

Structural Geology



Stress and Strain

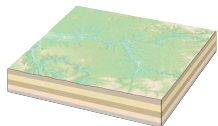
1

Deformation

2

Deformation

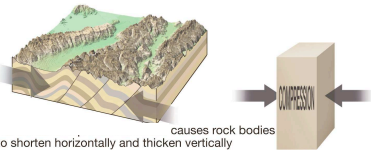
3



A. Undeformed strata (rock body)
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Compression



B. causes rock bodies to shorten horizontally and thicken vertically
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5



Undeformed Low confining pressure Intermediate confining pressure High confining pressure
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6

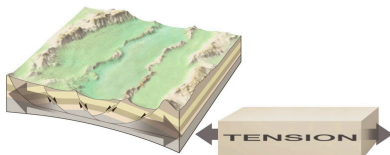
Anticline

Syncline



7

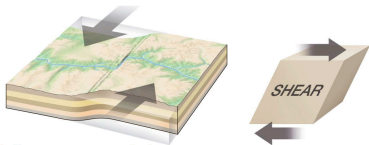
Tension



C. causes rock bodies to lengthen horizontally and thin vertically
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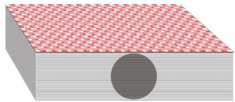
Shear Stress



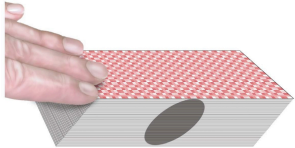
D. causes displacements along fault zones or by ductile flow

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A. Deck of playing cards

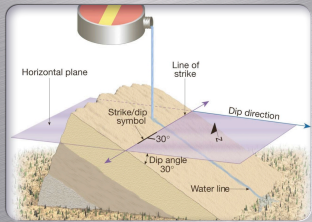


B. Shearing occurs when hand pushes top of deck

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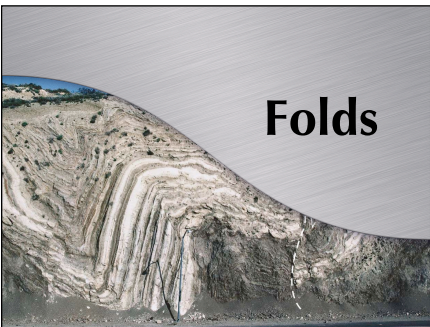
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Rock Geometry

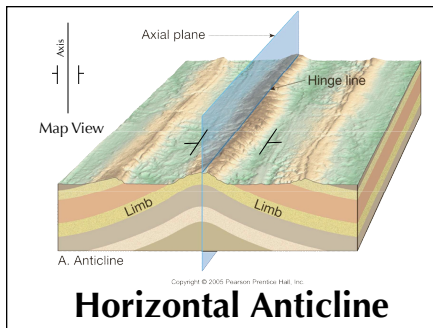


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Folds

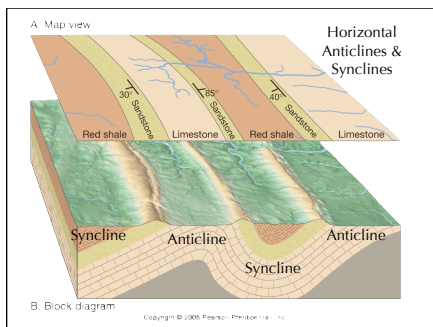


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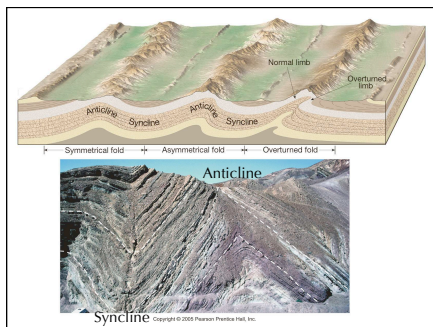


Horizontal Anticline

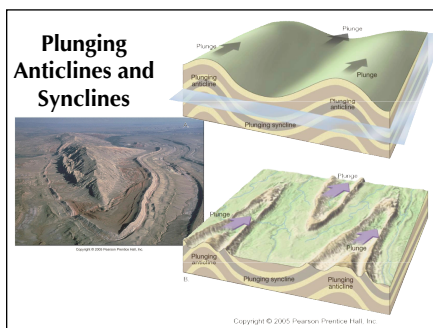
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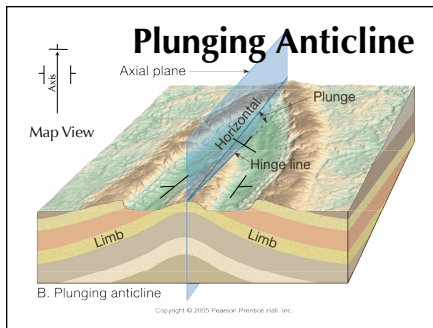
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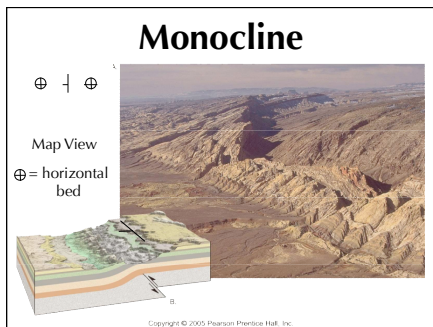
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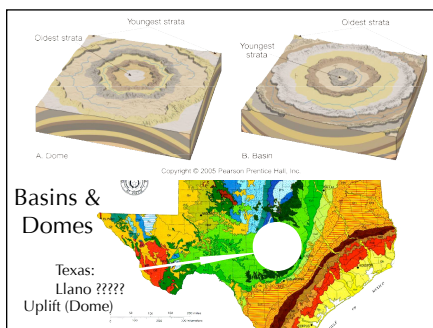
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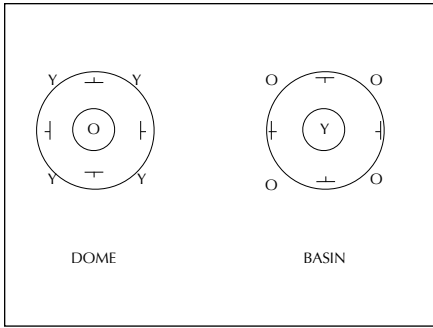
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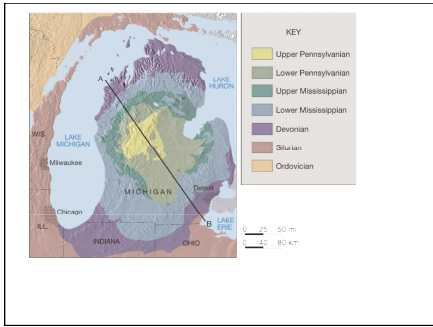
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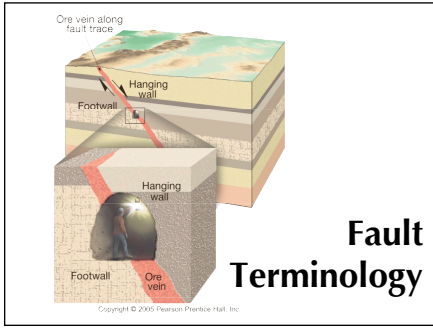
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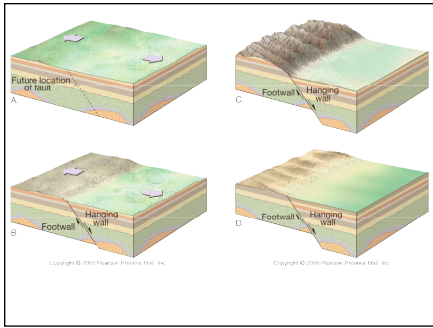
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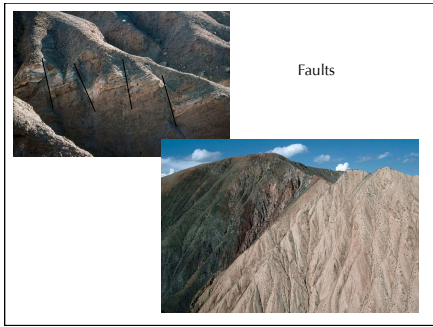
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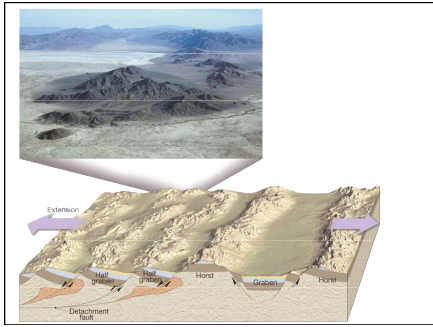
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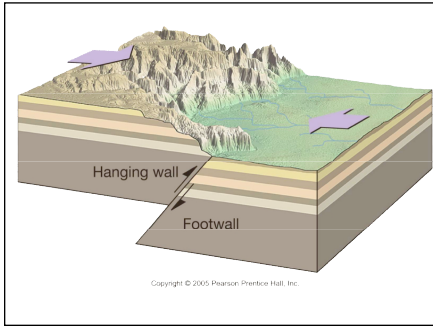
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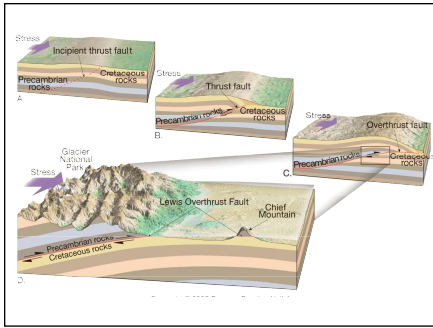
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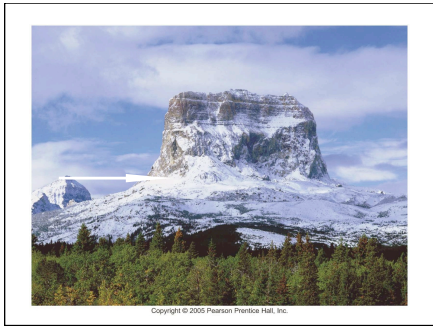
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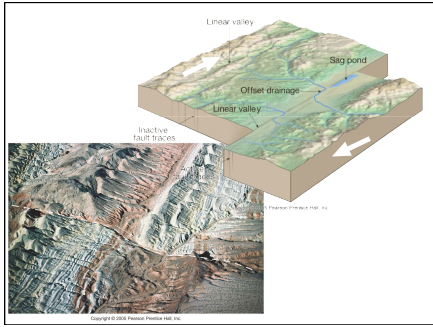
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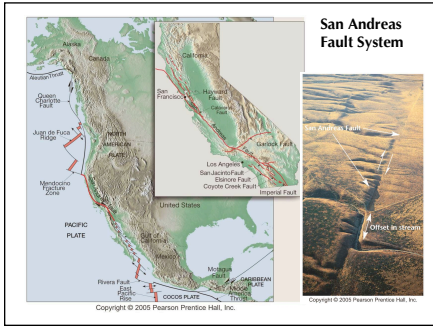
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San Andreas Fault Zone

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Next Lecture

Earthquakes

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