

Possible Windermere Rifts in the Mesoproterozoic Belt Basin of the Montana Rockies

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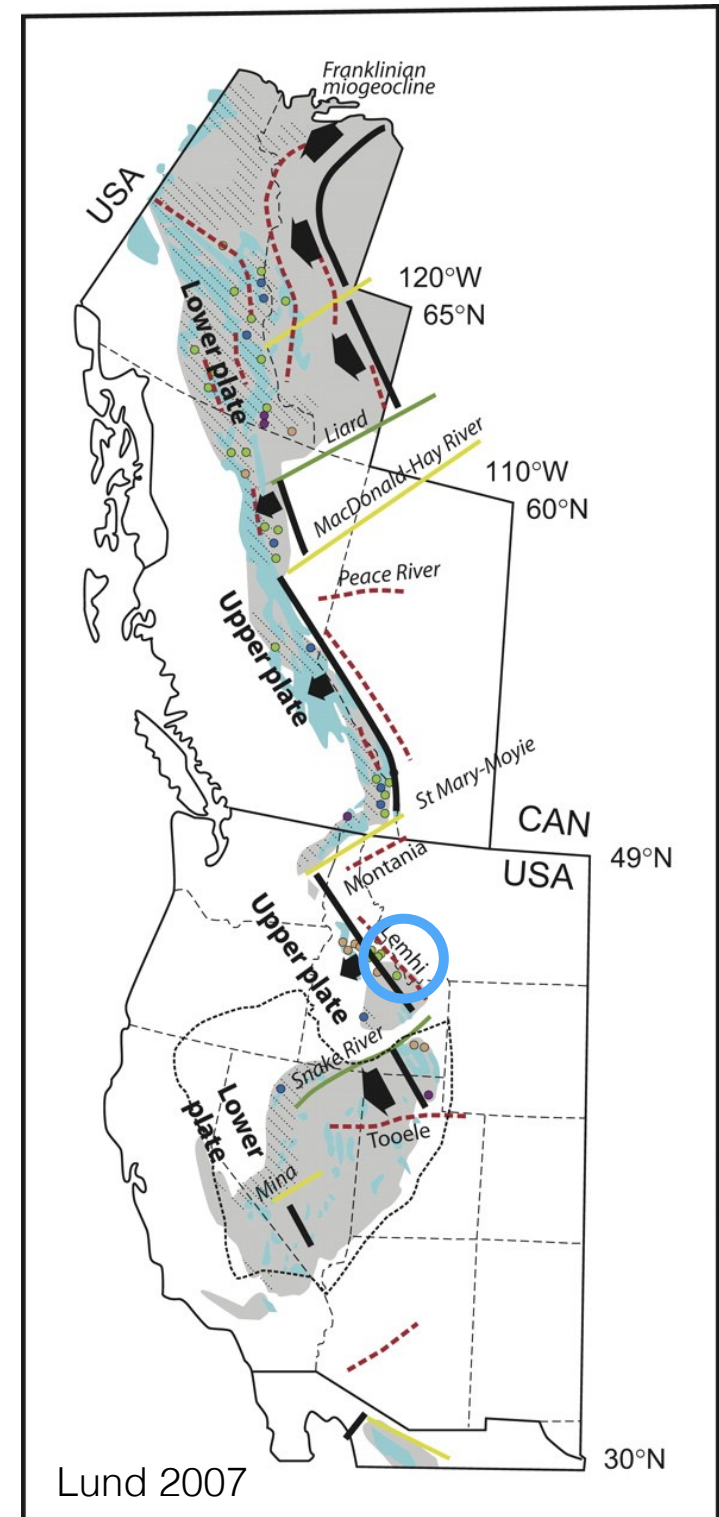






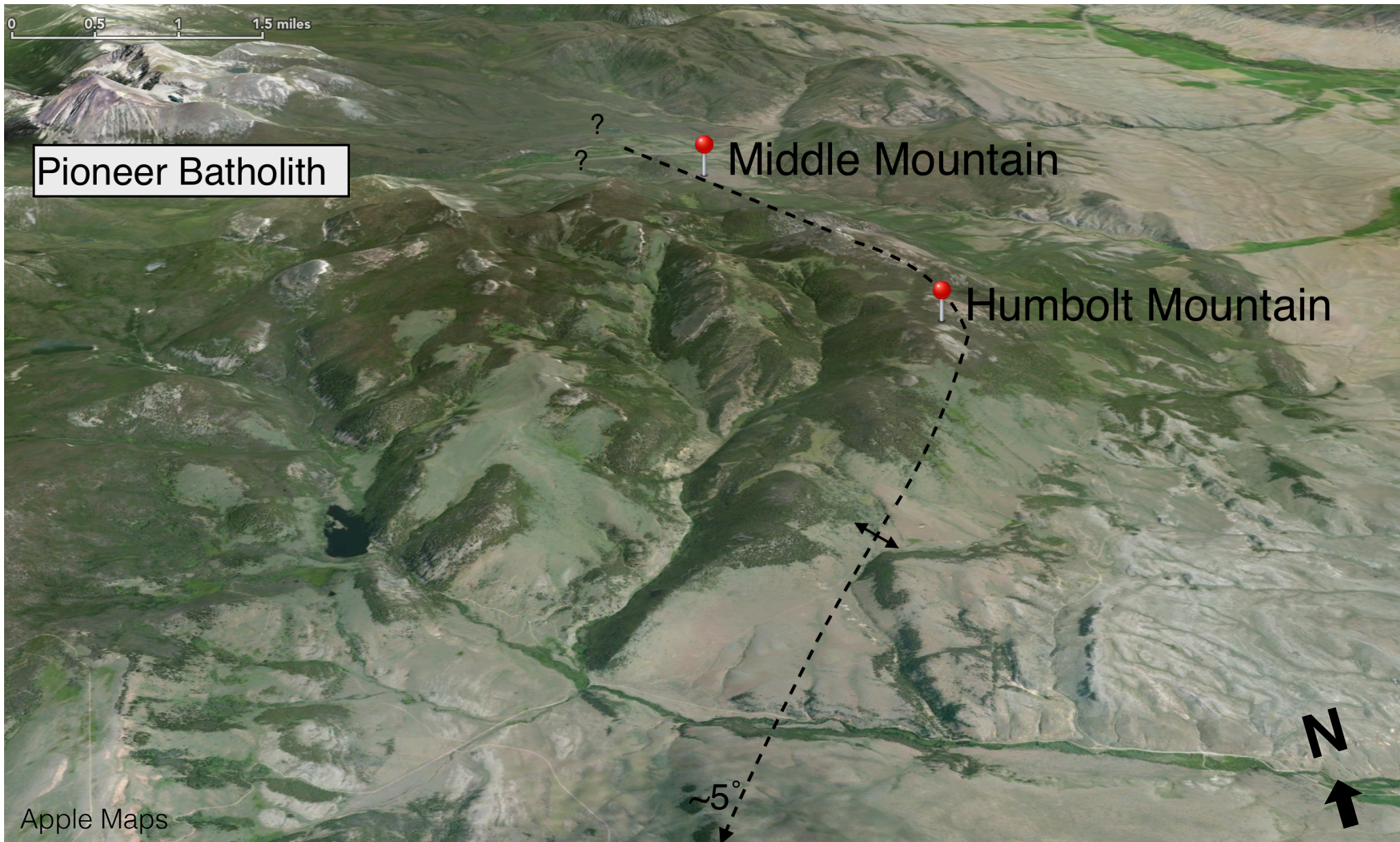
North America and the Windermere Supergroup:

- extensive
- helps characterize rifting at the margin of Laurentia
- Structural signature not previously recognized in MT

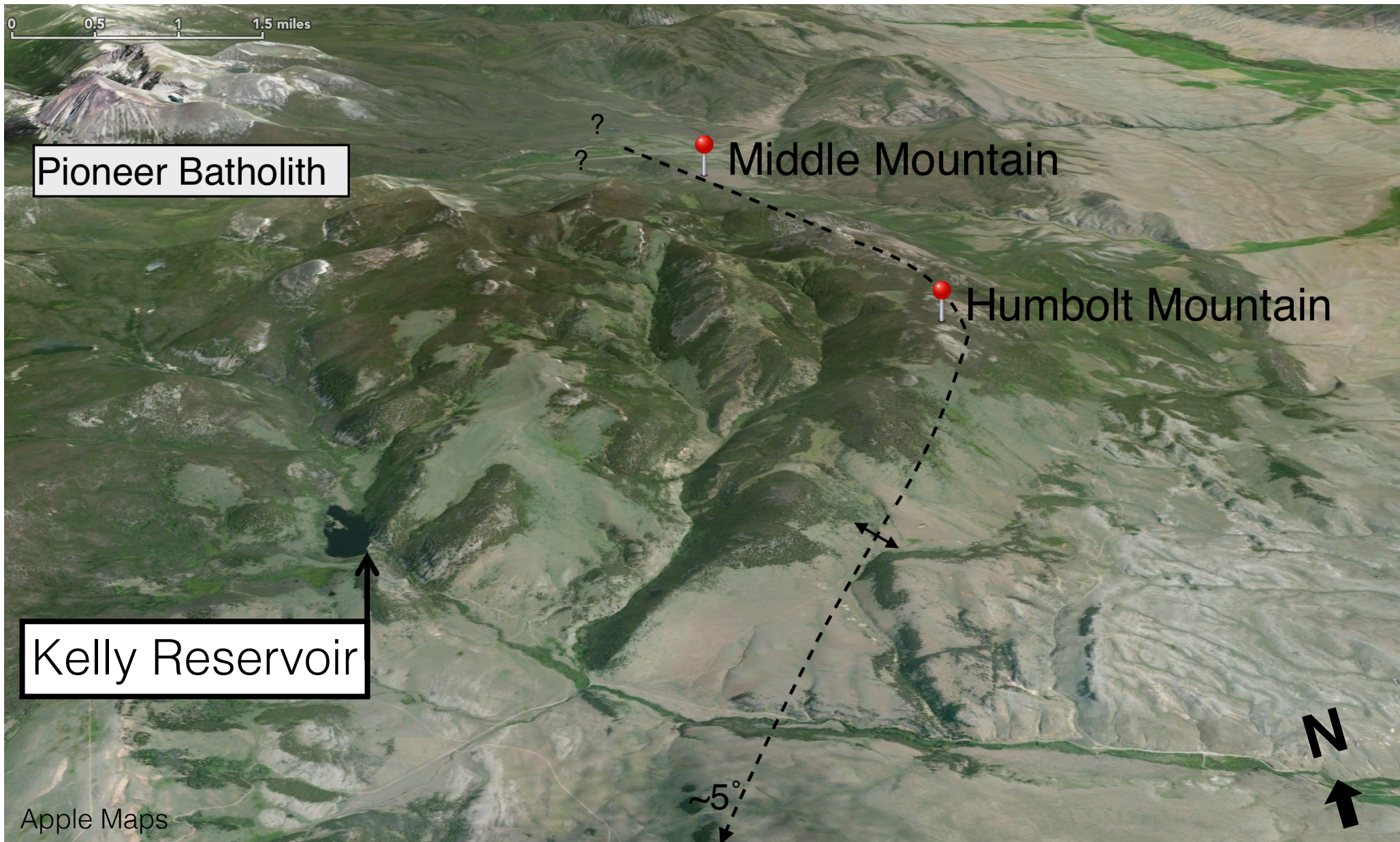




The Humboldt Anticline



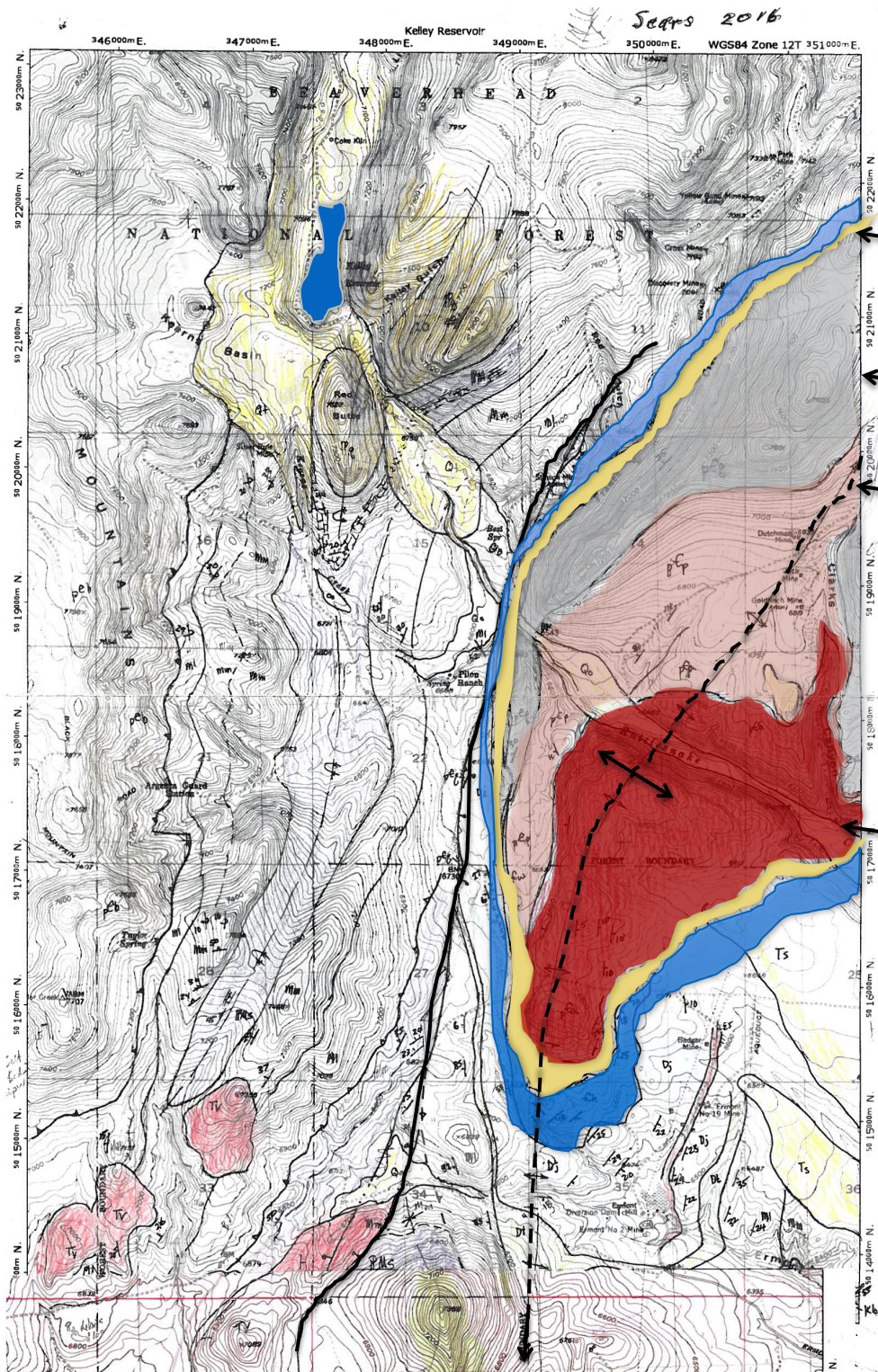
The Humboldt Anticline





Geologic Field Map, Kelly Reservoir

Geologic Field Map, Kelly Reservoir



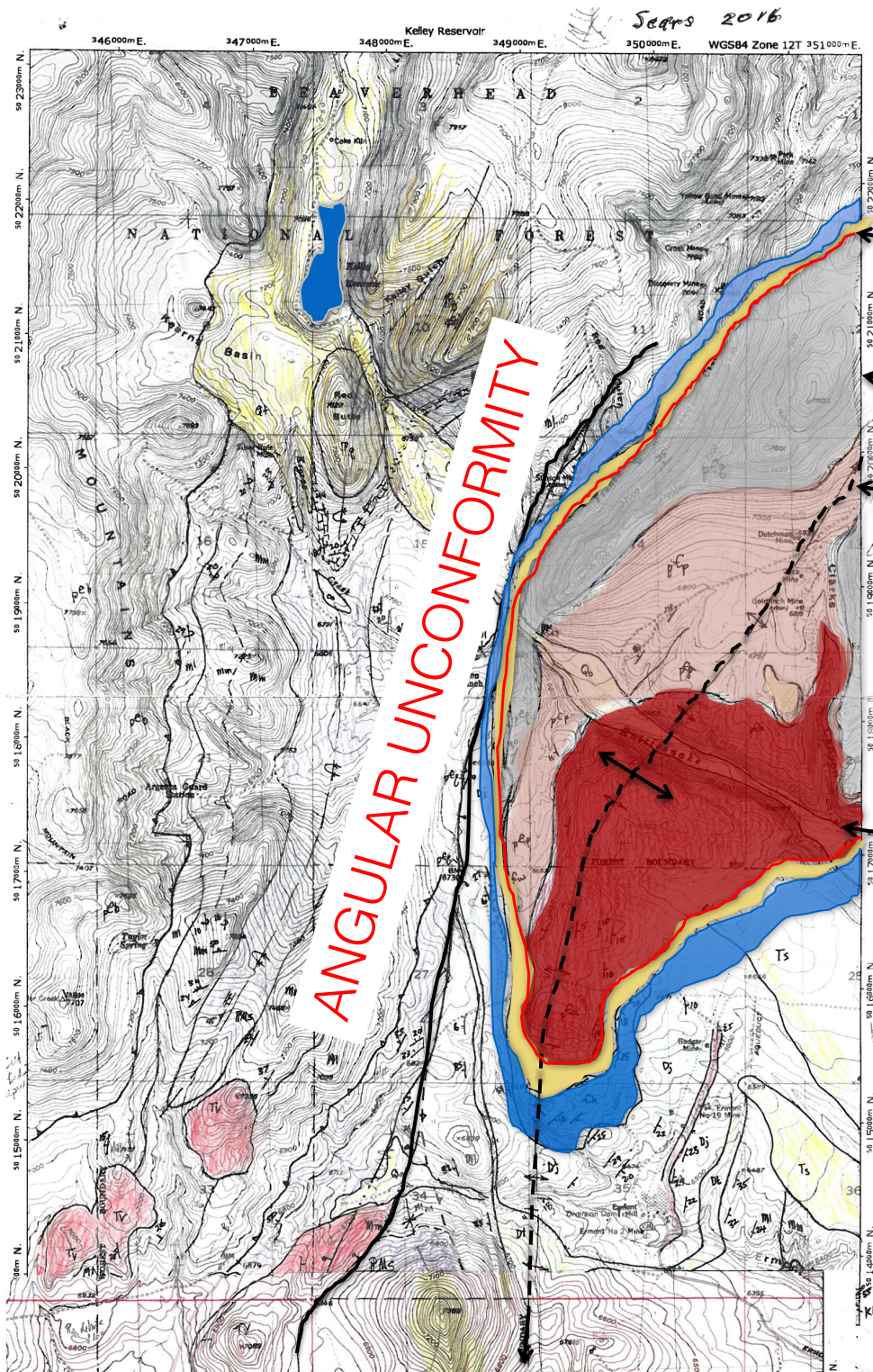
← Middle Cambrian Wolsey Shale

← White Quartzite (Cambrian*)

← Phyllite

← Red Quartzite

Geologic Field Map, Kelly Reservoir



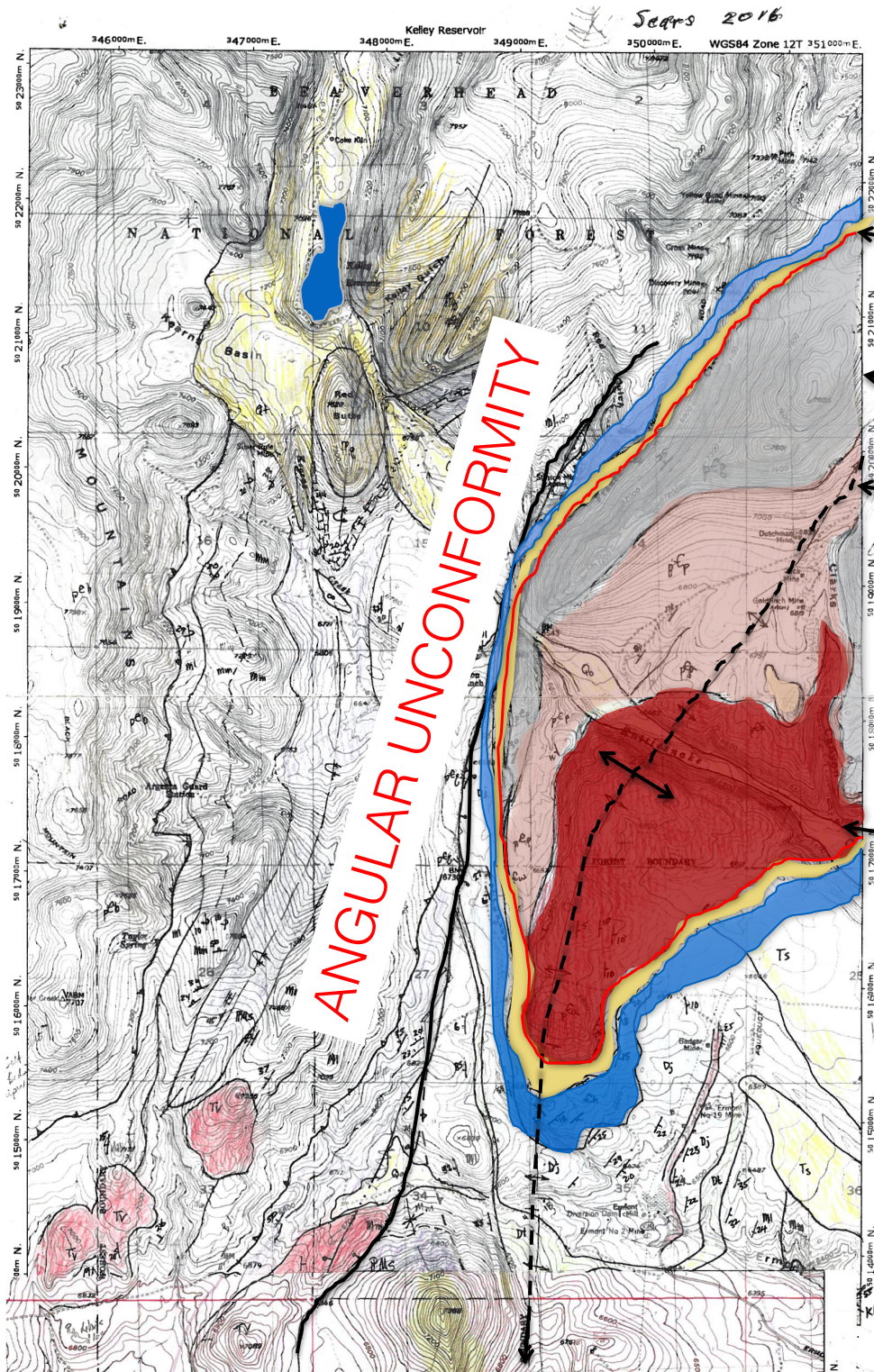
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Geologic Field Map, Kelly Reservoir



Middle Cambrian Wolsay Shale

- tapering wedge of sediment

W

P

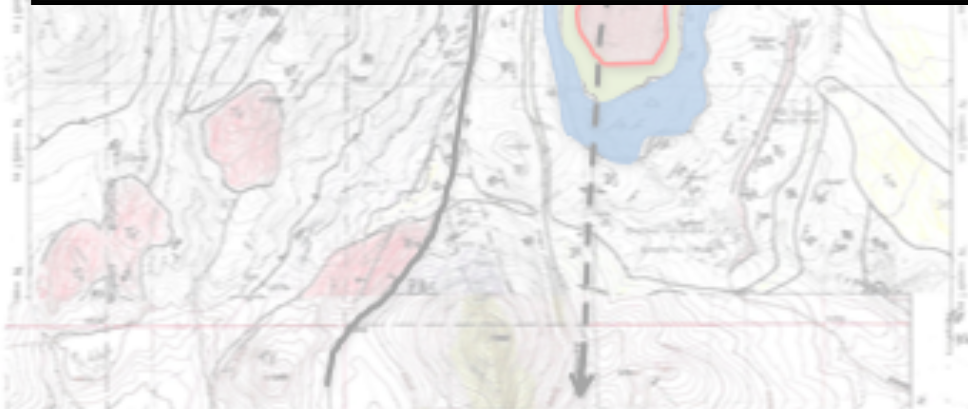
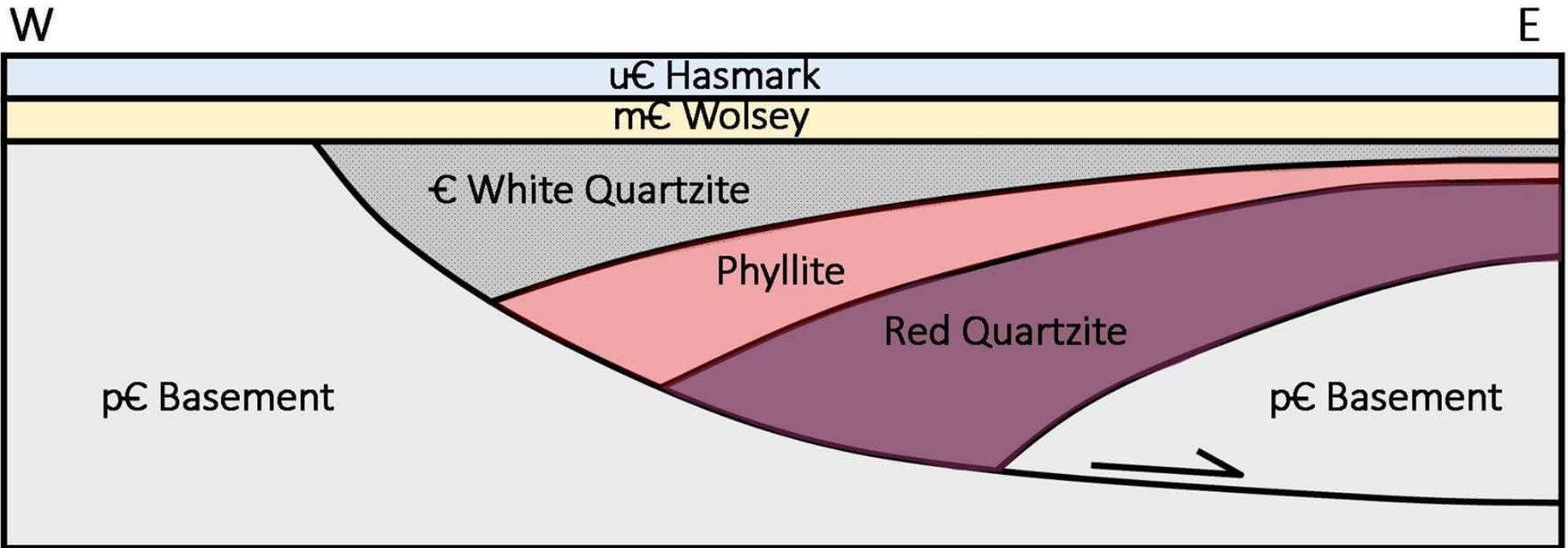
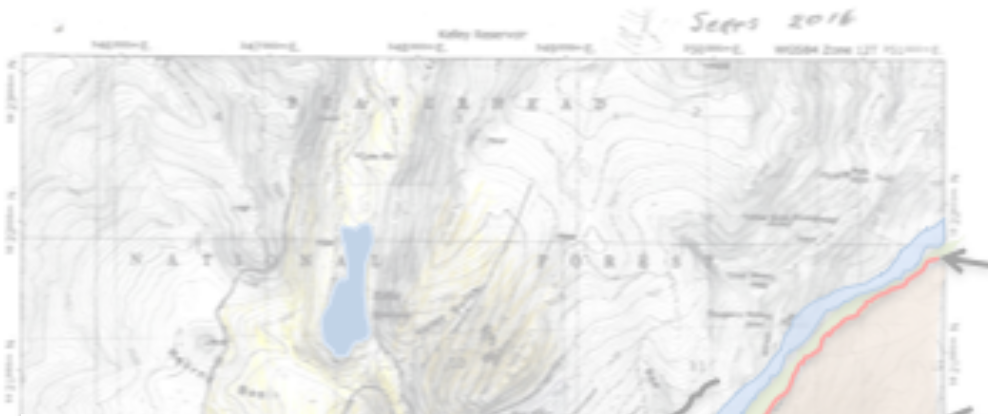
- Neoproterozoic to Cambrian

Re

- reactivated reverse fault

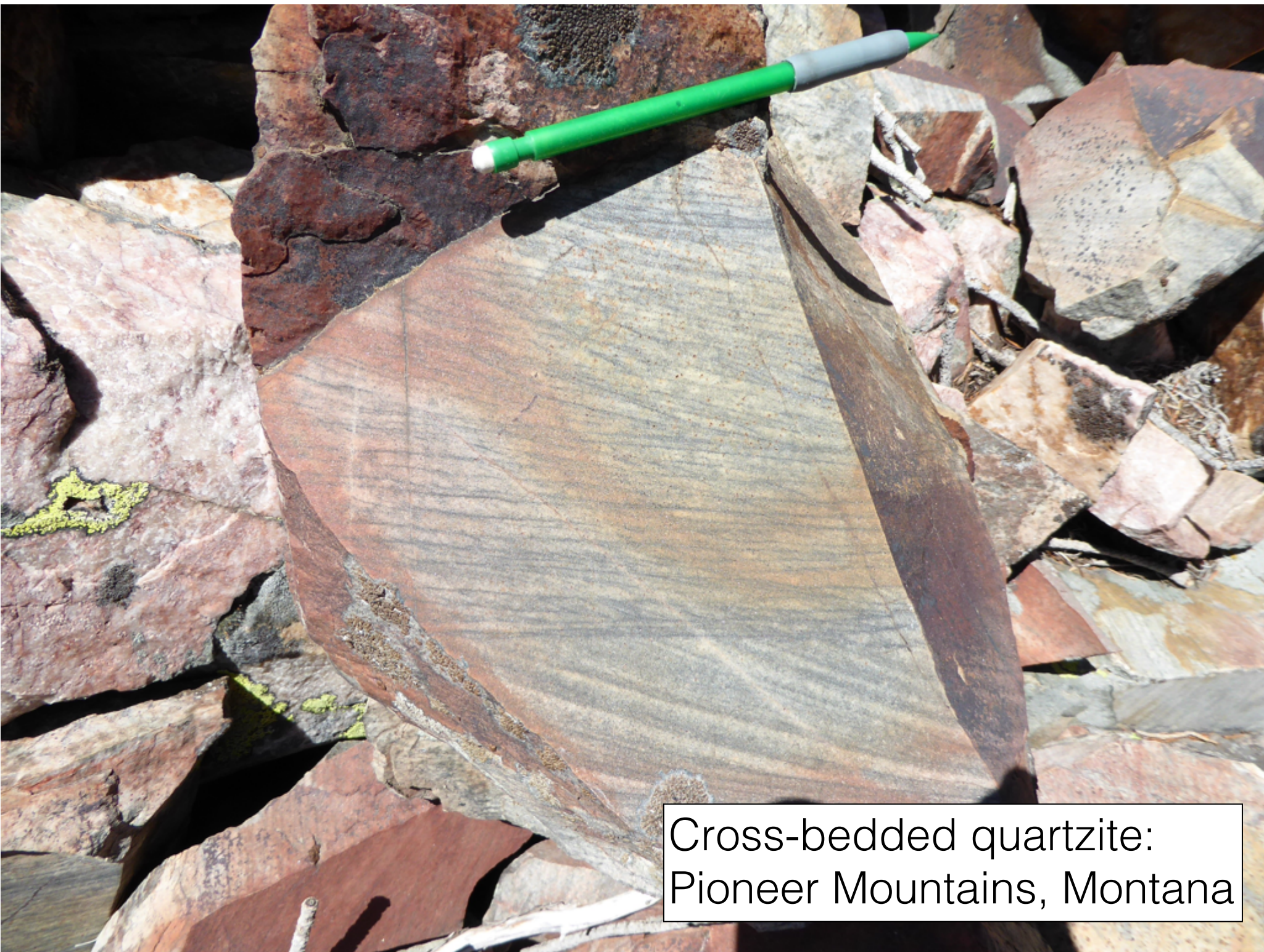
- inverted half-graben

Schematic Cross Section, Kelly Reservoir





contact-metamorphosed quartzite/ argillite:
Pioneer Mountains, Montana



Cross-bedded quartzite:
Pioneer Mountains, Montana



Massively bedded quartzite:
Pioneer Mountains, Montana



Massively bedded quartzite:
Pioneer Mountains, Montana



Rippled quartzite:
Pioneer Mountains, Montana

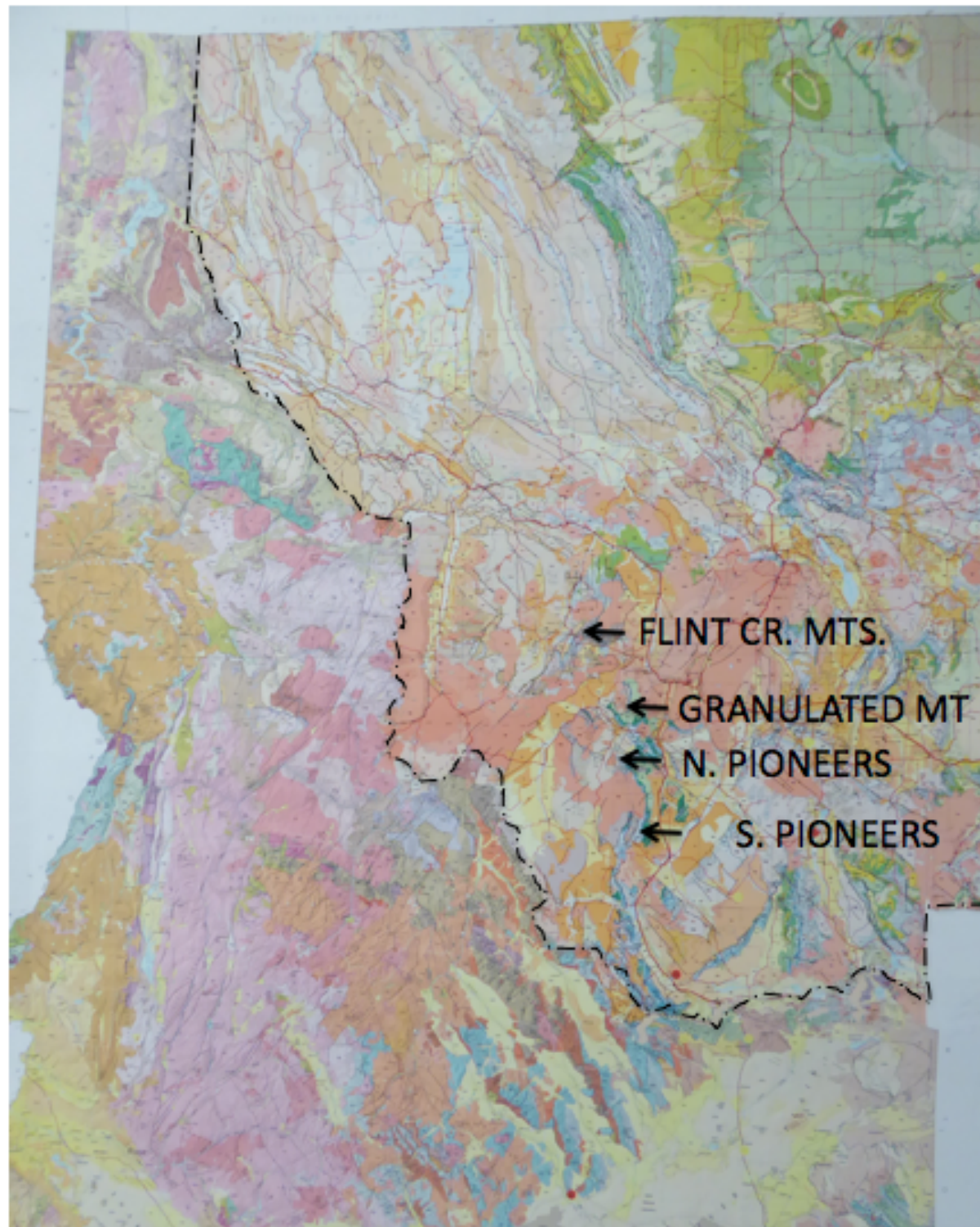


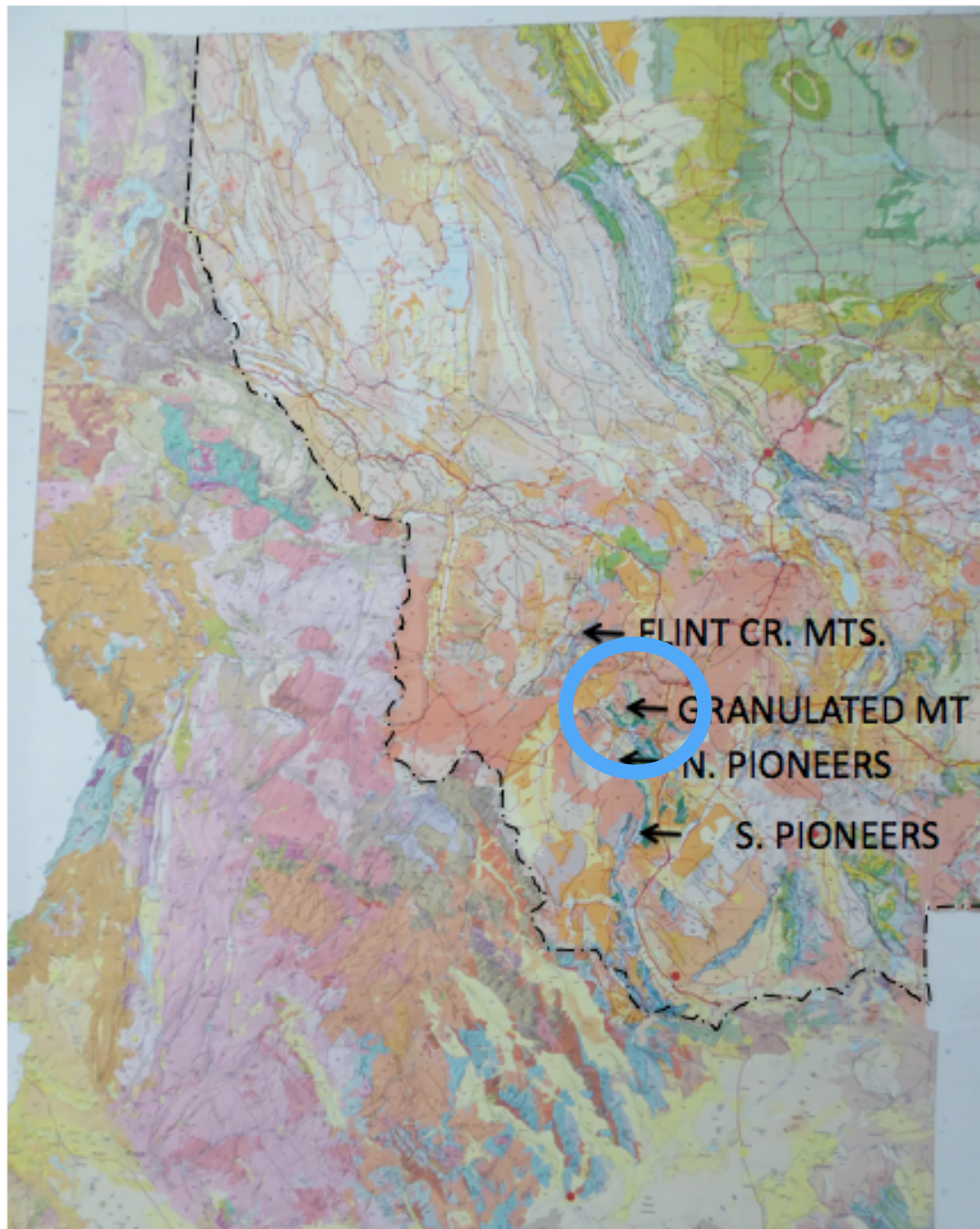
Cross-bedded quartzite:
Pioneer Mountains, Montana

A hiker wearing a green shirt, a light-colored hat, and a backpack is seen from behind, looking out over a vast mountain landscape. The foreground is filled with large, light-colored rocks. The middle ground shows a valley with green hills and dense evergreen forests. In the background, majestic mountains with patches of snow rise against a blue sky with scattered white clouds.

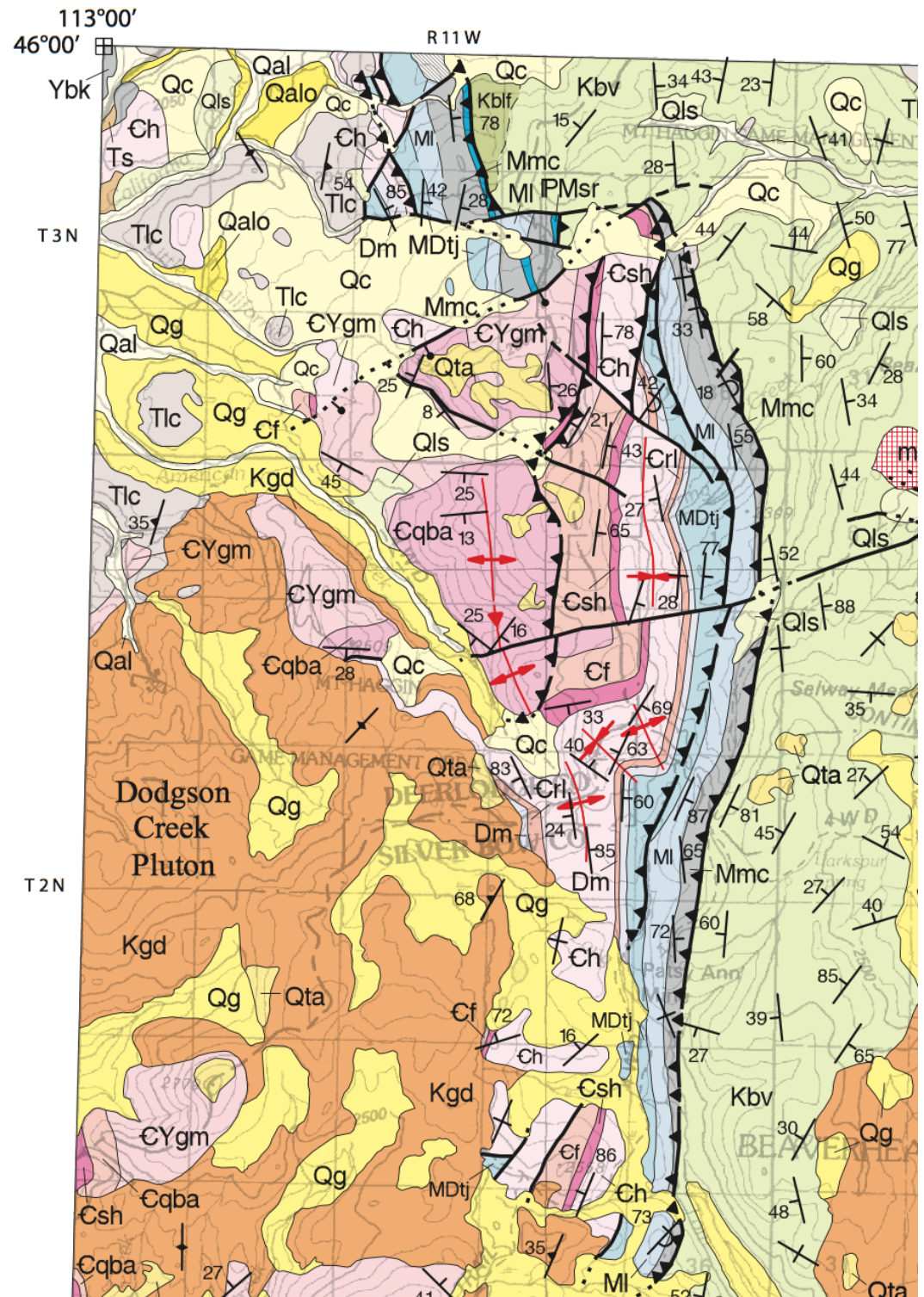
Pioneer Batholith

Argenta White Quartzite





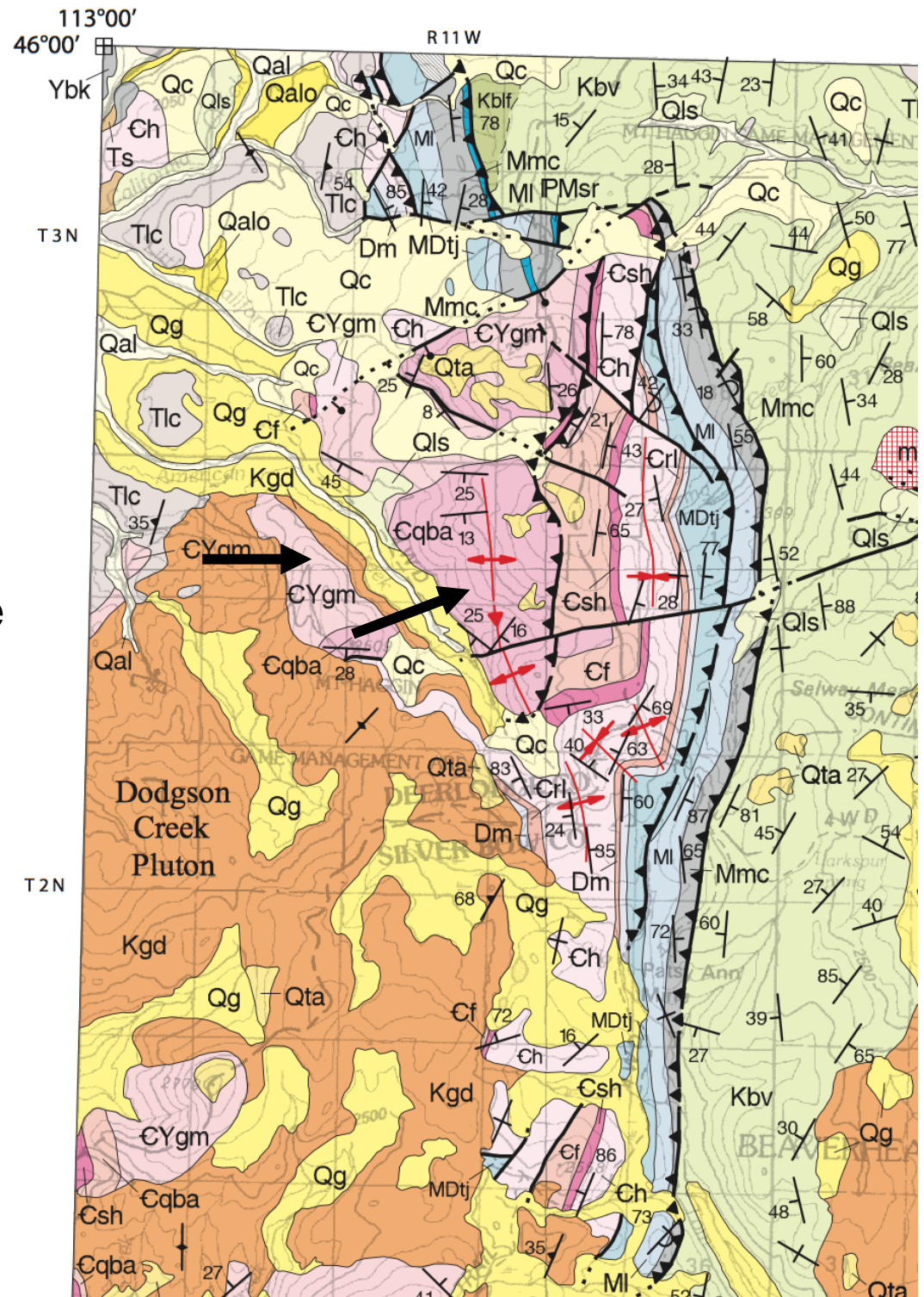
Granulated Mt. : Butte South Quadrangle



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CYgm: Quartzite of Granulated Mt

Cqba: Cambrian argillite and quartzite

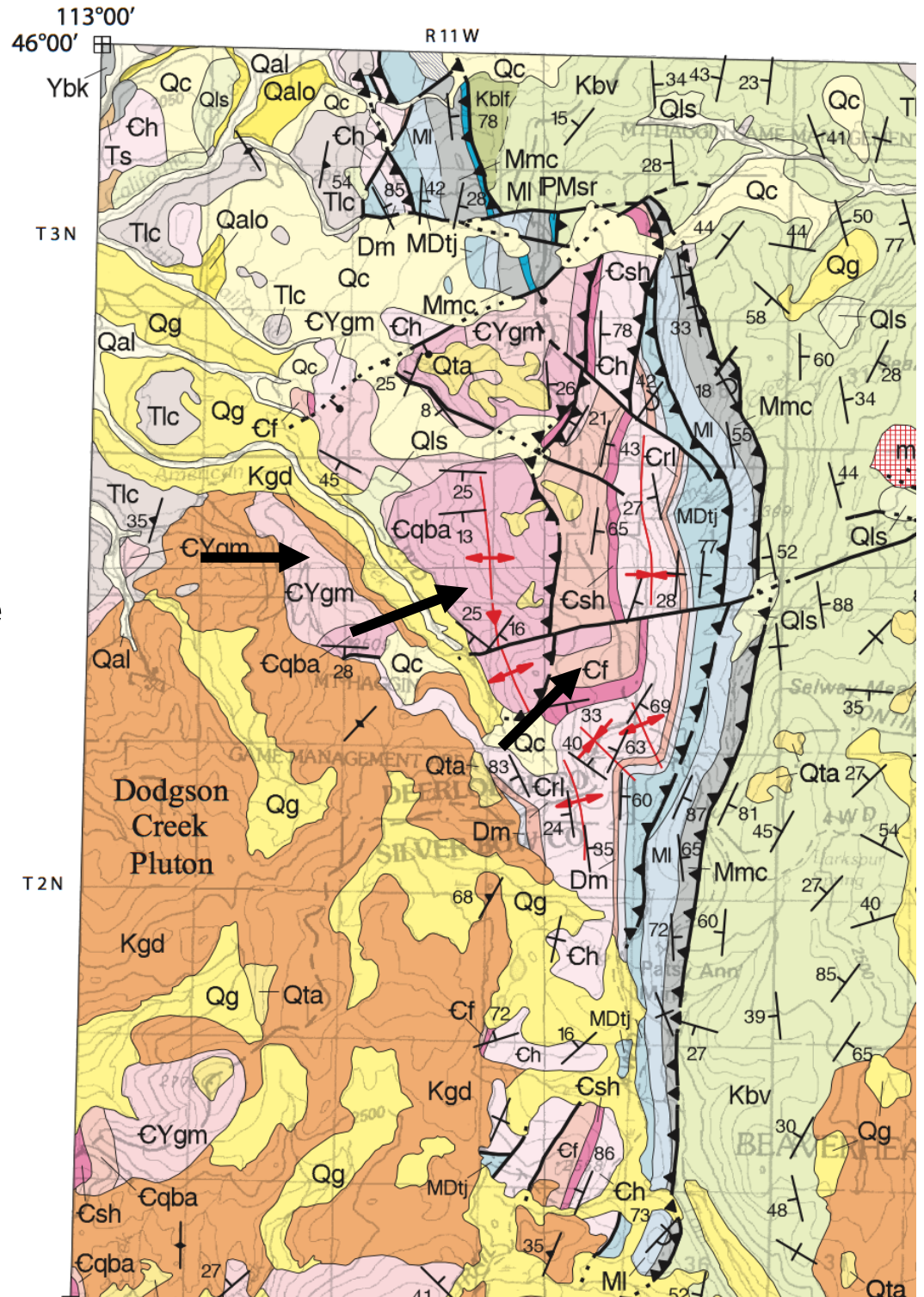


Granulated Mt. : Butte South Quadrangle

CYgm: Quartzite of Granulated Mt

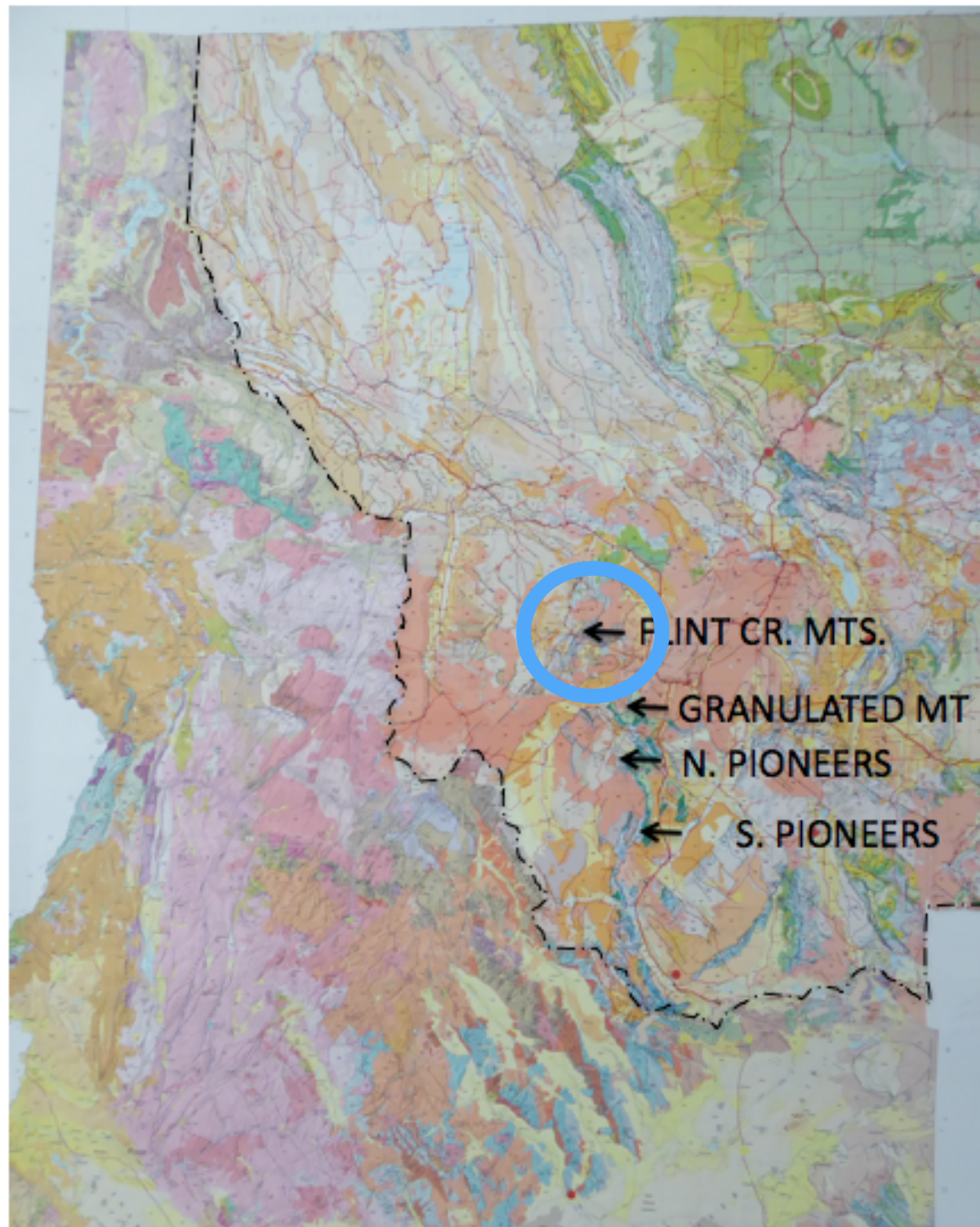
Cqba: Cambrian argillite and quartzite

Cf: Cambrian Flathead Ss

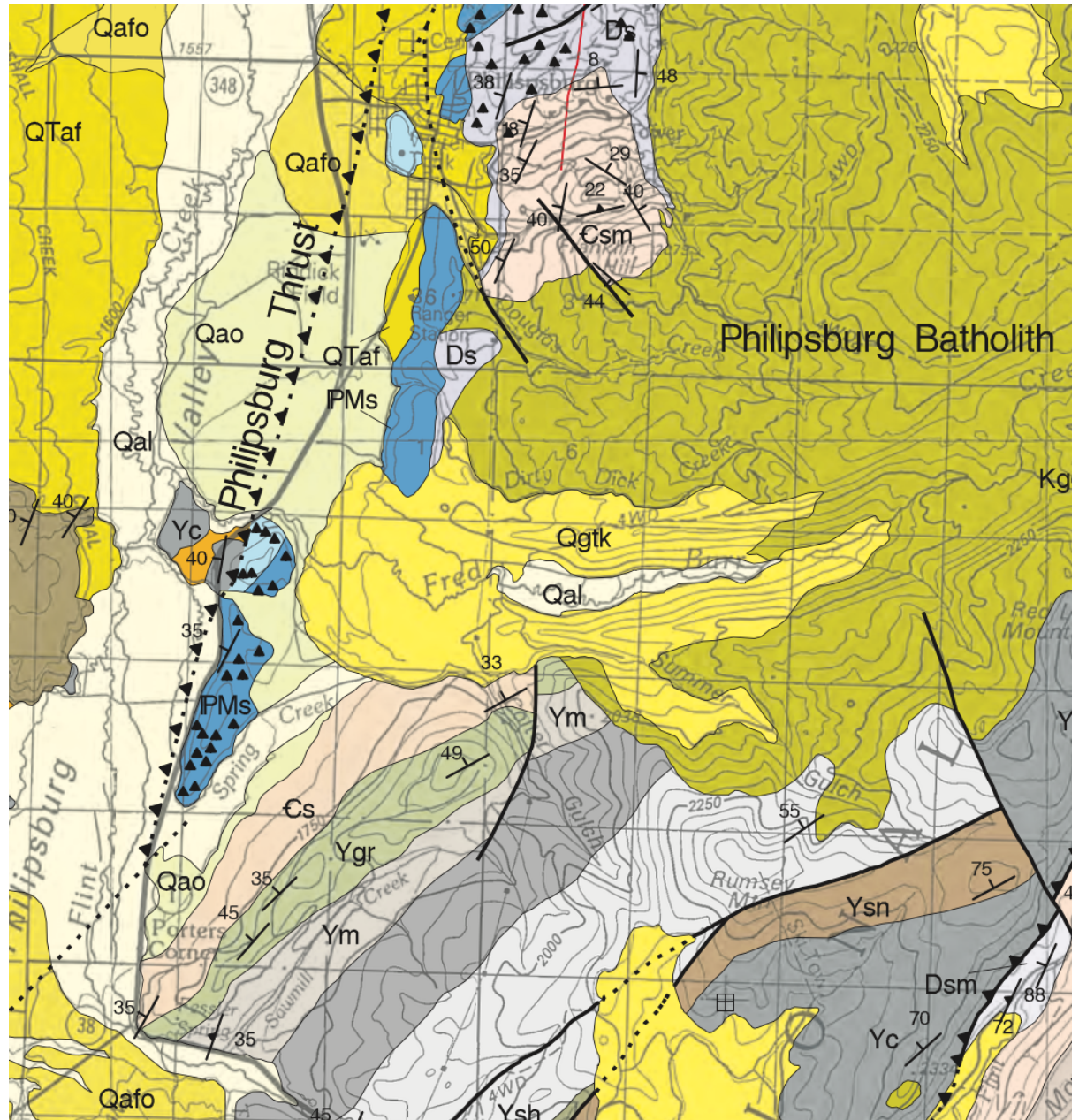


Butte South Quadrangle

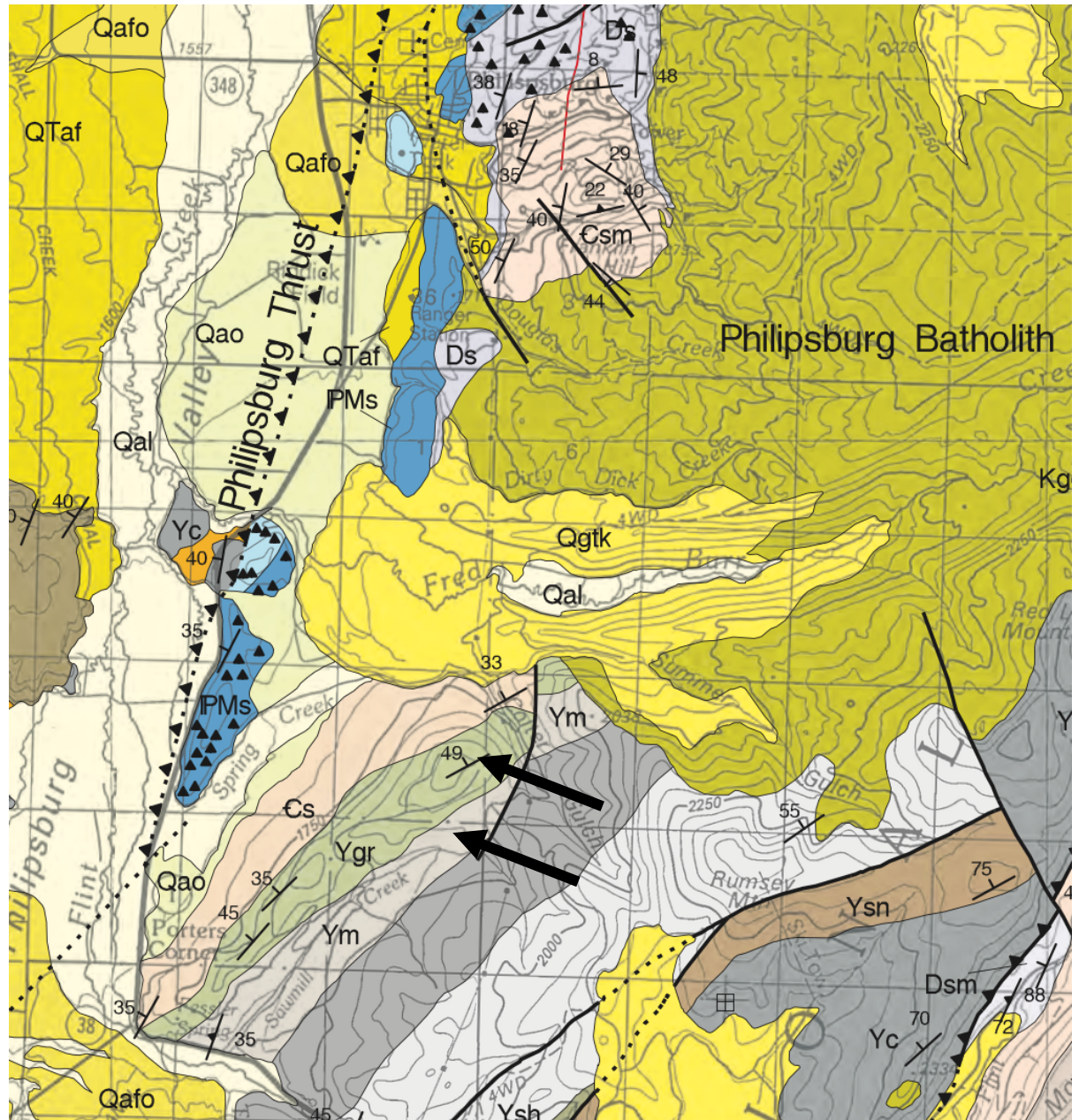




Flint Creek Mts. : Porter's Corner



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Ygr: Garnet Range & Pilcher

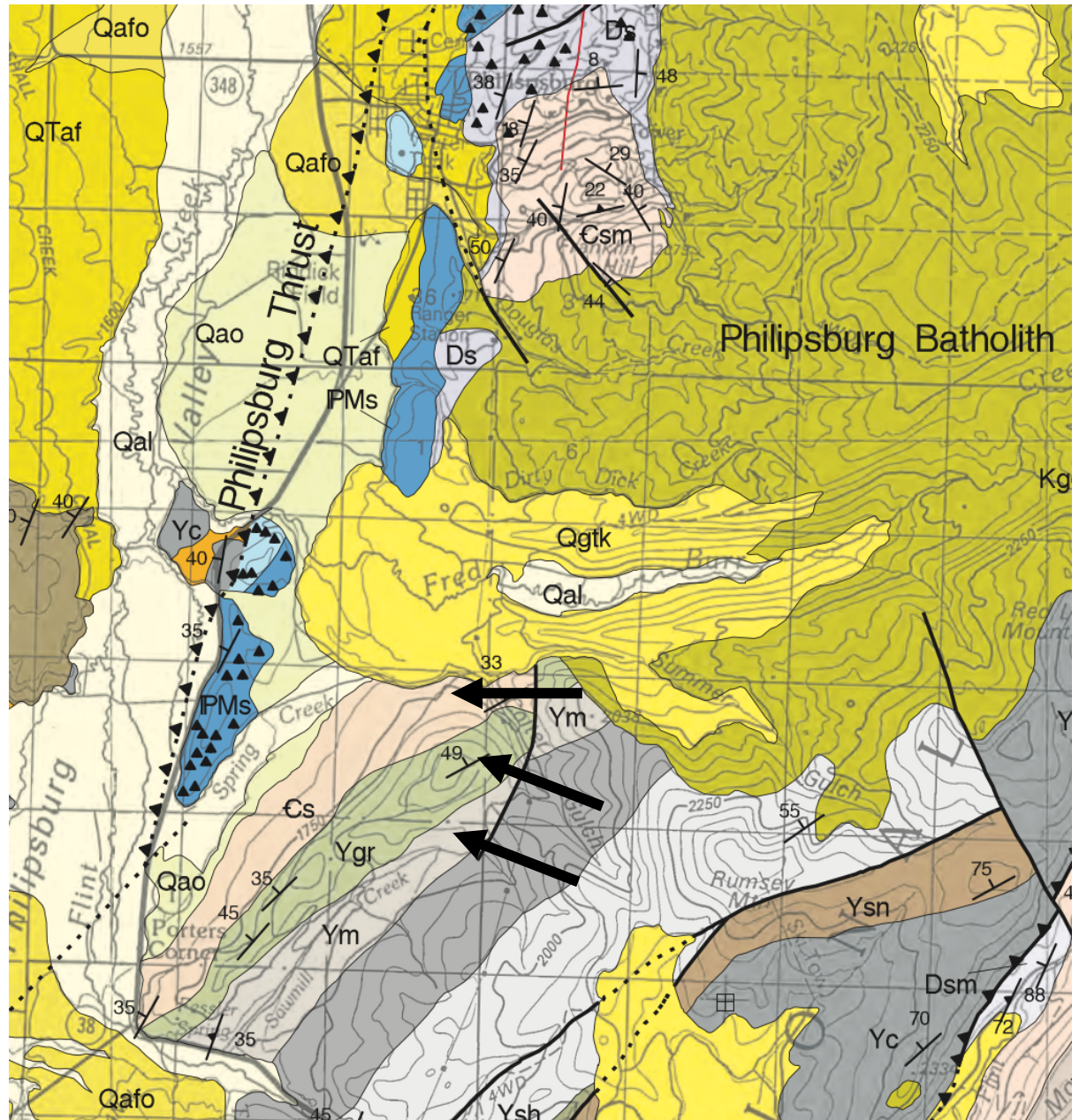
Ym: McNamara Formation

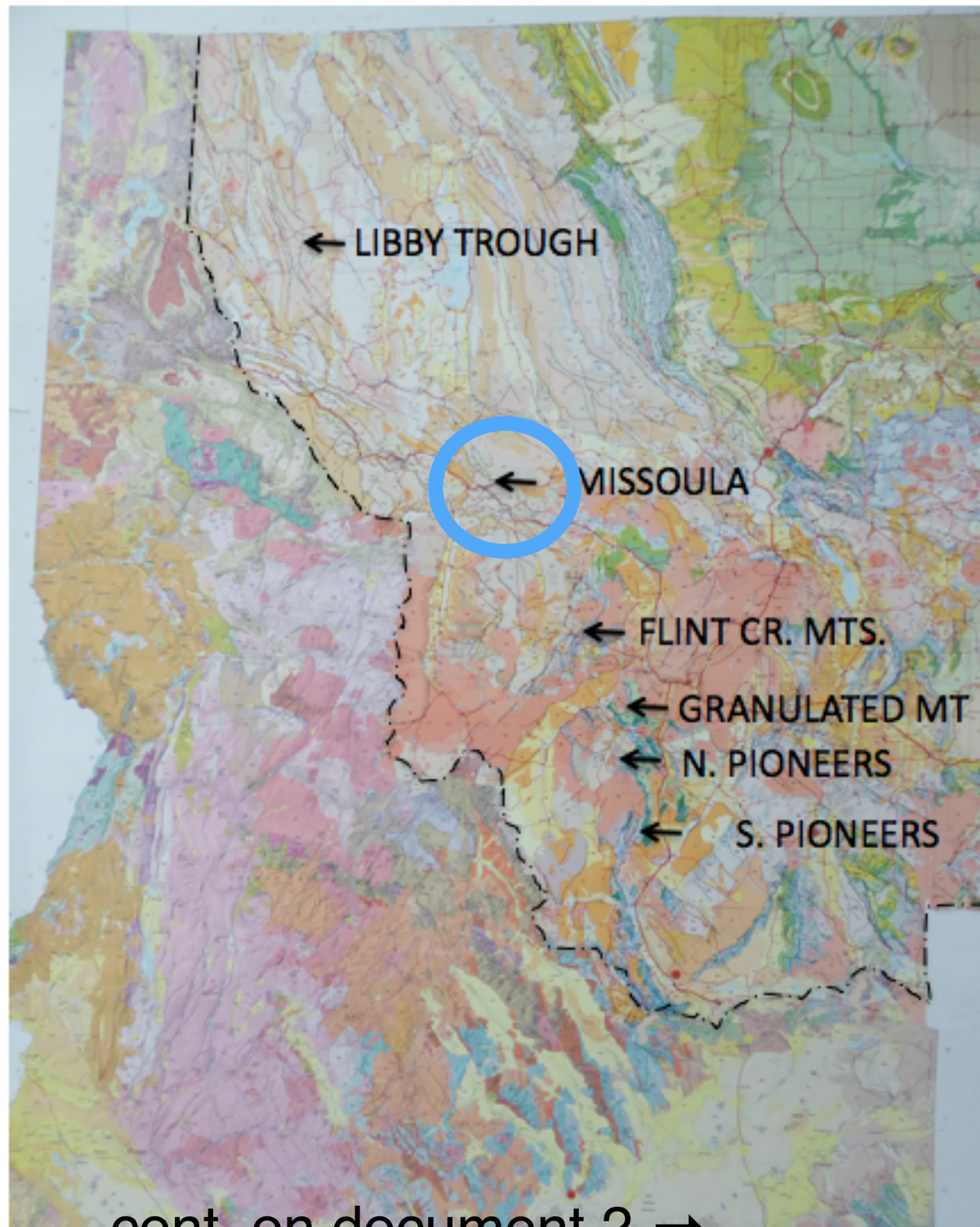
Flint Creek Mts. : Porter's Corner

Cs: Cambrian sedimentary
(includes Flathead Ss)

Ygr: Garnet Range & Pilcher

Ym: McNamara Formation





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