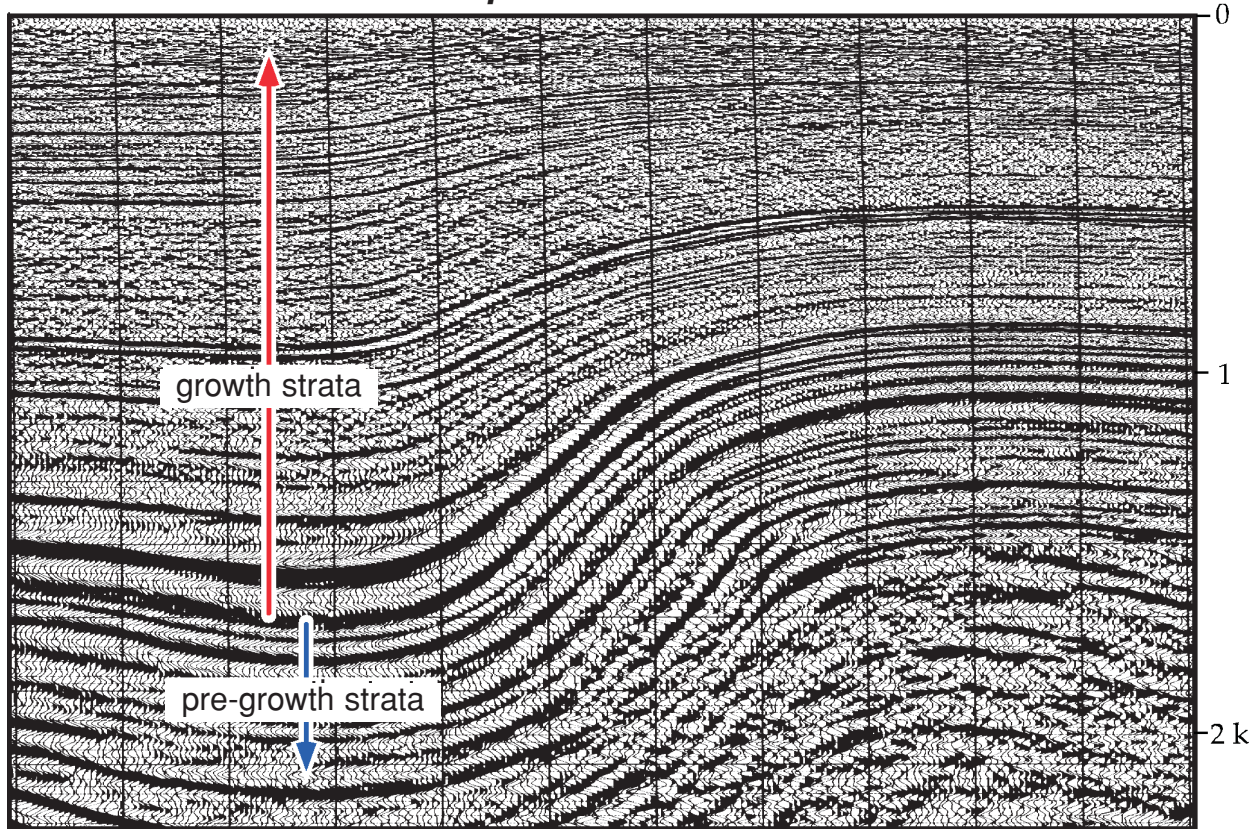


Growth strata in seismic section: *Sedimentation exceeds uplift*

0.5 km



Data courtesy of Caltex and Texaco, Inc.

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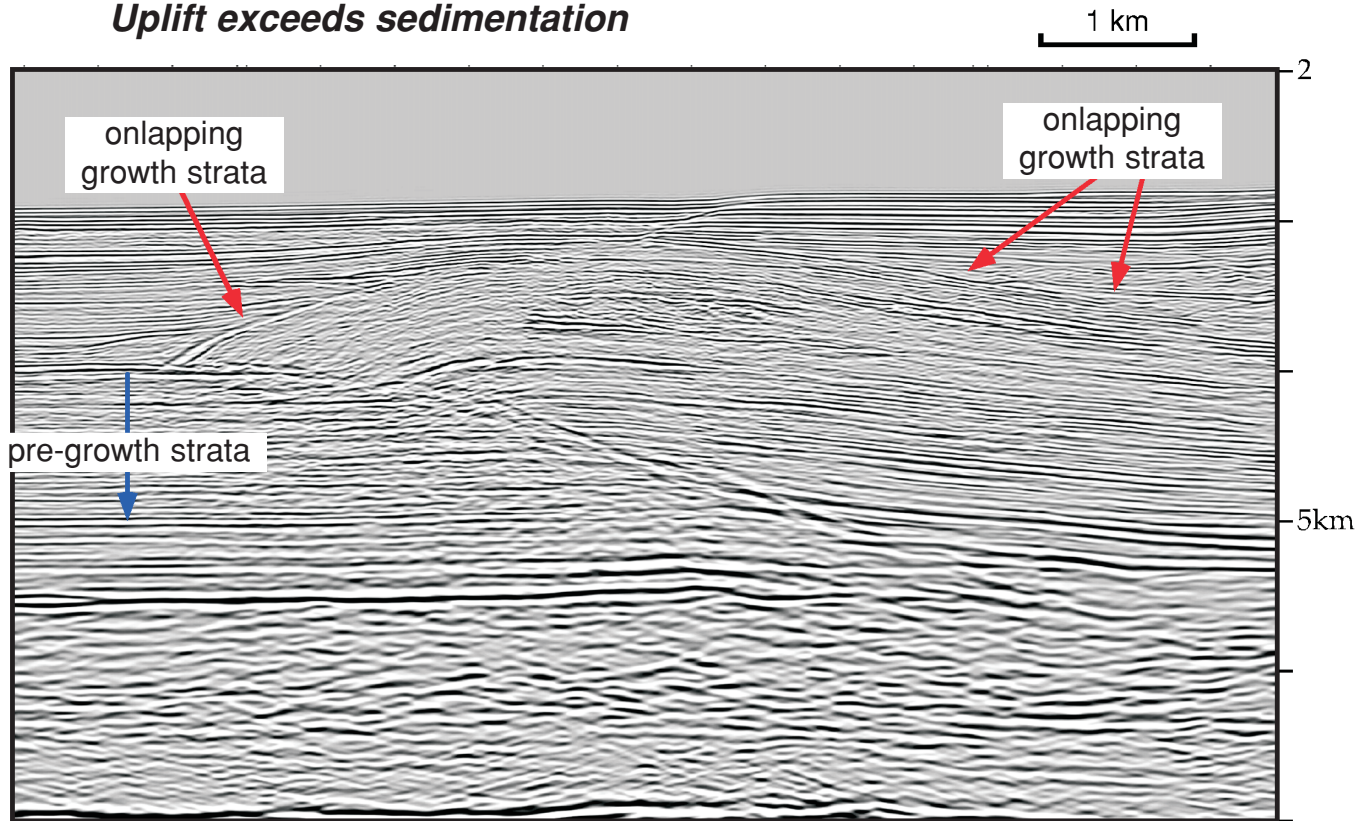
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Growth strata in seismic section: *Uplift exceeds sedimentation*



Data courtesy of VERITAS DGC Limited

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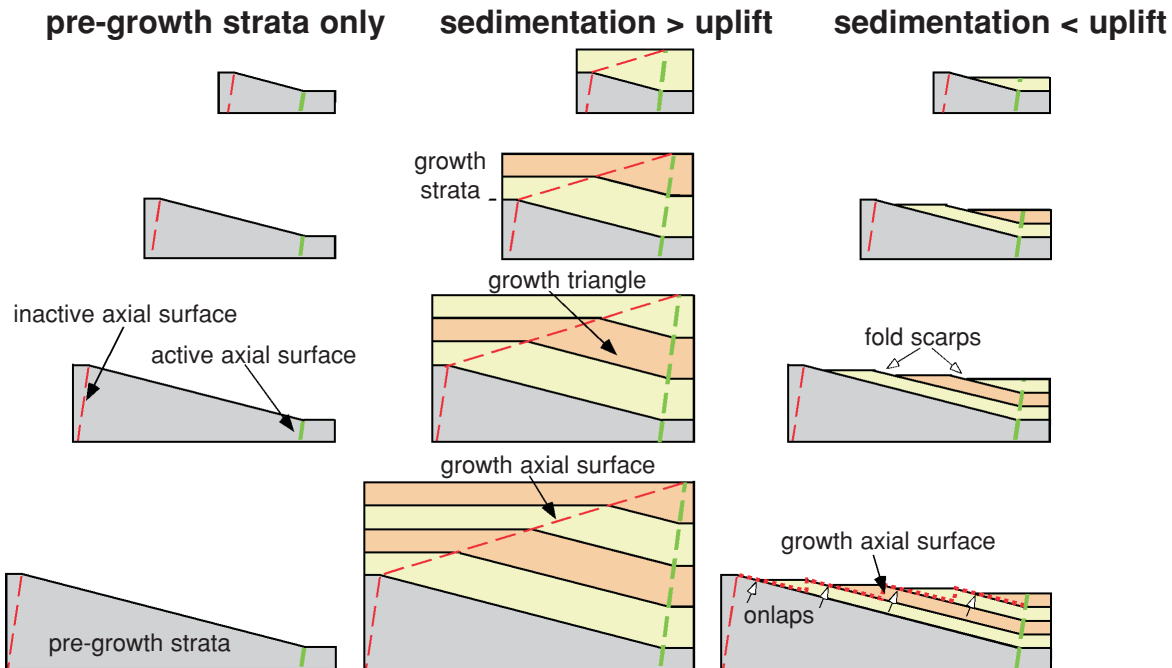
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Growth strata as records of fold kinematics

Folding by kink-band migration



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Growth strata as records of fold kinematics

Folding by progressive limb rotation

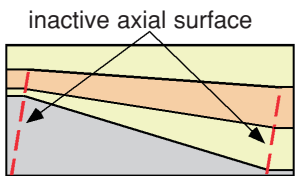
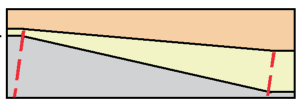
pre-growth strata only

sedimentation > uplift

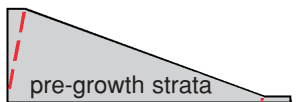
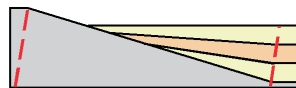
sedimentation < uplift



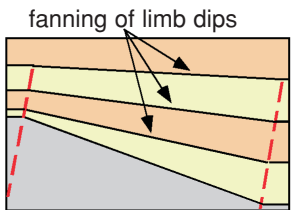
growth strata



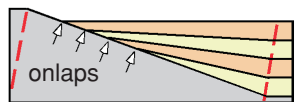
inactive axial surface



pre-growth strata



fanning of limb dips



onlaps

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Section 1A-3: Recognizing growth strata

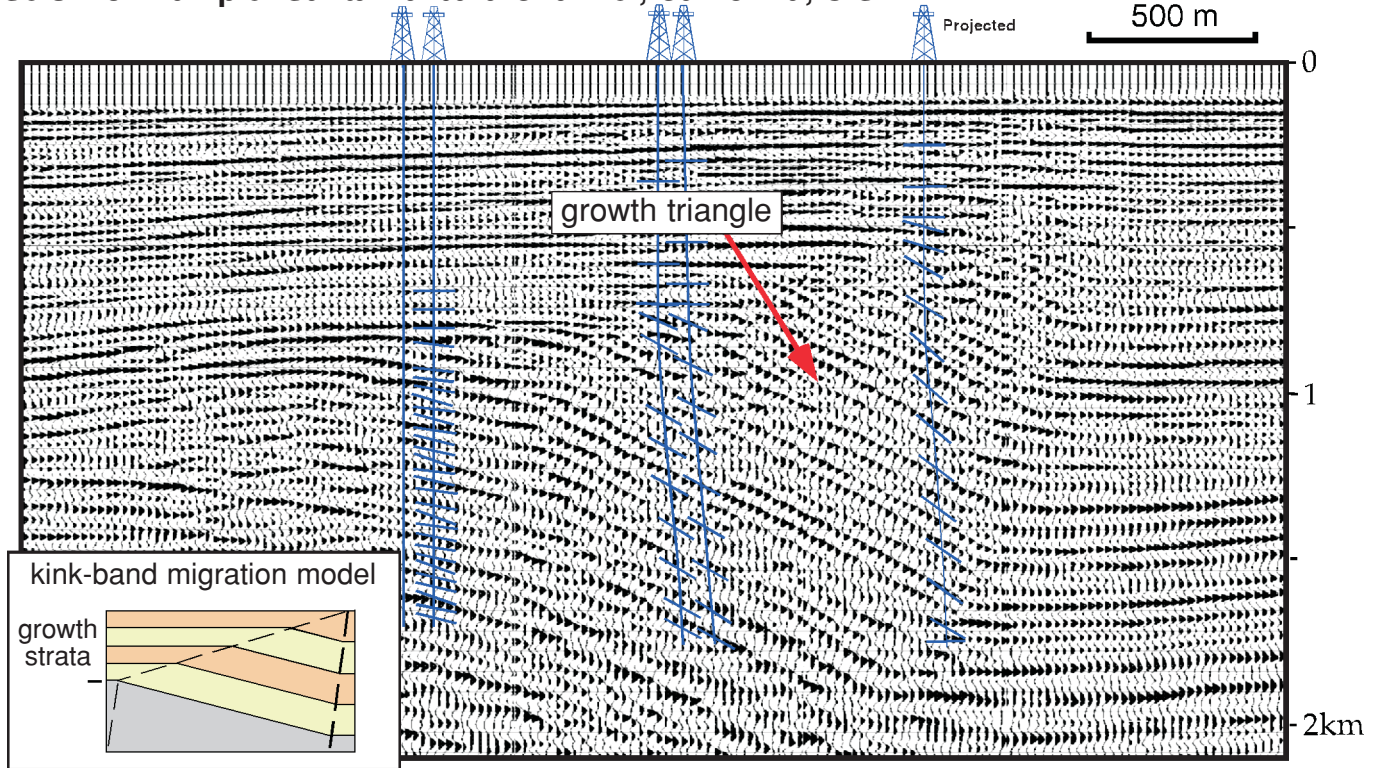
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Growth structures in seismic data

Folding by kink-band migration

Seismic Example: Santa Barbara Channel, California, U.S.A.



(from Shaw et al., 2004) Data courtesy of Texaco, Inc.

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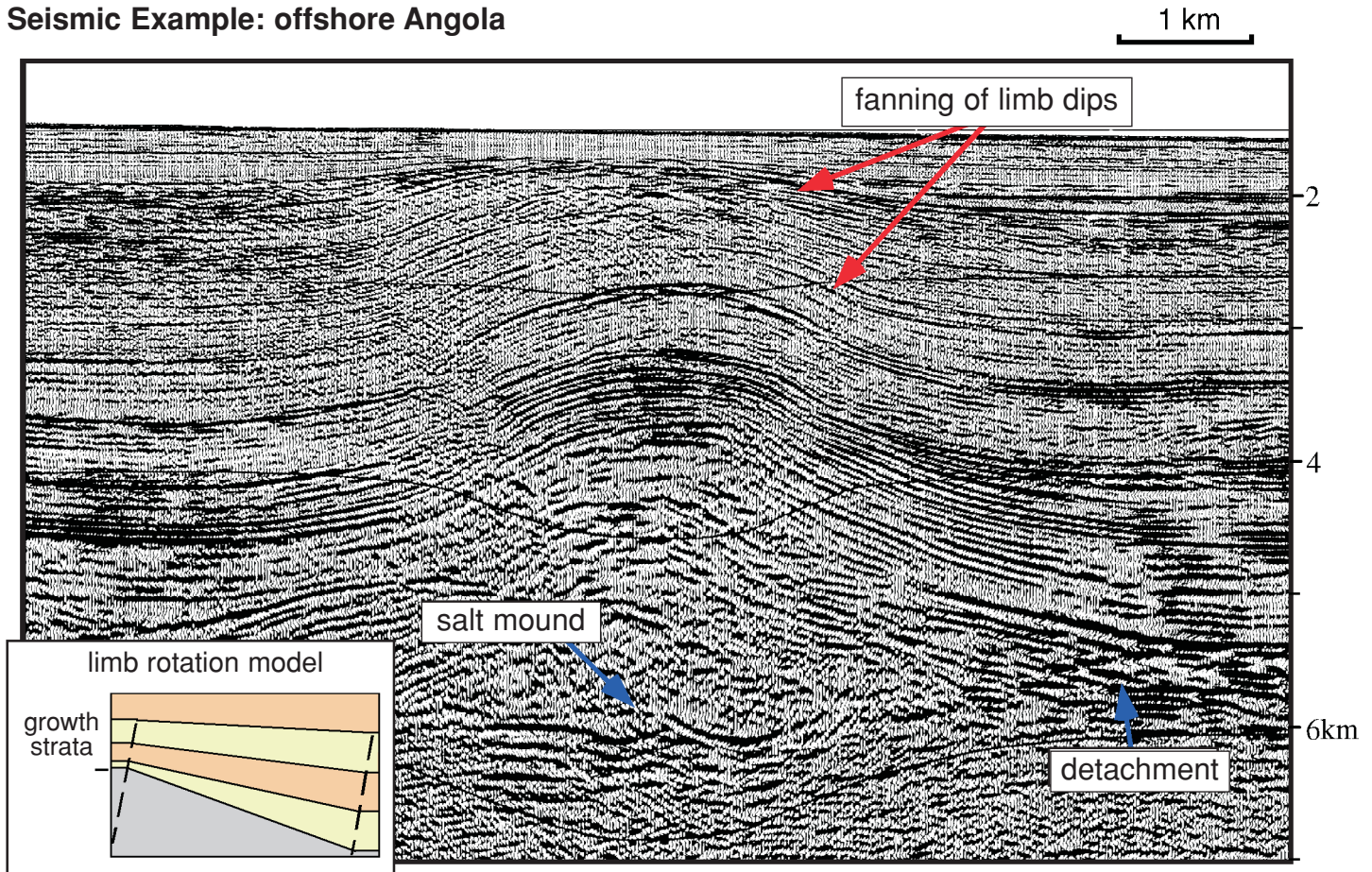
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Growth structures in seismic data

Folding by progressive limb rotation

Seismic Example: offshore Angola



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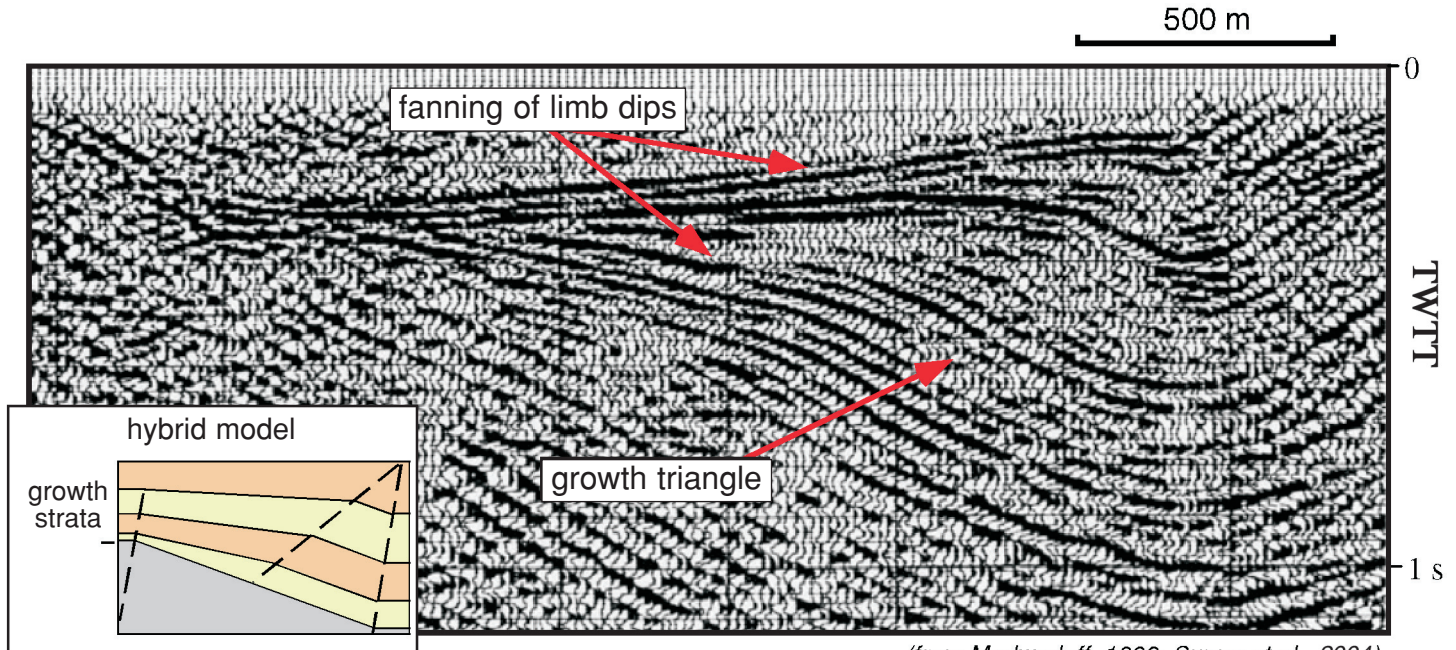
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Growth structures in seismic data

Folding by both kink-band migration and limb rotation

Seismic Example: San Joaquin basin, California, U.S.A.



(from Medwedeff, 1989; Suppe et al., 2004)

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Studies in Geology #53

Section 1A-3: Recognizing growth strata

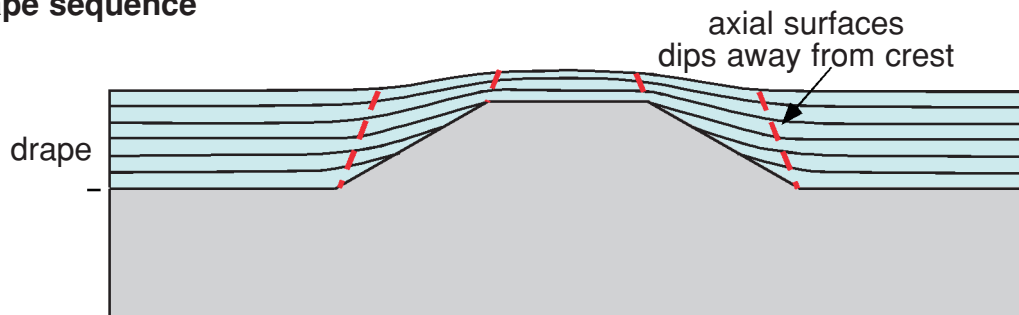
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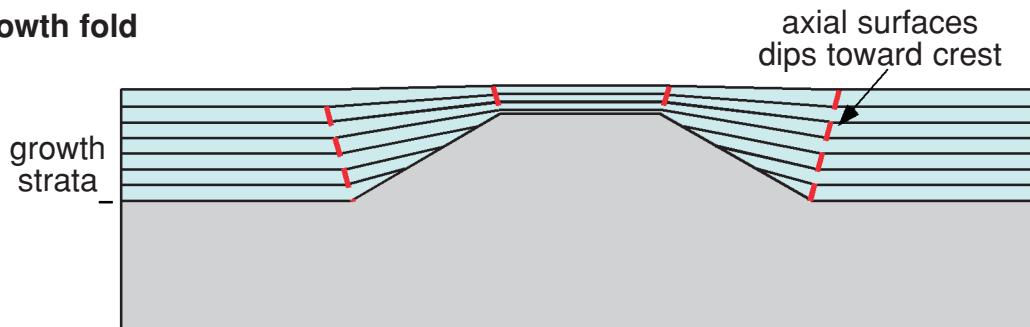
Distinguishing drape from growth strata

Kinematic models

Drape sequence



Growth fold



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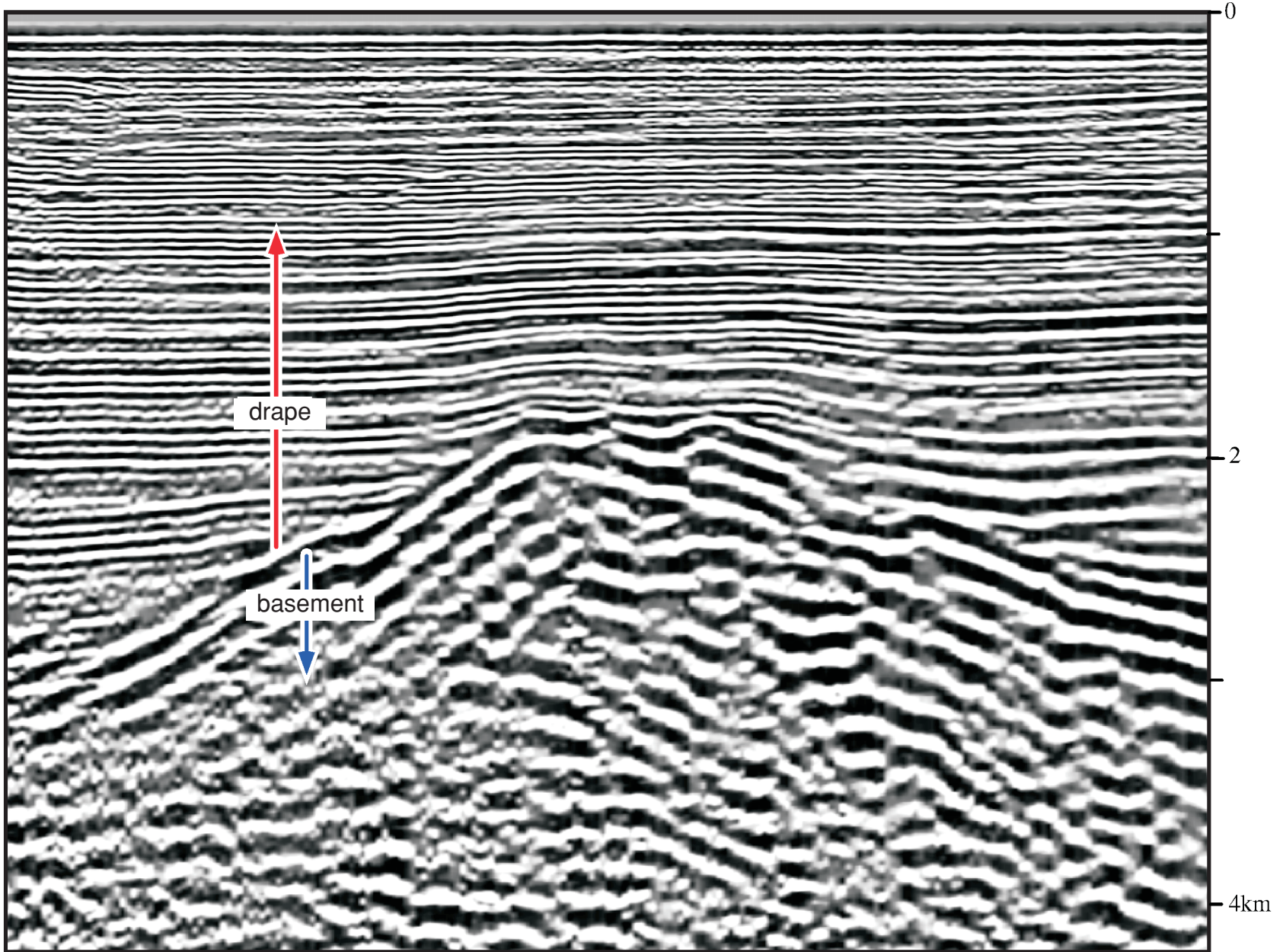
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Distinguishing drape from growth strata

Drape folding

Seismic Example: offshore California Borderlands, U.S.A.

1 km



Data courtesy of Texaco, Inc.

This seismic section images a siliciclastic drape sequence that onlaps and overlies a ridge of metamorphic basement rocks.

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