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Autor: Hemming, Brian
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Private Railways in Switzerland - 10 by Brian Hemming

BLS

Berner Alpenbahn-Gesellschaft Bern-Lötschberg-Simplon

The BLS Group prior to the recent reorganisation comprised four separate companies:

- BLS - Bern-Lötschberg-Simplon-Bahn
- BN - Bern-Neuenburg-Bahn
- GBS - Gürbetal-Bern-Schwarzenburg-Bahn
- SEZ - Spiez-Erlenbach-Zweisimmen-Bahn

The BLS was the oldest and original constituent of the Group, which also contained three railways (the BN, GBS and SEZ) known as the Bern Decree Railways. These were brought into the Group in 1913 for operational purposes having been built and worked under special guarantees from Canton Bern. All the resources of the Group were pooled, but each company kept its own accounts and duly charged any other Group company for the use of stock or facilities. From 1st July 1997 the accounting and organisational structure of the Group has been separated into two separate areas, Infrastructure and Traffic. The latter has been divided into two sectors - "Transit" covering general passenger and freight traffic and "Regio", regional passenger traffic.

Thus will disappear the individual company names carried on stock.

Length: 244.25 km

Gauge: 1435 mm

Voltage: 15kv 16.7Hz AC

Maximum gradient: 35‰

Depots: Bern-Holligen, Brig, Erlenbach, Schwarzenburg, Spiez, Zweisimmen

Works: Bönigen (wagons & carriages), Spiez (locomotives)

BLS - Bern-Lötschberg-Simplon-Bahn

The early history of the BLS goes back to 1872 when the first section of the Bödelibahn (BB) was opened from Därligen to Interlaken West with extension to Bönigen in 1874. The line was built to provide a rail link from the Thunersee to the Brienersee. This steam operated railway was notable in having double deck coaches. In 1893 the Thunerseebahn (TSB) opened. It formed end on connections with the Schweizerische Centralbahn (SCB, later SBB/



CFF/FFS) at Scherzlingen, Thun and the BB at Därligen. The TSB absorbed the BB in 1900. The next development to take place was the opening in 1901 of the Spiez-Frutigen-Bahn (SFB) which made a junction with the TSB at Spiez.

With the opening of the Simplon Tunnel in 1906, Canton Bern which had earlier supported the Gotthard route over the Alps, decided to lend its support to a plan which had been in existence since 1890 for a railway route over the Lötschberg. The BLS was formed in 1906, took over the SFB at the beginning of 1907 and commenced construction of the line from Frutigen to Brig. The route, which included the boring of the 14.6 km Lötschberg Tunnel, opened in July 1913. Some seven months earlier the BLS took over the TSB and assumed responsibility for the Bern Decree Railways; thus was the BLS group formed.

Until 1915 the through traffic from Eastern France to Switzerland travelled by way of Delle, Delémont, and then the circuitous and steeply graded route via Sonceboz-Sombeval to Biel/Bienne and beyond. In order to avoid this latter section the BLS opened in 1915 a line from Moutier to Lengnau on the Olten to Biel/Bienne line of the Federal Railways. This line, known as the Grenchenberg cut-off is 13km long and

Opposite page: Two of the older Re4/4's handling a freight through Frutigen from Brig.

Above: Re465 006 with a Geneva to Interlaken IC service passing through Lausanne.

Photos: Les Heath

includes the 8.5km Grenchenberg Tunnel. Although still owned by the BLS its importance as an international connecting line has declined but is used by the Federal Railways as their main route from Biel/Bienne to Basel. The one station on the line, Grenchen Nord, is still staffed by the BLS. No further route development took place, but the former BB (later TSB) line from Interlaken Ost to Bönigen closed to passenger service in 1969 although it still provides access to the carriage and wagon works at Bönigen.

Electrification, which from the beginning was at 15kV 16 2/3Hz AC (changing in 1996 to 16.7Hz), started in 1910 with the section from Spiez to Frutigen extending to Brig in 1913. Thun to Spiez followed in 1915, Spiez to Bönigen in 1920 and finally Moutier to Lengnau in 1928.

Whilst most of the main line southbound to the Lötschberg Tunnel was built as double track, that beyond the tunnel to Brig was largely single. Finance for a major modernisation programme to ensure a double track main line throughout from Thun to Brig was approved in 1976 and the project was completed in 1992. Among the major engineering feats achieved were an additional



Above: Tm 235 091 one of the larger diesel shunters. Photo: Les Heath

single track viaduct across the Kander valley near Frutigen, and the extending of the existing single trackbed out from the steep hillside on the descent into the Rhône valley to accommodate the second track. Foresight by the original builders meant that no major work had to be done to the massive Bietschtal viaduct which was built with provision for a second track to be added at a later date.

The BLS is responsible for the route over one of the two main Alpine crossings between Switzerland and Italy and carries a wide variety of national and international trains. The basic hourly passenger service on the Spiez to Brig route forms part of that between Basel and Brig, with every other hour the train being international and covering such destinations as Berlin, Brussels, Milan and Venice. Trains to and from Italy normally change locomotives at Domodossola. In addition the new Cisalpino ETR 470 Pendolino trains, in which the BLS has an interest together with the SBB and Italian State Railways (FS), traverse to route twice daily in each direction between Bern and Milan. Hourly local services cover Brig -Höhtenn and Spiez - Reichenbach. In addition there is an intensive car carrying service through the Lötschberg tunnel from Kandersteg to Göppenstein. Freight traffic over the line, particularly at night, is heavy

and is hauled to and from Domodossola where connection is made with the FS.

The Spiez to Interlaken line, although single for much of its route, also carries international traffic. The basic hourly service is from Interlaken Ost to St.Gallen or Basel, with an international service to Amsterdam and a German ICE service to Berlin. An hourly local service operates between Interlaken and Spiez. Daily during the summer and at weekends in the winter the *Golden Pass Express* operates up to three return journeys between Interlaken Ost and Zweisimmen. This train connects with the Montreux-Oberland-Bernois (MOB) *Crystal Panoramic Express* at Zweisimmen and normally conveys the Blue Saloon coach in its four coach set.

Although Federal Railways locomotives regularly operate trains over the BLS routes, the only lines where the reverse occurs are those from Thun to Bern and Brig to Domodossola. With the arrival of the new Class 465 locomotives, which are leased by the BLS from the SBB, the opportunity has been taken for BLS crews to be trained for the route to Basel and they are now working freight trains through from

Muttenz Yard via the BLS to Domodossola.

Length: 114.75 km

Maximum gradient: 27‰

Nearest SBB stations: Brig, Lengnau, Moutier, Thun (all shared)

Kursbuch tables: 230, 300, 301, 310

BN - Bern-Neuenburg-Bahn

It was not until 1897 that the BN was created and in 1898 granted official approval to start construction of a line from Bern Holligen to Neuchâtel via Kerzers and Ins. The line was opened in 1901. The operation of the day trains between Bern and Paris, hitherto routed between Bern and Neuchâtel by way of Zollikofen and Biel/Bienne, changed to the new direct route in 1902 to be followed in 1903 by the night train from Interlaken to Paris. The line, which was managed by the BLS, was steam worked from the beginning. It was not until 1928 that electrification took place. The steam locomotives were replaced by five new railcars (CFe4/5), three new locomotives (Ce4/6 later Ce4/4) and one additional locomotive (Ce6/6) acquired from the BLS.

The line is mainly single track with passing loops at the intermediate stations between Bern Holligen and the outskirts of Neuchâtel. The longest tunnel, 1103m, on the line is at Rosshäusern, whilst the most notable feature, near Gümmenen, is the Saane viaduct which has 27 stone arches, is 393m long and 63m above river level. The other major viaduct on the line is the Zihlbrücke which crosses the Zihl Canal connecting the lakes of Neuchâtel and Bienne. There are two major junctions at Kerzers and Ins. At Kerzers there is a level crossing and also a connection with the SBB Broyetal line from Palézieux to Lyss, whilst at Ins the BN is joined by the Gruyère-Fribourg-Morat (GFM) standard gauge line from Fribourg, whilst the metre gauge Biel-Täuffelen-Ins-Bahn (BTI) terminates outside the station. A third connection was with the Sensetalbahn (STB) at Gümmenen. The physical connection remains but the passenger service to Laupen ceased in 1995 and the overhead catenary has subsequently been removed.

The passenger service on the BN consists of hourly stopping and hourly semi-fast trains, thereby giving a basic half hourly service between

Bern and Neuchâtel. Some of the latter are extended to Le Locle. Bern and Bümpliz Nord have throughout the day a twenty minute service. The BN carries the daily TGV between Zürich and Paris as well as morning and evening services, using an RABe "Grey Mouse" unit, from Bern to Frasne in France to connect with the Lausanne to Paris TGV. Freight on the line is only local in nature as it had been agreed with the SBB before World War II that the preferred routes for freight traffic to France would be from Lausanne via Vallorbe or from the BLS via Zollikofen, Biel/Bienne and Delle.

Length: 42.8 km

Maximum gradient: 18‰

Nearest SBB stations: Bern, Neuchâtel (shared)

Kursbuch tables: 220, 296

GBS - Gürbetal-Bern-Schwarzenburg-Bahn

The GBS was formed in 1944 by the merging of two separate companies, the Gürbetalbahn (GTB) and the Bern-Schwarzenburg-Bahn (BSB). Both of these railways had been built and operated with financial guarantees from Canton Bern and managed by the Thunerseebahn (TSB) and their successors, the BLS

The GTB opened in four stages. Firstly in 1901 sections from Weissenbühl to Burgstein and Weissenbühl to Holligen opened, followed in 1902 by extensions from Holligen to Bern HB and from Burgstein to Thun. Not only did the GTB, which was initially steam operated, carry both suburban and rural passenger traffic but its very presence promoted the development of the Gürbetal. The line is single with passing loops at the intermediate stations between Bern Holligen and the outskirts of Thun where it joins the BLS and SBB. It is moderately graded with a maximum incline of 22‰. Electrification of this route took place in August 1920

Construction of the BSB, which is 20.9km long, started in 1905 and the line was opened throughout in 1907. It branches off the GTB at Fischermätteli (which was closed in 1986 and replaced by Ausserholligen) and then follows a winding and steeply graded route (35‰) to its terminus at Schwarzenburg. A major obstacle during the construction was the crossing of the Schwarzwasser between Mittelhäusern and Lanzenhäusern. This was achieved by the



Above: One of the GBS shunters, Tea 245 042, unusual in that it is overhead or battery powered.

Photo: Les Heath

construction of a single track 172m long iron cantilever bridge, 62m above river level. This bridge was replaced in 1979 by a single span concrete arch structure. The line was electrified in December 1920.

The passenger service on both lines is now operated by standard pendelzug units. There is a mainly half hourly service on the Gürbetal line, whilst that to Schwarzenburg has an hourly service which is augmented at peak periods. Freight traffic on both routes is provided by the many local industries as well as military installations and fuel storage facilities.

Length: 51.8 km

Maximum gradient: 35‰

Nearest SBB stations: Bern, Thun (shared)

Kursbuch tables: 297, 298

SEZ - Spiez-Erlenbach-Zweisimmen-Bahn

In the last quarter of the 19th century separate proposals had been put forward for both a standard gauge line from Thun to Bulle as well as a narrow gauge line from Thun to Vevey. Neither came to fruition, but in both cases the route from

Thun would have been via the Simmental. Eventually, a standard gauge line, the Spiez-Erlenbach-Bahn (SEB) was opened in 1897 from a junction north of Spiez (on the Thunerseebahn) to Erlenbach. This was followed in 1902 with the opening of the Erlenbach-Zweisimmen-Bahn (EZB).

The management of both the SEB and EZB was undertaken by the TSB from their opening, and this responsibility passed to the BLS on its formation in 1913. The companies were amalgamated at the beginning of 1944 to form the SEZ.

At Zweisimmen the SEZ shares station facilities with the metre gauge Montreux-Oberland-Bernois (MOB) which operates trains through to Montreux as well as having a branch to Lenk. Plans were made in the 1960's to convert the Lenk branch to standard gauge and incorporate it into the SEZ, but these did not materialise. Further plans, on which a decision is currently awaited, have been put forward to

convert the SEZ and part of the BLS to dual gauge. This would permit the MOB to work over the SEZ to Spiez and then forward on the BLS to Interlaken Ost where connection could be made with the SBB Brünig line through to Luzern.

The passenger traffic on the SEZ is hourly and mainly operated by railcars from the BLS Group pool with good connections being made with the MOB at Zweisimmen. Notable exceptions to the local service to Spiez or Interlaken are two through trains between Zweisimmen and Bern in the morning, returning in the afternoon and the "Golden Pass" trains mentioned earlier which are locomotive hauled. Freight traffic on the line comes from local industry and agriculture in the Simmental as well as military installations and a rubbish disposal incinerator.

Length: 34.9 km

Maximum gradient: 25‰

Nearest SBB station: Bern (shared)

Kursbuch table: 320

Powered Stock

Liveries: locomotives: brown or blue, railcars: blue & ivory, tractors: red, brown or orange.

Class	Old Nos.	New Nos.	Built
Ta	1		1941
Ta	2		1975
Te ¹	11-14	215 011-014	1950
Te ¹	15-17	215 015-017	1954
Tea	-	245 021-024	1993-94
Te2/3	31-32	215 031-032	1925
Te	33	215 033	1960
Tem	41-42	225 041-042	1960
Tem	43	225 043	1965
Tem	45-46	225 045-046	1960
Tem	55-58	225 055-058	1967
Tm	61-72	235 061-072	1960-74
Tm	75	235 075	1958
Tm	-	235 079-080	1993
Tm	81	235 081	1992
Tm	82-88	235 082-088	1977-83
Tm	91-94	235 091-094	1980-81
Tm	95-98	235 095-098	1984-85
Tm	-	235 099-100	1996
Tm	-	235 101	1971(96)
Re4/4	161-165	425 161-165	1964-67
Re4/4	166-189	425 166-189	1970-75
Re4/4	190-195	425 190-195	1982-83

Class	Old Nos.	New Nos.	Built
Ae6/8	205	(preserved)	1939
Ae4/4	251-252	415 251-252	1944-45
Ae4/4	257-258	415 257-258	1954
Ae8/8	271-273	485 271-273	1959-63
Ae8/8	275	485 275	1959-66
Ce4/4	311, 313		1920
Ee3/3	401	935 401	1943
Ee3/3	402	935 402	1991
RBD4/4	721-742	565 721-742	1982-92
ABDe4/8	746-754	535 746-754	1954-64
Be4/4	761-763	545 761-763	1953-56
Re465	-	465 001-008	1994-95
Re465	-	465 009-018*	1996-97
RABe525	-	525 001-008	On order

* 465 009-018 leased from SBB but have BLS livery

BLS Facts and figures (at 1 January 1997)

Electric locomotives	60
Steam locomotive	1
Multiple units	34
Electric tractors	14
Diesel tractors	32
Other powered tractors	9
Snowplough	1
Passenger carriages	205
Freight wagons	24
Service wagons	300
Motor vehicle transport wagons	146
Motorships	17
Steamships	2
Railway route kilometres	245
Bridges	294
Longest bridge:	
Gummenenviadukt	392m
Tunnels	62
Longest tunnel:	
Lotschbergtunnel	1461km
Busiest station:	
Spiez (approx. 300 trains per day)	
Highest station:	
Goppenstein (1216 above s. l.)	
Lowest station :	
Marin-Epagnier (449 m below s. l.)	
Steepest gradient;	
35% between Bern & Schwarzenburg	

Source: BLS Panorama magazine (PM)