

The White Pass and Yukon Railway - The railway built of gold

Andrew Jones and Philip Wormald travel across the Canada/US border on the scenic narrow gauge White Pass and Yukon Railway and discover a land of glaciers, bears and ALCo locomotives. Text by Andrew Jones, illustrations by Philip Wormald

Introduction

The White Pass and Yukon Railway was constructed to service the Klondike Gold rush in 1898, starting in Alaska at the port of Skagway the line crosses into Canada's British Colombia and terminates at Whitehorse in the Yukon Territory.

The 110 mile, 3ft gauge single track line was built in two years, two months and two days, an amazing achievement considering the mountainous terrain and harsh winters along the route. The last spike was driven in on 29 July 1900 at Carcross in the Yukon Territory.

The Railroad operated as a common carrier line until 1982 when, a severe drop in mineral prices crippled the Yukon mining industry and the construction of the Klondike highway removed most of the freight carried. The railway closed for six years before reopening as a tourist operation as far as Bennett BC, 40 miles from Skagway.

From the deep water port of Skagway on

ABOVE: Triple 90 class GEs Nos. 100, 93 and 98 wait at Skagway on 14 June with carriages to form 'Summit' train No. 37. Low clouds are often a part of the morning scene at Skagway. The resident population of 850 people rises to over 8,000 on a busy summer day.

the Lynn Canal, which is actually a Fjord connected to the Pacific Ocean, the line climbs the 2,865 ft to White Pass summit in just 20 miles, with a maximum gradient of 1:26 (3.9%).

History

Leaving the city of Skagway the line passes the WP&YR shops around two miles out and follows the Skagway River and the White Pass trail for most of the journey to White Pass summit. The White Pass trail or 'Trail of 98' as its also known was the route most Stampeders (Gold seekers) took to reach Lake Bennett before sailing the last



ABOVE: DL535Es Nos. 101, 108 and 104 are seen on train No. 42 from the small halt of Glacier as they descend the steep grade between Inspiration Point and Slippery Rock on 11 June. All movements are controlled by a dispatcher at Skagway and the successive trains run at eight minute intervals, between the various block posts.

◀ 500 miles to Dawson City, centre of the Yukon Gold Rush, in makeshift boats. This tortuous trail was difficult enough to ascend in the summer, but with the incredibly harsh winters and the ton of supplies demanded by the Canadian customs to allow entry, the trip must have tested every Stampeder to the limit, it was obvious a railway needed to be built.

Two men with that vision arrived in

Skagway; London based investor Sir Thomas Tancrede and Canadian Railroad engineer Michael Heany met by chance in a Skagway hotel, talked through the night and the following morning agreed a deal to build this 'impossible' railway.

Construction started on 28 May 1898 and in just two months trains started transporting Stampeders the first four miles towards the summit. It took until 20 February 1899 to reach White Pass summit, delving through dense pine forests, crossing four rivers, through one tunnel and hanging precariously on to steep cliffs. Once over the summit construction was much easier and Lake Bennett was reached on 6 July 6 1899, track laying also started southbound from Whitehorse and the two sections met at Carcross for the Golden Spike ceremony.

The whole railway cost \$10 million to build and by the opening date it had already paid for itself in fares from the Stampeders to carry them and their belongings northward to the gold.

Once the gold rush was over the railway made its money from mining, bringing the ore and concentrates from the Yukon to Skagway docks for export. During World War 2 the route was taken over by the US army to transport materials in connection with the building of the Alaska-Canada (Alcan) Highway. Around this time the original route, which went along Broadway Street in Skagway was realigned along the eastern edge of town.

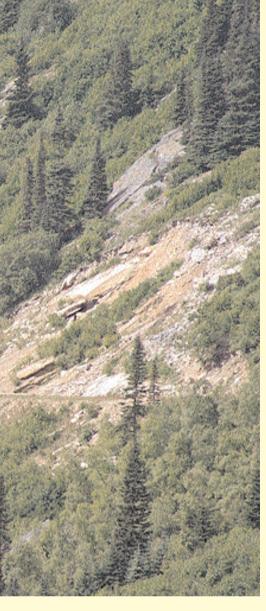
The Container route

During the mid 1950s the first diesels arrived on the route and in 1964 steam operation came to an end, by this time the railroad had developed a ship/train/truck container service, the first in the world and operated its own 6,000 ton container ship. These trains were the railways bread and butter right to the end of freight operation.

When heavier diesels arrived in 1969 the



LEFT: Bombardier-built wide cab No. 114 is seen leading DL535E No. 108 at Denver on 17 June with a long work train from Skagway to Fraser. No. 114 is the only loco remaining in the old blue livery and is generally used as a standby loco and works engineers trains.



huge cantilever bridge at Gulch, 18 miles from Skagway, the highest cantilever bridge in the world when built, needed to be replaced. A new steel bridge was built to the north necessitating the building of a tunnel at the north end of the new bridge to rejoin with the original alignment at mile post 19.

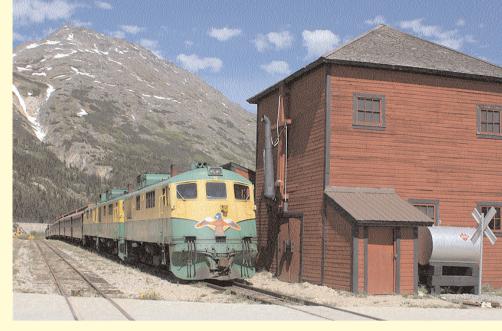
Shortly after the arrival of these new diesels the wooden roundhouse at Skagway burnt down on 15 October 1969 destroying two of the brand new locos and two 'Plymouth' switchers.

Operations were suspended in the autumn of 1982. The new Klondike highway, the only road into Skagway, opened in 1979 and reduced freight traffic considerably. The final nail in the coffin was the closure of the Yukon mining industry as a result of a catastrophic fall in world mineral prices.

The route reopened in 1988 as a summer only tourist operation serving the thousands of day trippers from the numerous cruise ship arrivals in Skagway Docks, from then the line has gone from strength to strength.

The locomotives and rolling stock

The backbone of the fleet today are the 90 class General Electric 'Shovelnoses', built in batches between 1954 and 1966, these 11 930-980hp stalwarts have battled against the weather and terrain for over 50 years. Before 1982, when the railroad operated all



year round, they fought against 35ft snowdrifts and temperatures as low as - 30C, these days' temperatures of up to 30C in summer test their cooling fans to the limit.

These custom built locos are well suited to the job; the cab is designed for bucking snow and high radiator air intakes allow cooling in high snow drifts, the rock solid six-cylinder Alco 251 power units have served them well over the years. Two batches of similar locomotives were built for the high Andean routes in Argentina and a few remain in service there, these machines are the true Kings of the mountains. Number 96 has recently been resurrected from a virtually derelict condition; the loco had been out of use since the late 1970s and required a total internal rebuild.

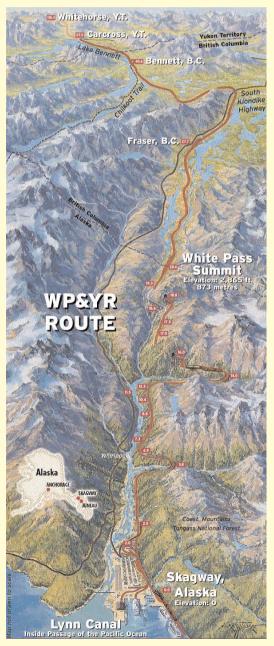
În 1969 Alco started construction of seven DL-535 road switchers for the White Pass; these units were completed by the Montreal Locomotive Works (MLW) when Alco closed shortly after fabricating the frames for the first three. Incorporating an updated version of six-cylinder 251 power unit, these machines produce 1,200hp. The 101 class were delivered in September 1969, two of them (Nos. 102 and 105) were completely written off a month later in the roundhouse fire mentioned earlier, and their remains were cut up in 1992.

Three more locomotives of the same design were ordered from MLW to replace the two destroyed units; Nos. 108-110 which arrived in 1971.

After the White Pass had resumed operations, traffic levels were easily handled by the GEs so the decision was made to sell some of the 101 class. In 1992 five locos, Nos. 101, 103, 104, 106 and 107 were sold to STF in Colombia leaving Skagway for Santa Marta by ship.

Traffic levels in the years following their departure grew to such a degree that more locos were then needed; the WP&YR negotiated with STF and bought the five locos back, they retraced their sea journey arriving back in Skagway on 30 July 1999. One loco nearly did not make it however, and almost ended up in

ABOVE: GEs Nos. 91, 97 and 90 wait departure at Fraser with train No. 24 to Skagway on 9 June. Driver John Westfall is the regular driver on the two daily Fraser trains and these are his 'preferred' locomotives! So expect to see these three GEs on this train on a regular basis.





ABOVE: Baldwin steam loco No. 73 descends through Glacier with train No. WX73 on 11 June. This train was an extra 'Summit' train which ran via the Fraser loop. The loco is usually in steam during the busy summer season and is often used as the Skagway pilot.

■ the depths of Skagway dock after it was left hanging precariously over the edge of the boat while being unloaded. Four of the five locos were put back into service but No. 103, which has a damaged power unit remains out of use, however it will be overhauled and returned to service when time allows.

The final diesel in the fleet is No. 114, the fourth loco of an order placed in 1982 before the railway closed. These units were built by Bombardier, successors to MLW with the same power unit as the 101 class, but with ac rectified control giving a higher tractive effort. By the time the four locomotives were built the White Pass had

BELOW: No fewer than four GEs Nos. 94, 96, 99 and 92 lead 'Summit' train No. 41 past Denver with a 15 coach load. All the 'Summit' trains originate in one of the docks at Skagway and have direct access to the relevant cruise ships that are in town on any given day.

closed, two Nos. 112 and 113 were sold to US Gypsum for their three foot operation at Plaster City in California, No. 113 was destroyed in an accident and No. 111 was purchased to replace it leaving No. 114 languishing in Montreal for 13 years before White Pass eventually bought it. It remains in the blue livery as built, the road colours of the White Pass in 1982.

This loco is generally used only for works trains and rarely appears on passenger excursions, this is due to an untraceable fault with the locos dynamic brake system only allowing it to operate at maximum dynamics with no variation.

The pride of the fleet is No. 73, a 1947-built Baldwin 2-8-0 Mikado, converted from coal to oil burning in the 1950s, this machine is kept in immaculate condition at Skagway shops for its weekly trip to Fraser each Saturdays. It is kept in steam most of the time and often performs shunting duties around Skagway docks; '73' usually takes around five coaches up the hill to the summit and on to Fraser.

A new addition to the fleet is expected this summer, No. 69 has been in Wisconsin at the moment for a complete overhaul. Built in 1907 by Baldwin, this 2-8-0 was the biggest steam loco to operate on the White Pass route. No. 69 was named Gila Monster by the US army in WW2 and converted to an oil burner in 1951. The loco left the WP&YR in 1956, sold to the Black Hills



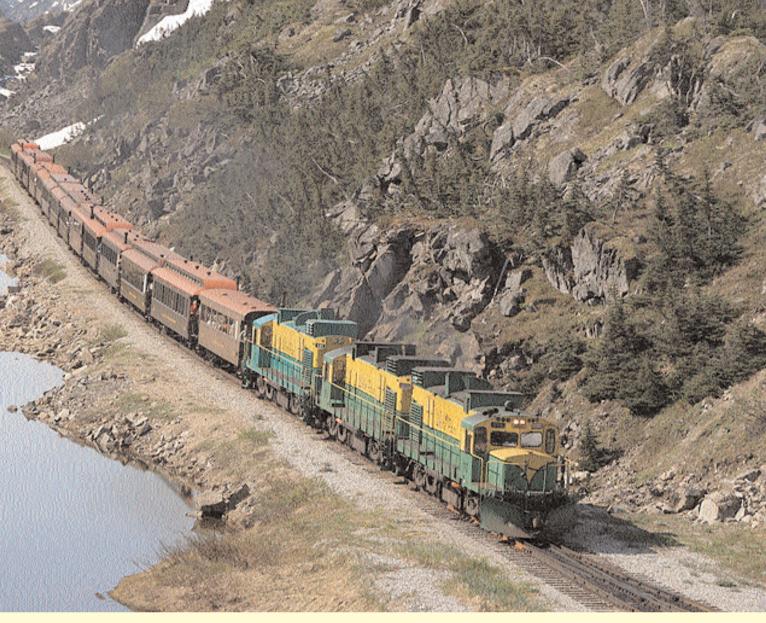
ABOVE: Triple DL535E, Nos. 101, 109 and 110 built by ALCo/MLW, arrive at White Pass on 17 June with train 'Summit' No. 31. Fridays are quieter days, so on these occasions train No. 31 reverses at White Pass and returns to Skagway as train No. 32, rather than running via Fraser loop as it does on busy days.

Central Railway in South Dakota where it was renamed Klondike Casey. In 1973 it became Nebraska Midland No. 69 where it served until 1990. The White Pass bought the loco back in 2001 and sent it to the Midwest loco works for overhaul. So the well travelled '69' will be soon heading home for the first time in 49 years.

A total of 69 parlour cars, either built for the White Pass or obtained from various narrow gauge railroads in the US ply the route. All are named after a local river or lake and were built between 1889 and 2005. These, and various flatbeds, tank wagons, cabooses and a number of permanant-way trolleys make up the rolling stock fleet.

All the locomotives and rolling stock are maintained to a high standard in the railroads repair shops on the outskirts of Skagway. The locos are given a fearful hammering day-in day-out climbing the pass, and the motors are worked constantly descending using the dynamic brakes, a testament to the solid GE electrics and Alco power units.





The Route Today

In 2004 over 400,000 people rode on the White Pass and Yukon, records are broken each year necessitating more and more coaches to be ordered to meet the ever increasing numbers of cruise passengers and independent hikers.

Monday to Thursday are usually the railways busiest days with four cruise liners arriving in the docks offloading some 8,000 day trippers in this small town of only 842 residents. After the line has been checked by the permanent way trolley the first departures of the day can get underway.

All movements are radio controlled by the dispatcher at Skagway and trains are separated by numerous block posts along the line. Trains can load up to 24 coaches and are generally hauled by three or four locos (usually of the same type) in multiple with the diesel run to Bennett usually being a single 90 class; the 101s and 114 are

RIGHT: Sunday afternoon rush at White Pass on 12 June as two southbound trains prepare to return to Skagway. Nos. 92, 110, 109 and 101 lead train No. 42 formed of 21 vehicles, and Nos. 98, 106, 108 and 104 lead train No. 44 formed of 20 vehicles. This is the physical US/Canadian border, although customs facilities are not located here due to very harsh winter weather conditions.

seldom used beyond White Pass due to a heavier axle weight.

The first passenger train is the 08.08 to Fraser BC, this leaves from the Main station and is met at Fraser by a coach connection to/from Whitehorse. Four 'Summit excursion' trains follow the Fraser train at around 10 minute intervals, the first goes beyond the summit to Fraser Loop (a large turning circle), just before the station (this train can run out and back from Skagway without actually stopping) to avoid a run

round and leave room at White Pass for the other three summit trains to arrive. As there is only the main line and one passing loop at White Pass, the following three trains perform a complicated shunt manoeuvre.

The second 'summit excursion' runs round at the White Pass and reverses north onto the single line to clear the loop for the third train to arrive and run round; when this is done, the final train can enter the summit loop. Once the forth is in clear,





ABOVE: Northbound train No. 41 exits the loop at Fraser as southbound train No. 46 with GEs Nos. 98, 93 and 100 leading on its return to Skagway on 16 June. Normally this train operates anti clockwise around this loop, special thanks to local staff for running clockwise to allow this photo to be taken.

■ the second summit excursion can depart on the main line to Skagway, the third can reverse north, wait for the last summit train to run round, and then depart. Finally the forth can follow south once the previous train has cleared the block post at American Shed.

The Fraser Loop train follows these and the returning Fraser brings up the rear.

This is repeated in the afternoon with the Fraser train leaving Skagway at 12.30, once they are all back in Skagway two summit trains run 'as required' in the evening, at 16.30 and 16.40 depending on passenger numbers.

Fridays to Sundays are less busy with the Fraser train and only two or three summit excursions. On Fridays and Sundays a train connects at Fraser for Bennett, a further 13 miles northward to the shores of Lake

BELOW: GEs Nos. 99, 96 and 94 on train No. 64 wait at White Pass for orders from the dispatcher to continue southbound on 12 June. On Sundays, the normally small Bennett trains Nos. 63 and 64 are strengthened as far as Fraser due to the usually large number of bookings.

Bennett to collect hikers from the Chilkoot trail. The Chilkoot train was the alternative route for the Stampeders, shorter but much steeper than the White Pass route, this train starts from Skagway on Saturdays with steam loco No. 73 at the head.

There are five stations in Skagway; the Depot is the main base for the railway and home to the offices and the dispatcher, trains also depart from the Long Siding, Railroad Dock, Broadway Dock and Ore Dock to allow easy access from the cruise liners. It is worth mentioning that Skagway is the 17th most popular cruise destination in the World!

Moves are underway for running as far as Carcross in the Yukon Territory, track work is ongoing and services should start soon. Carcross is 67 miles from Skagway and apart from the level crossing at Log Cabin, five miles north of Fraser, is the next place with road access so maybe the Fraser

train will continue to Carcross for the bus connection to Whitehorse. There are no plans to run through to Whitehorse in the foreseeable future.

The line has to rank as one of the most scenic railways in the world, the run from Skagway to White Pass summit is exhilarating and the views are stunning. Bears, mountain goats, caribou, eagles and porcupine are regularly seen from the train. These, combined with waterfalls, glaciers, raging rivers, pine forests and plenty of history make for an unforgettable trip. The views climbing toward Glacier station of the train in front hundreds of feet above you on the

other side of the valley are breathtaking as is the Carmack glacier and Bridal Veil Falls crashing 6,000 ft down the mountainside from it. The best vista of all is from the aptly named Inspiration Point back along the valley flanked on either side by snow-capped peaks to the cruise liners in Skagway dock, 17 miles by rail away.

Multiple journey 'rover' tickets are available by contacting Cody Bricker (cbricker@whitepass.net) at the White Pass and Yukon Route Railway directly.

Special thanks are due to Beth Cline, Cody Bricker, Gary Danielson and all the staff on the WPYR for their assistance in preparing this article and on our trip there, special thanks to the 'three Johns' McDermott, Westfall and Briner, also thanks to the WP&YR Yahoo! group for answering my questions.

FACT FILE

Location: Skagway, Alaska Land Area: 454 sq. miles Water Area: 11 sq. miles Population: 842 (in winter)!

Main physical features: Rugged mountains and

broad river valleys in Alaska

Climate: Maritime climate with cool summers and

mild winters.

Time difference: - 9 hours

Accommodation: Various hotels and bed &

breakfast (see links below)

Reaching Skagway: Air Canada or Condor (from

Frankfurt) to Whitehorse

Visa requirements: Visa waiver scheme for most

UK passport holders Currency: US Dollars

Web sites to check out: White Pass & Yukon Railway:

http://www.wpyr.com/

WPYR webcam:

http://www.wpyr.com/multimedia/webcam.html

Whitepass Fanlist:

http://groups.yahoo.com/group/whitepassfanlist/

Boerries Burkhardt site:

http://www.whitepassfan.net/

Skagway info:

http://www.skagway.com/

http://www.everythingalaska.com/eta.skwl.html http://www.skagwaychamber.org/community.html

Hotel and accommodation:

http://www.skagway.com/accommodations.html

