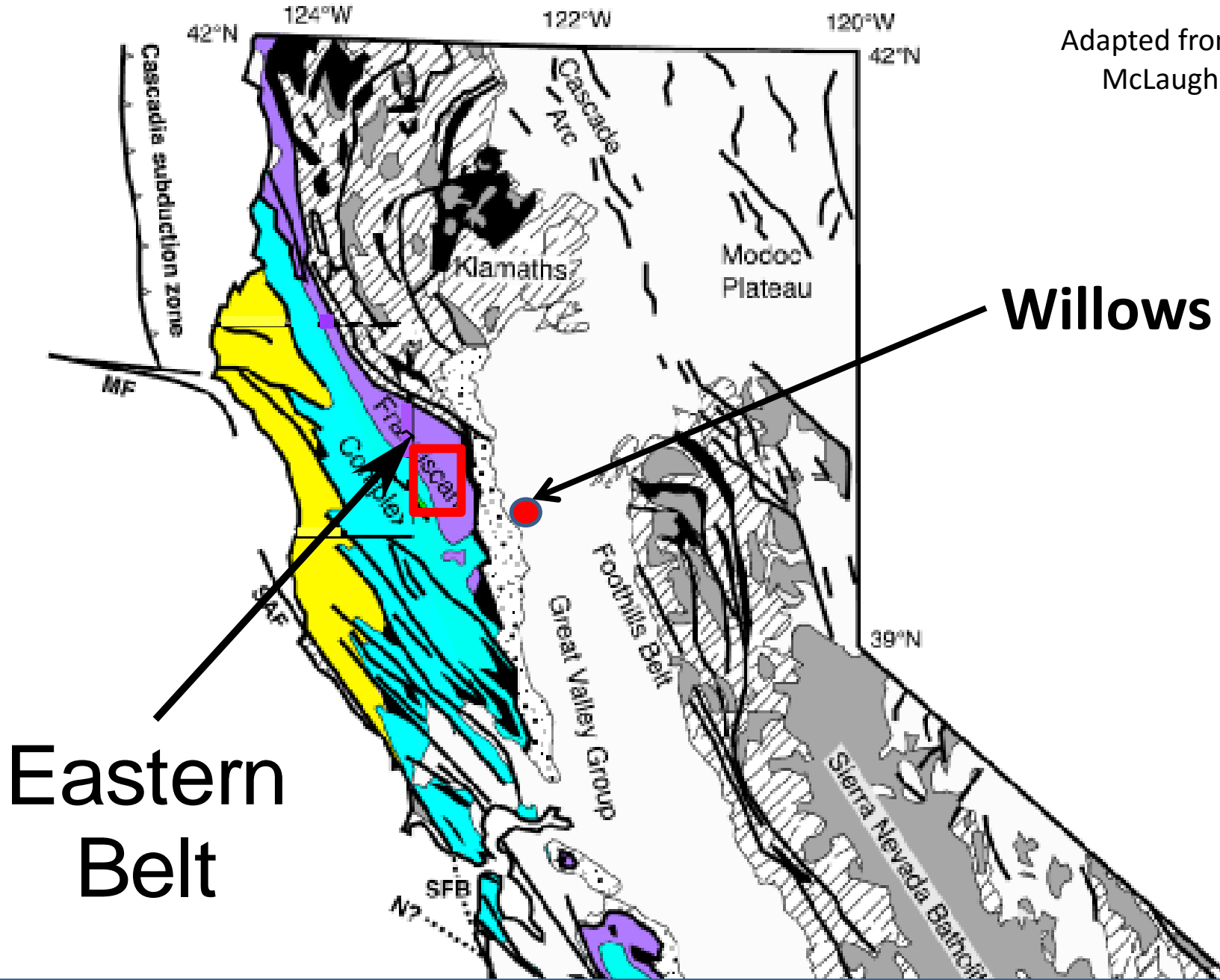


**Eastern Belt,
Franciscan**



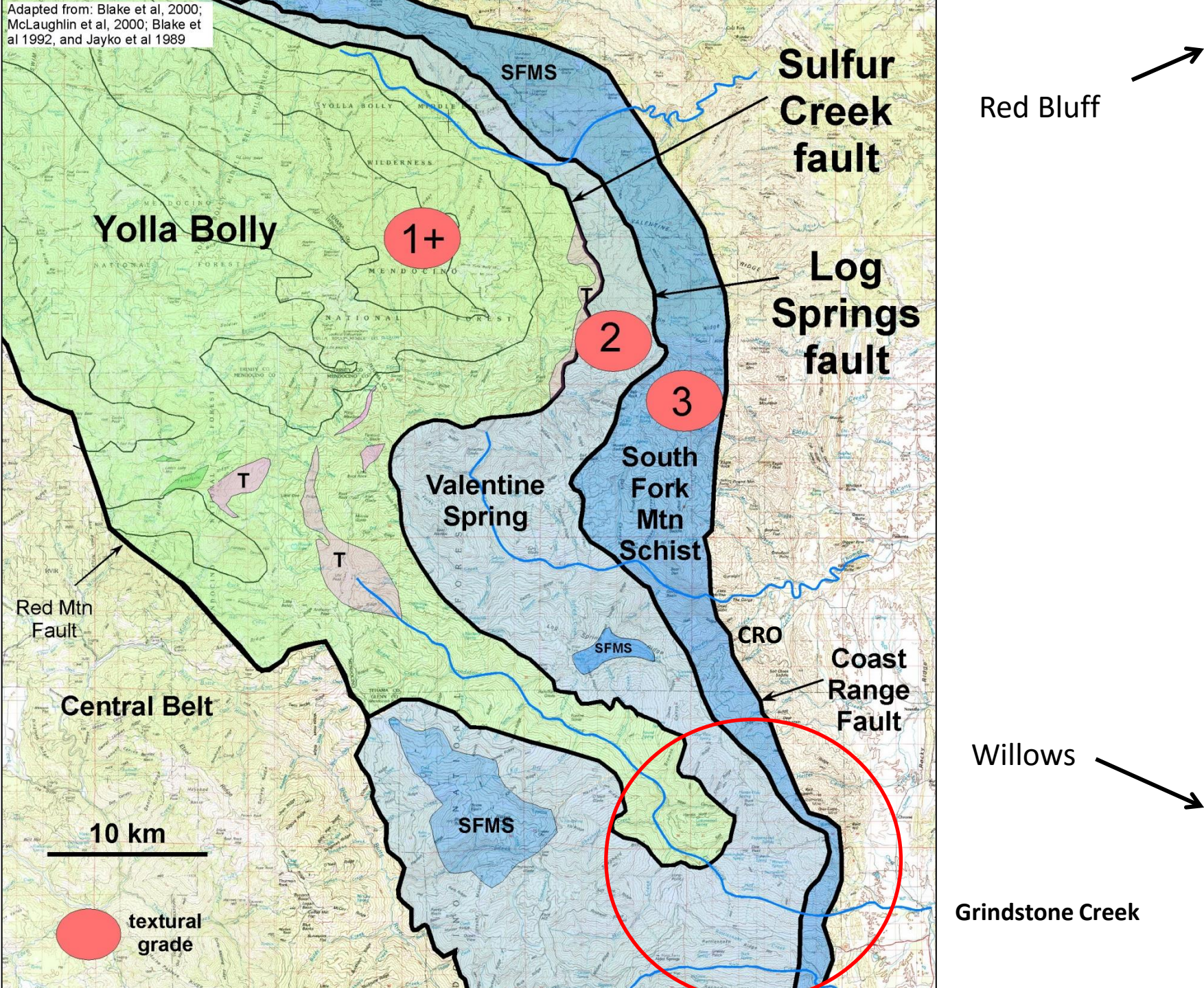
Adapted from Ernst and
McLaughlin, 2012



Eastern
Belt

Willows

Adapted from: Blake et al, 2000; McLaughlin et al, 2000; Blake et al 1992, and Jayko et al 1989



Yolla Bolly graywacke/argillite

1+



Valentine Spring
Semi-schistose graywacke & argillite

2



All units in
Blueschist
facies



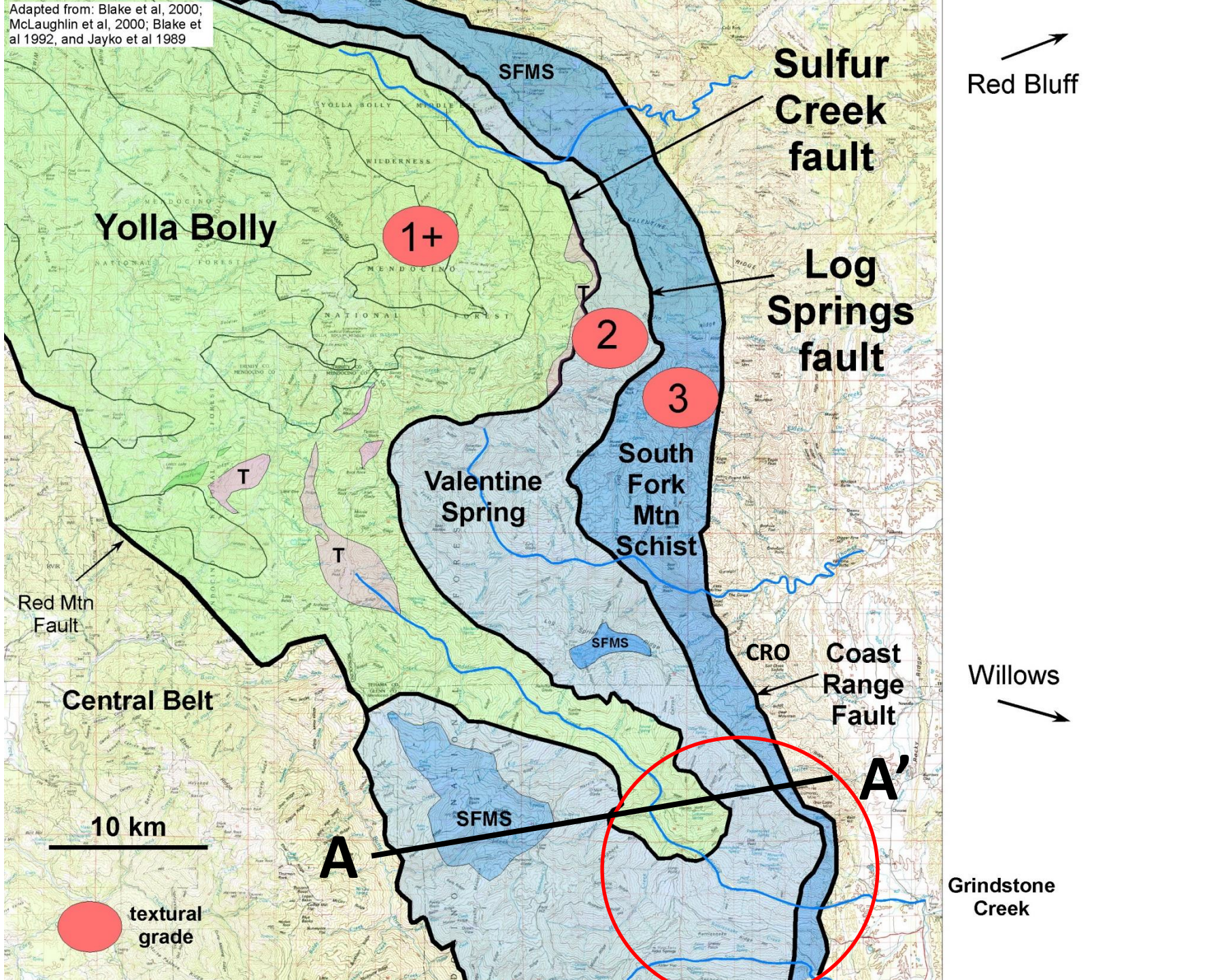
3

SFMS, thin-bedded to laminated schistose sand and shale



3

Adapted from: Blake et al, 2000; McLaughlin et al, 2000; Blake et al 1992, and Jayko et al 1989



Red Bluff

Sulfur Creek fault

Log Springs fault

Yolla Bolly

1+

2

3

Valentine Spring

South Fork Mtn Schist

Red Mtn Fault

Central Belt

Coast Range Fault

Willows

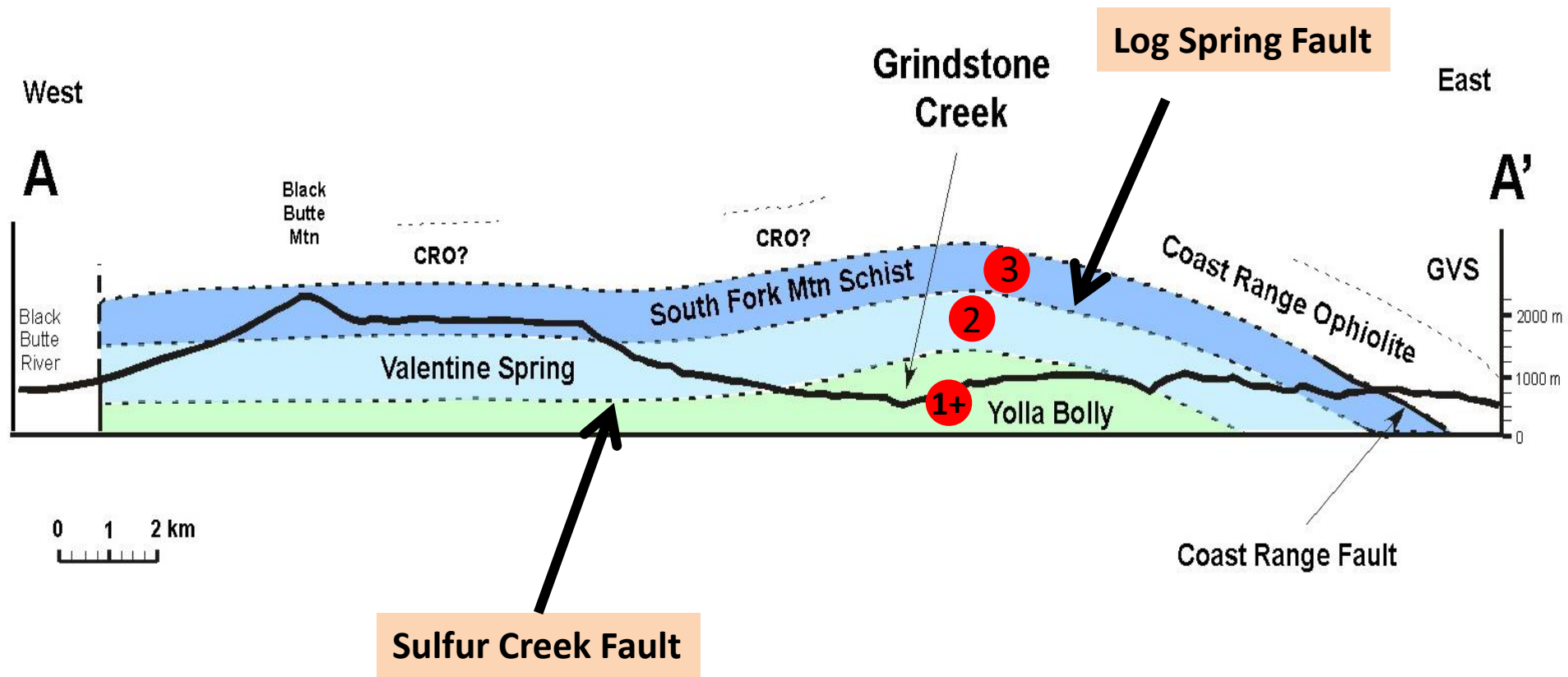
10 km

A

A'

textural grade

Grindstone Creek



Fault interpretation drivers:

Belief in Age difference between SFMS & Franciscan

Post-metamorphic differential uplift

<p><u>Arguments for faulting</u></p>	<p><u>Arguments against</u></p>
<p>Jump in metamorphic grade</p>	<p><i>“metamorphic temperature was not very different” across the Eastern belt</i> Brocker and Day, 1995</p> <p>Sulfur Creek Fault and other YB faults <i>“vertical component of post-metamorphic fault offset was small (< few km), if any.”</i> Cloos and Copeland, 2005</p>
<p>Change in lithology and structural fabric</p>	<p>Can be explained by accretionary processes</p>
<p>Jump in textural grade</p>	<p>Data not convincing</p>
	<p>Faults not seen in outcrop*</p>



Grindstone Creek from Longpoint trail





Grindstone Creek



Thomes Creek

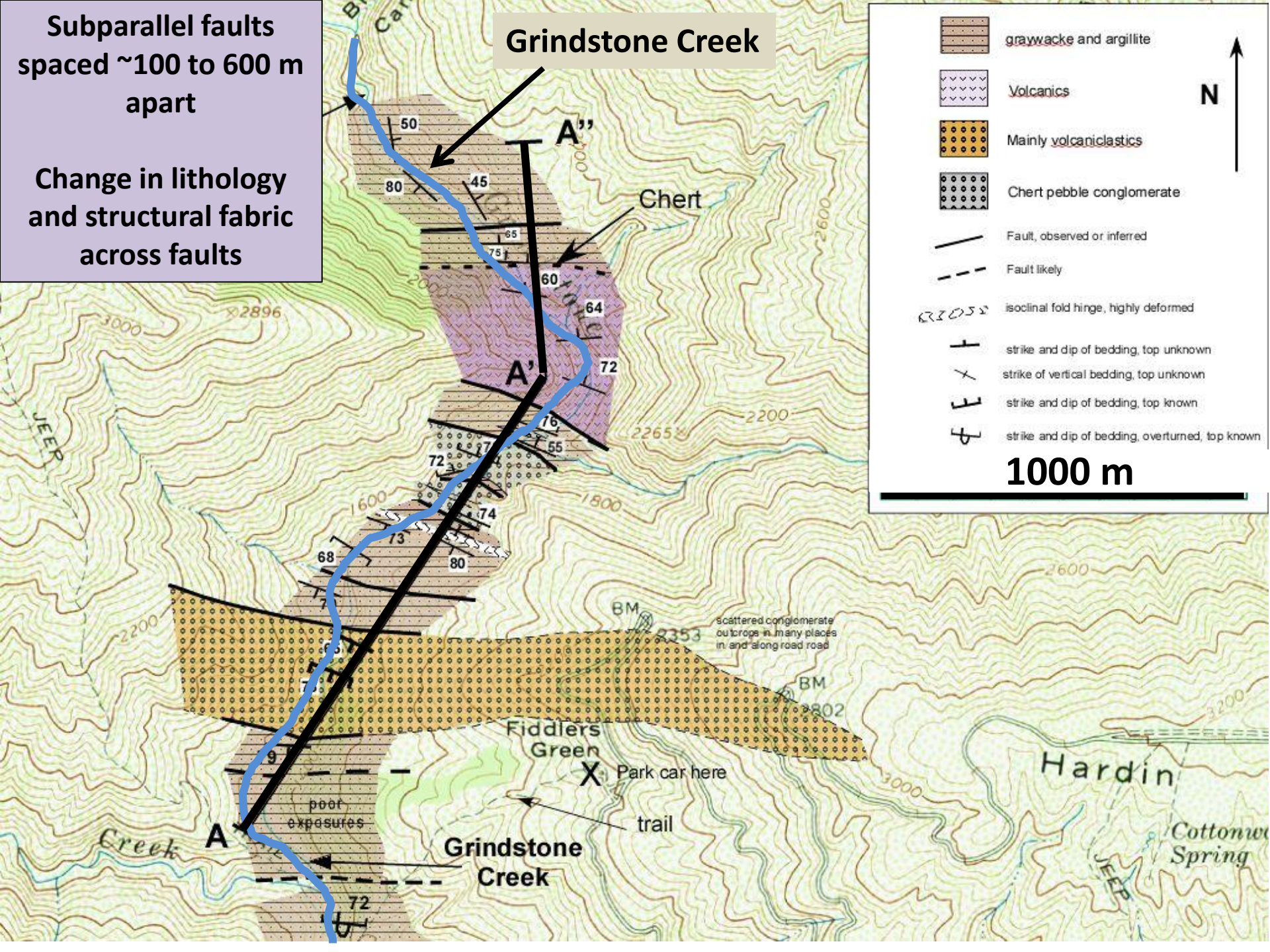
Thomes Creek



Subparallel faults
spaced ~100 to 600 m
apart

Change in lithology
and structural fabric
across faults

Grindstone Creek



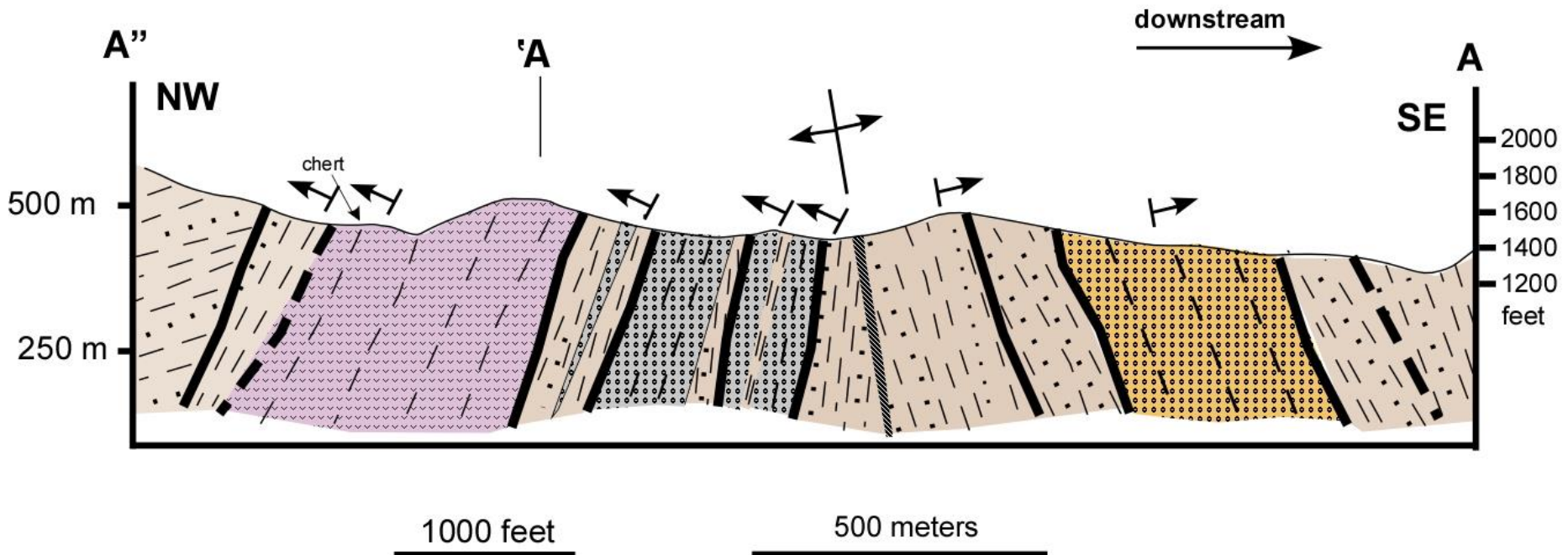
	graywacke and argillite
	Volcanics
	Mainly volcaniclastics
	Chert pebble conglomerate
	Fault, observed or inferred
	Fault likely
	isoclinal fold hinge, highly deformed
	strike and dip of bedding, top unknown
	strike of vertical bedding, top unknown
	strike and dip of bedding, top known
	strike and dip of bedding, overturned, top known

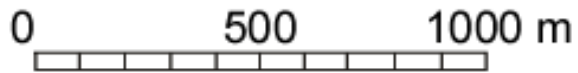
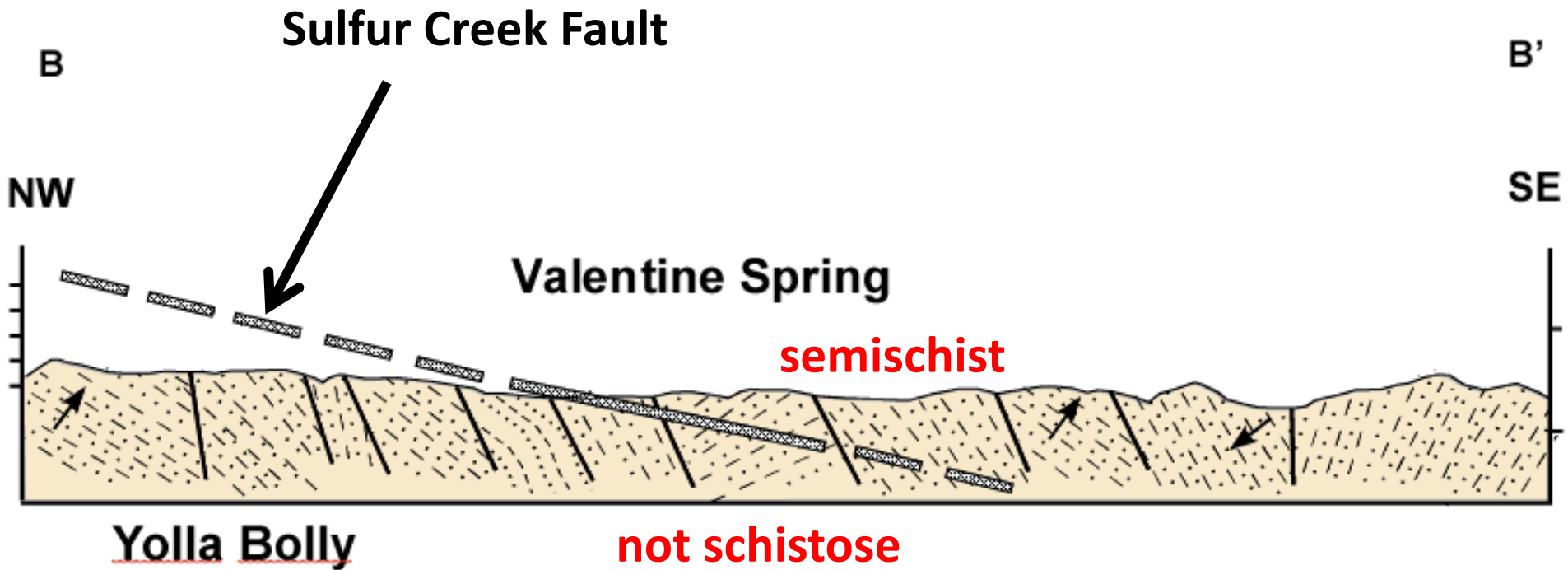
1000 m

Across faults there is commonly:

- a change in structural fabric (e.g. strike of bedding)
- a change in lithology.

Grindstone Creek

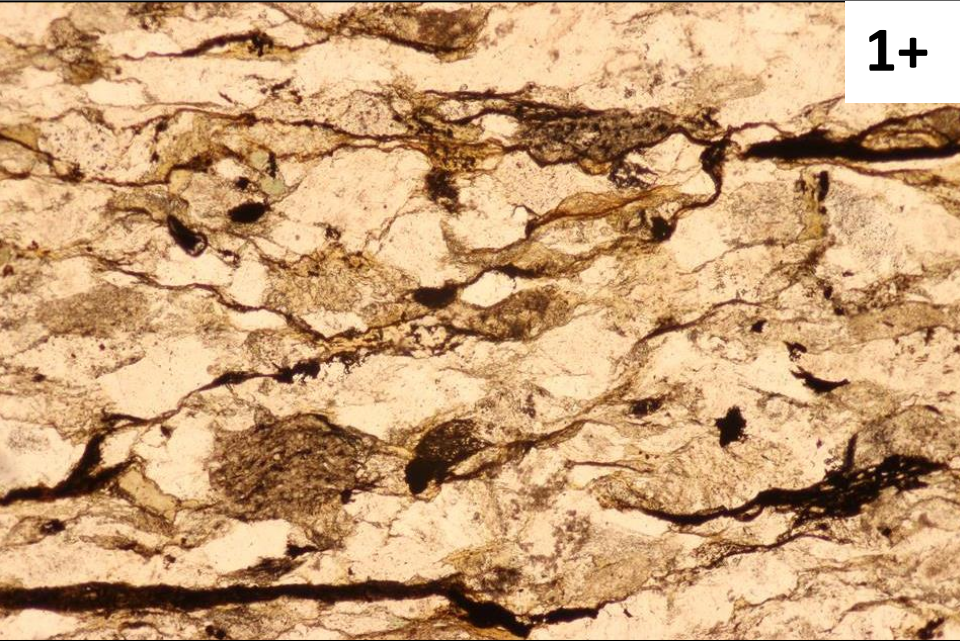




V = H

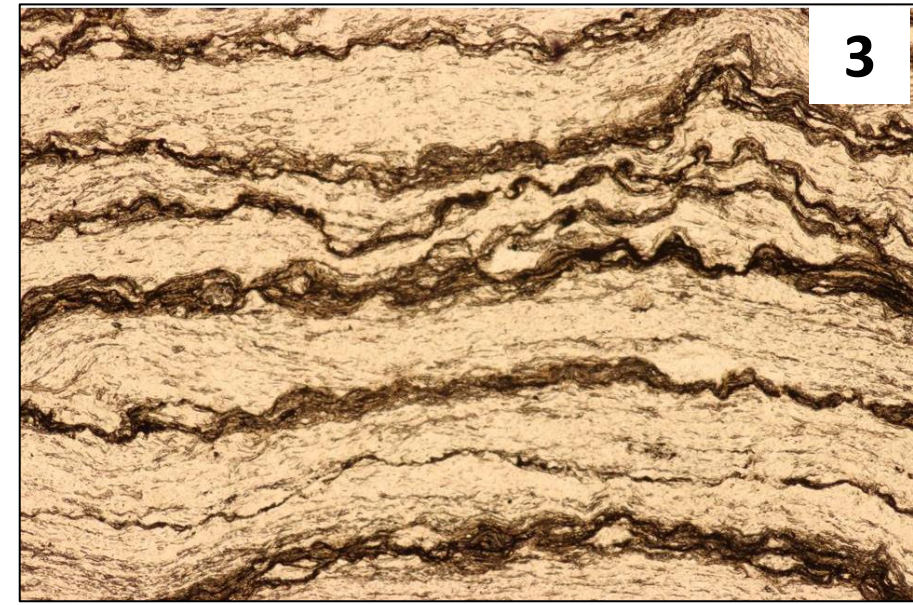
↑ up direction determined from graded bedding

1+



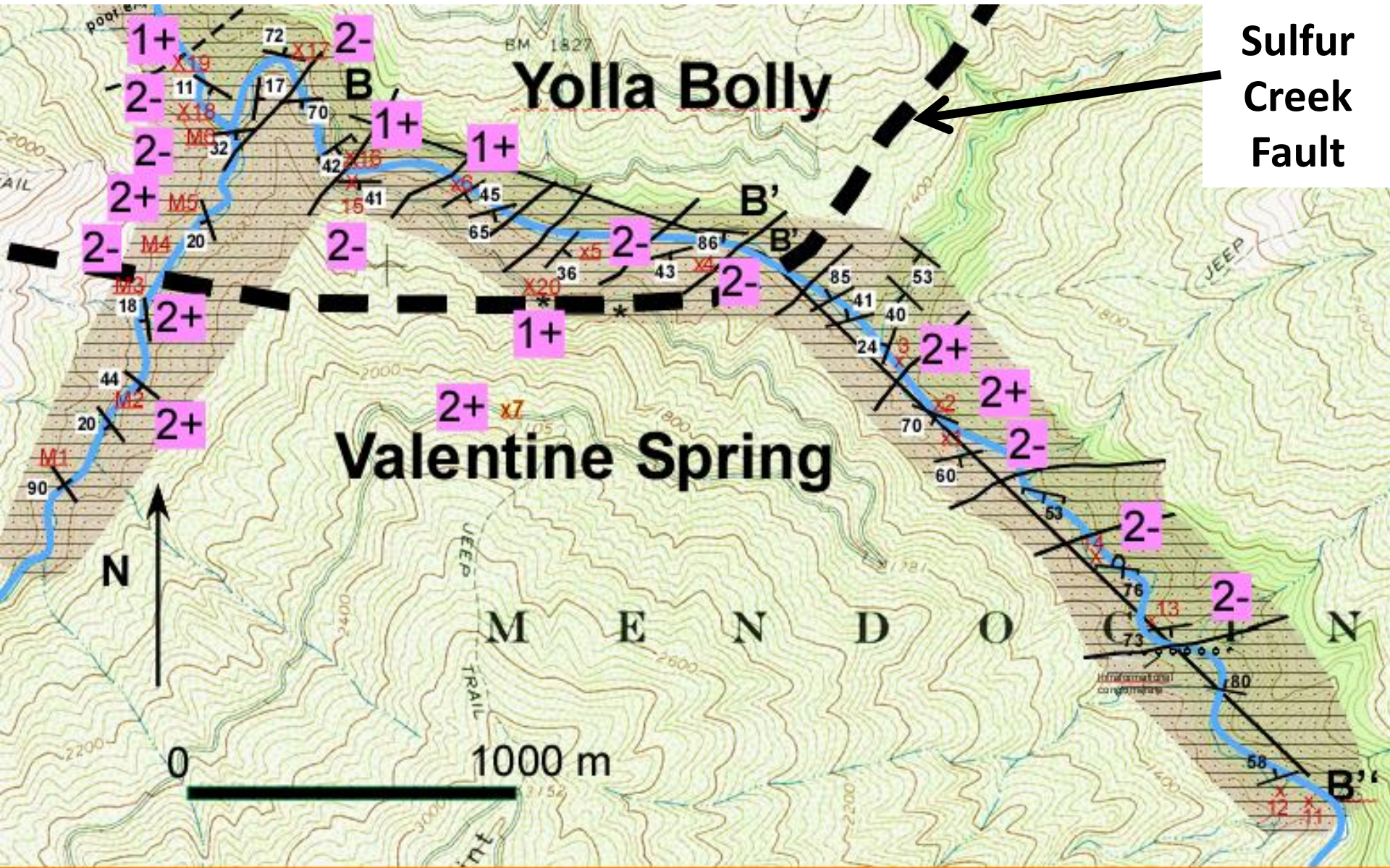
Textural Grades

3

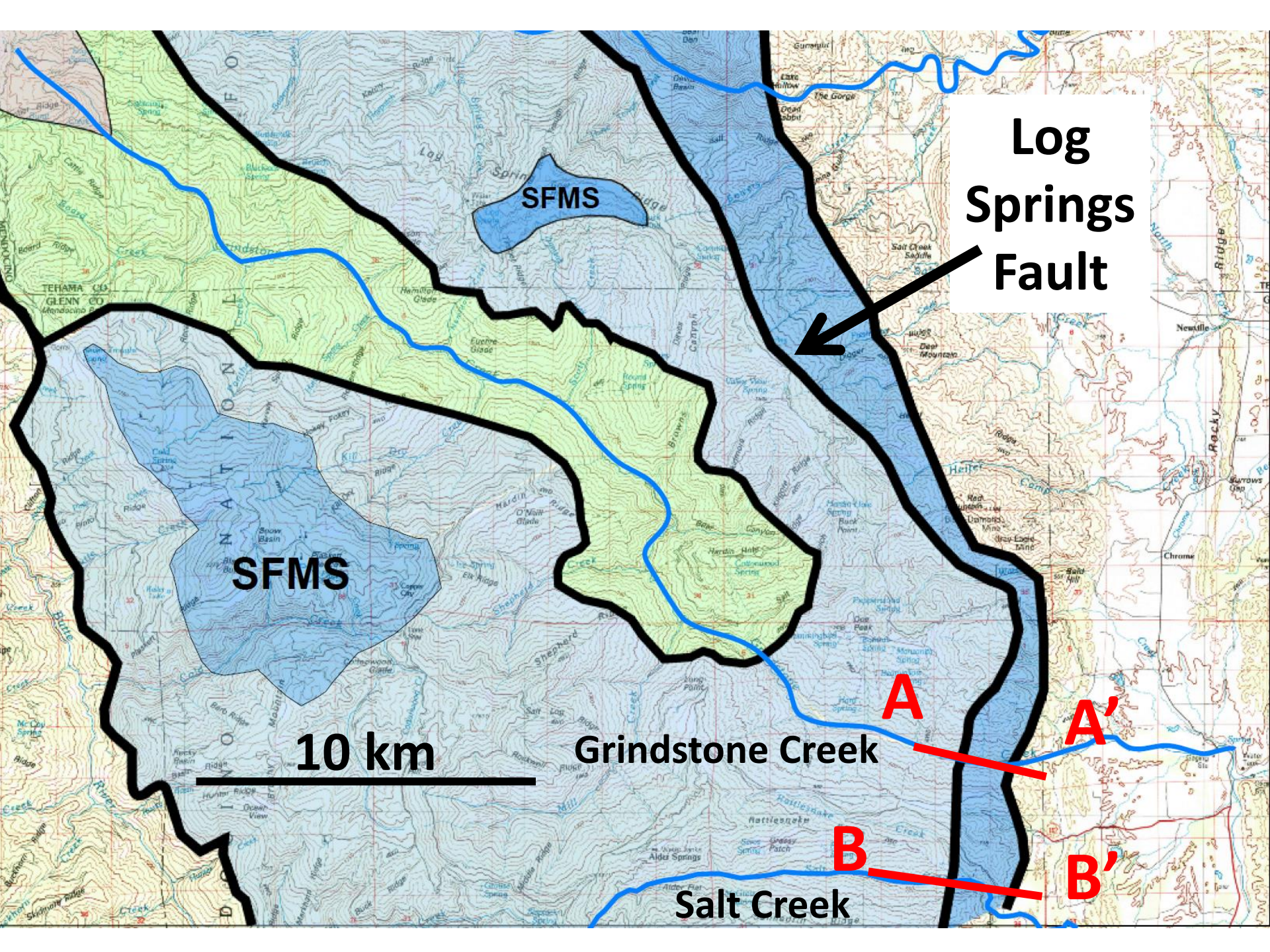


2





Sulfur
Creek
Fault



**Log
Springs
Fault**

SFMS

SFMS

10 km

Grindstone Creek

Salt Creek

A

A'

B

B'

South Fork Mtn Schist



Grindstone Creek

Valentine Spring



Grindstone Creek

