

Pilgrim's Progress



Señor Santamaría's Journey.



Preface.

I found the following article posted on the web. Making every effort to maintain the author's flowery style, I have translated it from its original Spanish. I surmise that Santamaría was a member of that class of young men who, at the turn of the last century, had independent means and could afford to travel wherever their fancy took them. Despite his high rhetoric and flights of fancy he did at least recognise the travails of the miners themselves. In his article he was courageous enough to describe, in quite graphic detail, their working conditions. I doubt that this won him many friends among the shareholders of the mining companies despite his flattering observations of their industry and innovations. So much of what he describes is still visible today. Follow in his footsteps up the Jaroso Valley to Pico Tenerife and along the ridge to Pico Iberia and then down to El Arteal, where the same abandoned Jaroso pumping station, ruins of mines, unfenced shafts and stunning views are waiting for you to rediscover them.

*Note: Despite further research I have been unable to discover anything else about Sr. Santamaria. It seems that, like so many of his contemporaries, he had a great interest in the Sierra Almagrera. In 1901, despite the difficulties of travel, he made the journey from Almería to the Sierra. Once there, he visited the mine Venus Amante and the El Arteal pumping station where he observed the installations and the living conditions of the miners. He recounted his experiences in an article published in **La Crónica Meridional** of August 17- 21 1901, titled **'From Almería to the Sierra Almagrera.'***

It is certainly not my intention to collect impressions of a journey, to make new discoveries, nor to record unknown things. It is, simply, the wish to summarize in a short space my own impressions, formed from seeing things for the first time, appreciating, admiring and slowly and carefully studying them.

The idea of visiting this much talked about region, the region which held the most fantastic attraction for me; the region which, in itself, represented greatness, the embodiment of power and wealth; the region which was the object of many anxieties, struggles and hopes, many satisfied desires and many bitter disappointments. As I said, that idea had for me a certain irresistible charm, a certain strong attraction, not just for now, but ever since I first heard its name. So it was that my satisfaction knew no limits when, on the 12th of this month, I took my seat on the Vera mail coach and was shortly on my way to the mountains.

I briefly record the inviting impressions and contemplations of the unfamiliar places seen on the way. No wonder the Almería plain enjoys such fame and with good reason for it comes from the importance of its grape crop. Seen on both sides of the road, even beyond Rioja, the immense vineyards which, to the right and left extend like a green savannah as far as the eye can see. It can be said without fear of contradiction, this magnificent crop, shows vividly and eloquently the grape fever. That fever where nothing comes before the cultivation of the fruit so precious and so lucrative on the English market.



Loading barrels of grapes bound for England, at the port of Almería. From 'El Puerto de Almería'

by A. García Lorca.

Shortly beyond Rioja, in the Terrera de las Palomas, the light of day fades and soon darkness falls. The lantern, which the coach has mounted on its roof, brightly illuminates fugitives on the road, drawing in the shadows, silhouettes of horsemen. The jingle of the bells induces drowsiness and the traveller cannot escape the dreaminess as the eyelids droop.

Occasionally the vehicle stops to change horses, then continues on its way, until it enters Vera in the early hours of the morning. From here, to go to the mountains, the traveller takes a trap, which travels for an hour along a road, on whose sides are large fields of maize, until reaching the left bank of the Almanzora. From here the landscape changes, passing into the gentle foothills of the Sierra.



A tartana, or trap, of the type which Santamaría would have travelled in.

On arrival at the hamlet of Los Lobos, proffered to the travellers gaze, is the immense mound of the Sierra Almagrera. Crossing the Rambla de Muleria and, following the winding path, the tartana that is conveying us starts the ascent. The full force of the heat is felt and the dust raised by the mules contains so many mineral particles that it shines in the sun. In truth, it is worth noting the neglected state of the track, heavy going, uphill and full of potholes. It would be a lie to say that anyone had a mind to fixing it. If each of the mining companies that are served by it, allocated at the end of the month, two or three workers, and took advantage of the massive amounts of slate rock which is everywhere, it would be possible to totally repair the entire length of the track. From its start on the left bank of the Rambla de Muleria as far as the Plaza del Jaroso, a length of approximately half a league, finishing near the San Roque mine, it would be accessible by carriage. From the plaza, situated at a height of 100 meters, the climb to the top is via a wide steep path.

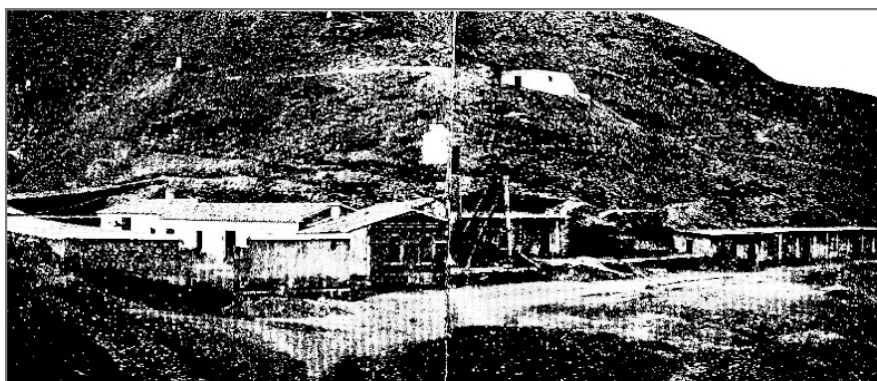
The approach to the Plaza del Jaroso, where in days past, a Saturday market was held.



The opposite approach to the Plaza with the ruins of the Virgen del Carmen's chapel on the right.

Author's photos.

From the Plaza de Jaroso, you can see, on the other side of a narrow ravine, the Almagrera pumping station buildings situated in the area closest to the Rambla de Muleria. Nearby are many washing floors which took advantage of the water raised by the pumping station. All that can be seen today, where once there was life and activity, are the ruins of two large buildings with no indication of movement or work. Continuing the ascent, we left behind, on either side of the Jaroso valley, the mines Ánimas, Esperanza, Constanacia, Virgen del Mar, Unión Primera, Dulcinea, Montserrat and Niña until we arrived at the Collado de la Muerte. Here, situated at 300 metres above sea level we found the mines San Andrés, San Torcuato and Venus Amante.



Montserrat then and below, as it is today.



The ruins of San Andrés above Montserrat at the top of the path.

Author's photos.

From this last mine the landscape is beautiful. Rounding the small height on which Venus is situated one discovers the sea, stretching from the South to the East. From this point, Villaricos and Garrucha on the shoreline look like two white spots standing out against the foothills of the mountains.

Description of a mine: Venus Amante.



*Two views of the mine
Venus Amante.*

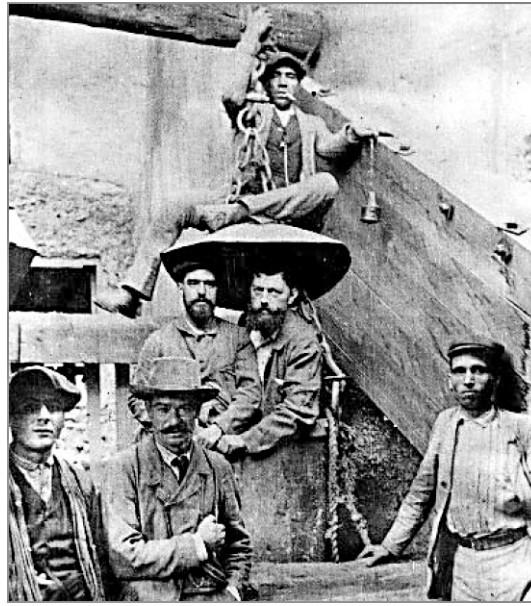
Author's photos.



Let me tell you something about this mine, that is I will detail my impressions, which, to be frank, were very different from how I imagined it to be. I can't quite define them as I have nothing to compare them with. I can do no more than describe that which I saw and of the insight which it gave me.

Concerning Venus Amante, the mine which I visited. Next to the building housing the machinery, the main shaft yawns, its mouth surrounded by a masonry wall. From this wall rise four pillars, which in pairs support the pulley sheaves over which the cable runs. Attached to the end of it is the metal tub which we are to enter to make our descent.

Such an operation could not be more impressive! Slowly the sheaves started to rotate and the tub started to descend over the collar at the mouth of the shaft, which became little by little narrower. Below, the darkness of the very deep shaft was illuminated by the candles which we had been given. In the uncertain flickers of light the minerals reflected as flashes on the walls of the shaft, which became more noticeable as we progressed. Finally, at the end of 15 minutes, the tub touched the bottom of the shaft at a depth of 387 metres.



Making the descent. This photograph of the engineer Manuel Figueras de Vargas (bearded, on the right) making a descent at El Pinar, Bédar in 1895 is from 'Memoria Fotográfica de Garrucha 1838-1936' by J A Grima Cervantes.

A gallery opened on one of the sides, in which could be seen tools for work, done in the bowels of the earth, in artificial light, portraying the quest for enormous riches, the pursuit of great wealth. By a labyrinth of galleries more or less narrow, ventilated, feeling sometimes cold and other times suffocatingly hot, we arrive at the place where all the hopes and efforts were focused. The cross-cuts, North and South in which the vein is found embedded in slate and other rock.

Work seems impossible at such depths, however, here the worker spends the best part of 24 hours a day, struggling with the drill and the pick to break away the granite which surrounds the precious silvered vein. There, the worker feels the dynamite explode, the demonstration of human strength, breaching and breaking that formed by nature. His is the strength that extracts the riches, but it is others that profit from it. And it happens that, as in other things, they see the vein, they look on the product of their labour with indifference, without any kind of ambition. A strange maxim but true; sometimes, what arouses aspiration, causes indifference if, after close handling, one doesn't see any benefits!



The manual boring of a hole to take an explosive charge.

Simonin.

I was in the mine for a space of four hours, always witnessing different workings, old, new, and abandoned workings, where the vein once discovered, then exploited and now peters out in the sterile. New workings, where the vein offers future riches running ahead, flashes of it caught in the candle's flickering light. Workings, in short, where the hopes of the Venus shareholders are pinned, for good reason, to soon have the reward of the many sacrifices.

At the end, having seen all that there was to see, the signal was made and we got into the tub which had lowered us to the workings three at a time. The machinery started to tension the cable suspended over the void. Moments of anxiety, in which one's imagination considers the heights of audacity of man who, constantly defying death, on the wings of his ambition, spares no means to prise from the earth, the secrets and wealth hidden deep with it.

Finally, we arrive at the top, the daylight streaming over the shaft illuminates us. We feel as if our spirits have been lifted in the presence of such splendours as we were privy to in the last four hours.

My particular aim, but not the real reason for my trip to the Almagrera, my innermost desire was satisfied. I now knew about the land of lead and silver, and also of one of the richest mines in the Sierra. But, I must confess, what a disappointment I experienced! Before I saw it, I imagined it as something else. I thought that a mine would be bigger than the one that I had been down; I thought that the Almagrera was something like Peru or Potosí, where the precious metal, the obsession of the mine owners, was to be found everywhere, within easy reach, needing no great effort to find it. On the other hand, I thought of the Sierra as a land of ambitious undertakings, where the noise of gigantic machines, in harmony with the purpose for which they were invented, filled the air with their continuous, deafening movement. I figured I could hear the incessant vibrations of those iron contraptions roused by the fever of riches; the hubble bubble of an immense multitude. All this and more, that I cannot define, I was expecting to witness. But, when fact overcame fiction, when reality was presented instead of the fantasy picture that my mind had created, the disillusionment could not have been greater.

Yet, something remained of those flights of fantasy. The work season had finished, the worker resting from four months of hard labour. The chimneys no longer belched into the air the black clouds of smoke that signalled movement and mechanical life. The tubs, lying next to the main shafts, looking like immense, abandoned pots. The cables wound round the drums, waiting after the break, the opportune moment to carry to the bowels of the earth the valiant, devil-may-care worker. All, for the moment, calm and tranquil, however, the spirit of life, of labour and of work breathes over everything.

To the stillness of the recess from the season of work, comes the action which makes sense of all the efforts, the feverish activity of reaping the rewards of the many days of anxiety, of hopes, of calculating and of dreaming.

All along the winding track from the Rambla de Muleria to the top of the mountain, numerous mule trains go up and down, carrying on their backs small baskets containing the mineral wrested from the bowels of the earth. They say that this to and fro, this incalculable wealth, sings a hymn of triumph of man over nature, a hymn to work harnessed to ambition.

Immeasurable wealth, which represents heavy sweat, great danger and exhaustion; at the end of the day, riches, in tiny, bounded fragments, coming to the surface of the earth in whose depths they have long been entombed, to become part of a better, more profitable life, by the acumen and enterprise of men other than those who wrested them from the ground.

As is so often the case, there is a marked contrast between the mine itself and the miner who works there.

The Miner.

How does the miner, who, for 18 hours of the day's 24 is entombed several hundred metres underground, and, by the uncertain light of an oil lamp, follows, using his pick and drill, the coveted seam which snakes tightly and brightly between the surrounding rock, identify himself with all those riches? He looks at them with indifference, and continues his work, heedless of the fact that others will benefit, with hardly any effort, from the fruit of his labours. This worker, a titan, imitating an inhabitant of Pluto, naked, herculean, battling without rest the hard stone that holds fast the vein. Breaking it by the force of his hammer, he teases it out with the pick and the drill and finally manages to free the trapped silvered metal. Naked from the waist up and from the thighs down, the miner performs his laborious task in the midst of his baking surroundings, in a contaminated atmosphere, rarefied by the burning lamp oil, the dust and smoke of the explosives. That worker, glistening with sweat, blackened, singing happily as he works, and, when his strength fails, the gang-master and the foreman force him to swing his pick anew.



Working a seam.

He has a certain amount of time to excavate the stipulated number of metres of gallery, he has to burst in order to fulfil the contract. It's a pittance looking for a penny in these caverns, where for the fabulous wealth he extracts, the miner receives six or seven reales plus board.

From afar, that is to say, having no knowledge of what mines are like, the idea of full board for a worker holds a certain attraction, giving heartfelt comfort, knowing that while the wage is petty, at least the miner's food will be plentiful and nutritious.

Illusion! Delusion!

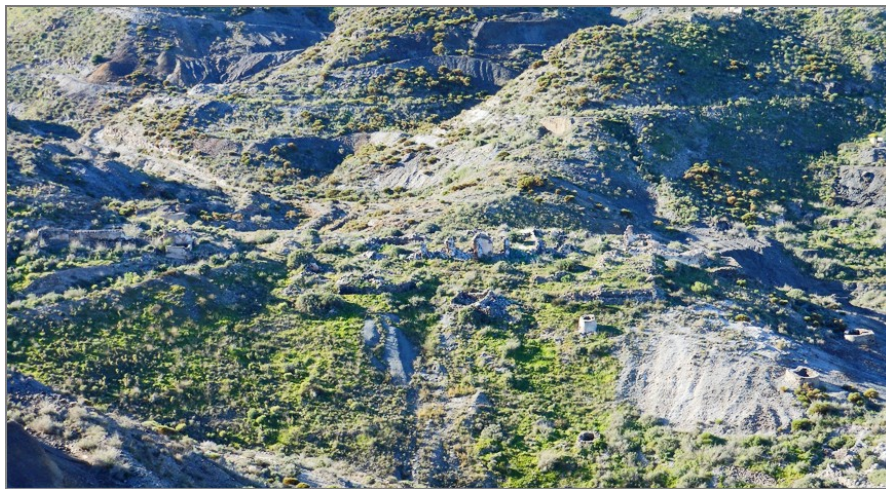
Apart from what we have already hinted at, in this the contrast between the owner and the miner is most palpable. In the morning, before starting their heavy work, the men are served with what in the Sierra is called a broth. This broth is made from hot water, a drizzle of oil and a little paprika and other spices; into this soup is crumbled a little bread, and ... nothing else. At lunchtime they eat a stew of spiced rice with potatoes and beans and ... nothing else. And, for the dinner, the same soup as they had for the morning. That is all the food for the men who, far below ground, exhaust their strength and their energy, all for chasing at great depths the rich veins which others capitalise on in order to spend, achieve and have a good life.

It often happens that the catering contractor for the miners gives them rotten bread, impossible to eat, and as the bread is the sole nutrient in the workers' food, so it is that on days when the bread arrives bad, the miner does not eat..., but he does work.

Such is the contrast. Those who work more or less non-stop, poorly paid and worse fed; they are everything, the hand that delivers the looked for and counted on wealth, the hand which pulls it from the depths where it is found and raises it up to the surface, where it becomes a thing of comfort, luxury and ease. Nevertheless, lacking everything, each one exposed to countless dangers, seeing death close by, waiting to feel their bodies torn apart by the blast of an explosive, living content, relatively happy within their limited aspirations they are bound by their work.

A sad end, where many are obliged to give of their abilities, moral and physical, to meet the needs of a life filled with pain and bitterness.

The illustrious story of the Sierra Almagrera also has its dark side. Man's blood has, many times, stained the argentiferous lode, which winds waywardly in the uneven veins. Each mine has its share of sadness and tears. Each mine holds bitter memories, reminiscences of painful events, which, in an instant, brought mourning and desolation to many homes. Amongst the mining people, the mine with the most reported deaths is viewed with suspicion. There are those who count them in hundreds. And all are similar. In one, the cable snaps, casting to the bottom of the shaft the tub in which three or four men are being raised. In an other, a distracted winch-man, by tightening the cable, causes the tub to reach the pulleys where it circles, throwing out the miners who are in it. In others, the driller who sets his charge and tears apart several of the work children. In yet another, a gallery collapses, burying and suffocating in its bounty the unlucky miner who only receives this miserable reward.



The ruins of the hospital in the Jaroso where injured miners were tended. Author's photo.

And those who live, those who every day leave the sunlight, the translucent sky, the joy of the play of light, and the delight of that which exists above ground; those who can't thank the Lord enough for keeping them from harm, those, who, when passing in the vicinity of a blood-stained mine grow pale and turn away, fearful. They shy away from the pull of the danger that they consider irrevocable, thinking of their homes, of their parents or wives or children, and unfailingly they say a fervent prayer for the souls of those who perished deep underground, torn apart, never to set eyes on their loved ones, and whose sorry remains rest, united again, beneath the white slab watered by the tears of those that mourn them.

The exploitation of the Sierra Almagrera.

The lust for money, which goes back to the early days of the Sierra, brought men to this special area to stake claims, more numerous each day. As soon as the mines were demarcated and brought into operation they struck rich seams, all, or mostly all, of the same type of metal. So, minute by minute, the fame of the Sierra Almagrera grew, a new Klondike, where those who had interests and those who had not, saw in it the realization of their dreams of gold.

The land responded to those first formed hopes, with fabulous returns it allowed the enterprise and investment to flourish and the Sierra Almagrera was the emporium of power and wealth. Mine shares within its folds were worth their weight in gold, and for a long time, before the inundation, it was the place for reckoning and recompense. The flooding of the Sierra back in '84 and '85 was the death blow to many of the mining and processing establishments there. The lowest and richest mining companies saw their workings flooded and for several years the area was just a shadow of its former self. What was dead now returns to life with new vigour, with greater energies, with more strength and power, offering again to men the immense riches of its hidden treasures.

It would be a long and arduous task to list all of the mines nestled in the mountain range. Their topographical positions cause them to qualify as first or second class. To the first belong: Medio Mundo, Venus Amante, Ramo de Flores, Dos Mundos, Asalto, Riojana: Eloisa, A Mesías, Guzmaná, Elena, Fuensanta, Rosario, Santa Isabel, San Agustín, San Manuel, Convento, Ánimas, Constancia, San Luis Gonzaga, and others; and to the second: San Antonio, Carrascosa, San Ildefonso, Esperanza, Estrella, El Globo, Madrileño, Los Altos, Florenciana and many others of little importance today, but which initially were thought to be worthwhile. In June there were 276 mines registered in the Sierra, of which two thirds are in operation.

It often happens that when carrying out exploratory work in a mine adjacent to a rich mine they follow a lode which turns from them to run into the neighbouring mine, where all of their efforts are wasted. Or, by a ridicule of luck, the rich, coveted lode, which in one mine is exploited with magnificent results, is lost in the sterile when it reaches the boundary of the neighbouring workings. Because of this, after a few trials the workings are completely abandoned.

And, as I have had occasion to observe, this abandonment is so utter that the societies set up to explore these mines, when leaving them also flout one of the most stringent regulations of the Mining Inspectorate: the main shafts remain open, with no wall around them, inviting accidents. Of such mines, I counted 8 or 10 along the route taken from the Collado de la Muerte to El Arteal. Serious, imminent danger which should be avoided at all costs, and in the worst circumstances these abandoned workings can be found on the sides of the tracks and narrow paths which circle the Sierra.

*One of the many open shafts on
the way down to El Arteal.*

Author's photo.



Except in this last respect, following the thread of my impressions, I could not and can not do other than admire the fabulous richness of the region. I have seen how in principle mines are exploited, yielding the predominant mineral in the Almagrera, argentiferous lead, after these veins are exhausted, finding in other extensive, widespread workings estimable amounts of iron, in sufficient quantities to defray the costs of its exploitation, and yielding to those who work them sufficient wealth to compensate for the exhaustion of the initial lodes. Mines of this class are few and far between, but they do exist and are in production today and the recording of this fact, I believe, is enough to demonstrate in a palpable way how far the metallurgical wealth of the Sierra Almagrera goes.

Great ideas only have a place in the minds of the privileged, the big companies are only formed by great imaginations, which in this case were lofty, daring and magnificent. A cataclysm, an unexpected phenomenon, a geological revolution was the reason that in the year 1884 Sierra Almagrera lost its prominence in the industrial world.⁽¹⁾ The in-rush of water flooded the mines which were being exploited with growing success, and within a few days the most absolute silence reigned throughout the area. The machines no longer worked, mechanical motion was no longer visible, that hectic activity that demonstrated the power harnessed by the big companies. Everything was calm. The solitary buildings looked like abandoned tombs, the mine chimneys, the advance guards of the death, rigid, unshakeable, watching over the place where before reigned life, movement and animation.

That cataclysm was like a lesson given to man by Nature. A lesson that entailed the eloquent manifestation of an indisputable power before the audacity and daring of humankind. The reaction of an almost defeated enemy, who in a surge of energy, in a re-concentration of overwhelming force, returns for the ground lost in the fight and recovers, in a second, that which was snatched during fierce combat.

There is nothing like the work of man in all aspects of life. Gifted with intelligence which he wields as a battering ram against Nature, and by every means trying to subjugate it, defeat it, and bend it to his will, tearing her secrets, penetrating her domains, stealing the treasures that she keeps in the depths of the seas or in the bowels of the earth.

Well it is that sometimes the reaction of Nature so embattled is to show man that the colossus still has the power to win, good that Nature retaliates in a grandiloquent manifestation of her power. Greatness comparable only to the human talent which rises high, very high, in bold concepts and companies, developed in their minds and created in their image and likeness.

For a long time the veil of oblivion covered the region which before had been the emporium of riches, and Sierra Almagrera remained in the memory, as the remembrance of something that was big and powerful. But, as I have said, a daring idea was conceived to return it to its former glory, and since then the mind in which this thought was conceived did not stop it developing, aided by a firm will, by an irresistible desire, by a deep conviction of triumph, by unwavering faith, the founding of marvellous companies which command admiration and respect.

It was a shame to let the main destruction, starting in the workings in the Sierra Almagrera by the invasion of the waters to complete the task and annihilate for ever the concerted efforts and the hopes pinned there. The speed with which the phenomenon occurred and the circumstances in which it happened means that the many workings in the various exploitations in the Almagrera will remain suspended and abandoned for the moment, for many of the mines didn't even have time to rescue their work tools.

⁽¹⁾ *The closure of the Jaroso and Francés pumping stations led to flooded mine workings.*

Giving up the exploitation of a region as immensely rich as the one which concerns us, leaving behind forever the heart warming prospects that the Sierra formed, in truth was painful to a high degree, and to relinquish the positive gains precisely when the importance of these was greater, and when the future was brighter, for all those who, in one way or another, had interests in the mines located in the Sierra Almagrera.

To record the events that happened concerning the pumping station, detailing the circumstances which coincided with this ambitious project, would be lengthy and tedious, and, in addition, would tell you nothing new, since the facts are already well known. For my part, it is sufficient to record the fact, that in doing so I pay homage, admiration for the actualization of a wonderful idea, which up to this point was practically unknown to me, appearing, like a dream before my eyes, as something inconceivably fabulous. The initiators of the pumping station succeeded, after a great deal of effort to complete the project, and, little by little, the powerful machinery started working, extracting from the flooded workings the water which was the cause of the paralysis of both man and machinery in the Sierra.

A visit to the pumping station.

To spend two days at the Collado de la Muerte and not visit the current drainage establishment, seemed highly incongruous, even unforgivable. So, making the necessary preparations, on the 13th of this month, Doctor José Rubira, who accompanied me in the Sierra, and I, guided by a workman from the Venus Amante mine, at daybreak started along the path to El Arteal, scarcely a league from where we were staying. Rounding the hill which is in front of Venus Amante, and which like an immense curtain conceals most of the landscape, was revealed to our eyes the wonderful panorama that from those heights awaits us. In the foreground is the enormous expanse of the sea, to the left the foothills of the Sierra with the steep rough slopes reaching down to the shore, where a lovely lacy foam is traced and, to the right, Villaricos, first El Arteal and after, Herrerías, then Garrucha, as a white spot standing out against the darkish blue of the sea which dies at its feet, and on either side the brownish background of the mountains on whose slopes it lies; and lastly, the foothills of the mountains which disappear in the distant horizon under the morning mists.

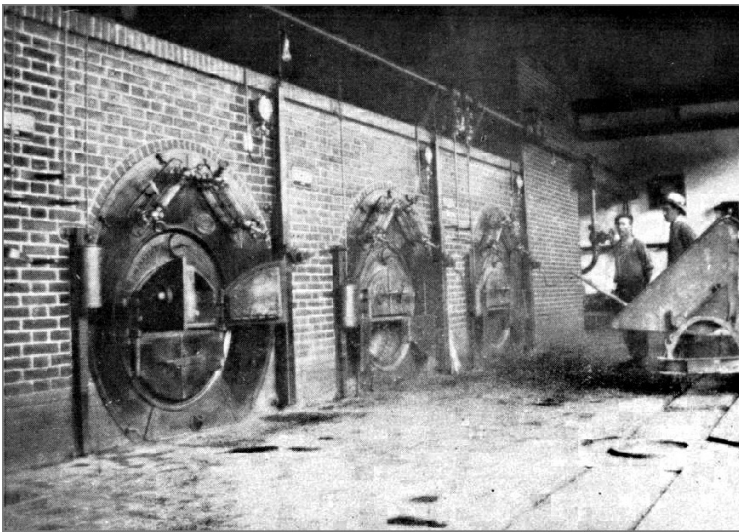


The view from Venus Amante.

We went down a narrow path, leaving on either side a whole host of mines, some abandoned and some being exploited, until we reached the Rambla de Muleria, at the end of which we caught sight of the pumping station buildings. Then we lost the desperate uniformity featured in the Sierra due to its lack of

vegetation. To the right of the rambla, in a flower garden was the house of the society's director, Mr. Charles Brand, and a little way off the machine gallery. I was in front of, and in the presence of, the audacious construction that I knew by reputation; work of a fertile imagination helped by mighty labour, put to the service of another more momentous task, of greater importance; a company which represented the salvation and redemption of the Sierra, opening the door to a bright future.

We sent a message to Mr. Brand and shortly the gentleman appeared before us and gallantly offered to accompany us on our visit, showing us all the buildings on the site which today holds and encompasses the hopes of all the miners. As I said, near to Mr. Brand's house is situated the boiler room, housing four boilers, each 75 horsepower, which operate at a normal pressure of 10 atmospheres. From these boilers run pipes which carry the steam to the machines, which at a depth of some metres act to extract the water. To the side of this building is the cage shaft, 118 meters deep, which goes down to the gallery housing the water lifting machines.



The boiler room in 1901 and below, all that remains of it today.



Author's photo.

On entering this gallery situated on the right of the cage shaft, we see two mighty, 300 horse power machines, which work constantly to extract the water. From these machines run pipes which connect with the latest artesian wells, recently built at a depth of 45 and 60 metres lower than the receiving gallery, and, through which flows water at a rate of 350 cubic metres per hour and at a temperature of 45 degrees. In light detail, this is what is comprises the first level of the pumping station.

The second, somewhat distanced from the first, is located to the left of the Rambla del Arteal, and is reached via a 225 metre long tunnel running into the mountain, at the end of which are found the huge boilers which activate two great air compressors, which run the pumps emplaced in the first level.



Above, the entrance to the tunnel housing the compressors.

Right, the chimney above the boilers.

Author's photos.



Mr. Brand showed great satisfaction with the progress of the dewatering and held out great hopes for it.

You'd need to be a mechanic, an engineer to understand all of the importance of the place that we had just visited. Despite my lack of technical knowledge in this matter, something occurred to me that I admired; I can't define it exactly, but all the same I am convinced, and that I had tangible evidence of, that the marvellous, the implausible has been almost achieved and become a reality thanks to the talents of men.

That water, which at high temperatures comes out of the depths of the ground; that powerful vibration of the machines, panting tirelessly; those clouds of black smoke billowing from the chimneys forming capricious clouds which the wind breaks into wisps, and carries away; that synthesised movement of mechanical life, developed in a splendid and daring way thanks to the efforts constancy and talent, represent a triumphal hymn of man over Nature, here defeated, enslaved, obedient to commands, to calculations made in advance.

The dewatering plant is the saviour of the Sierra Almagrera. The thought process has had many phases, it has had many ups and downs, has been the cause of many struggles, of much jealousy, of much rancour. Today it stands powerful, showing with conviction the truth and the reality to those who initially were pessimistic. Perseverance and faith were the powerful helpers of the original and daring idea; faith rolled

away the obstacles and smoothed over the objections, overcame the hurdles; faith and perseverance united to shield the thought that today seems to be accomplished and to win, to cry a triumphal eureka, gaining an attestation of admiration and respect for the intelligent men who set up the great company in order to drain the Almagrera.



The de-watering plant today.

Author's photos.

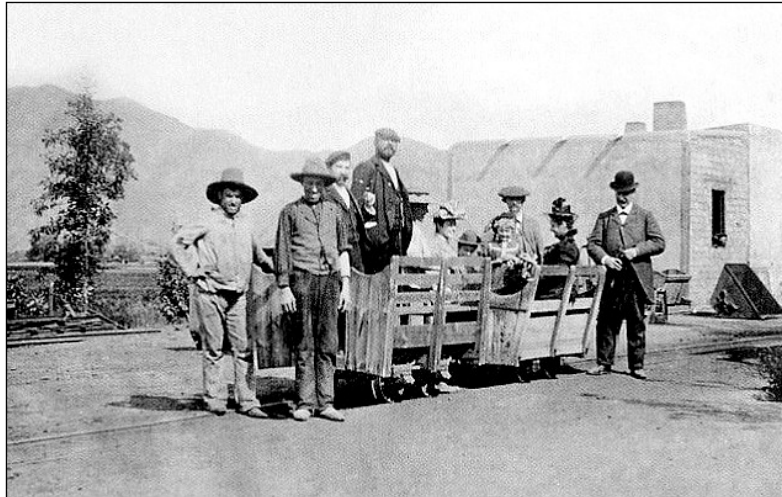
The waters subside, slowly yes, but descend in the workings of the mines in the Sierra. Life returns with renewed vigour, in its bowels are rich seams which offer great returns, giving men from all walks of life a means of development. Returned is animation, heard again is the vibration of the machinery, seen again is the working bustle that it produces. Almagrera resurfaces with its infinite riches, with its incontestable power the dead are awakened. The body is not galvanized with wholly fictitious energy, as one aroused from a long slumber, but one that wakens with twice the strength that it had before, in order to make up for lost time. The future for the Almagrera is shining, man won the contest, and soon will bring out into the daylight, like the spoils of war, the fabulous riches that the Sierra Almagrera keeps fast in her depths.

Córcholis Takes to the Tracks



In 1902, a young man by the name of Córcholis visited the Sierra Almagrera. He first went to the power station just along the coast from Villaricos and then, on his return to the village, went to el Arteal by rail. His boyish excitement about the journey makes me think that it was the first time that he had ever travelled on rails. This is a translation of his published account.

These good friends (Siret and Flores) had put at our disposal a specially adapted wagon¹ to transport us to el Arteal. It is difficult for me to give an idea of my delight at the novelty of the rail journey. Imagine a toy, a child's idea of a railway, two parallel rails, so tiny and narrow that they seemed to snuggle right into the mountain's side. On them a wagon, with just a platform and two wooden benches with backs, having just enough room for six people. So, six of us settled on them; Flores, Polo, Bellod, Bachiller, Vigil and myself.



Passenger carrying wagons. From Sierra Almagrera y Herrerías. Bolea

A strapping lad pushed the small wagon and we began to glide smoothly on the rails. Delighted by the originality of the vehicle, we start clapping like children with a new toy. We had only gone a few metres when our driver warned us to keep our arms tucked in. We entered a small, narrow tunnel. Really more of a borehole made by ants than a tunnel for transporting mineral, with only the marks made by pickaxes to show that it was indeed man-made.



Tunnel exit in the grounds of the necropolis.

At speed we skirted the Almanzora and then the Rambla de Muleria with its reed beds and drifts of rock rose, at intervals almost touching the trailing tendrils of the melons and the golden ears of millet. Occasionally, a

long line of wagons, laden with ore and pulled by a mule, brought our express to a stop. We were forced to step down and move our wagon to the side in order to give way for it. Once the crossover was made, we put our wagon back on the rails, and were again pushed by the strapping youth.

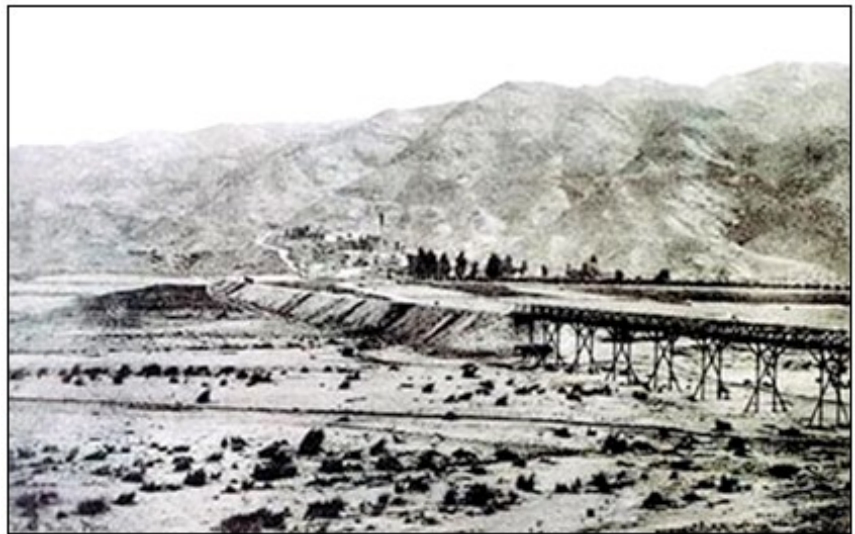
We stopped just below Siret's house, of which we had a quick tour, leaving convinced that nothing could be as simple and as exquisite as that little chalet. Surrounded by tropical plants, covered in morning glory and bellflowers, its overhanging vines seemed to be guarding over an extravagant grotto.



Siret's house today.

Close by, Carlos Brandt was waiting for us with another friend. Their wagon was coupled to ours and we continued the journey through tunnels. Gazing from our ambulant observatory at the las Herrerías installations, their chimneys wreathed in black smoke, the workshops and warehouses darkened by iron, a hue which dominates the entire landscape, and finally, the great mounds of the mine workings, which seem to have been thrown there by the earth itself in order to show the riches that lie beneath.

We escaped from the narrow darkness of the final tunnel and crossed over the bridge which straddles the rambla and there caught sight of el Arteal nestling in the foothills of the slatey mountains. About a hundred metres further on we came to a halt, went down a ramp, and were then within easy walking distance of our destination.



View of the bridge over the rambla and el Arteal.

Note¹. The wagon that Córcholis travelled on was a converted brake wagon. The tipper part was removed and replaced with a wooden platform on which the high-backed seats were mounted. What Córcholis called the driver was the brakeman. Ordinary wagons were also converted and could be coupled behind the brake wagon as can be seen in the photograph on page 1 taken on the day that the line opened.

Brake wagon.

