



# Compatible Indigenous & Geoscientific Knowledge

Flathead Indian Reservation  
Northwest Montana

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# Challenges for Geoscience Education in the Tribal Community

- Learning Objectives – Cultural Content
- Cultural Incongruities
- Tribal Student Enrollment



# Project Origination

- National Science Foundation grant
- Success of geoscience education programs in tribal communities depends in part on close relationships between scientists and community members
- Also important is the inclusion of traditional earth science knowledge in the curriculum.
- The goal was to blend earth science study, traditional tribal knowledge, and relevant oral histories.





Meetings

Interviews

Field Trips

Research

Writing

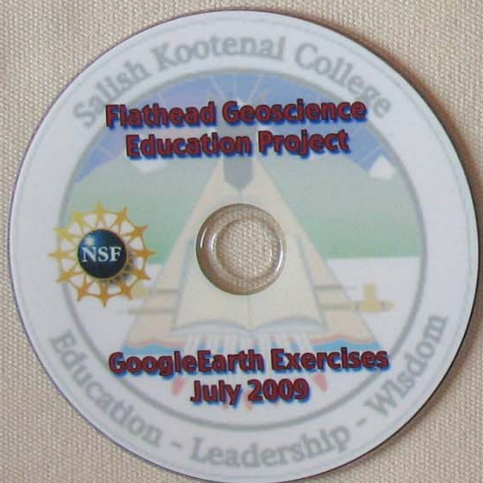
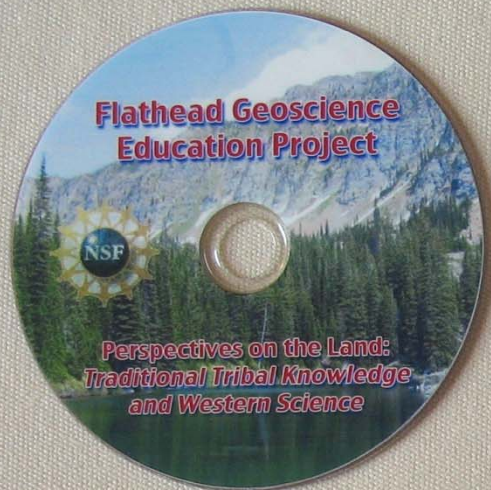
Editing

Filming

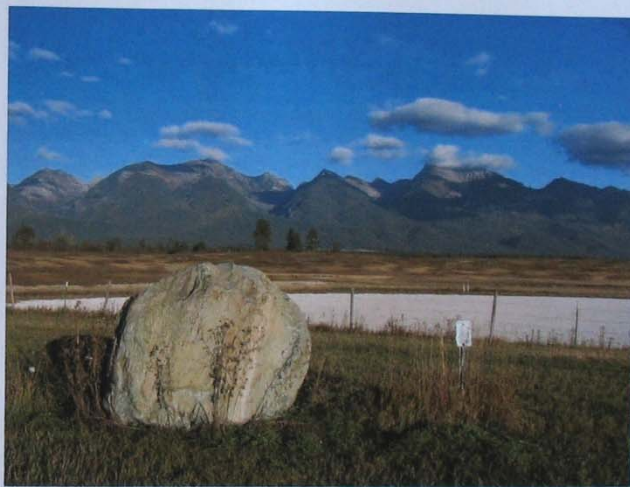






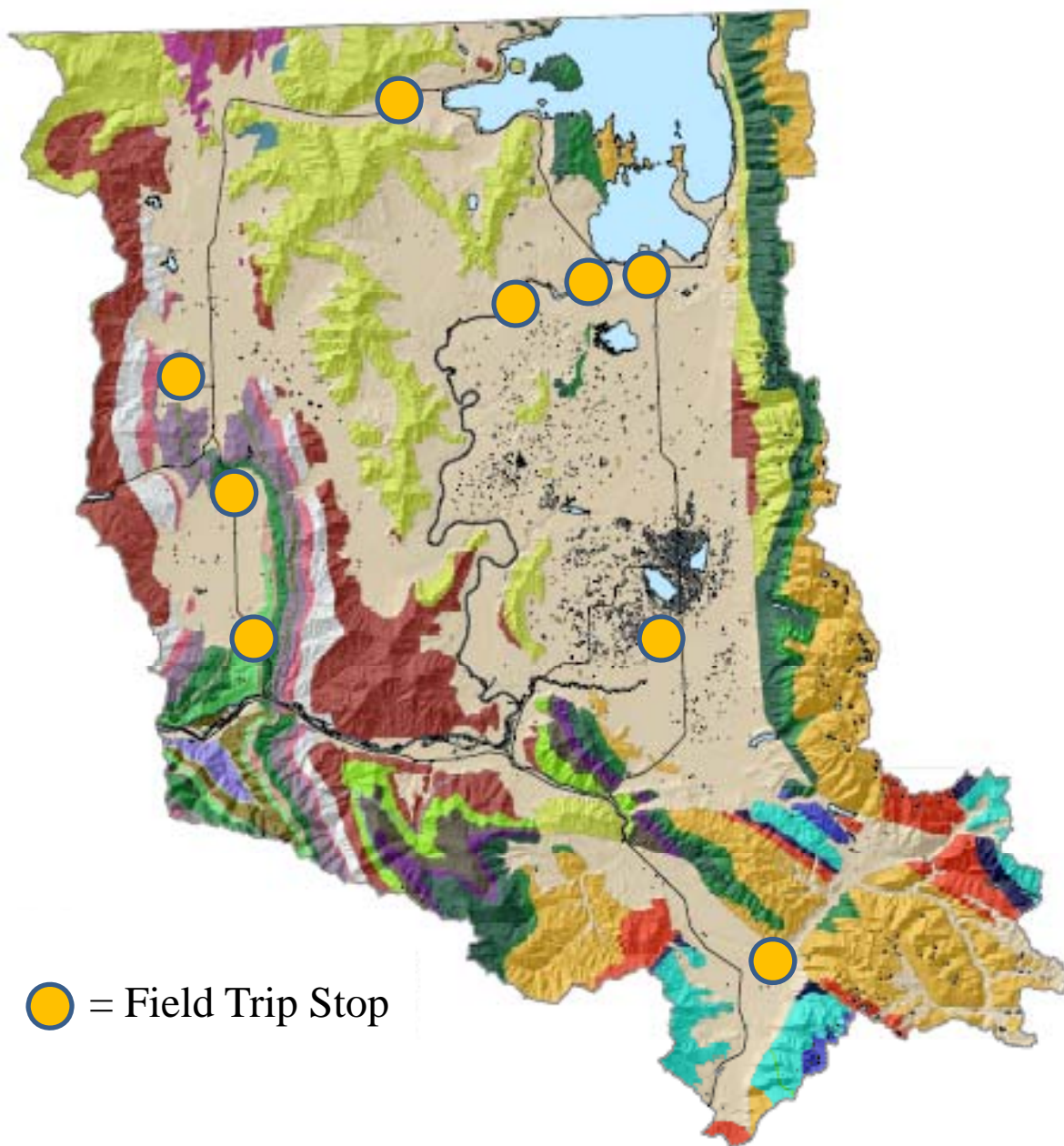


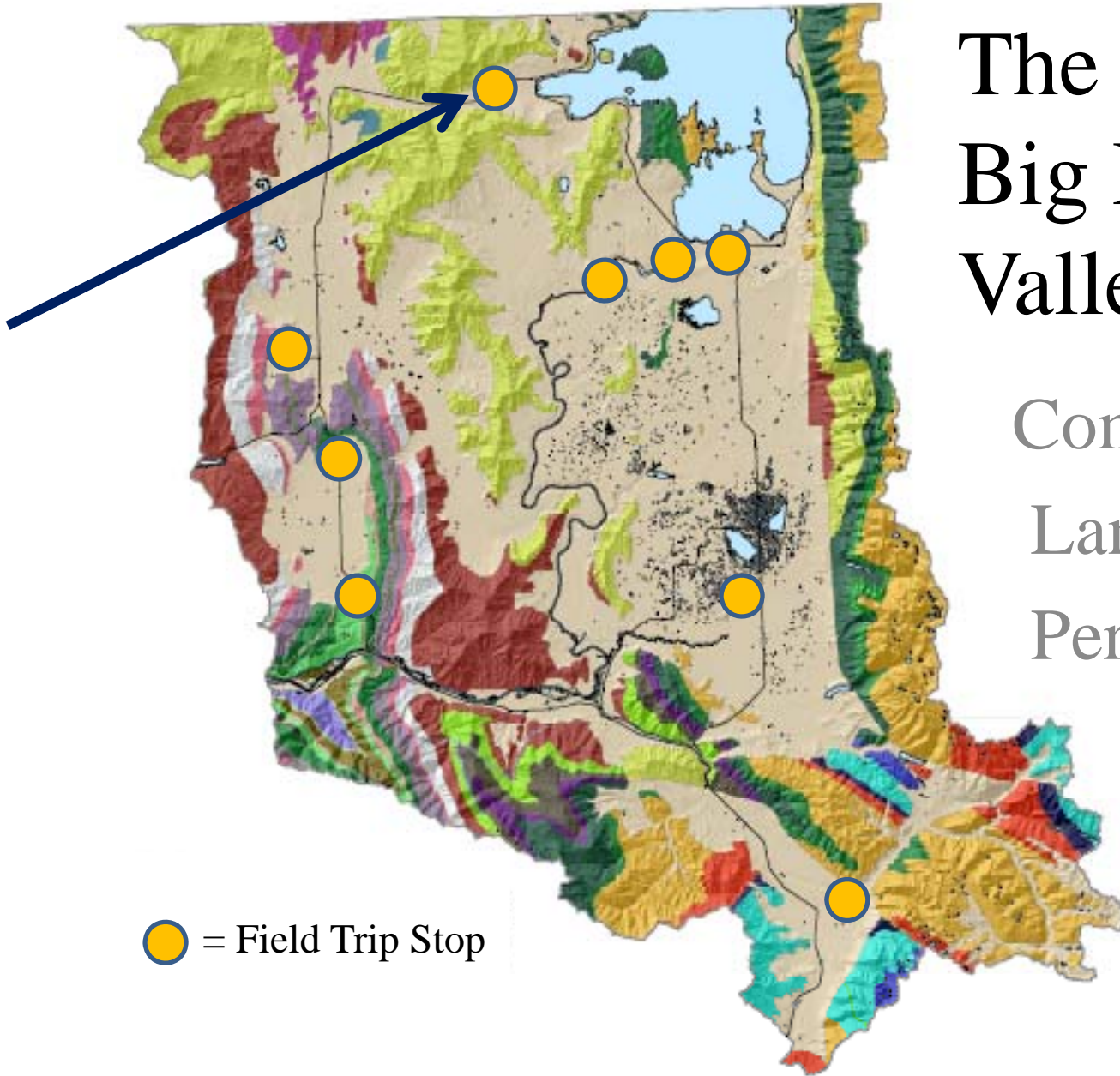
## Flathead Geoscience Education Project Teacher Reference Guide











# The Big Draw Valley:

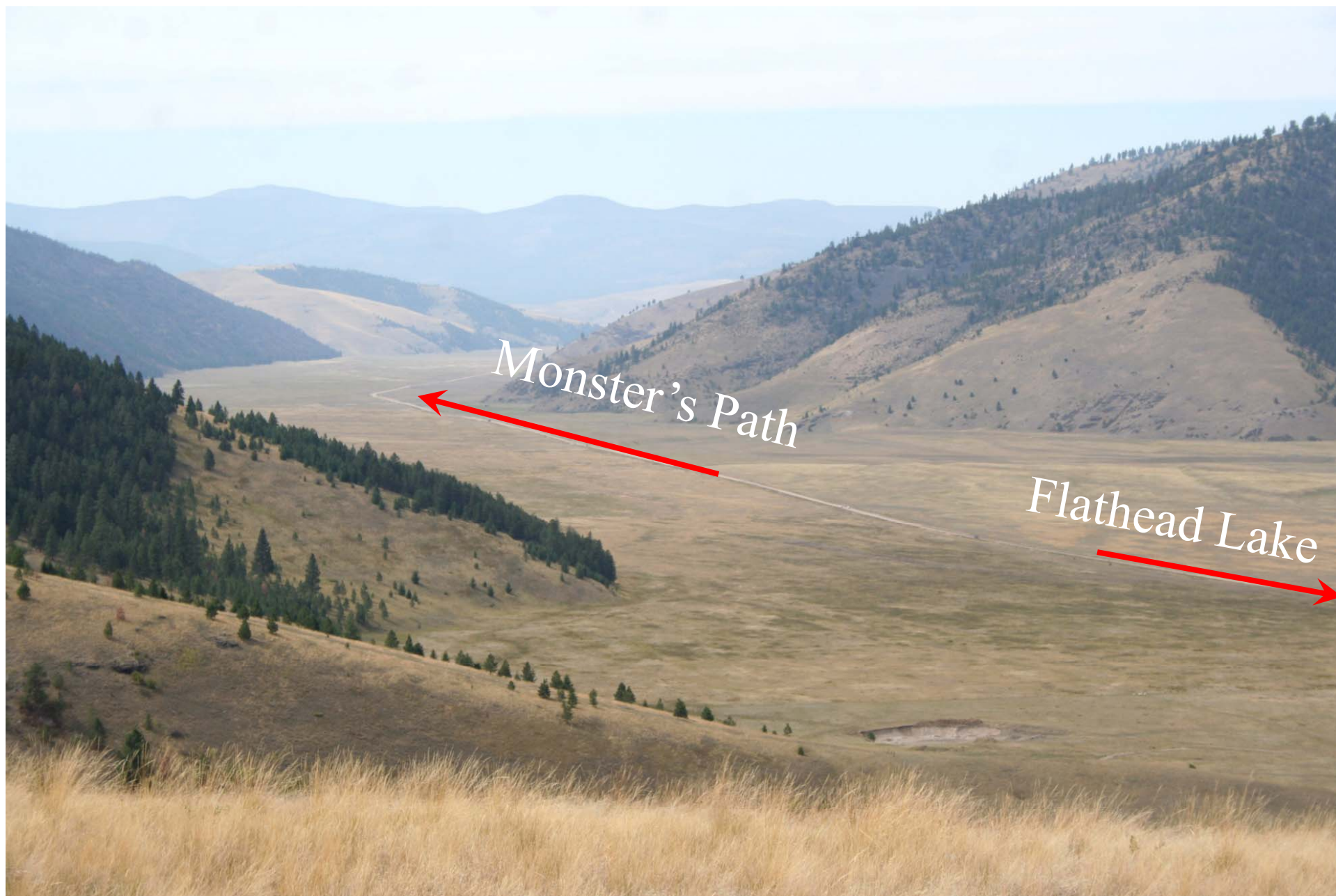
Compatible  
Landscape  
Perspectives

● = Field Trip Stop



# Oral Tradition - Kootenai

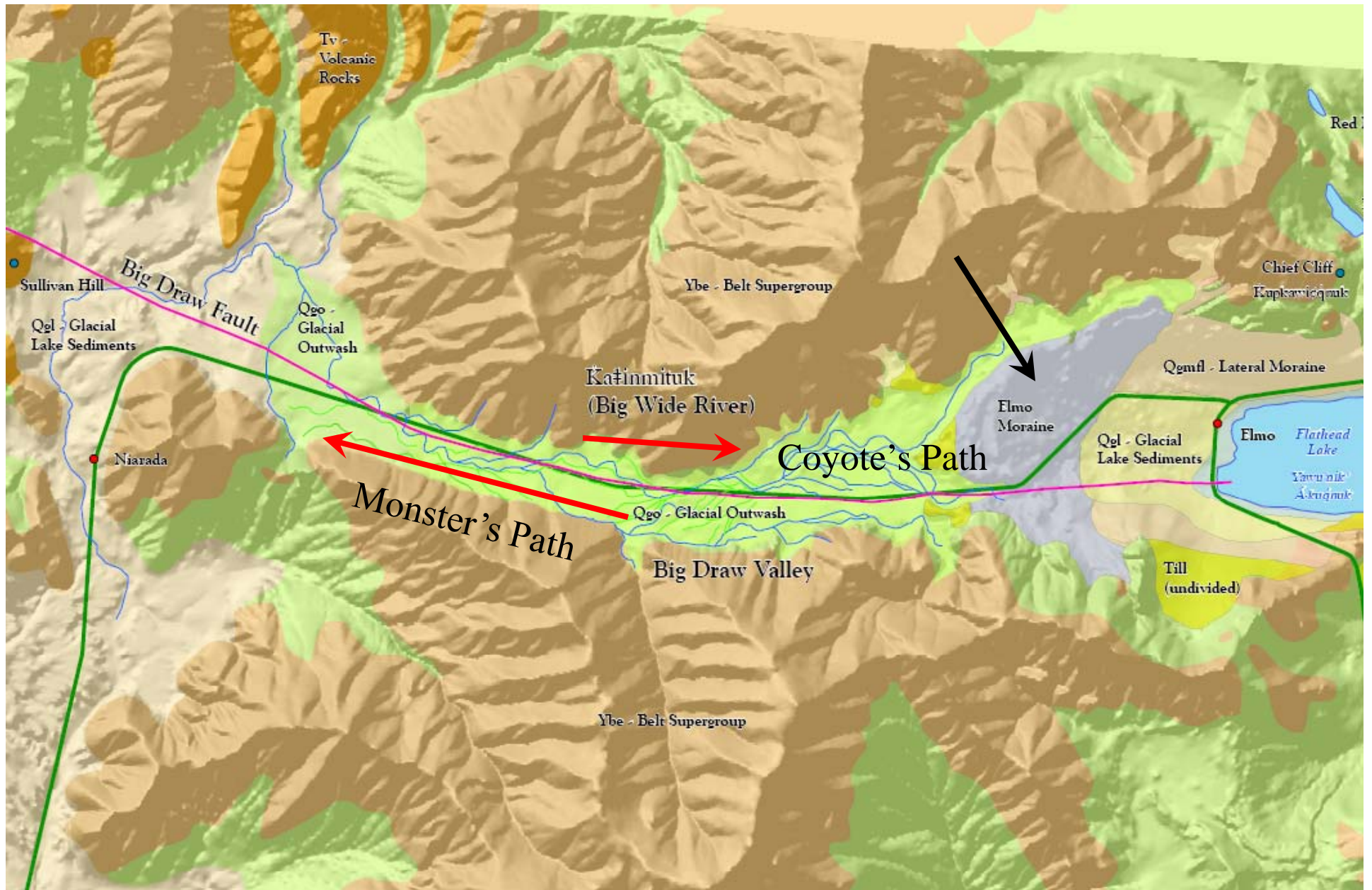
- A hawk was angry at his wife's amorous relationship with a monster that lived in Flathead Lake.
- The hawk battled the monster, and shot it with an arrow.
- The monster then swallowed all the water in the lake. The monster tried to escape from the hawk, but because he was so full and heavy, he dragged his body along the ground, gouging out the Big Draw.
- Later, hawk pulled the arrow out of the monster, and all the water drained through the valley back to the lake.





# Oral Tradition – Pend d'Oreille

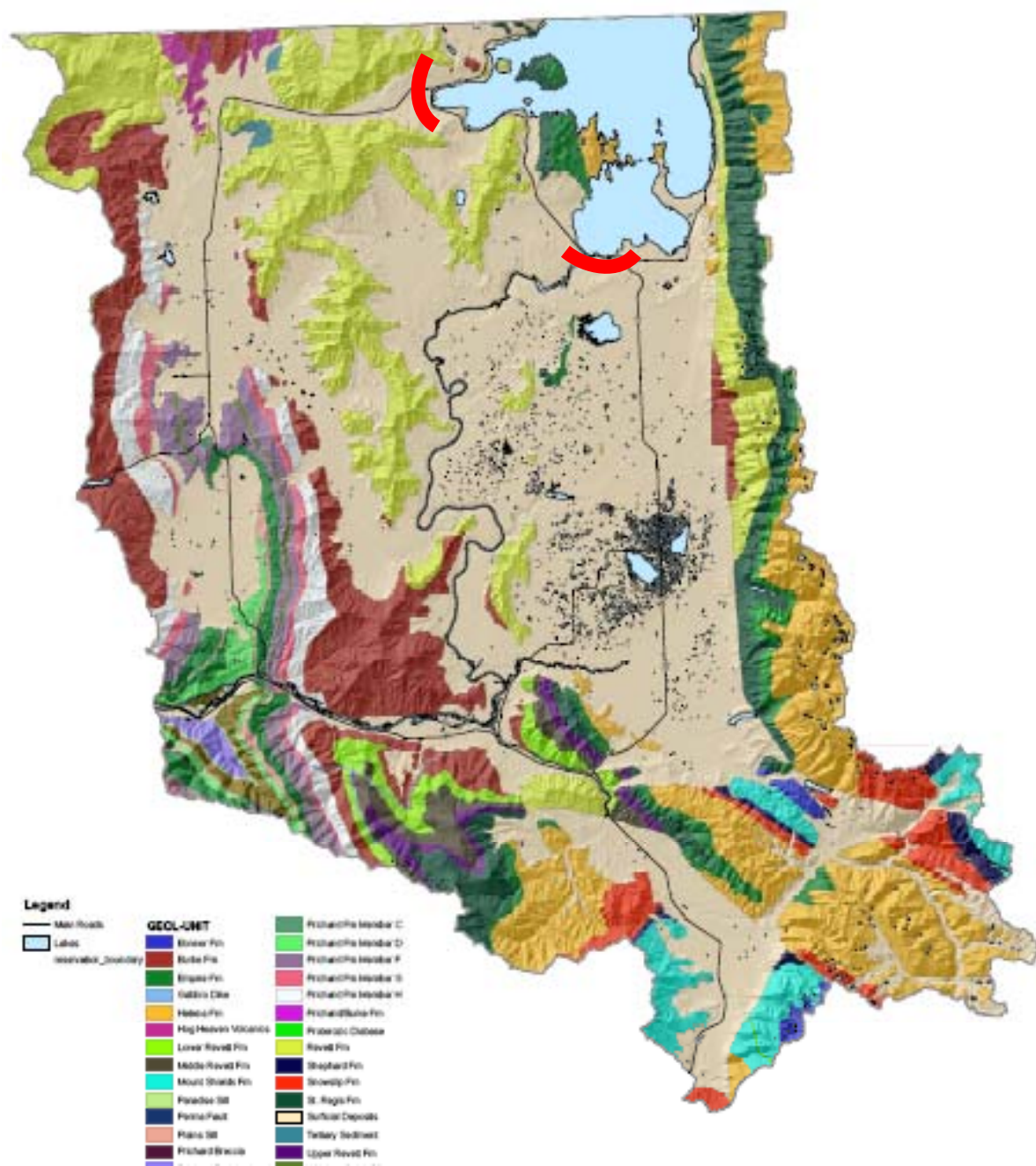
- Coyote was digging a channel for a river eastward from the Big Draw toward F.H. Lake.
- Purpose was to bring salmon to the P.O. tribe.
- However, just before he connected the channel with the lake, he was distracted by a woman and never finished his work.
- Instead, he left a large pile of material at the eastern end of the river channel (Elmo Moraine)



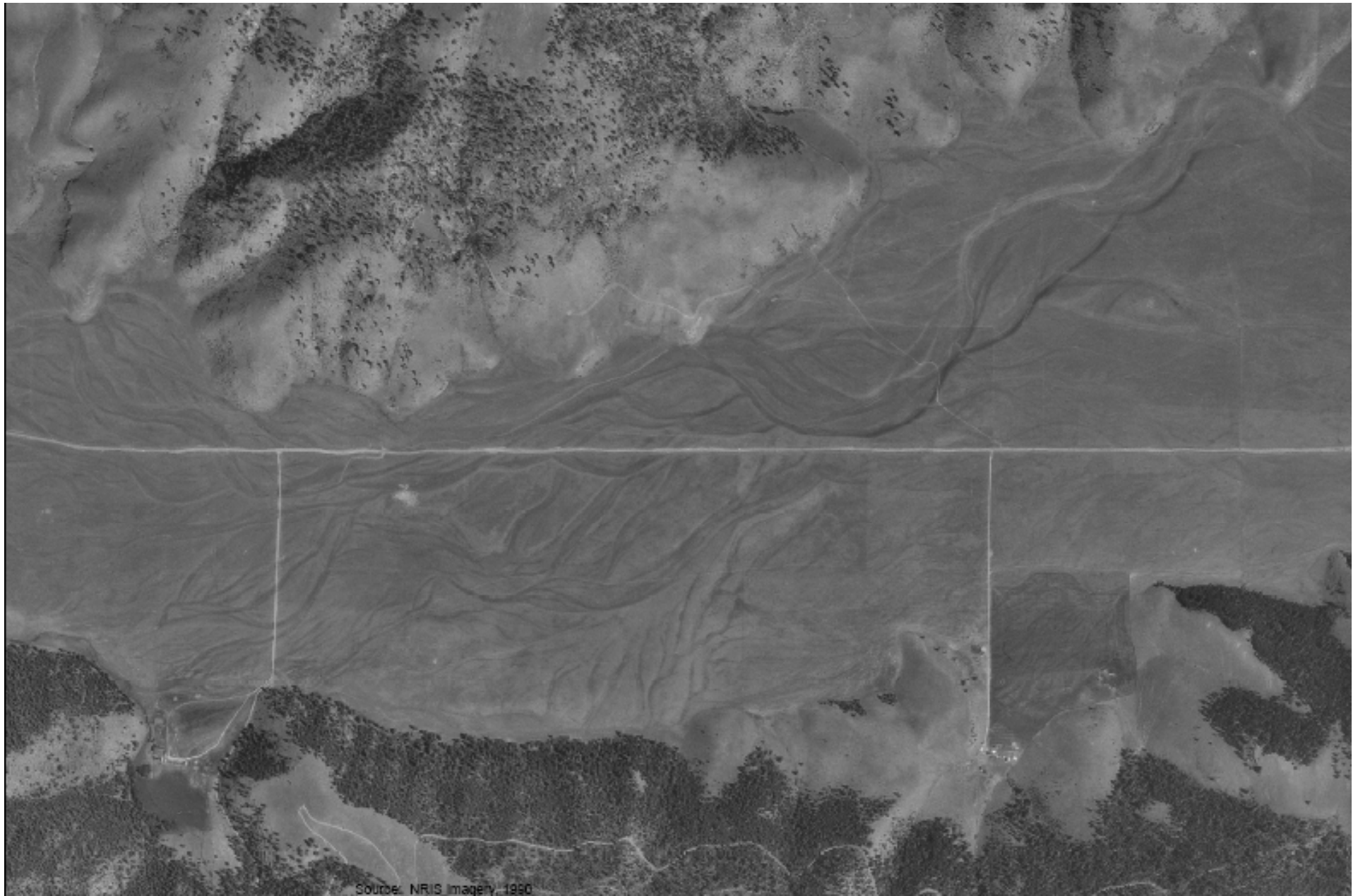


## Oral Tradition – Salish/Pend d'Oreille/Kootenai

- A giant beaver lived in Flathead Lake prior to the arrival of Indians in the valley.
- At that time, the outlet of the lake was the Big Draw Valley. The giant beaver built a dam across the river outlet [Elmo Moraine], causing the lake level to rise.
- As the beaver got older and bigger, he built the dam higher, but soon the water began to run out at the south end of the lake [current outlet at Polson]. So the beaver built up a high dam at that point [Polson Moraine].





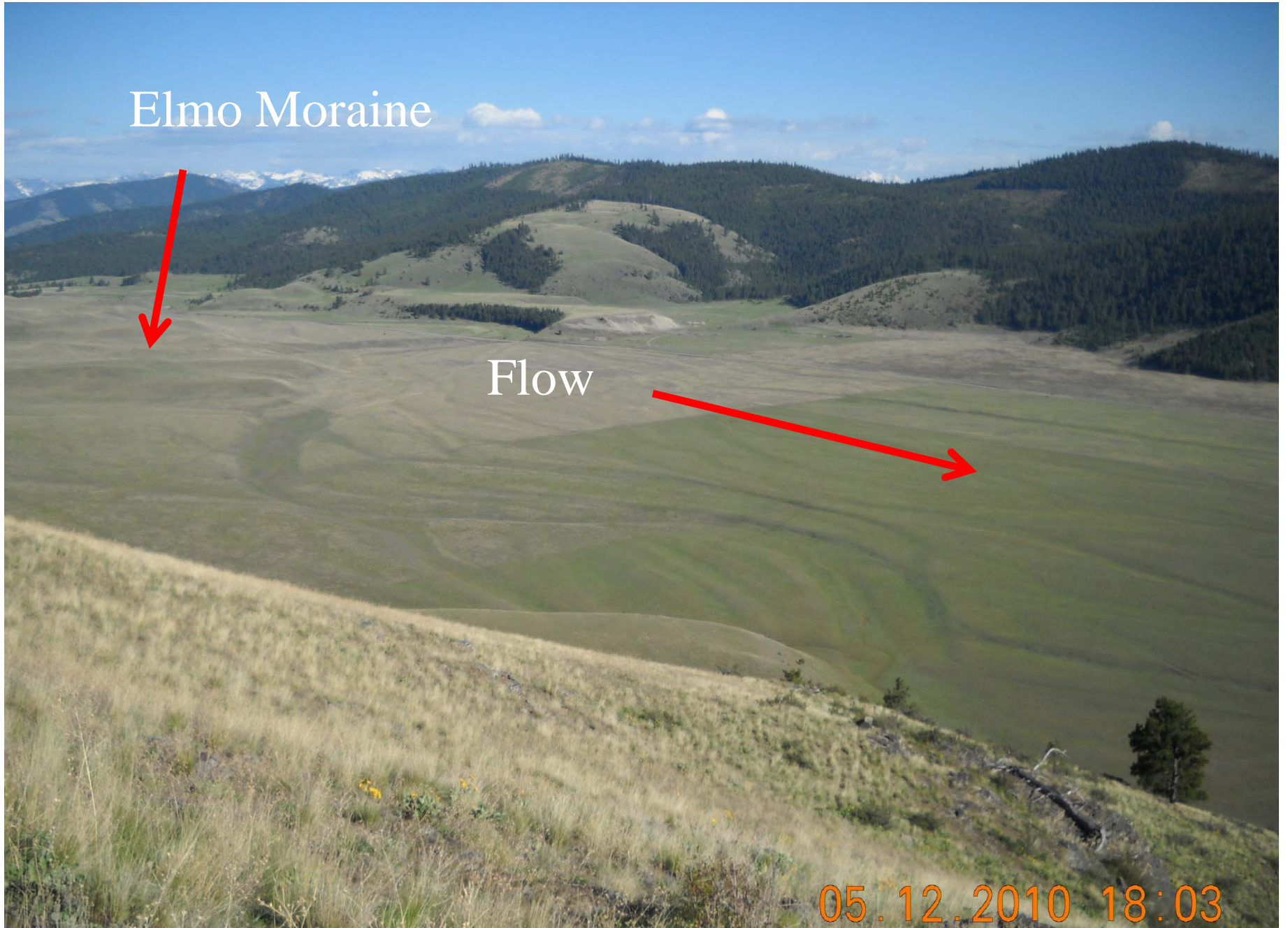


Source: NRIS Imagery, 1950

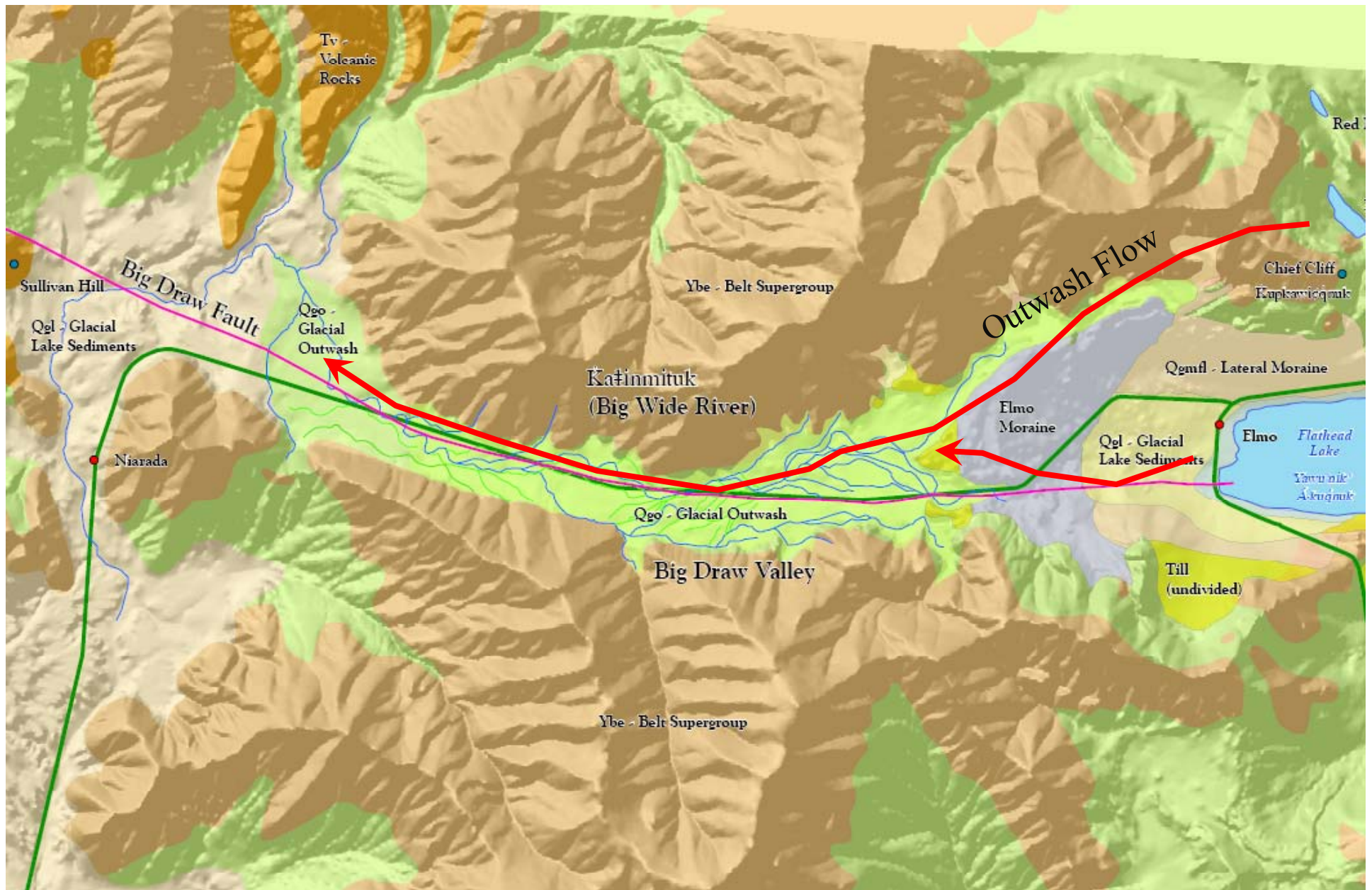
Elmo Moraine

Flow

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