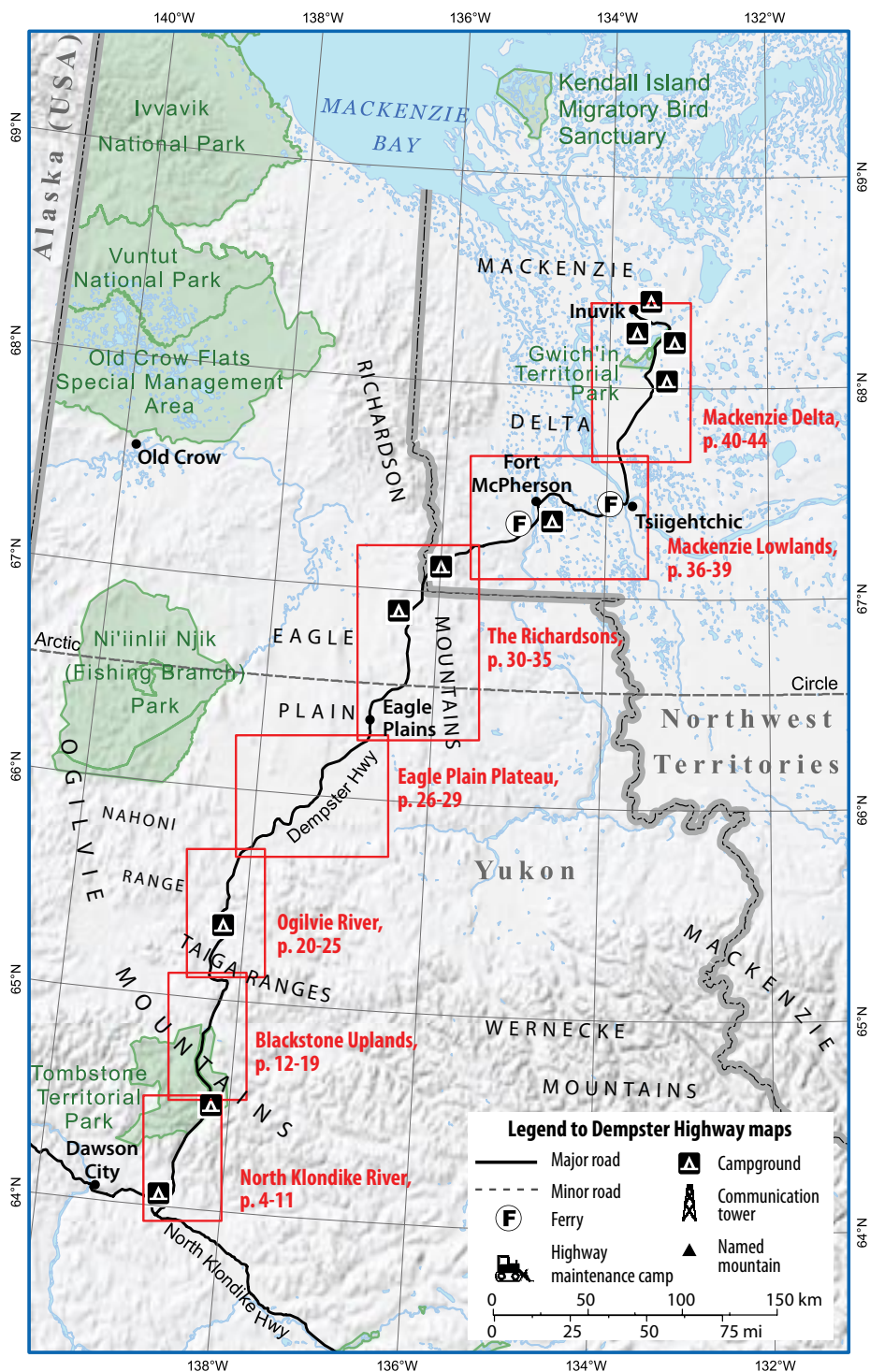


THE DEMPSTER HIGHWAY

TRAVELOGUE



*The only road in Canada that takes you to the Arctic Circle
and into the land of the midnight sun.*



THE DEMPSTER HIGHWAY

TRAVELOGUE

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For more information, visit our website at www.yukonparks.ca or call us at 867-667-5648, or toll free at 1-800-661-0408, ext. 5648.

This booklet is not intended to be used as a definitive road map. Please pick up free Yukon and Northwest Territories road maps from visitor centres.

The maps in this publication change scale. Refer to each map's scale bar for clarification on distances.

WELCOME

TO THE DEMPSTER HIGHWAY

INTRODUCTION

Where does “north” begin and what is it like? Perhaps the answers lie along the Dempster Highway. This is the only road in Canada that takes you across the Arctic Circle and into the land of the midnight sun, where north is a way of life, not just an arrow on a map.

The Dempster leads you into a unique landscape, passing through land that until 190 million years ago was the coastline of ancestral North America. It takes you through the lands of the Han, Gwich'in and Inuvialuit peoples. It introduces you to the winter habitat of the Porcupine caribou herd. And it takes you across a portion of east Beringia — the vast refuge that escaped continental glaciation during the last ice age.

Started in 1959, the Dempster Highway was eventually completed to Inuvik in 1979. In a half century of road access, the Dempster has experienced many changes, but the lands through which it passes have maintained their remote character. You can do your part to keep it wild by being extra careful with fires, waste and off-road hiking. (See Environment Yukon's *Into the Yukon Wilderness* for tips.) Camp in the designated campgrounds marked on the maps in this booklet.

This travelogue highlights many of the features that make the region so special. We hope it will whet your appetite for more information about the north. References for further reading are provided at the back of the travelogue.

Read on and enjoy.

HOW TO USE THIS TRAVELOGUE

Each section of this travelogue begins with an overview of the country you are travelling through, highlighting distinctive features of landscapes and life forms. This is followed by numbered features to watch out for as you are driving. These numbers are highlighted on the relevant section map. The kilometre distance on the highway is provided, along with a short piece of information about most features.

The best way to use the travelogue is to set your odometer to zero when you turn onto the Dempster. Watch for the kilometre markers on the east side of the highway, spaced every two kilometres, and compare these to your odometer. Then watch for the feature noted in this travelogue.

The road will take you through many ecoregions, across major watersheds and through areas of glaciation and Beringia. Check the table of contents to find short write-ups about a variety of additional topics.

CAREFUL DRIVING IS ESSENTIAL ON THE DEMPSTER

When you are on the highway, remember that you are in a northern wilderness. By travelling lightly on the land, you will help to ensure a wild experience for those who follow.

Please keep off the access trails to Northwestel's microwave towers; manoeuvring large vehicles is very difficult. These trails are built on permafrost; more traffic means more permanent damage to the tundra.

Airstrips on the Dempster were originally built as resupply points during highway construction and may still be used today. Please obey posted signs.

Except for the first five kilometres, the Dempster Highway is all gravel. Flat tires are common, so carry spares.

Stop only where other drivers can pass safely, and then pull over as far to the right as possible. Do not stop at the top of a hill, on a bridge, or on a curve. For more driving tips, get the highway driving brochures listed in the reference section on page 45.

While most people travel the highway in the brief arctic summer (July and August), spring and fall have their own delights. Be aware that the long winter (October to April) requires additional precautions for travelling.

For specific information on highway conditions, check with the Yukon Road Report (867-456-7623 or toll free 1-877-456-7623), visitor information centres, or any RCMP detachment.

In case of an emergency, you will find telephones at Eagle Plains Hotel and at RCMP detachments in Dawson, Fort McPherson and Inuvik.

DRINKING WATER

Water taken from any non-commercial source along the highway should be boiled or treated before drinking.

FISHING LICENCES

A valid angling licence is generally required if you want to fish in the Yukon and Northwest Territories. More information is available at www.environmentyukon.gov.yk.ca/fishing/fishinglicences.php or www.nwtwildlife.com/fishing/license.htm.

WILDLIFE: OBSERVE BUT DON'T DISTURB

Home to caribou, sheep, eagles, butterflies, falcons and countless other wildlife, the Dempster is truly a way to the wild.

Peregrine Falcons and Gyrfalcons can be observed during much of the summer along the Dempster. They are very sensitive to your approach, however, and may abandon their young if disturbed. Therefore, if you see a falcon nest or a sign indicating a sensitive nesting area, stop where you are and watch through binoculars or a telescope. Keep at least 500 metres away.

When coming upon wildlife, consider your safety, the safety of other people on the road, and that of the animal. The best approach is for you to pull off the road and observe from a respectful distance.

Never feed a wild animal. It is forbidden under the *Wildlife Act* and you may be setting the stage for an attack on you or the next person who encounters that animal.

Bears are easily habituated to human food and can become a danger to everyone. The killing of a bear that has been fed human food, intentionally or through neglect, is a sad loss that can be avoided.

Feeding smaller animals can create problems as well. Red squirrels, ground squirrels, coyotes and foxes can become pests in campgrounds and along roadsides. If they are not killed by traffic or other accidents, they may suffer from dietary problems caused by the wrong kind of food. Wildlife need natural foods to remain healthy.



Interpretive hike

The Dempster Highway traverses three ecoregions in its first 40 kilometres, although the landscape does not change much. The Klondike Plateau, Yukon Plateau North and Mackenzie Mountains ecoregions look very similar from the highway.

In this section of the highway, the road mostly follows the North Klondike River toward its source in the Ogilvie Mountains. The southern end of the highway lies within the Tintina Trench. This major geological fault extends from the Rocky Mountain Trench in British Columbia, northwest across the Yukon and into Alaska. It marks a collision point between the ancient North American continent and drifting fragments of other continents.

White and black spruce, balsam poplar and trembling aspen cover much of the valley bottoms and adjacent slopes. This mosaic of vegetation was created by fire, moisture, water flow and the presence of permafrost. Moose, black bear, Gray Jay and Spruce Grouse are common in this region of the highway.

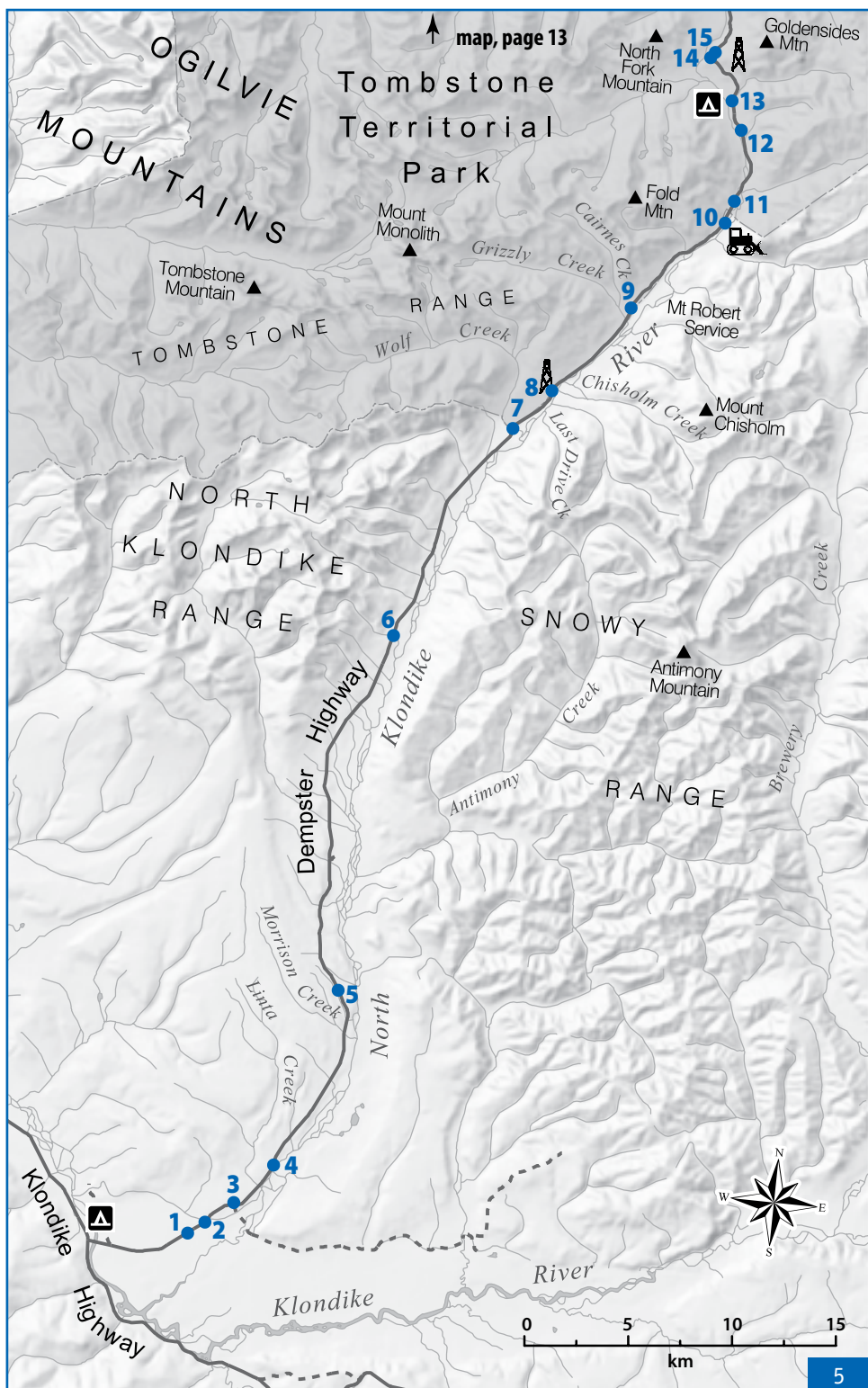
HAN, PEOPLE OF THE YUKON RIVER-KLONDIKE VALLEY: *The southern part of the highway traverses the traditional land of the Han people, the ancestors of the Tr'ondëk Hwëch'in First Nation. The early Han moved through their lands in a yearly round according to the availability of food. Small family groups spent much of the spring and summer in the valley of the Yukon River — where the Klondike River enters — downstream to beyond present-day Eagle, Alaska. There they fished for the chinook and chum salmon moving up the rivers from the Bering Sea.*

Nets made of willow bark and spruce root, basket traps and weirs were used to catch these and other types of fish. Much of the catch was split and boned, then hung from pole racks and dried for winter use. They were then stored in underground caches lined with willow and covered with heavy poles, bark and soil.

Once the salmon runs were over, the people moved in smaller groups, spending much of their time hunting birds and mammals. Caribou, moose, bear and mountain sheep were important food species along with waterfowl, grouse and ptarmigan.



Caribou



1. Forest fires

km 5.0

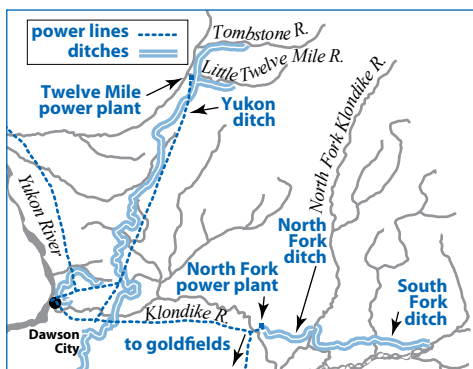
Forest fires are a common occurrence in the dry Yukon interior. They are often caused by lightning storms that bring little rain. You will see many remains of forest fires along the route, going back many decades. A major effect of climate change will be an increase in forest fires, particularly in the north.

While these fires may seem disastrous, in the long term they are beneficial to many plants and animals. Fire is a natural process that releases large quantities of nutrients, ultimately nourishing the next generation of plants. Within a few short years, open forests of aspen and balsam poplar develop. Fireweed, grasses, willows and succulent plants provide food for wildlife like moose, mice and black bears.

2. North Fork ditch and road

km 6.4

Just past the end of the pavement, you will see side roads in both directions. This is where the North Fork ditch passed by. For nearly 60 years, the ditch channelled water from the North Klondike River to an electric power plant 25 kilometres further west. It helped to provide electricity and water for gold dredging in the Klondike. Constructed in 1909 by the Granville Power Company, the hydroelectric plant provided 10,000 horsepower, later increased to 15,000. The ditch carried three times as much water as the neighbouring Yukon ditch, which carried water 113 kilometres from the Tombstone River.



The Yukon Consolidated Gold Company purchased the operation in 1922. By the 1960s, falling gold prices and rising production costs forced the shutdown of the last dredge. The power plant closed soon after.

3. Mining road

km 8.0

The road to the east provided access to the Viceroy gold mine on Brewery Creek. The mine operated until 2002, using heap-leach technology and cyanide to extract 8.5 million grams of gold from crushed rock. Reclamation on the site ended in 2005.

4. Antimony Mountain km 10.5

Although you are still in the shallow, wooded valley of the North Klondike River, you can now see one peak of the Ogilvie Mountains. This is Antimony Mountain, a 2,040-metre-high feature that is about 30 kilometres away.

Antimony Mountain is part of the Snowy Range, an appropriate name considering that the range receives relatively high amounts of precipitation. It forces moist, northward-moving air masses to rise, cool and release their moisture.

5. North Klondike Range km 20.0

By now, you can see the broadly sloping fringes of the North Klondike Range to the west of the highway. Leading towards the rugged Tombstone Range, these mountains were glaciated during the ice age. Evidence of this glacial history is in the abundant gravel in road cuts along here. This glacial drift (also called moraine) was transported out of the mountains by ice and runoff.

6. Signs of glaciation km 38.7

High up on the mountains to the west, you can see evidence of the glaciers that cloaked these mountains until 12,000 years ago. Triangular-shaped peaks, U-shaped valleys, mounds of rubble and steep-walled ridges are some of the effects of glaciation.

Watch for these features on the mountains bordering both sides of the valley from here to Tombstone campground (kilometre 71.5).

7. Southern boundary of Tombstone Territorial Park km 50.5

The land to the west of the highway is part of Tombstone Territorial Park. Established in 1999, the park protects 2,100 square kilometres of the Ogilvie Mountains and Blackstone Uplands. Fifteen kilometres further north (at kilometre 65.3), the lands to the east of the highway are also in the park. You will be driving through Tombstone Territorial Park for the next 70 kilometres.

Like all cabins along the Dempster, the residence at this location is private property. Please respect the privacy and property of the owners by not stopping. It is also helpful if you slow down to reduce dust.

8. Microwave towers km 53.5

Fourteen microwave towers, like the one here to the west of the road, were built along the Dempster Highway in the early 1990s. They provide a communications system for Eagle Plains Hotel (kilometre 369) and government employees working on the road.

9. Grizzly Ridge trail km 58.5

The Grizzly Ridge trail heads west through boreal forest to Cairnes Creek, then climbs steeply to rocky slopes, providing views of Mount Monolith and the North Klondike River valley. Further information on hiking routes is available at the Tombstone centre (kilometre 71.5).

10. Klondike Highway maintenance camp km 65.0

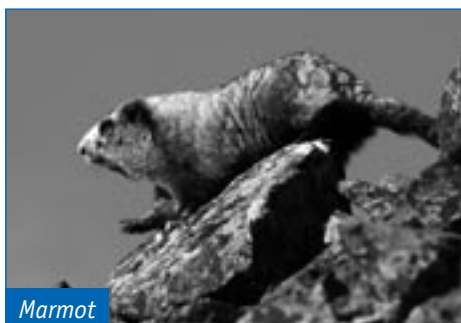
This is the first of three government maintenance camps along the Yukon portion of the Dempster Highway. (The others are at Ogilvie River and Eagle Plains.) No visitor services are available at these camps but staff will provide assistance in valid emergencies.

11. Rock glaciers km 66.0

To the east is another ice age feature known as a rock glacier. Originating in a bowl, or cirque, of the mountain, this undulating tongue of rock fragments moved much like a glacier. But, unlike a glacier, a rock glacier is composed of rocks and only has a core of ice.

Another rock glacier is to the southwest of you at kilometre 67.5.

MARMOTS: *Marmots may be seen crossing the road here. A true Yukoner, the hoary marmot sleeps away the winter months — all eight of them, from September to May — in a den deep beneath the frozen surface and 40-below blizzards of the Dempster. The largest member of the squirrel family, marmots live in rocky slopes of the mountains, foraging on the lush green plants of nearby alpine meadows. More often heard than seen, marmots are the sentinels of the mountains, their piercing alarm call giving them the nickname “whistler.”*



Marmot

12. Beavers and ducks km 69.0

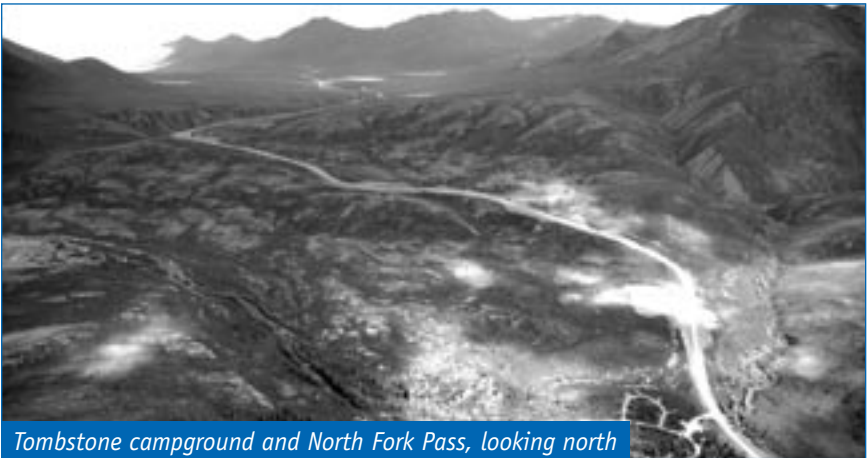
In the 1990s, a series of beaver dams and a lodge were maintained here by a family of beavers. You may also see one or two families of Bufflehead ducks. They nest in abandoned woodpecker holes in trees throughout the pond area.

13. Tombstone Territorial Park Campground and Interpretive Centre km 71.5

The campground, at 1,034 metres above sea level, is a nice spot to relax for a day or two. By taking advantage of the services and facilities here, you will be better able to make the most of your Dempster journey.

The centre has displays, a resource library, identification guides and much more. Interpreters will answer your questions about the region and also offer nature walks and campfire talks. A self-guided interpretive trail, approximately one kilometre in length, introduces you to the tundra.

Wilson's Warbler, Dark-eyed Junco, Northern Hawk Owl and American Kestrel are regularly seen in the campground.



Tombstone campground and North Fork Pass, looking north

OF TRAVELOGUES, ROADS AND WILDERNESS: *The Dempster Highway was built in the 1960s and 1970s, without the benefit of an environmental assessment or land use planning. In 1959, Prince Philip had flown over the road construction and commented on the “destructive practices” of the many gravel pits used in the early parts of the highway.*

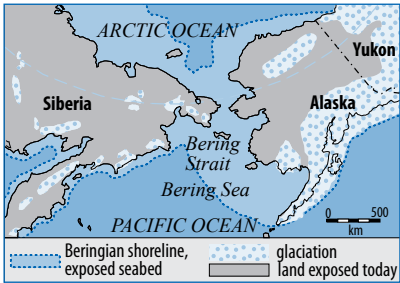
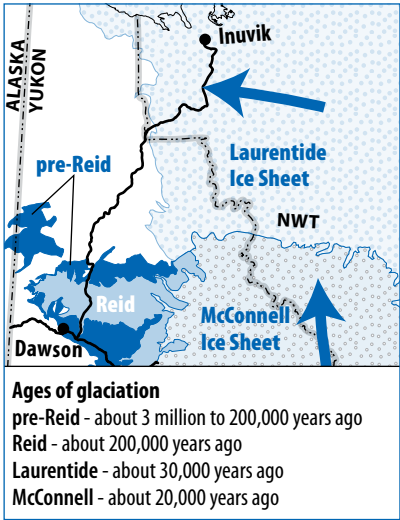
Continuing public concern led to the development of regulations to limit the effects of the road on the wild lands through which it travelled. The first interpretive events were provided in 1983 by biologists roaming the highway and talking with tourists. In 1986, they set up a base in a trailer at the Tombstone campground.

This travelogue first appeared as a photocopied manuscript in 1992. The origins of the travelogue, as well as the Dempster Interpretive Centre (now the Tombstone Territorial Park Campground and Interpretive Centre), were in the far-sighted vision of Yukon biologist Dave Mossop and Yukon parklands interpreter Jack Schick. They clearly saw public education as essential for the protection of north Yukon raptors and their wilderness environment from the potentially devastating effects of road building and use.

GLACIATION AND BERINGIA: The most recent ice age started almost three million years ago and included repeated glacial advances and interglacial periods. In this part of the north, great lobes of ice periodically advanced from the south and east, filling valleys and smothering mountaintops. Each new glaciation obliterated most traces of the previous, but did not advance quite as far. Today, these remains include mounds of gravel and sand in the valley bottoms, terraces and canyons on mountainsides, and scratched bedrock on knobs and mountaintops.

At the same time, changes in climate caused sea levels to drop; the Bering Strait became a grassy plain. A cold and dry land extended from where Stewart Crossing in the Yukon is today, across Alaska to what is now Siberia. This large, ice-free area is now called Beringia. Many species of animals, plants and insects were able to cross here from Asia to North America. Where long grass flourished, bison and mammoths congregated: near the ice edges, in the valleys of western Yukon, and near ice-dammed lakes that formed in central Yukon as glaciers receded. On occasion, placer miners find their bones while digging for gold.

The Dempster Highway mostly passes through Beringia. The southern 70 kilometres, however, follow a valley containing moraines that were fed by tongue-like glaciers lodged in the high peaks of the southern Ogilvie Mountains; the next 35 kilometres are across the Blackstone Uplands, where side-valley glaciers spilled out.



Tombstone viewpoint

14. Tombstone Range viewpoint

km 74.0

The prominent peak (2,193 metres) you see from here lies about 20 kilometres distant, at the head of the North Klondike River. The jagged skyline of the Tombstone Range is caused by a tough rock type called syenite, an igneous intrusion which punched upward into overlying sedimentary layers about 90 million years ago. As the intrusion cooled, steep shrinkage cracks developed; during the ice age, valley glaciers plucked slabs from the base of the mountains, leaving impressive vertical faces.

The traditional name for the peak was Ddhal Ch'el or Ddhah Chaa tat (Tron'dek Gwitchin, Tukdah Gwitchin for "among the sharp, ragged rocky mountains"). Picturesque little lakes, or tarns, and open tundra greet experienced backpackers.

During the most recent glaciation, a glacier flowed down the North Klondike River valley as far as the low undulating hills near the river bend below the viewpoint. The broad gravel flat of the river contains boulders of the glacier's terminal moraine. Groundwater seeps in this area flow all winter, building a thick ice pan that persists well into summer.

Northern Wheatear, a bird species that winters in north Africa and southeast Asia, have nested in the cliffs nearby.



In the Tombstone Range

15. Goldensides Mountain access road

km 74.4

On the east side of the highway is a road to a microwave tower and access to Goldensides Mountain. Ask staff at the interpretive centre for information on hiking here.

GWICH'IN TERRITORY: *To the north of here is the land of the Takudh and Teetl'it Gwich'in, who now reside mainly in the communities of Old Crow and Fort McPherson. Their ancestors and the ancestors of the Han travelled much of this region for thousands of years, hunting caribou and other animals.*

From the high point of the Dempster Highway at North Fork Pass, you travel down the Blackstone River and over Windy Pass to the Engineer Creek valley. The Blackstone Uplands — labelled Blackstone Plateau on the map — is high, rolling land covered in willow and birch shrubs, dotted with ponds, and alive with birds in the spring and caribou in the fall.

As you leave Tombstone Territorial Park, you cross from the Mackenzie Mountains ecoregion to the North Ogilvie Mountains ecoregion. Crossing the Taiga Valley, before you start to climb out of the Blackstone valley and through Windy Pass, you will experience a landscape of rock and tundra, where mountain streams etch their constantly changing courses alongside, under and through the road.

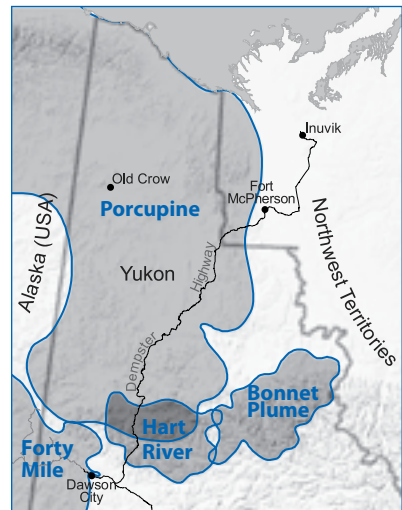
16. Hart Winter Road

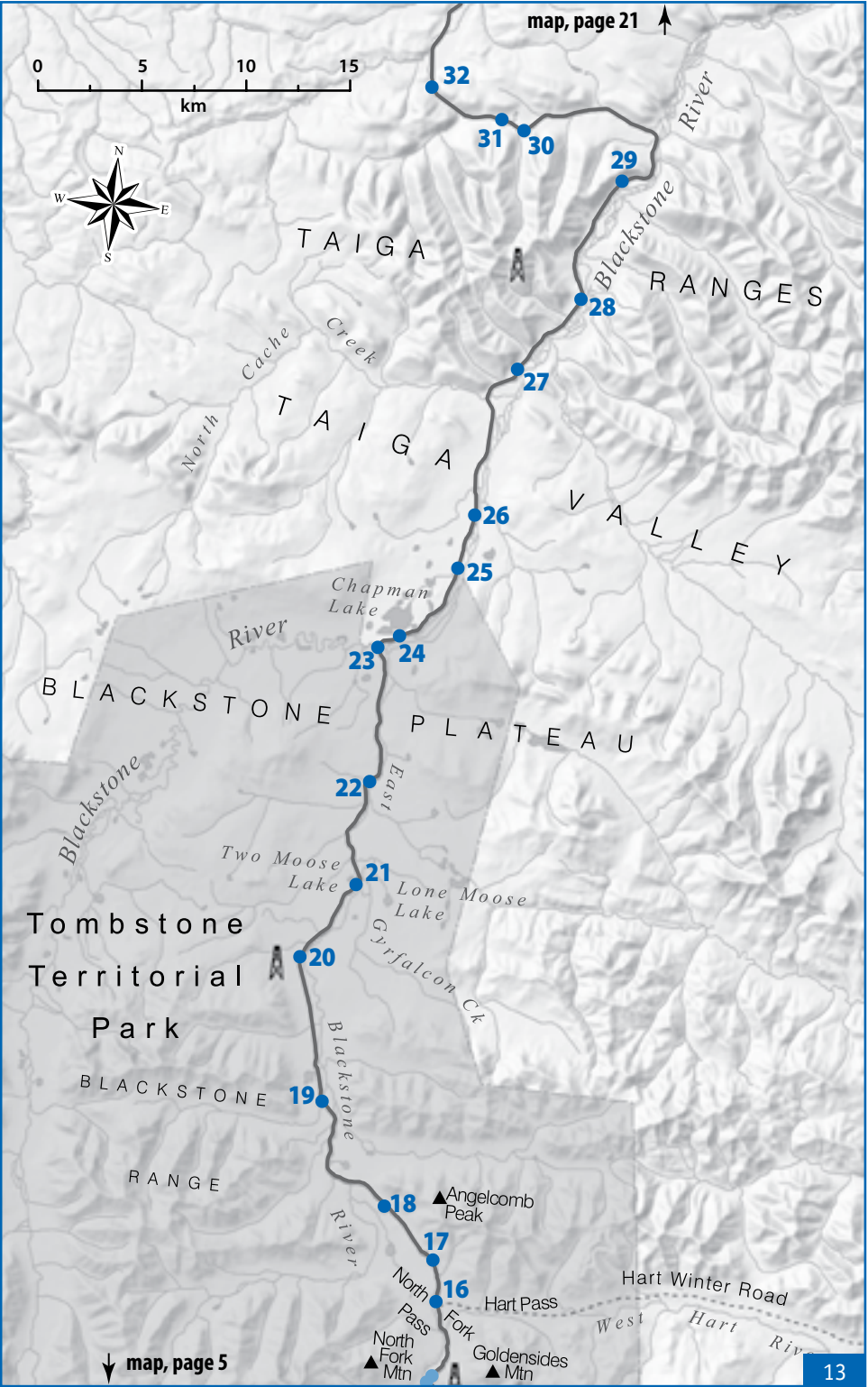
km 78.2

This is the beginning of a road that leads east into the headwaters of the West Hart River. Originally a mineral exploration winter road, the route goes through wet and boggy areas that could only be crossed when the ground was solidly frozen and snow-covered. Today, the road serves as a walking or mountain-biking route.

HART RIVER CARIBOU HERD: *The Hart River herd is one of two caribou herds that range in the Dempster region of the Yukon. Numbering about 1,200 animals, these woodland (mountain) caribou use North Fork Pass and the Blackstone Uplands as part of their summer range. Although they are known to share winter range with the barren ground caribou of the Porcupine herd, the Hart River herd is not known to interbreed with them.*

You may see members of the Hart River herd anywhere on the tundra so keep a close watch. They easily blend into the surrounding landscape. Individuals or small groups may gather on windy slopes or snow patches where flies and mosquitoes are less of a bother.





17. North Fork Pass summit and watershed divide (east side pullout) km 80.0

At 1,400 metres above sea level, this summit is the highest point on the Dempster Highway. This is also a watershed, or continental, divide, where rivers to the north flow into the Beaufort Sea via the Mackenzie River system, and rivers to the south are part of the Yukon River watershed that flows into the Bering Sea far to the west.

Wildflowers abound in late June and early July. Willow, Rock and White-tailed Ptarmigan live here, as do marmots, arctic ground squirrels, pikas and Golden Eagles. North of here, you may also spot Gyrfalcon, the magnificent tundra falcon that eats mainly ptarmigan.

You are now travelling through a land of near-continuous permafrost. Wherever you see tundra, you can be pretty sure that the soil underneath is permanently frozen. It has been this way for thousands of years, insulated by a thick layer of moss and lichens.

The word “tundra” is derived from the Finnish word, “tunturi,” which means treeless plain. Because of the thin active layer of soil — which thaws during summer — roots cannot penetrate deeply enough to support a tall tree. Trees and other plants have adapted to drying winds and the short growing season by staying low to the ground.

Do not hike here during lambing season in May and June. It is important that the sheep not be disturbed.

DWINDLING SIGNS OF GLACIATION: *As you drive northward, the landscape shows less and less evidence of glacial action. The valley to the west contained a small glacier at the height of the ice age. However, it received so little snow that it only spread a short distance north and south into the main valley of North Fork Pass. The undulating, hummocky terrain below marks the maximum extent of the glacier. This region has probably been free of glaciers for 10,000 years.*

18. Angelcomb Peak (Sheep Mountain) km 83.5

These mountain slopes are lambing and nursery habitat for Dall sheep during May and June. (Please stay away from here at that time.) In addition to finding safety in the crags, ewes are able to feed on the south-facing slopes, the first area to green up in springtime.

You may also see Golden Eagles soaring over the mountains or along cliff faces. The surrounding mountain slopes, with their ground squirrels and marmots, provide good hunting for eagles. The eagles may also kill young lambs if they are left unprotected by their mothers. Unlike Bald Eagles, which will feed on carrion, Golden Eagles prefer live prey.



Moose

19. Blackstone Uplands

km 90.5

The Blackstone Uplands stretch from North Fork Pass to Chapman Lake and beyond. The large creek at this crossing carries water into the Blackstone River.

The uplands are probably the richest area for bird life on the Dempster. Species to look out for include Long-tailed Jaeger, Gyrfalcon, Peregrine Falcon, Red-throated Loon, Long-tailed Duck, American Golden Plover, Willow Ptarmigan, Common and Hoary Redpoll, Lapland Longspur and Snow Bunting. Whimbrel, Golden Eagle and Short-eared Owl can also be seen.

The late Bob Frisch, a gifted naturalist who roamed these mountains, described more than 150 bird species that could be found here.

Big game hunting is guided in the region by two outfitters who are based along the Dempster Highway. One camp is here; the other is on the Blackstone River at kilometre 120.7. The hunters' main prey is Dall sheep and grizzly bears. The area is also hunted by Yukon residents during hunting season.

Watch and slow down for horses which may be roaming along the highway during the summer.

20. Surfbird Ridge and microwave tower

km 98.0

FRAGILE PERMAFROST: You may notice sections of old roadway that, in places, have become small ponds. The early technique of road building on permafrost was to scrape off the surface, then lay down a thick layer of gravel. Unfortunately, the gravel pad for this section of road was delayed for a year. The following spring, the exposed, ice-rich permafrost melted, creating a "thermokarst" lake. A new alignment had to be made.

21. Two Moose Lake

km 102.6

Moose are not abundant in the Blackstone Uplands but they are sometimes seen feeding in this small lake. The abundance of shrubby willows around the lake and along the Blackstone River provides a good place for moose to eat and hide.

This may also be your first chance to see waterfowl in the uplands. Watch for Northern Pintail, Scaup, American Wigeon, Northern Shoveller, Harlequin Duck and many others, including prairie species such as Gadwall that are rare here. The lake also hosts a variety of songbirds like Gray-cheeked Thrush and shorebirds like Red-necked Phalarope.

Three kilometres to the east, you will see a gentle, northward-sloping hump. This terminal moraine marks the northern limit of glaciation about 125,000 years ago.

The North Ogilvie Mountains ahead of you were not sculpted by ice. You can tell because ridge crests are adorned with palisades and spires; mountainside rubble forms long straight slopes, and small valleys are V-shaped.

22. Pullout

km 107.6

This pullout on the east side of the road is beside the Blackstone River. Dolly Varden (Arctic char) and Arctic grayling can be found in this river. During winter, the thick cover of willow along the river is an important concentration area for Willow Ptarmigan. Willow buds are a key food for these tundra-dwelling grouse.

23. Boundary of Tombstone Territorial Park km 115.0

Like the southern boundary, the northern boundary of Tombstone Territorial Park splits along the highway. On the west side, park lands end here at the south end of a Tr'ondëk Hwëch'in land selection around Chapman Lake. Parklands continue for another 5.3 kilometres on the east side of the highway.

The east fork of the Blackstone River joins the main Blackstone River about 100 metres east of the highway bridge. Gwitch'in people knew this stream as Tth'oh zraii njik, or "black boulder creek."

ARCTIC TERNS: Watch for Arctic Terns skimming or hovering over the water. The terns nest on gravel bars in the braided channels of the river. They are among the long-distance champions of the bird world. From here, they will migrate nearly 20,000 kilometres to have another summer in Antarctic regions. These birds experience more hours of daylight every year than any other species on earth.

PINGOES: Once you have crossed the river and gained a bit of elevation, look upriver about eight kilometres. You should be able to see two low, cone-shaped mounds. These are pingoes. With a core of solid ice, pingoes are unique features of the north. They form in a manner similar to the way freezing water in a bottle forces its way upward as it turns to ice. These two pingoes are thought to be more than 5,000 years old. Pingoes can be as small as a very small car or as big as a large stadium.



Arctic Tern

24. Chapman Lake

km 116.0

This is the largest lake you will see on the Dempster Highway. It was named for Ernest Chapman, a trader, trapper and prospector. Chapman Lake was the end of the road in 1964 when the Canadian government temporarily dropped the highway project. Work on a smaller scale continued sporadically, with the road reaching the Ogilvie River by 1970.

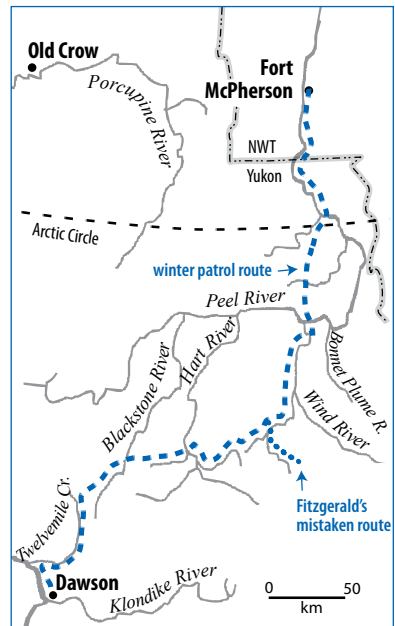
There are many other smaller lakes in the vicinity and together they support a variety of waterfowl and shorebirds, including nesting Mew Gulls, Common and Red-throated loons and swans. The lake is home to a variety of fish, including Arctic grayling, burbot, round whitefish and longnose sucker.

If you are travelling through here in winter, you might observe part of the wintering Porcupine caribou herd. As many as 40,000 caribou have been seen crossing the highway here in mid-October. Over the past 30 years, the population of the herd has varied between 100,000 and 178,000 animals. It is believed to be in decline.

THE TRAGIC LOST PATROL: *This region was familiar to the earliest of travellers, long before highways and aircraft came into existence. It was a winter crossroads for Han and Gwich'in, as the people shifted their camps seasonally between the Old Crow, Dawson and Fort McPherson areas.*

In the winter of 1904-1905, the Royal Northwest Mounted Police began winter patrols between posts at Dawson, Fort McPherson and Herschel Island, on the Beaufort Sea. The patrols usually took about 50 days, following one of the Gwich'in routes.

Though the 765-kilometre route was considered very difficult by the police, it was traversed safely, except once. That was the "Lost Patrol," in the winter of 1910-1911. Travelling south from Fort McPherson, without an Indian guide, Sergeant Fitzgerald's party lost its way near the headwaters of the Little Wind River. While attempting to return to Fort McPherson, everyone died. All patrols after this were required to have an Indian guide with them. Patrols ended in 1921.



25. Northern boundary of Tombstone Territorial Park

km 120.3

You are now leaving Tombstone Territorial Park.



Airstrip

26. Airstrip km 124.4

27. Taiga Range km 132.0

At this point, you start to travel through the mountains of the Taiga Range. Note how the slopes to the west have strong growth on the sunny, south faces but very little on the north sides. Watch for Bald and Golden eagles as you travel further north. Both species nest in the area.

28. Dippers km 136.7

American Dippers have nested in this area. Watch for these small, grey birds that frequently walk into the water until they disappear. Dippers feed on insect larvae attached to rocks in clear, running water.

29. Erosion of mountains km 143.2

The northern Ogilvie Mountains consist mostly of light grey limestone; erosion by water and frost-fracturing have resulted in long slopes of broken rock that have reached a fairly stable condition known as the angle of repose. Lichens have slowly grown over the surface, giving it a dull brown colour.

Where there has been recent removal of surface rock, the light-coloured, lichen-free rock underneath is revealed. It may take centuries for the disturbed slopes to stabilize again and certainly will take many years for the lichen cover to return.

30. Windy Pass summit km 152.8

Aside from the establishment of the Dempster Highway, this alpine tundra environment has probably changed very little over the past 100,000 years or more. At 1,100 metres above sea level, what you see now is the view the first people would have had as they roamed eastward from Asia, across the Bering land bridge, and into what is now the interior of Alaska and northwestern Yukon.

Eastern Beringia, as it is known today, was a dry, windy land in which even the valleys were cloaked in vegetation similar to this summit. Forests were absent. The rolling expanse of grasses and sedges ranged from the Richardson Mountains in the east, south to the coastal mountains, west to the Bering Sea, and north to the Arctic Ocean. As the climate became warmer and more moist, spruce, birch and poplar forests appeared. Pine forests have still not reached the Dempster region, although one pine tree was found near kilometre 74.

Spared the ice sheets which covered all the surrounding land, Eastern Beringia was a northern sanctuary, or refugium, containing a unique array of plants and animals. Many had once been common to much of Asia and North America. The changing environmental conditions and isolation caused by continental glaciation affected plant and animal life significantly.

Some wildlife species, such as woolly mammoth, giant bison and giant elk, disappeared. Others were isolated from members of their own kind by the great expanse of ice and, over thousands of years, developed distinctive characteristics. Thinhorn sheep (Dall and Stone sheep) are an example. They and their southern equivalent — bighorn sheep — were likely one species before they were isolated by continental glaciation. Now they are quite distinct.

Wandering Tattlers, a shorebird that lives around fast-flowing mountain streams, can be seen in this area.



Walkers on the rocks

BERINGIAN MOTHS: *These mountain ridges are breeding habitat for certain rare butterflies and moths. Found only in unglaciated regions of North America, a few of the species found here probably exist nowhere else. Evolving in the dry tundra of Beringia, one species of moth larva feeds only on the lichens of these rocky slopes. Since the adult female is flightless, distribution of the species is limited.*

31. Caribou trails

km 154.0

Migration trails used by caribou for countless centuries are visible on the bald, gray mountain directly ahead. Such trails are etched into the tundra for hundreds of kilometres throughout this region.

32. Gyrfalcon nest

km 158.0

On the cliffs by the road you can see whitewash (bird guano) below a ledge. This has been the home of a family of Gyrfalcons for many years. If they are in the area, watch them from the far side of the road so you will not disturb them.

The Dempster Highway now follows Engineer Creek to its junction with the Ogilvie River, passing through “drunken” boreal forest. Perched on a shifting active layer of permafrost just below the shrub-insulated ground, the black spruce trees are tossed around by the freezing and thawing of the soil that holds their shallow root systems. Mineral-bearing creeks add colour and odour to the forest air, while limestone crags carved by ice suggest castles in the air.



Drunken forest

33. Red Creek and Sulphur Springs km 168.3

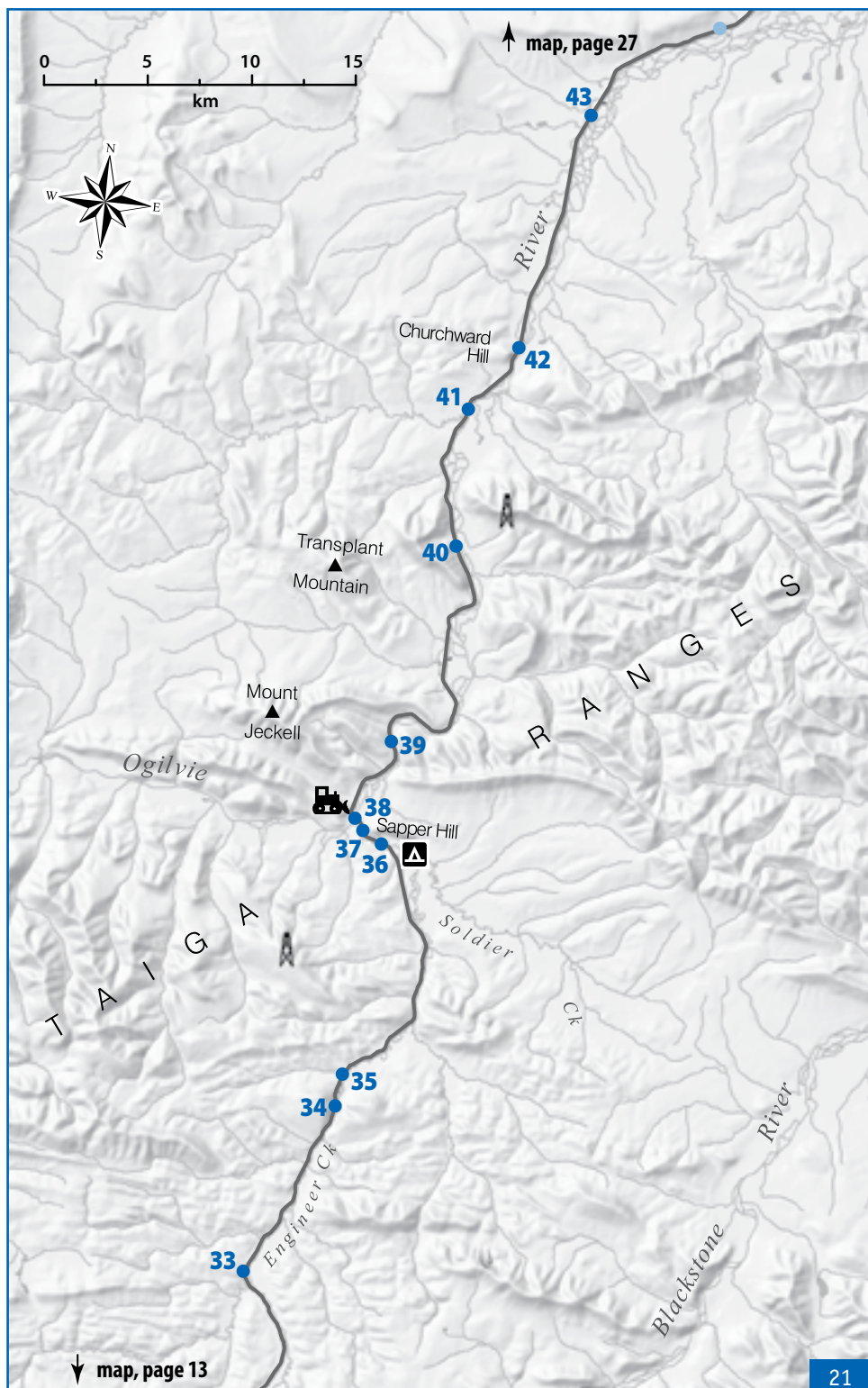
Whether it is the sulphur smell or the brilliant, orange-brown stain in the mud and on surrounding vegetation, for the next 25 kilometres you can easily tell you are in a highly mineralized area. When water percolates through limestone, gypsum, salt- or sulfide-bearing sediments, it dissolves parts of the rock. As a result, the water is high in calcium, magnesium, bicarbonate, sulfate, hydrogen sulfide, sodium and chlorine. In some seepages, it is highly acidic as well.

This water should not be used for drinking!

34. Sheep lick km 178.4

If you look across Engineer Creek to the steep, rubble-covered slopes beyond, you will notice sheep trails leading down to the water's edge. Resident Dall sheep add calcium and magnesium to their diet by drinking from Engineer Creek, which is rich in both. Watch for them feeding and licking by the creek or sunning themselves on the slopes on either bank.

Sheep are easily scared. When you see them on the road, stay in your vehicle and watch from a distance.



COLLARED PIKAS: *Standing outside your vehicle near rubble-covered slopes, you might hear a short, medium-pitched squeak coming from the rocks. If you watch very closely, you may see a small, gray, fist-sized animal watching you. It is a collared pika, sometimes called a rock rabbit or cony. A member of the rabbit family, the pika is quite common on mountain slopes along the Dempster Highway.*

Pikas do not hibernate in winter. Instead, they stay under snow-covered rocks and survive on their stored piles of dried plants.



35. Red hillside

km 180.0

To the west of the road, in the distance, is a hillside covered with a pink colouration. If you look closely, you will see that the slope is covered with shattered, red shale. The red colouring is due to the iron oxide in the rock.

36. Engineer Creek Campground and Sapper Hill (Divii Ddhaa)

km 193.8

As you reach Engineer Creek Campground, the huge mass of Sapper Hill, with its castle-like cliffs of dolomite, gains prominence. This type of rock, which is more resistant to erosion than the surrounding shales and limestones, continues along the highway to the Ogilvie River.

Sapper Hill was named in 1971 in honour of the 3rd Royal Canadian Engineers who built the Ogilvie River bridge. “Sapper” is a nickname for an army engineer.

PEREGRINE FALCONS: *Look closely at the ledges and cave entrances on Sapper Hill. Peregrine Falcons have been known to nest here, the sites marked by a whitewash of droppings. They lay their eggs on the bare ledge.*

You may spot the silhouette of an adult peregrine on the skyline. Peregrine Falcons are agile and speedy fliers. If lucky enough to see one, you may witness some of the most masterful flying in the animal kingdom. They are known to reach speeds of over 200 kilometres per hour when in a dive. Please look from a distance and avoid disturbing them.

LONG COLD WINTERS: *This is one of the coldest places in the Yukon, with an average monthly temperature of nearly -10°C year-round. During the dark days of January, the nearby Ogilvie maintenance camp has recorded a monthly average as low as -42°C. With any encroaching warmer air blocked by the surrounding mountains, dense, very cold, dry air may settle here for weeks at a time. The lowest temperature recorded at Ogilvie camp was -47.8°C in January, 1985 (records kept since 1971).*

37. Engineer Creek bridge

km 195.0

If you look closely in the limestone outcrops to the northeast of the bridge, you may spot fragments of fossil coral. This limestone was formed on the floor of a shallow sea about 400 million years ago. Pieces of a coral reef, broken by storm waves, came to rest in the soft lime mud. They eventually turned to rock and were uplifted into folded mountains about 150 million years ago.

Please leave the fossils for others to see.

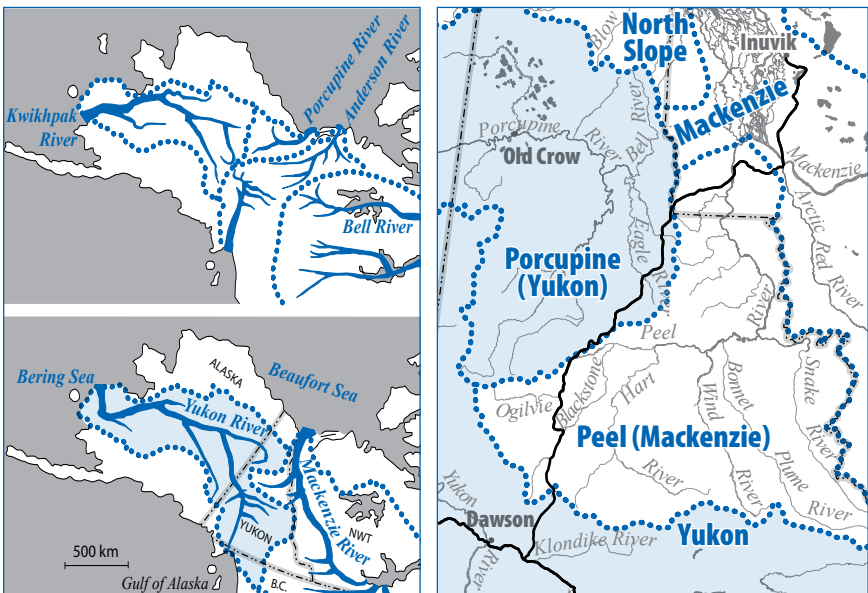
38. Ogilvie River (Gwazhal Njik)

km 195.5

Arctic grayling, northern pike and Dolly Varden are common in the Ogilvie River.

William Ogilvie was a prominent Canadian land surveyor who began working in the Yukon in the summer of 1887. His first task was to determine the location of the 141st meridian — the boundary between Canada and the United States (at Alaska) at the Yukon River. The boundary surveys confirmed Canadian jurisdiction over the area.

WATERSHEDS



Dotted lines show watershed boundaries. Left: Dramatic changes in the drainage of northwestern North America occurred between pre-glacial — five million years ago (top), and post-glacial — since about 15,000 years ago (bottom). Thickness of the drainage outline indicates relative volume of flow. Right: The watersheds today. The shaded area highlights the Yukon River watershed which extends across Alaska and flows into the Bering Sea. The Peel River watershed flows into the Mackenzie and then the Beaufort Sea.

CANOEING: *The Ogilvie River offers several possibilities for short and long river trips. You can make a two-day trip from the bridge to the point where the Ogilvie departs from the Dempster Highway to join the Peel River. Or you can travel all the way to Fort McPherson, a two-week wilderness adventure. Check the book, "Paddling in the Yukon," for more details.*

39. Tors and tortured rock

km 200.0

From here to the point where the Ogilvie River heads east towards the Peel River valley is particularly fascinating for the geologically inclined.

Protruding from the slopes of rubble are towers, spikes and minarets of rock. Known as tors, these features are the product of frost shattering. Water seeps into cracks and joints in the hard bedrock, then freezes and expands, forcing the rock apart until it falls down the slope. The larger, more solid blocks remain.

Tors are found only in unglaciated terrain. If this valley had been glaciated, most of the tors would have been bulldozed away by the ice, leaving steep, smooth, rock walls.

Using your imagination to fill the gaps, try connecting the dipping strata of one mountain with the rising strata of another. The resulting arches and troughs are known as anticlines and synclines, respectively. On a smaller scale, you can see steeply dipping shale beds at kilometre 210. Mountain building is a stressful process!



40. The notch

km 214.0

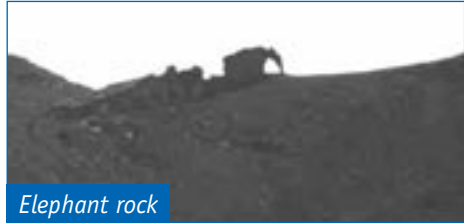
Water freezing in a crack and then expanding, called frost shattering, has created a wide crack right through the tor high above you.

41. Elephant rock pullout

km 221.2

Elephants were once common in the Yukon, in the days of woolly mammoths, which was as recent as 8,000 years ago. Now, only deep-buried bones remain as evidence of this extinct life form. Use your binoculars (and imagination) and look southeast across the river

to the top of the distant mountain ridge. There you will see a very elephantine-looking rock. Nature has carved a tor into the shape of an elephant, complete with a clearly defined trunk.



42. Churchward Hill (Chii Akan)

km 224.7

This is the last of the Ogilvie Mountains and the last of the dolomite cliff faces along the highway. Known in Gwitch'in as "Chii Akan," or "beaver house mountain," legend says it was once occupied by giant beaver.

Opening up ahead is the wide, well-forested floodplain of the Ogilvie and Peel rivers. As you reach the middle of the valley, tall balsam poplar and white spruce are indicators that permafrost is either absent or quite deep. The result is a layer of fertile, well-drained soil in which tree roots can probe wide and deep to support these tall trees.

Across the valley is the escarpment of the Eagle Plain plateau.

43. Airstrip

km 237.0

GREAT GRAY OWLS: *Great Gray Owls, one of Canada's largest owls and a dweller of boreal forests, are known to nest in this area.*

A year-round resident of the Yukon, Great Gray Owls hunt during the day, preying mainly on small rodents like mice and voles.



Climbing out of the Ogilvie River valley, you leave the North Ogilvie Mountains ecoregion and enter the Eagle Plains ecoregion. Widely scattered groups of black spruce and tamarack trees are interspersed with dwarf birch and willow shrubs among the cottongrass, lichen and mosses. High above the Ogilvie and Peel rivers, the road follows ridgetops through the plains, crossing from the Peel (Mackenzie) watershed and following the Porcupine (Yukon) watershed once again.

Watch for signs of burned areas as you travel across Eagle Plain. Even this close to the Arctic Circle, fires, both in the forest and the tundra, are major factors in shaping the ecosystem.

44. Beginning of Seven-mile Hill km 245.5

Following well-drained slopes, the highway winds up the 300-metre-high escarpment of the Eagle Plain plateau. In some exposed cuts, you can see the resistant, nearly horizontal sandstone that forms the base of most of the plateau. Here, for the second time, the highway crosses the continental divide. For the next 60 kilometres water on the right hand side of the road flows to the Beaufort Sea, while water on the left side of the road flows to the Bering Sea.

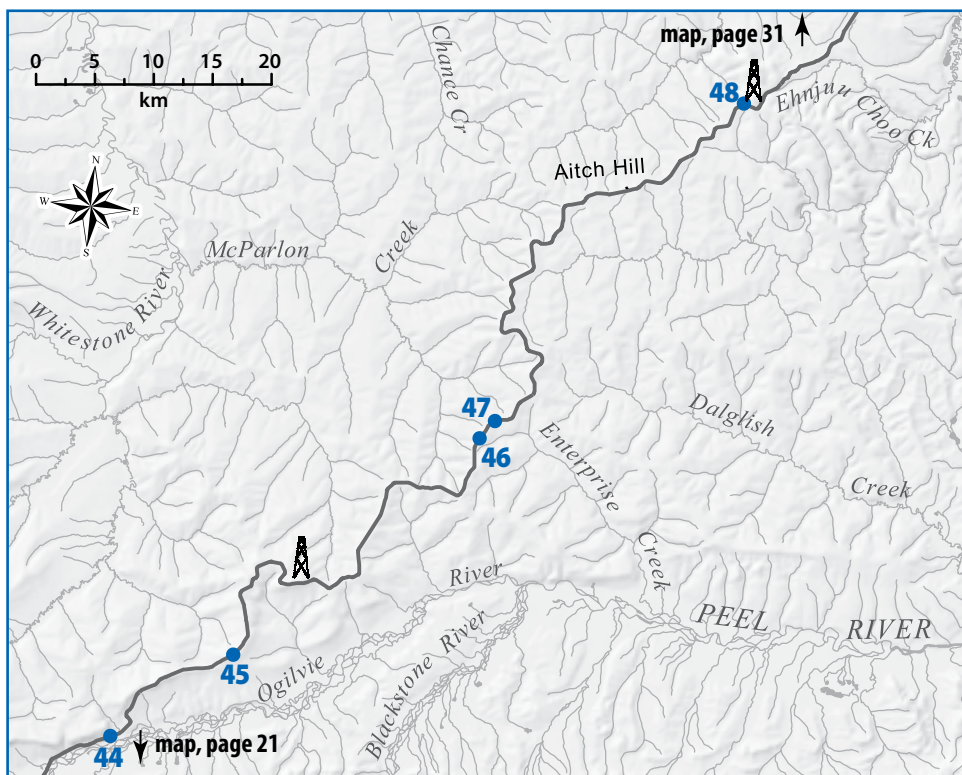
45. Ogilvie-Peel viewpoint km 259.0

This viewpoint provides one of the best panoramas of the northern fringe of the Ogilvie Mountains. The valley of the Ogilvie and Peel rivers continues eastward for about 180 kilometres, passing between the south end of the Richardson Mountains and the Ogilvies. Then it swings north toward Fort McPherson and the Mackenzie River delta. The Gwitch'in of the Fort McPherson area commonly travel up the Peel as far as the mouth of the Wind River, about 130 kilometres upriver.

Behind you at the viewpoint, and northward, you will be driving on Eagle Plain, a 200-kilometre wide area of gently rolling hills, here and there incised by deep tributaries of the Ogilvie and Eagle rivers. Beneath the lightly forested and shrub-covered hills are gently undulating layers of sandstone and shale.

A few natural seeps of tar in the area led to exploration for oil and gas, as well as an exploration road. An early technique was to send a vibrating source along straight lines cut through the forest; sensitive geo-phones picked up the vibrations reflected from buried rock layers. These seismic lines from the 1950s and 1960s are still visible.

The highway crosses Eagle Plain from here to the Yukon-Northwest Territories border in the Richardson Mountains.



BUILDING ROADS OVER PERMAFROST

Constructing roads in the north is complicated. The thick blanket of rock and gravel that makes up the roadbed is designed to prevent the underlying ice-rich permafrost from warming, thus keeping it in its more stable, frozen state. Much of the highway was built in winter, with the gravel being dumped on top of the moss-covered permafrost. Only trees were cut; shrubs and other plants were buried by the deep gravel. The roadbed conducts heat more than the surrounding vegetation, and it must, therefore, be extra thick to insulate the frozen ground beneath.

As climate warms, keeping permafrost under roads is a challenge. Intensive maintenance efforts are becoming more necessary to keep roads on permafrost in a reasonable state of repair.

Good gravel is hard to find here where glacial ice and rushing water have not crushed and rounded the rocks. Abrupt changes in the colour of the road surface indicate a different local source of gravel, while further on sharp rocks punctuate the road surface, and possibly your tires.



46. Changing vegetation

km 300

The highway runs for many kilometres along the transition line between shrub tundra on the upper slopes and black spruce forest below. The boundary varies from nearly 900 metres elevation on south-facing slopes to 750 metres on north-facing slopes.

The kinds of dominant trees and shrubs provide an indication of the soil conditions. Moist areas underlain by permafrost are characterized by black spruce, tamarack and a sphagnum moss and lichen ground cover. Wetter sites support growths of willow and shrub birch. Drier and warmer sites, such as the valley bottoms, may have white spruce and balsam poplar.

Although the variety of bird life is not as rich here as in the Blackstone or Richardson areas, this transition zone is a good spot to see birds that prefer each habitat or the transition zone itself.

47. Forest fire

km 302.0

With endless days of intense summer sun, it is not uncommon for temperatures to reach the high twenties (Celsius). During these hot periods, moisture-laden updrafts or weather disturbances may produce towering thunderheads. Rainfall from them is often meager and spotty but the abundant lightning can set the tinder-dry forest and tundra ablaze.

Such fires affect caribou's winter food source by burning the layer of lichen on which the caribou depend. On the other hand, the increase in poplar and willow in burned areas is an advantage to the moose population.

The burn in this area began in late July 1991 and ended with the onset of fall snow and rain in mid-August. It covered 5,500 hectares and was only one of many fires in the region.

48. Richardson Mountains

km 347.0

To the northeast lie the Richardson Mountains, a lower range of mountains than the Ogilvies.

As you leave this point and descend the hill ahead, you will see the sandstone bedrock that underlies the plateau. Its surface is shattered through frost action, leaving a veneer of angular rubble across the plateau and under the vegetation.

ECOREGIONS: Ecoregions are large areas of similar landform and climate with a fairly wide range of plants, animals and soils. The Dempster Highway will take you through 10 of Canada's 217 ecoregions.

Klondike Plateau: Long periods of weathering have resulted in extensive upland boulder fields, V-shaped valleys and deep soil weathering. Extreme annual temperature variation occurs in valley bottoms. Two major bird migration corridors exist here.

Yukon Plateau North: Several large river valleys traverse this ecoregion. Fannin sheep here may be a relict of isolation during the last glaciation. The glaciated valleys host important wetlands.

Mackenzie Mountains: The sedimentary rocks that underlie much of this ecoregion tell a 1.6-billion-year-old story. Multiple glaciations resulted in spectacular landforms. The ecoregion is home to large woodland caribou herds.

North Ogilvie Mountains: Mountains of modest relief have unvegetated summits and rubble-covered slopes, separated by broad valleys. The coldest daily minimum winter temperatures in the Yukon are often recorded in these valleys. The region is used as a wintering grounds by the Porcupine caribou herd.

Eagle Plains: Much of this ecoregion escaped glaciation, but is now underlain by continuous permafrost and peri-glacial features are common. It has low mammal diversity because habitat is limited for many species.

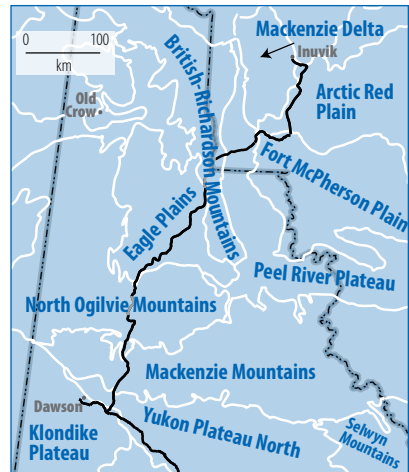
British-Richardson Mountains: This mountainous ecoregion contains the largest extent of unglaciated mountain ranges in Canada. The Porcupine caribou herd uses it for both calving and migration.

Peel River Plateau: Several canyons testify to rapid northward draining of glacial lakes about 10,500 years ago. Many species of large mammals occur, but only the polar representatives of most small mammal groups inhabit the ecoregion. The extensive wetlands and the broad Peel River valley support considerable bird life.

Fort McPherson Plain: This ecoregion lies on the floor of the Mackenzie River Valley. Perennially frozen peatlands cover over 25% of the area.

Arctic Red Plain: This ecoregion is an extensive, low-elevation complex of gently undulating glacial till and peatlands with slow-growing black spruce forests and nearly treeless lichen-peat moss bogs.

Mackenzie Delta: This ecoregion includes Canada's largest delta, an intricate network of small ponds, stream channels, and alluvial uplands with white spruce forests.



From the Eagle Plains Hotel, the highway drops down to cross the glacial outwash channel of the once-mighty Eagle River, now a slow, small stream in late summer. It then climbs back up again to the plains to cross the Arctic Circle. With the Richardson Mountains close on the east, the highway leaves the Yukon boreal forest one last time at Rock River to cross the mountain range at the Northwest Territories border, and the Eagle Plains ecoregion becomes the British-Richardson Mountains ecoregion.

49. Eagle Plains Hotel km 369.0

This is your chance to sample the amenities of civilization! Take the time to view the photos displayed in the hotel. They illustrate the saga of the Lost Patrol and the manhunt for Albert Johnson, the so-called “mad trapper” of Rat River.

Built in 1978, just before completion of the Dempster Highway, the hotel was an engineering challenge. Considering the permafrost environment, engineers found an area where the bedrock was at the surface. The hotel was built on this natural pad, thus avoiding the costly process of building on pilings (as you will see when you get to Inuvik).

The hotel runs year-round, despite the severe cold and blizzards common to this part of the Yukon. There is a maintenance camp nearby.

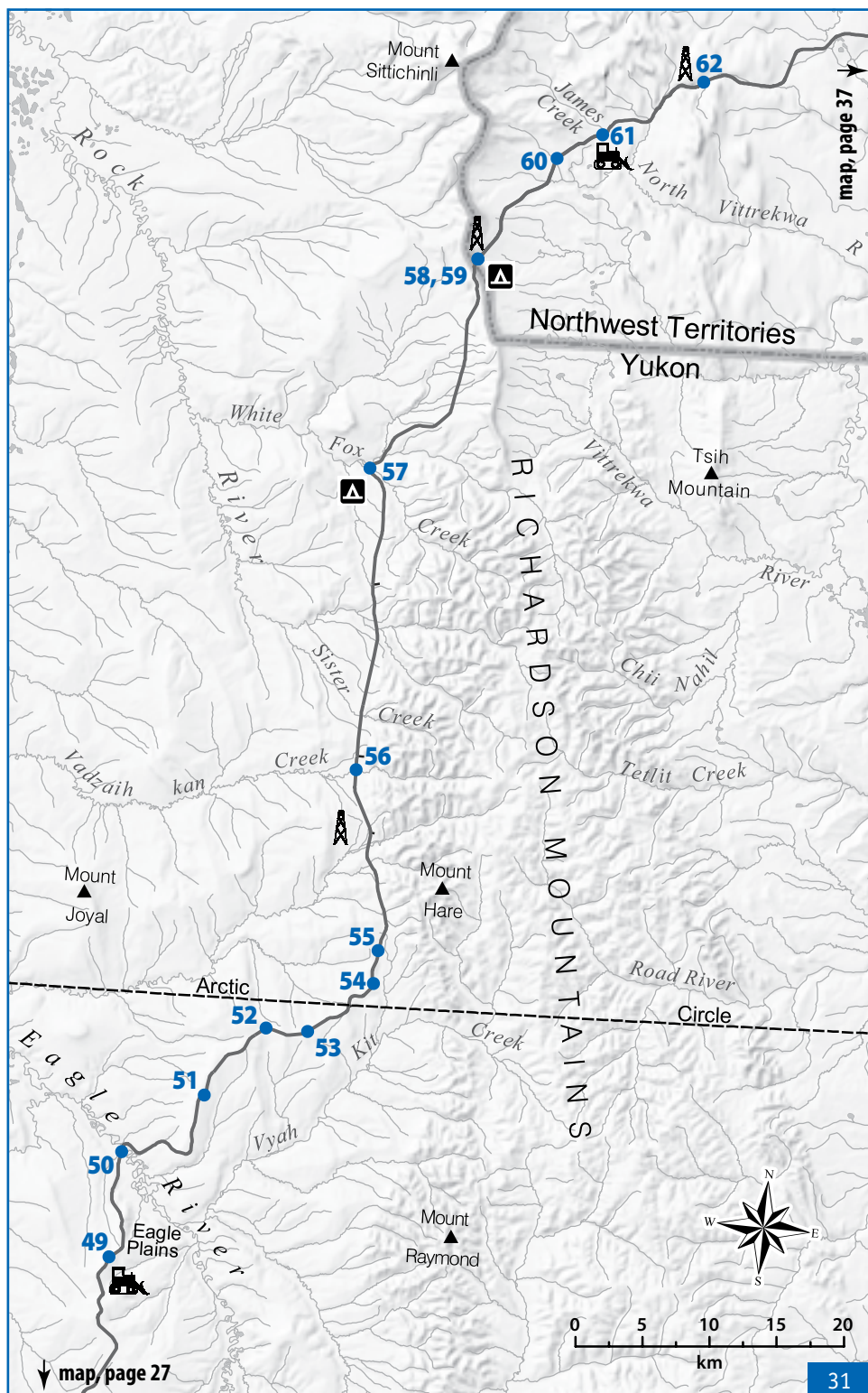
50. Eagle River km 378.0

This is the main channel for water from the western slopes of the Richardson Mountains. The Eagle is a slow-moving, meandering river that joins the Bell, becoming the Porcupine, which then flows into the Yukon River west of the Alaska border. It poses no problems for the canoeist prepared for many days of wilderness travel. Old Crow is your first takeout point (air access only), seven to 14 days downriver.

The bridge over the Eagle River is built on permafrost. Pilings were driven 30 metres down into the ground, passing through a 10-metre layer of permafrost.

CHANGING DRAINAGE PATTERNS: *You may wonder how such a small river as the Eagle River has such a wide valley and high terraces. During the last ice age, the land east of the Richardson Mountains was covered by the vast Laurentide Ice Sheet. It formed a barrier to both the Peel River and a river through McDougal Pass that drained the Old Crow basin. Both rivers had previously flowed into the Mackenzie before the ice blocked the way.*

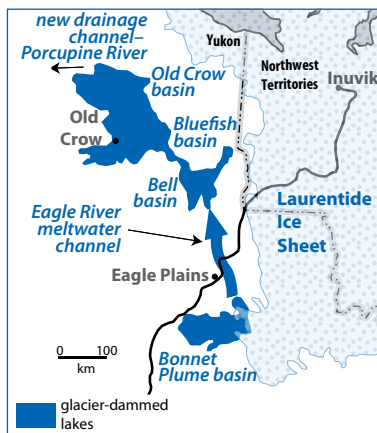
With their outlets dammed by a wall of ice, these rivers formed huge lakes. To the south, Glacial Lake Bonnet Plume grew until it spilled over a height of land and flowed down this valley. The ancient Eagle River was large and slow, carrying all the waters of the western



Richardsons as well as all those of the Ogilvie-Peel watershed.

To the north, waters rose and flooded the valleys until Glacial Lake Old Crow was able to spill over the Ramparts south of Old Crow. This new channel — the Porcupine River — became the new river, being lower than the pre-glacial waterway through McDougal Pass. A huge wetland known as Old Crow Flats remains where part of the ancient lake existed.

Once the ice sheet east of the Richardsons receded, the Peel reverted to its pre-glacial channel. The much smaller Eagle River is now fed by streams from only a portion of the Richardsons.



51. Eagle Plains airstrip

km 389.0

52. Fossils

km 395.5

The shales in this cutbank contain fossil plant fragments. Please look but leave for others to enjoy.

WARNING: Do not park on the road! It is best to walk down to the site after parking on the hilltop well back from the crest.

53. Tamarack or larch (*Larix laricina*)

km 399.0

Mixed with the black and white spruces, the deciduous, brush-needed tamarack becomes abundant from here north to the Mackenzie Delta. Tamarack are easy to spot in autumn when their needles turn gold before dropping off.



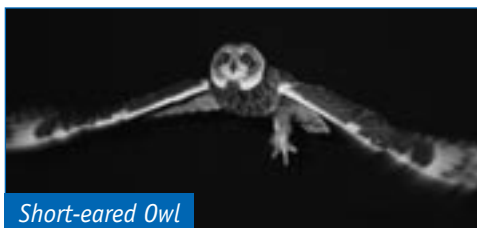
54. Arctic Circle 66°33' north

km 405.5

Welcome to the Arctic Circle! You have reached the land of the midnight sun. At this point, on June 22, the sun never falls below the horizon. The long days of summer contrast with the long nights of winter. An interpretive display here tells stories of the midnight sun, permafrost and road building.

In June, this region receives as much solar energy as equatorial regions. Since the sun here is much lower on the horizon than at the equator, it is less intense. The low intensity is partially compensated for by the long days, providing less light but for a much longer time.

Short-eared Owls hunt the open tundra in this area in summer, their moth-like wingbeats distinctive as they cruise low over the ground. Smith's Longspurs may also be seen on the tundra north of the Arctic Circle.



Short-eared Owl

55. Caribou migration

km 408.0

Most of the Dempster Highway region — from North Fork Pass to the Richardson Mountains — is part of the Porcupine caribou herd's winter range. With its wide open vistas, this area provides excellent opportunities for caribou watching from September to the end of May.

Curiously, a summer visit to this region may give the illusion of a lifeless landscape. While it is often easy to count thousands of caribou scattered across this terrain in April and May, you will be lucky to see any during summer. At this time of year, they congregate along the Beaufort Sea coastline, 300 kilometres to the northwest. But caribou leave signs of their presence long after they have gone.

Along the road edge, you may be able to find old tracks in muddy spots, as well as bones, antlers, chunks of caribou skin and old droppings.

Take a close look at the plants as well. The lichen cover is the main winter food for caribou. Preferring snow no deeper than about 60 centimetres, they can smell favourable lichen sites and paw craters with their wide hooves to reach the food. They also eat other greenery, including sedges, horsetails, herbs and deciduous shrubs, especially during summer.

GRIZZLY BEARS: *Although the caribou may be gone in summer, grizzlies remain. Most of the Dempster is grizzly country and, in this open terrain, your chances of seeing one are good. You will probably have to scan the tundra with binoculars, however, as they can be difficult to see at a distance. Those with light-coloured coats are almost totally camouflaged on the similarly coloured tundra. The best technique is to park your vehicle and watch for movement.*

June and early July is mating time, meaning that males are quite active and you may see breeding pairs. You may also see sows with this spring's cubs, or yearlings that can appear as big as the mother.

Grizzly bears eat a lot of plants and you may well see them feeding on the succulent greenery or the berries of late summer.

CAUTION: *Do not approach, attempt to feed, or disturb bears.*

56. Vadzaih kan njik (creek) km 422.0

Translation from the Gwich'in identifies this as "caribou den" creek. It was a favoured hunting area of the Gwich'in.

57. Rock River campground km 445.8

Rock River has been an important caribou hunting area for the Gwich'in people for over 8,000 years. The valley is a natural passageway for caribou on their migrations north in spring and south in autumn. The Gwich'in used caribou fences to hunt these animals and this was likely an excellent location.

Such fences were built with fallen trees and were in the shape of a large funnel. A centre fence line would run as far as a kilometre at right angles to the trend of the valley. Frightened by hunters on the sides of the valley, the caribou ran toward the centre fence line and were then diverted into the funnel. Once in the funnel, they became entangled in snares fixed to the walls of the trap and were killed by the people nearby.

Note the large size of the trees and shrubs in this valley. Shelter on the windswept tundra and the resultant warm soils are the key to this thick forest.

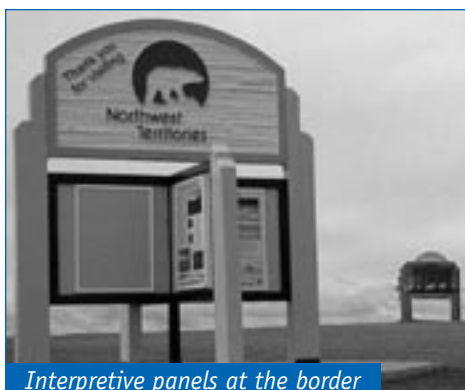
You can see how the treeline depends on both how far north you are and how high above sea level, as well as on the moderating effects of river valleys, southern exposure, and wind protection from the hilly terrain.

Beyond Rock River, you will be travelling in open tundra until you descend into the Northwest Territories. Watch for Northern Wheatears and, in winter and early spring, Snowy Owls in the Richardson Mountains.

58. Yukon-Northwest Territories border km 465.0

You are now leaving the unglaciated landscape of Eagle Plain. Once you cross the Richardsons, you will be in a landscape scoured by the great Laurentide Ice Sheet. At its maximum, this ice sheet joined the Cordilleran glaciers, surrounding East Beringia with ice hundreds or thousands of metres thick.

You have now entered Canada's Northwest Territories. Highway distance markers restart at kilometre 0 at the border and switch from green to blue. From here it is 272 kilometres to Inuvik. You are also now on Mountain Standard Time, so move your clock ahead one hour.



Interpretive panels at the border

The border is identified by signs and a Trans Canada Trail cairn. At this point, the Dempster Highway crosses the continental divide (dividing the Beaufort Sea watershed from the Bering Sea watershed) for the third time. The road here passes through the Richardson Mountains, a range of mountains which are the most northerly extension of North America's Rocky Mountains.

The Richardson Mountains are composed of dark shale and sandstone deposited in a deep basin about 450 million years ago. The mountains form a narrow line between north-trending faults. East-directed tectonic forces caused the sedimentary rocks to buckle and uplift between these faults; a mountain range formed during the last 50 million years. They are unique because, during the last ice age, the climate here was too dry for glacial formation. The tip of the Laurentide Ice Sheet was stopped by this mountain range, marking the eastern edge of the unglaciated area.

This range is named after Sir John Richardson, a naturalist who accompanied Sir John Franklin on his voyages of exploration to the Arctic. Franklin is the Arctic explorer who died in 1845 during his third attempt to find the Northwest Passage between the Atlantic and Pacific oceans.

59. Welcome to the Northwest Territories NWT km 0

If the weather is good, go exploring. Tundra walking can be a little wet at first, but you will soon be walking on dry, rocky ridges that follow the continental divide far up into the distance. Twelve kilometres to the north is the Richardson's highest peak, Mt. Sittichinli, rising to 1,574 metres. Look for flowers like arctic lupine, dryad and vetch.

60. Vittrekwa Valley NWT km 10

As you travel farther north, the highway leaves the Richardson Mountains on its way to the Peel Plateau. The road weaves in and out of mountains that display massive folds in their rock walls. Eventually, the highway follows a broad upland plateau that continues to the Peel River. This plateau marks the northwestern limit of the land covered by the Laurentide glacier.

61. James Creek NWT km 14

This is an excellent site for grayling fishing. Locals value the quality of the water at James Creek and use it to make good tea. A highway maintenance camp is located across the road.

62. Descent from the gorge NWT km 23.6

As the road heads east, it descends 853 metres out of the mountains and down to the Peel River, 51 kilometres away. It's a spectacular view.

With mountains and tundra far behind, the Dempster Highway travels through the lowlands of the Peel and Mackenzie rivers, heading downriver to the sea. Back in the boreal forest, now with poplar and birch as well as spruce, the highway skirts lakes and ponds and crosses both the Peel and Mackenzie rivers. The Peel River Plateau, Fort McPherson Plain and Arctic Red Plain ecoregions define subtle differences in the landscape as you drive through.

63. Midway Lake

NWT km 44

Situated on the Peel Plateau, this lake is the site of the annual Midway Lake Music Festival (www.tetlitgwichin.ca/MidwayLake) held the first weekend in August.

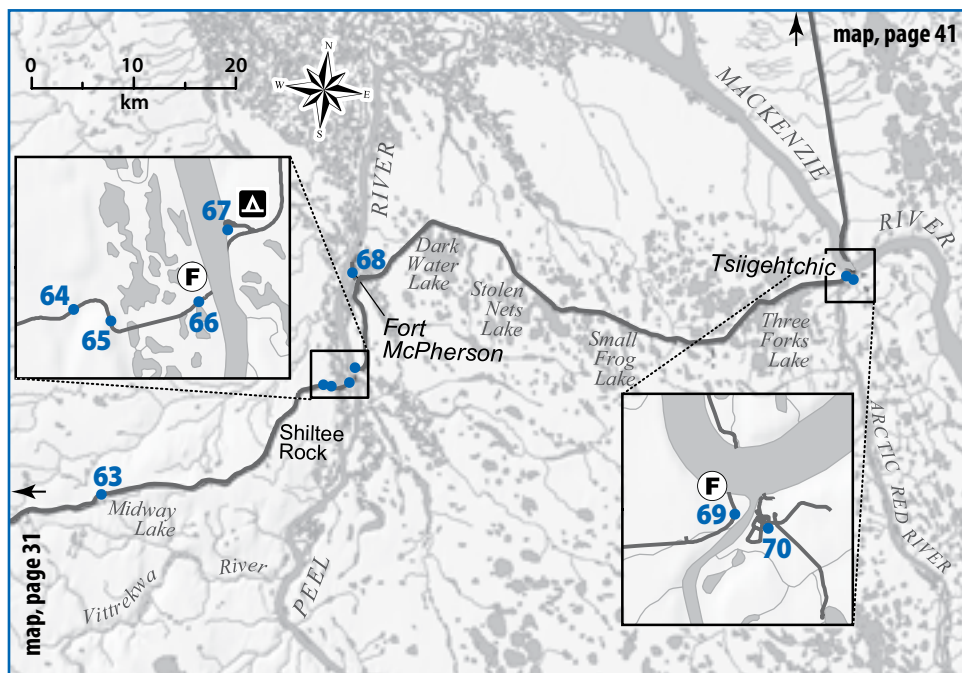
64. Tetlit Gwinjik Park and Peel River plateau view

NWT km 71

Stop at the pullout and walk to the viewpoint for a magnificent view of the Richardson Mountains, Mackenzie Delta, Peel River and Fort McPherson. Tetlit Gwinjik is the Gwich'in name for the Peel River. There are interpretive panels and a pathway out to a viewpoint, along which you can look for flowers and berries.



Peel River crossing



65. Leaving the Richardson Mountains NWT km 72

The mountain vegetation changes from treeless tundra to spruce, birch and tamarack forests as the road descends into the Mackenzie Lowlands. The shallow lakes in this area were created during the last ice age.

66. Peel River crossing NWT km 74

This cable ferry crossing is free and operates from 9 a.m. to 12:30 a.m. daily, from early June to mid-October. When signaled by ferry crew, drive straight on to the boat. During the winter (from the end of November to late April), except at fall freeze-up and spring break-up, there is an ice bridge at the crossing.

Locally, this site is called “Eight Mile” as it is eight miles from Fort McPherson. The Peel River flows from the Mackenzie and Richardson mountains through its tributaries — the Snake, Bonnet Plume, Hart, Wind and Ogilvie rivers.

You will see Gwich’in bush camps with cabins or canvas wall-tents set up along the Peel River, near the highway. Ravens and gulls linger close to the fish nets floating in the river’s current. Whitefish is the most common catch. It is cleaned, smoked and dried to make “dryfish” — a northern delicacy that is often for sale here.

67. Nitainlaih Territorial Park

NWT km 76

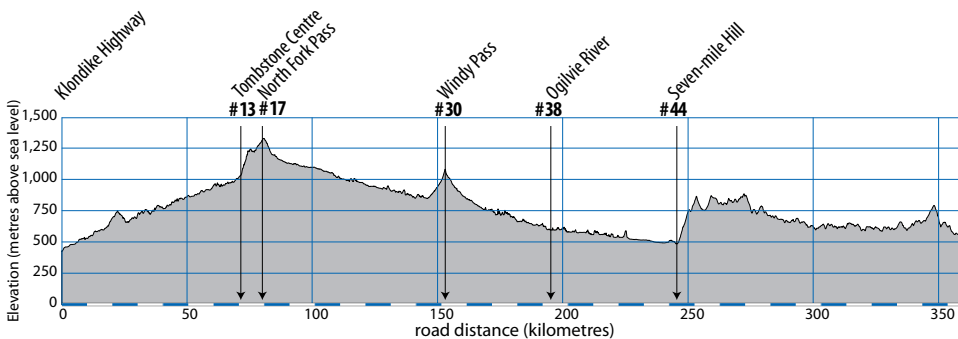
Nitainlaih is a Gwich'in term meaning "water flowing out in all directions."

Facilities here include an interpretive centre, campsites, potable water, firewood, a kitchen shelter, toilets and 24-hour security.

The interpretive centre is located one kilometre north of the Peel River ferry crossing, on a ridge overlooking the Peel River. Open from June to September 1, 12 hours a day, it features exhibits and displays about the Gwich'in traditional way of life. The interpretive centre's logs were cut locally in the Peel River valley.



The ups and downs of the Dempster show clearly in the elevation profile of the highway below. Though you climb up and down a lot after Tombstone, it really is downhill to the ocean.



68. Fort McPherson

NWT km 86

Take the turnoff to visit Fort McPherson, a community of 900 and home of the Tetlit Gwich'in. Fort McPherson is also the home of the Fort McPherson Tent and Canvas Company (www.fmtent.ca).

Drive carefully between Fort McPherson and Tsiigehtchic (km 86 to 142) for there are often sections of loose gravel. Be sure to slow down for oncoming traffic, as it is safer, as well as easier on windshields.

TREELINE: *The forested landscape here often comes as a surprise to drivers who think they crossed the treeline further south. Along this route, you are starting to see the northern edge of Canada's boreal forest. The treeline stretches to 69° north latitude in the Mackenzie Delta, because the Mackenzie River provides appropriate soil and climate for spruce and other trees to survive.*

69. Mackenzie River crossing

NWT km 142

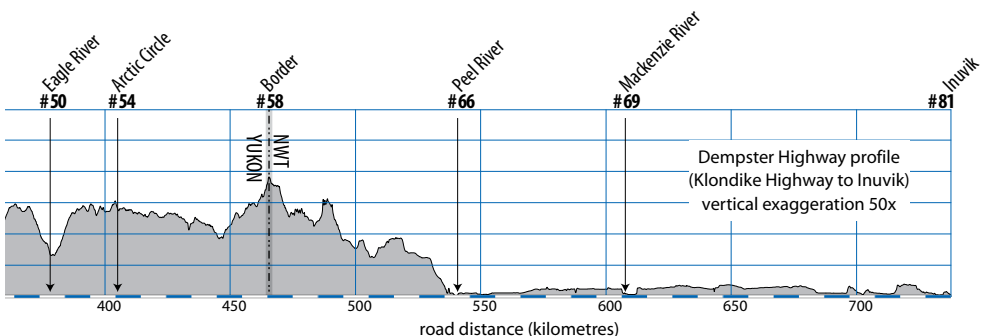
This site is a great place to photograph the confluence of the Arctic Red River and the Mackenzie River. The Arctic Red River, declared a Canadian Heritage River in 1993, flows beside the highway for a short distance before it joins the Mackenzie near the ferry crossing.

The Mackenzie River ferry operates between 9 a.m. and 12:30 a.m. from three points: the Inuvik side of the Mackenzie River, Tsiigehtchic (one kilometre away) and the Fort McPherson side of the Mackenzie River. It does not run during freeze-up in the fall and break-up in the spring. There is no charge to use the ferry. Once across, Inuvik is about a two-hour drive.

70. Tsiigehtchic

NWT km 143

The community of Tsiigehtchic is situated at the confluence of the Arctic Red River and the Mackenzie River. Tsiigehtchic is a Gwich'in community, well known for its dryfish and berries — blueberries, cloudberries, cranberries and red currants.



Heading north, downriver to Inuvik, you will be paralleling the vast delta of the Mackenzie River sprawling to the west and out of sight in the low-relief landscape. The highway takes you through open forests of black spruce and tamarack, alongside lakes and ponds, in the Mackenzie Delta ecoregion that is 50% wetlands.

The longest river in Canada, the Mackenzie flows over 4,200 kilometres from its headwaters in northern British Columbia to its terminus in the Beaufort Sea. Its watershed comprises one-fifth of Canada's area.

71. Rengling River

NWT km 178

Good grayling fishing and a great spot for a picnic.

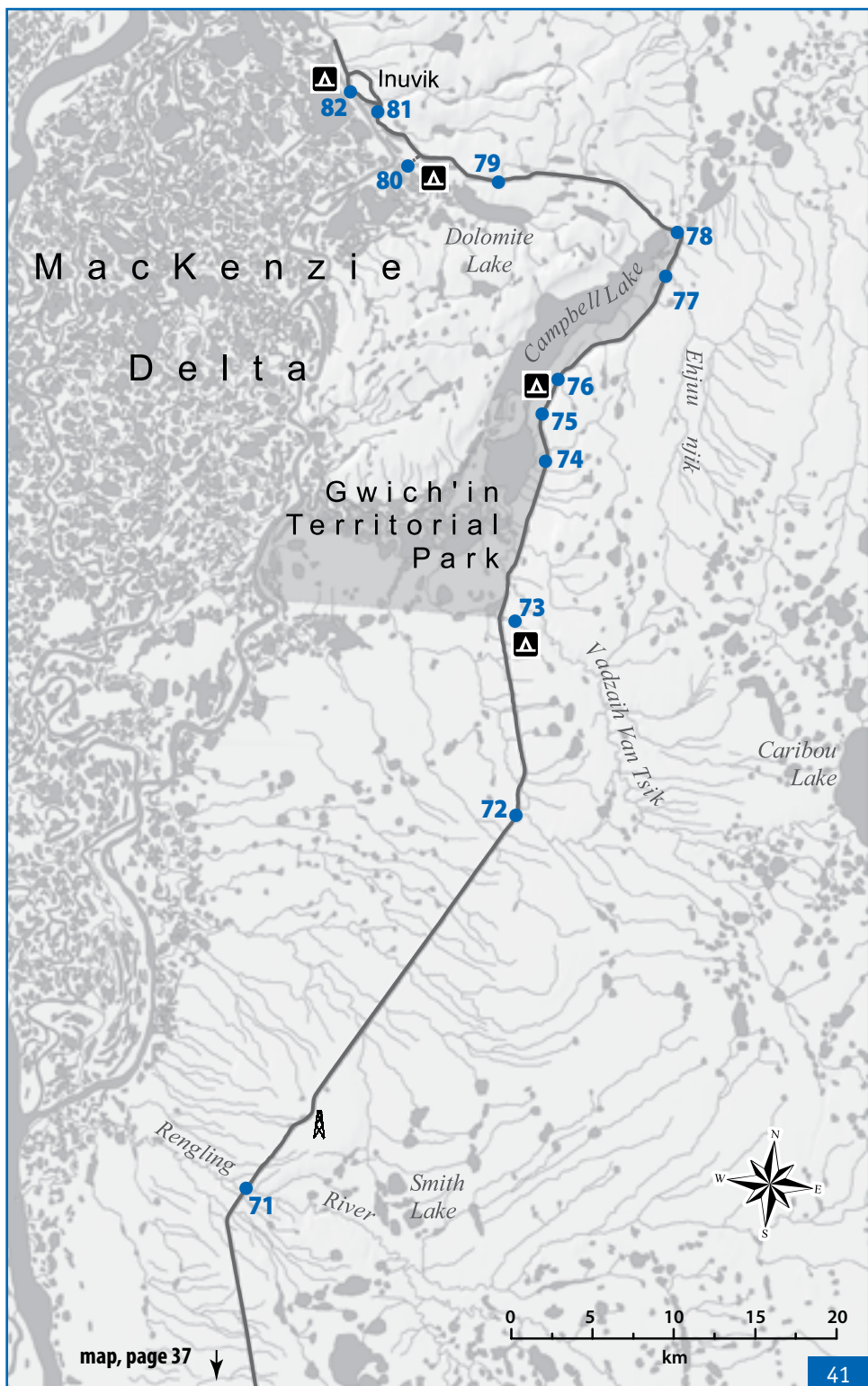
72. Reindeer grazing reserve

NWT km 207

Still noted on some maps, this reserve was once set aside for reindeer grazing. In 1935, a herd of 2,400 reindeer was brought to the region from Alaska. Sami and Inuit herders spent five years making the grueling 2,400-kilometre trek from Alaska to the Mackenzie Delta. The herders settled just north of present-day Inuvik, in a small community called Reindeer Station. Still in operation in 2007, there are concerns about the possibility of the herd spreading disease to wild caribou.



Mackenzie Delta



73. Vadzaih Van Tsik campground NWT km 221

Park facilities include 11 campsites with firewood, picnic tables, barbecue pits and toilets. This site lies at the south end of Gwich'in Territorial Park. Most of this campground is located in an oxbow of Caribou Creek and is protected from the elements by a steep cliff on the north side.

74. Panoramic view of Campbell Lake NWT km 229

A series of cliffs can be seen around Campbell Lake. These are part of an elongated dome with a core that may be hundreds of millions of years old. The oldest rocks are exposed in the centre of the cliffs, while the younger rocks flank the sides. These younger rocks were once the soils of the ancient Mackenzie Delta. The cliffs are home to raptors such as Peregrine Falcons.

Campbell Lake is an example of a reversing delta. During the spring flood, the east channel of the Mackenzie Delta backs up into the lake.

75. Tithegeh Chii Vitaii lookout NWT km 232

It is a short walk from the road to the edge of the cliffs that overlook Campbell Lake. Wood frogs, which are at the northern limit of their range here, inhabit this lake.

76. Gwich'in Territorial Park NWT km 235

Park facilities include 15 sites and four tent sites, picnic tables, barbecue pits, kitchen shelter and toilets. There is beach access to Campbell Lake. Walk the shore and note the interesting rocks and fossils, or try your luck fishing from the shore.



Gwich'in Territorial Park

77. Ehjuu njik day use area

NWT km 244

Ehjuu njik is Gwich'in for "tall trees creek" and refers to Cabin Creek which flows into the northeast end of Campbell Lake. Arctic grayling can be found in the pools of Cabin Creek and cranberries are plentiful in the fall. There are picnic tables, barbecue pits, firewood and outhouses.

78. Nihtak day use area

NWT km 247

Nihtak is Gwich'in for "a divide." This refers to the large valley between Campbell Lake and Sitidgi Lake. On the north side of the road there are picnic sites with tables, barbecue pits and toilets. On the south side is a boat launch. This site lies at the north end of Gwich'in Territorial Park and is locally popular for the spring run of whitefish. It is regularly used for fishing, boating, canoeing and, in winter, for cross-country skiing and snowmobiling.

79. Inuvik/Mike Zubko Airport junction

NWT km 262

At last: the rattle-subduing influence of a paved road. To the left is the Mike Zubko Airport. Follow the road to the right and head down the final 12-kilometre stretch of your Dempster journey.

80. Júk Territorial Park

NWT km 266

Júk in Gwich'in means "berries" and this park was named for the abundant cranberries, blueberries and cloudberry in the area. The park has 24-hour reception and security. Facilities include six sites with power and 32 non-power sites, along with picnic tables, barbecue pits, firewood, water, kitchen shelter, toilets and showers, a 10-metre high lookout tower, and walking trails. The tower provides an impressive view of the Mackenzie Delta and Richardson Mountains.



From the tower in Júk Territorial Park

81. Inuvik

NWT km 272

A full range of services is available in this town of 3,300 people. The Western Arctic Regional Visitor Center is located at the top of the hill on the right as you enter the town.

82. Happy Valley Territorial Park

NWT km 272

Located in downtown Inuvik, park facilities include 24-hour reception and security, 36 sites (including some electrical sites), showers, laundromat, kitchen shelter, dump station, water fillup and a playground. Each site has a picnic table, barbecue pit and firewood. This site overlooks the East Channel of the Mackenzie Delta.

Here the road ends, but your journey is just beginning. It is 737 kilometres back to the Klondike Highway. In the meantime, if you are interested in learning more about the natural and cultural history of the Dempster Highway, the northern Yukon and Northwest Territories, use the list of references on page 45 to help you carry on your explorations.

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For more information on the Dempster Highway, visit any of the visitor information centres along the highway or check out these publications.

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CREDITS

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Dempster Highway maps on inside front cover and pages 5, 13, 21, 27, 31, 37, 41; caribou map (p. 12) and Dempster Highway profile (p. 38-39): Environment Yukon.

Maps for Beringia and glaciation (p. 10), watersheds (p. 23) and ecoregions (p. 29): Adapted from Smith, C.A.S., Meikle, J.C. and Roots, C.F. (editors), 2004. *Ecoregions of the Yukon Territory: Biophysical properties of Yukon landscapes*. Agriculture and Agri-Food Canada, PARC Technical Bulletin No. 04-01, Summerland, British Columbia.

Map for North Fork ditch and road (p. 6): Adapted from *The power of water: The story of hydropower in the Yukon*. Yukon Energy, 2001.

Dawson to Fort McPherson route map (p. 17): Adapted from *The law of the Yukon: A pictorial history of the Mounted Police in the Yukon*, by Helene Dobrowolsky, Lost Moose Publishing, 1995.

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At the Arctic Circle



Igloo church, Inuvik



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