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## Case Study 3.4: The Metallurgical Centre of Viña del Cerro, Chile

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### **Presentation and analysis of the site**

*Geographical position:* Tierra Amarilla, III Atacama Region, northern Chile.

*Location:* Latitude 27° 54' 9" S, longitude 70° 1' 51" W. Elevation 1090m above mean sea level.

*General description:* Viña del Cerro is a *Diaguita-Inka* metallurgical centre dating to approximately 1400 AD. The site is located in the middle of the Copiapó river valley, or *Camasquil*, on a rocky hill at the foot of the *Calquis* Mountain, near the ancient Indian town of *Painegue*.

*Inventory of the remains:* The site is composed of four well-defined architectural units: a group of *huayras* (founding ovens), a control unit, a water-provisions construction, and a large plaza or *kancha* (see Fig. 3.4.2). The *kancha* or unit A, which is located on a large flat section of a rocky hill, is an area of 58.5 × 52 m constructed of mud, stone and adobe. It is composed of two architectural units: the camp and the *ushnu* platform. The platform is located on the eastern corner of the large plaza or *kancha*. It is trapezoidal in form, with a 6 m wall of mud and stone. The platform has seven steps that are 1.4 m wide, located on the east side of the south wall.

The access gates to the residential structures and the *kancha* are oriented towards the summits of two prominent mountains, Potro mountain in the south-east and Calquis Mountain to the north-east (Fig. 3.4.3). The *ushnu*'s walls and diagonals are also aligned on these mountain peaks, together with the positions of sunrise on the two solstices (line segments 4–1 and 4–2 in Fig. 3.4.4). These and other alignments suggest that the platform that was part of the *ushnu*, and the access doors of the *kancha* and other structures, could have served for the creation and adjustment of a solar horizon calendar using specific mountains in the local landscape as reference points.

*History of the site:* In 1958 Jorge Irribarren described what for him were 'Indian constructions' and undertook the first topographical survey of this site with the help of Hans Niemeyer, who later began the first archaeological excavations at the end of the 1960s. Between 1979 and 1980, Niemeyer executed a new topographic survey of Viña del Cerro along with another archaeologist. The site was studied from the perspective of archaeoastronomy between 2004 and 2006.

*Cultural and symbolic dimension:* *Ushnus* have been interpreted in various ways: as platforms for military parades, places where military leaders swore obedience to the Inca, places for *capac hucha* ceremonies, places where the Sapa Inca or his representatives spoke about politics and justice, podiums where local authorities carried out their responsibilities, platforms for ceremonies to fertility worship, places for astronomical observations, and centres for architectural planning in the principal provincial towns of the Inca empire.

Analysis of the orientations of the reconstructed architecture at Viña del Cerro provides strong evidence that the site—in addition its to political and administrative functions relating to accounting and to the production of copper and silver—served as a place for performing

activities related to sun and mountain worship. In Viña del Cerro, the construction of a complex *ushnu* may have been a response to the Incas' need to highlight the pre-existing qualities of the place. These include landscape markers of the solstices, and the visibility of the Calquis and Potro mountains, likely considered sacred places (*huacas*).

Viña del Cerro is also connected with the 'Main Incan Trail', in its section through the Copiapó River Valley between La Puerta and Iglesia Colorada.

Viña del Cerro, with its *ushnu*, was a place that symbolized the authority of the Inca as well as Andean complementarity and reciprocity. It served as a form of ideological coercion and subordination of local groups to the solar deity and the Inca empire, through the incorporation of all potentially sacred elements from the local topography.

*Authenticity and integrity:* An architectural restoration was carried out in 1982 by the Institute of Archaeological Investigations and Monumental Restoration of the University of Antofagasta, Chile, under the supervision of Hans Niemeyer.

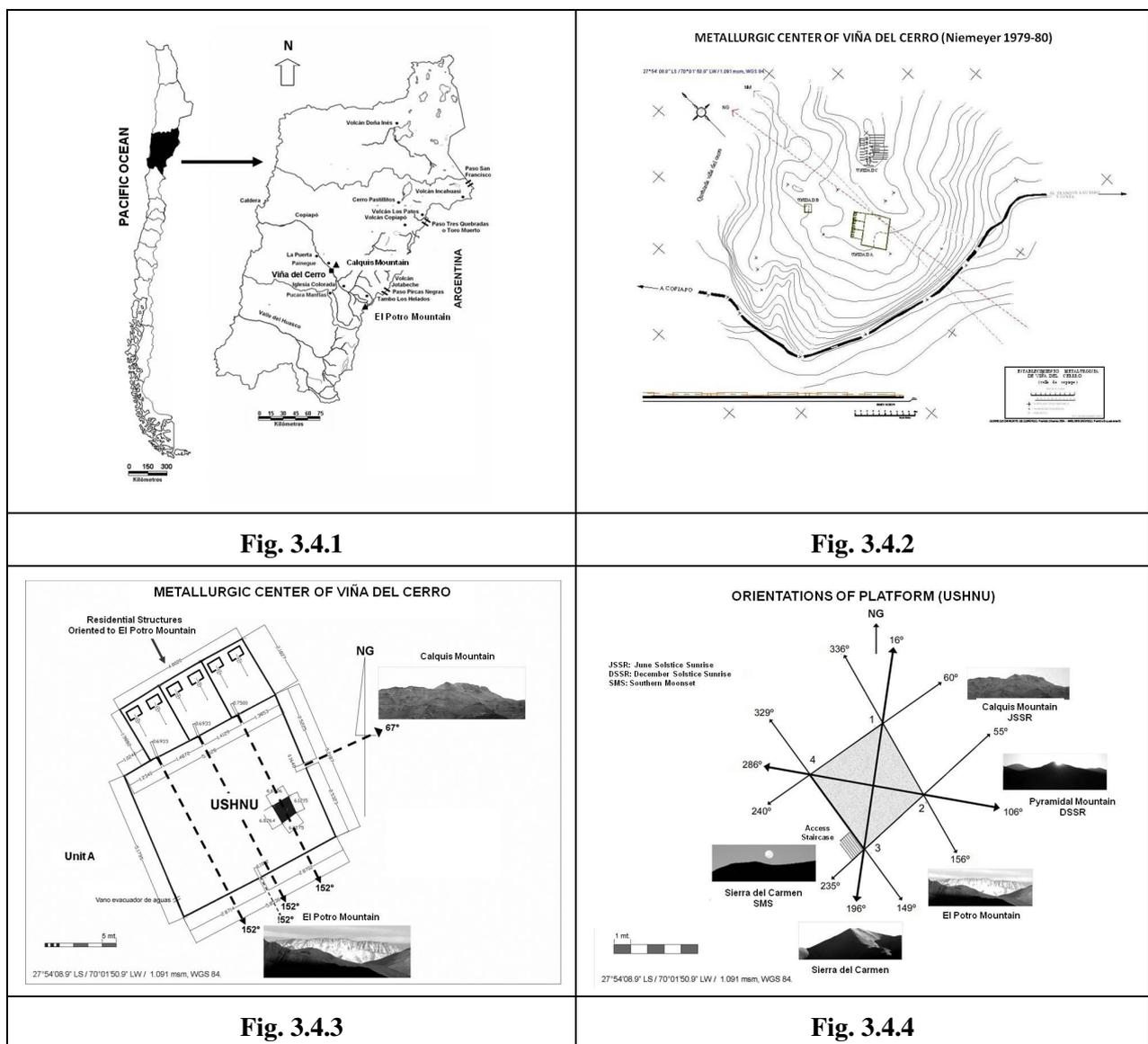


Fig. 3.4.1. Location of Viña del Cerro. Figs. 3.4.2–3.4.4. See text. Drawings by Ricardo Moyano.

## Present site management

*Archaeological/historical/heritage research:* Viña del Cerro is part of the World Cultural Heritage project ‘*Qhapaq Ñan*’ (Main Andean Trail) of UNESCO and the University of Chile.

*Main threats or potential threats to the site:* Human disturbance and natural agents (wind, sun, and water).

*Management:* The site is a national historical and archaeological zone. Outreach is provided by the Atacama Regional Museum.

## Additional bibliography

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