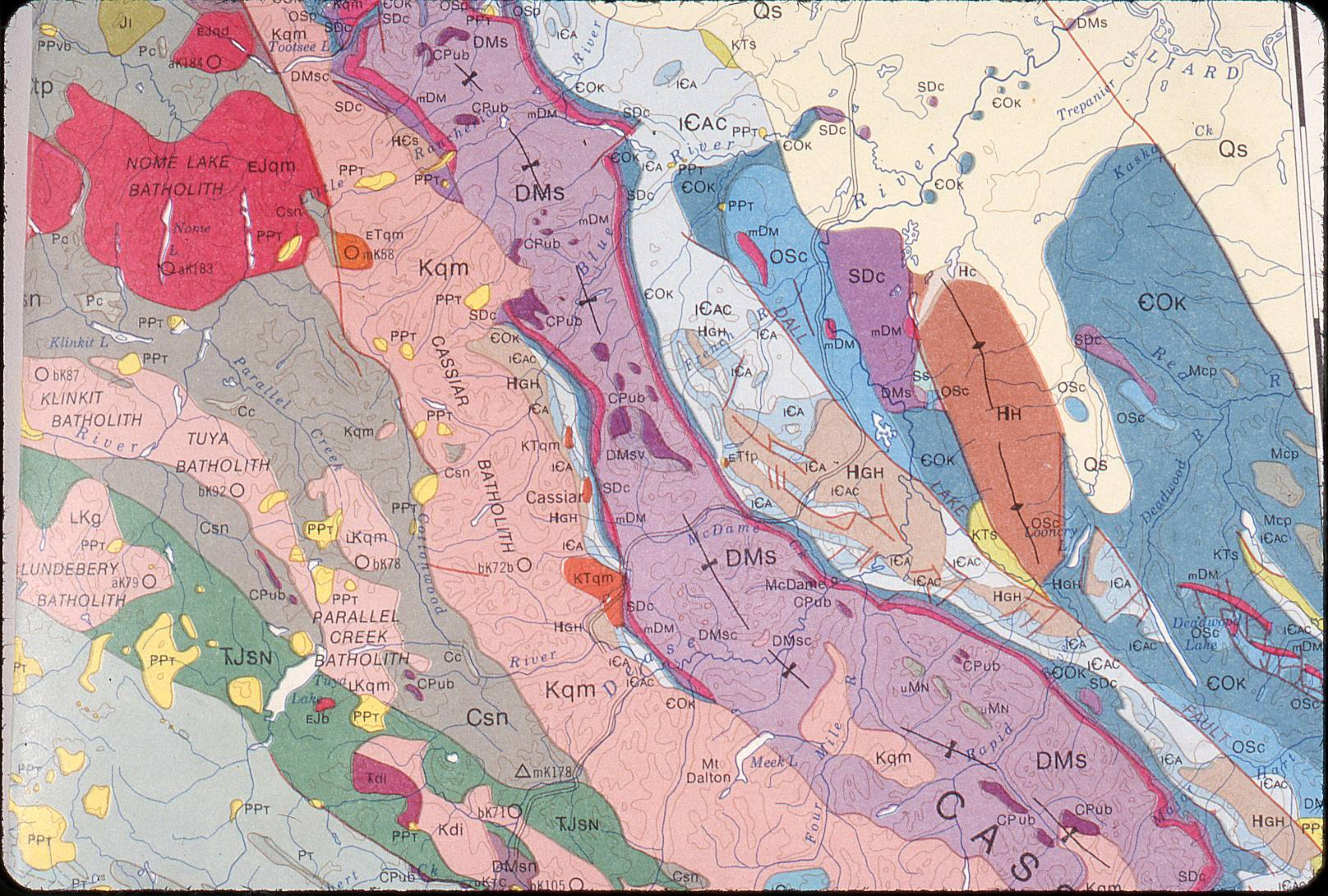
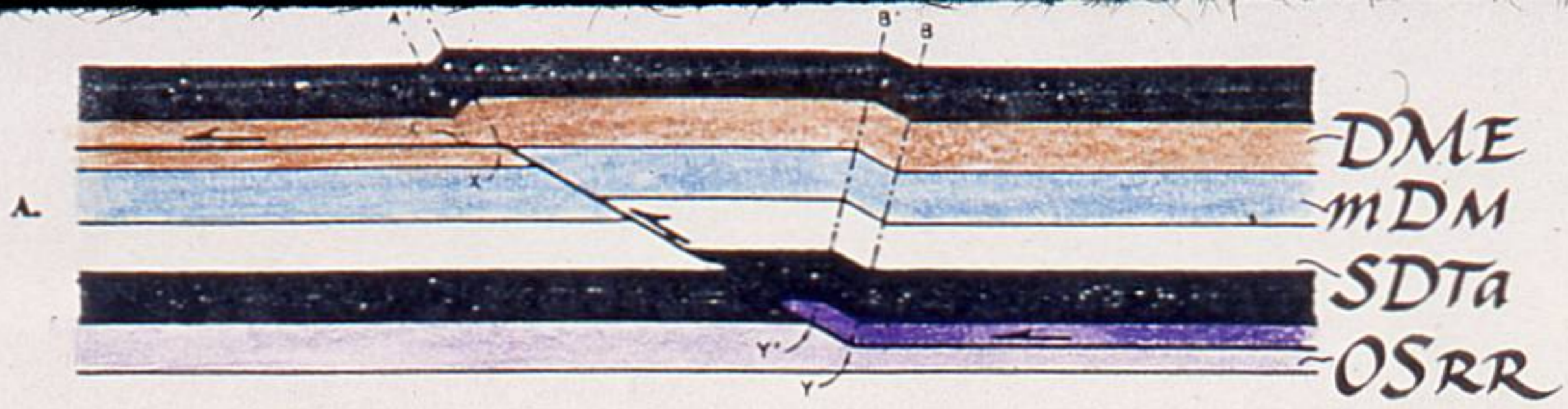
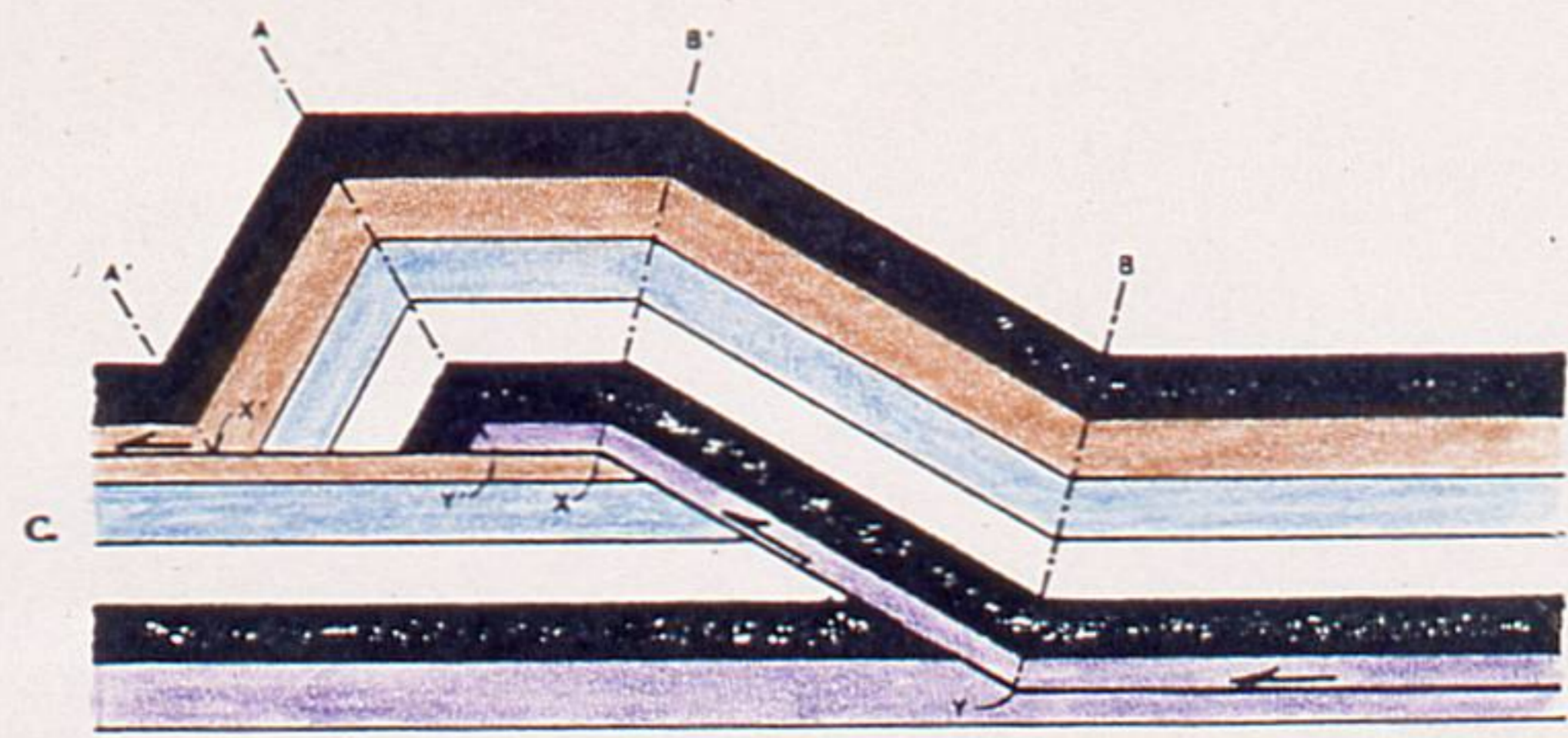
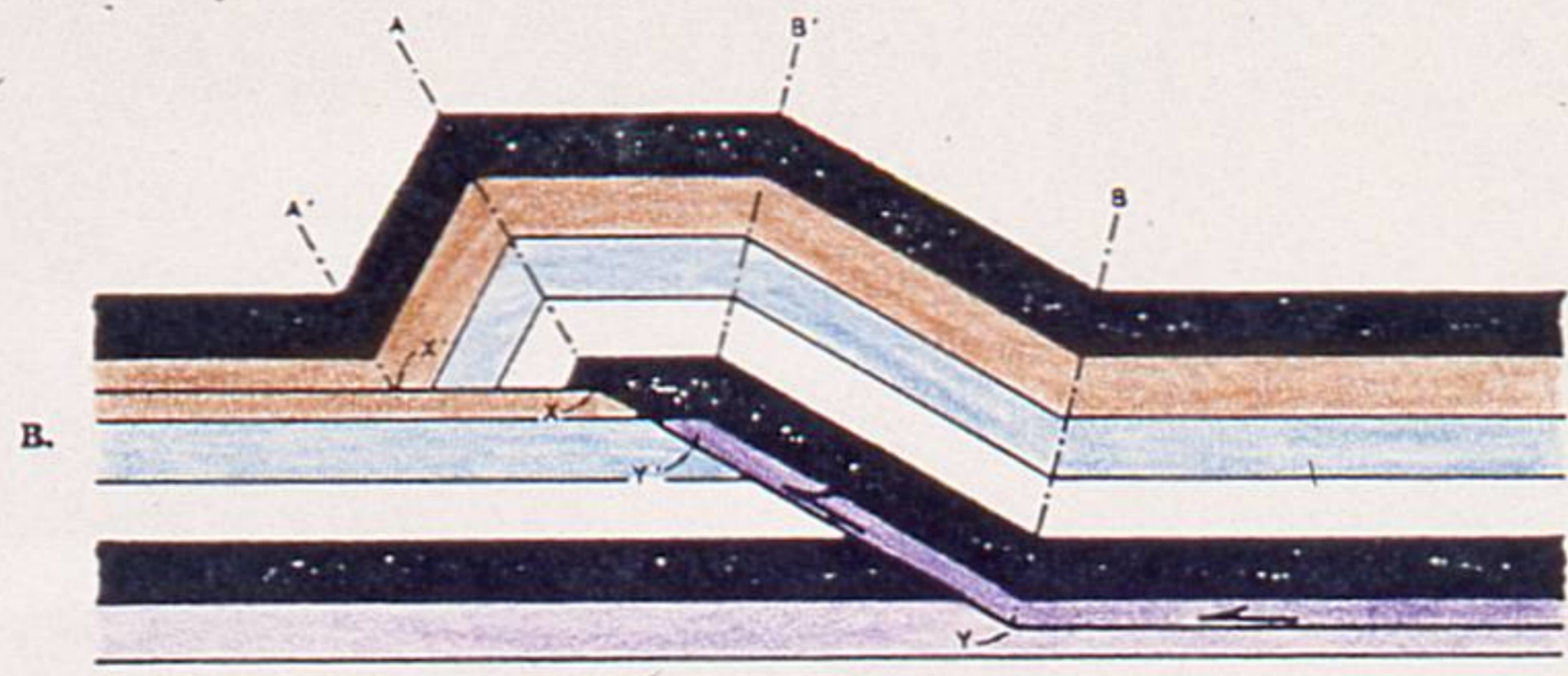


Alteration and mineralization (K-E)





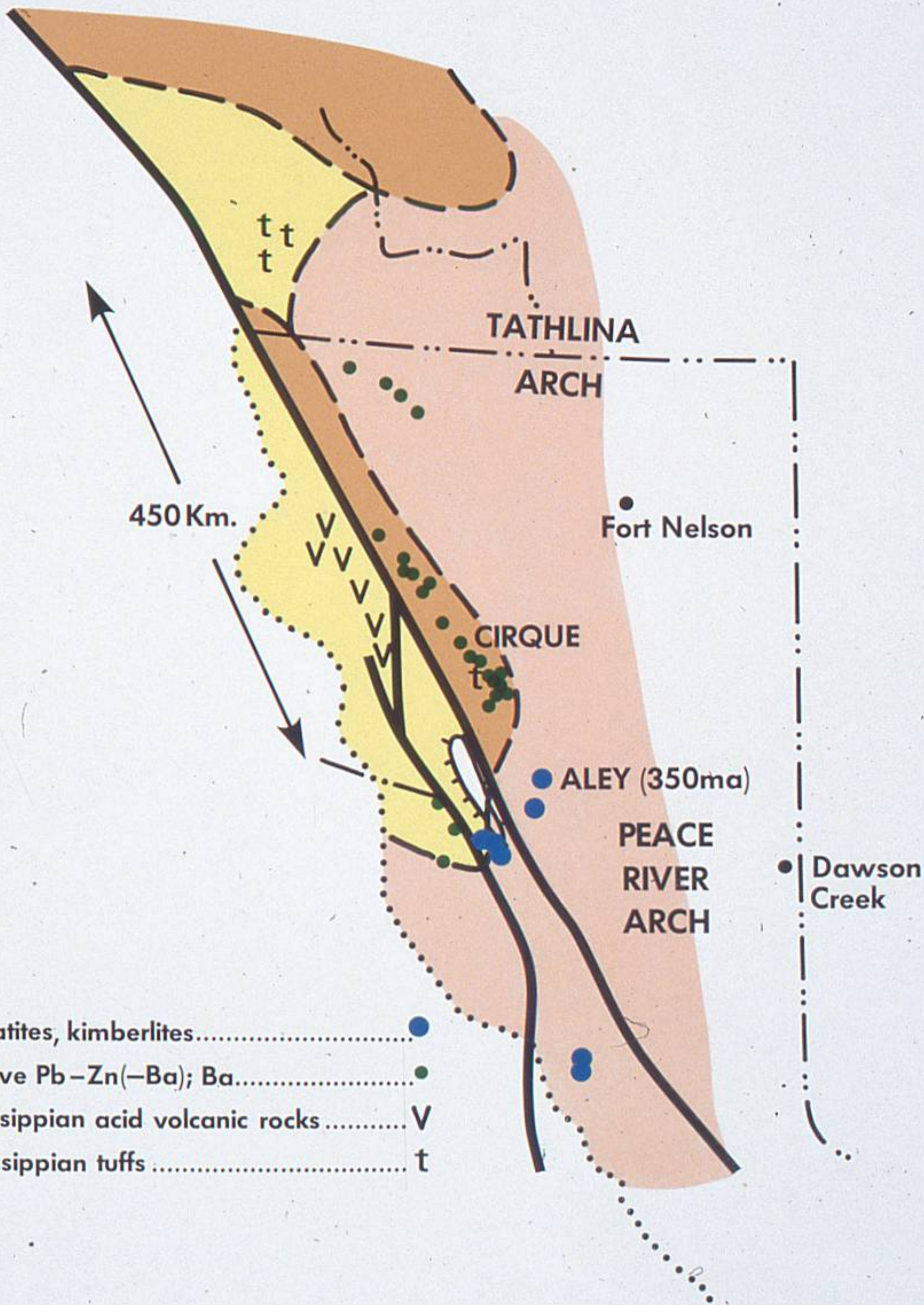
Thrust
Ramp



Kinematic development of fault-bend folds in response to a simple step in decollement (after Suppe and Namsou, 1979).

Figure 3.4.27 (from Suppe, 1983)

THE UPPER DEVONIAN LOWER MISSISSIPPIAN SCENE



- Carbonatites, kimberlites.....●
- Exhalative Pb-Zn(-Ba); Ba.....●
- E. Mississippian acid volcanic rocks.....V
- E. Mississippian tuffs.....t

FACIES:

Upper Devonian – Lower Mississippian



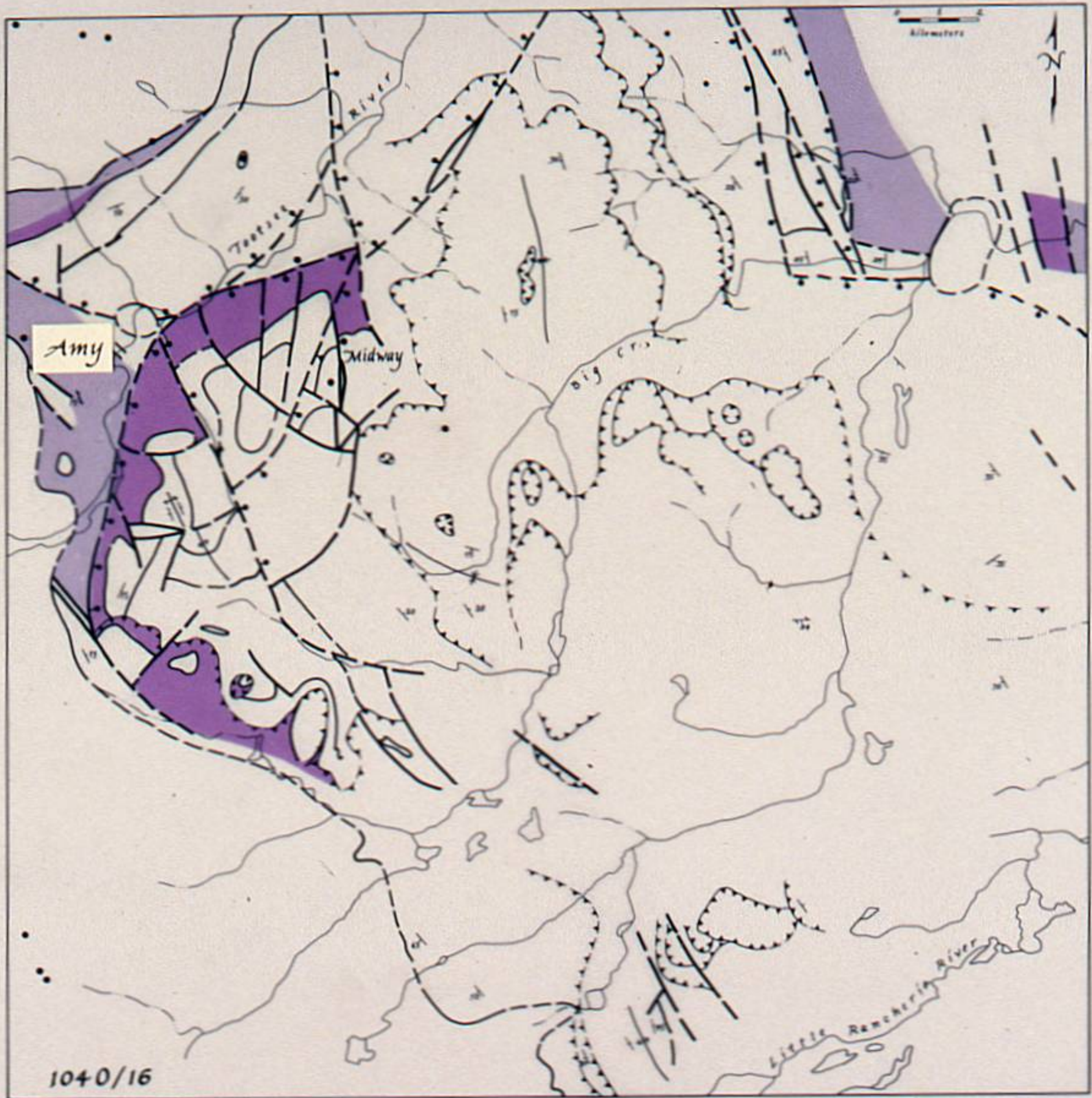
Black Clastic Group
over earlier basinal facies



Black Clastic Group
over earlier platformal facies

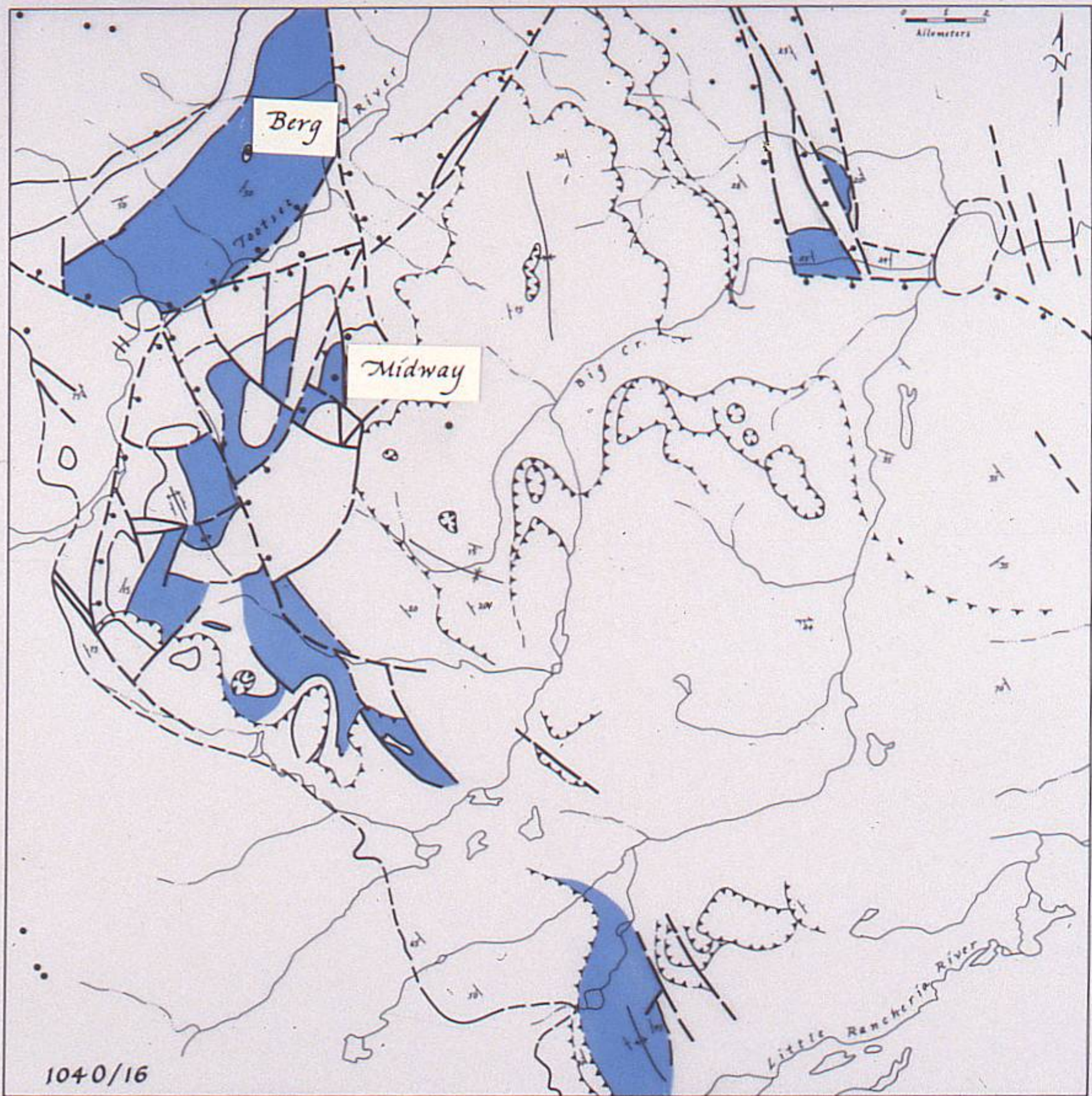


Besa River Shale
over earlier platformal facies



Kechika Group (€-0)

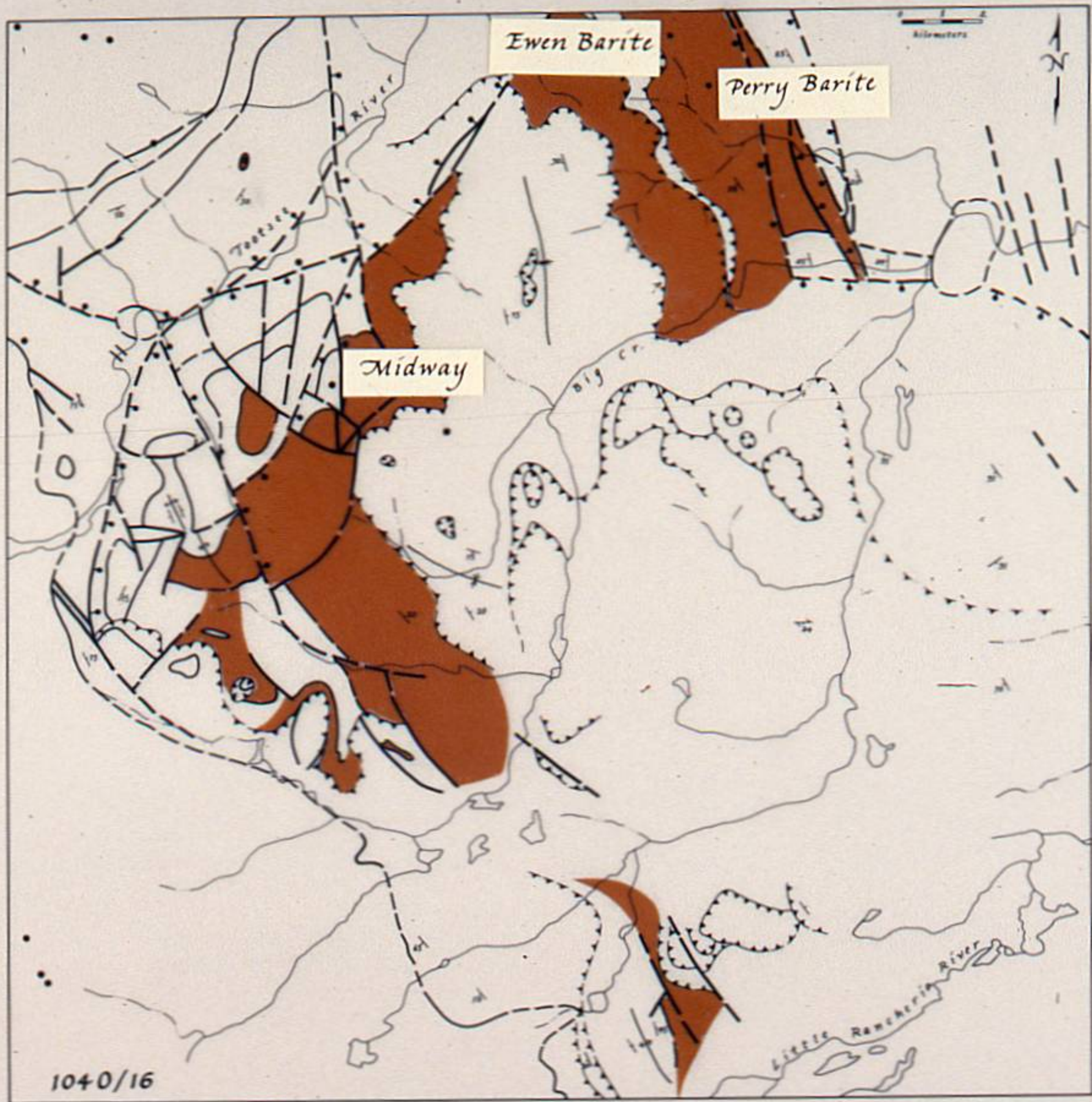
Road River Group (0-5)



McDame Group (Middle Devonian)

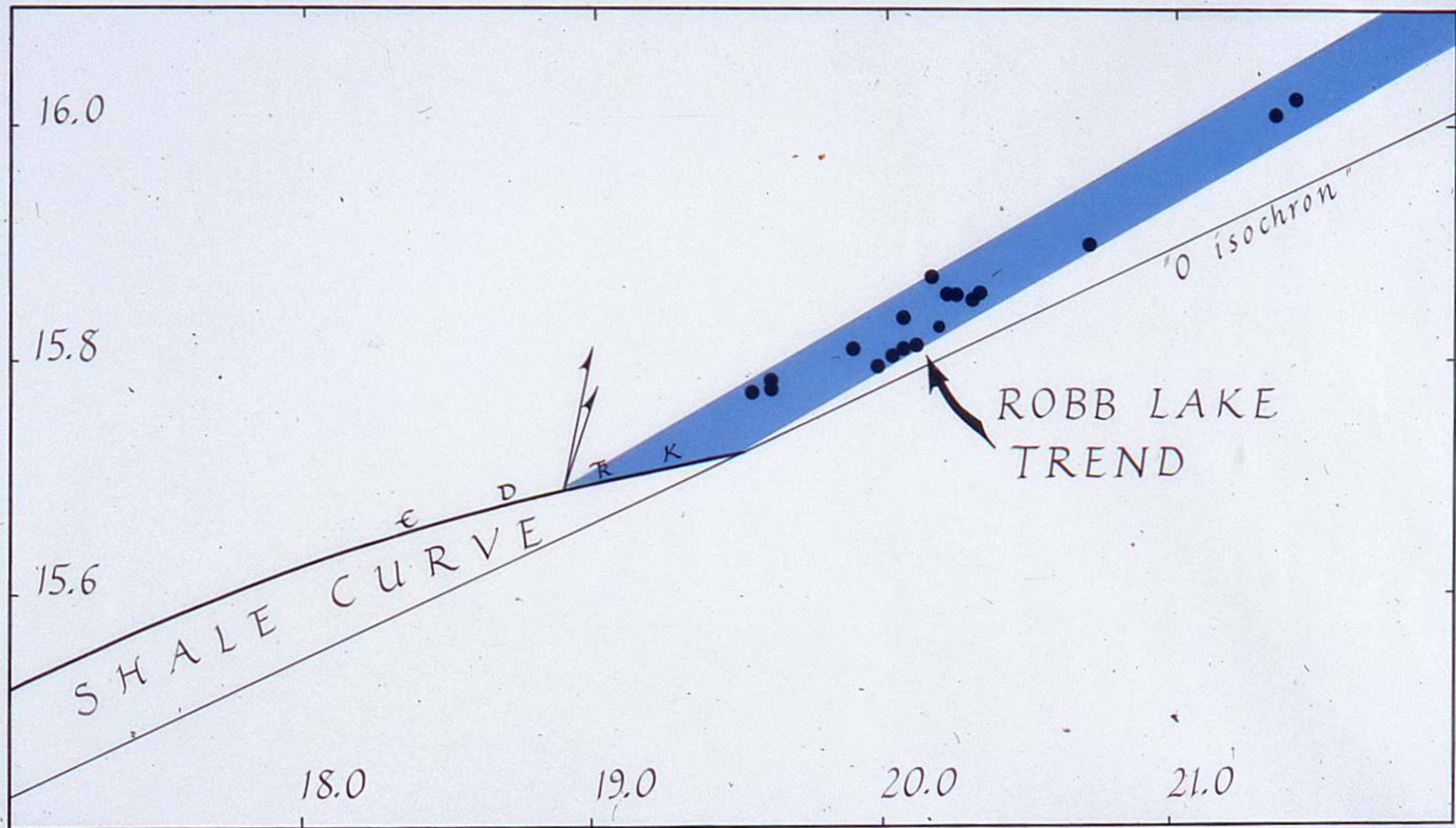
FLAGSHIP DEPOSITS

Name	Type	Commodity	Tonnage	Grade
CIRQUE	Sedex	Pb-Zn	40 mt	2.2% Pb 7.8% Zn 47 g/t Ag
Robb Lake	MVT	Pb-Zn	5.5 mt	7.3% Pb-Zn
Aley	Carbonatite	Nb	significant	1–1.5% Nb ₂ O ₅
Midway	Manto	Ag-Pb-Zn	1.2 mt	410 g/t Ag 7% Pb 9.6% Zn



Earn Group (D-M)

$\frac{^{207}\text{Pb}}{^{204}\text{Pb}}$



SHALE CURVE

ROBB LAKE TREND

0 isochron

$\frac{^{206}\text{Pb}}{^{204}\text{Pb}}$

CONTROLS OF MINERALIZATION

● Sedex

● Carbonatites

Located on rift system that shows Ordovician, Silurian, Devonian, Lower Mississippian activity
Devono-Mississippian event most significant economically

● Mantos

Structure, intrusive, appropriate host
Late Cretaceous-Eocene tectonics

● MVT

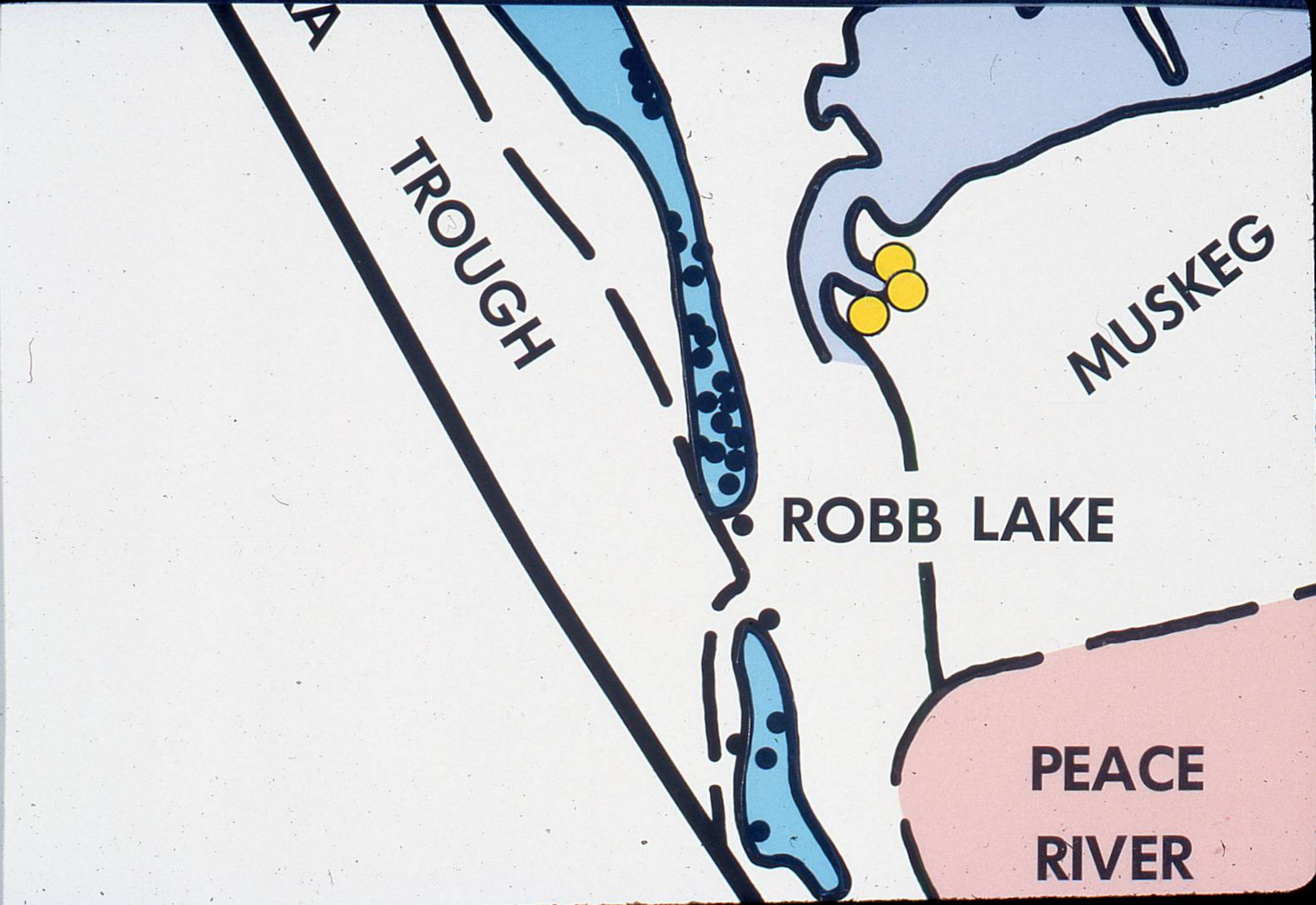
In Siluro-Devonian platform carbonates
Pine Point located in reef facies
Robb Lake is not
Host-specific; minimal tectonic control

A
TROUGH

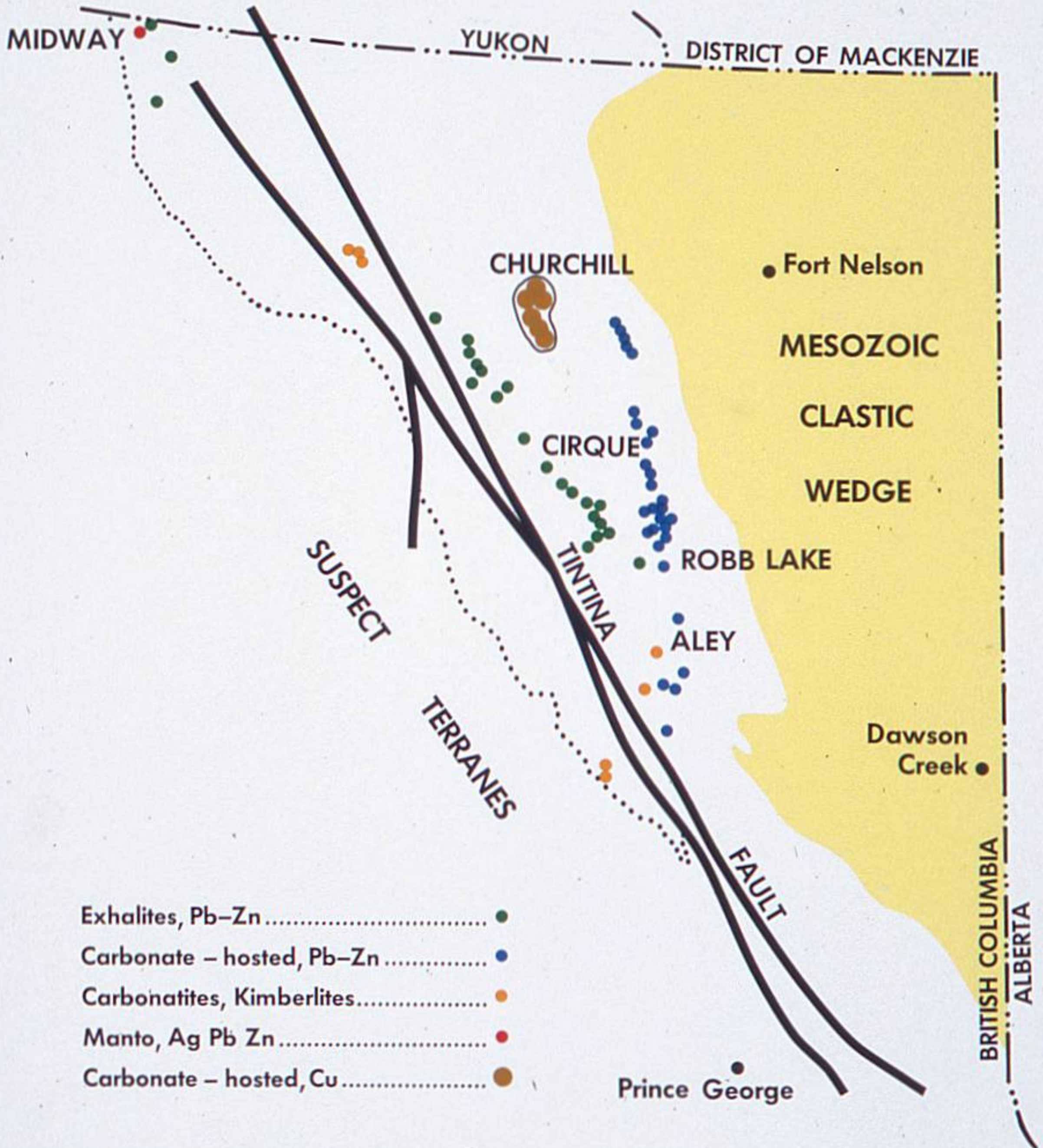
MUSKEG

ROBB LAKE

PEACE
RIVER



METALLIC MINERAL DEPOSITS NORTHEASTERN B.C.



- Exhalites, Pb-Zn ●
- Carbonate - hosted, Pb-Zn ●
- Carbonatites, Kimberlites..... ●
- Manto, Ag Pb Zn ●
- Carbonate - hosted, Cu ●