

# Sima del Sombrero

## INTRODUCTION

Since 1994, the Speleological Association Ramaliega has been carrying out exploration work in the Mazo Chico area, where the system is located Garma Ciega-Cellagua, as the main cavity of the area. Within these tasks, it was undertaken in the year 1996 the exploration of the Sombrero chasm, which already was known for the works of French groups, Catalans and Madrid. Our efforts were awarded with the discovery of 1.5 km of new galleries, and the union of this cavity with the network of Cellagua, downstream of the sink.

## LOCATION AND ACCESS

This cavity is located in El Mortillano, in the small mountain range that connects Mazo Chico with the peak Tejes, at an altitude of 1,020 meters, and in the vertical of the Cellagua sinkhole. From the town of Astrana, take the track that goes up direction to Entremazos and leave the vehicle in La Platform. A track in poor condition goes up to the hill between Mazo Grande, on the right, and Mazo Chico on the left. This point is the upper bound of the depression of Llana la Cueva and common path with the access to El Morterón and Hoyo Salzoso Sumidero. You have to skirt the depression towards the West, gaining height in the direction of Pico Tejes. The path passes very near and above, first of the Mazo Chico chasm and shortly after above the Mortar of Cellagua I and II. The entrance is in a channel, vertically in the Cellagua sinkhole.

**Sima del Sombrero**  
(WGS84) 30 T 454292 4786396

## DESCRIPTION

The chasm begins with a 45-meter ramp shaft which leads to a room 10 meters high, whose floor slopes sharply towards two other rooms lower. This room also continues through two points:

1. Upper path, which is accessed by climbing 7 meters up a steeply inclined ramp, and which leads to a nearly horizontal gallery of good size and 20 meters high that after 60 meters is obstructed by a plug of blocks and lava flow. On its floor there are caves that lead to lower levels. In this gallery, by climbing 15 meters, you can access an upper tube that ends in a sinking that blocks it. On one side, a 22-meter shaft leads us to La Catedral, which is a large chimney of enormous dimensions. At its base, a small mine of 1 x 1 meters and with abundant air current, collapses into a 17-meter shaft formed at the intersection of two perpendicular meanders. Descending the shaft we can take two paths. To the right, a narrow meander with some small pools, descends several metres until it narrows definitely. To the left, a steep 40-metre ramp leads us to a 15-metre pool, at the bottom of which, and after continuing along a narrow fossil meander, we intercept another larger one that appears on the left and descends to the right. This meander, with a width of 3 metres and 10 metres high, is followed by a 9-metre pool and another 14-metre pool, which in turn leads to the head of a large pool of 43 metres. This entire last section is actually a large meander, which drops off sharply in the pools. At the base of the 43-metre pool we find a 7-metre ledge, which leads to some ramps that in turn lead to the head of a large pool, which we will also access by other routes in the chasm.

**2. Normal route, which begins in the first room of the pit. We descend a 20-metre shaft, in the form of a 1-metre-diameter tube, which connects with a medium-sized 2 x 4 gallery that collapses in some sections and receives chimneys through the roof that lead to the upper gallery. A 6-metre overhang cuts this gallery, which is stopped short shortly after. Only a very narrow meander that appears at its bottom allows, descending an 8-metre shaft, to reach a steeply sloping room, at the bottom of which the meander continues, giving access to more pitches, this being the already known area of the pit.**

In this room, an ascending joint leads us to a large 50-metre shaft (Pozo del Salto del Oso) at the bottom of which a sequence of shafts and 5 meanders lead us nowhere (Vía Muerta). However, a window located at 42 meters, gives us access to a small meander that collapses into a 6-meter-deep pitch and another 33-meter-deep pitch. At the base of this, we have two paths, to the right and passing in opposition over a 20-meter-deep pitch, we arrive at a chimney, which cuts the meander. A 5-meter climb allows us to continue along a narrow meander, which finally collapses into a large pitch 120 meters deep (Pozo de los Fuertes) and which is the same one that the upper route already mentioned accesses. On the left side of P33, a window gives access to a 68-meter-deep pitch in which it is necessary to swing several times, since it has numerous collapses. We thus arrive at a ledge with a strange viewing point, which leads to the great P120 meters, but this time at 55 meters from the ground.

Once at the bottom of the pitches (level -300 meters from the mouth) we find a gallery that runs from East to West, and which has been sunk by the pitches, as evidenced by the large blocks that are at its bottom.

Towards the east, the gallery is a meander 30 to 40 meters high, and whose width varies from 1 to 4 meters. The tunnel is slightly ascending, ending in a large collapse of blocks that reach the ceiling, completely blocking the passage. Air circulates between the blocks and stalactites and flowstones form. Following the gallery to the West, it is necessary to climb down 6 metres between the blocks to continue them. This gallery has a larger section than the other, with the square shape characteristic of collapses. At 25 metres the gallery is again cut by another large shaft that reaches from its ceiling, and it is at this point where, on the right after some handrails and a 2-metre climb, we can access a side gallery, shaped like a meander, which is nothing other than the remains of the original gallery, before the collapses caused by the shafts. This gallery has a similar section to the East gallery, with a height of 30 metres and which runs on a plane inclined towards the North. At the bottom there are collapses that lead to the gallery we came through, which, together with the previous handrail, sinks into a 10-meter shaft to reach shortly after and through another 10-meter shaft, the roof of the Cellagua Canyon, which we cross above to continue 30 meters more in the same direction, and end again in a barrier of blocks.

## EXPLORATIONS

At the end of the summer of 1996, we returned to the sinkhole with the intention of continuing the exploration and reinstalling the known sections. On this occasion we descended several shafts of 15, 6 and 17 meters, stopping at the head of another shaft, due to lack of material. A third visit to the sinkhole ended our hopes on this route, as it ended after another shaft of 27 meters that has no continuation. While ascending the 50-meter shaft, which we called Pozo del Salto del Oso, a speleologist made a small pendulum to a window, which after a short meander, led him to the head of a good-sized shaft.

Our fourth visit was carried out by 6 speleologists who divided the work into three main tasks: topography the Dead Way and remove its equipment, explore a pitch parallel to this way, and continue exploring the window that was located the last time. When the first two teams finished their work, they went to the window, whose explorers had not been heard from, and they descended the ropes, checking the great size of the pitches that followed: 33, 68 and 55 metres, all of them with a large perimeter and fossils.

Finally, they reached what seemed to be some galleries of good size, where they met the lead team, who after descending continued exploring to the west along the gallery, and who informed us with joy that they had reached the Cellagua canyon, thus making the connection. The next visit is made by two speleologists, who are dedicated to carrying out the topography from the street to the junction.

During three new descents to the bottom of the chasm, we try to force our way through the barrier of blocks that cut the gallery on its eastern side, but, after climbing 45 meters, we must surrender to the evidence that the wall reaches the very ceiling of the gallery, making the passage impossible. It is a hard blow to the aspirations of continuing the cavity, which we did not expect due to the size of the gallery, 40 meters high and 4 meters wide.

A new visit to the West galleries reveals the continuation of these on the other side of the canyon by two different levels that join after 50 meters were the gallery is stopped by another block wall. A handrail is also made through the canyon that leads us to an upper floor of the same, formed by the embedding of large blocks, and which leads towards Cellagua. We descend again to finish exploring this sector, which unfortunately offers nothing new, making a bivouac in the canyon where an inspection is performed.

At this point in the explorations, a crossing is done at the head of the 68-meter shaft, which leads us to a meander and a large shaft, which turns out to be the same as the one at the end of the chasm, which is 120 meters in size (Pozo de los Fuertes). In the upper area, two climbs are made, accompanied by members of the Geological Survey, exactly in the first room after the entrance ramp-shaft. One of these climbs, which is done at the end of an upper gallery, leads to a 22-meter shaft, which in turn leads to a gigantic chimney measuring 10 x 22 meters in section and about 40 meters high. At its base, a series of shafts with an air current extend the cavity.

We descend again to this new promising route, doing the topography and exploring at the same time, ending at the head of a large pitch probed for about 70 meters, which is not descended due to lack of rope. To get here we have descended a pitch of 17 meters, a ramp of 40 meters, a pitch of 15 meters, a pitch of 10, a pitch of 14, a pitch of 43 and another of 7 meters. The descent of this last pitch probed which is done in a new exit, reveals to us, as we expected, that it is the final pitch of the chasm (Pozo de los Fuertes). We ascend, clearing this area almost entirely.

In the meantime, we have also installed the Cellagua sinkhole, as access is much easier, and it is along this path that we descend to climb the block plug that stopped us on the other side of the canyon. This climb continues for 40 meters, but again without success, thus closing all the unknowns that remained in the Sombrero sinkhole.

The result of these efforts has been 1,500 meters of new galleries, with a maximum difference in height of 350 meters, for which we have accessed the cavity about 18 times, in all seasons of the year, with snow or rain on several occasions, which taking into account the narrowness of some passages, and the inconvenience of some pitches, gives an idea of the effort made in the exploration.

## Ficha de Instalación

POZOS	CUERDA	ANCLAJES	OBSERVACIONES
P 45	50	2 s. <sup>[1]</sup>	Pozo - rampa
		1 s.	
		1 Desv. <sup>[2]</sup>	
		1 s.	
		1 s.	
P 20	30	1 Desv.	A la izquierda, sin terminar de bajar la rampa de bloques
		1 An <sup>[3]</sup>	
		1 s.	
		1 An	
P 6	8	2 s.	Se puede destrepar sin cuerda
P 8	20	1 s.	
		1 s.	
		1 s.	
P 50	70	1 An	Pozo Salto del Oso, vía normal. Tomar una ventana a 8 m. del fondo
		1 An	
		2 s.	
		1 An	
P 6	10	1 An	En el meandro de la ventana
P 33	40	2 s.	A la izquierda
		1 s.	
P 68	80	1 s.	Varios péndulos
		1 s.	
		1 An	
		1 Desv.	
		1 An	
P 55	70	1 An	La cabecera es una repisa en mitad del P 120
P 6	No	2 s.	Destrepe sin material, entre bloques, dirección Oeste
		No	
P 10	15	1 An	
P 10	15	1 s.	
		1 s.	
P 11	25	1 An	Llegada al Cañón de Cellagua
		1 An	
Variante del P 11	20	2 An	Se puede llegar al Cañón por un meandro lateral activo

### NOTAS:

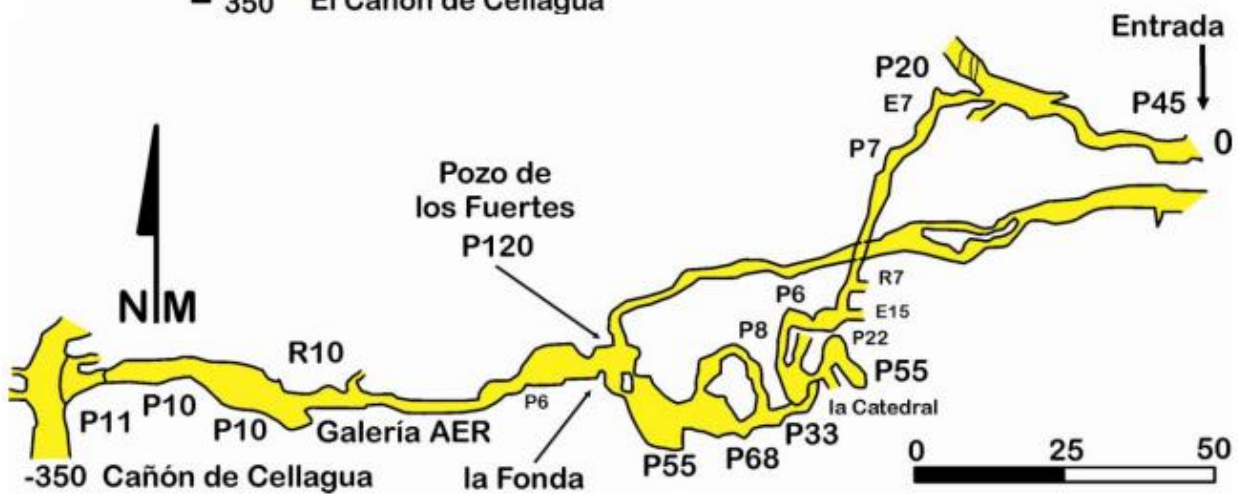
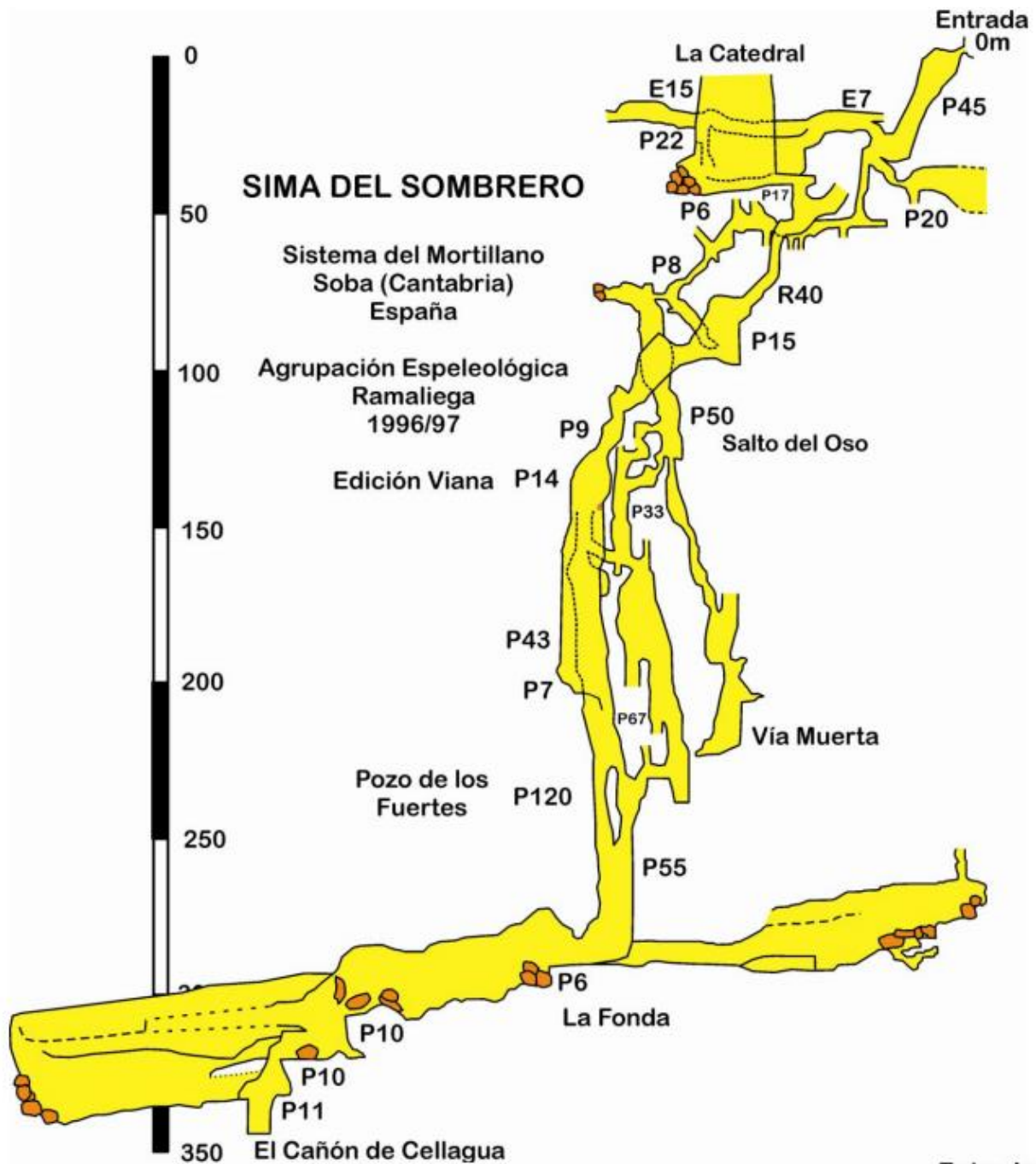
- ▶ Las cintas para los anclajes naturales deben ser bastante largas. En cuatro ó cinco ocasiones son necesarias cintas de 2 metros de longitud.
  - ▶ Prever también la utilización de algún desviador más.
- Ficha establecida en Septiembre de 1997

Notas

[1] Spit

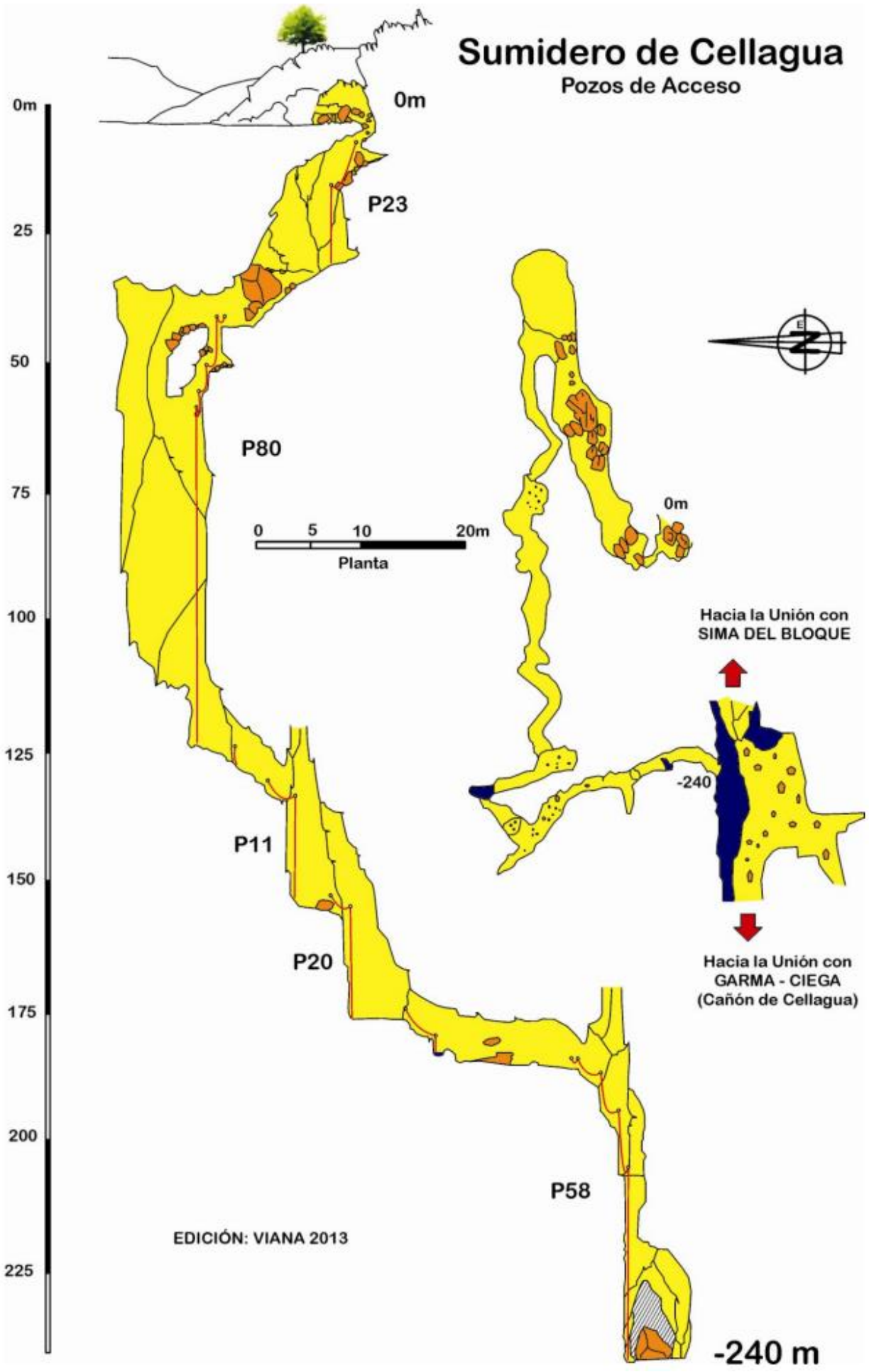
[2] Desviación

[3] Anclaje natural



# Sumidero de Cellagua

Pozos de Acceso



EDICIÓN: VIANA 2013