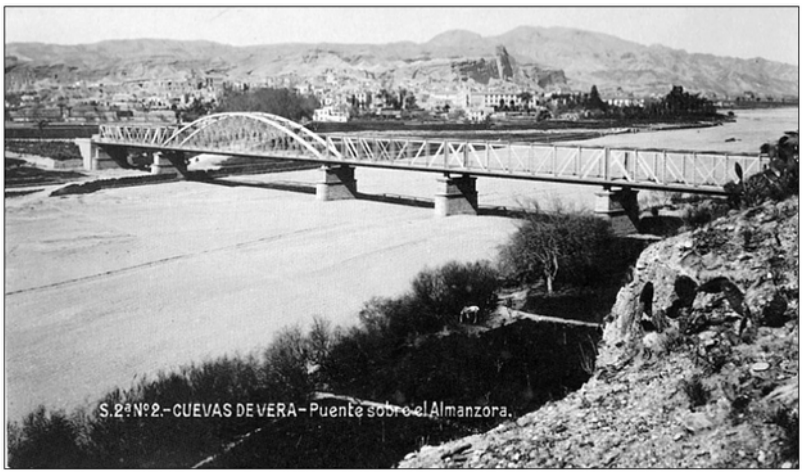
Chapter 2. The Las Rozas Railways.

2.1. Las Rozas to Palomares.

Following the purchase of the Roza of Santa Matilde and other interests previously belonging to Guillermo Huelin, La Compañía de Águilas recognised the need for a cheaper and more efficient way of transporting iron ore to the coast than the ubiquitous mule trains and donkey carts. The good returns on low volumes of lead and silver enjoyed at the time could support the cost and the 10% load loss suffered by using these traditional modes of transport. However, iron ore was different; high volumes and the need to keep the final price down in order to remain competitive in the world market required a more modern form of transport. The solution was the building of the first mineral railway in Almería Province linking the company's interests in Las Rozas with their San Francisco Javier foundry on the coast at Palomares, enabling them to export refined ore at no extra cost.

Work started in 1884 and the line opened in 1885. The Santa Matilda and Virgen de las Huertas mines employed motorized, double track, inclined planes to move ore up to level ground. From there it was moved to the loading bay, close to the river by means of a short inclined plane situated just off the Las Herrerías to Palomares road, north of the irrigation ditch. The initial bridge over the Almanzora was constructed of wood. There was a method in this madness since the cost of replacing it every time that it was washed away by flood waters was less than the cost of constructing an iron bridge that may, or may not, withstand the ferocious might of the river. (A support for the iron bridge over the Amanzora at Cuevas, started in 1882, was destroyed by flooding in 1888, before construction was even completed).



In Cuevas an arch was built to span the gap left when one of the support pillars was washed away before the bridge was even completed.

F. de Blain.

Later, an ingenious crossing was devised similar to a lock gate, whereby the two halves could be moved to the side by means of heavy chains, so as not to impede the flood waters. Whether the locomotive crossed the bridge or not is unclear. One source speaks of tip wagons crossing the bridge, so it is likely that the loading bay was on the west rather than the east bank, and that the locomotive remained on the west bank. (Tip wagons could be moved manually on level track and were extensively used in the roza).

The line skirted the Palomares hill on the river side, and then ran parallel to the coast to the San Francisco Javier foundry, where the ore was processed before being loaded onto ships from Quitapellejos beach. One of these ships would have been the Carolina, which the Compañía de Águilas had bought from Carlos Huelin along with the Palomares foundry.

The Carolina sold to the Compañía de Águilas by Huelin.

Vidamaritima.com

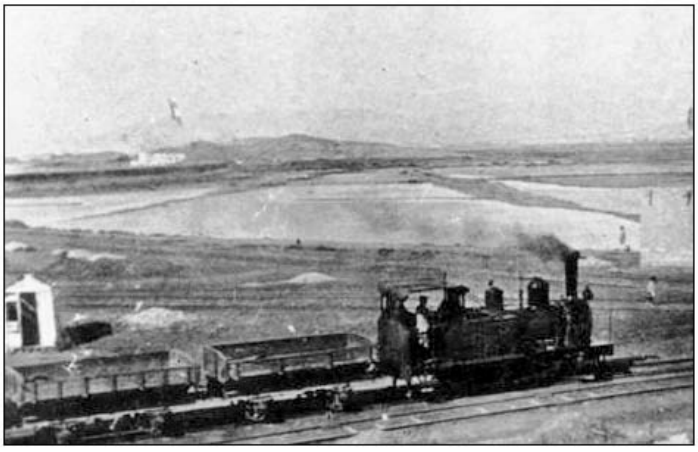
Serious concerns were felt by land owners in the Nati, Lombardas and Casa Marqués districts about the dangers of sparks from the locomotive setting fire to crops along the line. Extensive clearanced was carried out to mitigate the very real danger of fires.

The San Francisco Javier foundry in Palomares. Monika's Restaurant is now on the site of the tall building on the right of the photograph.
Rodrigo.

Almost the entire length of the line was washed away in the floods of 1888 and it wasn't until 1891, when Casa Borner took over Santa Matilde, that the line was repaired in order to transport the equipment needed to dry out the roza following its catastrophic inundation in 1884. When Borner pulled out of the roza in 1895 the line was thought to have fallen into disrepair. Luis Siret may have used it before his Las Rozas to Villaricos line was operational.

Records show that Siret sold an old Compañía de Águilas locomotive in 1908, one of the four that were constructed in 1883 by the Franco-Belgian company La Construction de Machines et Matériel pour Chemin de Fer in their La Croyère works in Belgium. These series 030T, 20 horse power engines were some of the first narrow gauge locomotives that they made. The construction numbers of those bought by La Compañía de Águilas were 495-498 and it is believed that one of these was in service on the Palomares line. The tall smoke stack, circular smoke box cover, and unusual cabin, covered front and rear and having cantilevered overhangs, were characteristic of these early locomotives.

A locomotive of the type used on the Palomares line.
Asafel.es.

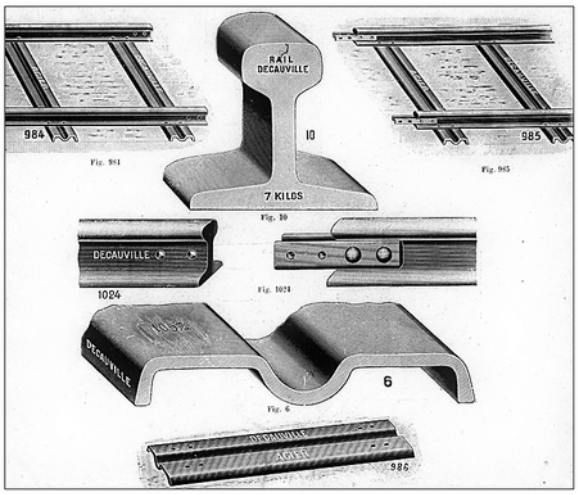


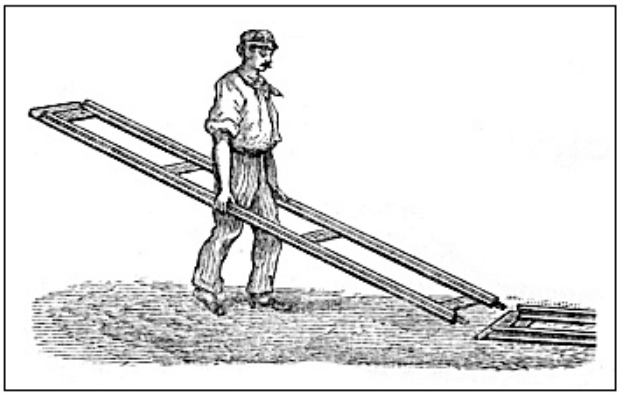
No trace of this line remains today.

2.2. Las Rozas to Villaricos.

Luis Siret's answer to the problem of moving iron ore cheaply was a railway running from the Petronila mine in Las Rozas to the quays and wharfs in Villaricos. Nobody foresaw how successful and long-lived it would be. Started on May 31st 1897 and opened on August 1st of the same year, it was in use until 1959 when MASA's activities in the area ceased.

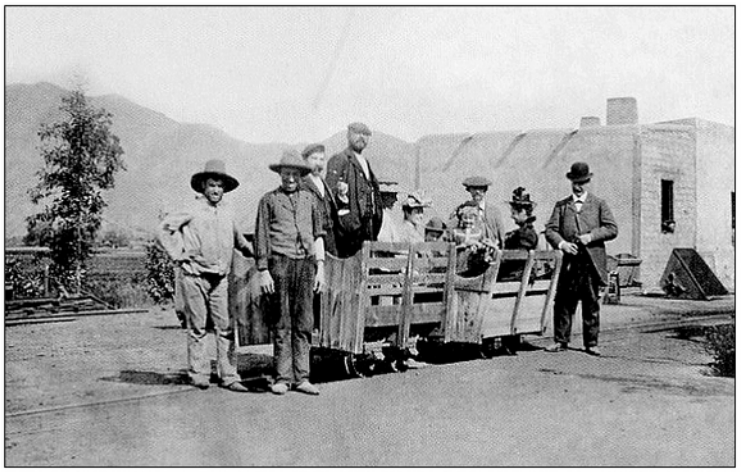
In those three short months, 3.50km of narrow gauge (600mm) rail track had been laid on embankments six or seven metres high, over a bridge spanning the Rambla de Muleria and through a 140 metre long tunnel. The rails were flat-footed, "Vignole" type, manufactured by Decauville. The track consisted of light, ready made, portable sections with integral sleepers which could be fastened directly to the ground. Even allowing for the "train set" nature of the track, 13 weeks from start to finish was quite an achievement!





Above, the track was light enough to be laid by hand. Left, a page from the Decauville catalogue.

The local press plastered its pages with details of the line's inauguration. The reader was informed how, following a blessing from the Reverend Santos Mulero, the families of Luis Siret and his associate Baltasar Flores, together with other guests, occupied one of the wagons specially adapted to carry passengers and headed off on the inaugural journey. Arriving at Villaricos seafront they were treated to "una opípara comida bien regada con vinos y licores." ("A sumptuous feast washed down with wines and spirits.") Apparently, the vintage wine from Baltasar Flores' own vines in the Sierra Cabrera was well received. The programme was completed by carriage rides along the front. The article was very upbeat about the upturn in fortunes for the area, and the jobs that would be provided.



'Inauguration Day'.
Luis Siret is 3rd from the right.
Un Siglo de Historia Minera. Bolea.

The line can be traced for most of its length today, especially on Google Earth where the section from Las Rozas to the rambla can be seen, running past Luis Siret's house, then south east in a direct line where part of the access road to the desalination plant was built over it. Where this road bends and runs parallel to the rambla is the point where the railway bridge was. On the east side of the rambla, it followed the line of the ALP 828 Las Herrerías to Villaricos road, but on a lower level, and ran past where the sewage works are, as far as the Palomares crossing.

In the 1890s, long before the Almanzora was canalised, the final stretch of the 828 was frequently a virtually impassable quagmire despite being the main road linking the mines of the Sierra Almagrera and the Carmelita foundry situated behind the watch tower at Villaricos. Siret constructed the road which snakes from the Palomares crossing, behind Los Conteros, up the hill where the condensation tunnels and chimney of the Carmelita used to be, and out on to the coast road. I suspect that there was some sort of a deal here, whereby access to the foundry was improved in return for permission to tunnel under the hill.

The line of the railway is shown in green.

This new road was constructed wide enough to accommodate both carts and trains for the first part, until the track veered east, behind the Phoenician necropolis, and entered a 140 metre long tunnel, exiting on the other side of the coast road.

The tunnel entrance in the fenced area of the necropolis.

The tunnel exits in the area below the roundabout at the top of Villaricos.

The line then ran down to a yard, constructed on the southern side of what is now called Calle Central, above the beach. From here, ore was ferried to waiting cargo ships using the quays and small metal piers that had been built for the Carmelita, in the area known as the Balsica. I think the term means a small pontoon, a reference to the original loading piers. The area has undergone a radical transformation and is now a small modern harbour with the Balsica bar. The glass “bottom” boat is moored there.

Ore was loaded onto small lighters in the Balsica and ferried out to waiting cargo ships.
E.L. Morin.

During my research into the construction of the railway I uncovered two snippets of information. The first, was that the owner of the area known as Los Conteros did very well out of the construction of the new road. He was paid handsomely for the land that was required and, in addition, he was able to retake possession of the land that had been used for the earlier road. I suspect that the land in question is the strip between the building line and the modern road, currently used as a car park. The second snippet was the fact that the Carmelita foundry didn't operate during the summer. This was because the combination of standing water in the mouth of the Almanzora, and the heat, meant that malaria and other fevers were endemic.

The workforce could die of lead poisoning some other time!

2.3. The runaway success.

From the very start the line was a success. The 30% reduction in transport costs together with negligible transit losses attracted the attention of other mine owners. The British firm, Las Rozas Mines, approached Siret who agreed to carry their ore, levying a fee for every tonne carried. Soon the owners of the Virtud de San José and the Milagro de Guadalupe mines signed up as well. An unusual show of cooperation on the part of the Spanish! Within four months the line was extended all around the roza, and the tunnel widened to accommodate passing points. A second loading yard or “patio borracho” was constructed in Villaricos and a branch line extended to it. When the site was used by the Central Eléctrica from the 1940's to the 1960's, it was known as Tío (Uncle) Borracho. A play on words as “borracho” can mean both loaded and drunk. The line ran along what is now called Calle Borracho. A sign reading Patio Borracho is fixed to the wall of the edifice that was built over the yard despite it being within the Villaricos heritage protection zone. From here, the ore was loaded onto the ships via metal loading piers in Cala Verde.

The initial line in Villaricos is shown in green. The later extension to the 2nd mineral yard (known as Tío Borracho) is shown in blue. By 2012 the yard had been built over

patio borracho

Between its inauguration on August 1st 1897 and December 31st 1899, just under 200,000 tonnes of ore had been carried from San José, Guadalupe, Petronila, Santa Matilde and Virgin de las Huertas. In addition untold amounts of British coal and coke for steam engines had been carried in the opposite direction.

In 1901, La Société Minière d'Almagrera was formed with Siret at the helm. By 1903 the company had taken over both, the Guadalupe concession and those of Las Rozas Mines' Santa Matilde, and Virgin de las Huertas. This gave them a virtual monopoly in the roza. In 1903, Siret transferred the rights of the railway to the Société. Baltasar Flores' buy out was 50¢ for every tonne load carried.

To make the main line double track, a second tunnel was constructed at Villaricos, alongside the original.

The entrance to the second, more solidly built, tunnel.

The entrances to both tunnels by the necropolis. (The second one is on the left hand side)

The exits of the tunnels. The area has been cleared recently, because it is earmarked for development.

In 1904, a request to replace the original bridge over the Muleria was refused. By1910, the line was carrying 240,000 tonnes a year (up from the 148,00 tonnes of 10 years previously) on a double track except for the bridge crossing. Authorisation was again requested to replace the bridge with a wider one

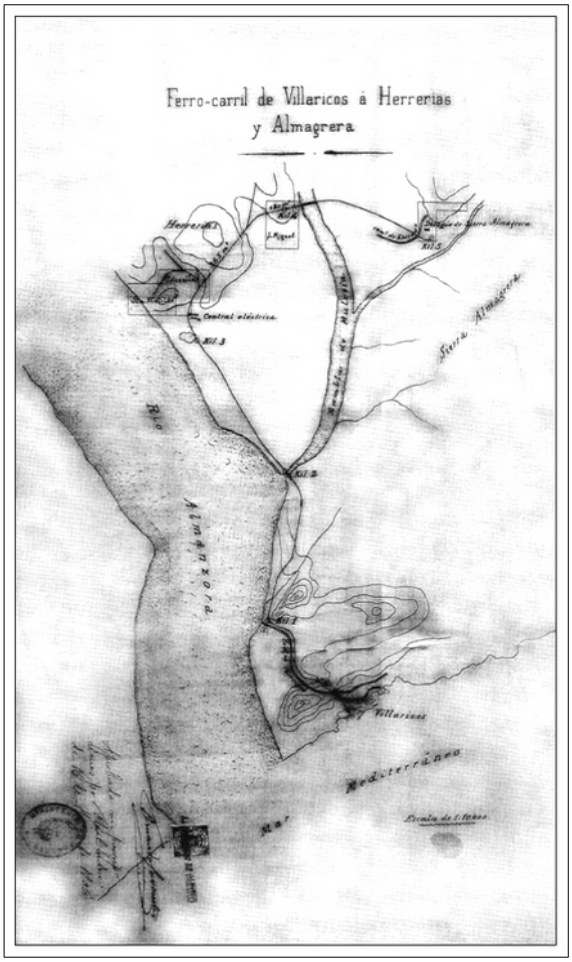
This time the authorities, having regard to the benefits of having 1500 workers in full employment in Las Rozas, not only allowed the new bridge to be built, but allowed it to be built alongside the old one so as not to interrupt the service! The new bridge was still in use when the line was closed in 1959.

The new bridge spanned the Rambla de la Muleria close to the house with the cypress trees on the Villaricos to Las Herrerías road.
Coll. Pedro Perales Larios.

2.4. The extension to El Arteal.

In 1904, Siret applied for permission to extend the line to the desagüe at El Arteal and to upgrade the existing infrastructure and driving a second tunnel to Villaricos. The application was blocked by the Spanish authorities, despite the importance to the area of maintaining the desagüe. (The line was for the transportation of the vast amounts of coal required to keep the steam driven pumps running.) The reason for the embargo was, that while Siret owned most of the land over which the line would pass, some of it was in the public domain. There was probably also an element of anti- foreign attitudes at play in the refusal. Undeterred, Siret continued to petition, and in 1906 permission was granted, with the proviso that anything on public land be maintained in good condition.

There is a certain amount of evidence indicating that Siret applied for permission retrospectively. On the 23rd of November 1902, a gentleman writing under the pseudonym of Chórcholis, wrote in El Eco de Levante about his trip to El Atreal by rail.



The plan submitted in 1904 for the extension of the railway to El Arteal.
Un Siglo de Historia Minera.Bolea.

A detailed description of the line was included in the 1904 petition and the remains of much of the extension can still be seen today.

It ran from the coal yards on either side of the roadway through El Arteal (one now covered by a greenhouse, and the other re-purposed as washing tanks).By the desagüe building it left the road and ran to a bridge over the track by the olive grove. At the time this was the main public track to the Sierra.

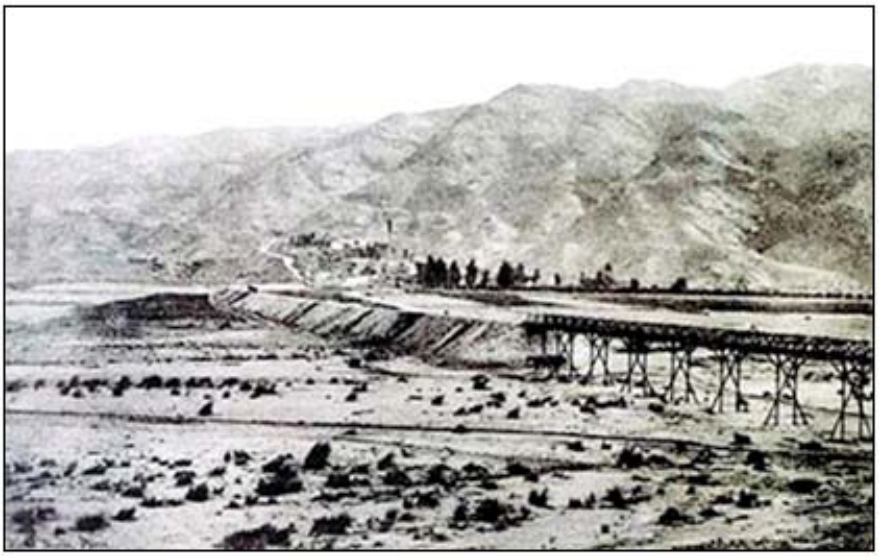
From the bridge it ran 800 metres on a raised embankment curving to the Rambla de Muleria which it crossed on a 90m bridge.

The re-purposed coal yard.

The supports for the bridge over the track.

The bridge across the rambla can be seen in this early photograph. The chimney at El Arteal is in the centre of the picture.

E.L.Morin.



Both supports for the rambla bridge are still in place. One is very obvious, the other often goes unnoticed.

From the rambla, via a deep cutting, it went into a tunnel 180m long, 1.60m wide and 2m high. The tunnel entrance is very overgrown, but its exit can just be seen below the track on the west side of the top field (below left). From here it ran through the overgrown area below the tower at the start of the track to El Arteal.

From this point I wasn't quite sure where it went. Bolea describes it as turning quite sharply towards the south and heading towards the head of the massif, where a 365m long tunnel was bored beneath its eastern flank. As can be seen from the plan submitted in 1904, this was the proposed route, with the line exiting in the demarcation of the mine Costa Rica, where it joined the main line to Villaricos.

The exit is situated just past the retaining wall of the Araucana foundry.

The same exit can be seen on the extreme left in this early photograph. Luis Siret, in the white hat, is on the right.

E.L.Morin

I think that the entrance to this long tunnel was somewhere opposite the turning for El Arteal.

The entrance to the long tunnel was probably somewhere in the area by this sign.

This left me with the mystery of the tunnel in the garden of the first house on the Las Rozas road.
It was obviously part of the El Arteal extension as its style is the same as the second Villaricos tunnel. An elderly Spanish gentleman told me years ago that the trains from El Arteal went through it, but I couldn't see how it fitted in with the 1904 submitted plan, nor with the description of it. Its entrance was at the end of the wall which runs parallel to the main road.

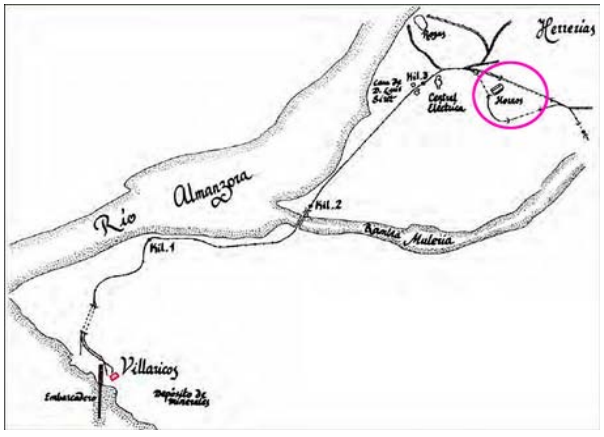
Above, the tunnel exit in the garden of the first house and right, a more recent view.

After years of puzzling, I went back over all of the information that I had collected and I revisited several web sites. Sure enough, I had had the answer all along. I re-examined this sketch map from "The Mines of the Sierra Almagrera" faydon.com/almagrera which I had long since discounted as I knew that something was wrong with it.

Faydon's plan.

I also re-found "Intervención arqueológica preventiva en calle Playazo zona arqueológica de Villaricos" by Carrillo and Ballesteros where I looked again at this plan from the Archivo Gereral de la Administración Sección Obras Públicas. Caja 23.116.

Carrillo and Ballesteros's archive plan.



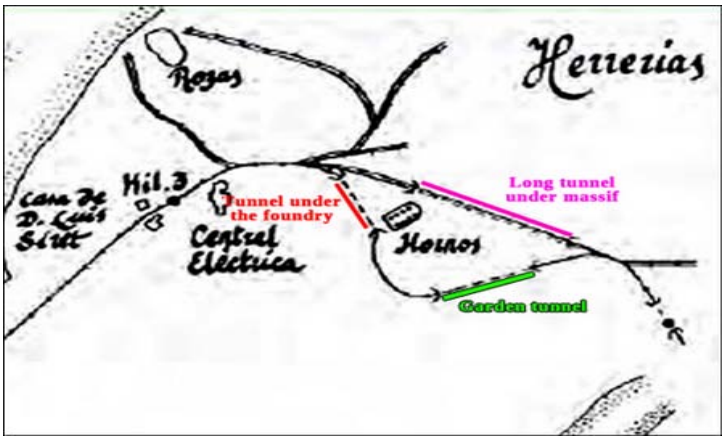
When I compared the two plans I realized that the author of faydon.com and I had both made the same error. We had both thought that the “hornos” circled in the archive plan referred to what looks like a calcination oven at the entrance to El Arteal, which was why the Faydon plan had shown the loops and branches on the El Arteal side of the Villaricos-Las Herrerías road. When I realized that they actually refer to is the ovens of the Araucana foundry it all made sense.

The archive plan shows that there were two lines built and that the tunnel in the garden was part of the second one. The entrance to it was at the end of the wall which runs parallel to the Villaricos to Herrerías road.

On leaving the garden tunnel, the line curved round, parallel to the road, and, to avoid the hill on which the Araucana foundry stands, entered a second tunnel. I think that the entrance to this was in the corner of the garden of the second house on the Las Rozas road.

I think that the line ran through this olive grove and entered a tunnel in the corner.

I think that the exit can be seen in this 2008 photograph of the retaining wall of the foundry when the houses were being built in the roza.
Photo. G García

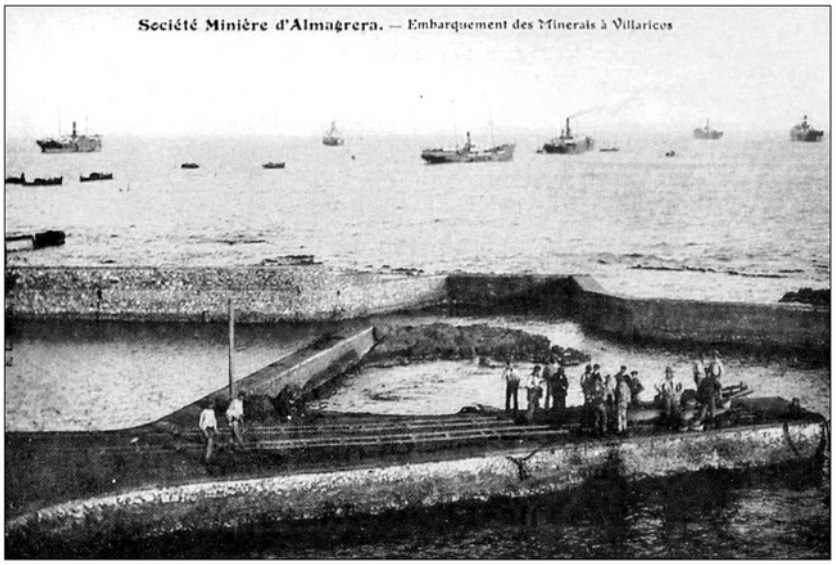


Detail from the archive plan showing the three tunnels.

It took me several years to solve this mystery!

2.5. The boat train.

Prior to 1913, ore was transferred from the beach, via metal jetties and stone quays, to barges and lighters and taken out to sea, where it was hauled up on to the decks and into the holds of the waiting steam ships. With as many as seven vessels anchored up at one time, loading was a slow and costly business.

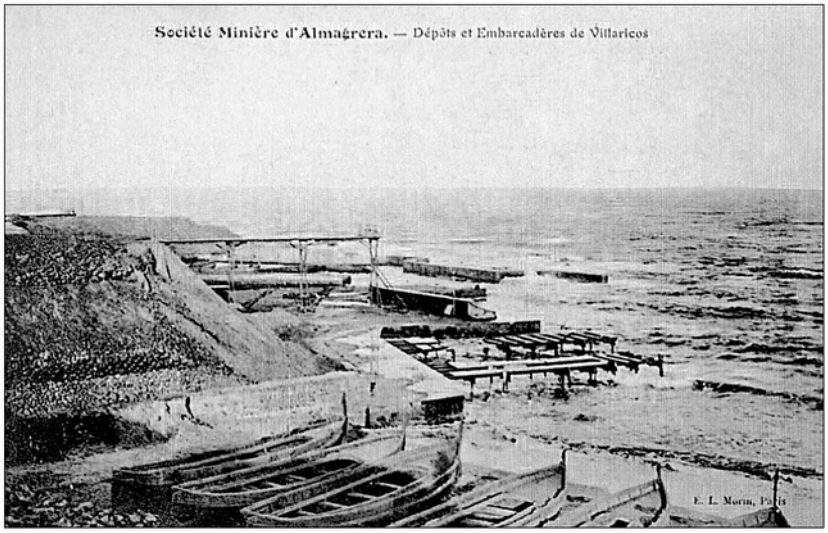


Lighters ferrying ore to steamships waiting off Villaricos.

E.L. Morin.

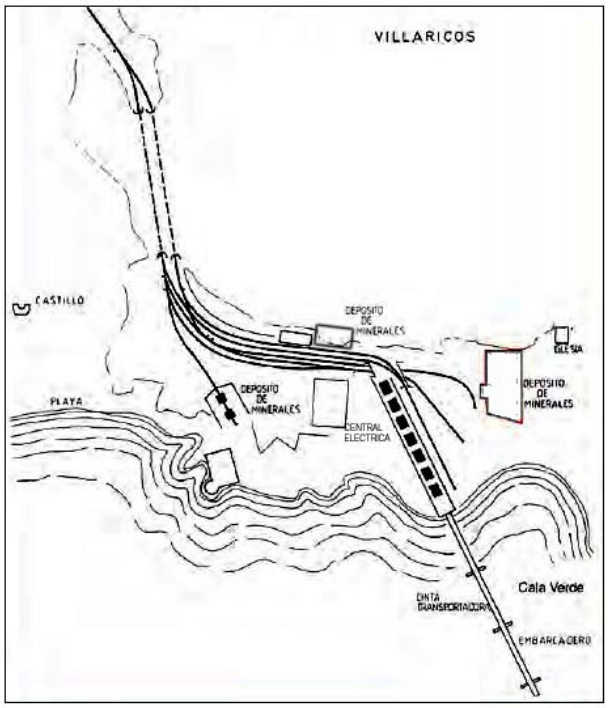
In 1913, in order to reduce the costs and speed up the process, work started on a third mineral yard, more railway branches and a magnificent cargadero or loading platform. Built by the Marseilles company Ateliers Terrin and opened in 1914, the cargadero was capable of loading 500 tonnes an hour directly into the ships' holds.

The mineral yard and loading quays in the Balsica.
Part of the landward section of the new cargadero can be seen under construction on the left.
E.L.Morin.



The cargadero consisted of two distinct parts. One on land, and the other out to sea, with the mineral being moved on metal conveyor belts, driven by electric motors.

On land there were seven enormous hoppers, each capable of holding 60,000 cubic metres of mineral. Ore was fed in either, directly from the side- tipping rail trucks, or, from a large, walled deposit situated at the end of the line of hoppers.

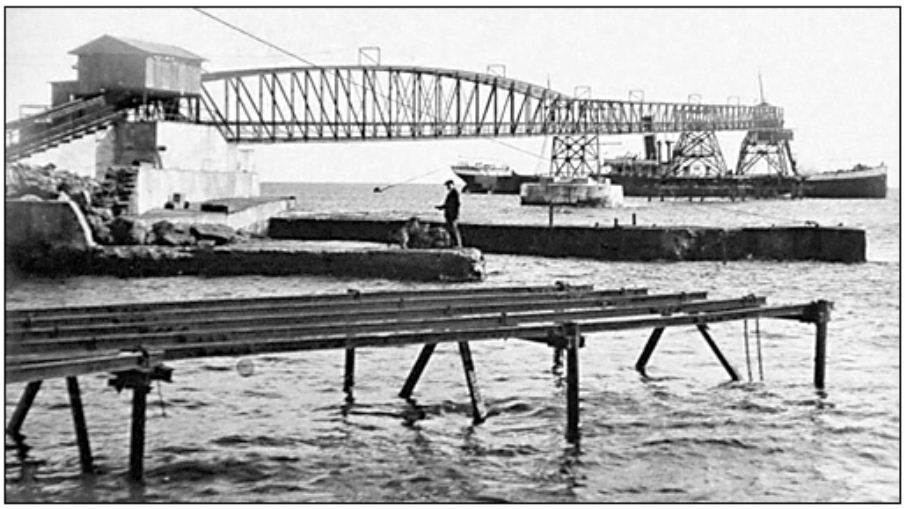


In the plan the seven blocks indicate the hoppers. The various railway tracks can be seen linking the mineral yards. *J. González Ballesteros.*

The mineral yard today. From Calle La Central (top) and from the main road into Villaricos.

Google screen shot of the installations.

Beneath the hoppers was a tunnel, housing a conveyor belt and a 60 H.P. motor. The ore dropped from the hoppers on to the 1.20 metre wide belt and travelled through the 100 metre long tunnel and then a further 36 metres up to a transfer tower. The second section, the loading pier, ran from the tower out to sea.



The transfer tower and loading pier.
Mti blog.

The loading pier was a kind of mobile bridge that could move up to 16 metres backward or forward. This section was carried by a pair of stone supports and two metal ones. The ore was dropped off the end of the first conveyor belt on to a second one, powered by a 12 H.P. motor, and carried along the metal bridge to the cargo ships. The ability to advance and retract the bridge meant that as one hold was filled, the vessel could move forward and present subsequent holds for filling.

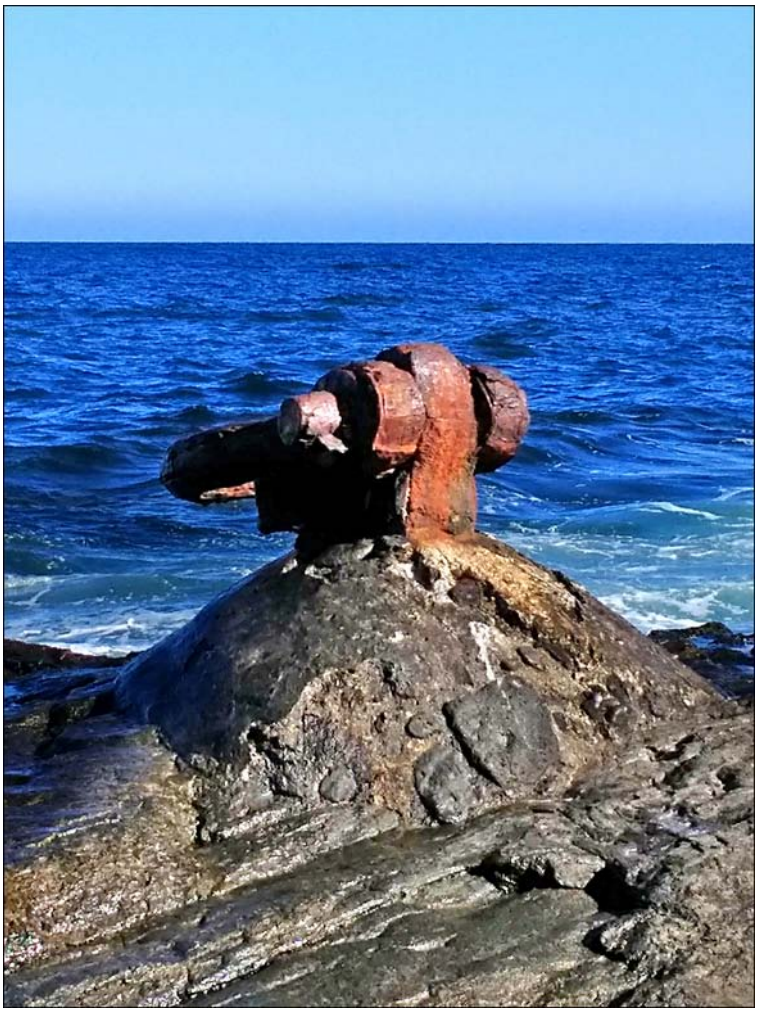
An ore carrying conveyor belt, similar to the one at Villaricos.

While this mechanical wonder was fêted by many, the majority of the boat-men lost their livelihood although some were still needed to off-load coal for the boilers. Electricity was being used to power the mining machinery, so only the power stations needed coal. Also, because of the First World War, very little British coal arrived in Spain.

This engineering feat stood the test of time as, like the rest of the railway, it was in use until 1959 when it was dismantled. Few traces of it can be seen today. The remains of one of the circular, stone supports is a popular fishing platform. Traces of the foundations of the transfer tower can be seen on the old, lower, seaward part of the promenade wall called El Mirador. One of the mooring points for the steam ships is also still visible.

The remains of one of the supports seen from the 'mirador' on the Paseo Maritimo.

The 'mirador' was built over the old walls and supports Of the Cargadero.



One of the mooring points for the cargo ships.

2.6. Hitting the buffers.
The First World War and its aftermath were disastrous for the whole of the mining sector in the region. With rising costs and increasing instability in the labour markets, La Société Minière d' Almagrera looked for other areas in which to begin exploitation. In 1923 a sister company was formed, Compagnie Minière de l'Afrique du Nord and operations started in Morocco. From then onwards, there was a progressive abandonment of the Société's interests in Las Rozas until 1928, when it transferred all of its activities to North Africa.

Luis Siret however remained in Spain. Two years earlier he had again taken over the running of the desagüe at El Arteal and now, took over the running of the railway. (It had always been very much his train set.) La Société granted him 6,000 pesetas per annum, and a levy of 10 cents per tonne carried. In addition, he was allowed 12,000 pesetas for the maintenance of the cargadero. In return he was contracted to replace any worn or defective elements and to repaint the cargadero every 18 months. This contract lasted until 1931.

Although Siret ran the railway, in 1929 the infrastructure and actual rights to it were ceded to a Spanish company, La Sociedad Anómina Consorcio de Almagrera who agreed the same terms with him. They took over the running of the desagüe at El Arteal and, in addition, Siret sold them some of the mines that he had in the Sierra Almagrera.

One of the conditions of the original licence for the railway was that it could only carry minerals extracted from Las Rozas and Las Herrerías. It was barred from carrying anything from the Sierra Almagrera. It could carry coal to El Arteal, but could take nothing from there. Using his 40 odd years of experience of negotiating with Spanish authorities, Siret was able to change the conditions of usage of the line. The Consorcio was able to use the railway to transport iron, lead and barite from the numerous mines that it had acquired in the Sierra.

Siret scrupulously maintained the railway but the Consorcio reneged on the deal. Siret took them to court in 1931 as they had not paid their dues. By now the quantity of mineral carried was a fraction of what it had carried in the past so Siret terminated his contract.

In 1932, the Consorcio petitioned the authorities to allow them to run a line directly from El Arteal to Villaricos on the eastern side of the Rambla de Muleria, rather than having to go via Las Rozas but permission was refused. They continued to use the railway until the Civil War disrupted production.

Franco's initiative to revitalise Spanish industry after the war led to the formation of Minas de Almagrera S.A (M.A.S.A). This company used the railway and the loading pier until 1959 when everything was dismantled.

2.7. The locomotion.

A train entering the roza by the side of the Araucana Foundry.
E. L. Morin.

In the castle museum in Garrucha is an old photograph of a Mercedes-Benz car pulling, probably as a

prank, wagons on the stretch of line between Las Rozas and the rambla crossing. But, in all the years of its operation, no photograph of a locomotive steaming along the track was taken. No children ever waved to the engine driver and no train-spotter ever noted down the names and numbers of the locos. Siret's locos did have numbers and I'm sure that some, at least, had names but the man who introduced the most modern technology to the Roza used the humble donkey to pull his trains! To be precise, he used mules, each one numbered, and it was mules that hauled the hundreds of thousands of tonnes of ore down the line to Villaricos right up until 1959.

Why? Why construct a highly engineered railway and run mule trains on it? The mules, for the most part, belonged to the Société's workers and were hired as required. Was Siret being philanthropic, providing the men with an extra income? He was an Hispanophile, so did he view the beasts in the same light as those 70's and 80's British holiday makers who arrived home clutching straw and even concrete donkeys?

I could understand why he moved away from the old pack mule trains. Assembling sufficient mules in one place to haul the large quantities of ore would be a logistical nightmare. It would also be a very expensive option, muleteros (muleteers) and carreteros (carters) were the crème de la crème of the 1890's workforce.

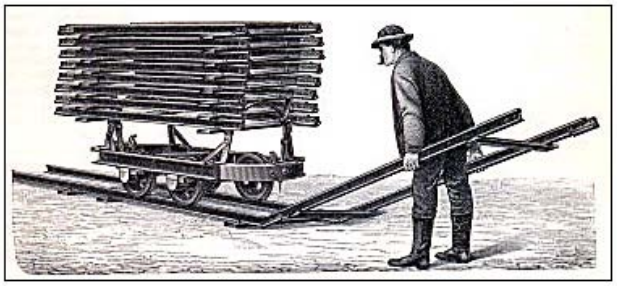
Carreteros were self-employed. They earned good money and, presumably, had some standing in the community as this photograph seems to indicate.
Memoria Visual del Siglo XX. Bolea.

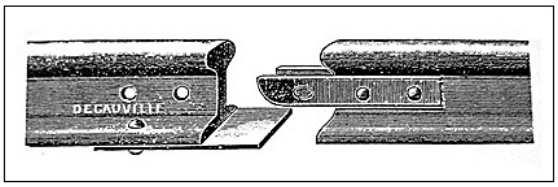
Is it possible that Siret never expected the line to be so successful, or long-lived, so saw mules as a cheap short term motive power? But then, were the mules themselves the secret of the success?

Siret was a genius, an experienced engineer, an astute businessman, so why would a man with such acumen run a railway with mules not locomotives? Was it for financial reasons? With no capital investment, depreciation, maintenance or replacement costs, that could make sense. Was it a question of available land? The mineral yards in Villaricos would have needed to be much larger, with turntables and shunting sidings. Unhitching a mule was certainly easier. Old photographs of Santa Matilde, Guadalupe and Petronila shown rail tracks everywhere. Certainly mules were a good option in the confines of the roza.

Finally, as I was drafting this section, I found the answer. DECAUVILLE. Siret had bought the whole train set, one of the most successful ever produced. By chance, when looking for illustrations of the wagons used on the line, I opened up a site on the history of the Decauville company. Bingo! The Original Decauville system was designed for animal traction, in this case, by horse. The Frenchman, Decauville, owned large fields planted with beetroot. He reasoned that if a horse was capable of hauling a wagon containing one tonne of beet, then, the same horse could haul 7 tonnes if the wagons were on rails. Not much of a discovery, but it was the ingenuity, flexibility and simplicity of the components that made it one of the most successful narrow gauge systems ever. Designed for use use on farms and plantations, in quarries and in both open cast and subterranean mines, it was tuned for man and beast.

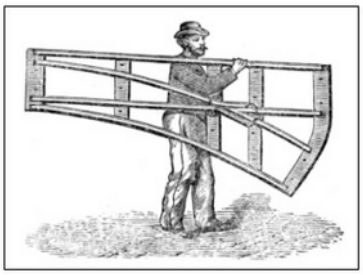
The rails were light, 4 kg. per linear metre. They were easy to carry and install. They could take changes in elevation of up to 3 metres without buckling. For long term use, they could be fastened down using bolts through holes in the cross members.

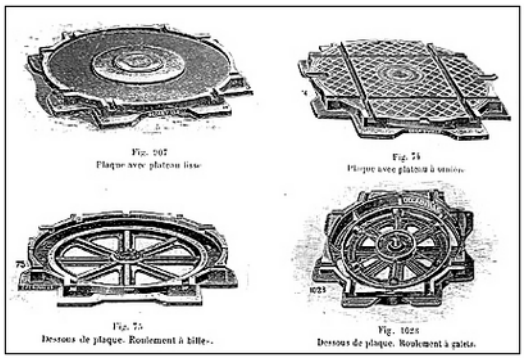


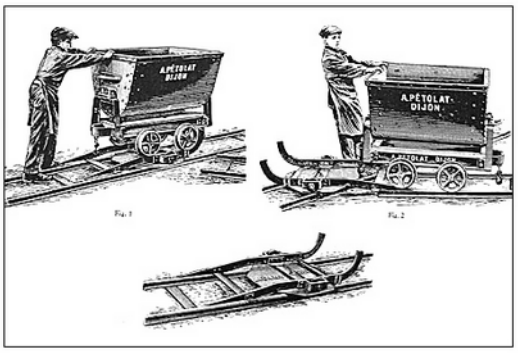


Joining lengths was a simple matter of slotting together the male and female elements and inserting a pin.

Curved sections had either an 8 metre curvature for animal traction, 6 metre for manual traction, or curves of between 2 and 4 metres formation use in extremely tight spaces. (A lot of grease was required on the outside rail.)



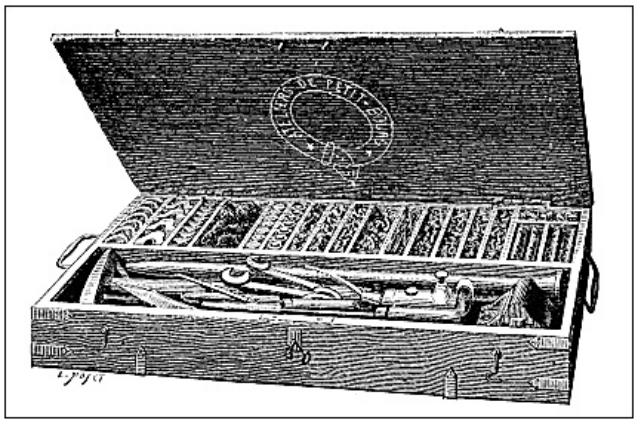


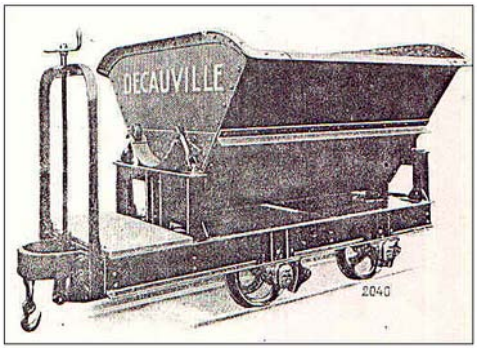


A variety of turntable plates were available, the most ingenious being the dérailleur plate where a wagon could be moved from one track to another, even if they weren't connected.

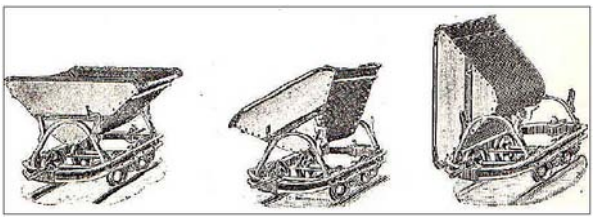
A boxed repair kit was supplied with the rails containing "une enclume portative, un bec d'âne, des clefs, une bouterolle, et des pièces de rechanges de wagonnets."

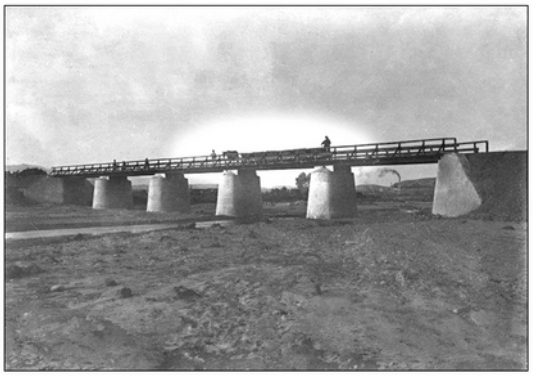
(A portable anvil, a mortise chisel, spanners, a riveting punch and spare parts for the wagons.)





The tilting trucks could be down loaded with the minimum of effort. Siret generally used a line of six, standard, one tonne, tilters and one, braked tilter. In the description of the line submitted with the application to extend it to El Arteal, the position of the brake wagon was stated as being at the front.





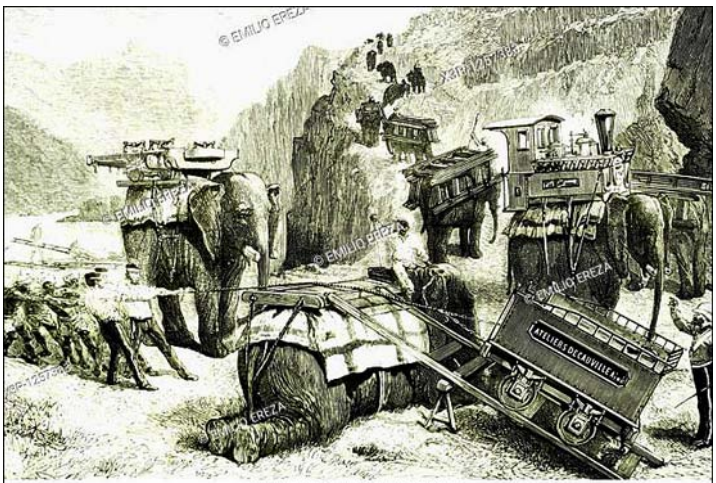
This photograph of a train crossing the Rambla de Muleria shows the brake wagon at the rear. This may have been because the train, returning to Las Rozas, was running empty.

Coll. Pedro Perales Larios

The Decauville system, because of its portability, was extensively used in the open cast areas of the Roza, the track was simply moved down to successive haul roads as the sides were excavated.

Decauville systems were employed extensively by both the French and British Armies in the trenches during the First World War, using either Decauville locomotives or horses.

This wondrous engraving of an entire system, engine and all, being taken up a mountain on the backs of elephants, gives some idea of the universality of Decauville.



2.8. Along the lines.
While Villaricos has worked so hard at obliterating its industrial heritage and re-inventing itself as a touristy "fishing village" there are still one or two glimpses of its past remaining.

While the section of the new promenade that was built over the loading pier boasts the title "el Mirador", the real "mirador" or, look out point, is still alive and well as can be seen in these two pictures.

The sloping roof at the rear covers stairs leading to a belvedere with windows on three sides. It gave the Harbour Master a commanding view of the shipping entering and leaving the area. The new building on the right of the view from the front, stands on what was the Tío Borracho yard.

View from the back of the mirador

and from the front.

The ramp and belvedere, on the roof, can be clearly seen in the 1970's postcard (above). Before the sea front was developed it had a prominent position. The high wall which runs along the road and down towards the mirador enclosed the Tío Borracho yard.

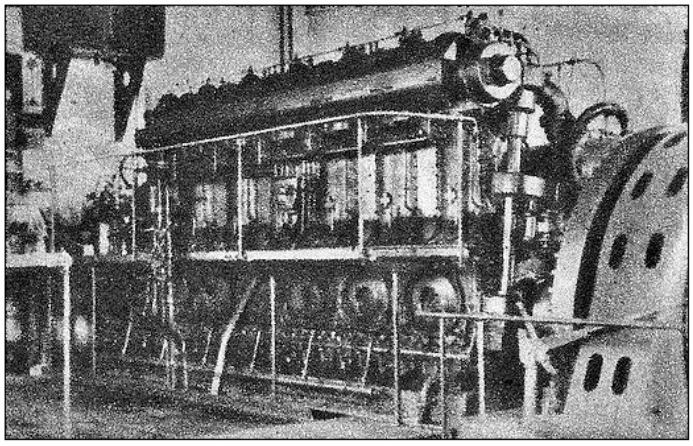
To help you to get your bearings, the asphalt road is the main road into Villaricos, the unsurfaced road on the right is signed Calle Verde. The church is just out of the picture on the left, almost opposite the yard walls.

The hoppers and tunnel were in the road that runs in a straight line between the new mirador and the large, walled area that was the mineral yard. The road name plate reads Calle Las Torvas, which is odd because the Spanish word for hoppers is tolvas. Calle Las Torvas translates as the grim street. While I don't doubt that the passageway was grim, most place names in the area are far more prosaic, so I wonder if it was simply misspelled.

The Central Eléctrica, built in 1932 to power the pumps at El Arteal, is just round the corner on the left hand side of the road built on the line of the railway. I imagine that it also powered the loading pier from that date.

As can be seen from the photograph below is falling into disrepair. Ever prosaic, the name of the road in which it stands is Calle Central.

Central Eléctrica's collapsing roof.



The dynamo of the Villaricos power plant.

Minas de Almagrera S.A. 1944-1958
Andrés Sánchez Picón and Isabel Garcia Jiménez.

Even more prosaic is the name of the road leading off it to where the old Carmelita foundry used to be. This one is Calle El Escorial. Forget about any connection with the magnificent palace built by Philip II, this one translates to the address you do not want as your own - Slag Heap Street.

Calle El Escorial.