



# THE FIRST WORLD WAR IN VAL D'ARGENT

1914 - 1918



**INTERPRETIVE TRAIL**  
**STARTING FROM THE PASS OF SAINTE-MARIE**



*Military music concert at the Keufer Place in 1916 (Sainte-Marie-aux-Mines)*

**D**ear friends, dear visitors,

This interpretive trail which you are going to explore embodies a work of many years of the Community of Municipalities of the Val d' Argent, conducted with the support of dedicated volunteers in the subject and in partnership with the Memory and Military Heritage Association in Val d' Argent. All of them joined forces for the recovery of the remnants of the first World War on our territory. Our recovery proposal was selected as part of the arrangement of the Centre of Rural Excellence « Memory tourism - 1914/1918 War », confirming our approach thanks to the support of historians specializing in World War I, members of the scientific committee of the Centre of Rural Excellence.

By walking along this interpretive trail, you will discover quite remarkable remnants of the first World War. Like Alsace and the Moselle, Sainte-Marie-aux-Mines (Markirch during that epoch) was then German land, since the French defeat during the war of 1870. Our trail will help you discover the history of the German presence in our territory in a different way.

These places are full of history: that of nations and men. A walk for a duty of remembrance, to retrace the plight of these German and French men who took part in the terrible battles of August, 1914 in these places.

This visit will also bear witness to the ingenuity of man to destroy himself, of which the war of 1914-1918 is frightening proof. This war was

marked by four years of carnage and more than 10 million dead, more than 20 million injured, about 800,000 missing and 8 million civilian victims, and was an absolute disaster for Europe. It left the warring nations bled dry of life forces. The Armistice of 11 November 1918 and the Treaty of Versailles of 1919 were, as reported by many historians, the seed that encouraged the rise of Nazism and the second World War.

The first World War was a breaking point in our history, made up of a myriad of often tragic moments: we invite you to discover part of this common history by rediscovering the Saint Marie front during the Great War.

And I wish with all my heart that this magnificent forest of Violu, marked by the scars of past, will become for all of you, beyond the discoveries, a place of reflection so that yesterday's follies of war are transformed into the hope of peace for tomorrow.

Claude Abel, President of the Community of Municipalities of Val d'Argent.



**01 THE PASS OF SAINTE-MARIE, THE FRONTIER**

**Start / Finish** Col de Sainte-Marie 772 m

**02 BETWEEN NO MAN'S LAND AND THE FIRST LINES, THE WAR OF THE TRENCHES**

La Grande Cude 870 m

**03 THE FRENCH POSITIONS, WAR OF THE MOUNTAINS**

**04 THE MAZE OF TRENCHES, MINES AND GAS**

**05 ARTILLERY OF THE TRENCHES**

La Cheminée 931 m

**06 THE «BETONTURM» AND ITS HISTORY**

**08 FLORA AND FAUNA OF THE SECTOR**

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Gloriette

Arbre de la Liberté

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# «PÔLE D'EXCELLENCE RURALE»

## « MEMORY TOURISM - 14/18 WAR »

In contrast to other battlefields of the Great War, the specific feature of the Vosges Massif was being the only mountain front in 1914-18 on French soil, exhibiting infrastructure and logistics and transport technologies, environmental impacts and strategic issues associated with climatic and geographical constraints.

It seemed important to the Department of the Haut Rhin and Vosges, through their departmental committees of tourism, to initiate a memory initiative and localize the special feature of the French-German context, through the coordination of actions and projects to be set up by all the local tourism stakeholders. Haute-Alsace Tourism and Vosges Development submitted their joint application for a «Pôle d'Excellence Rurale» « Memory Tourism 14-18 », to coordinate all the actions and projects undertaken in the partner territories.

In the Val d'Argent, participation in the «Pôle d'Excellence Rurale» led to achieving an interpretive trail, starting from the Pass of Ste Marie in the sector of the head of Violu. The selection of the site was made complex by the richness of our heritage: to any visitor who wants to find out more, do not hesitate to ask the Tourist Office for further information!

More information on the website: [www.front-vosges-14-18.eu](http://www.front-vosges-14-18.eu)

### CLASSIFIED SITE

## « NATURA 2000 »

Be careful not to disturb the wildlife present (especially during the breeding, nesting or hibernation seasons) and be respectful of the flora, do not pick protected species.

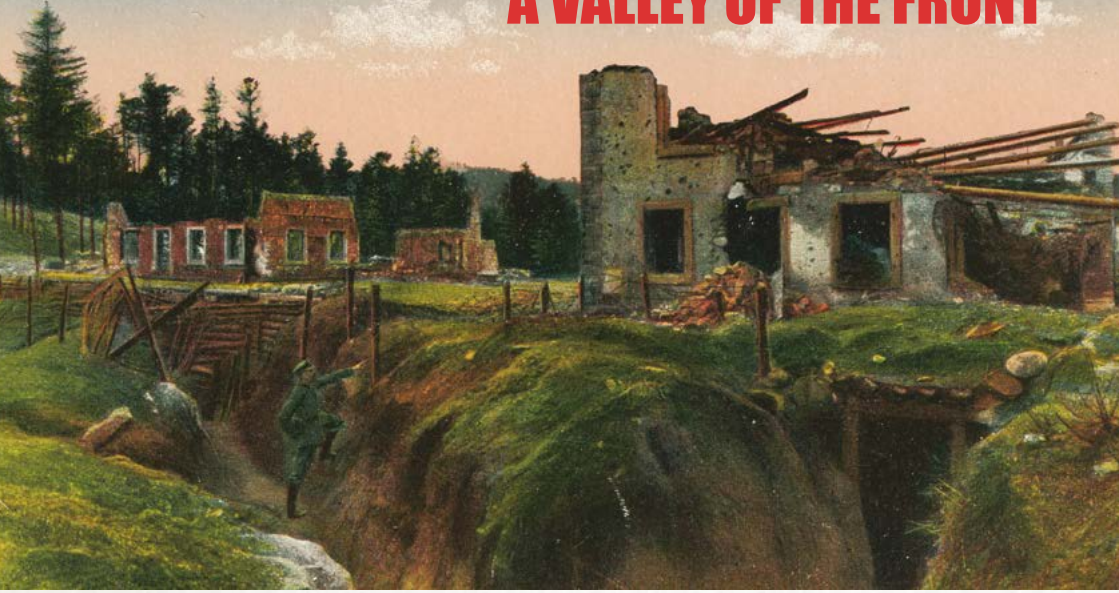
It is not recommended to follow the trail during the winter period: some portions are made dangerous by the presence of frost or snow.

### RECOMMENDATIONS AND SAFETY INSTRUCTIONS:

We recommend you take the usual precautions for your discovery trip into the forest and we remind you that this site was a bombing zone, and so ammunition and explosives can still be buried in the ground, and that the remnants which you will discover in the course of your visit are often more than 100 years old and may have weaknesses that are invisible to the untrained eye.

- Arm yourself with a map and suitable equipment, stay on the marked path and watch the younger ones
- Do not dig, do not make a fire
- Do not smoke, do not let animals run free
- Do not go underground or into the blockhouse, respect the safety perimeters that are in place
- Please take your waste with you

## A VALLEY OF THE FRONT



Following the Franco-German conflict of 1870-1871 that resulted in the French defeat, the Alsatian departments and those of the Moselle were annexed to the German State from 1871 to 1918. For that time, the whole valley made up an integral part of the Germanic empire. The Pass of Sainte-Marie-aux-Mines served as the border. An important economic passage between France and Germany, and a place of Sunday promenades, it was subjected to discreet and constant surveillance by the customs officers on both sides.

The onset of the 1st World War put an end to the prosperous period of the Reichsland. At the end of a quick war of movement (August-October 1914), a long positional warfare followed in November 1914. Until the end of the conflict, German troops fortified the front line, between Haycot and the Chaume de Lusse, in order to hold it permanently. Culminating at about 1000 m altitude, its development answered specific problems of mountain warfare. It was organized around a dense network of trenches, blockhouses, barracks and military transport systems (funicular, cable car, small train).

The 5,000 men in charge of monitoring the front were relieved at regular intervals by spare troops. On average, 10,000 - 15,000 reservist soldiers were stationed in the 4 villages of the Val d' Argent, and all the municipal infrastructure was requisitioned for the war effort. In Sainte-Marie-aux-Mines, the local theatre was transformed into a field hospital, and reserve troops were lodged with the inhabitants or in requisitioned factories. Less exposed to artillery gunfire, the municipality of Lièpvre sheltered strategic reserves (food provisions, ammunition) and a military hospital.

During the 1920s, all the military installations were dismantled. Of these military facilities, remnants of trenches and concrete structures still remain, more than a hundred of which are currently visible in the landscape. The military interpretive trail allows you to discover some of these remnants, and to understand the problems of the management of the front in mountainous areas.

To everyone, have a good trip of discovery!



## THE PASS OF SAINTE-MARIE, THE FRONTIER



Since the Middle Ages, the travellers crossing the Vosges massif have done so via the pass of Sainte-Marie. After the annexation of Alsace by Germany in 1871, the border was set on the line of the crest of the Vosges. The pass of Sainte-Marie became the border between France and the germanic Empire, marked by two demarcations installed on both

sides of the road, where the traffic is watched by the customs officers. Over the years, the pass of Sainte-Marie became a place for Sunday promenades, where French and German families dined in inns and stocked up their provisions from the market stalls of street butchers during periods of meat shortage.

**F**rom the end of July 1914, the imminence of a French-German conflict caused tensions in the pass of Sainte-Marie. The French troops stationed close to the border stayed on alert. However, so as not to be suspected of aggressive behaviour towards Germany, they were forced to move 10 kilometres away from the Vosges ridge line. On 31 July 1914, a regiment of Lancers and a German artillery battalion made an entrance into Sainte-Marie-aux-Mines. On 1st August, the German servicemen dug trenches in some strategic places of the pass. Germany declared war on France on 3 August 1914 and violent clashes occurred immediately on the heights of the valley. From 10 to 18 August, the French troops managed to cross the pass of Sainte-Marie and enter the territory provisionally. On 16 August, the

tricolour flew on the town hall of Sainte-Marie-aux-Mines and the clocks chimed French time again. This grip was short-lived, however, as the Germans led a counteroffensive and took back Sainte-Marie-aux-Mines and the pass during the week of 20 to 25 August. During these operations, their troops burnt down farms and exercised retaliation in several localities, notably Musloch, towards the inhabitants suspected of francophile behaviour. The German advance continued up to the sector of Saint-Dié, before being pushed back on the crest of the Vosges where the front stabilized in November, 1914. The pass of Sainte-Marie and the valley were witnesses to the war of movement which characterised the first months of the First World War.

*St. Diedler-Höhe bei Markkirch.*



## DID YOU KNOW?

During the first weeks of the conflict, the French troops sustained considerable losses. Wearing red trousers and caps, the French troops were very showy targets when faced with German machine gun units, and they were decimated during attacks on 8 and 9 August.



**TO LOOK  
FOR**

*Today, it is again possible to see one of the border demarcations on the pass (moved a little back from the roadway), as well as the foundations of the visible buildings (see the postcard opposite).*

*Grenze — St. Diederlhöhe. 1915*



2

**BETWEEN NO MAN'S LAND AND THE FIRST LINES  
THE WAR OF THE TRENCHES**

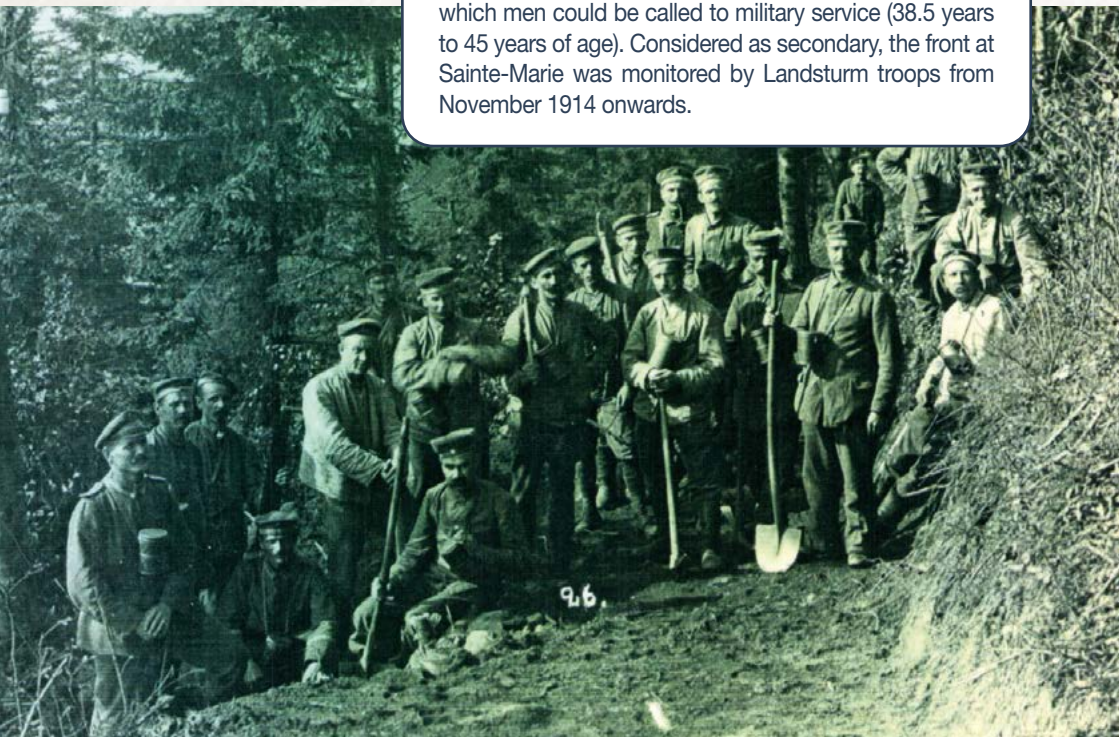


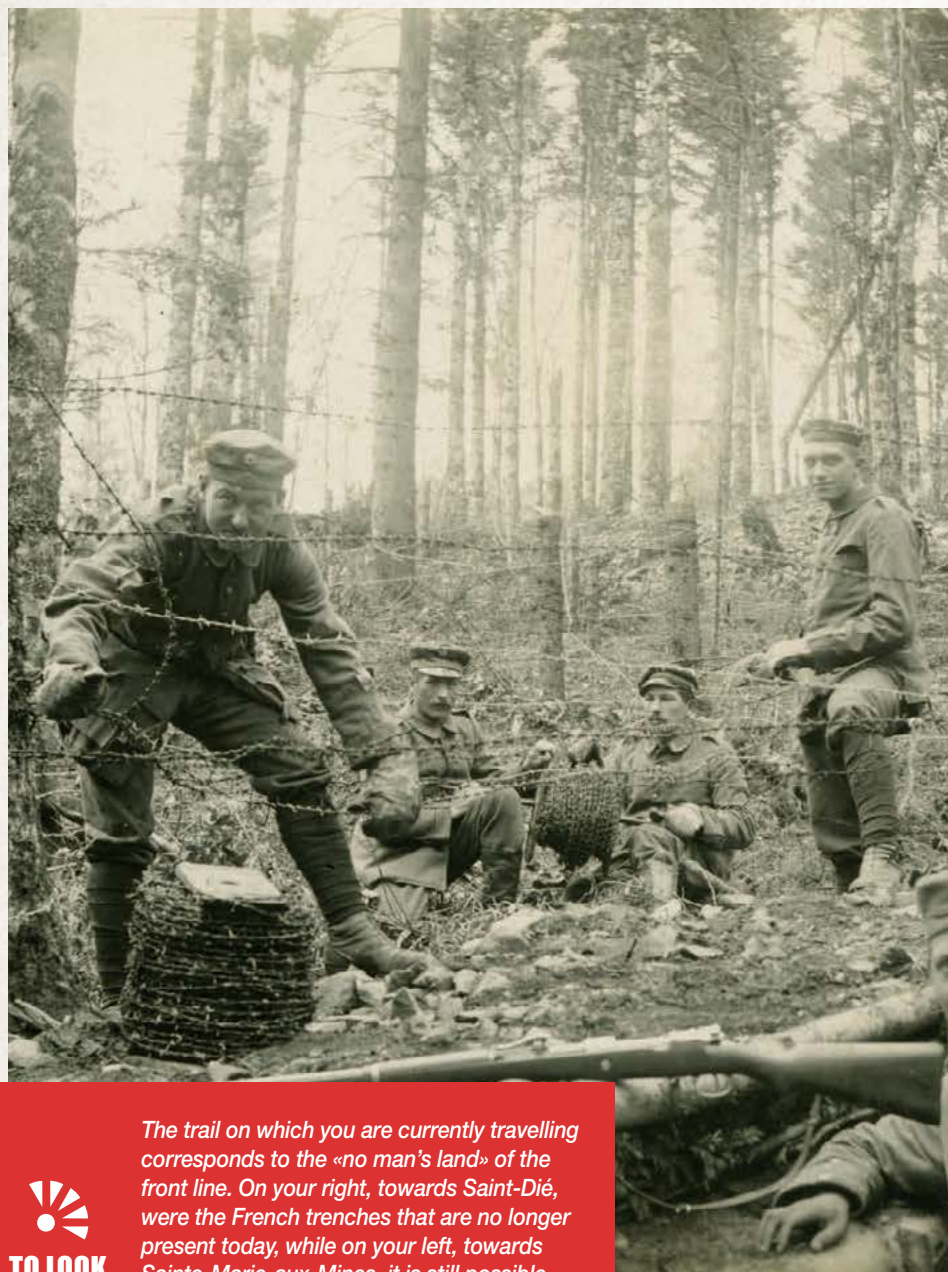
**T**he positions kept by both belligerent parties were maintained from November 1914 to the Armistice of 1918. The French kept the pass of Bonhomme and the Violu, while the Germans occupied the pass of Sainte-Marie, the Pain de Sucre and the Bernhardstein. The general staffs became aware that decisive battles were played out elsewhere and consequently redeployed their troops. From the end of 1914 onwards, the Germans assigned 15 - 20.000 soldiers to the front at Sainte-Marie-aux-Mines, principally the oldest of the Landsturm and the reservists, compared to about 10.000 during the first months of the conflict. Although considered as secondary, the front at Sainte-Marie was not calm despite that and continued to be punctuated by clashes and regular bombing.

Maintaining the positions gave birth to another type of conflict: the war of the trenches. To protect themselves from the shooting, the belligerents of the two sides buried themselves in trenches organised in several lines of defence and interconnected by tubes. The trenches that were closest to the adversary were reinforced with sand bags, shooting windows with slits or else parry-grenade nets. On the first line, several networks of barbed wire were installed. Between the two lines: no man's land, a space separating the enemy lines, devastated by battles.

## DID YOU KNOW?

The Landsturm comprised the oldest age category in which men could be called to military service (38.5 years to 45 years of age). Considered as secondary, the front at Sainte-Marie was monitored by Landsturm troops from November 1914 onwards.

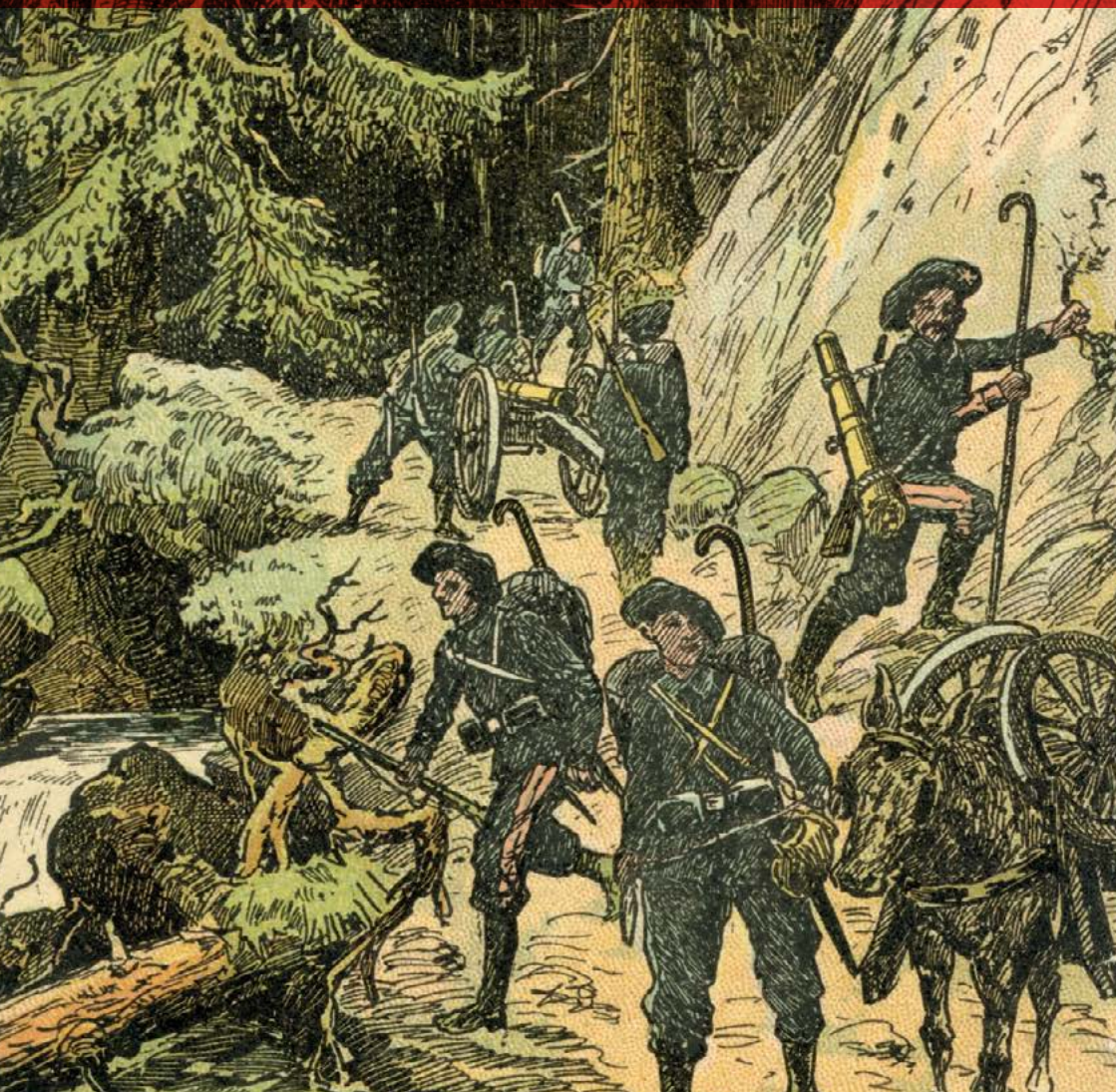




  
**TO LOOK  
FOR**

*The trail on which you are currently travelling corresponds to the «no man's land» of the front line. On your right, towards Saint-Dié, were the French trenches that are no longer present today, while on your left, towards Sainte-Marie-aux-Mines, it is still possible to see the German trenches in the forested landscape.*

# 3 THE FRENCH POSITIONS WAR OF THE MOUNTAINS



## DID YOU KNOW?

The war of trenches in the Val d'Argent had the special feature of being in a mountain zone: the front line was spread between 700 and 1000 metres in altitude.

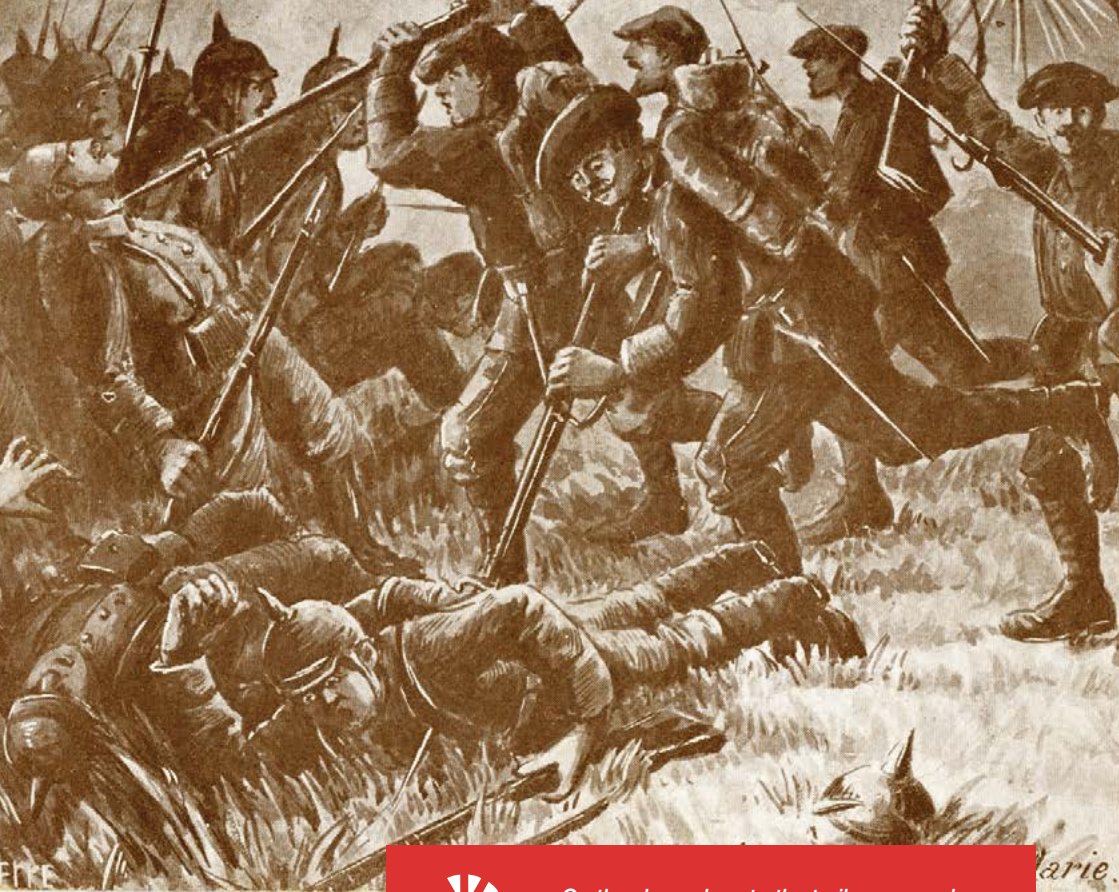


**T**he vosgien front was the only sector of the western front to take the form of a mountain war. The organisation of troops and trenches had to fit into the relief: trenches were dug in opposite slope to escape from the shooting of the adversary and were supplemented by shelters (so-called blockhouses). To construct their shelters, to reinforce the trenches and to establish shooting and observation windows, the French soldiers used wood, while the

German used prefabricated elements in concrete from June 1916.

The climatic conditions were hard. The German soldiers, like the French, had to face up to long periods of cold and snow. Troops of Alpine hunters were sent in great numbers to the vosgien front at the beginning of the war. These were elite soldiers trained in the mountain environment, with the reputation of being good walkers and skiers.





**TO LOOK  
FOR**

*On the slope close to the trail, you can detect several flat zones. It is here that French shelters and groups of huts were installed, inaccessible to the shooting.*

**A Sainte-Marie inhabitant tells us...**

Wednesday 2 September 1914: « (...) Haycot was once again a place of fighting, the alpine hunters attacked a German troop there and almost completely annihilated it. These alpine hunters were the terror of the German soldiers. They were everywhere without anyone seeing them, in the trees and bushes. No sooner is their presence made known by a salvo of guns than they disappeared once again. Even the German officers gave orders to their men to have no forgiveness for these soldiers, whom they accused of waging an unfair war»

*Hélène Fleischmann, Memories of the war 1914-1917*



## 1915 - 1916 THE WAR OF MINES



### TO LOOK FOR

*A little further on the right of trail is a German observation post named «Beton Spiegel Beobachtung», dug into the rock and endowed with an observation periscope. Aerial reconnaissance or watchtowers were used by the two armies to observe the enemy camouflaged in the landscape. These observations were absolutely key to getting definite information of movement or positioning in order to adjust gunfire. General Bourgeois, a native of Sainte-Marie-aux-Mines and leader of the geographical service of the French armies, set up the firing canvas in which he developed some change according to the movement of troops.*

**O**n the map, you can see the large network of trenches on each side of the front line. Because of its complexity and its expanse, it was nicknamed «The Maze».

The proximity of the French and German lines resulted in a «War of mines». On both sides, the belligerents dug underground tunnels, «saps», passing under the opposing positions, in order to blow them up with explosives.

On the map, dotted lines from the first lines towards the opposing trenches point out this type of tunnel.

In 1915 and 1916, this «War of mines»

stretched from Violu to the pass of Sainte-Marie. To be warned about attacks, the soldiers perfected techniques for listening underground by using stethoscopes put against the tunnel walls. When a digging operation was noticed and that noise suddenly stopped, it usually announced the withdrawal of the belligerent, and therefore an imminent explosion.

The «War of mines» ceased in 1917, having allowed neither of the two camps to make any difference.

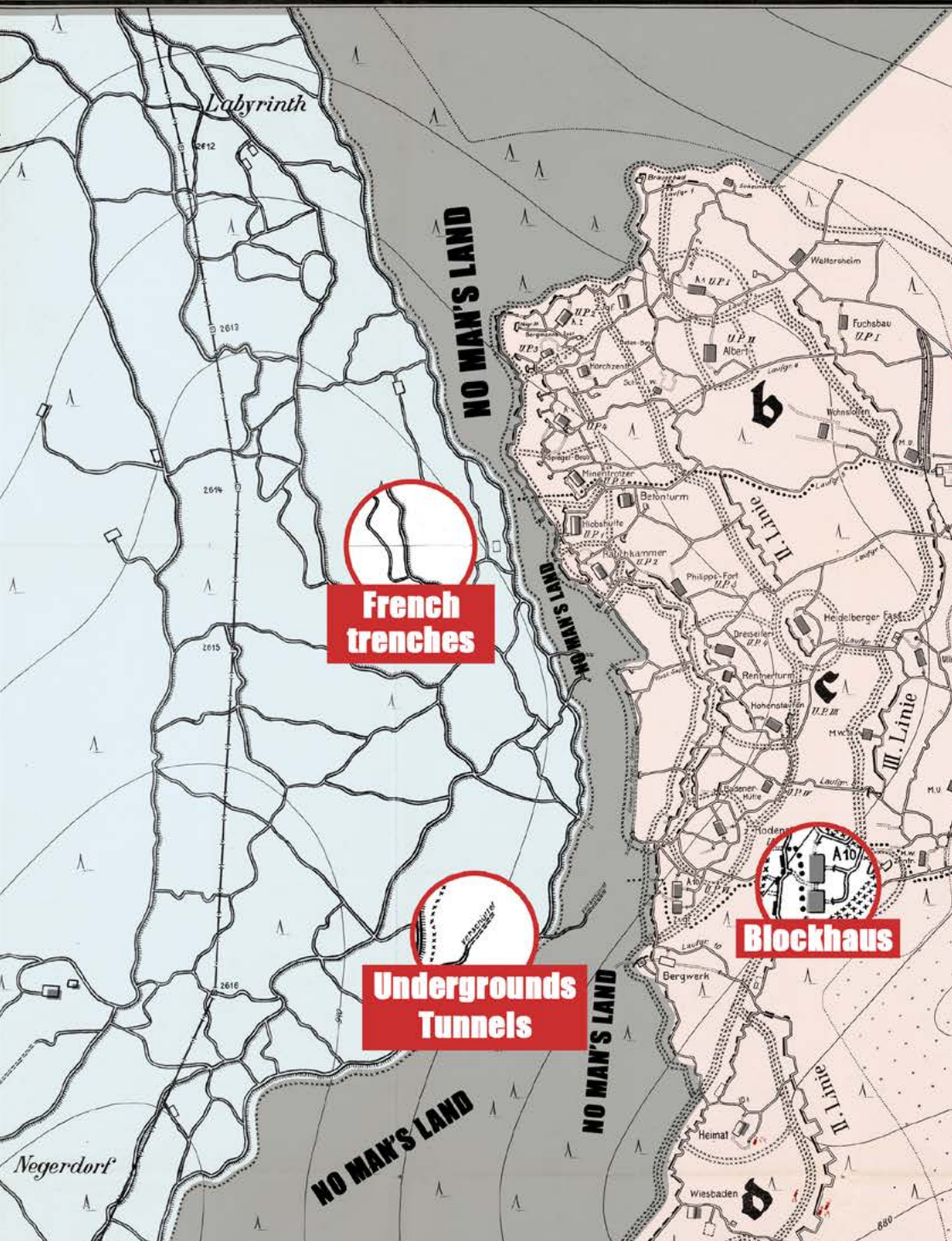
# 4 THE MAZE OF TRENCHES MINES AND GAS

1915 - 1916  
THE CHEMICAL WAR



Attention was quickly brought to other types of weapon and their development, like for example gas. The different European countries had forbidden this type of weaponry during the Congress of the Hague in 1899, but this did not prevent the Germans from using gas on the Belgian front from April 1915, and the French from doing the same! The objective of such a weapon was either to infest the first opposing lines, or to create a chemical wall causing the isolation of specific strategic points and thereby preventing the arrival of reinforcements.

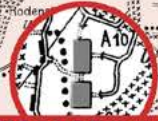
The sector of Sainte-Marie was not spared. On 3 June 1916, the French troops fired phosgene shells on the German positions of Bernhardtstein and Violu, causing clouds of chlorine. Other attacks of this type were attempted in 1916 but were quickly abandoned because of meteorological vagaries that made the chemical weapon too imprecise. Let us also note the appearance of the gas mask in all units of the two camps from 1916.



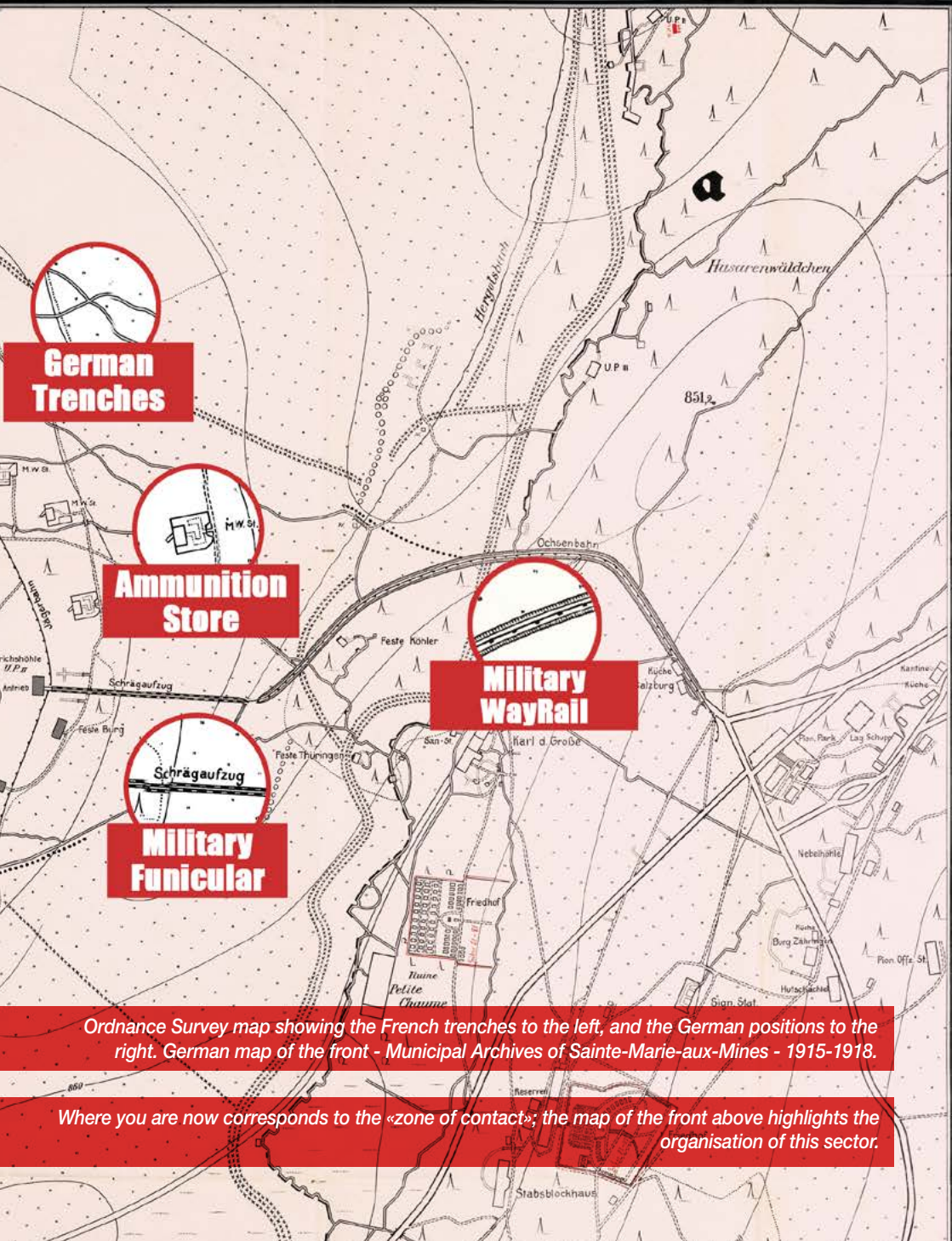
**French  
trenches**



**Undergrounds  
Tunnels**



**Blockhaus**



**Ammunition Store**

**Military WayRail**

**Military Funicular**

Ordnance Survey map showing the French trenches to the left, and the German positions to the right. German map of the front - Municipal Archives of Sainte-Marie-aux-Mines - 1915-1918.

Where you are now corresponds to the «zone of contact»; the map of the front above highlights the organisation of this sector.

## DID YOU KNOW?

To treat the German soldiers who were victims of gas attacks, health units created a complex of care in 1916 in the sector of the coast of Echery. This included an infirmary, hot showers and a swimming pool at an altitude of about 750 metres.



### A Sainte-Marie inhabitant tells us...

Saturday 3 June 1916: «That night, after three in the morning, the French attacked with asphyxiating gas, the Germans were not prepared for it at all and they did not even have time to put on their masks. There were many suffocating and they brought 52 back to the emergency hospital, without counting those that they left above who were not able to be transported, as well as those who were dead on the spot. It seems that these poor suffocating people were a horrible sight to see. They could not breathe, their lungs were filling with blood and were burning, and it was 24 hrs of agony. When they first returned to consciousness, they seemed to be well, but the discomfort increased. Almost all of them were irretrievably lost. Ambulances were running all night and all day to carry the most seriously injured to Lièpvre.»

*Hélène Fleischmann, Memories of the war 1914-1917*



## 5 TRENCH ARTILLERY

**T**he war of position forced the trench artillery to be adapted to fixed positions while it was initially conceived as a war of movement. The destruction charges were always becoming more important and the distances longer, going up to 1600 metres. The artillery became heavy and powerful and thus bombarded the opposing positions at different strategic points: 1- shelters deeply buried in the ground, the trenches and the guns; 2- rear positions in order to prevent the delivery of supplies and reinforcements.

The artillery had to adapt to the mountainous ter-

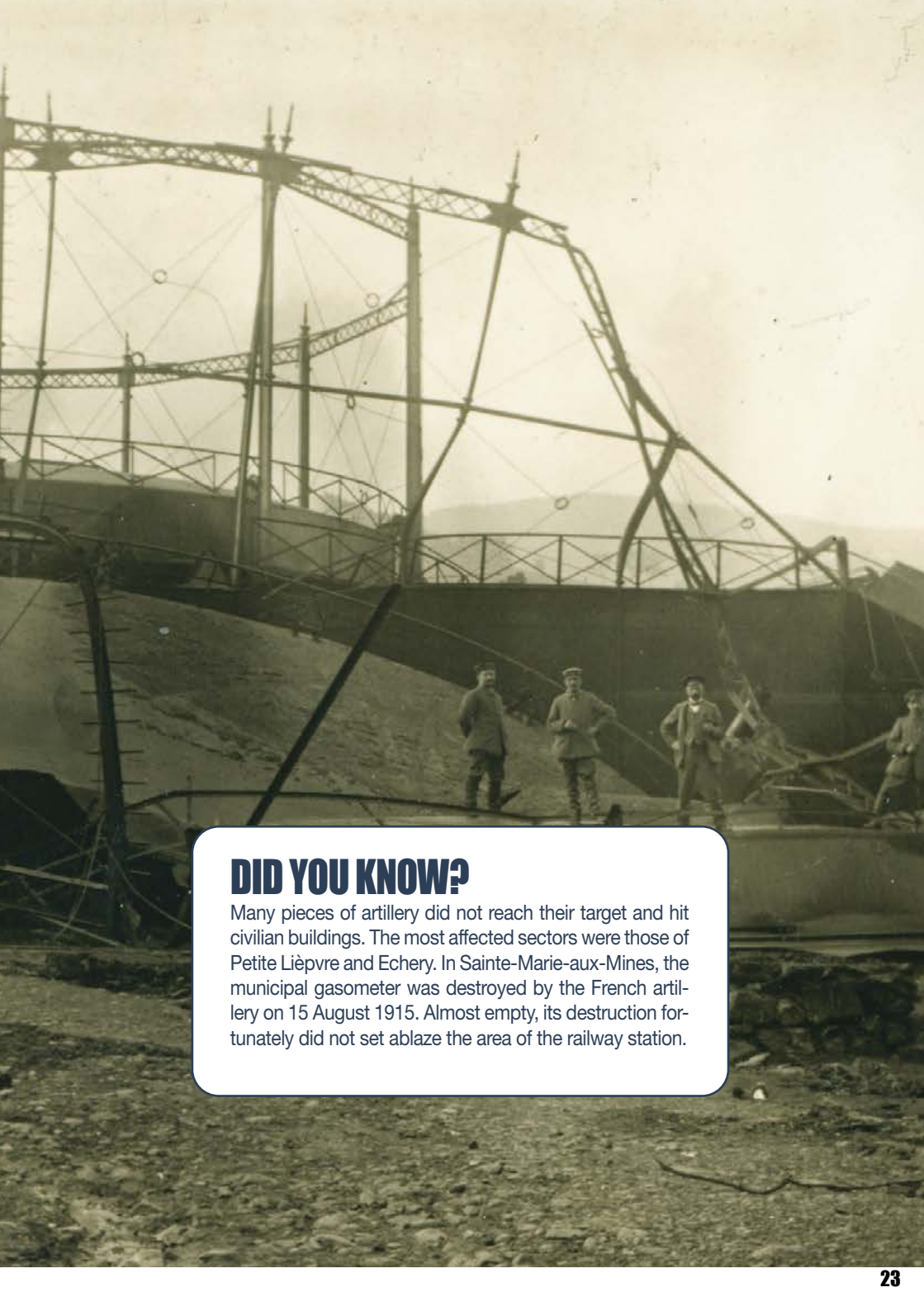
rain of the vosgien massif with the use of indirect fire weapons: Ladungswerfer (type of charge launcher) for charges of a hundred kilograms, were installed in concrete wells. Of smaller size, Minenwerfer (type of mortar), for charges of about fifty kilograms, were used more often because of being easy to move. Light mortars and grenade launchers, with a charge capacity of 24 kilograms, also allowed more mobility, thus completing this arrangement.

**T**owns close to the front became targets for this long range artillery. Thus, Saint-Dié was often bombed by the German artillery. In retaliation, the French fired at Sainte-Marie-aux-Mines, reaching the military buildings and the companies working for the German army, or else the railway below the city. All the Sainte-Marie districts and neighbouring localities were affected, notably Echery and Petite Lièpvre which were the closest geographically to the exchanges of fire.



*Sainte-Marie-aux-Mines Gazometer destroyed by french artillery fire, 16 August 1915.*





## **DID YOU KNOW?**

Many pieces of artillery did not reach their target and hit civilian buildings. The most affected sectors were those of Petite Lièpvre and Echery. In Sainte-Marie-aux-Mines, the municipal gasometer was destroyed by the French artillery on 15 August 1915. Almost empty, its destruction fortunately did not set ablaze the area of the railway station.



**TO LOOK  
FOR**

*In front of you is a German concrete well which hosted a charge launcher (Ladungswerfer). The firing chamber is located in the bottom of the well at a depth of 8 metres. The protection wells were constructed to protect the artillery pieces in case of bombing. On the sides, you can still see the hinges which held a camouflage plate that was necessary to conceal the well from aerial observations.*

# 6 THE «BETONTURM» AND ITS HISTORY



## DID YOU KNOW?

In the position of being the attackers, the French troops were supported by a network of trenches and barracks summarily laid out, which could be quickly redeployed in case of progress on the ground. For their part, the German lines were heavily reinforced with concrete installations, designed as a long-term defensive strategy.

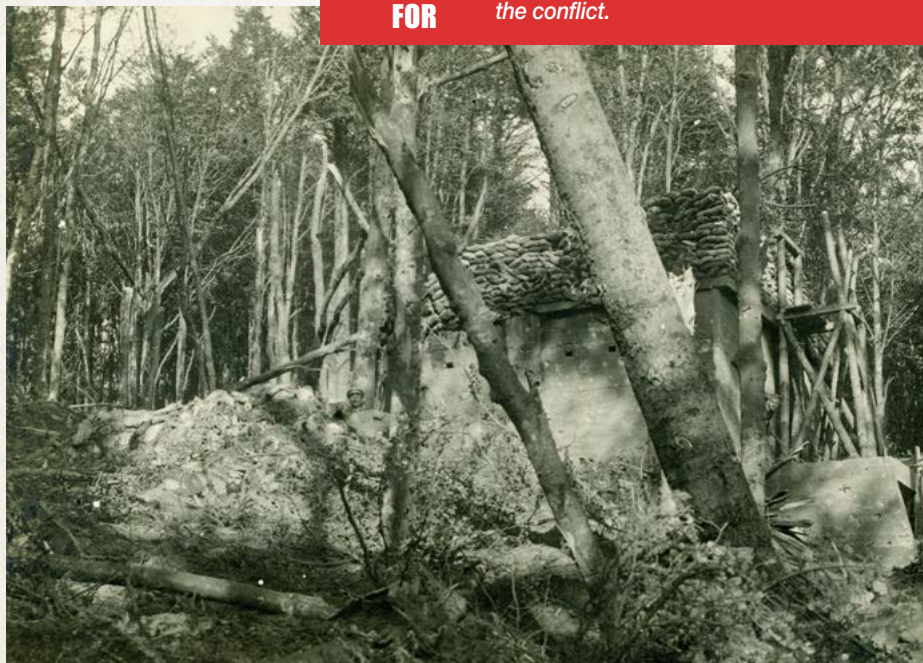
**T**his forward defence post constructed in concrete by the Germans was a large blockhouse where the protection was reinforced with bags of cement. The goal was to protect the front line German troops from French attacks, while safeguarding access to the sector, by firing shells. The construction of the Betonturm started in late 1914 and continued to the beginning of the following year. It was hidden from the eyes of the enemy by blending in with the fo-

rest landscape and so was not spotted right away by the French troops. The latter discovered it during a photographic reconnaissance of the ground and bombed it continuously from 23 to 25 August 1915. The German guns replied, but without succeeding in saving this defensive structure, which was severely damaged and rendered unusable. But it remained standing and was redeveloped to occasionally provide shelter to the troops until the end of the war.



**TO LOOK  
FOR**

*The remnants of the Betonturm right in front of you were an integral part of the first German lines of defence at the beginning of the conflict.*





## THE «RENTNERTURM» AND THE USE OF THE MACHINE GUN

**W**ith the artillery, the machine gun was the second weapon that was of significant importance in the course of the First World War. It was used from the beginning of war, especially by the Germans, who at the beginning, in the summer of 1914, thereby managed to stop the attacks of the French, who were still equipped with rifles and bayonets. The clear advantage of the machine gun was to allow concentrated fire, fed on average at 400 - 600 rounds per minute. The various models of machine

guns evolved during the war to carry ever larger cartridge magazines in order to maintain a high rate of fire. Using one requires solid training of the machine gunners, who must be able to use it day and night and repair possible jamming of the apparatus. The Germans mainly used the MG08 model (Maschinengewehr), of the Maxim model, equipped with a cooling jacket filled with 4 litres of water to deal with the subsequent heating when firing.



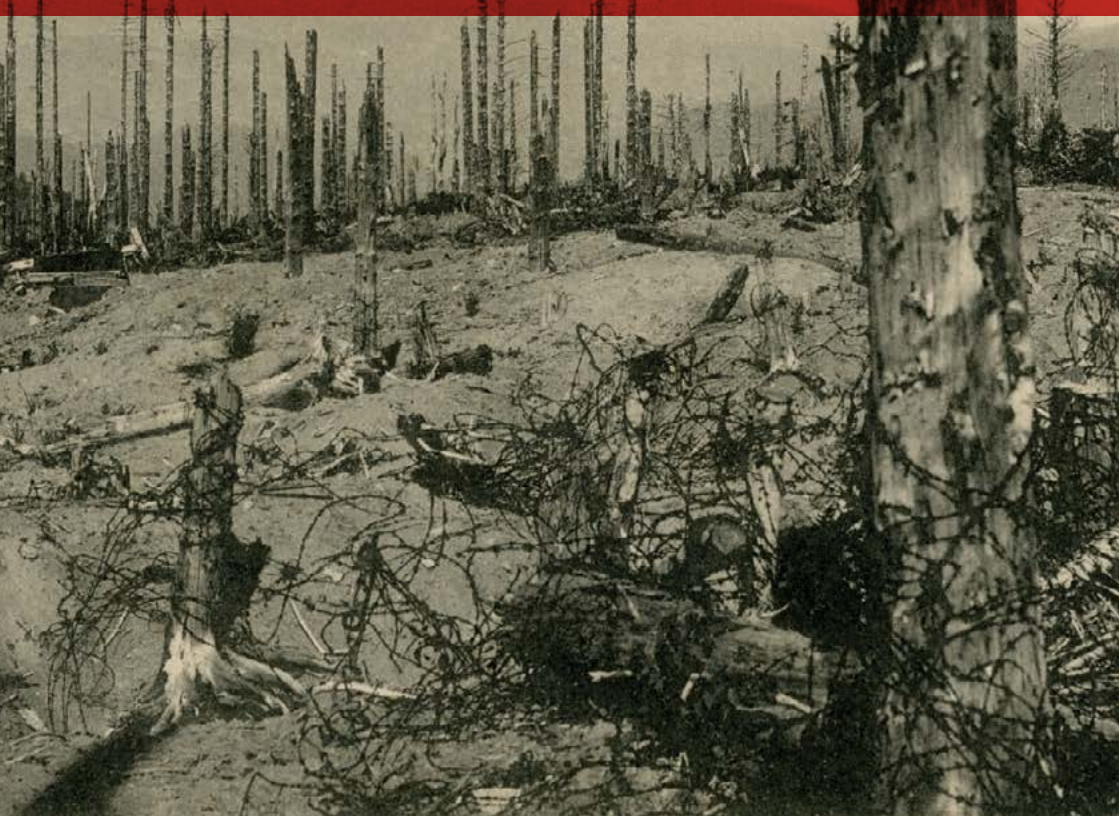
*This shelter was used to camouflage a German machine gun. The blockhouses used for this purpose had rounded openings in order to provide an enlarged window of firing. They were usually located at the crossroads of several paths in the front lines, in order to allow a portion of the front to be securely held. This is the case with this shelter, which is positioned directly facing the French lines.*

## DID YOU KNOW?

The cooling jacket of the machine gun was connected by a tube to a condensation housing or bucket. This tube enabled the steam to be collected that was produced by the machine gun when it warmed up, and to recover it in liquid form after condensation.



## 8 FLORA AND FAUNA OF THE SECTOR



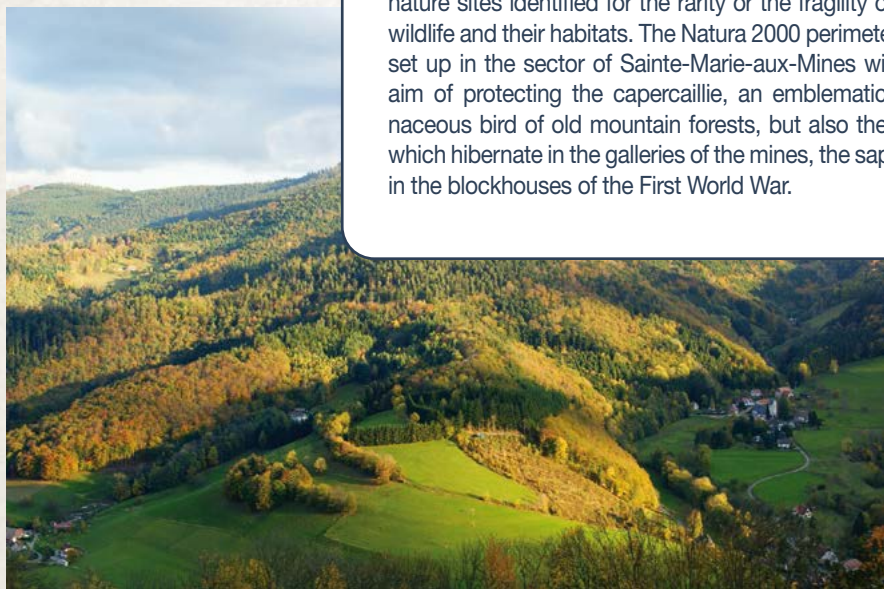
**T**he forest of Sainte-Marie-aux-Mines is the largest of the Upper Rhine: already in 1914, the forest covered  $\frac{3}{4}$  of the surface area of the territory! The most widespread species were beech, fir and douglas fir. After the consequent deforestation because of the mining development of the sixteenth century in the valley, the forest gained ground again in the nineteenth and twentieth centuries. Muni-

cipalities encouraged the reconstitution of forest reserves because of the income that they derived from the sale of timber. Reforestation accelerated at the end of the First World War because the forests bordering the front line were devastated by the fighting. In 1918, about 150 hectares of forest were destroyed and 135,000 m<sup>3</sup> of machine-gunned timber was unable to be sold. Bernhardstein and the Head of Violu were particularly affected.



## DID YOU KNOW?

Part of the forest area of Val d'Argent was classified to be in the Natura 2000 zone. This is a group of European nature sites identified for the rarity or the fragility of their wildlife and their habitats. The Natura 2000 perimeter was set up in the sector of Sainte-Marie-aux-Mines with the aim of protecting the capercaillie, an emblematic gallinaceous bird of old mountain forests, but also the bats, which hibernate in the galleries of the mines, the saps and in the blockhouses of the First World War.





# 9 THE « ZÄHRINGER-LÖWE » CONCRETE BILLETING STRUCTURES



**F**rom the beginning of the war of position, one of the main tasks of the soldiers consisted of earthworks and the construction of shelters of every kind, including for the billeting of troops from the front. Local forest resources were widely used for this purpose. From 1915, the German servicemen also erected concrete structures enabling an increased

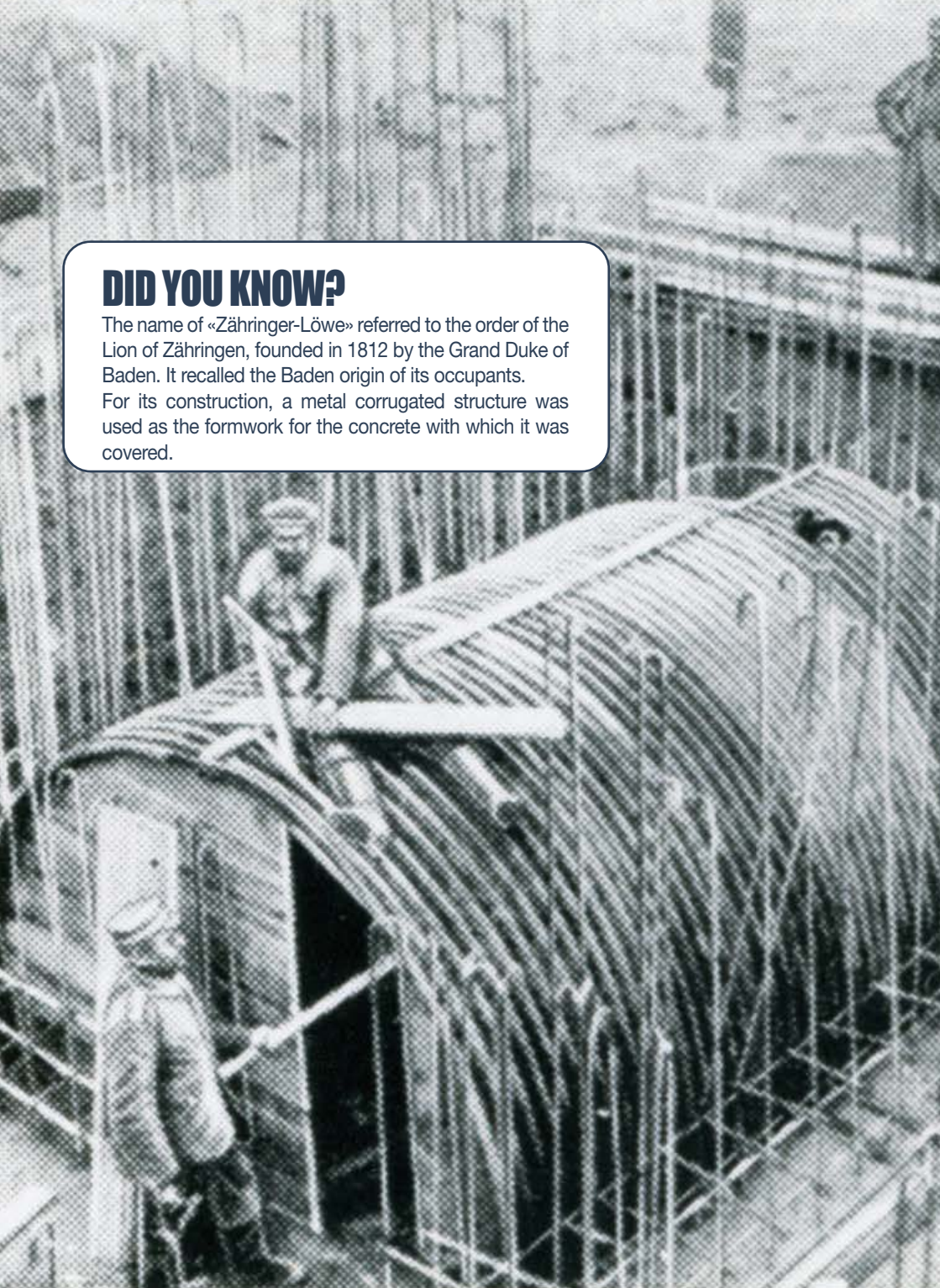
resistance to bombing. These blockhouses thus formed a large network of fortification which was part of the long-term defensive strategy of the German General Staff.

The French shelters were fewer in number and less solid, mainly made from logs, stones and earth.

## DID YOU KNOW?

The name of «Zähringer-Löwe» referred to the order of the Lion of Zähringen, founded in 1812 by the Grand Duke of Baden. It recalled the Baden origin of its occupants.

For its construction, a metal corrugated structure was used as the formwork for the concrete with which it was covered.





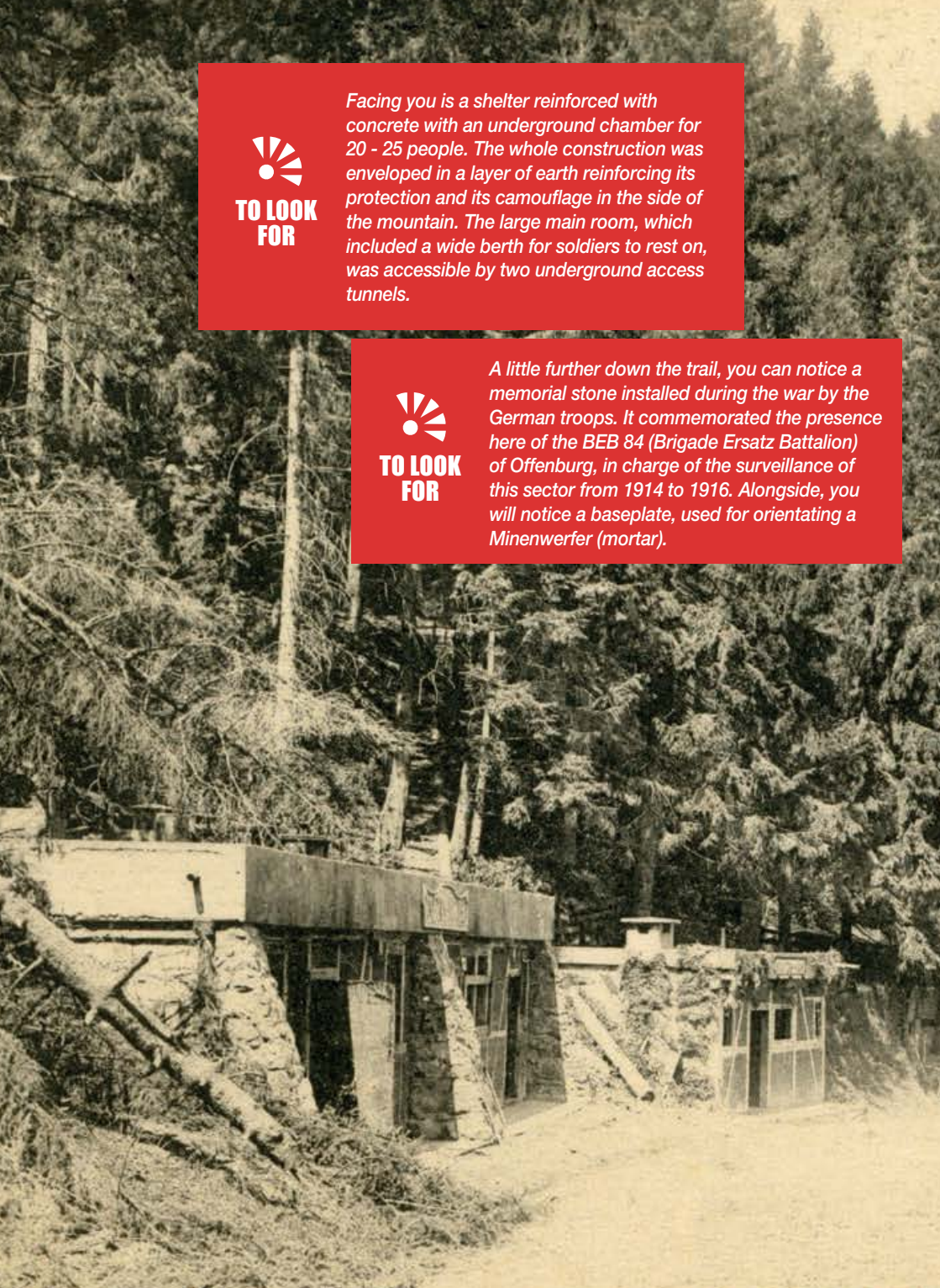
**TO LOOK  
FOR**

*Facing you is a shelter reinforced with concrete with an underground chamber for 20 - 25 people. The whole construction was enveloped in a layer of earth reinforcing its protection and its camouflage in the side of the mountain. The large main room, which included a wide berth for soldiers to rest on, was accessible by two underground access tunnels.*

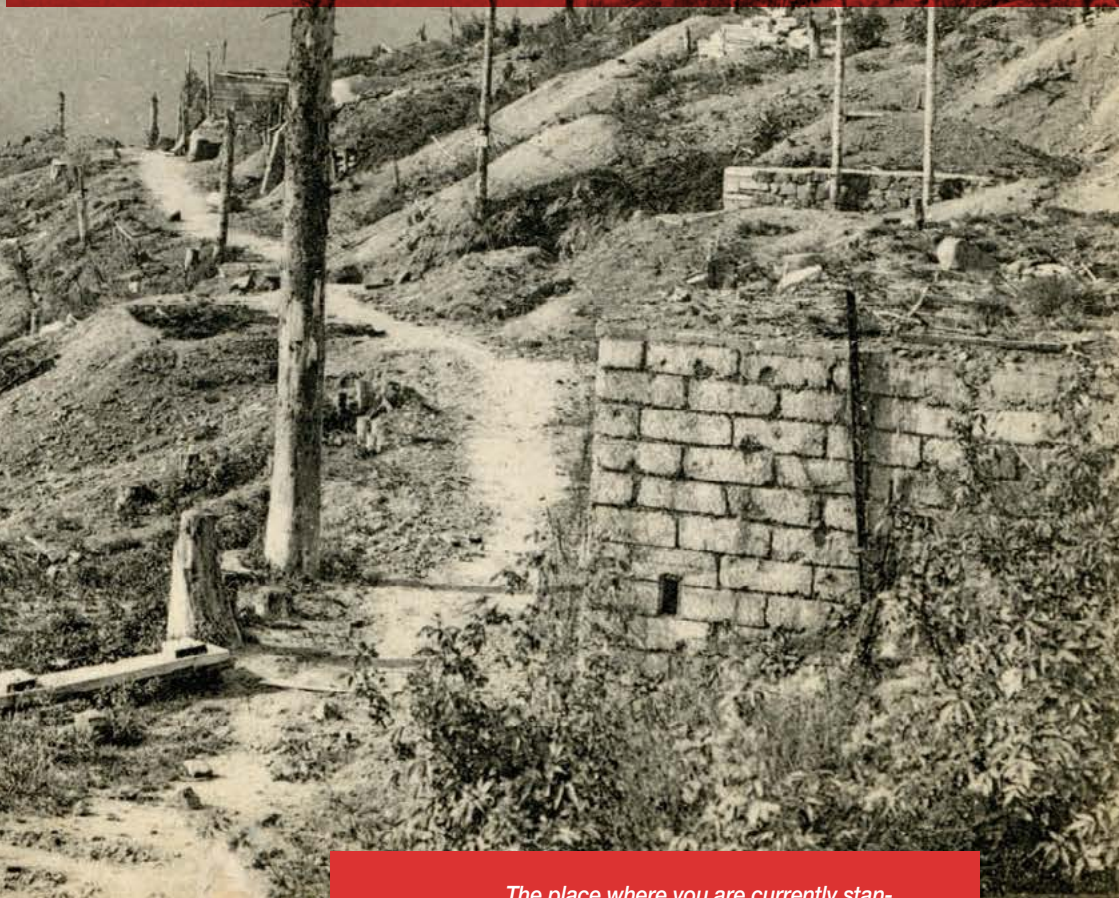


**TO LOOK  
FOR**

*A little further down the trail, you can notice a memorial stone installed during the war by the German troops. It commemorated the presence here of the BEB 84 (Brigade Ersatz Battalion) of Offenburg, in charge of the surveillance of this sector from 1914 to 1916. Alongside, you will notice a baseplate, used for orientating a Minenwerfer (mortar).*



# 10 THE PATH OF SHELTERS AFTER CONFLICT

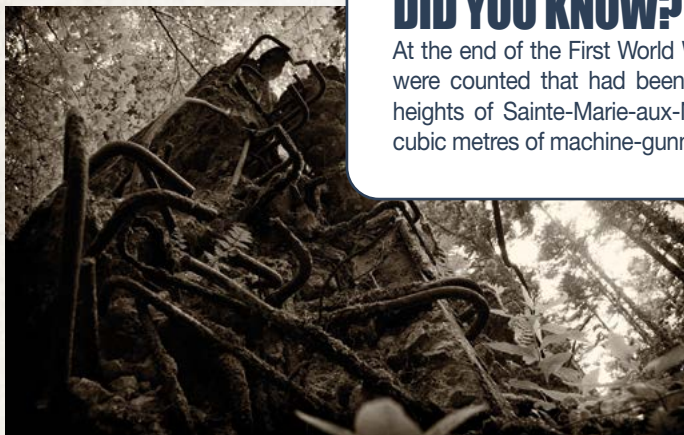


## TO LOOK FOR

*The place where you are currently standing is represented on this photograph published in 1920, after the end of the war. The landscape was devastated and, except for the blockhouse still present, it in no way resembled what you can see today.*

## DID YOU KNOW?

At the end of the First World War, 150 hectares of forest were counted that had been entirely destroyed on the heights of Sainte-Marie-aux-Mines, and about 135,000 cubic metres of machine-gunned wood.



**A**fter the war, the activity of reforestation enabled the forest to recover on the landscapes devastated by the artillery. The French administration then decided to fill up the trenches dug in the course of the conflict. This activity was mainly carried out in the 1920s on the Alsatian side of the Vosges and to a lesser extent on the Lorraine side. It enabled the end of the conflict and the return of Alsace to France to be marked symbolically in the landscape, while giving work to unemployed local inhabitants. The army, having recovered the military equipment, authorised firms to recover the remaining materials on the sites. A disarmament campaign was

conducted across the entire sector. Some blockhouses were destroyed with the aid of explosives, but this technology did not always obtain the results hoped for. Today, 160 concrete structures remain along the old frontier line bordering on the Val d'Argent. Other scars are still visible in the Vosges forests, such as the memorial stones, the military graveyards, the remnants of trenches on the Lorraine side or traces left by barbed wire on the trunks of some of the trees.

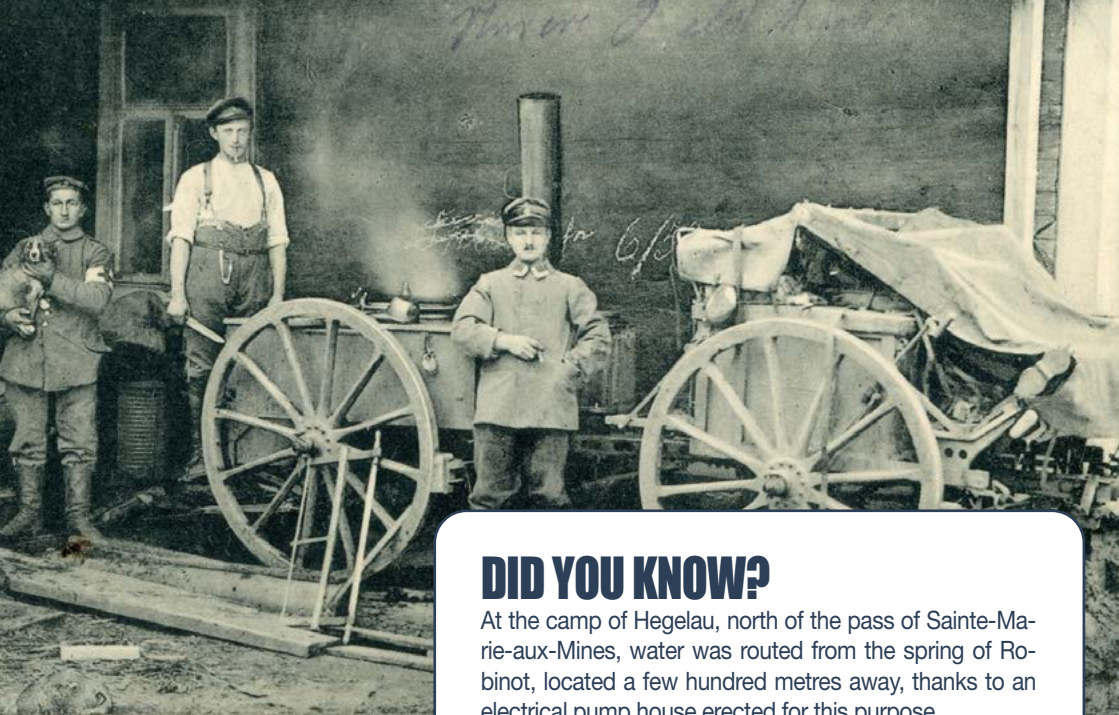


# WATER AND FOOD SUPPLY



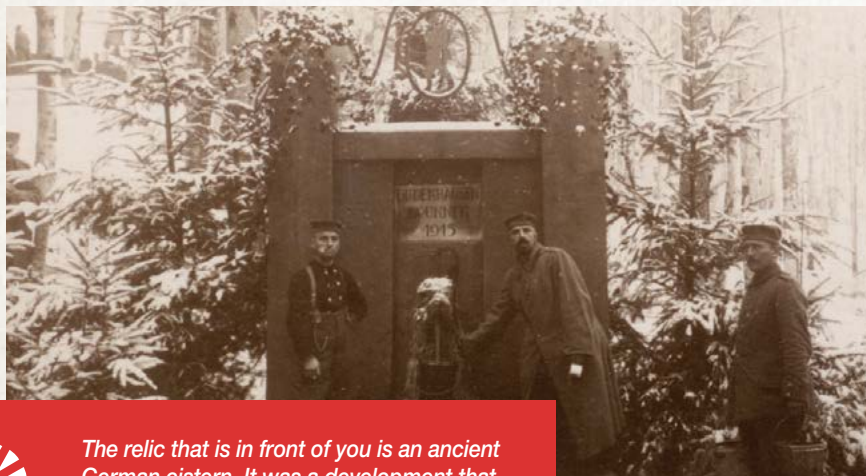
**T**he question of water and food supply on the front was fundamental during the five years of the war. The soldiers collected water by building cisterns or catchment from drinking water springs close to the front. The water was also brought to the front on the backs of mules in cans that were directly distributed to the combatants. It was then used by the soldiers to perform summary toiletries or for hydration having purified it with the aid of pastilles or by boiling it. Troops also used it in battle for the cooling of the machine guns.

The provision of food was also fundamental in the war of the trenches. Field kitchens towed by the mules were able to bring bowls of food from fixed kitchens established in the rear to the soldiers fighting in advanced positions. For the preparation of meals, the majority of local resources were requisitioned for the servicemen, and rationing became widespread for the inhabitants. Nevertheless, troops suffered food shortages throughout the war. Meat was often missing in the rations and was then replaced with some herring or stewed fruit to the great displeasure of the soldiers.



## DID YOU KNOW?

At the camp of Hegelau, north of the pass of Sainte-Marie-aux-Mines, water was routed from the spring of Robinot, located a few hundred metres away, thanks to an electrical pump house erected for this purpose.



*The relic that is in front of you is an ancient German cistern. It was a development that could collect and store rainwater for use by the troops.*

# 12 THE MEANS OF TRANSMISSION THE EXAMPLE OF TELEPHONY



**D**uring the war of movement like that of position, transmissions between sectors were crucial in the smooth running of military operations. From 1914, the belligerents used field telephones. A telephone exchange was installed in every sector of the front and linked up with the various observation posts, which transmitted information to it on enemy positions. The information received was communicated to a central station, which distributed it to the other telephone exchanges of the sector. The stations were linked by telephone lines which were mainly set up according to the state of the ground. In places exposed to shelling, the telephone cables were aerial in order to be repaired more easily in case of damage.

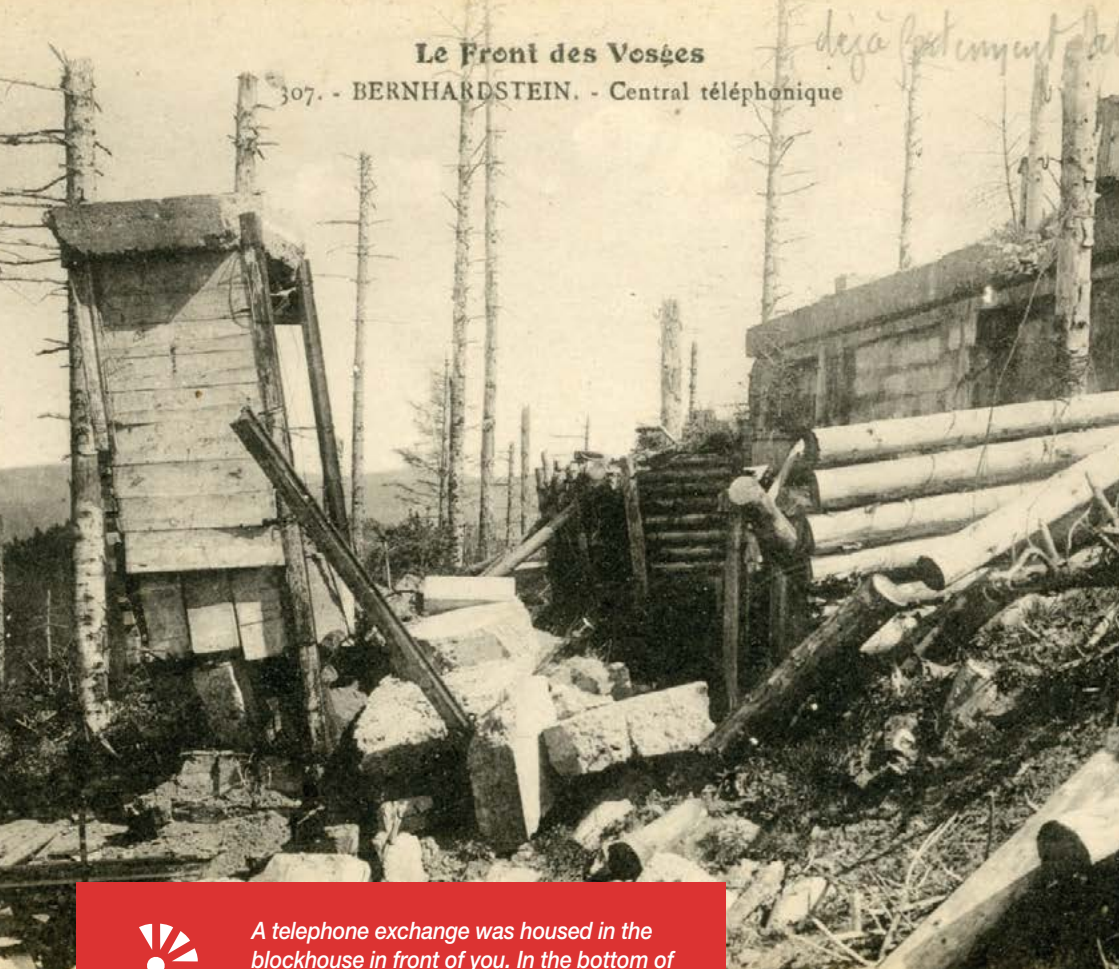
The development of telephone communication led to the creation of listening services whose mission was to intercept the messages of the enemy. Other means were then used, such as messengers (men or dogs), optical posts, flags and light signals to give short and rapid orders, or else homing pigeons. The latter were used in a secondary way because of the many imponderables such as: wind, rain, fog, darkness, shooting or birds of prey hindering or interrupting their movements. The belligerents combined all available means of communication because it was their complementary nature that made them most effective.



# Le Front des Vosges

307. - BERNHARDSTEIN. - Central téléphonique

*deja (at) emment (at) a*



**TO LOOK  
FOR**

*A telephone exchange was housed in the blockhouse in front of you. In the bottom of the shelter, a tunnel entrance was dug to act as refuge in case of bombing.*



# 13 THE OPTICAL TRANSMISSION NETWORK



**TO LOOK  
FOR**

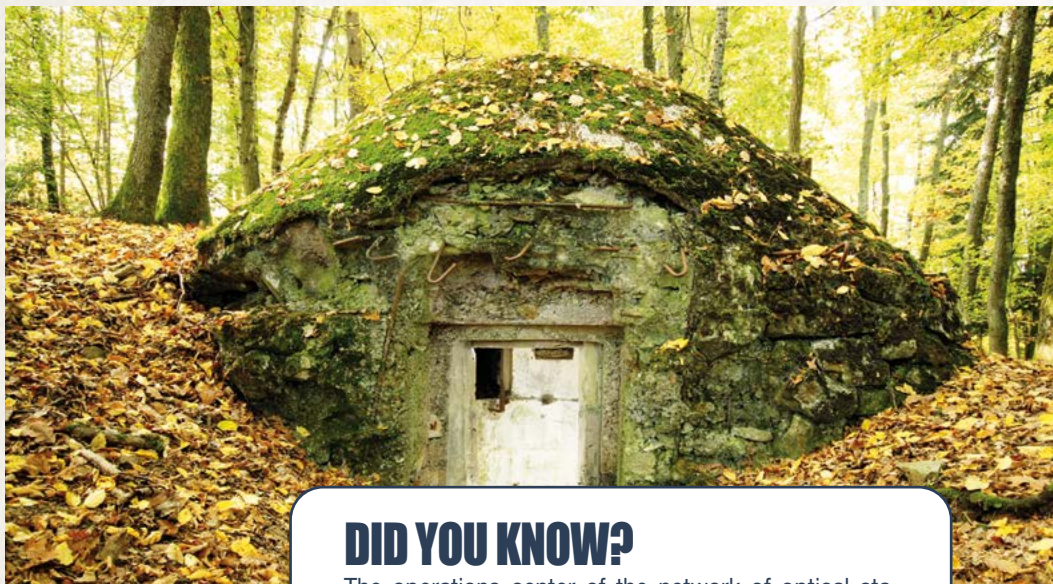
*The blockhouse installed at this site housed an optical station that communicated with other structures in the network. An opening as well as supports that were always visible enabled the optical apparatus to be set up. This one broadcast to the hill opposite, to the very spot where there is a deforested zone, which housed an optical transmission relay. The information transmitted was then relayed to the central platform located in Saint-Philippe.*

Optical transmission was a supplementary communication system to telephony, used during The Great War. The «MBLINK 16» was an optical apparatus including a 6 volt bulb supplied by batteries with 50 to 60 hours of operation, and with its light amplified by a mirror located at the rear. It enabled coded messages to be sent by light signals using Morse code. Long flashes represented dashes and short flashes represented dots.

From 1917, a complex and dense network of optical stations was organised with the building of structures specifically dedicated to their protection and use. From the window of view of its shelter, each optical apparatus issued light signals

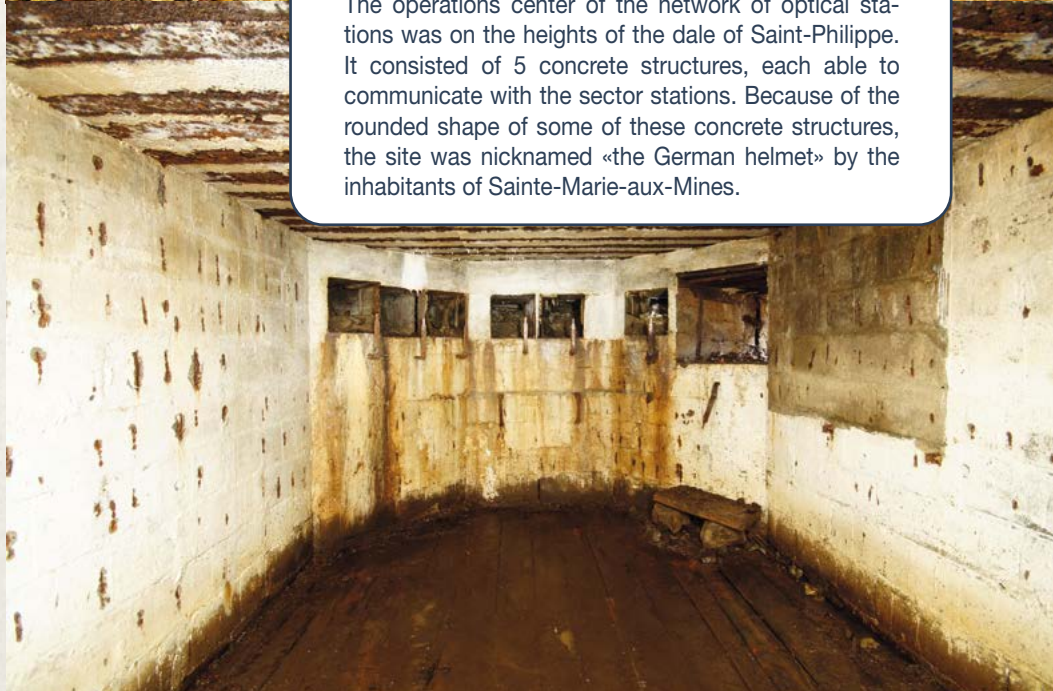
received by an optical transmission station or relay, which in turn transferred the message to the central platform. Sometimes, the optical stations were half-buried in order not to be spotted by the enemy and a wooden or concrete channel extended the window of view to make the signal lights visible outside. This mode of communication could not be interrupted by the enemy, but it was unusable in bad weather. At present, the structures of 24 optical stations have been identified throughout Val d' Argent.





## **DID YOU KNOW?**

The operations center of the network of optical stations was on the heights of the dale of Saint-Philippe. It consisted of 5 concrete structures, each able to communicate with the sector stations. Because of the rounded shape of some of these concrete structures, the site was nicknamed «the German helmet» by the inhabitants of Sainte-Marie-aux-Mines.



# 14 THE ACCOMODATION OF THE BADEN OFFICERS



**T**he barracks intended for the billets of the German officers and NCOs featured internal and external facilities that were better cared for than those allocated to the rest of the troop.

This superior comfort was occasionally reflected in the presence of a terrace or a decorating effort. The more rudimentary billets of the ordinary soldiers in turn were distinguished by significant overcrowding and very small personal areas.

On the front, nearly 5000 soldiers and officers resided permanently, and were regularly replaced by reserve troops, who were stationed in the town, with inhabitants or in local facilities (school, factory, ....). At the end of 1915, the residential capacity of the valley was quickly being saturated, with more than 10,000 men living in the town of Sainte-Marie-aux-Mines.

Small villages for billets were then arranged in

places that were not very exposed, close to the front like Hegelau, on the coast of Echery and in the valley of Fenarupt. Each billet was identified by a name inspired by the geographical origin of the troops residing there or by a humorous pun. Some billets became veritable small villages with their wooden barracks, their chapels, their sanitary facilities and their canteens.



*A little further on the trail, you can see a blockhouse which, during the war, was used as a shelter for corporations (Zunfhaus). It was here that the German pioneers lived to be as close as possible to the front where they had to perform numerous works: laying barbed wire, digging trenches, building shelters ... Other structures follow on the path and in particular the shelter where the ammunition was stored, which supplied the entire sector, and also the smithy.*



### **A Sainte-Marie inhabitant tells us...**

Friday 11 September 1914: «In the course of the day, billets were distributed to the soldiers, we had four to house and feed; they came from Hoechst and its vicinity; one of them was even a dye worker in a Farbwerke. I had to make them dinner though they only came at 1.30 am. I served them a soup, a dish of cabbage with some bacon and potatoes and black coffee. In the evening I made them beans and potatoes and a good soup with the cabbage water. I made them sleep on two mattresses in the bathroom. At a quarter to three, they were woken and departure was set at 3.30.»

*Hélène Fleischmann, Memories of the war 1914-1917*

## DID YOU KNOW?

The municipal archives of Sainte-Marie-aux-Mines kept maps of 1916-1917, representing all the German military installations (blockhouses, trenches, lines of barbed wire). These maps have enabled the names of some concrete structures to be found.

*In front of you are the remnants of a blockhouse where German officers were billeted. It was here that the General Staff were lodged of BEB 84 (Brigade Ersatz Battalion) of Baden origin. The recruits forming the battalion were originally from Offenburg, as the panel at the entrance of the blockhouse reminds us. In the early days of the war, this shelter was constructed with wooden logs and presented carefully landscaped surroundings as well as parry grenade wire netting on the roof. After 1915, the wooden roof was reinforced with a layer of concrete and a lateral protection wall was added on the side to improve security. You can see two holes in the middle of the foundations at the site, where two trees were preserved at the time of the construction of the blockhouse.*





## 15 THE MEANS OF TRANSPORT, THE ADLER FUNICULAR RAILWAY

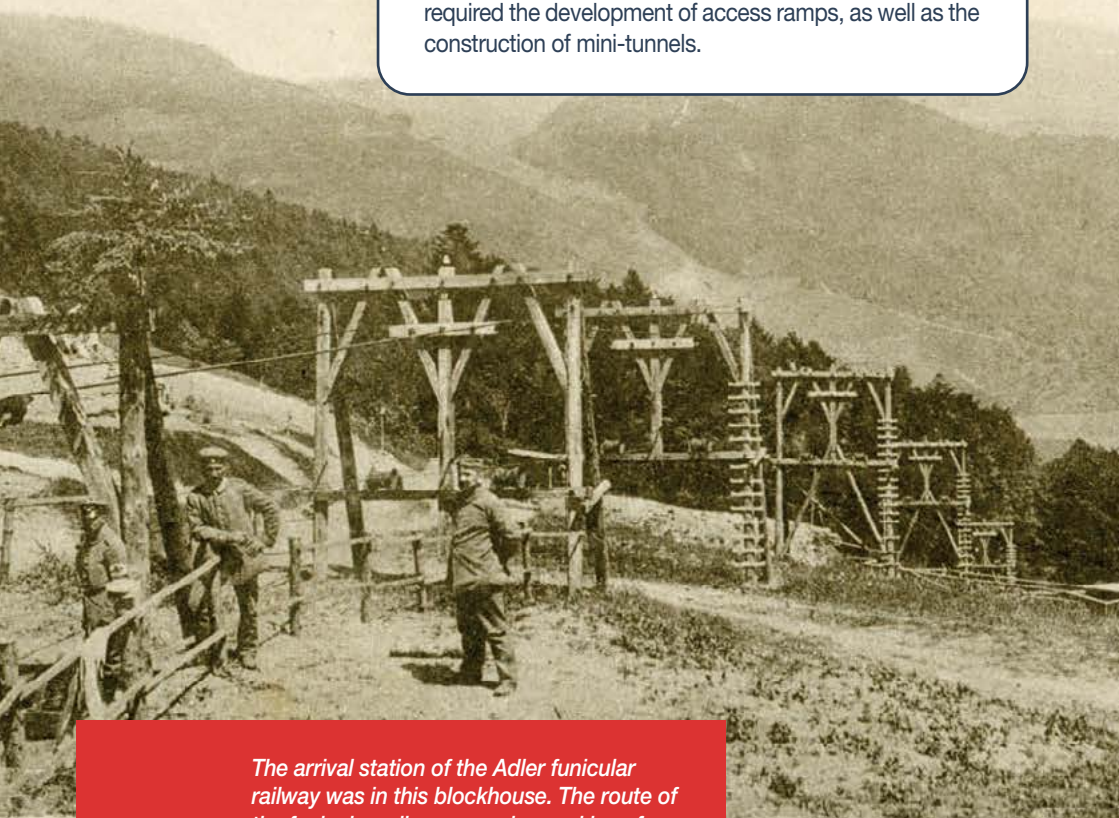
**T**he stabilisation of the front on the line of the Vosges ridge made crucial the question of the transportation of the equipment necessary for combat. The means of transport had to be adapted to the mountainous environment that offered limited possibilities for movement. In the first months of the conflict, the transportation of provisions and equipment was performed on the backs of animals. In a

second phase, the Germans constructed narrow gauge railway tracks on the side of the mountain. To overcome the obstacle of slopes that were too high, means of transport by cable were then installed: cable cars and funicular. This set of means put into a network optimised the transportation to the front.



## DID YOU KNOW?

The valley of Rauenthal also had a military funicular railway during the 1914-1918 war. It served the bottom of the valley up to the blockhouse of Haycot. Its realisation required the development of access ramps, as well as the construction of mini-tunnels.



**TO LOOK  
FOR**

*The arrival station of the Adler funicular railway was in this blockhouse. The route of the funicular railway was changed by a few hundred metres during the course of the war, following the movement of the front, and that is why this terminal station was called « Neuer Aufzug » (new arrival).*

*Pay attention to the rectangular opening of the blockhouse which was used for the passage of the cables.*



The funicular railway was one of the key elements of this military transport system. It worked with the aid of traction cables: while one trolley went up on a track, the other one went down on the second track, thereby acting as a counterweight.

Facing you is the final station of the Adler funicular railway. To reach this location at the front, the equipment first of all travelled on an initial funicular railway going up to the Pain de Sucre. It was then transported in the Albertbahn train, operating with the aid of a benzene locomotive, that reached to the back of the Violu lines. This train was connected with the Adler funicular railway, which climbed up about 200 metres in altitude over 400 metres of distance to the final station. The equipment was then transported in animal-drawn trolleys on a narrow gauge railway called the Eugenbahn. The Adler funicular railway thus enabled soldiers,

supplies and ammunition to be transported up to the front lines and, in the opposite direction, the Germans on leave and the French prisoners to be brought down to the valley.

Other noteworthy means of transport were provided on the Sainte-Marie-aux-Mines front. A cable car called Eberhardtbahn also connected the valley of Petit Rombach with the Chaume de Lusse. Its terminal station was connected with a country railway, the Lordonbahn, the line that led to the Val de Villé, 20 km downstream.

16 THE OLD BORDER  
AND ITS DEMARCATIONS



**T**he annexation of Alsace and part of Lorraine to Germany after the treaty of Frankfurt of 10 May 1871 resulted from the defeat of France against Prussia. 4056 demarcations were installed along the new Franco-German border between Luxembourg and Switzerland. Each demarcation bore the letters F (France) and D (Deutschland) on either side, a number from 1 to 4056 and a groove giving the directions of the two demarcations that surround it. On the pass of Sainte-Marie, the border followed

the line of the Vosges ridge. For the duration of the annexation, surveillance was kept on the Vosges border, where border incidents (arrest of smugglers or alleged spies) stirred antagonism between the two neighbouring countries. After the armistice of 1918, the letters F and D were erased on most of the demarcations to mark the return of Alsace to France. Some were also taken down by the French administration or by the owners of private plots on which they were located.



*The tour takes you back to the « contact zone » between the French and German lines before you continue on a path that follows the old Franco-German border between 1871 and 1918. That is why you will come across several old border demarcations which line the trail.*



# « HANSMANNBAHN », NARROW GAUGE RAILWAY



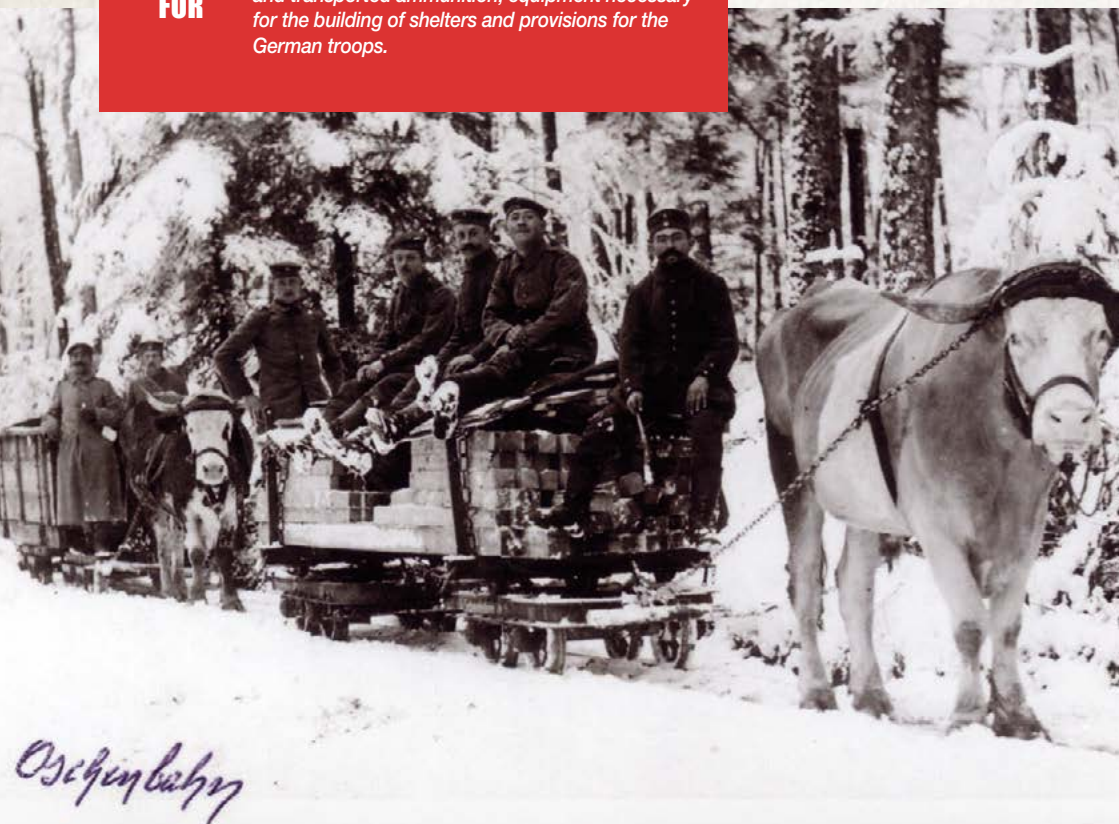
**T**he narrow gauge railways belonged to the German transport network and were supplemented by the funicular and cable cars to transport men and equipment to the front. They could either be composed of tracks without sleepers, or consisted of rails laid on wooden or metal sleepers.

Depending on the type of tracks constructed, the

wagons were towed by animals (mules, horses and oxen), men or steam or benzene locomotives.



*On each side of the trail, you can distinguish two flat tracks. These zones were not natural but came from the presence of a narrow gauge railway without sleepers, which served German positions during war. This railway was called «Hansmannbahn». The wagons that travelled on this track were towed by animal force and transported ammunition, equipment necessary for the building of shelters and provisions for the German troops.*



*Oschinbahn*

# 18 POST-WAR AND THE RETURN OF ALSACE TO FRANCE



**A**fter the armistice of 11 November 1918, Alsace became French again and the Franco-German border on the pass of Sainte-Marie was abolished. On 16 November 1918, a first battalion of Alpine troops entered Sainte-Marie-aux-Mines and on the following day, a significant number of French troops marched into a town decorated with flags for the occasion.

From 1916 onwards, the Germans had created a burial service as well as military cemeteries, like in Mongoutte between Sainte-Marie-aux-Mines and Sainte-Croix-aux-Mines. This type of building had become a necessity to bury the

soldiers because of a lack of space in the local cemeteries. The necropolis of Mongoutte today counts more than 1000 graves and is dominated by a monumental cross, itself adorned with a bust of a German soldier.

The French administration also decided to construct national cemeteries after the armistice. One of them was constructed in the pass of Sainte-Marie on 22 August 1920 and a second one in Hajus on the heights of Sainte-Croix-aux-Mines in 1923.

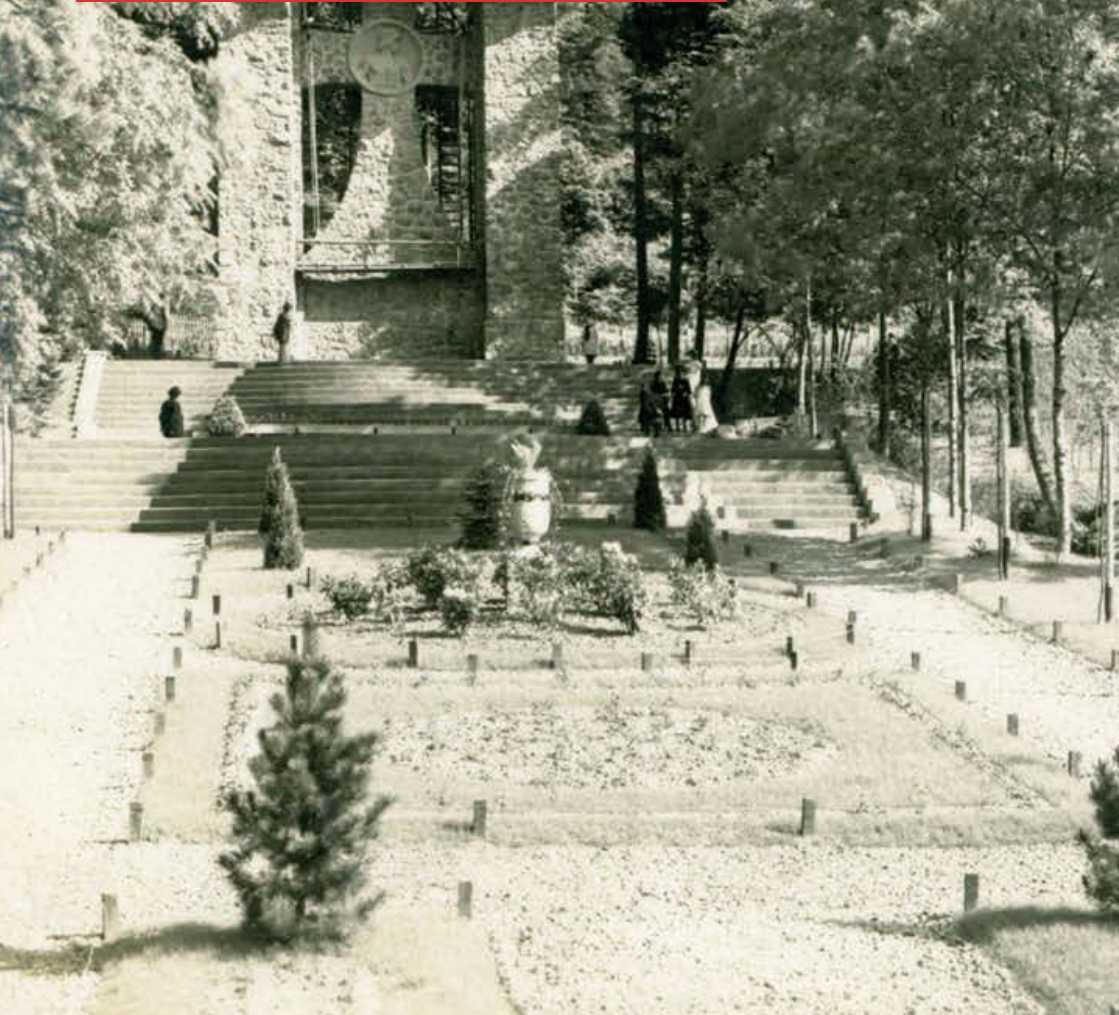
## DID YOU KNOW?

The German military cemetery of Mongoutte is maintained by reservists of Bruchsal. Their regular visit has encouraged the creation of a twinning between Sainte-Marie-aux-Mines and Bruchsal Untergrombach, signed in 1989.



**TO LOOK  
FOR**

*You can extend this tour by going to the necropolis of the pass of Sainte-Marie which is close to the parking, on the other side of the road.*







### A Sainte-Marie inhabitant tells us...

«Sunday 16 August 1918: «That night the German soldiers all left the town and its surroundings, it was a retirement that they performed with a dismal and moody air. (...) At 5.30 it was announced that the French were coming. Indeed, the alpine hunters made their appearance. The whole town was on its feet; families who otherwise did not show themselves on the streets, were moving around without hats, eyes bright with joy. The French flag was hoisted at the town hall, and the crowd greeted it; bravos were even heard! The General took possession of the town hall, met the mayor and the deputies, had the residence of the tax inspector pointed out, we were French in a flash! Next to the French flag the Alsatian flag was hoisted. In the girls' school yard, the soldiers put up a blackboard where they wrote «Long live France and Alsace»»

*Hélène Fleischmann, Memories of the war 1914-1917*

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- Site de la Fontenelle et Site de La Roche Mère Henry - CC du Pays des Abbayes
  - Site de La Chapelotte - CC de la Vallée de la Plaine
- Site du Hartmannswillerkopf (Vieil Armand) – Comité du Monument National du HWK
  - Abri-Mémoire d’Uffholtz – CC de Thann – Cernay
- Site du Col de Sainte Marie et de la Tête du Violu - CC du Val d’Argent
  - Musée de Mittlach (infirmerie militaire) - CC de la Vallée de Munster
    - Musée Mémorial du Linge – Mairie d’ORBEY
  - Site de la Tête des Faux – Mairie de LAPOUTROIE
  - Cimetière roumain – Mairie de SOULTZMATT

More : [www.front-vosges-14-18.eu](http://www.front-vosges-14-18.eu)

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**A MARKED TRAIL  
IN THE WOOD**

**A NOTEBOOK  
IN 3 LANGUAGES**



**A SMARTPHONE APP  
FRONT DES VOSGES 14/18**



**A PLAYBOOK  
FOR CHILDREN**



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