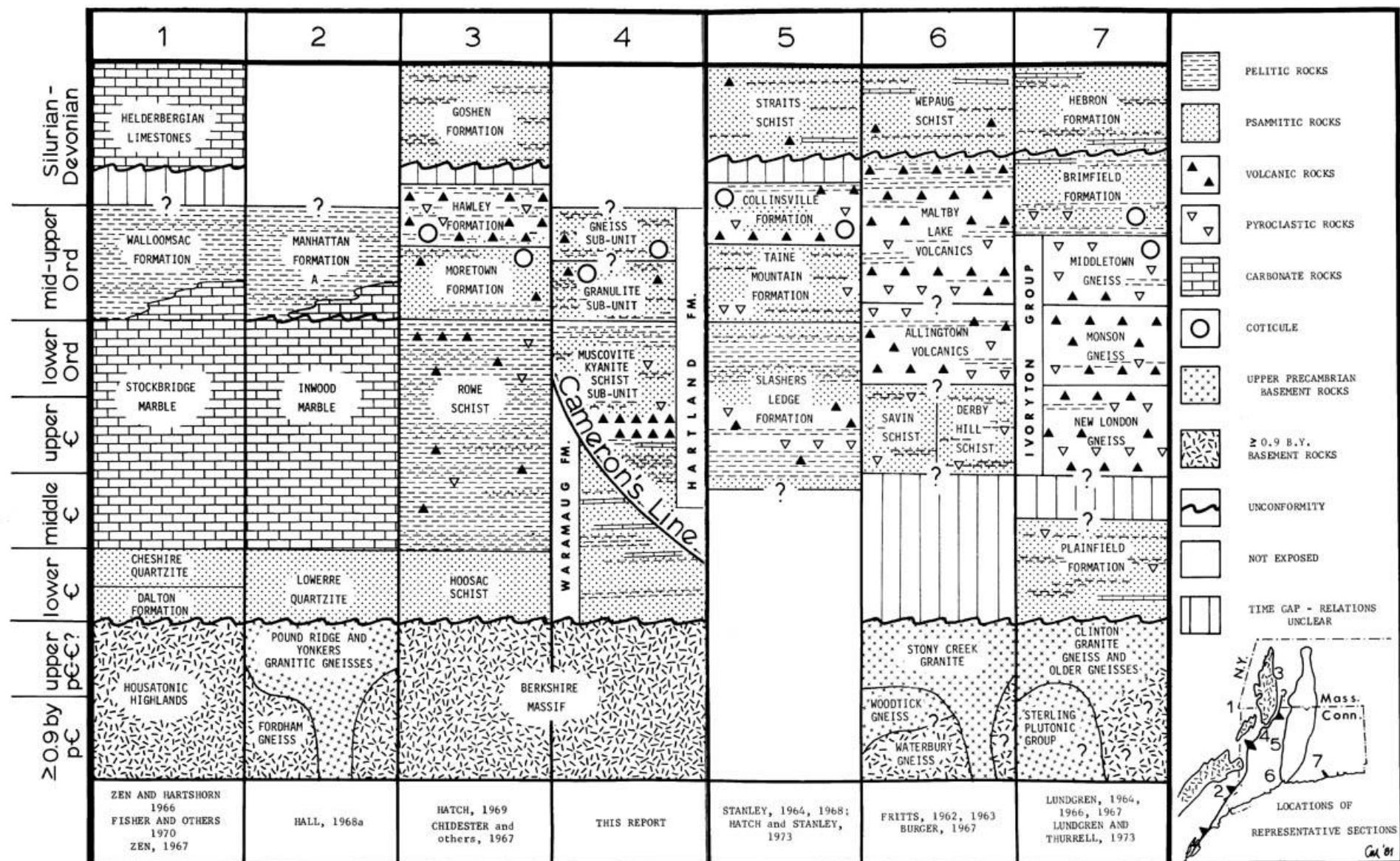


~450 Ma Taconian Arc – Passive Margin Collision



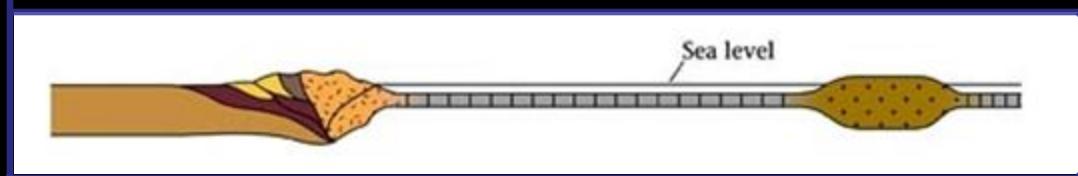




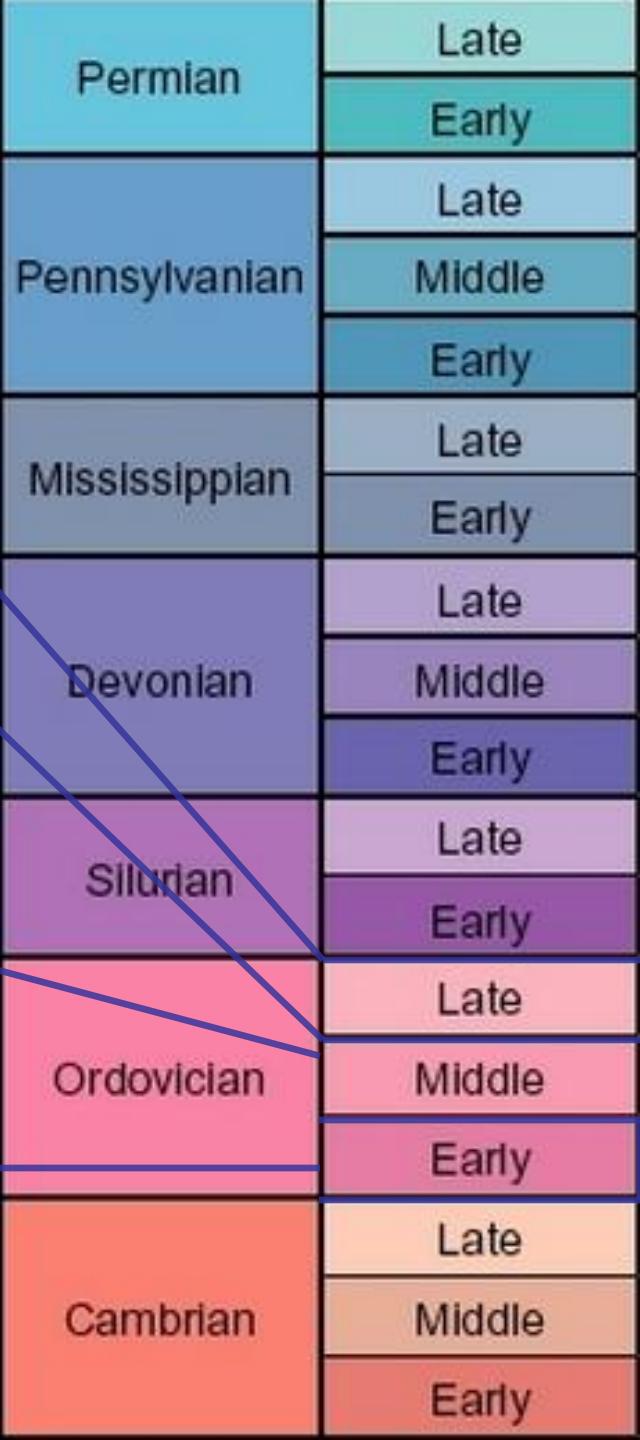
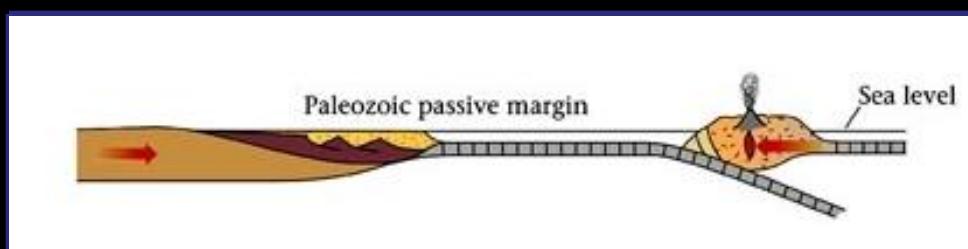


Taconic Orogeny

2



1



EARLY SILURIAN

Isopachs in feet

0 MILES 100

CARBONATE - MUD - AND - SAND

SHALE AND
SAND

SAND

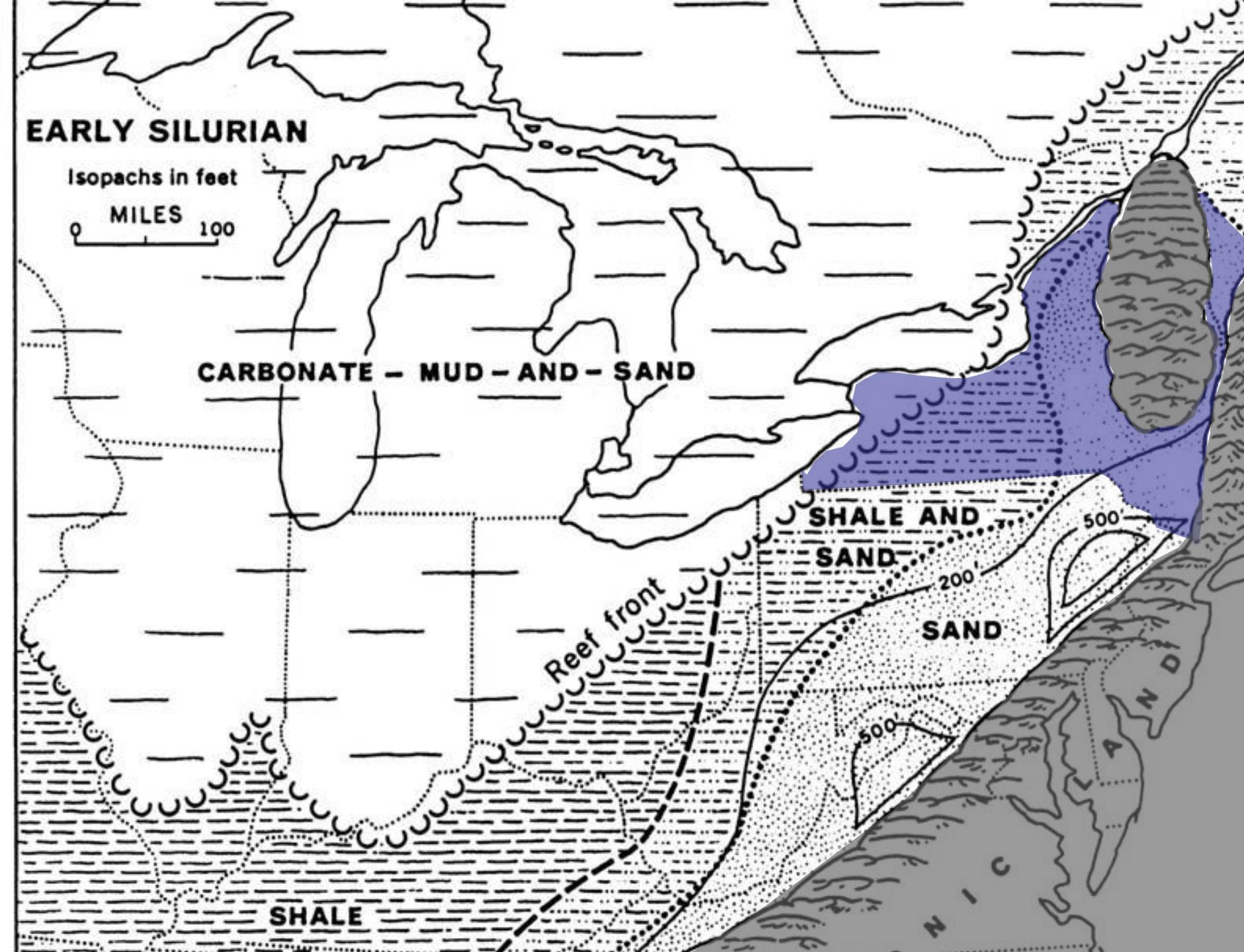
Reef front

200'

500'

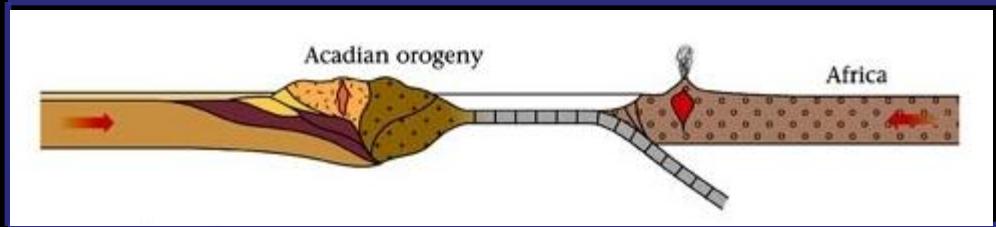
SHALE

N C



Acadian Orogeny

4



Permian

Late

Early

Pennsylvanian

Late

Middle

Early

Mississippian

Late

Early

Devonian

Late

Middle

Early

Silurian

Late

Early

Ordovician

Late

Middle

Early

Cambrian

Late

Middle

Early

3



360 million
years ago

future location
of Sideling Hill

Kaskaskia Sea

Acadian highlands

Iapetus Ocean

Africa



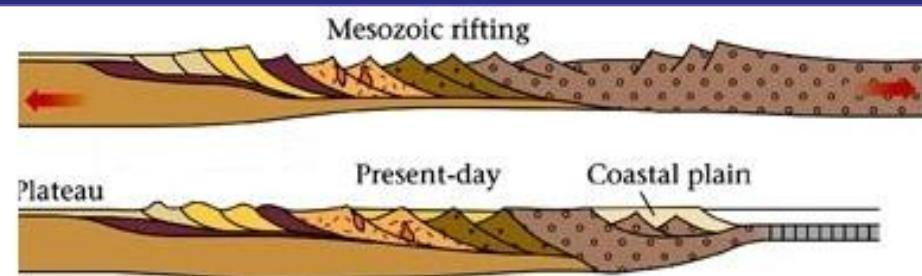
Alleghanian Orogeny



5

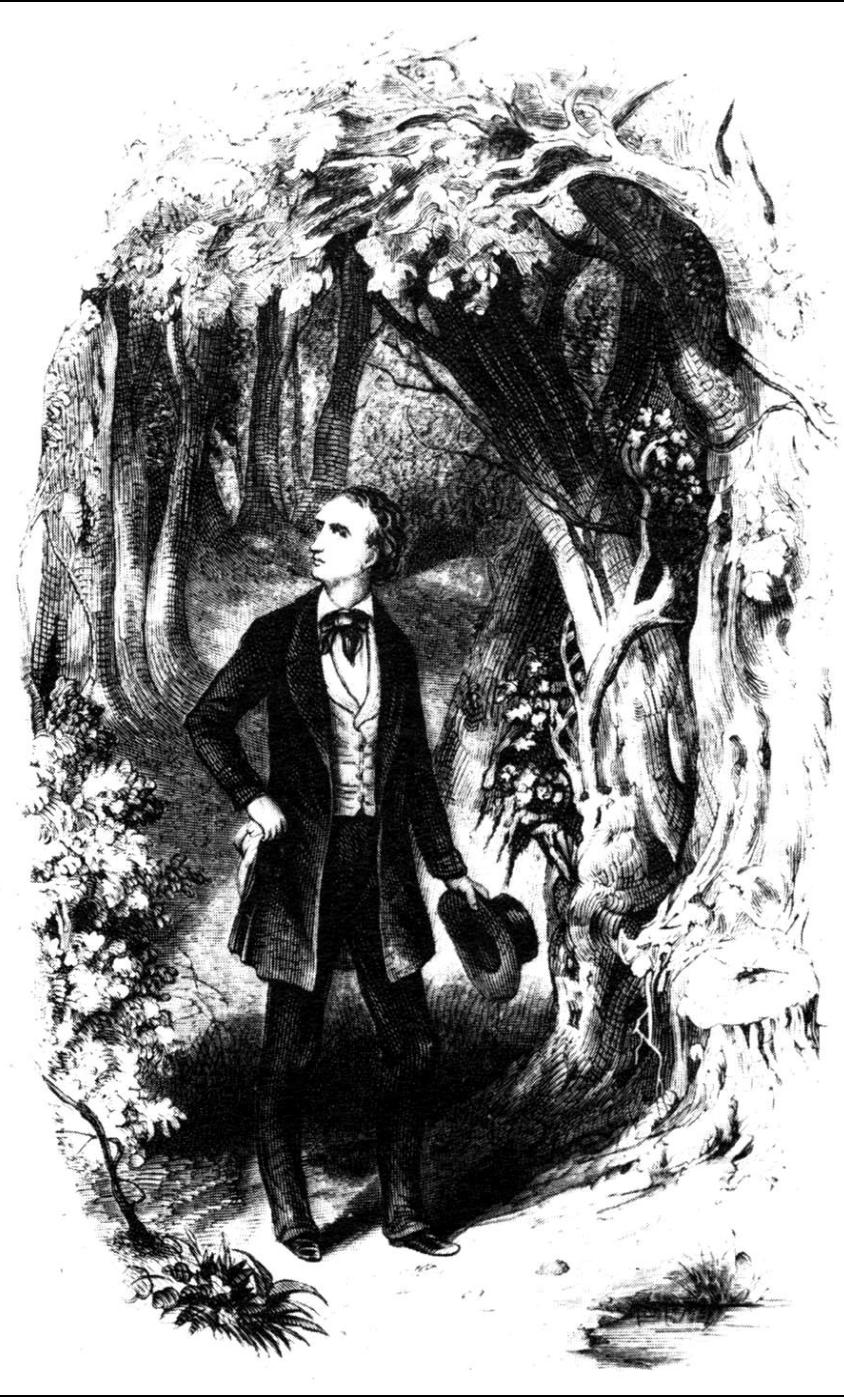
Permian	Late
	Early
Pennsylvanian	Late
	Middle
	Early
Mississippian	Late
	Early
Devonian	Late
	Middle
	Early
Silurian	Late
	Early
Ordovician	Late
	Middle
	Early
Cambrian	Late
	Middle
	Early

Mesozoic Rifting



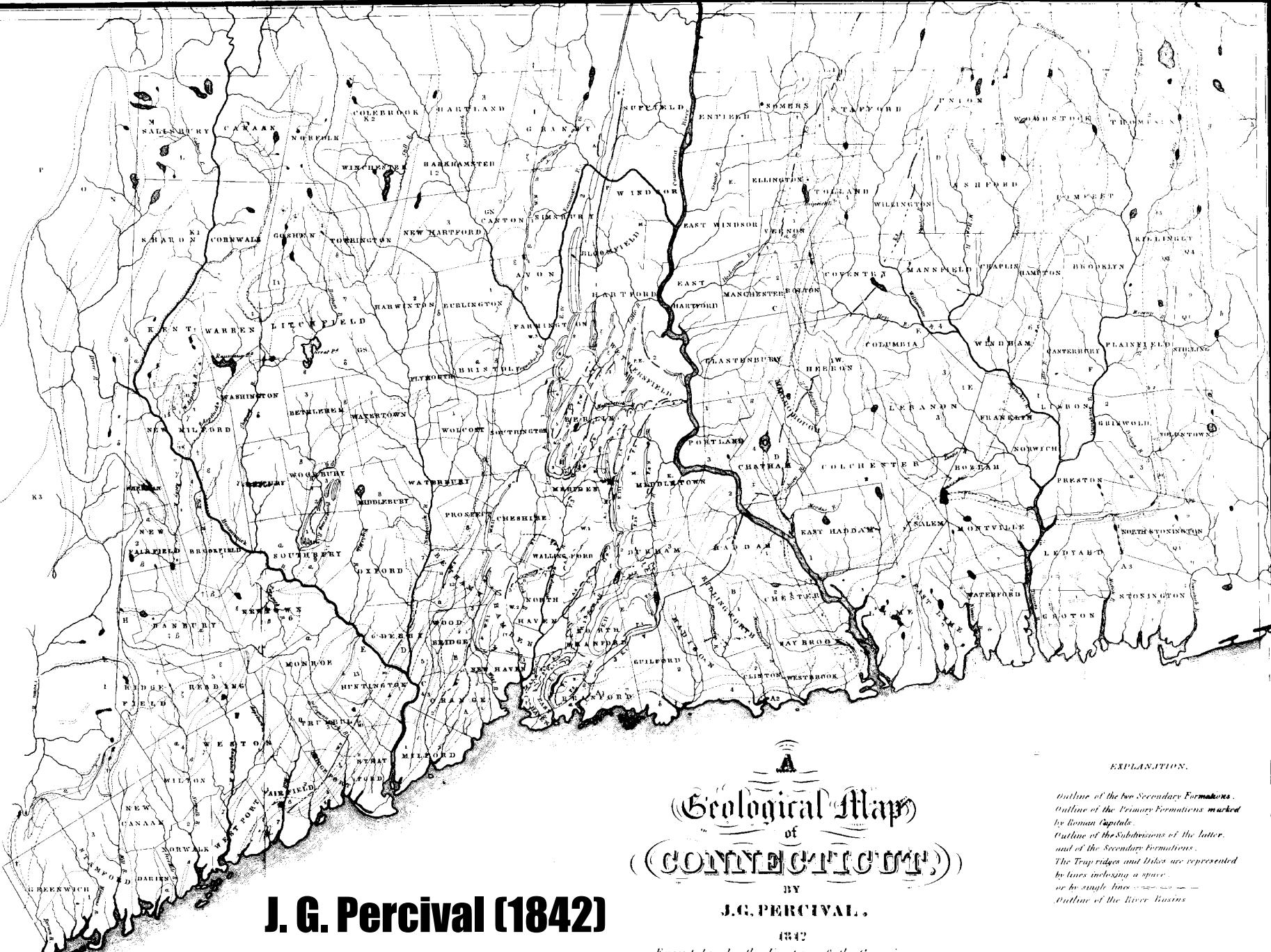
6

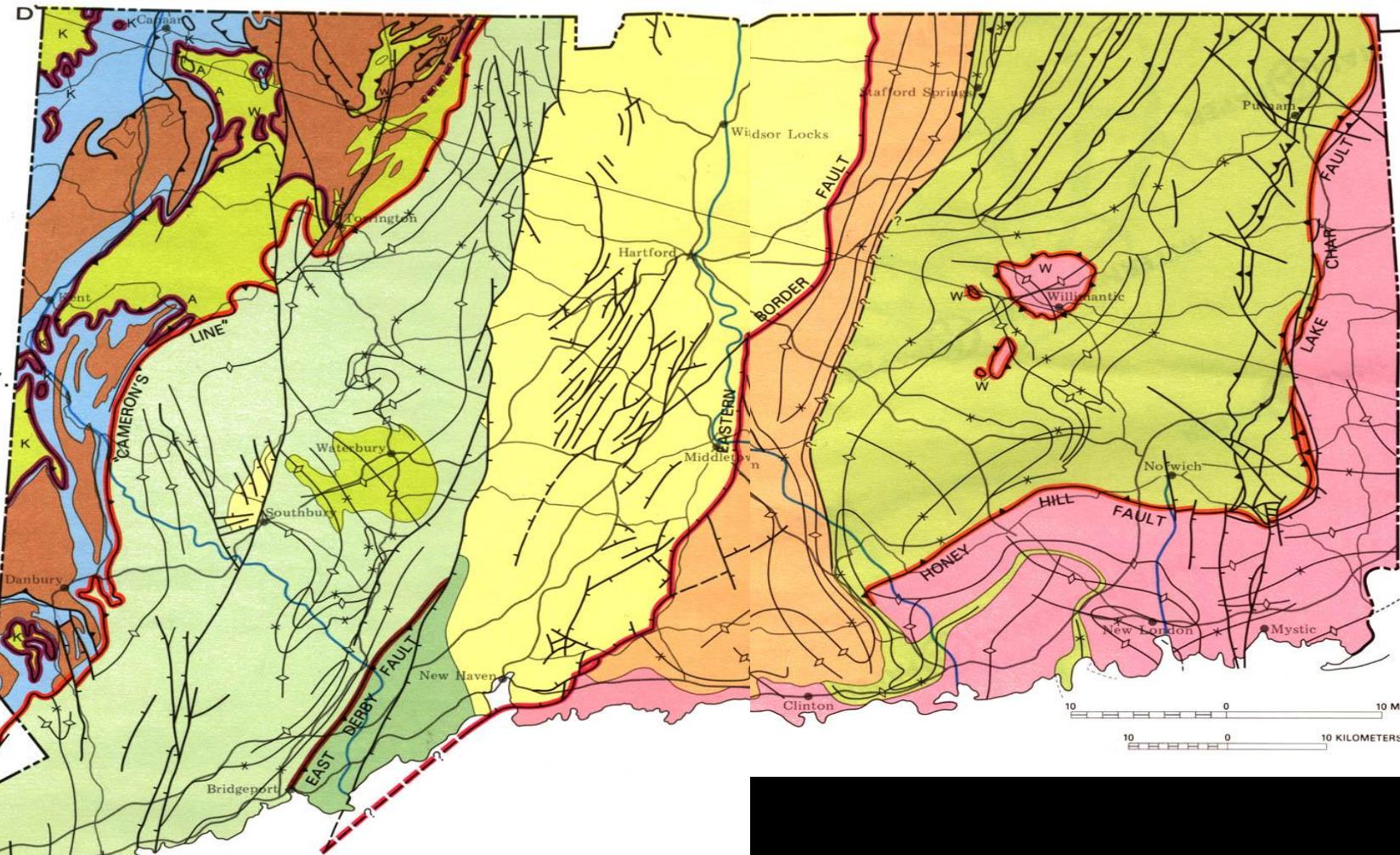
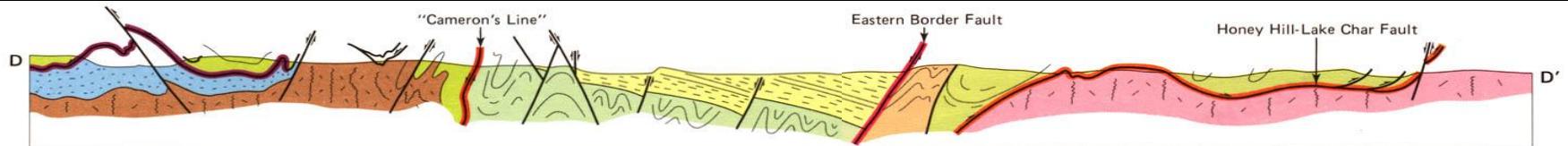
Permian	Late
	Early
Pennsylvanian	Late
	Middle
	Early
Mississippian	Late
	Early
Devonian	Late
	Middle
	Early
Silurian	Late
	Early
Ordovician	Late
	Middle
	Early
Cambrian	Late
	Middle
	Early



James Gates Percival
[1795-1856]

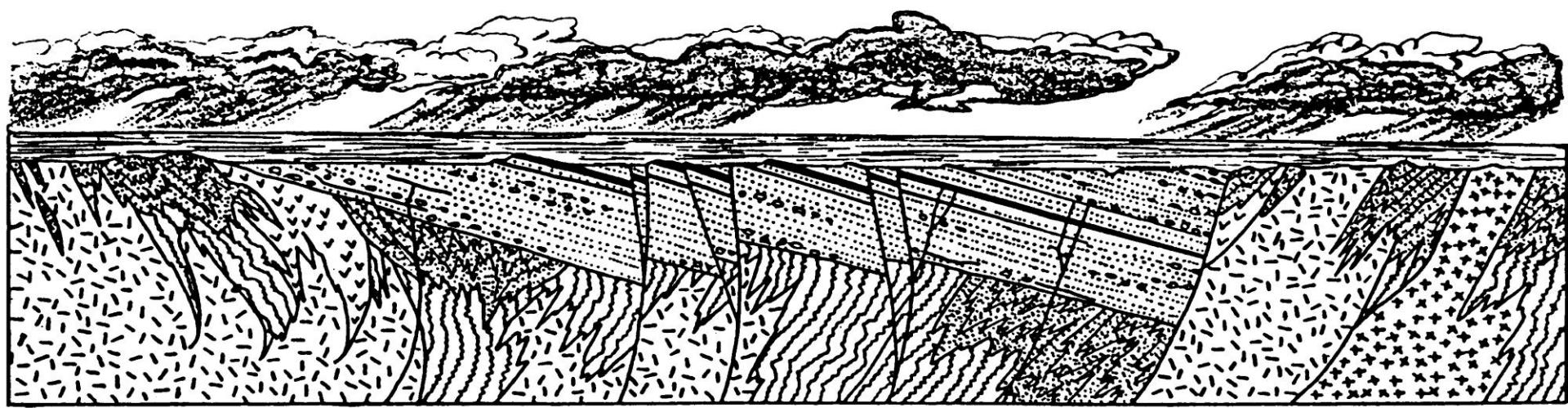
**Accomplished
Smart Guy
Geologist
Naturalist
Linguist**





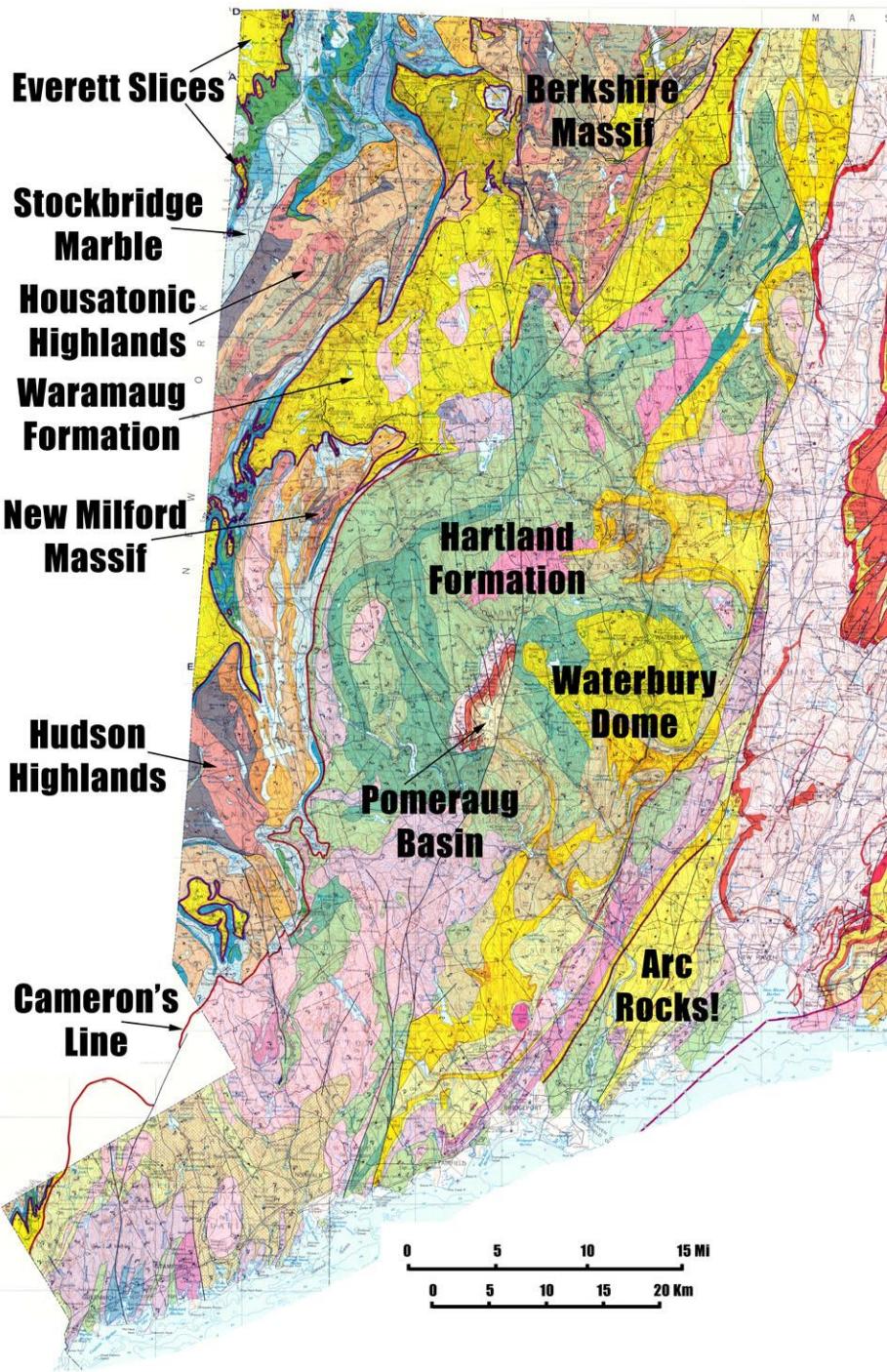
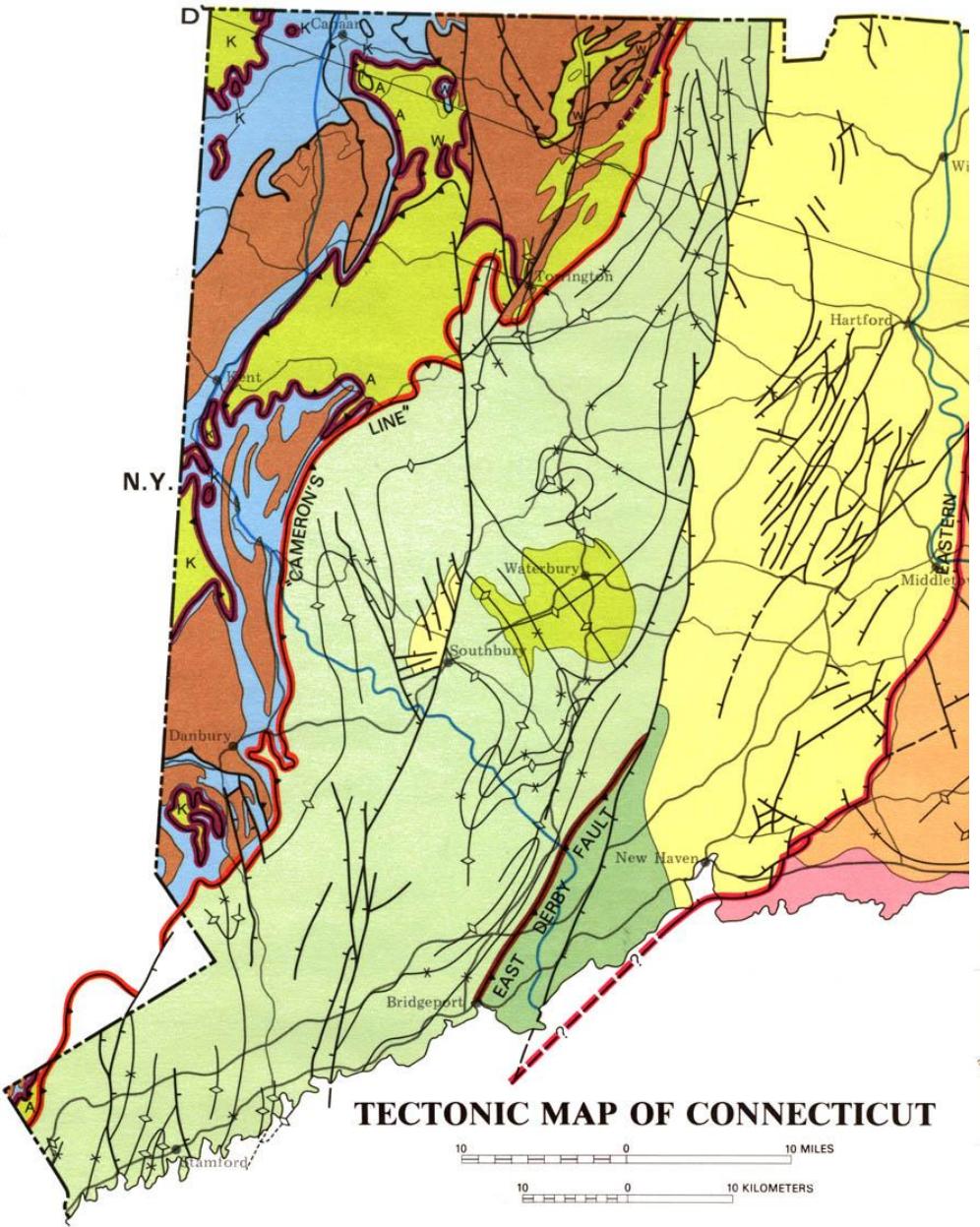
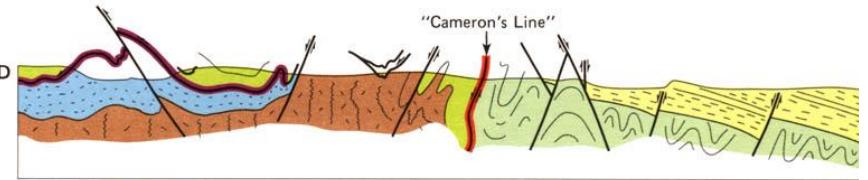
TECTONIC MAP OF CONNECTICUT

10 0 10 MILES
10 0 10 KILOMETERS





Newark Strata, Rte 9N, CT



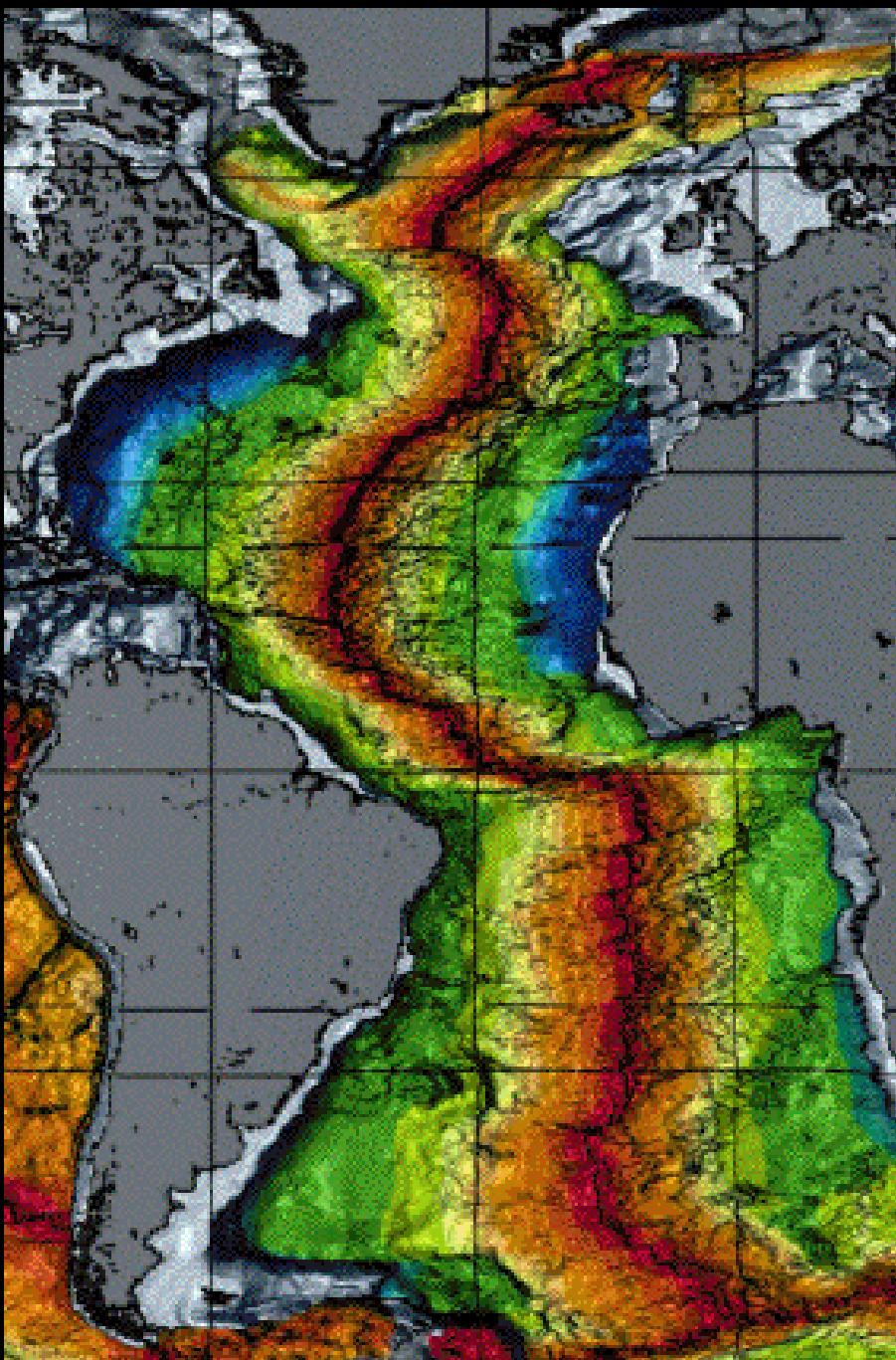


**Remember
CM, You're
Nothing
Without Me!**

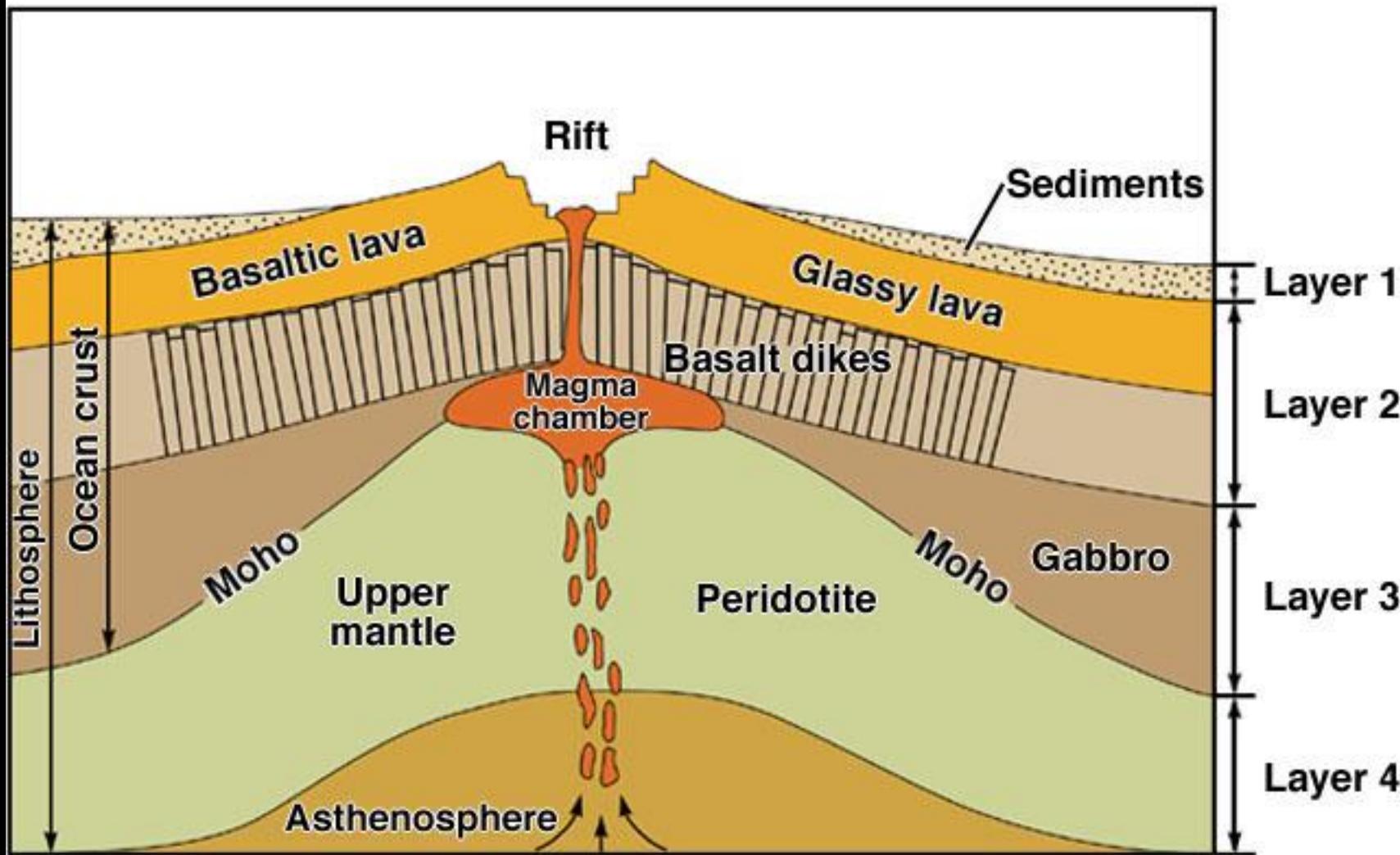
**Finally! He's
Going to Talk
About
Mineral
Environment**

s

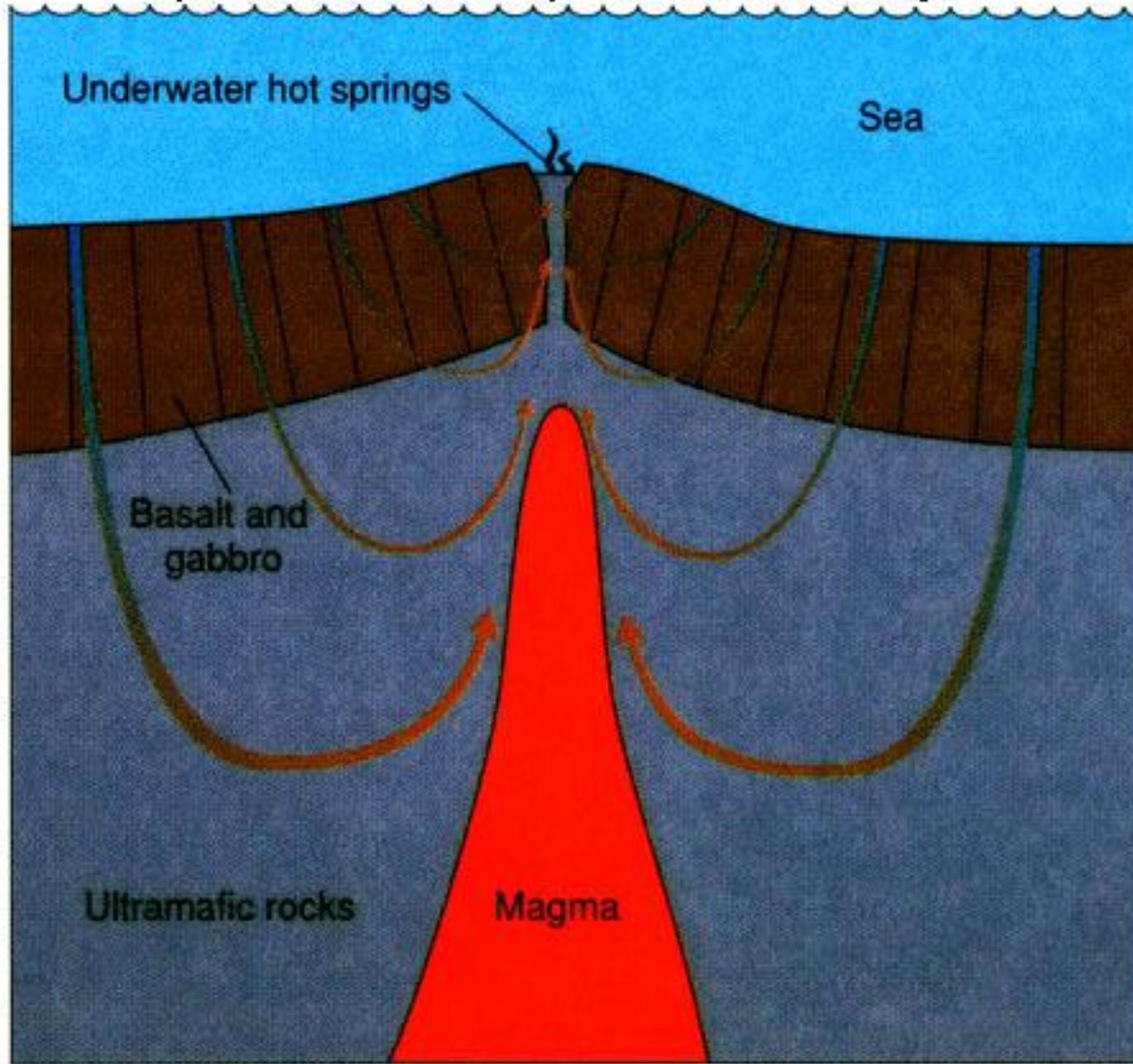
Ocean Floor Environment



Mid-Ocean Ridge Cross Section



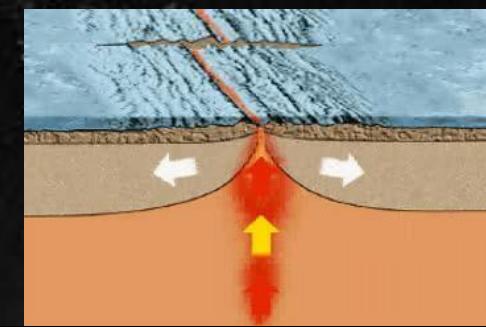
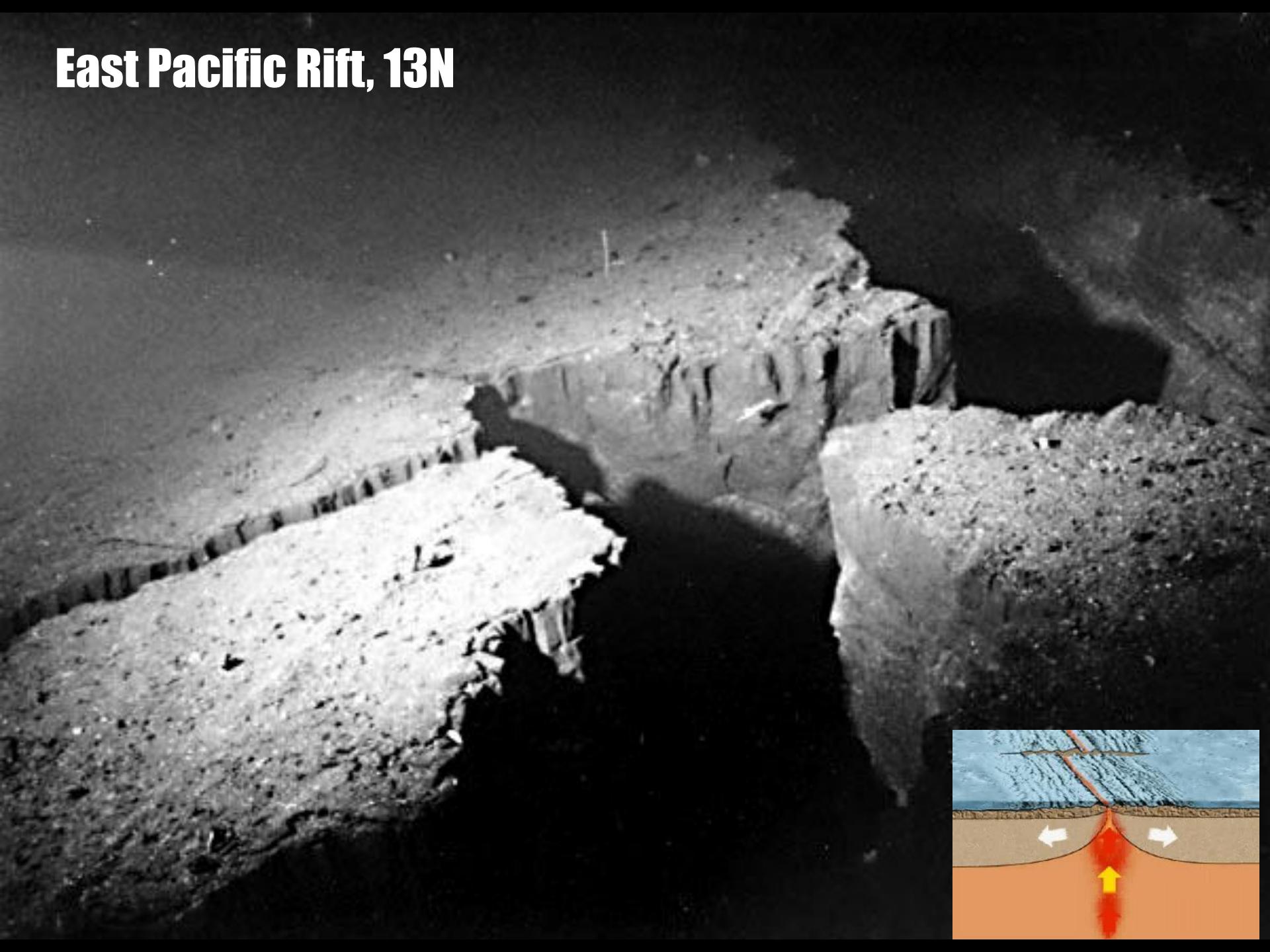
Hydrothermal activity at mid-ocean ridge



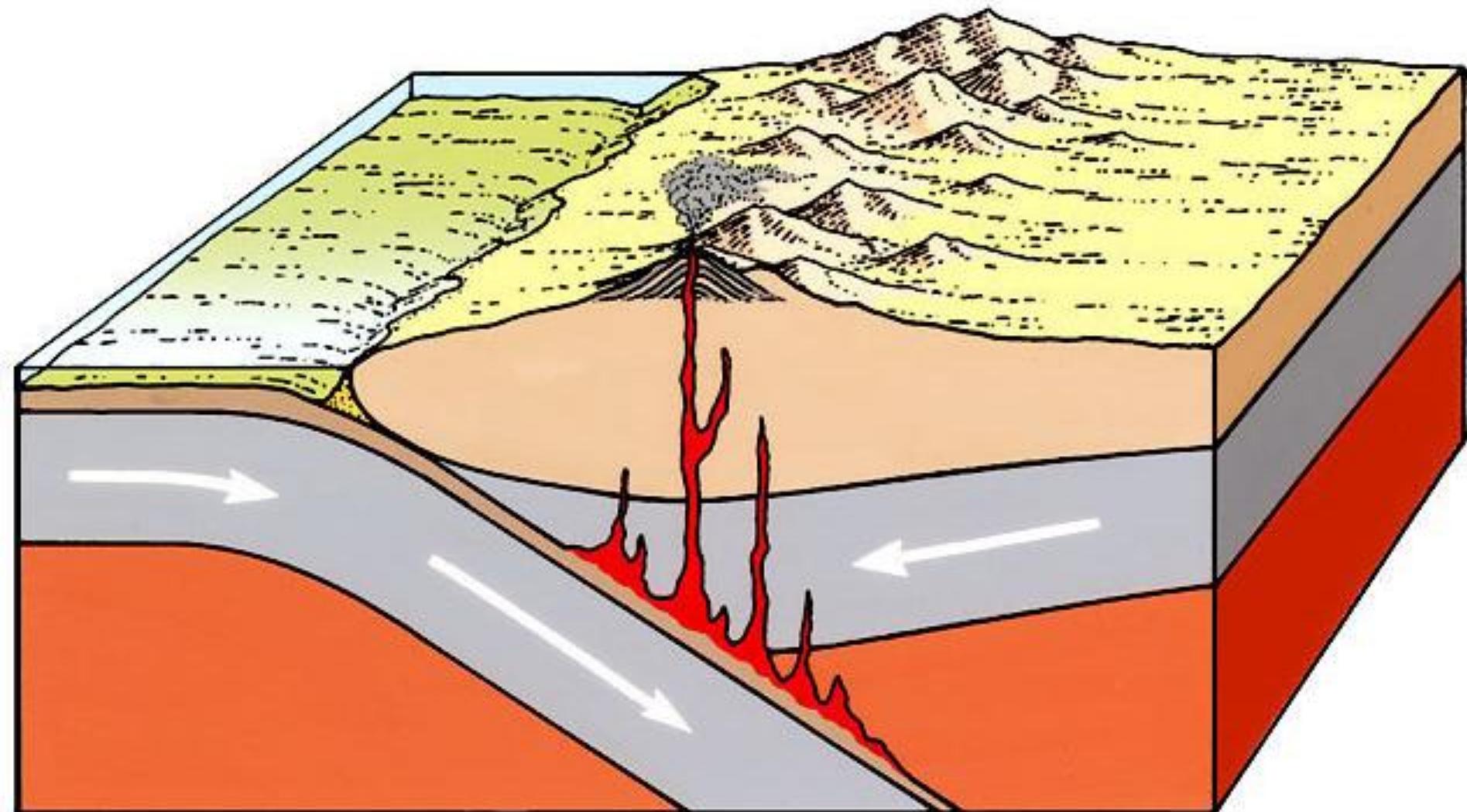
Pillow Talk



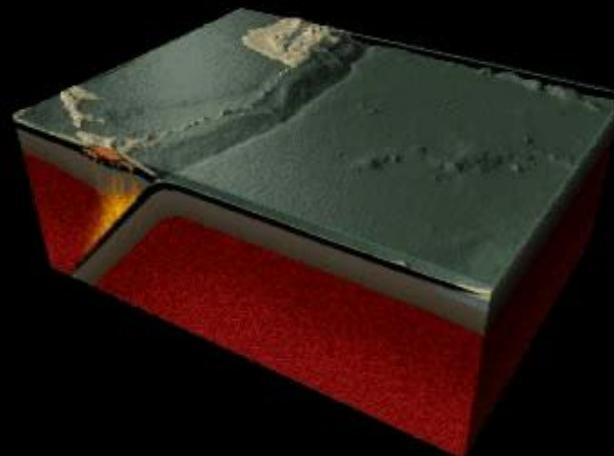
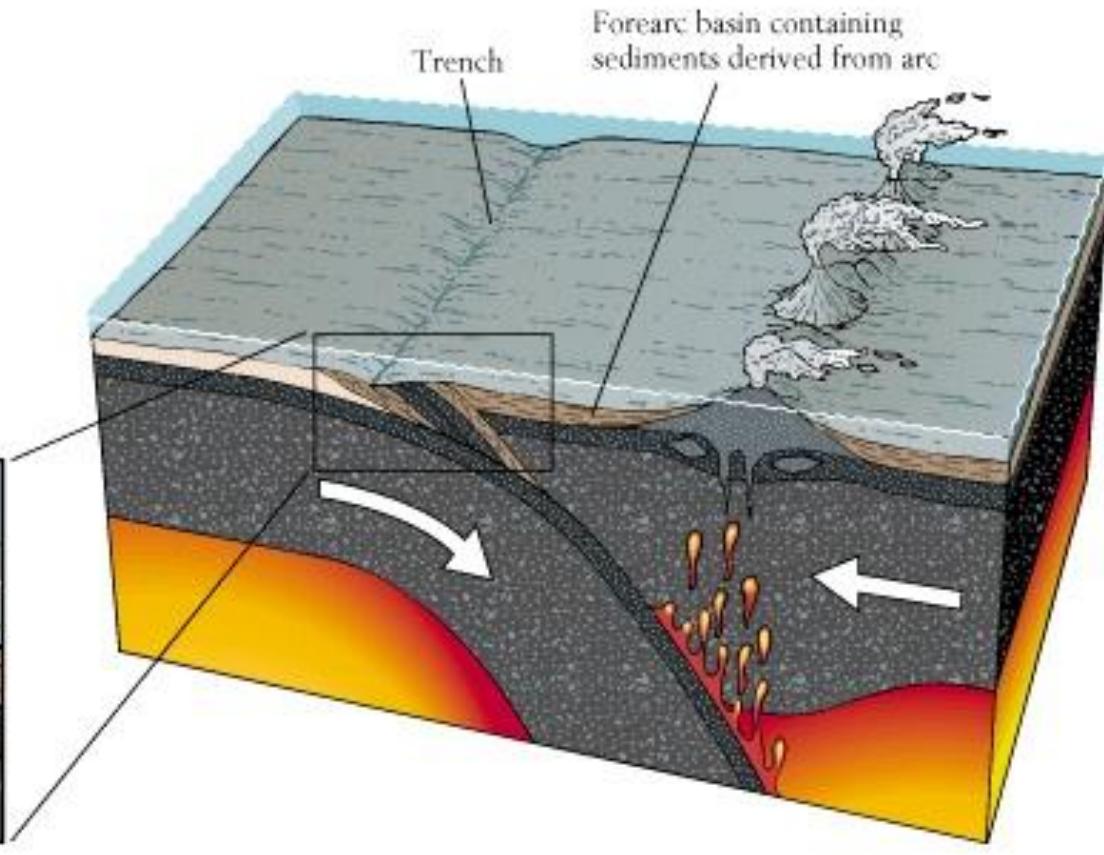
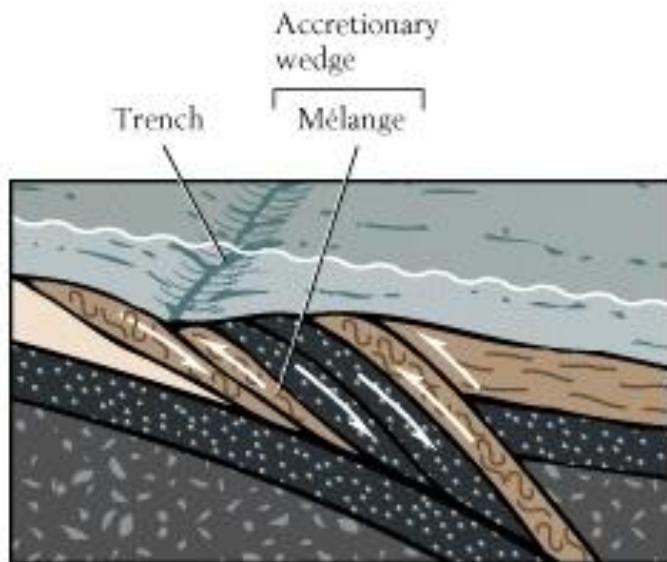
East Pacific Rift, 13N



Subduction Zone Environment

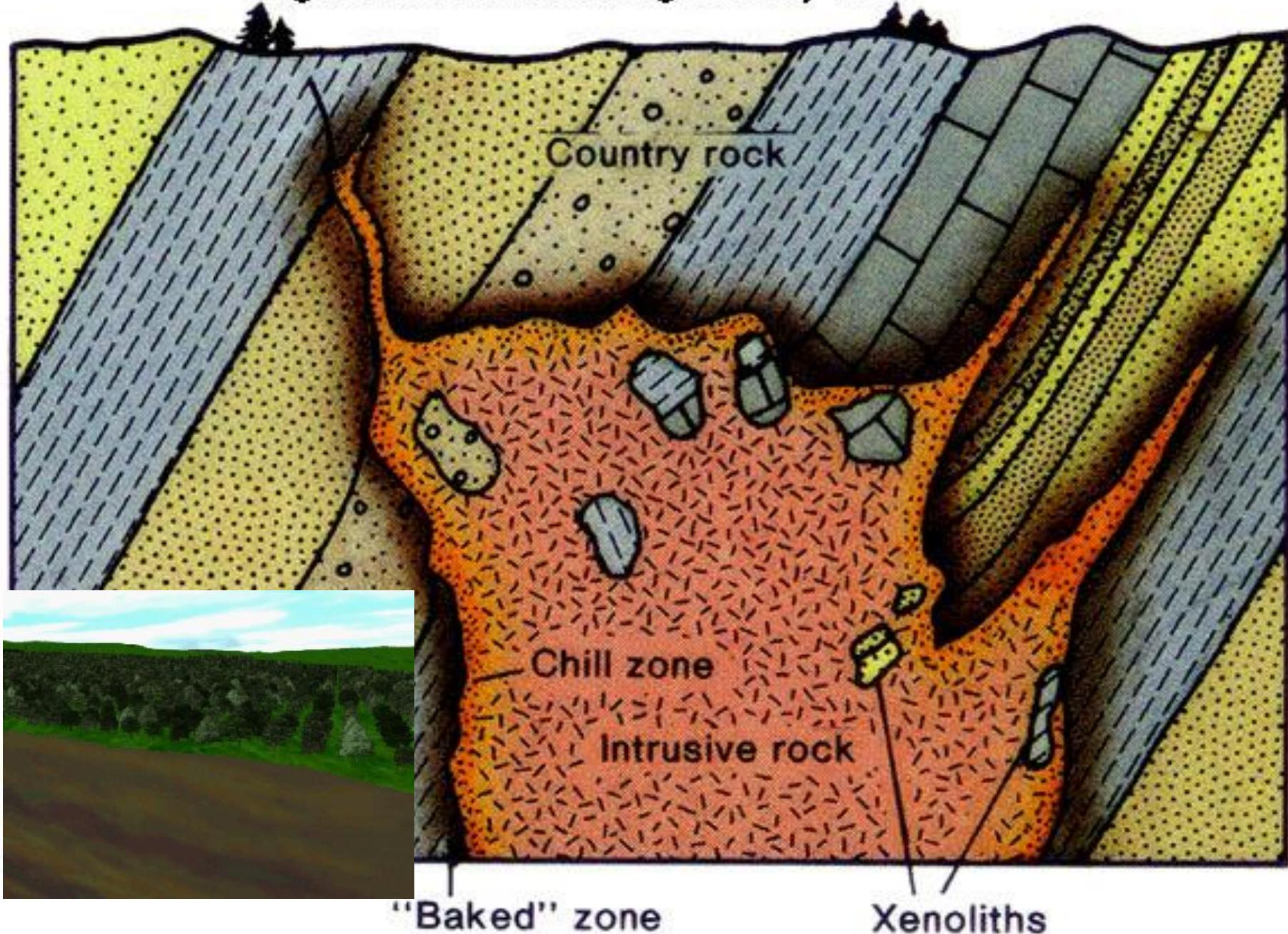


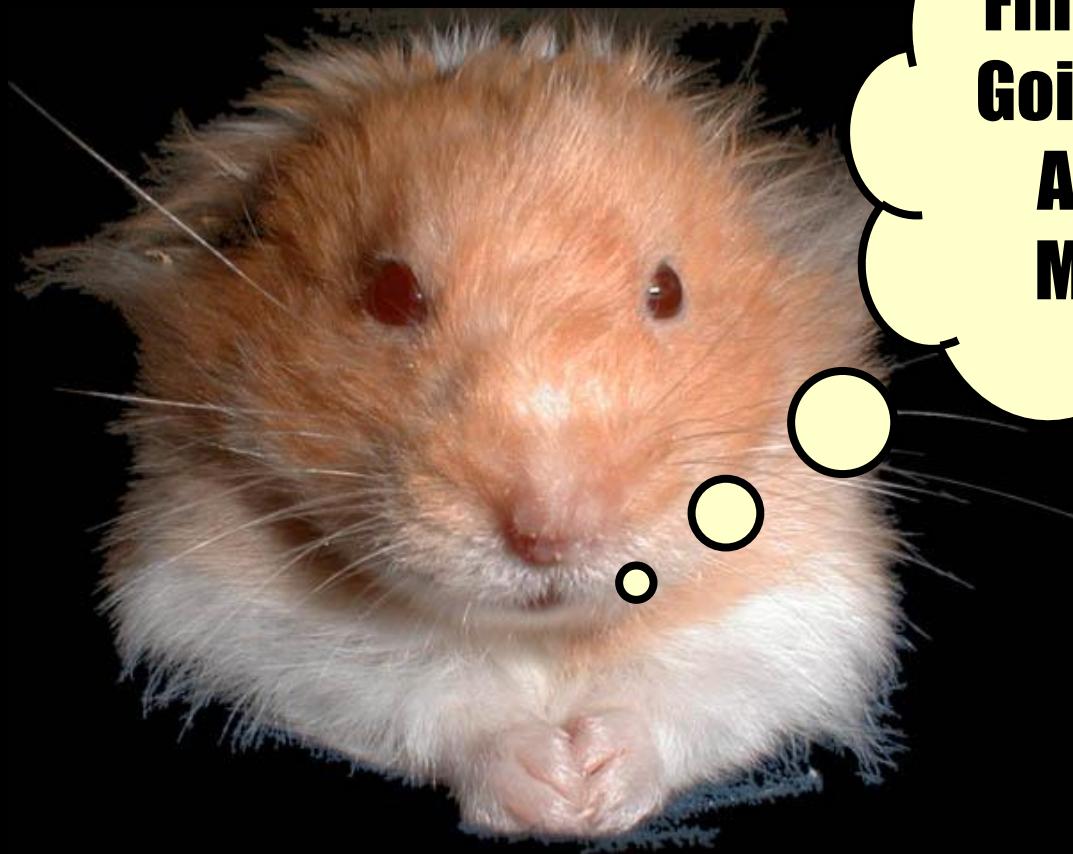
Accretionary Wedge



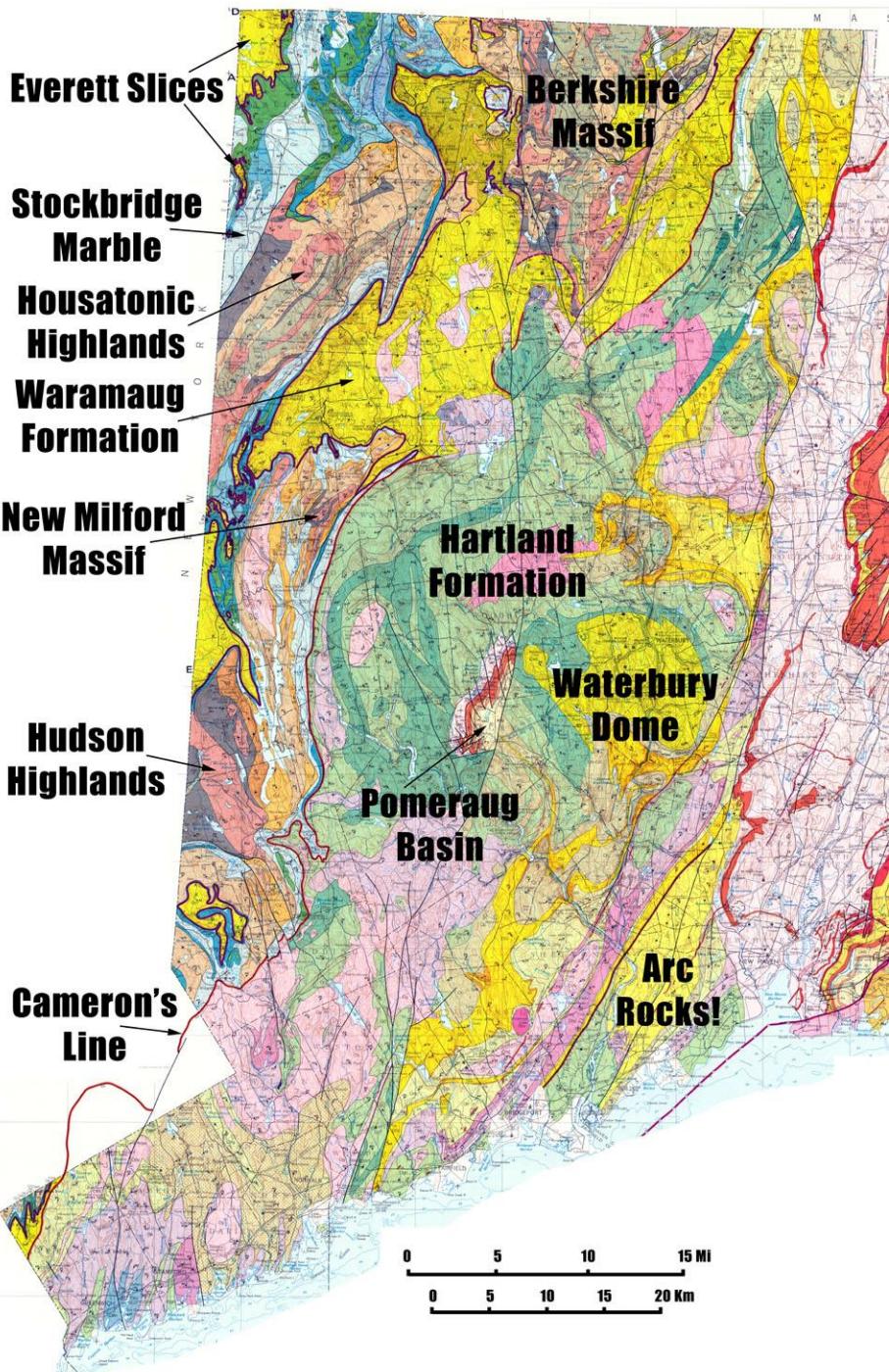
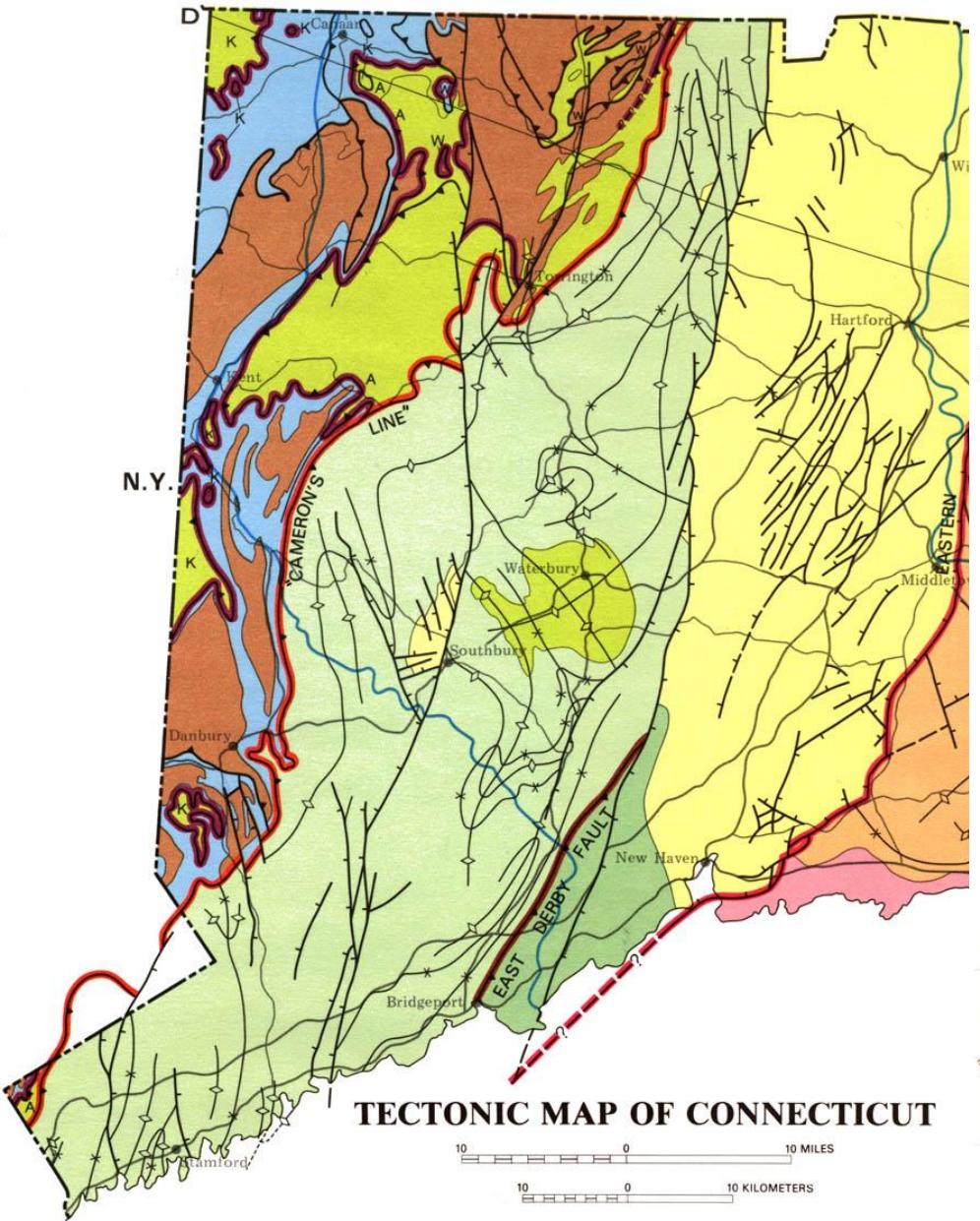
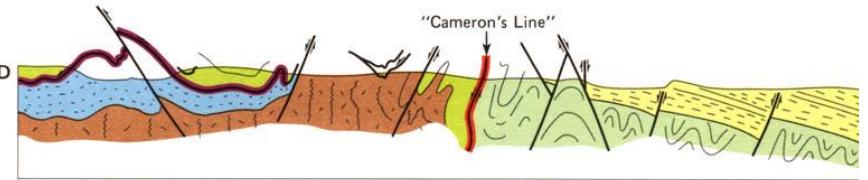


Igneous rock intruding country rock

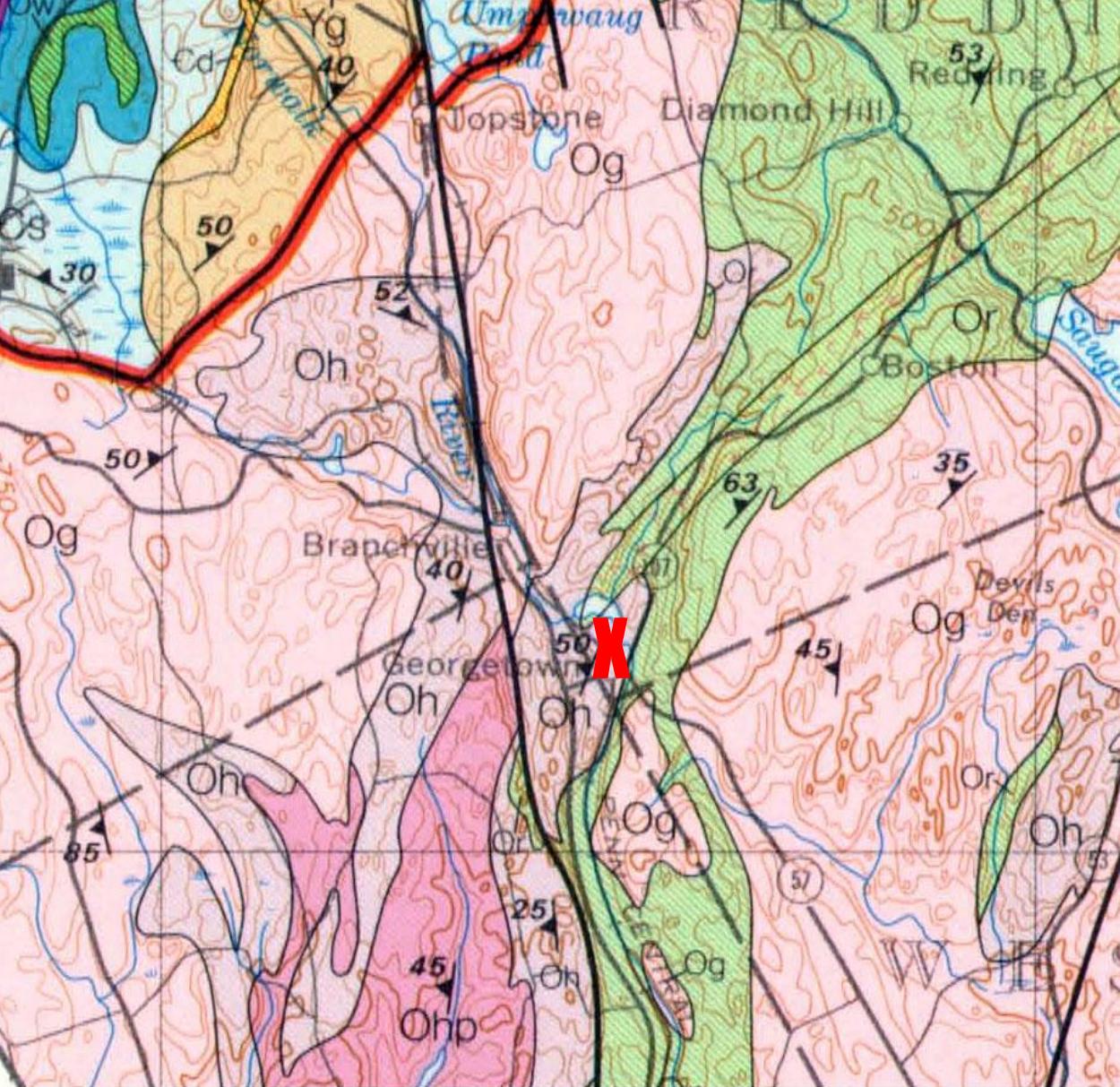




**Finally! He's
Going to Talk
About CT
Minerals**



Branchville Pegmatite Branchville, CT



34

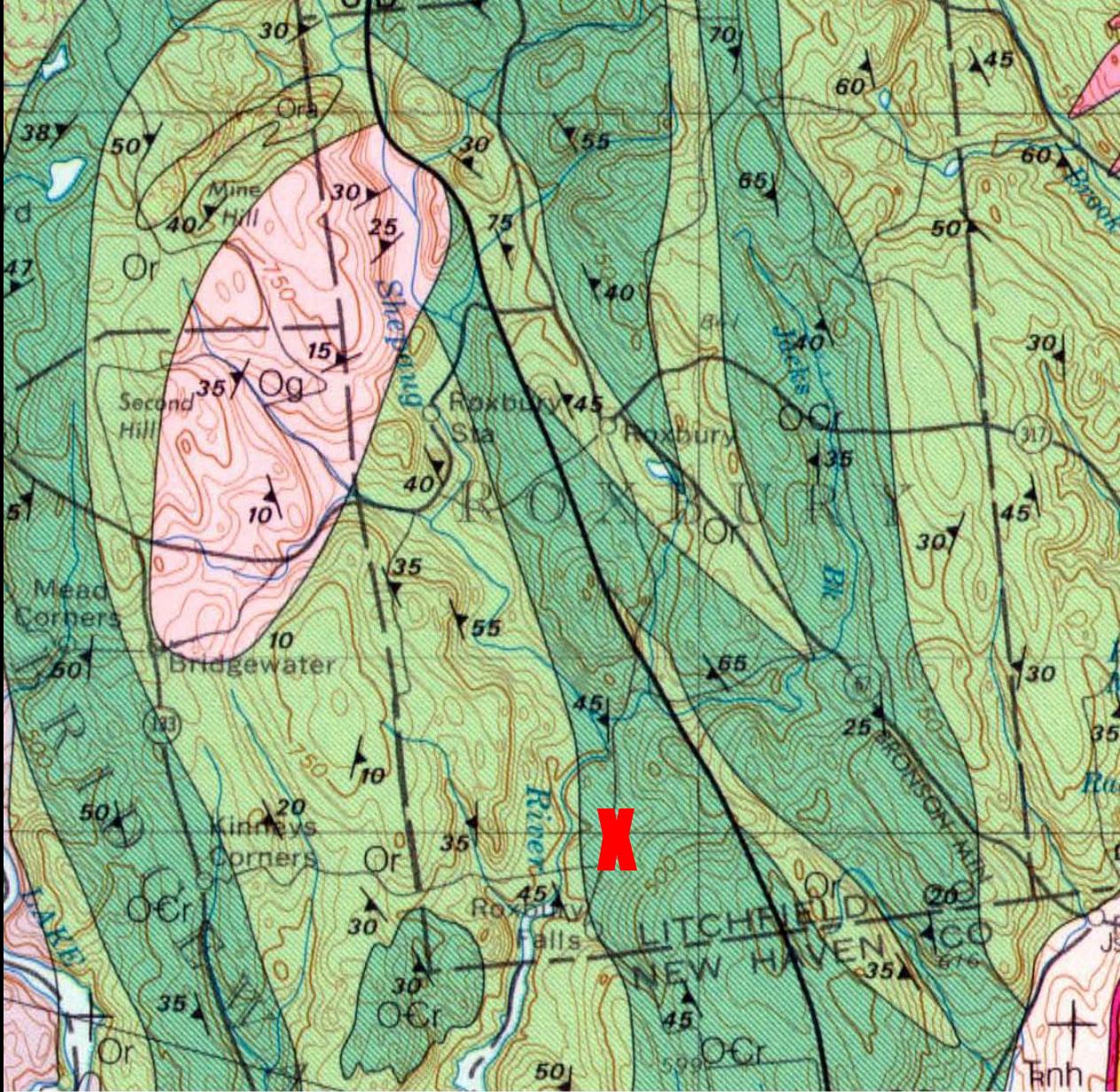
Meta-Autunite, Branchville

34



Meta-Autunite, Branchville

Roxbury Garnet Mine Roxbury Falls, CT



Roxbury Garnet Mine



32

Roxbury Falls, CT



32

Roxbury Falls, CT

32

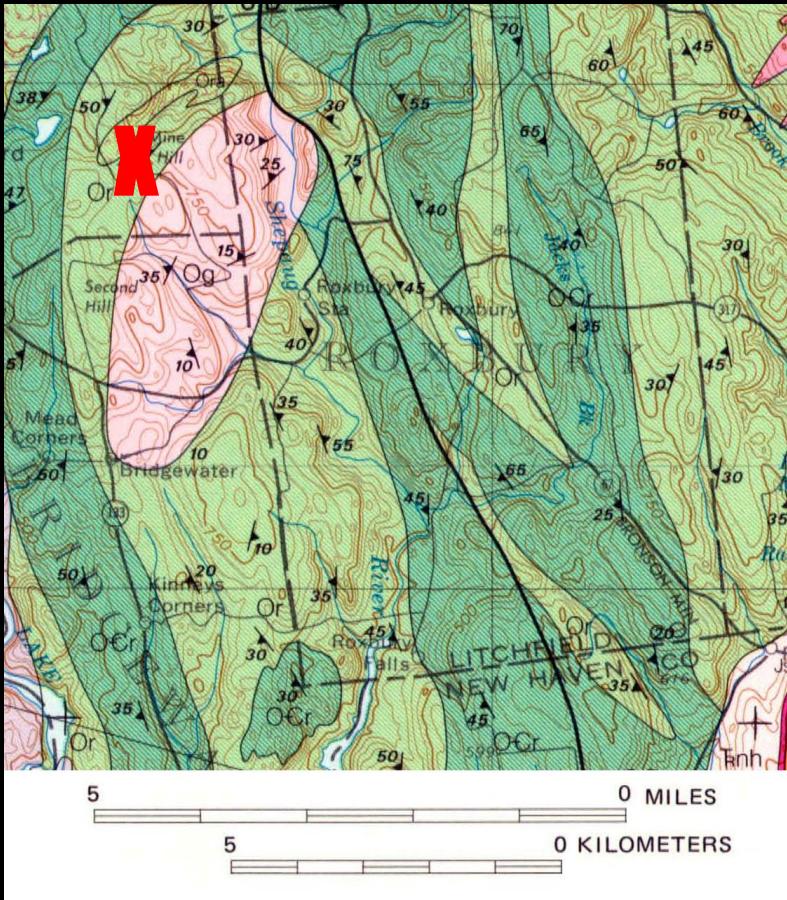
Roxbury Falls, CT



32

Roxbury Falls, CT

Roxbury Iron Mine





30

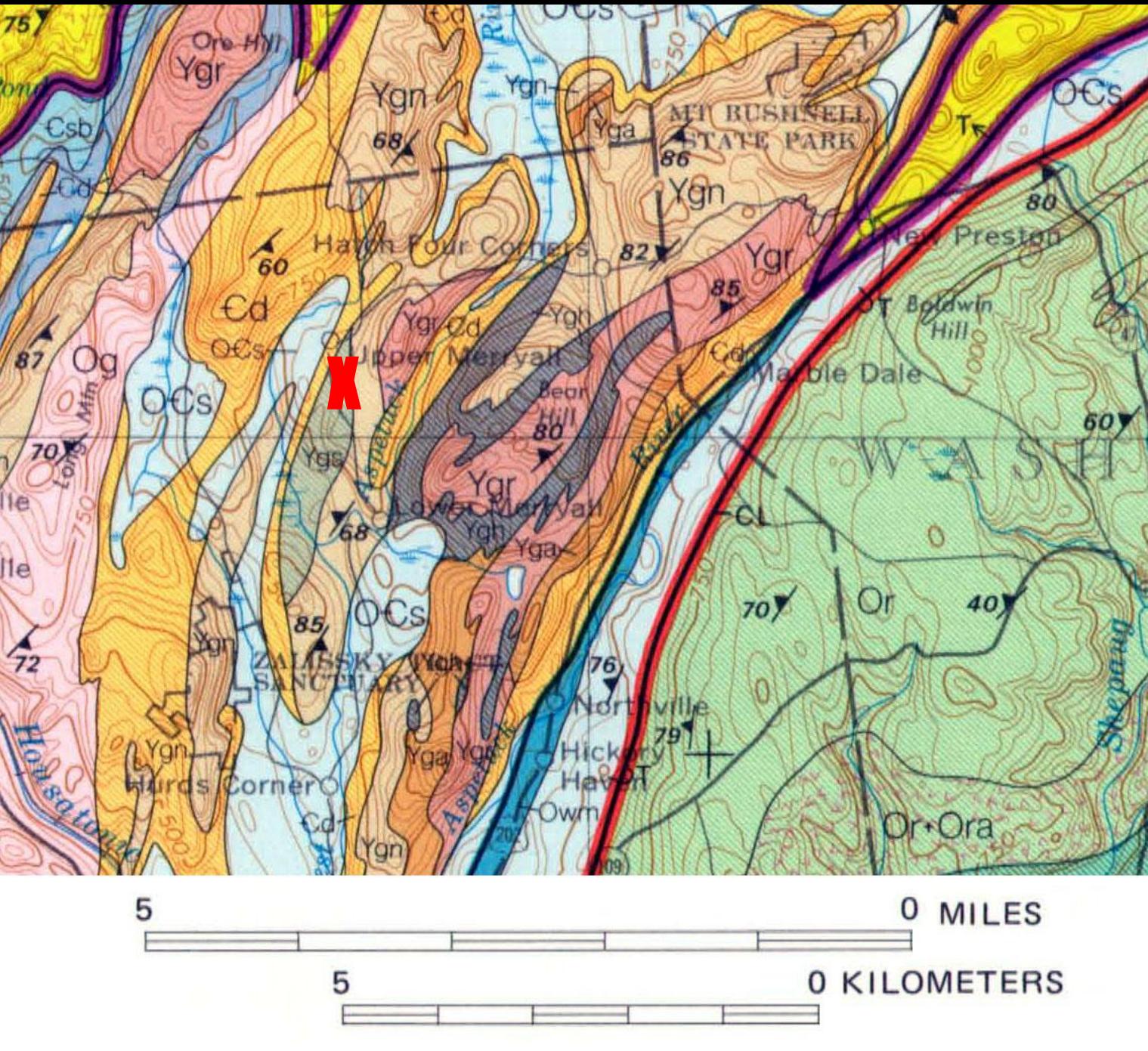
Roxbury, CT



30

Roxbury, CT

Merryall Quarry Upper Merryall CT





29

Garnet – Upper Merryall Q, CT



29

0064 – Beryl, Upper Merryall Q, CT



0064 – Beryl, Upper Merryall Q, CT



0054 – Beryl, Upper Merryall Q, CT



29

Gemmy Beryl, Merryall Quarry, CT

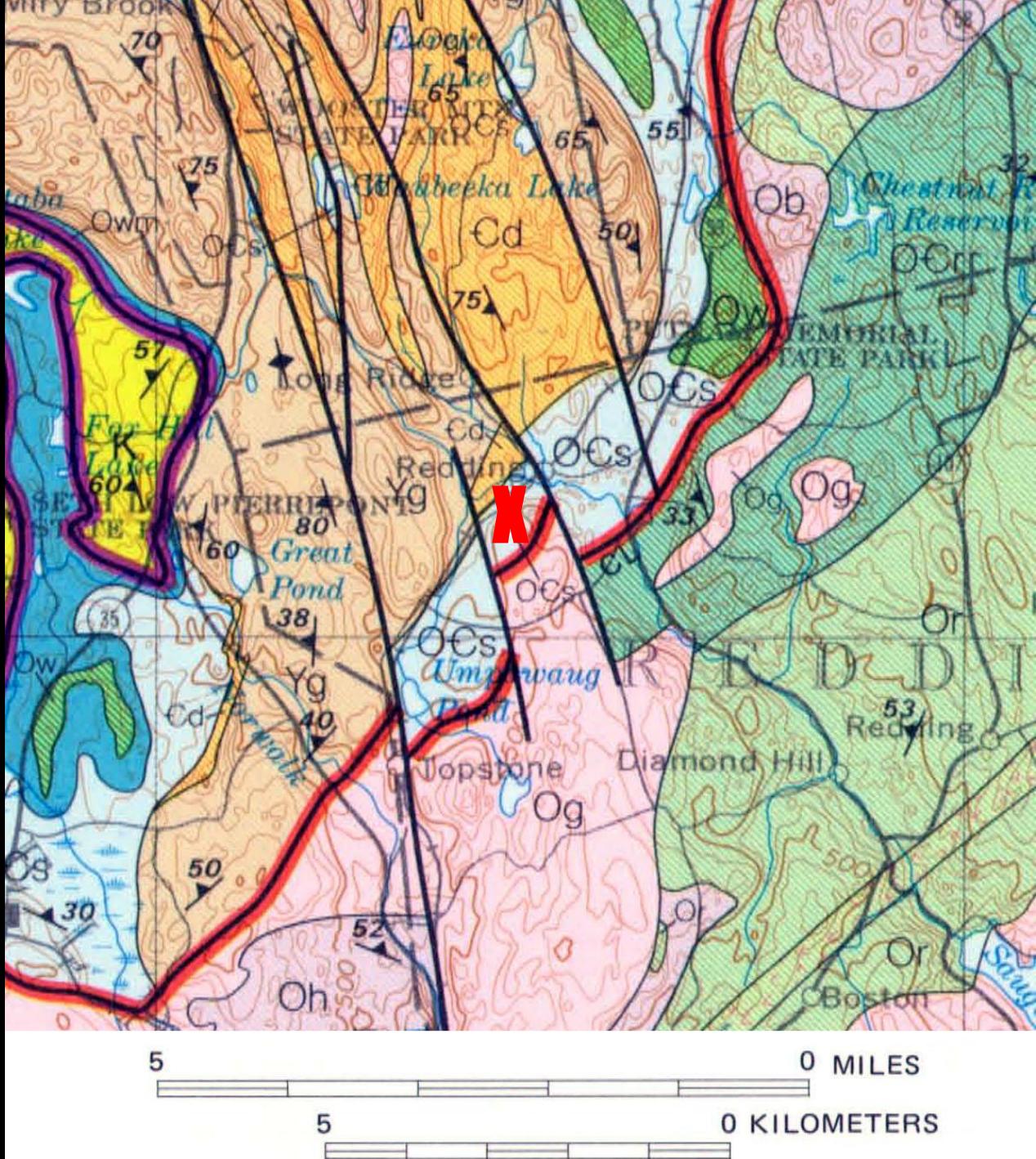


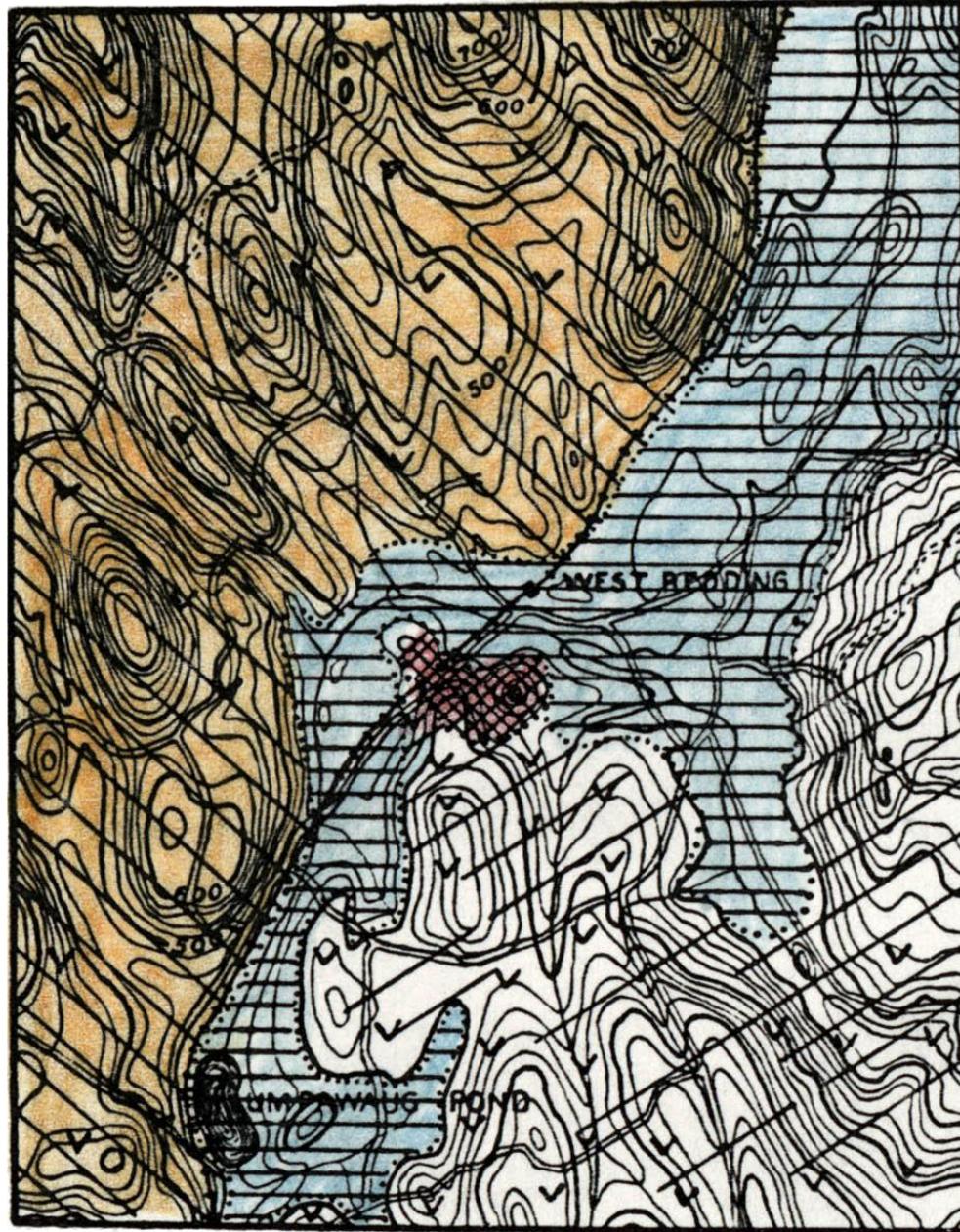
29

Gemmy Beryl, Merryall Quarry, CT

Garnet Locality

West Redding, CT





LEGEND

- [Red hatched square] GARNET-PYROXENE ROCK
- [Square with three downward-pointing chevrons] GRANITE
- [Square with diagonal hatching] SCHIST
- [Light blue horizontal stripes] MARBLE
- [Yellow-orange square with diagonal hatching] GRANITOID GNEISS AND INJECTED SCHISTS
- [Square with four dots] COVERED CONTACT

CONTOUR INTERVAL 20 FEET

0 ½ 1 MILE



74



Diopside- Garnet Outcrop



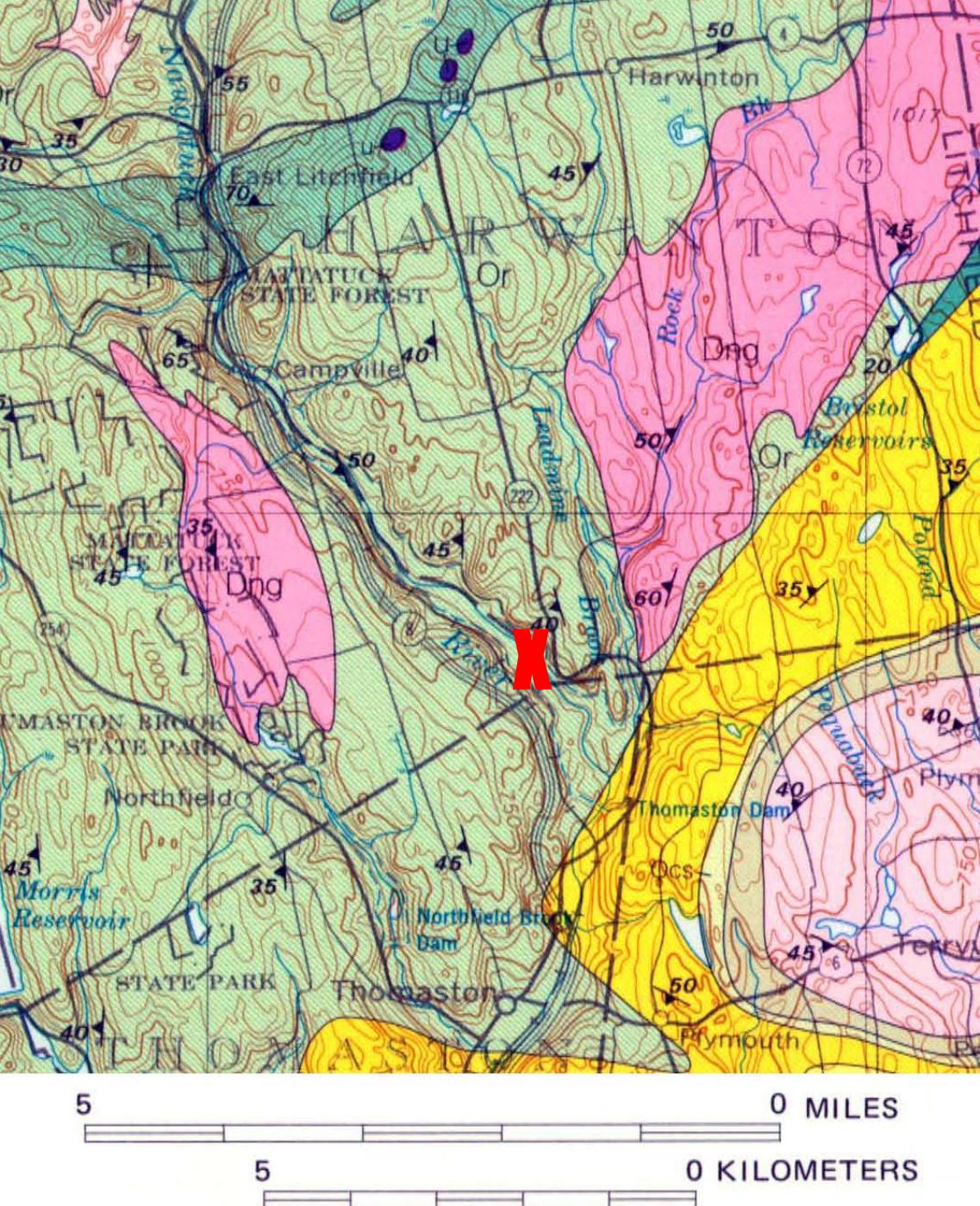
Massive Essonite Garnet Outcrop





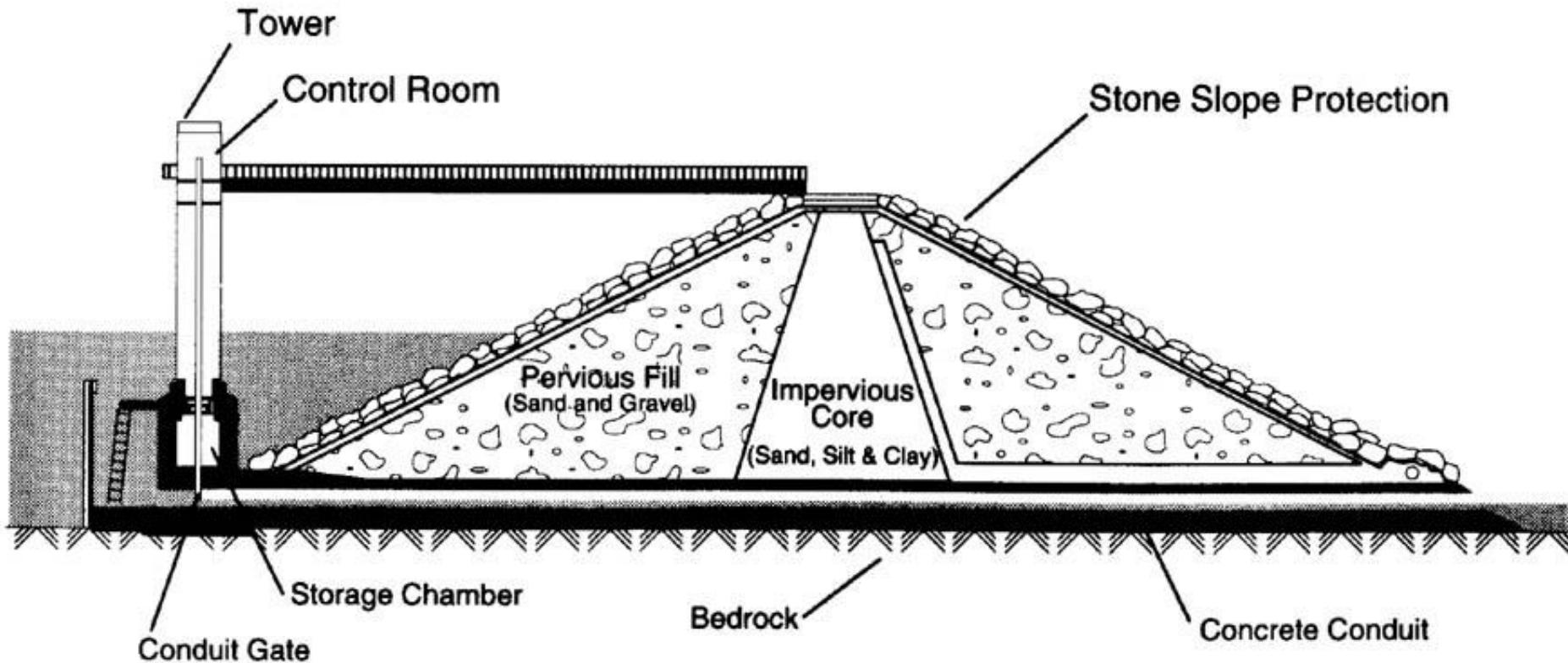


Thomaston Damsite Thomaston, CT

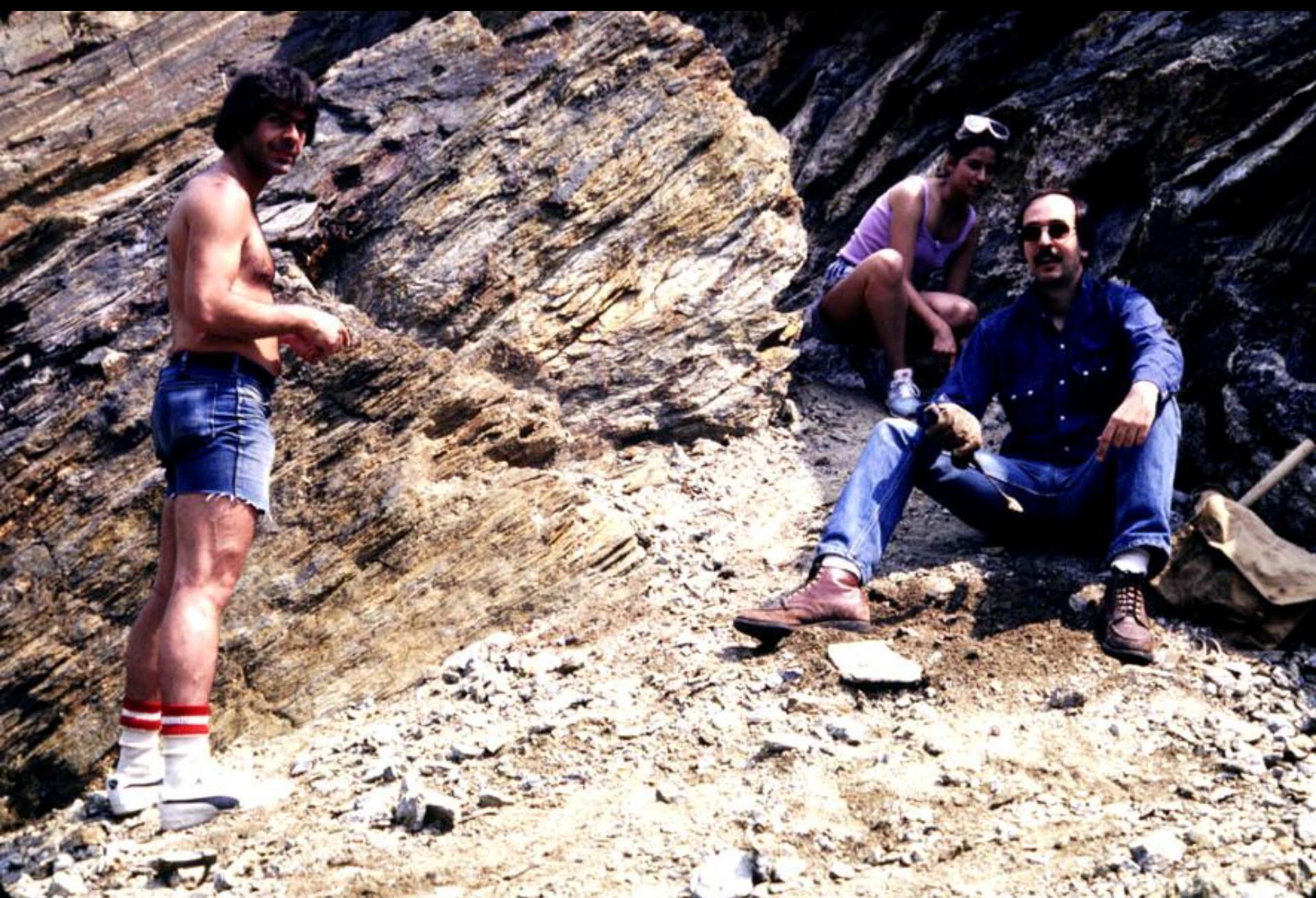




August 1955 City of Waterbury, Ct
Photo Courtesy Waterbury Republican American.



Thomaston Dry Dam



62

Thomaston Damsite Cut

62

0432 – Fluorite, Thomaston Dam, CT





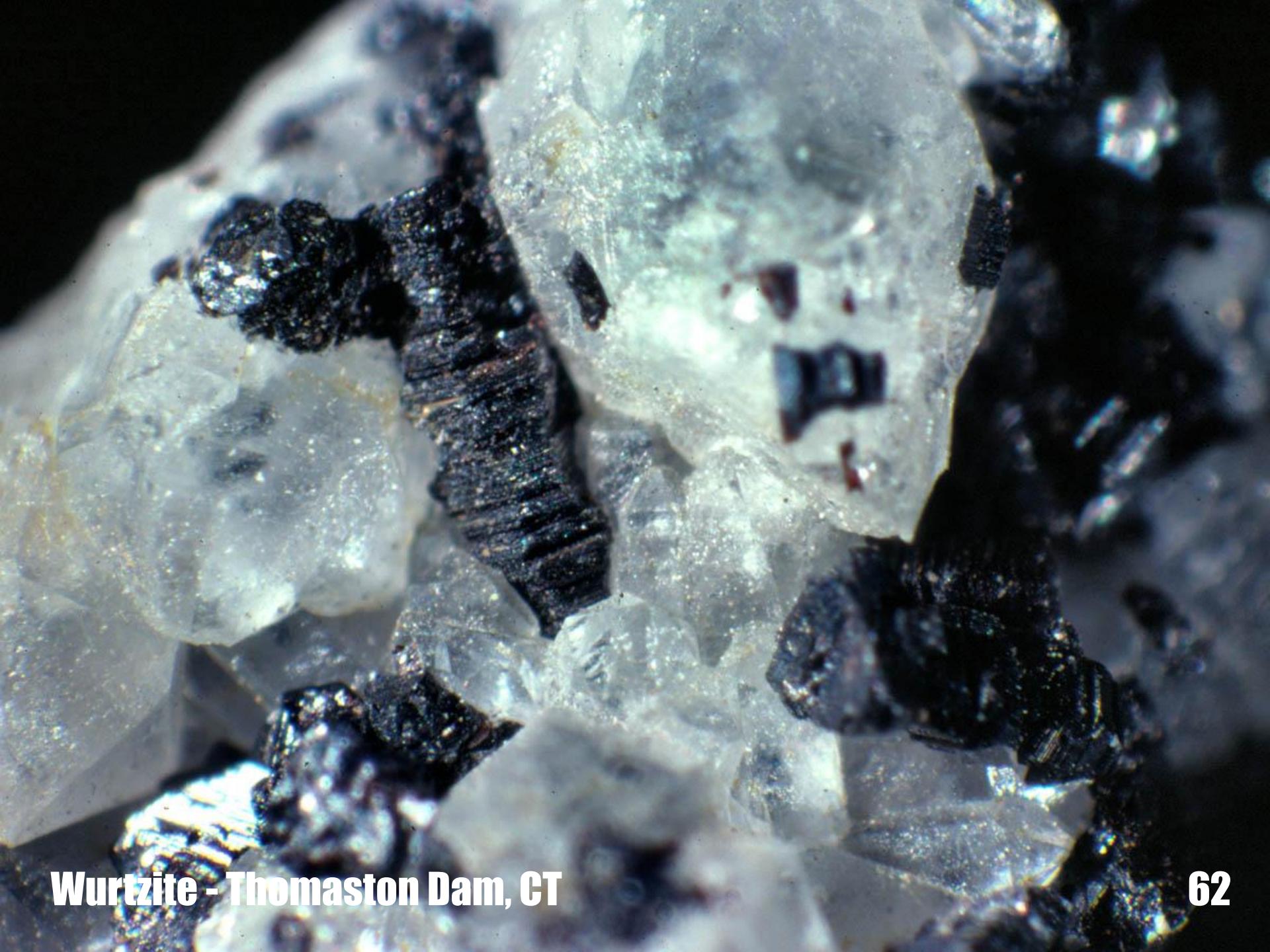
0407 – Quartz, Thomaston Dam, CT



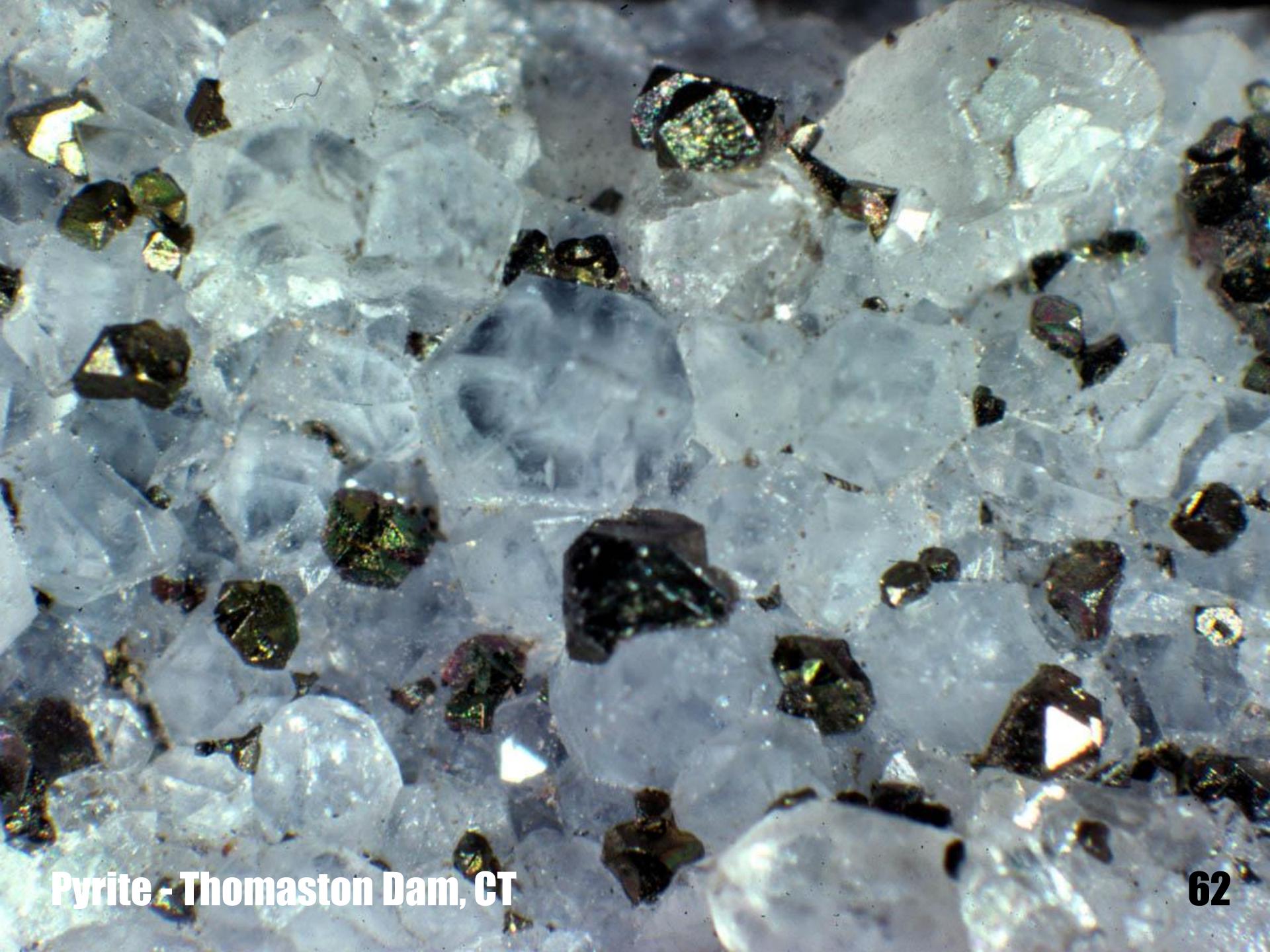
Heulandite - Thomaston Dam, CT



Stilbite - Thomaston Dam, CT



Wurtzite - Thomaston Dam, CT



Pyrite - Thomaston Dam, CT



0614 – Galena, Thomaston, CT

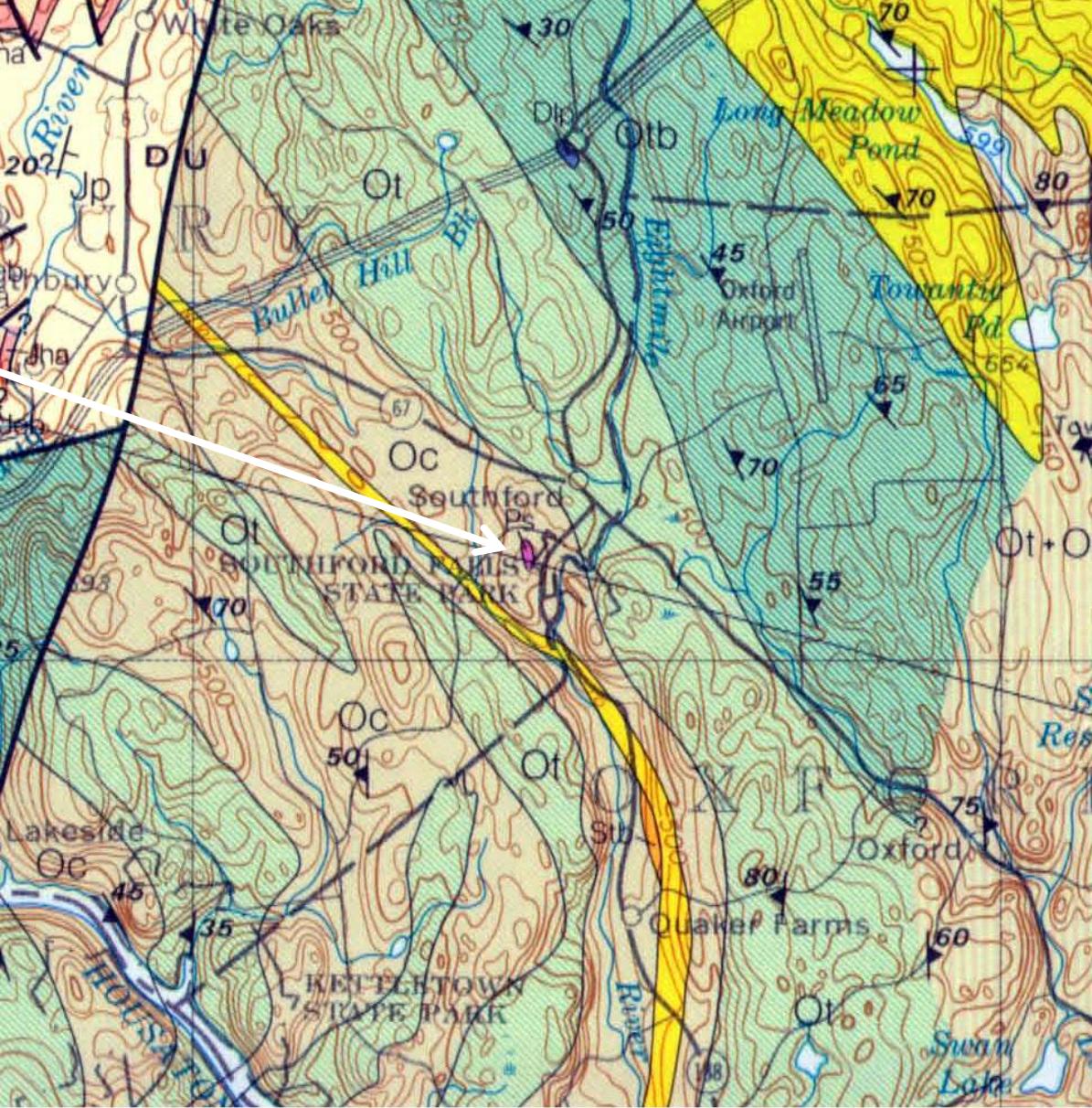
62



0286 – Galena, Thomaston, CT

62

Southbury Pegmatite Southford, CT



33



0439 – Beryl, Southford, CT



0440 – Beryl, Southford, CT

33



33

Beryl, Southford

0442 – Beryl, Southbury, CT



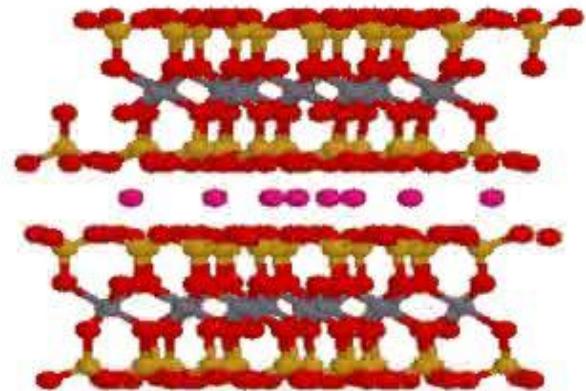
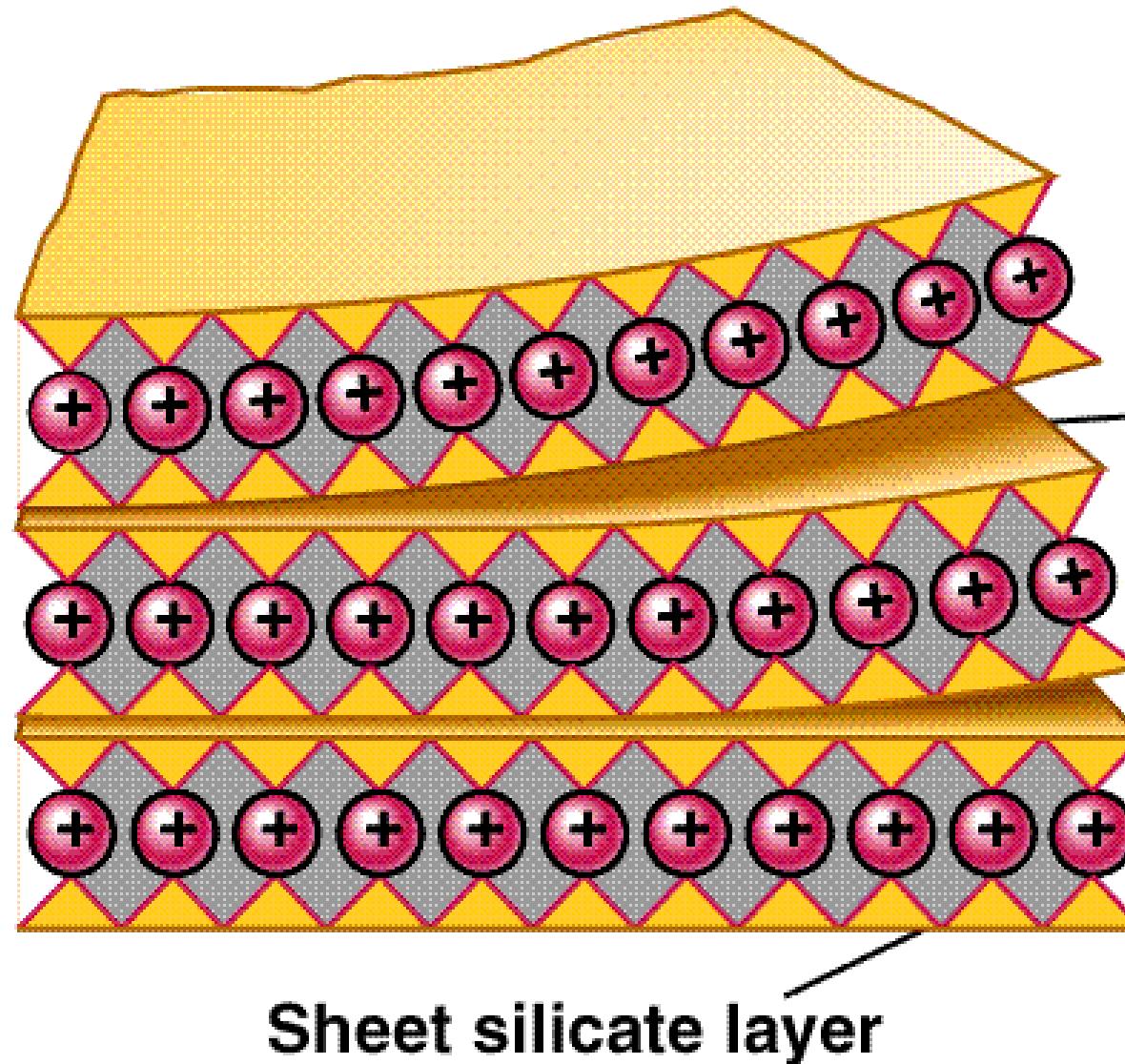
33



0443 – Beryl, Southbury, CT

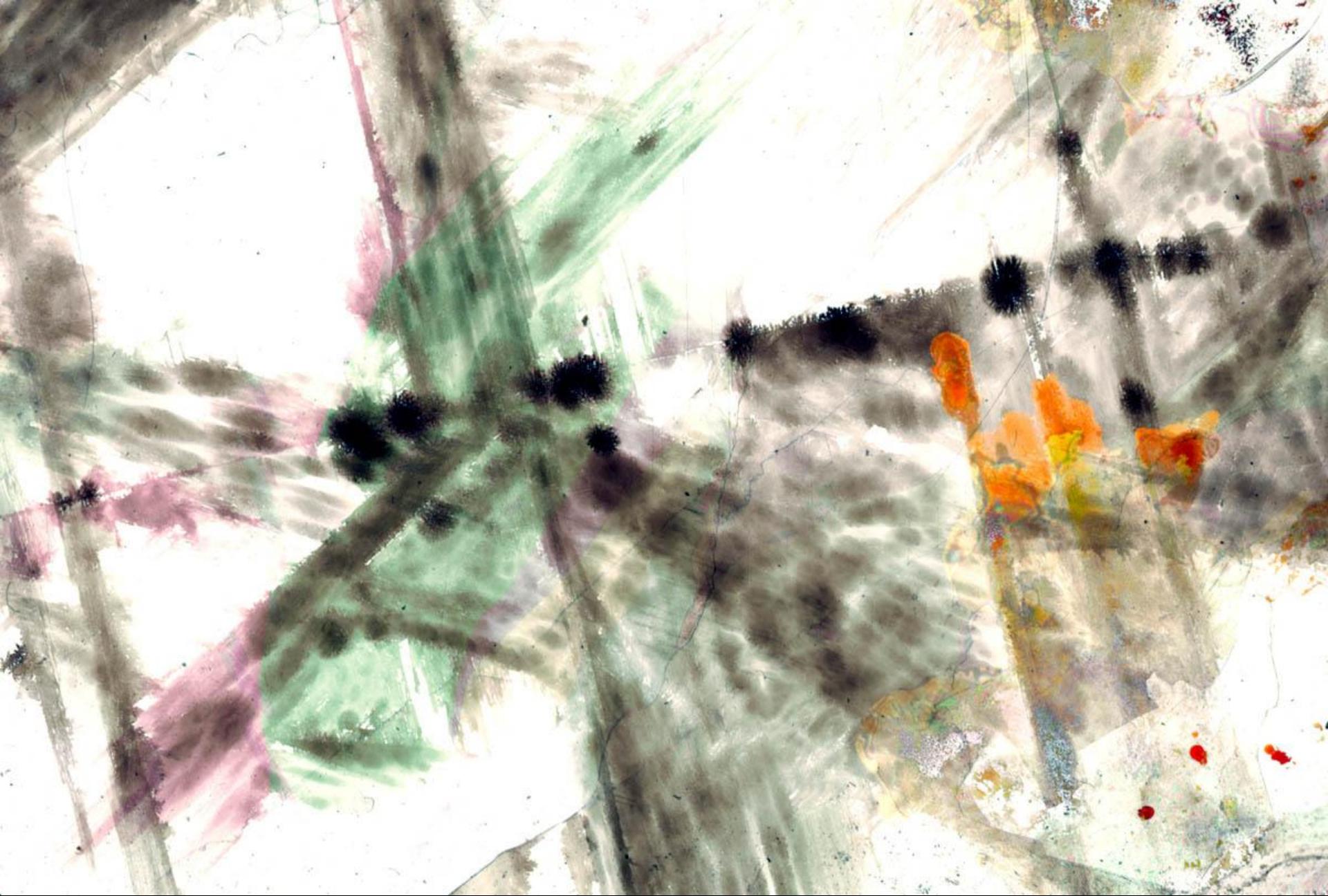
33

Mica Structure



Because of weak bonds, mica splits easily between “sandwiches”

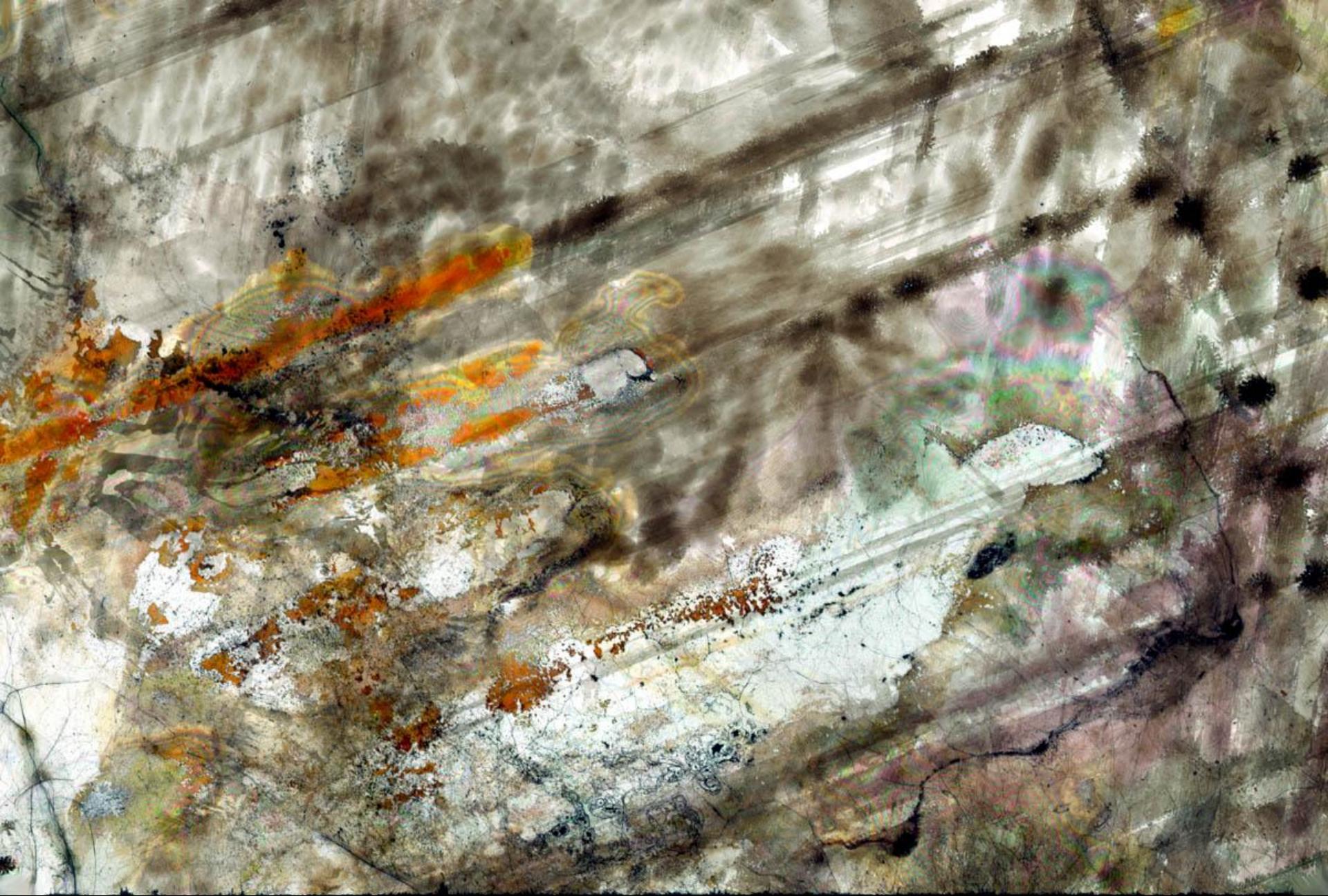
Positive ions, sandwiched between two sheet silicate layers



© 2004 Dukelabs



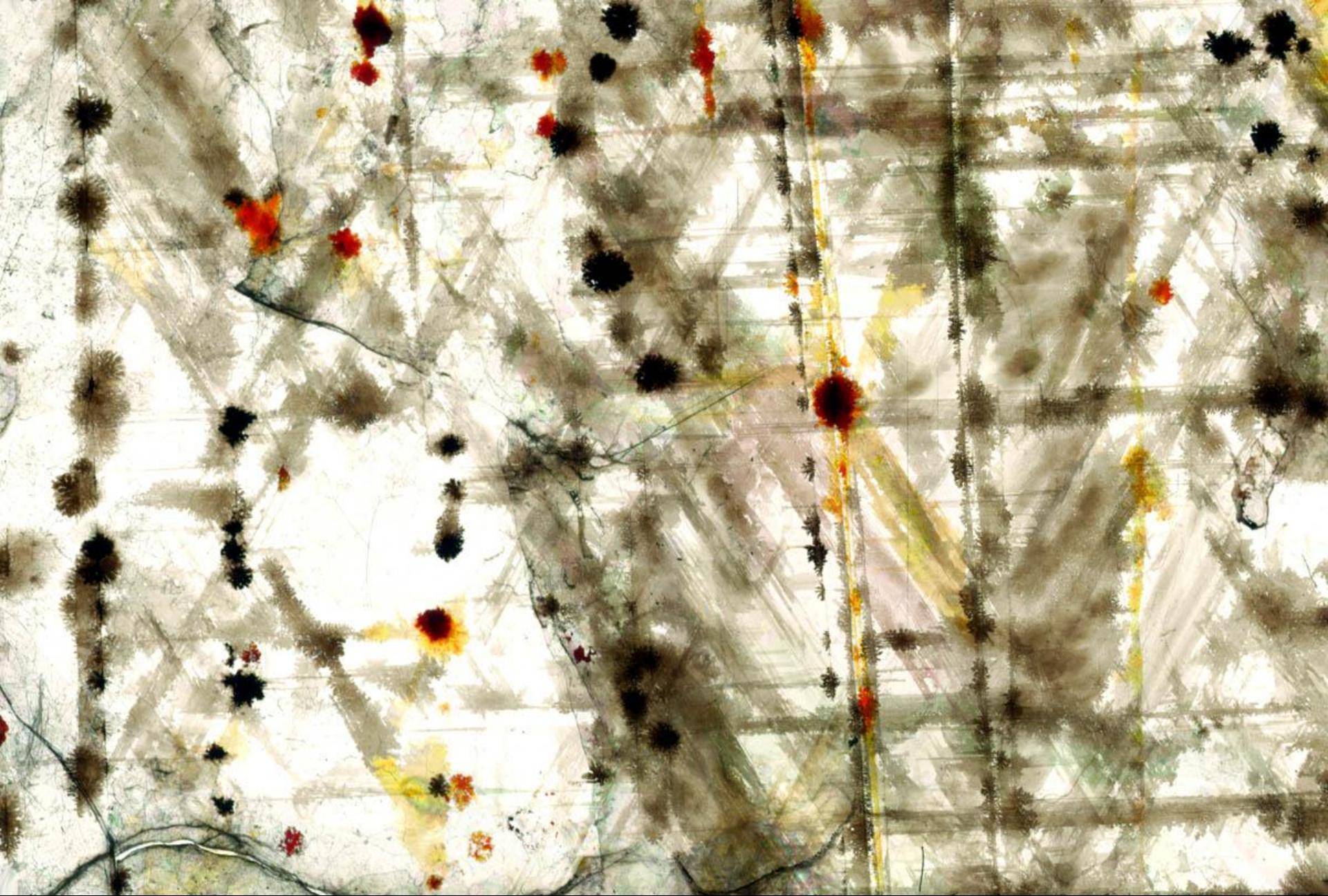
© 2004 Dukelabs



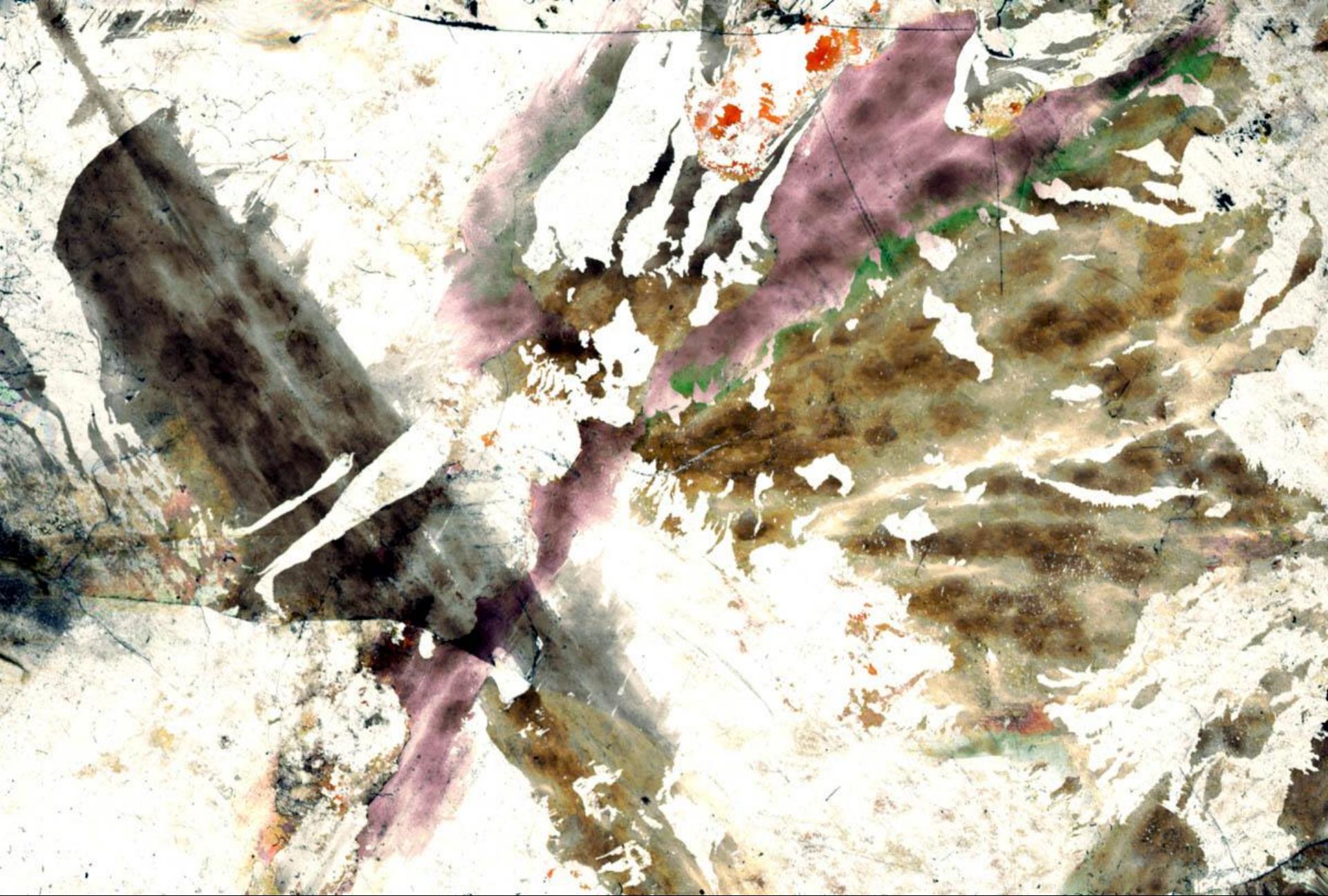
© 2004 Dukelabs



© 2004 Dukelabs

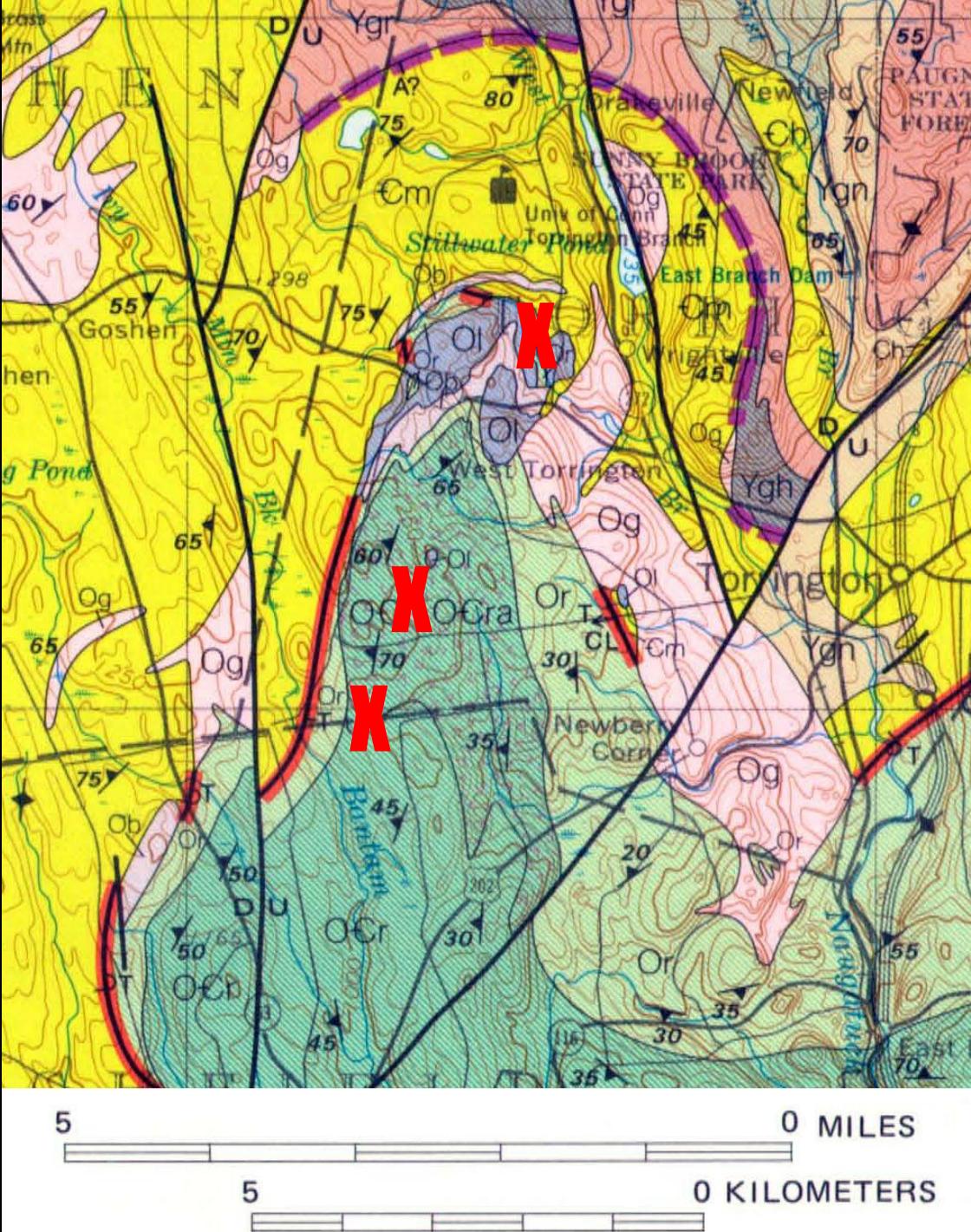


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Pentlandite, Pyrite Staurolite/Kyanite Ilmenite West Torrington, CT



25, 75, 78

75



Staurolite, West Torrington

75



Kyanite, West Torrington



0113a_Beryl_WestTorrington_CT

0063b_Illmenite_WestTorrington_CT

78



DUKE
LAB

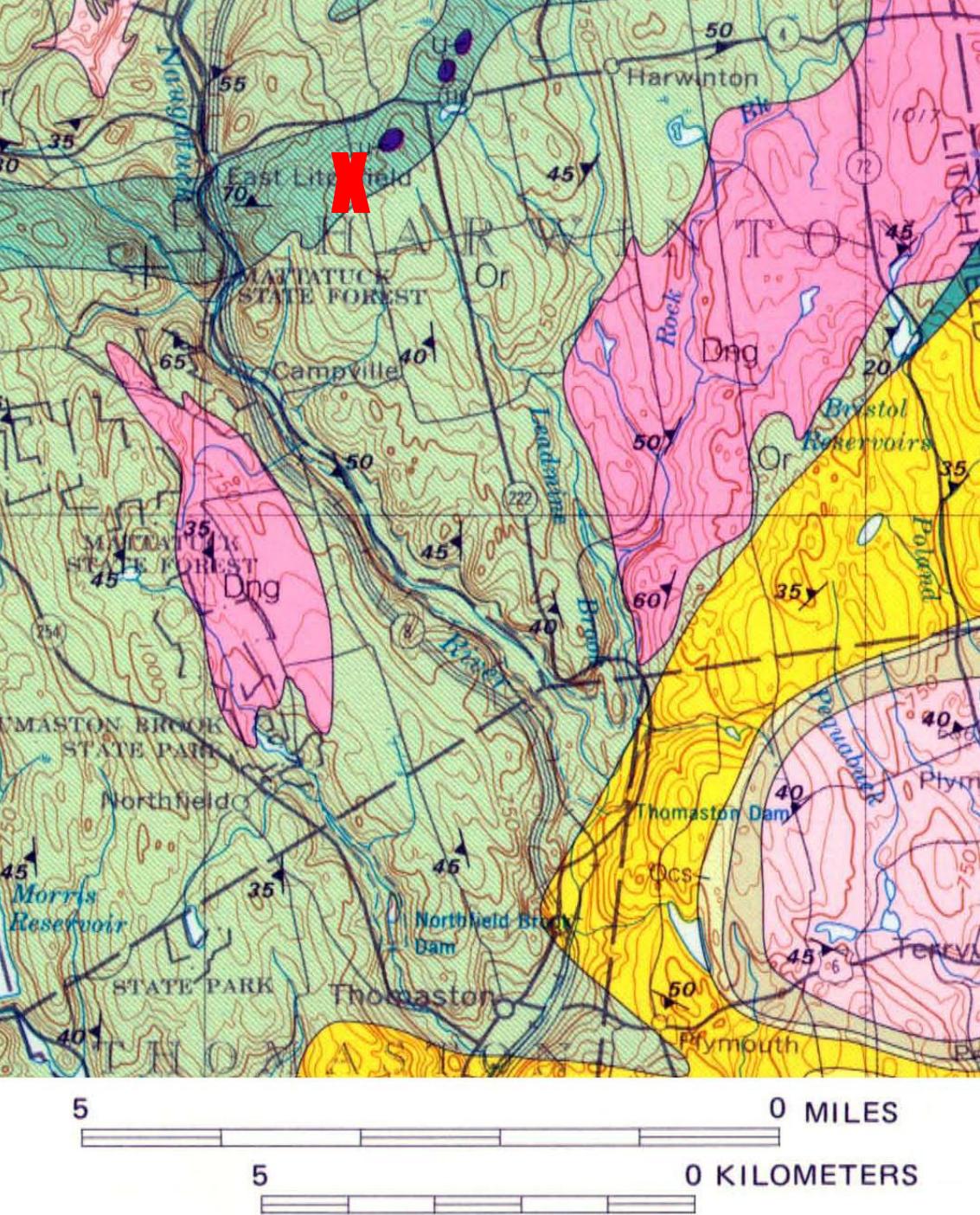


0067a_Ilmenite_WestTorrington_CT



P. La Juke

Beryl Prospect Harwinton, CT





70

0004 – Beryl, Harwinton, CT

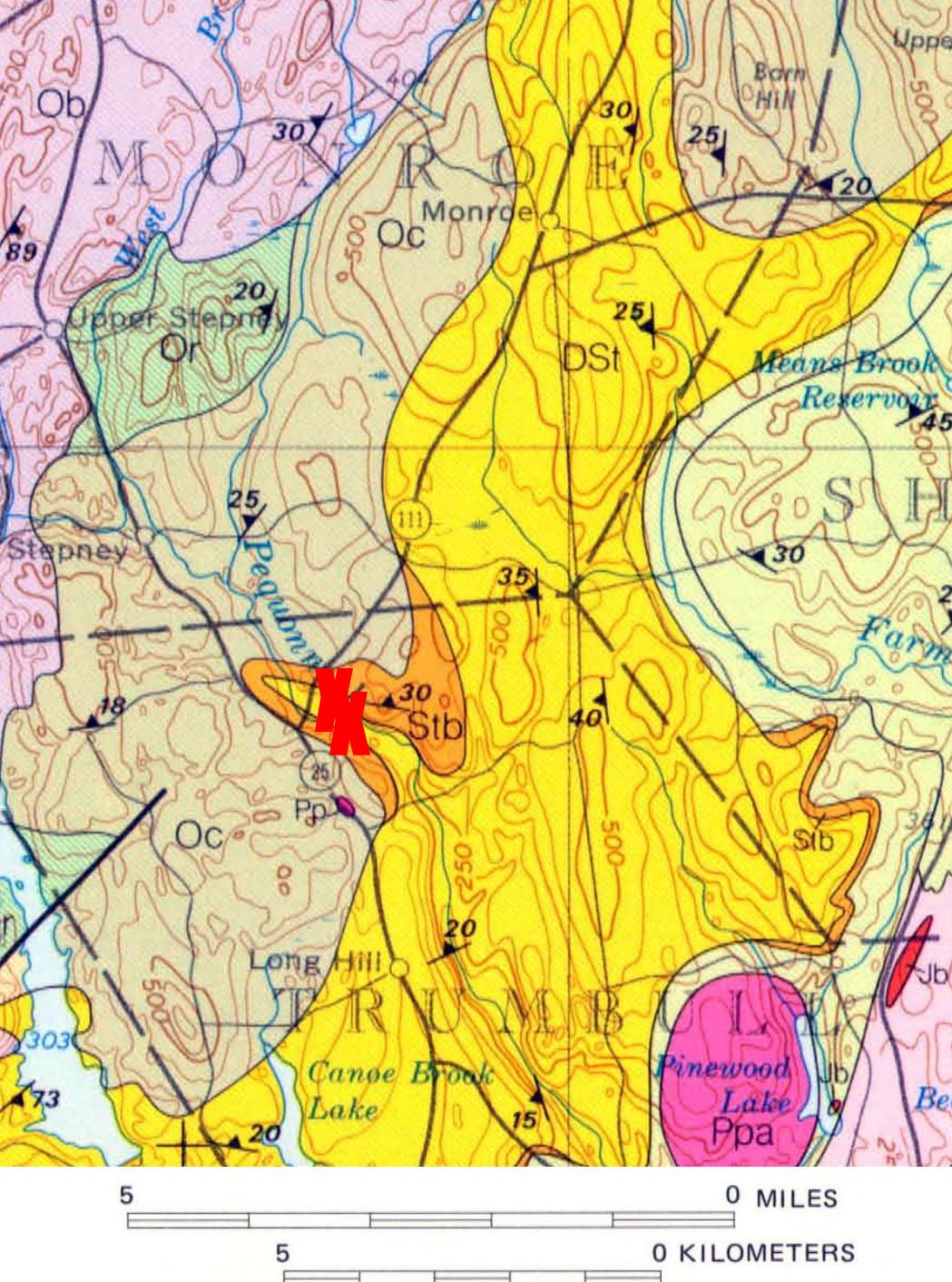
70

0111 - Orthoclase-Quartz, Powerline Q, Harwinton, CT



Long Hill Tungsten Mine Trumbull, CT

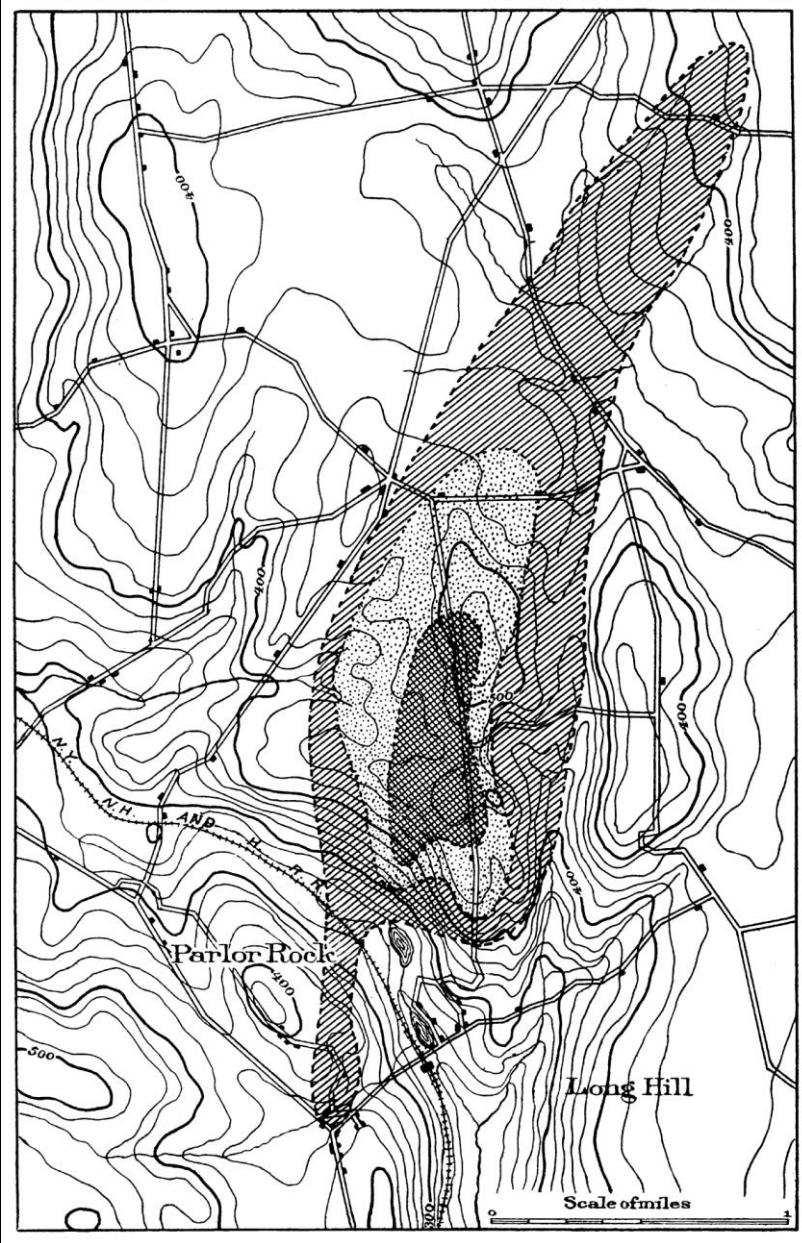
Topaz
Scheelite
Pyrite
Collophane
Bismuth
Wolframite
Etc.



Long Hill Tungsten Mine Trumbull, CT



U. S. GEOLOGICAL SURVEY TWENTY-SECOND ANNUAL REPORT PART II PL. II



GEOLOGICAL MAP OF THE VICINITY OF THE TRUMBULL MINE.

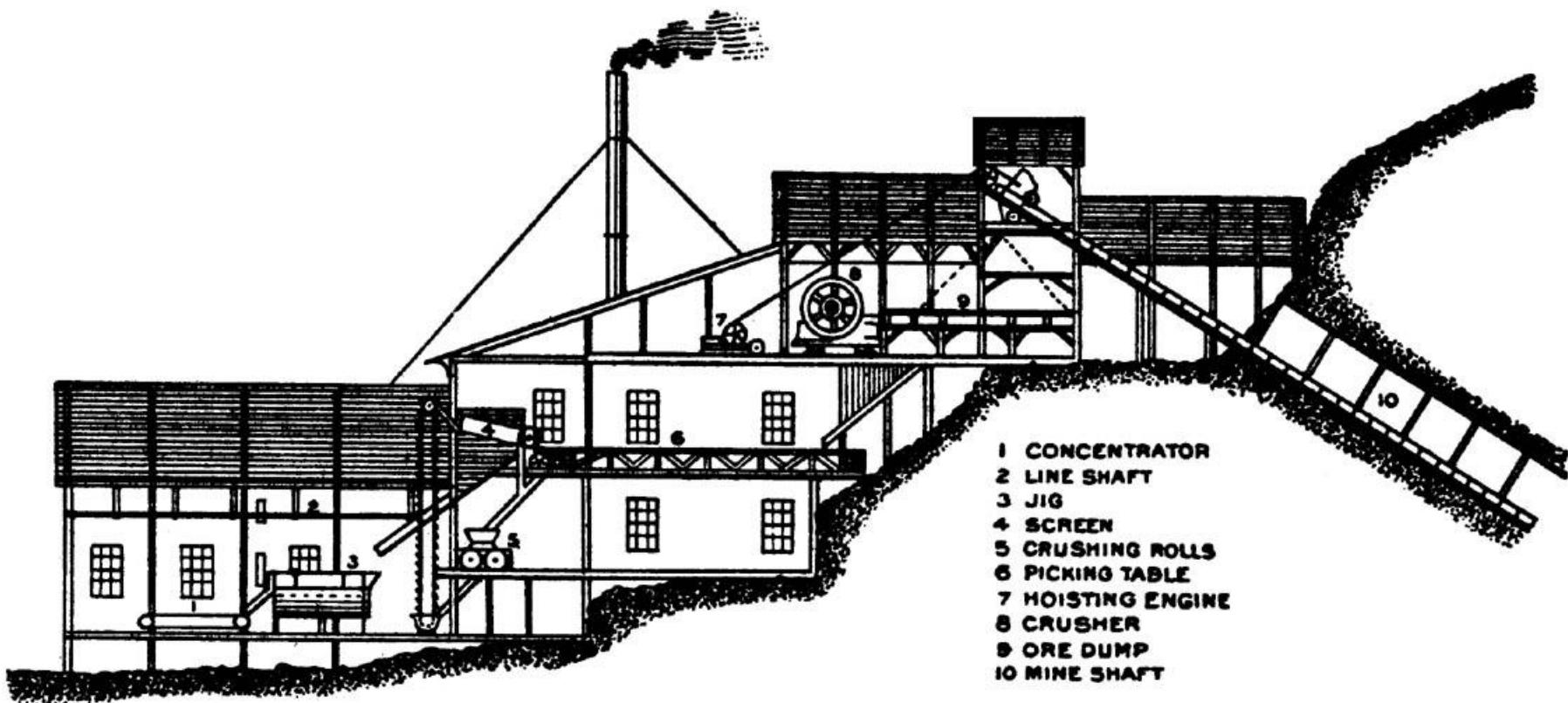


FIG. 1.—Diagram showing sectional elevation of mill.

Champion Lode Trumbull, CT





14

Upper Pit, Long Hill Mine, Trumbull



0601 - Collophane, Old Mine Park, Trumbull, CT

14

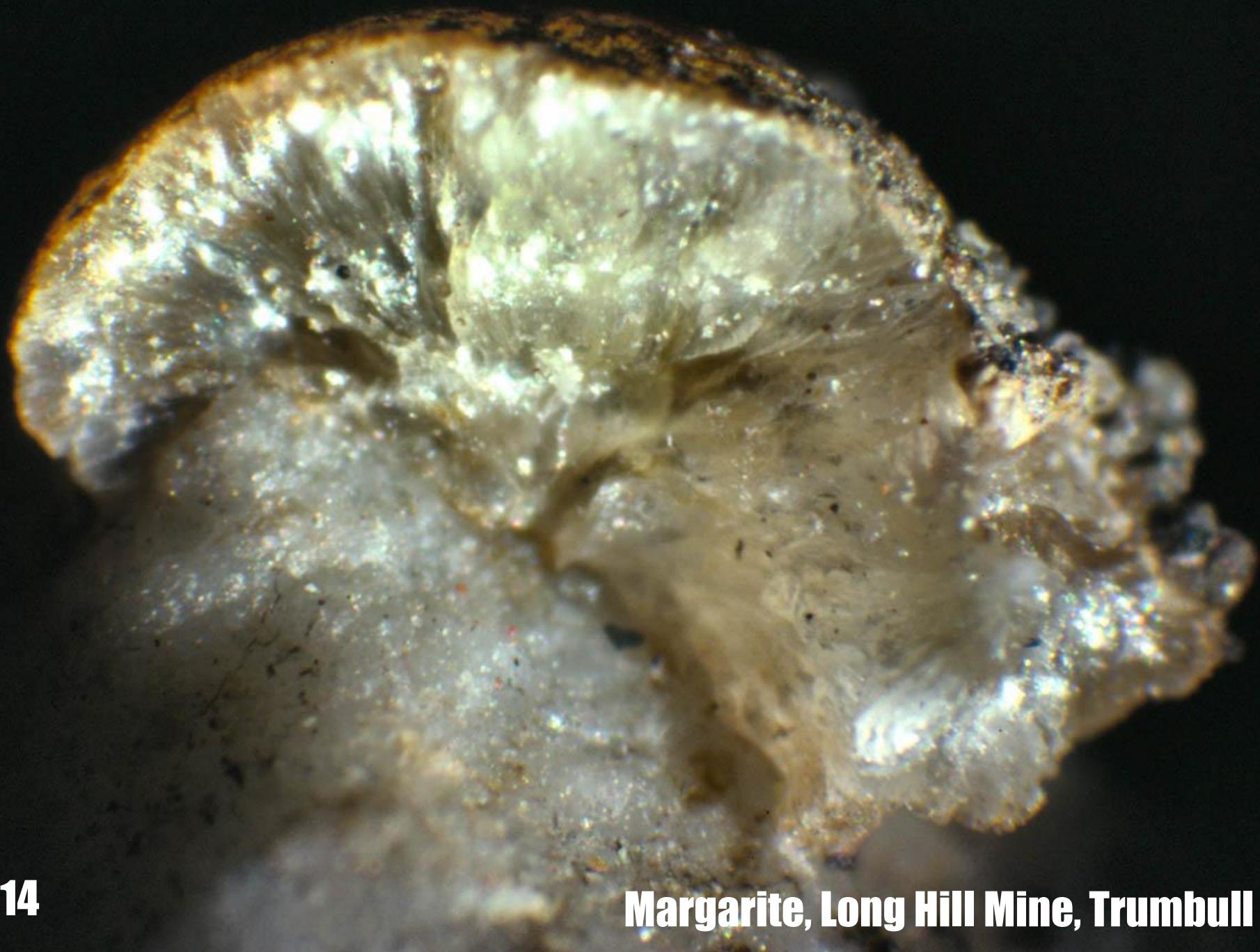


Collophane - Old Mine Park, Trumbull, CT

14

Pyrite, Long Hill Mine, Trumbull

14



Margarite, Long Hill Mine, Trumbull

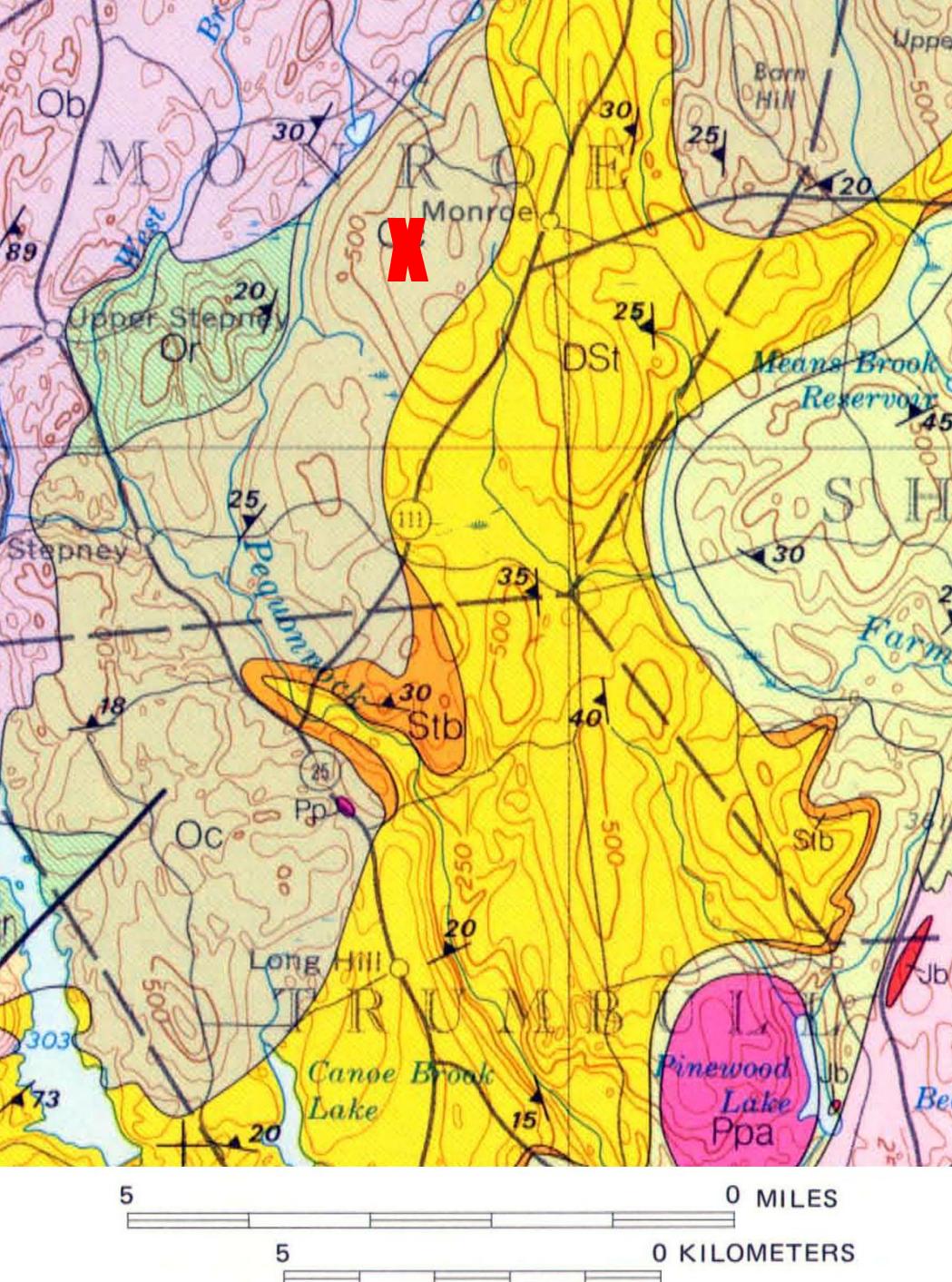


0310 – Fluorite, Trumbull, CT

14

Lane's Tungsten Mine Monroe, CT

Collinsville Fm.



13

Wolframite pseudomorph after Scheelite, Lanes Mine, Monroe

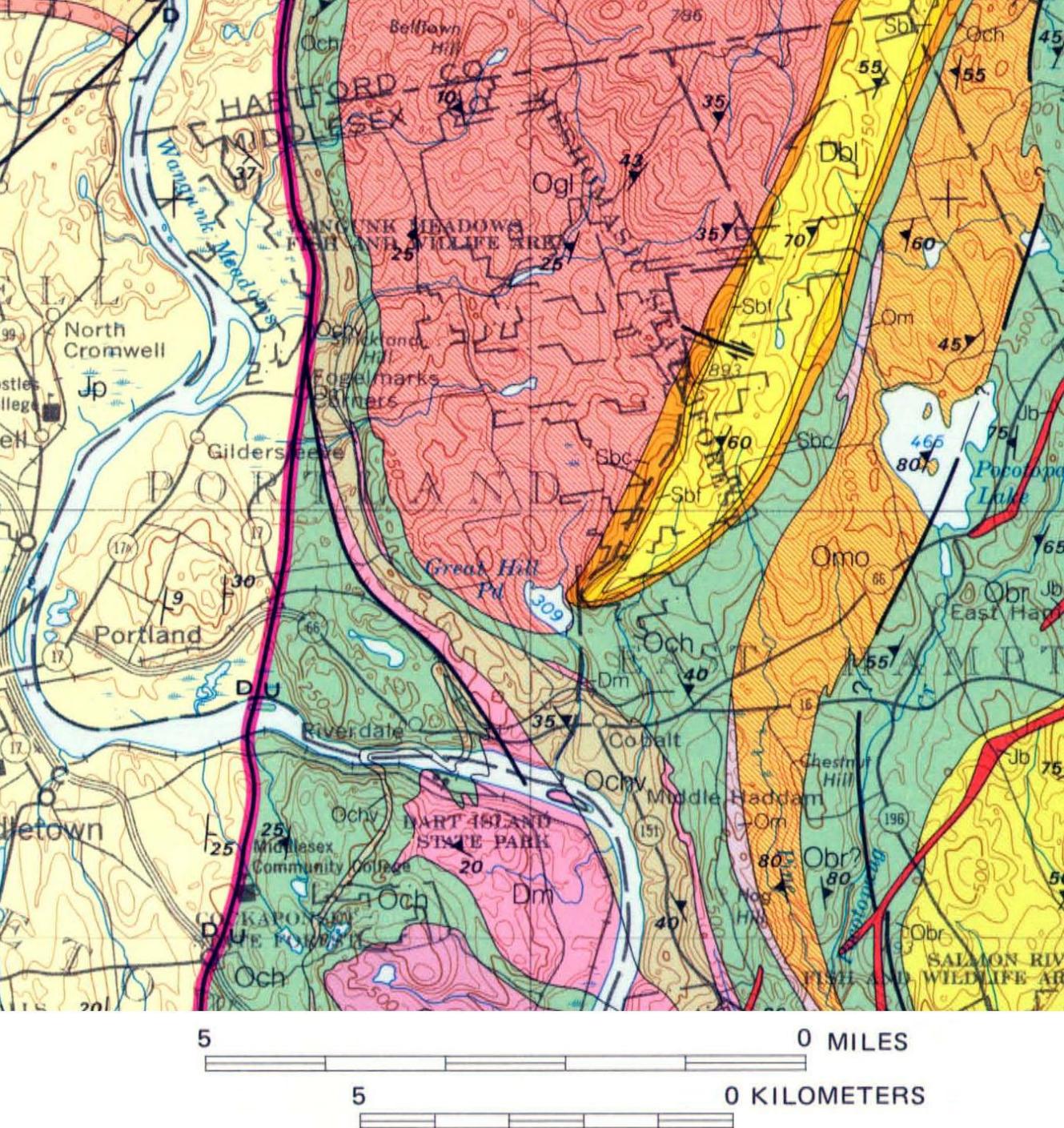


13

Wolframite pseudomorph after Scheelite, Lanes Mine, Monroe



Middletown District, CT





68

So. Glastonbury, CT



18

Spodumene, Strickland Quarry

18

0124 – Columbite, Strickland Q, Portland, CT



18

2099 - Columbite, Hale Q, Portland, CT





53

Case Quarry, Middletown, CT



0831 – Beryl, Case Quarry, Middletown, CT

53



36

**Muscovite -Tollgate Mine
Middletown, CT**

36

2164 – Beryl, Tollgate Mine, Middletown, CT



36

2164 – Beryl, Tollgate Mine, Middletown, CT

36

2164 – Beryl, Tollgate Mine, Middletown, CT



36

Amphibole, Tollgate Mine, Middletown, CT

27

Turkey Hill Quarry, Haddam, CT

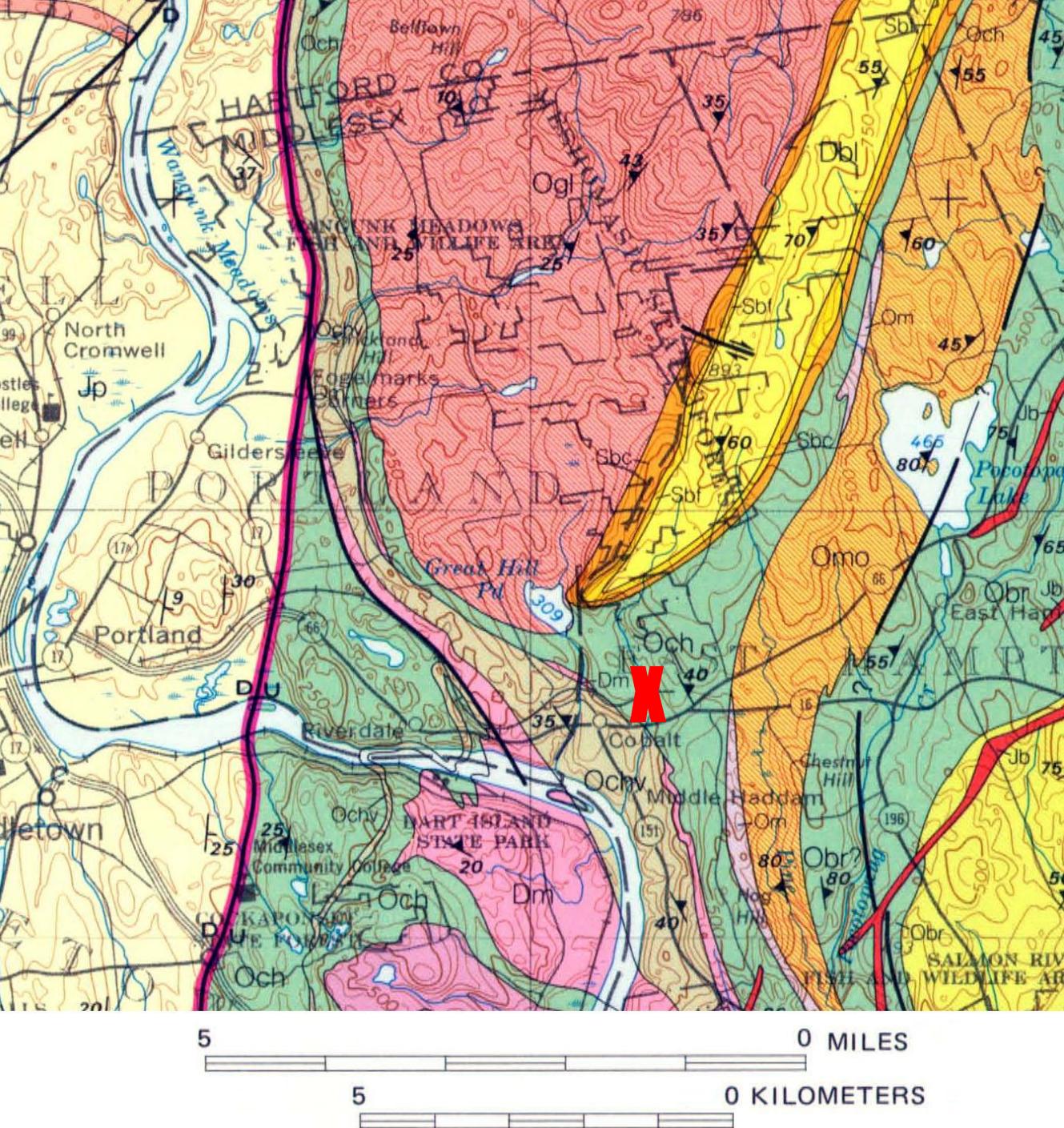


27



0597 – Muscovite, Turkey Hill Mine, Haddam, CT

Cobalt Mine Cobalt, CT





19

Arsenopyrite Mine, Cobalt, CT

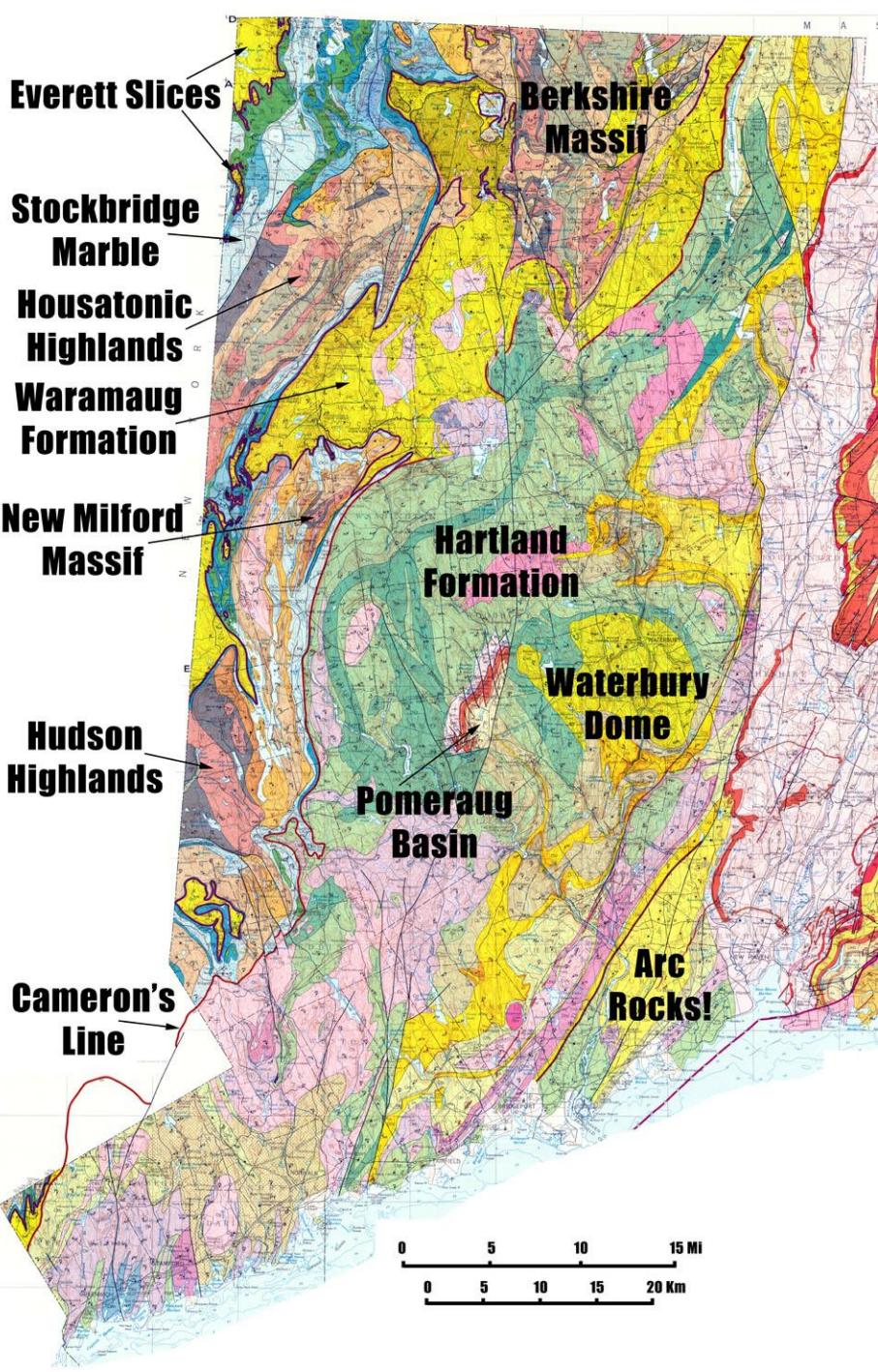
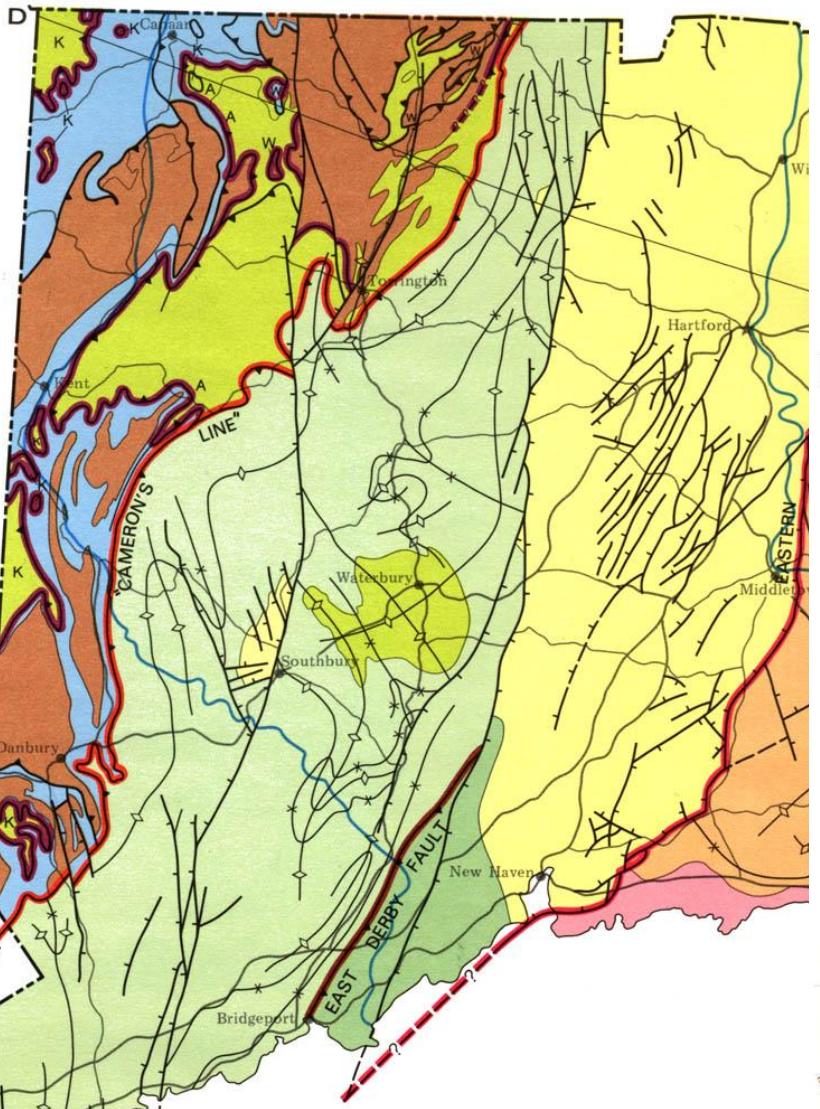
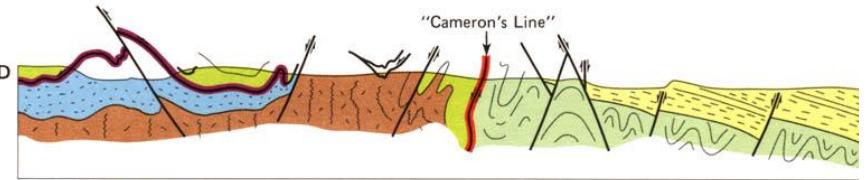


19

Arsenopyrite Mine, Cobalt, CT

19

Arsenopyrite, Cobalt, CT

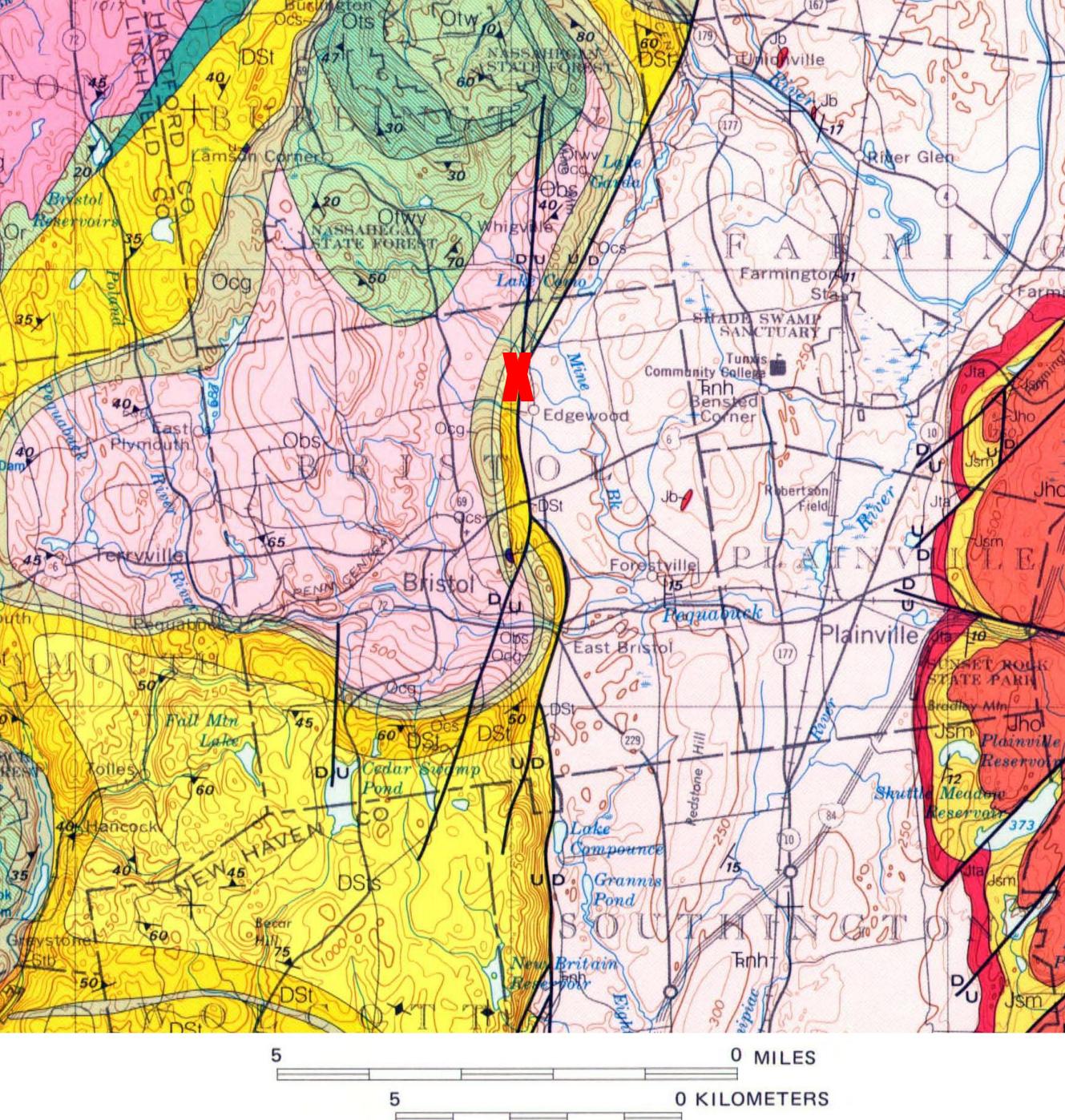


**Copper Minerals
Old Newgate Prison
East Granby, CT**



81

Copper Mine Bristol, CT



28



Chalcocite, Bristol, CT



28

Chalcocite, Bristol, CT

28

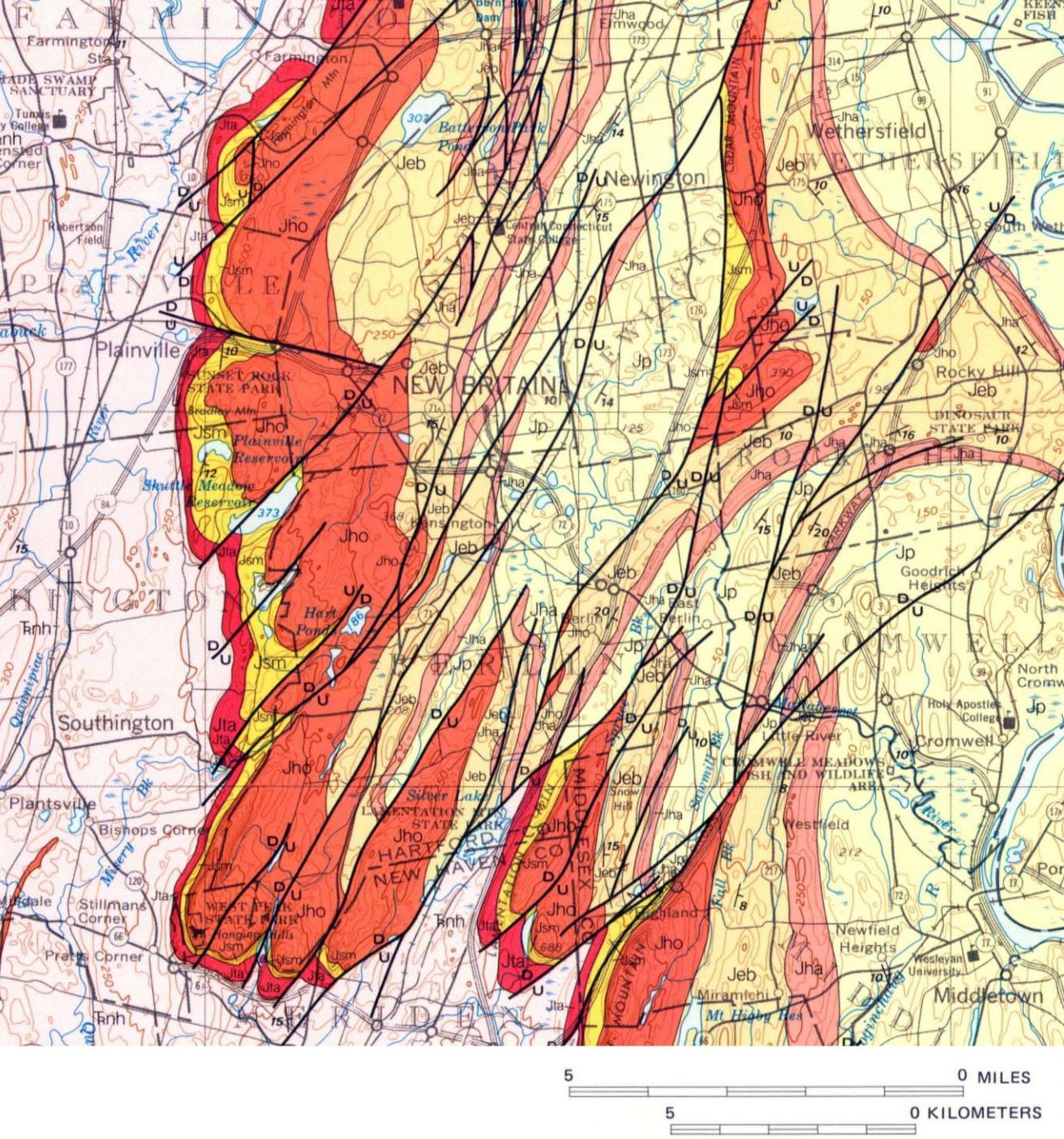
2148 – Chalcocite, Bristol, CT





2148 – Chalcocite, Bristol, CT

Copper Minerals New Britain, CT





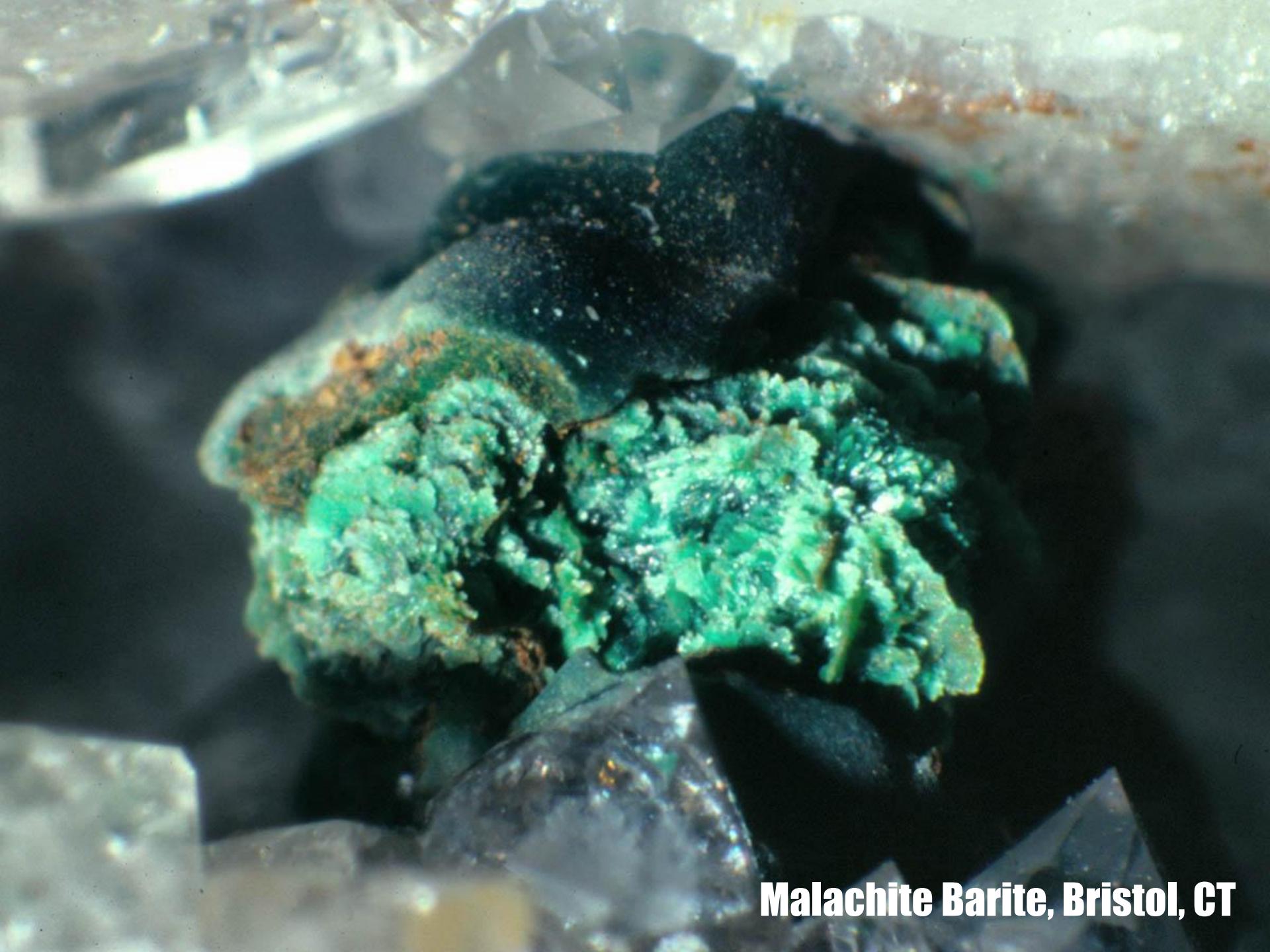
Barite Siderite, New Britain, CT



Malachite Quartz, New Britain, CT



Malachite Barite, Cheshire, CT



Malachite Barite, Bristol, CT



Malachite, New Britain, CT



Chrysocolla, New Britain, CT



**Thanks For Attending
Questions Please ??**

**Biting?
There's No
Biting in the
Hamster
Industry!**