

THE RAILWAY ORAVIȚA – ANINA A BRIEF INTRODUCTION

Jasenova- Oravița section

After Jasenova the rail station of Iam comes at a distance of 11km. The village is located nearby the railway. There are two manors and gardens of count Bissingen-Nippenburg. In the rail station, by summer, one offered for sale some water from a source which was famous for its sourish and cooling taste.

After Berliște station, the station of Răcășdia comes (27km). The village is located at 2km distance from the station. There are large plum orchards, fruits from which the local inhabitants make considerable quantities of tzuica.

Above the village of Răcășdia we are drawing near mountains. A beautiful landscape appears in front of us. After 20 – 25 minutes we arrive to the great viaduct from Oravița (10.2m in height and 87.6m in length). We can see from here the nice valley on which Oravița lays.

The railway Oravița – Anina

The railway between Oravița and Anina is undoubtedly one of the great... oddities.

Anina is known for its mines. Immense forests cover all its environs. It was in 1790 when Mathias Hammer, a coal burner from Steierdorf, found the first coal rock and that led to the great coal deposits discovering. Such circumstances motivated the state financial administration to accede to and turn the local natural treasures to account; it was the reason to create as good as possible vehicles there.

In 1846 the state financial administration took itself in charge the coal mines. To a more rapid and facile capitalization of the won coal, in 1847 they began to build up the railway Baziaș – Jasenova – Oravița. The railway equipment was made and put into operation in the same year

The coal was carried from Anina to Oravița by carts. Having so rapidly developed the extractive work, the absence of a railway in order to carry the coal was deeply felt.

Yet in 1847 the above mentioned railway was proposed to be prolonged as far as the former station Lișava. On a distance of 34km from there to Anina, a railway with horses-driving was foreseen in the same time. That railroad was foreseen at a higher level than the present one, and

* Karl Erdélyi „Wegweisen der Südungarischen Karpaten“, 1895. Translated into Romanian by Ioan Szabo (Reșița), 18 May 2007; the former toponyms were updated in the Romanian version, according to the present usage. The English translation was made following the Romanian version, by Ada D. Cruceanu (Reșița, 2013, July).

its starting point would have been from the above zone of the Lişava Valley. Up to the westward of Lişava station the terminus point of hippo-driving way is still visible, as well as the vestiges of the machines house.

For the many obstacles, that road construction was abandoned. New coal deposits were also discovered on the area the way should have pass. As the construction work had very slowly and unsatisfactorily progressed, the works supervisor, Mr. Dülbig himself proposed in 1852 that instead of a horses-driving road, a railway line be built (even 1.5 million of guildens had been yet consumed and the work had been almost ended). Hocheder, the ministerial counselor was sent in 1853 to examine the situation there. He ascertained inefficiency of that work and proposed to be stopped, and so it was. But the coal exploiting was going on.

In 1855 the Court set its estates there up for sale to StEG Company. The new owner invested colossal amounts for the local industrial development, so the railway Oraviţa-Anina construction became inevitable.

The project of the hippo-road was reexamined in 1860, but it was irrevocably abandoned and a new railway line from Lişava to Anina was foreseen. In this manner, the superb railway road there came into being; a road that passes narrow valleys, next to steep slopes, over immense viaducts, and through numerous tunnels while it is ever climbing. It is one of the contemporary building art masterpieces.

Oraviţa – Anina railway has 34km in length. Great problems were to be solved there, as: the extremely bizarre hills configuration, the narrow valleys on the depth of which small streams flow and when temporarily swelling they bring dangerously stumps or rocks with their wild flowing down, so many diggings on stone were necessary, as well as propping walls, tunnels at high altitudes, and many curves of small curvature radius, all of them contributing to the singleness of that railway line...

The total cost of that short railway was of 5,000,000 guildens. There are 10 viaducts of 843m total length, 14 tunnels of 2,084m length, propping walls on a distance of 9,046m, and mountain passes of 21,171m in length.

The valleys passing over are grouped as follows: 6 viaducts are on Oraviţa – Maidan portion of line, the greatest one being the so-called Racoviţa viaduct. It has 11 arches, 115m in length, being placed at 26.5m altitude. Between Maidan and Lişava, there is also a viaduct close to Lişava station. On Lişava- Gârlişte section, there are 2 viaducts, the last one, the viaduct of Jitin being the largest one on the whole road, and a masterpiece from the constructive point of view. It has 7 arches, the middle one is of 31m and joins a metallic bridge; there are also the smallest curvature radius curves, of 114m, at its both ends. The middlemost pillar is placed at 37.18m altitude. That passing over the Jitin valley is of 130.8m total length. There is only a viaduct after Gârlişte station, near to Anina; in the middle of this viaduct there is also a metallic construction. It is placed at 31.6m altitude, and is of 95.45m in length.

The tunnels are distributed as follows:

- Tunnel 1 (Lişava) of 91m in length
- Tunnel 2 (Maidan) is of 298m in length
- Tunnel 3 (Dolhof) is of 112m in length
- Tunnel 4 (Seiler) is of 230m in length
- Tunnel 5 is of 76m in length
- Tunnel 6 is of 72m in length
- Tunnel 7 is of 47m in length
- Tunnel 8 is of 57m in length
- Tunnel 9 (Polom) is of 290m in length
- Tunnel 10 (Gârlişte) is of 660m in length
- Tunnel 11 is of 26m in length
- Tunnel 12 is of 34m in length
- Tunnel 13 is of 31m in length
- Tunnel 14 (near Anina) is of 60m in length.

The whole tract has greater or smaller curves. Even the viaducts and the tunnels are located on curves. The minimum curvature radius is of 114m, although the minimum admitted radius is of 150m on the common railways.

The climbing slopes are dizzy quite often. From Oraviţa which is located at 218.7m altitude given the sea level, the difference up to Anina which is placed at 556.7m altitude, is of 337.7m.

The level difference is distributed as follows:

Oraviţa altitude	218.7m	Difference:
Maidan altitude	225.2m	6.5m
Lişava altitude	332.4m	107.2m
Gârlişte altitude	543.3m	214.9m
Anina altitude	556.4m	9.1m
TOTAL		337.7m

Considering the up data, the trains preparing is extremely exacting. The common locomotives could not be used there, but only those for steep grade railways. They are different from the common engines by the fact that from the 4 axels, the first and the last ones bend to right and, respectively, to left allowing the engine entering a curve with a small radius. To ensure the wheels adherence on the rails, as the friction is very intense, the engine driver could spread by some pipes sand under wheels; that sand is deposited in sandbox over the engine boiler. The carriages are also equipped with a rotation device; the essential rule is that 2 of the 4 axels must be always braked.

Our train is prepared carefully at Oraviţa station by the competent ones. We are getting into the train to make a trip to Anina. The trip is a very benefic one and any tourist is recommended to visit as soon as possible

these wonderful regions. The travel is a reasonable one. We get into the train, for instance, at 6.30 in the morning and at 10.30 we are in Anina.

Leaving Oravița behind, the railway climbs only a little at the hilly region beginning. Prisaca and Coșovița, namely the hills of Oravița on the right side cover the scenery. On the left side, within a depression of about 7 – 8 km in breadth there are some villages, Greoni, than Ticvaniu Mic and Ticvaniu Mare, and Grădinari, the village of Răchitova being located close to the railway. The tract we are going over slinks among lots of orchards, especially of plum trees. Upward of Răchitova we meet the first viaduct with a curve of 300m. It passes over the valley of Coșovița and bears the same name. Soon we meet a second curve and a viaduct that surpasses the first one by its dimension. The third one comes, the so-called Racovița viaduct, the largest one on Oravița – Maidan section, with 11 arches, 115.32m in length and impressing pillars, of 26.6m in height.

We meet other 3 viaducts as far as Maidan. The first two of them have 7 arches, the third one, around Maida, has 9 arches.

Not far from Maidan, the landscape is changing. On the right side there are the northern heights of the reach in mineral mountains from around Oravița, that are named Tâlva Mică and Tâlva Mare, and behind it, the hill of Lup, than Pălăria de Zahăr and Fatia Mare. In 1864, a nice chapel was built where the last ones join. From this place wonderful scenery opens towards the plateau of Răcășdia with its dispersed villages, as well as towards the stately Danube.

On the left side, the rivulet of Lișava also offers us a nice view. There are there small watermills on this stream.

Soon after the houses of Maidan appear, toward the church we arrive on Racovița viaduct. It is the place where the railway forks. The small fork on right makes possible that the rocks from Tâlva Mică quarry be transported on this way.

The name of Maidan has a Turkish resonance, but the inhabitants there are Romanians. The station is located much above than the village is. The miners are waiting usually the train here. We are not seeing any traveler, only ox carts, flocks, and we hear the shepherds' pipes.

The beautiful crops remain behind us. An ever narrow valley comes from the north, the hills slopes become much steeper, and the curves much more numerous and stronger. Barren crags surround us, here and there a small stratum of humus. We let our indignant thoughts dwell on those people who destroyed unthinkingly all what had been green and let the region in a desert, without forests.

Dispersed plants on the crags and in the narrow valleys are fighting with the natural elements. The air streams become tempests here. This one who doesn't know the region is far for guessing the tempests that especially in fall and spring unleash here. The snowdrifts as well as the sand in the tempests times make impossible the train working; the rails are seldom covered with a lay of sand or snow of some meters in height.

After Maidan our way follows the stream of Lişava. The landscape is diversifying. The curves follow closely. There were necessary deep stone cuttings, dykes, propping walls, and embankments in order to assure the necessary security and resistance.

Above of N^o 476 block station we arrive, through a stone cutting, to an artificial plateau. There was the former Lişava station. The railway was foreseen as far as that place, and a hippo-driving road would have been made from there towards Anina. That one would have been at a greater altitude, what means up to the railway. The block station with N^o 477 and the rivulet of Natra would have been connected by a cogged railway, and to the present station of Lişava it would have worked the hippo-driving transport. The railway arrives to this target after two large curves.

Southward above Lişava station the building for the cogged line machinery still exists the building of Ştefan tunnel (490m) began from that place and it would have penetrated Mount Marila towards the Jitin Valley. Across that one, a mine called Ştefan was open, on a length of 300m. The works to extend the mine met many difficulties after and developed so slowly than they were abandoned for ever.

In order to transport the coal from the Gârlişte Valley till the end of the railway, a provisional cartage road was planed. That one should have connected the western part of Ştefan tunnel to Gârlişte, by surrounding the crag of Jitin over the plateau of Predet. All what was built those times, tunnel, propping walls and enhancing diggings are still working nowadays.

But let's go back to the railway with steam engines. From the former Lişava station the slope is more stressed. Our road is always near the rivulet of Lişava and passes through great (dug) enhances and over enormous erected (built) walls, and is ever climbing till the moment than Tâlva Ştefan closes our way, parallel with the hill Fetia Mare. A curve that deeply penetrates the Natra Valley and an impressing viaduct direct us over the craggy and steep slopes of Tâlva Ştefan that is of 642m altitude. Leaving the valley of Natra the road goes along the **Dobra** River on the side of Tâlva Ştefan. Within the waste region we can see on left the bald side of the two mounts Cărpinişul Mare and Cărpinişul Mic; on the same side there are not very engaging passages through deep dug enhances. Suddenly our engine disappears. We are now at Lişava tunnel that is of 91m lengthwise. A new view comes in front of us after it. We are admiring and enjoying the natural beauties and are almost about to ignore that, over a viaduct of 13m altitude and 56m length, we have arrived in Lişava station. We are getting off the train and walking along the railway on the fork till the mountainous rivulet. Some minutes after we arrive at the Gasteyer source. Above, on westward we can see the second building (machinery house) of the former planned horses-driving road. Downwards, there are kilns for lime and diorite sand.

We are heard a strident whistle. A goods train is coming. We are making haste through the young forest to the viaduct and than to our train.

It was the time. The re-supplied engine is ready to leave and we are getting in the train in a hurry.

From now on it follows the most difficult part of our trip, the section Lişava – Gârlişte, a technical and building masterpiece.

The section is of 11,139m lengthwise, from which 10,942m in a permanent climbing, the horizontal part having only 200m. The maximal slope is of 20 ‰ on 5,188m lengthwise. The propping walls length is of 2,572m, and 7,988m is the length of the stone diggings. The propping walls greatest height is of 36m and the greatest depth of stone diggings is of 14.6m. There are 8 tunnels, 25 passages for water draining, and two bridges.

After Lişava we surround through the valley Dobrea on the western slope of the hill of Jitin, that giant hilly comb. Northward, the hill of Dobrea rises up to 689m.

Steep and craggy slopes, immense rocks made this section unfriendly. Our train itself advances dully and panting. The engine is groaning due to the great load it has to drag. Many times it seems to depart from this life, the wheel are rolling many seconds with no adherence and advancement. The train driver in such cases pours sand under the engine wheel to increase the friction.

The train goes on through great diggings in rocks and these are very close to the train windows on right. Threatening slopes open on left. The railway curves are countless now on right, now on left; and this gives an impression of the engine disappearance. If seen from above, the train is like a giant serpent.

Like this our route is permanently altering. Than, the valley becomes narrow. A rocky wall suddenly penetrates deeply down the valley. A strident whistle and than the engine disappears inside a rocky corridor. We are now at the tunnel called “Maniel”, of rock dug 298m. Above the tunnel entrance we may see the year MDCCCLXIII. After the tunnel we leave the Valley of Dobrea and plunge toward the hill western side, than to south in the Valley of Jitin. On left, the Jitin Valley heaves in our sight, being surrounded by the mentioned Dobrea (689m) on right, and by Polom Hill (689m) on left. After 2– 3 curves, we enter another tunnel. It is “Dolhof” tunnel, of 112 m lengthwise, which is placed in a curve with a radius of 114m. This curve gives again a new direction, now to south, now to west.

After some curves the locomotive disappears inside the tunnel “Seiler”, of 230m, which also is placed in a curve (radius: 114m) and so, we are turning naturally to east.

Yet inside the tunnel we hear the engine whistling. The most relevant concerning its beauty and the most interesting of our road is the following one. We pass the narrow valley on a viaduct. The engine directs us to the viaduct from the tunnel exit. Scarcely have we got a sight of the valley that a new tunnel is waiting for us at the other end of the viaduct.

It is like hide and seek. The train is unapprehensive of us and permanently tries to continue its road. And yet till it arrives at the tunnel N^o 6, a short reverting of eye offers us entirely a wonderful sight of this building masterpiece. The viaduct is of 130.8m lengthwise and 7 arches, the middle one being a metallic one, of 31.65m, on built in rocks pillars of 37m height. The middle metallic part has three bended arches at its both ends, the external ones of 3.15m height, the 4 internal ones of 15.8. The curved parts are of 114m radius. The slope climbs at the both end to 20^{0/00}.

Reverted our eyes after coming out from the tunnel of 76m in length, we would see only a part of this building work and only for few minutes, as the train disappears again, after 300-400m in the tunnel N^o. 6, of 72m. When exit from this tunnel we revert the eyes once again and only now we have the whole view of this creation in the field of constructions. This creation seems to ridicule the natural environment and seems to tell us that there is no impediment for the human mind in making the planned things. Much regretfully we see how the commanding pillars disappear one after another from our sight.

It would be fitting for this place that a railway station be built at the next block station.

The train goes away on the wonderful Polom hill steep slope. N^o. 7 (47m) and 8 (57) tunnels come northward. The way faces obstacles continuously and arrives at N^o 9 tunnel (290m) which is called Izvor or Polom, than some curves follow and a passing through a deep enhance in rocks. Leaving these places we are soon in the station of Gârliște, at 543m altitude, on Polom hill. The climbing slope is a great one.

We get off the train and have a look on the kilns for concrete. Here the concrete is prepared through burning in the days of winter, and lime in summer. Above the railway, from these kilns, a hippo-driving road goes to a quarry at a distance of some kilometers, to bring the necessary chalky stone for burning.

We are looking once over the region that could be seen now till a long distance. An abundant plantation of pines hinders our sight above the station.

Down the valley we may see the villages of Clocotici and Rafnic. Behind the pines, in the valley depth, there is the village of Gârliște. In front of us, some barren summits, on either side north-eastward, the slopes are populated with mining installations. On the cloudless days, great layers of smoke can be seen over Reșița.

From Gârliște to Anina, the railway is of 8,400m length. The propping walss length is of 2,808m and the rock diggings for the railway passing are of 4,965m lengthwise. The propping walls greatest height is of 16m and the deepest rock digging is of 6m. The slope is of 6.6^{0/00}. The curves here are still very close. The radii are various, from 114m to 948m.

Leaving behind and on right the kilns and the station, we enter immediately the tunnel from Gârliște station, of 660m lengthwise. Within the

impenetrable darkness our oil lamp lights poorly. A strident whistle comes suddenly, some shocks after, and then the train stops. All but to abandon ourselves to bad misgiving. Although nothing has happened! Just a switch to let another joint train that comes from Anina to enter the station of Gârliște.

The railway goes toward north. Downwards comparing to our railway, another railway of a narrow gauge assures the transportation of cubic rocks from Predet quarry that belongs to Johann Biebel Company.

A curve with a large radius comes now and we leave the steep slope of the hill drawing nearer the terminus station, over a deep and craggy valley. It is the narrow valley on the east side of Predet Hill, through which the mountain rivulet of Gârliște trickles as it had taken much trouble after its work in Anina.

Some small tunnels come in front of us and then, the beautiful viaduct of Anina, which is likewise up to its length to Jitin viaduct. It is 95.5 lengthwise. From its three arches, the extreme 2 is of 15.8 m, and the middle metallic one is of 31.6m length. The pilaster is of 33.15m height.

The valley is populated by miners' dwellings. Dense smoke clouds leave the plants' stacks. Thousands of voices resound.

"Far from here, noisily

They're working impetuously

And I hear hammer strokes

Among the riotous voices.

So hard the man can have

What he's asking from the heaven". – Schiller said.

We are now near the destination. Along the workers' and office workers' dwellings we keep going to the station of Anina.

We have attained our end. Confused as we are, we are getting off the train. Images and sceneries we have seen rejoice our heart. But here they are knocking and hammering continuously. We wish to collect our thoughts and think about what can be forged and created from our weakness.