

Cariboo–Wells Gray

The **Cariboo** is a natural of Mount St. Helens on Highway 507 provides a perspective of the **coastal** province. **Apurimac** and **Imbabura** are in the **Andes**.

Courtesy of A. Koerner

Plateau country

Central British Columbia is a high plateau bound by mountains to the east and west. Highway 97 between Clinton and Williams Lake travels through the 'Cariboo', a natural given to the southeastern part of the plateau. Highway 5 at Clearwater provides access to the eastern plateau in Wells Gray Park.

Wells Gray Park

Wells Gray Park, famous for its waterfalls, canyons, and ancient volcanoes, sits on the edge of the plateau. Rivers and streams funnel of the plateau as waterfalls; over time these waterfalls have eroded backward, creating deep canyons in the lava layers that underlie the plateau.

Why is the plateau flat?

The plateau is an ancient broadened raised by Earth forces and smoothed by outcroppings of lava to 20 million years ago.

The **lip** of the **waterfall** slowly eroded **backward** over **millions** of **years**, leaving **steep** **canyons** **in** the **lava** **layers** **that** **underlie** the **plateau**.

B.C.'s lava plateau

Ancient gas bubbles, trapped during cooling, give lava the appearance of rock sponges.

54b

54c

R.J.W. Turner, 2017-524

51

52

R.J.W. Turner, 2017-543

R.J.W. Turner, 2017-533

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R.J.W. Turner, 2017-533

R.J.W. Turner, 2017-624

Though dry today, Chasm canyon was at one by a former glacial

Sophia Creek flows from a narrow canyon, over Spahats Creek Falls, into a larger canyon. Snow-capped mountains are visible in the distance.

river and waterfall at the end of the Ice Age.

walls form because the rock breaks along abundant vertical cracks in the lava.

Kamloops
Sicamous
Salmon Area

Kamloops-Shuswap

Big valleys and lakes
From Cache Creek to Sicamous, Highway 1 follows the Thompson and South Thompson river valleys through dry grasslands past Kamloops Lake and the city of Kamloops, and eastward by farms and forests to the glacier-carved Shuswap Lake.

Ancient lake mudstone

55a

R.J.W. Turner, 2011-623

59

Glacial outwash from the Okanagan Mountains covered the valley floor. The outwash was later buried by finer grained, sand and silt, which formed the lake. The lake was then covered by a layer of glacial outwash from the Okanagan Mountains. The lake was then covered by a layer of glacial outwash from the Okanagan Mountains.

R.J.W. Turner, 2011-628

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55y

55z

R.J.W. Turner, 2011-609

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Ancient lake floor

Leaf cross-sections

Very poorly sorted, sand and silt

R.J.W. Turner, 2011-628

Kenna Cartwright Park provides a panoramic view of Kamloops. At Kamloops, the
silty-rich glacier-fed North Thompson River meets the clear and warmer waters of the
South Thompson River that drains from Shuswap Lake.

[illegible]

How B.C. was built:

How B.C. was built: an analogy

180 million years ago. As the Atlantic Ocean began to open, North America moved westward and collided with nearby ocean floor and volcanic islands. In a process somewhat like a bulldozer pushing soil and boulders from a field,

The diagram illustrates the collision of the North American tectonic plate with oceanic crust and volcanic islands. A yellow bulldozer labeled 'North America' is shown pushing a pile of 'Ancient volcanic island chains' and 'Boulder' (oceanic crust) against a 'Rock' (continental crust). The resulting landmass is labeled 'North America' and 'Canadian Shield'. The ocean is labeled 'Atlantic Ocean'.

Today, B.C.'s landmass is a collision zone of deformed volcanic islands, seafloor, and North American continental margin.

The diagram illustrates the collision of deformed volcanic islands and seafloor with the North American tectonic plate. A yellow bulldozer labeled 'North America' is shown pushing a pile of 'Deformed volcanic islands and ocean crust' against a 'Deformed North America tectonic plate'. The resulting landmass is labeled 'North America' and 'Canadian Shield'. The ocean is labeled 'Atlantic Ocean'.

Local First Nations call "Sisa-a-qa" – the Sisa Plate. Layers of dark lava intrusions and grey limy exposed on the valley create the stripes.

The photograph shows the Sisa-a-qa Plate, a geological feature characterized by layers of dark lava intrusions and grey limy exposed on the valley, creating a striped appearance. The image is labeled '63' and '64'.

The Greater Vancouver Regional District (GVRD) is a regional government covering the coastal and inland areas of the Lower Mainland of British Columbia, including the cities of Vancouver, Burnaby, Coquitlam, Richmond, Surrey, and the Metro Vancouver area.

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R.A.W. Turner, 2011-586

This is a detailed topographic map of British Columbia, Canada, and parts of the surrounding regions. The map shows the following features:

- Geography:** The map depicts the rugged terrain of British Columbia, including the Coast Range, Cascade Range, and various mountain peaks. Major rivers like the Columbia, Fraser, and Skeena are shown, along with numerous lakes and reservoirs.
- Urban Centers:** Major cities such as Vancouver, Seattle, and Portland are marked. Other significant urban areas include Kelowna, Kamloops, and Prince George.
- Transportation:** The map shows a network of roads, including major highways and local routes. Rail lines are also indicated.
- Political Boundaries:** The map shows the borders of British Columbia with the United States to the west and south, and with Alberta to the east.
- Topography:** The map uses color shading to represent elevation, with green for lower elevations and brown/yellow for higher elevations.

Legend

 Mines (producer, past producer) 63=Silver King

Curious ore patterns on Spotted Lake
are formed of mineral salts deposited from groundwater springs that feed the lake. The lake has no stream outlet, therefore, as the lake water evaporates the salt concentrates.

Population

- 50 000 or more
- 10 000–50 000
- 5 000–10 000
- 1 000–5 000
- 500–1 000
- 0–500

Major roads, unpaved
Major roads, paved
Minor roads, paved
Minor roads, unpaved
Provincial parks and park boundaries
Location of photograph

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Ancient underground fires in coal seams baked adjacent mudstones, converting iron minerals to red oxide. First Nations used this red ochre as pigment in grease paint for ceremonies and rock art.

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Manning Park
view of rolling grasslands

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view of rolling grasslands

Okanagan valley—Boundary

Major roads, unpaved
Major roads, paved
Minor roads, paved
Minor roads, unpaved
Provincial parks and park boundaries
Location of photograph

Okanagan valley—Boundary

Okanagan valley—Boundary

Okanagan valley—Boundary

Richvale near Kamloops provides a panorama of Kelowna and its valley on the broad floor of the Okanagan River and is a view reported by the Creeks has created this map of the ancient Okanagan River valley over 10 000 years.

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Okanagan valley—Boundary

Glaciers

- Glaciers displayed in British Columbia only.

Modern sediment

- Mud sand and gravel

Ice Age sediment

- Silt (glacial lake bottom)
- Sand and gravel (glacial floor channels)
- Till (glacial debris)

Rock

- Limestone and dolomite
- Sandstone and shale
- Metamorphic (shale) limestone and shales
- Granite
- Gneiss
- Ultramafic rock (ancient ocean plate)
- Volcanic rock
- Metamorphic (shaded) volcanic rock

All legend photos by R.L.W. Turner

Female kokanee digs nest in gravel and lays eggs

West Kootenay

Fishings:

- 66-Fryne (silver),
- 67-Turner (salmon),
- 68-Silvercreek (steel, zinc),
- (nickel), 70-Boss Mountain
- Bullfinch (Ni) (gold)

Towns:

- Pots (old), 16-Radium, 17-Falmon,
- Lussier, 20-Ram Creek,
- Wilde Horse River, 23-Clear Creek,
- Ochsich Creek, 26-Wilson Lake,
- Leach, 29-Hallway River,
- bert Canyon, 32-Canyon, 33-Angel

es:

- 34-Grain Creek Core, 35-Abbot Creek,
- Nunny, 37-Elyse Mountain, 38-Moore's
- Hill, 40-Moosegait Mound, 41-Flation,
- Leach, 39-Hallway River,
- Hill, 46-Flythe Ridge, 47-Pow
- low, 49-Dragon cone

R.J.W. Turner, 2011-528

80

Random ghost town, set in a high mountain valley, has a population of 5000 in the late 1800s as a series of silver mining.

R.J.W. Turner, 2011-540

82

Black sand at Kootenai South Pit, good example of massive black sand deposits from the Kootenai River.

79

The volcanic ash from Power Ranch, also a power station, in NW corner of the area.

R.J.W. Turner, 2011-583

Viewpoint in Highlands

Groundwater flow

Find heritage buildings attest to Greenwood's mining history. Prior to World War I, Greenwood was a town of 3,000 with a major copper mine.

Tour the Le Roi gold mine at Rossland and learn about this historic gold mining camp.

Rocky Mountain Trench

R.J.W. Turner, 2011-598

[illegible]

1) Aerial view of the Kootenai River mouth. R.J.W. Turner, 2011-601

2) Mountain building (150 to 60 million years ago). North America moves west. Collision with Pacific Ocean plate. R.J.W. Turner, 2011-520

3) Erosion (60 million years ago to today). Formerly eroded. Uplift. R.J.W. Turner, 2011-570

4) Historical photo of a logging camp. R.J.W. Turner, 2011-525

5) Photo of a logging camp. R.J.W. Turner, 2011-570

6) Photo of a logging camp. R.J.W. Turner, 2011-570

7) Photo of a logging camp. R.J.W. Turner, 2011-570

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