THE MINING TOWNS OF VETA MINA AND EL MOLINO IN EL AGUILAR, JUJUY, ARGENTINA, A 21ST CENTURY COMPANY TOWN

Dr. Architect Mónica Ferrari
TICCIH Argentine Representative, National University of Tucumán, CONICET- INTEPH
mferrari10@gmail.com

Spec. Architect Luis Bruna
National University of Tucumán, Argentina
luiggipantom@gmail.com

Abstract

El Aguilar is the evidence of the persistence of a Company Town during the 20th and 21st centuries. The village is located in the Department of Humahuaca, in the province of Jujuy in north of Argentina. It is located at 3980masl. It is the second highest settlement in the country and is part of the mining complex that has been extracting lead, zinc and silver from the Sierra El Aguilar during 91 years. It is a site which nobody can access without the authorization of the company because it is the owner of a vast extension of the territory. The study is interesting because the town is located in the buffer area that surrounds the World Heritage Site in the Quebrada of Humahuaca. The subject also matters because so far there is knowledge of social problems, but there is no found information on urban-territorial readings. The objective of this work was to develop the characteristics of the conformation of two towns Veta Mina (in ruins) and El Molino as well as the conflictive scenarios and situations resulting from the survival of the model as a Company Town. The study of these settlements is justified because there are almost no ruins from the first one due to its dismantling, but it survives in the memory of the dwellers; and the second one works today as a mining town. The company is nearly closed and it is probable that the village will not survive. Methodologically, we worked on the identification of the morphological characteristics of its spatial conformation through the analysis of historical cartography, interviews and data collection from videos and photographs published on social networks. We present here information about a series of scenarios in the operation as a company town as well as a brief synthesis of the landscape aspects that are visible in the territory as recognizable components of a valuable mining industrial heritage.

Key words: mining industrial heritage, company town, Quebrada of Humahuaca

Introduction

The Company Town was originated in 1925, when the construction of the roads and the installations of the camps started1. In 1926 the company Minera Aguilar was established as a subsidiary of monopoly groups that owned common capital with the National Lead Co. It operated for more than 60 years with the two inhabited towns until 1988 when the company was sold to the COMSUR group, who reduced the staff by two thirds –from 1,800 to 598, among workers, technicians and administrators–2. As it was established that only those who were employed could live in the company’s houses, the people ought to abandon the village of Veta Mina345. Since 2005, the mine (who belongs to the Swiss group Glencore and the International Finance Corporation linked to the World Bank) reduced to 60% the workforce6 that currently lives in the town of El Molino. In November of 2020, the Minera Aguilar Company informed its employees of the cessation of production operations due to "the decline in mineral resources and reserves in recent years", which caused a "significant reduction in production" added by the pandemic of coronavirus. The company also announced that they would keep the town for two years7.
The diverse conflicts scenarios in operation as a Company Town

El Aguilar was a stage of conflicts that became visible since 1926 and involved the territorial, economic, political and social aspects. The functioning of the settlement was always distant from the nineteenth-century conception of Company Town as a concept of industrial paternalism with moral responsibility, and from the prototype of a benefactor employer who looked after its workers. The 20th century was marked by workers' struggles as a reaction to coercive policies that, through layoffs, constantly reduced the population until the dramatic instance of the disappearance of **Veta Mina**. Although the companies provided the towns with infrastructure, the provision of services was very basic. The conflict situations that are part of their culture are explained below.

In terms of territorial aspect, the company prevents free and public access to the village from the beginning of the intensive exploitation in 1936. The company is, practically, the owner of the entire municipal jurisdiction; controls access on the route built and even had carried out immigration controls in a moment. For all this, it has the collaboration of the National State through the National Gendarmerie and it installed a box on the provincial Route N°14 where the company personnel authorize or deny access to the town, as if it were a border post.

Despite the complaint made in 2010 by Jujuy legislators, the company continues to act illegally and contrary to the law. Therefore, as the municipality is contained within the limits imposed by the company, it is overpowered to the company discretion. Another conflict is the Company’s relationship with pre-existing communities, to whom it does not recognize the right to land and to participate in the management of natural resources.

From the economic point of view, there is a subordination of the state bureaucratic apparatus to large capitals, fostered by the Mining Code issued in the 1990s, which conditions the provincial government to develop mining exploration and exploitation activities only in association with private investors. This leaves the partner in a minority position without regulatory power. The Company export 97% of the wealth that extracts and the State keeps only 3% as royalties, of which a smaller amount is returned to the people from Municipality who can carry out works.

In the political sphere, the labour conflicts between workers and the company have a long history, from the payment of leases lands at the beginning of the 20th century, the coercion in the recruitment of workers to demands for better working conditions with tragic events in the middle. The social conflicts are more intense. The precarious working conditions –insecurity, high mortality and unsanitary conditions– were attenuate by the relative advantages offered by entering the Company Town. It is important to mention the advantage of living in a mining village: a fixed remuneration, and relative economic stability, the social security system, the access to housing for bachelors and families in addition to the services and infrastructures such as hospital, schools, market and the places for free time.

The industrial paternalism allows to have a healthy and educated workforce, but also controlled from the privileges offered by a relative stable job in a region with a subsistence economy. There is, also, a controlled socialization expressed in the offer for the use of free time with the organization of football tournaments or movie projections. The control reaches the prohibition of consumption of alcoholic beverages except during the feast of mother earth: the **Pachamama**, a deity associated with nature. The restrictive character is expressed in the absent of urban functions, such as hotels and the cemetery, giving a meaning to the transitory condition of those who reside or can visit the place. The retired miner must leave the village, which causes the breakdown of belonging to the place and the family excision. The dismissals occurred in the 1980s led to eviction and lack of protection, and accentuated the demographic emptying of the municipality.

Social segregation is expressed in the strict zoning of residential areas by class and the duplication of equipment such as schools, clubs and churches (ones for workers and the others for the hierarchic personnel. Bosses and professionals reside in a differentiated sector, in another the
administrative ones and in a third level the miners. Another indicator is the accessibility to the type of education, since the public school receives and prepares the sons of workers, while a private institution instructs the children of the personnel administrative and high level staff\textsuperscript{25}. Certainly, the fight between memory and intentional forgetting reached its highest point in the creation and nomination of institutions and public spaces. At that moment, the municipal authorities named his institution with as "Pluricultural Community Municipality of El Aguilar", thereby recognizing the indigenous movements. However, as well the Provincial State as the company, the living forces and the media ignore the terms that allude to the collective and pluralism, reducing the nomination and hiding many social actors. This proves an installed invisibility.

The Mining Towns
The mining complex was made up of industrial facilities, infrastructure, residences and services, divided into three nearby sectors, 3.5km distant in a straight line. The first, at 4,500masl, called Mina Camp or \textit{Veta Mina} (Mine Seam), contains the entrance, the open pit, the complementary services and ruins of what was once the village. The second, at 4,000masl, is \textit{El Molino} Camp, which concentrates the logistical support system, the milling system, and the site where the town currently sits. In a third sector,–approximately 6km faraway– towards the East are the tail dikes (where the mineral is decanted and the water is allowed to dry in the open sky on a membrane that protects the earth)\textsuperscript{26}.

\begin{center}
\includegraphics[width=\textwidth]{map.png}
\end{center}

The industrial ensemble of El Aguilar

References
1. Open Pit
2. Veta Mina
3. Industrial area of El Molino (Mineral Concentrator Plant)
4. Village area of El Molino
5. Installations and Tailing’s dam

\textit{Veta Mina}
The town declined in the late 1980s, because the company's operating logic changed due to the discovery of a seam near \textit{El Molino}, it was decided to reduce the workers plant. In order to avoid that the workers and their families continue living in the houses, the company ordered those to be dismantled. In its heyday moment, the village had occupied an area of approximately 61.9ha in a remote, arid and almost inhospitable area, due to the need to have labour at a close distance from the seam. It is still remaining the access roads that connect \textit{Veta Mina} with \textit{El Molino}, the mineral concentration zone (11km faraway) and, to the North, the open-pit extraction area. Its urban structure is analogous to the skeleton of a fish, which in the head contained the houses of the hierarchical staff, the industrial facilities -on a higher level-, the church -in a lower one-, and the
miners' residences in the body. Currently, we only can observe the streets that converge like thorns to the canalized Padrioc river.

The functional organization reflected the social verticality, recognizable by the arrangement in areas that were located following topographic lines in descending order from the extraction sector located between 4,900masl and 4,500masl. At a lower level, the homes of the hierarchical staff were situated at 4,500masl and 60m below, like an acropolis, a mixed zone with industrial predominance. The Tunnel B was there at 4,445masl through which all the mineral that exited was transferred 740m to the southeast of the town, by a Decauville line to a Blake-type jaw crusher. Then it passed to Hopper No. 1, and from there it was transported to El Molino by means of a cable car at a distance of approximately 3,000masl.27 The system no longer works, but the towers of this means of transport can still be seen in satellite photos.

Regarding the urban landscape, the repetition of the row housing typology resulted in a singular view of symbiosis between geomorphology and architecture. The space, devoid of trees, presented its identity strength in a terraced area with an approximate difference of 145m in height between the lowest and highest levels, verified in the study of Google Earth profiles and by the Mapcarta elevation analysis. That is the equivalent of a staggered building with 48 levels with an approximate difference of 6m or more between terrace and terrace.

References
1. Open Pit
2. School n°354 of Mina Aguilar
3. Mine entry (tunnel B)
4. Stadium Teodoro Sánchez de Bustamante
5. Industrial área (Compressor Plant)
6. Church of Santa Bárbara
7. Padrioc river
8. Industrial área (Crasher Plant and Hopper)
9. Cable car
10. Workers’ dwelling in ruins

El Molino (The mill)

The town of El Molino is organized into three distinctly separate and staggered functional areas on which different urban fabric and urban landscapes are superimposed. In the urban structure of the village, five differentiated areas can be distinguished where they are located: an industrial sector, the ‘staff’ camp, the administrative quarter, the workshop area and the workers' village. In the last, the main square occupies a central position and in front of it was located the church. It is interesting to observe that the concept of the block disappears to give rise to the organization of the mesh based on the orderly succession of row houses, a modality with antecedents in urban history used by the Romans in their military camps and later, in our country, in the Jesuit missions. A drop of approximately 13m –where the market and the sports centre are located–, marks the limit between the hierarchical personnel and administrative's quarter and the workers' quarter. The follow figure shows the current urban functions derived from the analysis of cartography, videos and interviews.
Regarding the urban landscape, in the working people quartier the celestial roof of the church of Santa Bárbara emerges as a perceptible focus, visible from the entrance to the town and from the slopes that surround it. An element that dominates the urban profile is the huge statue of Santa Bárbara located on a hill, behind the National School of Technical Education N°1 in view from any part of the town and with a high symbolic-landscape value, since it provides feelings of permanence, protection and devotion. In the inside urban landscape, the curved streets of Camp Staff provide dynamism to the individual residences with their cut-out profile, free perimeter and discreet woodenness despite the severe weather. In the Administrative District begins the linearity of the circulatory spaces that was defined by the row housings.

The urban reading reveals the missing functions of social memory because there weren’t found, as we said, the existence of a cemetery. The denial of the right to live in the village to retiring personnel is another of the functional aspects that are related to the spirit of not leaving footprint. Similarly, the absence of significant elements is seen in the lack of names of the streets – ordered by numbers—28.

References
1. Industrial area of El Molino (the mill)
2. The hierarchical personnel quartier
3. The administrative houses
4. Industrial area of El Molino (the workshops)
5. The workers’ quartier

Final considerations
At a moment of transformation, of rupture and discontinuity, of upcoming deindustrialization, this work was based on the culture of preservation and tried to visualize the memory of a common past, which has become a cultural reference for current and former mining workers. The town of El Molino is still standing and its disappearance is at risk due to the imminent closure of the mine.

Its value consists on the richness and diversity of a complex system of industrial heritage, which is defined by: 1) a valuable industrial archaeological legacy, where had located: the village of Veta Mina the constructions of the workers quarter with the protagonism of the parish church, the houses of its workers, the factory, etc.; 2) a valuable territorial and urban landscape with a miner historic architecture in village of El Molino; 3) a social group at risk of being expelled from its place, bearer of ancestral knowledge and an immaterial culture where syncretic mining rituals survive between the pagan and the Catholic devotion, summarized in the veneration to Santa Barbara, patron saint of the miners. The values of this population are expressed, also, in persistence and endurance over time. Finally, and as a disvalue, the survival of a Company Town with a social control of submission turned into a scene where the impulses of the different social agents offer episodes of unequal arm wrestling, by the same token, it result touching by the moral fortitude of the most weakest.
11. Gómez Lende, p. 46
15. Salizzi, p. 60.
17. Ontiveros Yulquila, p. 4.
18. Gómez Lende, p. 47.
21. Gluzman et al.
22. Gómez Lende, p. 52
28. Municipalidad El Aguilar