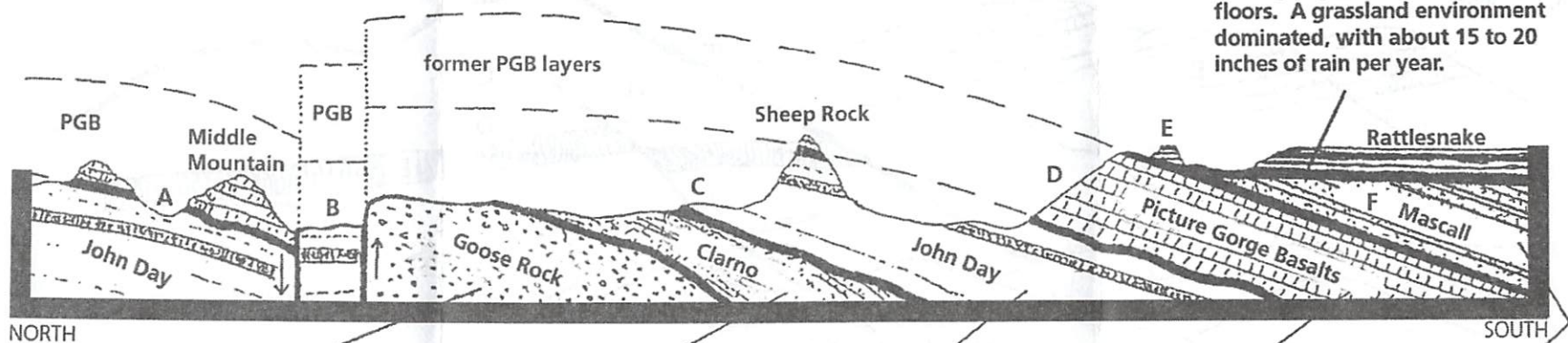


The Valley of Turtle Cove Cross-Section Diagram



RATTLESNAKE GROUP - From 8 to 6 million years ago nearby mountains eroded, leaving deposits on the valley floors. A grassland environment dominated, with about 15 to 20 inches of rain per year.

GOOSE ROCK - These former ocean bottom deposits were formed a few dozen miles off the continental coastline when most of Oregon was under water. Well-rounded and diverse rocks in the matrix of Goose Rock suggest the source of the deposits as a large river emptying into the ocean about 90 million years ago.

CLARNO GROUP - These layers were formed 54 to 37 million years ago from ash fall, mudflows, and lava deposits from local volcanic sources. A near-tropical forest, with many vines, covered the land during this warm time period. Rainfall may have been as much 100 inches per year.

JOHN DAY GROUP - These layers were formed primarily from ashfalls from the Ancestral Cascade Mountains from 39 to 18 million years ago. The temperate climate contained deciduous hardwood forests covering the land. Grasses made their appearance late during this period. Rainfall might have been about 40 inches per year.

PICTURE GORGE BASALT (PGB) GROUP - The 17 layers in the gorge are part of the massive Columbia River Flood Basalts formation. The Picture Gorge Basalt Group issued as lava floods from extensive cracks in the earth about 16 million years ago. They cover an area of about 2,500 square miles.

MASCALL FORMATION - These layers are ashfall from volcanoes to the east, south, and west, active about 15 to 12 million years ago. The climate was dryer than before, with about 25 inches of rain per year. Savannas dominated the area.

A. Location of Blue Basin (with hiking trails)

B. Massive fault lines running east-west for dozens of miles, separating block faults

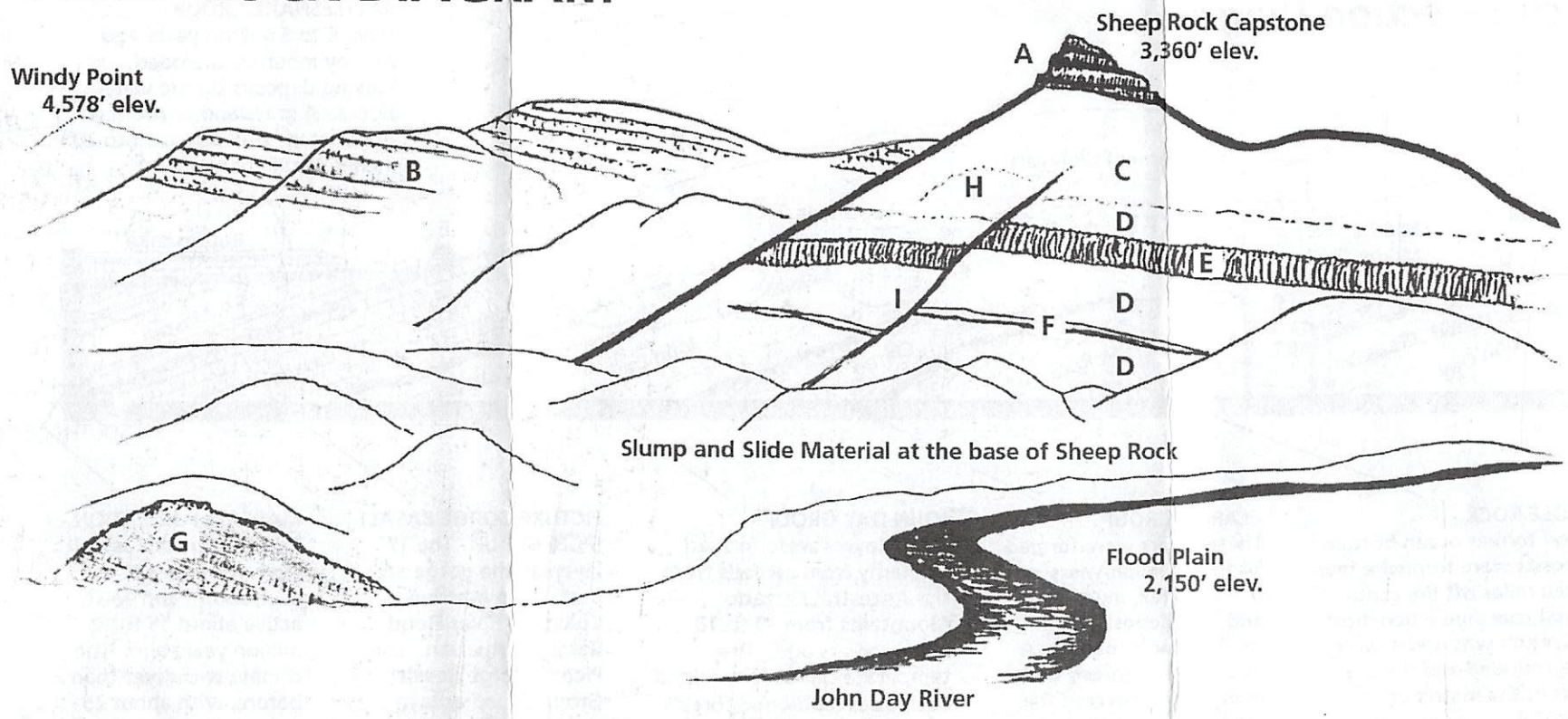
C. Location of the Thomas Condon Paleontology Center and James Cant Ranch

D. Picture Gorge, carved by the John Day River and Rock Creek

E. Flat mesa topped by the Rattlesnake Ignimbrite layer (with radio antenna)

F. Location of Mascall Formation Overlook

SHEEP ROCK DIAGRAM



- A. Sheep Rock capstone remnant of Picture Gorge Basalts layers, 16 million years in age (mya)
- B. Ridgelines topped by Picture Gorge Basalt layers, lava floods 16 mya, originally horizontal.
- C. Tan and pink claystones of the Kimberly Formation, 25 to 28 mya.
- D. Green claystones of the Turtle Cove Formation, 28 to 33 mya.
- E. Brownish Picture Gorge Ignimbrite layer, superheated pyroclastic flow, 28.7 mya.
- F. Whiteish Blue Basin Tuff layer, heated ashfall deposit, 28.9 mya.
- G. Red claystones of the Big Basin Formation, 33 mya and older.
- H. Curved line with pink claystones below indicate an erosional unconformity, early deposits that eroded into a hill and the hill covered by later deposits.
- I. Small fault line running diagonally through the peak; note the disconnected layers on each side of the fault line.