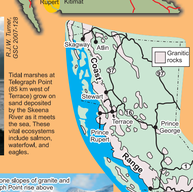
Coast Mountains

Terrace to Prince Rupert



Highway 16 between Terrace and Prince Rupert, Nisga'a Highway, and Highway 37A to Stewart

Three highways cut through the central Coast Range. Highway 16 follows the Skeena River valley from Terrace to Prince Rupert. As the Skeena slows and meets the sea, it dumps its load of gravel and sand as numerous islands and bars. The highway route passes below steep cliffs of granite and gneiss prone to avalanches during the winter. Farther north, the western end of the Nisga'a Highway follows a similar route along the Nass River valley and estuary. Upriver, near New Aiyansh, the Nisga'a Highway crosses the barren rock expanse of a lava flow. Farther north again, Highway 37A crosses high Bear River Pass before descending to an ocean inlet at Stewart. The road through nearby Hyder in Alaska leads to stunning views of the Salmon Glacier.

6 — A tidal marsh

Tidal marshes at Telegraph Point (85 km west of Terrace) grow on sand deposited by the Skeena River as it meets the sea. These vital ecosystems include salmon, waterfowl, and eagles.

5 — Overhanging glacier, Skeena River valley

Steep avalanche-prone slopes of granite and gneiss near Telegraph Point support cottonwood forests on sand and gravel islands of the lower Skeena River.

Layered gneiss at Galloway, Alaska

Contorted gneiss at Kitkatla, Gil Island, with amphibolite layering, dikes, and folds, approximately 200 km west of Prince Rupert and nearby region

7 — Avalanche tracks, Skeena River valley

Steep avalanche-prone slopes of granite and gneiss near Kitwanga and on the highway to Skeena River valley near Kitwanga, Kitwancool and Nass valley

8 — Spectacular Nisga'a Highway near Canyon City

Mountain granite and gneiss along the Nass River estuary

9 — Nass River valley near Laxgalts'ap on Nisga'a Highway

Nass River valley near Laxgalts'ap on Nisga'a Highway reveals how wind and ice current shaped

The Coast Mountains are granite country

A great ridge of granite forms the Coast Range from Alaska to Vancouver. This granite and related gneiss are best seen between Terrace and Prince Rupert, in the Nass valley near Gingolx, and on the highway to Skagway.

Stewart area

Salmon Glacier from road to the former Granduc mine (near Stewart)

11 — Salmon Glacier

The best roadside view of a glacier in B.C. is at the Salmon Glacier near Stewart. The panoramas include its high ice field, crevassed surface, terminal snout and glacial meltwater river, and evidence for recent shrinkage.

Nass valley

10 — Bear Glacier

Glacier surface 200 years ago; Glacier surface 100 years ago; Bear Glacier; Tit

Mountain slopes show evidence for shrinkage of Bear Glacier at Bear River Pass on Highway 37A due to climate change. Less than 150 years ago, the Bear Glacier covered the area of the lake and adjacent highway with more than 50 m of ice.

12 — Coast Range icefields and glaciers are visible above Highway 37A near Bear River Pass.

13 — Icefield

The Nisga'a Highway follows the lava flow from near its source to its final limits. Eruption of lava transformed the lush forested valley into a rocky desert landscape.

To Gingolx; Gitwinksihlkw; Nass River; New Aiyansh; Lava flow; Eruption point; Lava flows; Direction of lava flow; Lava Lake; Nisga'a Highway; To Terrace; Source of lava; Tseax Cone; 0–2 km

How do I use this map?

This map sees the land through "geological eyes". The map's many colours represent the different geological materials that underlie this diverse landscape. You can use the map to answers such questions as: Are the Rocky Mountains made of sandstone or limestone or granite? (Go to the Coast Mountains to find granite!) Why is the farmland near Vanderhoof so flat? (You are driving across an old glacial lake floor!) Why are there so few exposures of rock outcrop between Prince George and Smithers? (A thick blanket of Ice Age sediment covers the rocks!) The diagram below uses the example of the Chetwynd area to show how the map's three major types of geological materials (rock, Ice Age sediment, modern sediment) typically underlie the landscape. Rock underlies all parts of northern B.C., but is commonly buried by thick layers of Ice Age sediment in valleys. Today's rivers have cut through this Ice Age sediment and deposited their own modern sand and gravel sediments.

Modern sediment

Peat (muskeg deposits); Mud, sand, and gravel (river deposits)

Ice Age sediment

Silt (glacial lake bottom); Sand and gravel (glacial river channels); Till (glacial debris)

Ice Age sediments form a widespread blanket overlying rock throughout much of northern British Columbia. They were deposited during the Ice Age when continental glaciers, similar to those in Antarctica today, covered most of Canada.

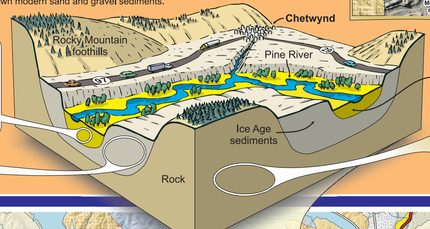
Glaciers

Glacier ice

Rock

Limestone and dolostone; Volcanic rock; Sandstone and shale; Metamorphic (altered) volcanic rock; Metamorphic (altered) sandstone and shale; Granite; Gneiss; Ultramafic rock (ancient ocean plate)

Since the end of the Ice Age 10 000 years ago, rivers have eroded valleys and deposited **modern sediments** in valleys and estuaries. Peat bogs, sand dunes, and beaches are other modern sediments.



All legend photos by R.J.W. Turner

Rock of the Earth's crust underlies all of British Columbia. It is widely exposed at surface in mountainous areas, but is commonly buried beneath thick layers of sediments in valleys and on plateaus.

Peace River country

Lookout Park on the southern outskirts of Fort St. John offers a magnificent view of the Peace River, its valley, and the surrounding plains.

30 — Hudson's Hope; Chetwynd; Tumbler Ridge; Dawson Creek; 97

Dinosaurs and coal

Broad coastal swamps inhabited by dinosaurs once bordered an inland sea in what is now Peace River country.

Deep burial transformed swamp vegetation to coal. Later uplift and erosion during mountain building has exposed dinosaur tracks and coal layers.

Peat soil layer; Dinosaur trackway; 1000 m; Compressed peat layer; Sand and mud; Fossil trackway; Sandstone and shale; Coal layer; Increasing pressure and temperature

Chetwynd to Hudson's Hope, Dawson Creek, and Tumbler Ridge

Forested foothills and plateaus in Peace River country are replaced eastward by rich agricultural plains. Across this landscape, the Peace River has carved a fertile valley. Foothills between Chetwynd and Tumbler Ridge are underlain by folded layers of sandstone and shale that contain important reserves of coal, as well the footprints and fossils of dinosaurs and other life. The town of Tumbler Ridge was built to support local coal mines.

The former Bullmoose coal mine in the foothills west of Tumbler Ridge quarried tilted layers of coal from a surface pit.

Courtesy of Peace Coronco Ltd.

29 — 100 million years ago; Seas; Lowlands; Mountains

28 — Several short walks in the Tumbler Ridge area lead to dinosaur foot prints such as this example at Flatbed Creek.

The Rockies and Rocky Mountain Trench

Chetwynd; Mackenzie; Prince George; Jasper; McBride; 97

Jasper to Prince George, and Mackenzie to Chetwynd

From Jasper, Highway 16 follows the headwaters of the Fraser River past Mt. Robson and other high limestone and quartzite peaks of the Rocky Mountains. It then enters the strikingly long and straight Rocky Mountain Trench and continues northward along the broad Fraser River toward Prince George. Highway 97 also crosses the trench near Mackenzie and Williston Lake, and crosses the Rockies at Pine Pass. Here the Rockies are a narrow mountain range composed of limestone, slate, and sandstone.

Rocky Mountain peaks of grey limestone rise above Highway 97 at Pine Pass.

27 — Causeway across Williston Lake near Mackenzie. Construction of the Bennett Dam on the Peace River flooded 200 km of Rocky Mountain Trench with the waters of Williston Lake reservoir (B.C.'s largest lake).

26 — Rocky Mountain Trench; Williston Lake; Fort Nelson; Mackenzie; Prince George; McBride; Golden; Cranbrook; Fraser River; Alberta; British Columbia

The Rocky Mountain Trench, a major fault in the Earth's crust and a North America's longest mountain valley, extending from Montana to Yukon.

24 — The Fraser River meanders through a rich agricultural valley near McBride in the Rocky Mountain Trench.

25 — Mount Robson, Northern Canadian Rockies, is composed of thick layers of limestone, sandstone and shale deposited in a shallow sea. Courtesy Kent Dixon.

Canada; KGS 2274

Legend

Population

- 50 000 or more
- 10 000–50 000
- 5000–10 000
- 1000–5000
- 500–1000
- 0–500
- First Nations community

Major roads, paved; Major roads, unpaved; Minor roads, paved; Minor roads, unpaved; Provincial parks and park boundaries; Volcano

Mines (producer; past producer or major prospect)

1=Windy Craggy (copper), 2=Engineer (gold), 3=Polaris Taku (gold), 4=Tulsequah Chief (zinc), 5=Golden Bear (gold), 6=Galore Creek (gold), 7=Snip (gold), 8=Johnny Mountain (gold), 9=Eskay Creek (gold, silver), 10=Sulphurets Creek (gold), 11=Granduc (copper), 12=Premier (gold), 13=Porter-Idaho (gold), 14=Glacier Creek (gold), 15=Mount Klappan (coal), 16=Kemess South (gold, copper), 17=Baker (gold), 18=Lawyers (gold), 19=Red-Chris (copper), 20=Polar Jade (jade), 21=Kutcho Creek (copper), 22=Kutcho Creek Jade (jade), 23=Provencher Lake (jade), 24=Letain Creek (jade), 25=Wheaton Creek (jade), 26=Seywerd (jade), 27=Table Mountain (gold), 28=Cassiar (asbestos, jade), 29=Taurus (gold), 30=Fireside (barite), 31=Anyox (copper), 32=Anyox (slag), 33=Kitsault (molybdenum), 34=Red Rose (tungsten), 35=Silver Standard (gold), 36=Ogden Mountain (jade), 37=Glacier Gulch (molybdenum), 38=Duthie (gold), 39=Telkwa (coal), 40=Bell (copper), 41=Granisle (copper), 42=Huckleberry (copper), 43=Equity Silver (silver), 44=Endako (molybdenum), 45=Pinchi (mercury), 46=Mount Milligen (copper), 47=Dahl Lake (ilmestone), 48=Cariboo Gold (gold), 49=Giscome (limestone), 50=Dome Creek (slate), 51=Willow Creek (coal), 52=Brule (coal), 53=Wolverine (coal), 54=Bullmoose (coal), 55=Quintette (coal).

Gold placer mine areas

1=Pine Creek, 2=Spruce Creek, 3=Dease Creek, 4=Thibert Creek, 5=McDame Creek, 6=Germansen Creek, 7=Manson Creek, 8=Barkerville.

Natural gas plants

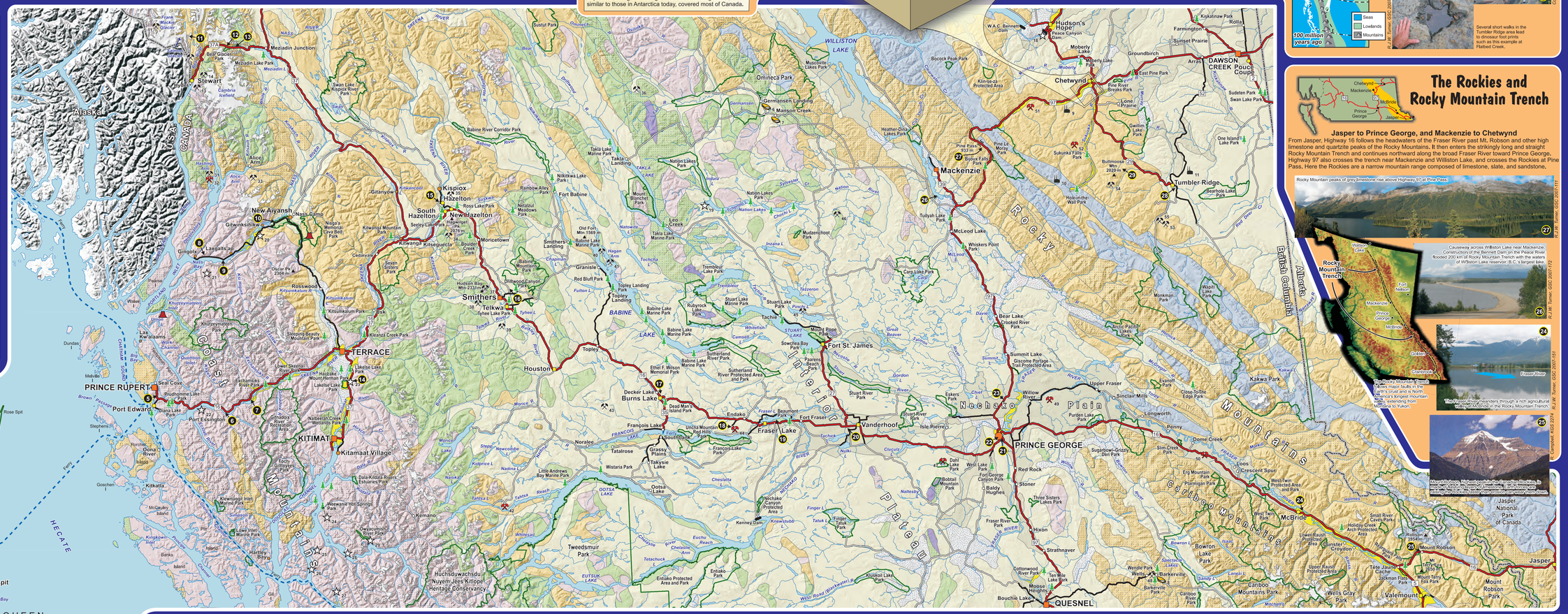
1=Fort Nelson, 2=Wildboy, 3=Midwinter, 4=Ekwan, 5=Ladyfern, 6=Aiken Creek, 7=Sikanni, 8=Taylor, 9=Pine River, 10=Kwoen, 11=Noel.

Hot springs

1=Tatshenshini, 2=Atlin, 3=Sheslay, 4=Ehwy Creek, 5=Taweh Creek, 6=Mess Lake, 7=Mess Creek, 8=Sphaler Creek, 9=Choquette, 10=Hoodoo Mountain, 11=Iskut River, 12=Portage Brule, 13=Liard, 14=Deer River, 15=Lepine Creek, 16=Toad River, 17=Prophet River, 18=Hudson's Hope, 19=Tchenlo Lake, 20=Alyansh, 21=Burton Creek, 22=Frizzell, 23=Lakelse, 24=Weewanie, 25=Bishop Bay, 26=Klekane Inlet, 27=Khutze Inlet, 28=Shearwater, 29=Brim River, 30=Hotspringss Island.

Location of photograph

25 0 25 50 kilometres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PRINCE RUPERT
Port Edward
Port Essington
Masset
Port Clemens
Queen Charlotte
Skidegate
Sandspit
GRAHAM ISLAND
QUEEN CHARLOTTE ISLANDS
HECATE STRAIT
Coast Mountains
Houston
Burns Lake
Decker Lake
Endako
Fraser Lake
Vanderhoof
Fort St. James
Fort Fraser
Mackenzie
Tumbler Ridge
Chetwynd
Hudson's Hope
Pine Pass
PRINCE GEORGE
Prince George
McBride
Valemount
Mount Robson
Jasper
QUESNEL
Williston Lake
Rocky Mountain Trench
Nechako Plateau
Interior Plains
Cariboo Mountains
Rocky Mountains
Alberta
British Columbia
DAWSON CREEK
Pouce Coupe
Fort St. John
Dawson Creek
Tumbler Ridge
Bear Glacier
Salmon Glacier
Meziadin Lake Park
Swan Lake Kispiox River Park
Babine River Corridor Park
Babine Mountains Park
Nisga'a Memorial Lava Bed Park
Seven Sisters Park
Kitwanga Fort
Kitseguecla
Moricetown
Hagwilget Canyon
Hudson Bay Mtn 2443 m
Smithers Landing
Granisle
Topley Landing
Houston
Tweedsmuir Park
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Kitlope Lake
Kitimat Arm
Douglas Channel
Kitkatla
Masset Inlet
Naikoon Park
Port Clements
Tlell
Rennell Sound
Moresby Camp
Sewell Inlet
Gwaii Haanas National Park Reserve and Haida Heritage Site
Cape St. James
Cape Knox
Langara
Rose Spit
Juskatla
Cape Ball
Athlow Bay
Pure Lake Park
Naikoon Park
Tlell
Skidegate
Sandspit
Queen Charlotte
Copper Bay
Tasu Sd
Lyell Island
Talunkwan I
Skidegate Inlet
Deception Pass
Kwuna River
Yakoun River
Mamin River
Tlell River
Yakoun Lake
Mayer Lake
Honna River
Pallant Creek
Juskatla Inlet
Masset Harbour
Masset Sound
Dixon Entrance
Chown Bay
Cape Fanshawe
Lawn Point
Rennell Sound
Sangan River
Delkatla Inlet
Tlell River
Yakoun River
Mamin River
Skidegate Inlet