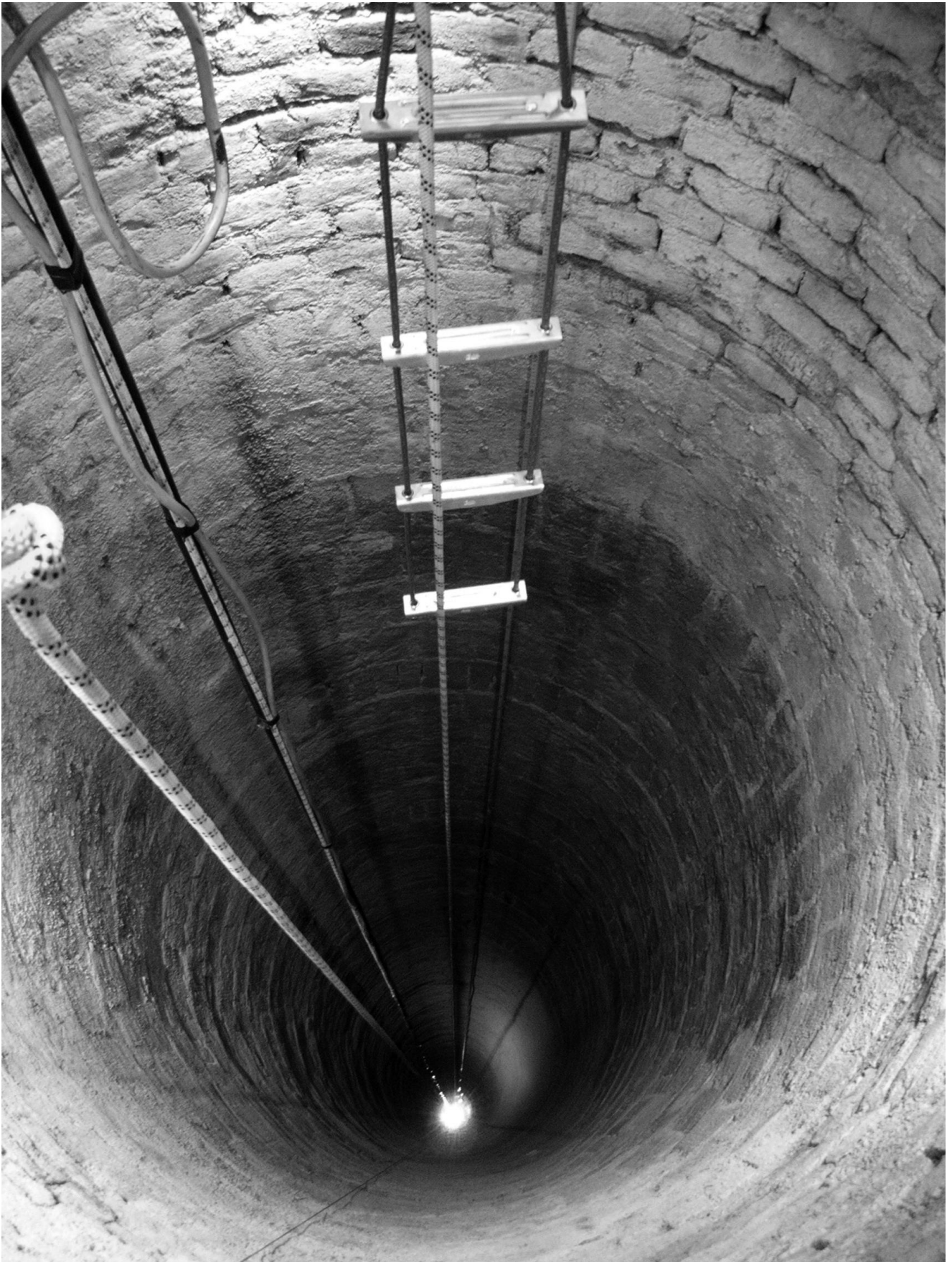


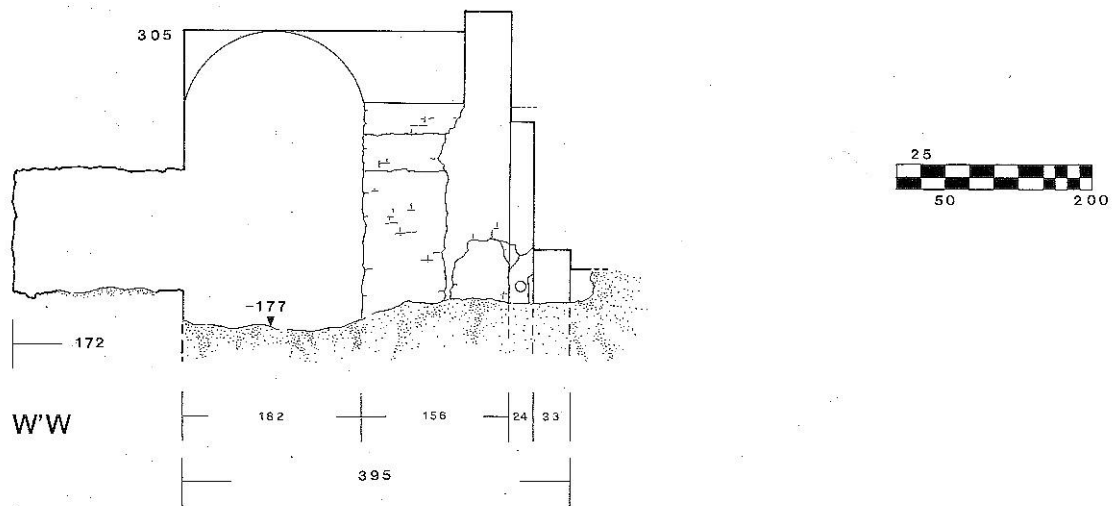
Federazione Nazionale Cavità Artificiali

# **HYPOGEAN ARCHAEOLOGY®**

**Research and Documentation of Underground Structures:  
IMAGES**



*Exploration and study of a well in Moncrivello (Vercelli), with a depth of 85.4 m (photo R. Basilico).*



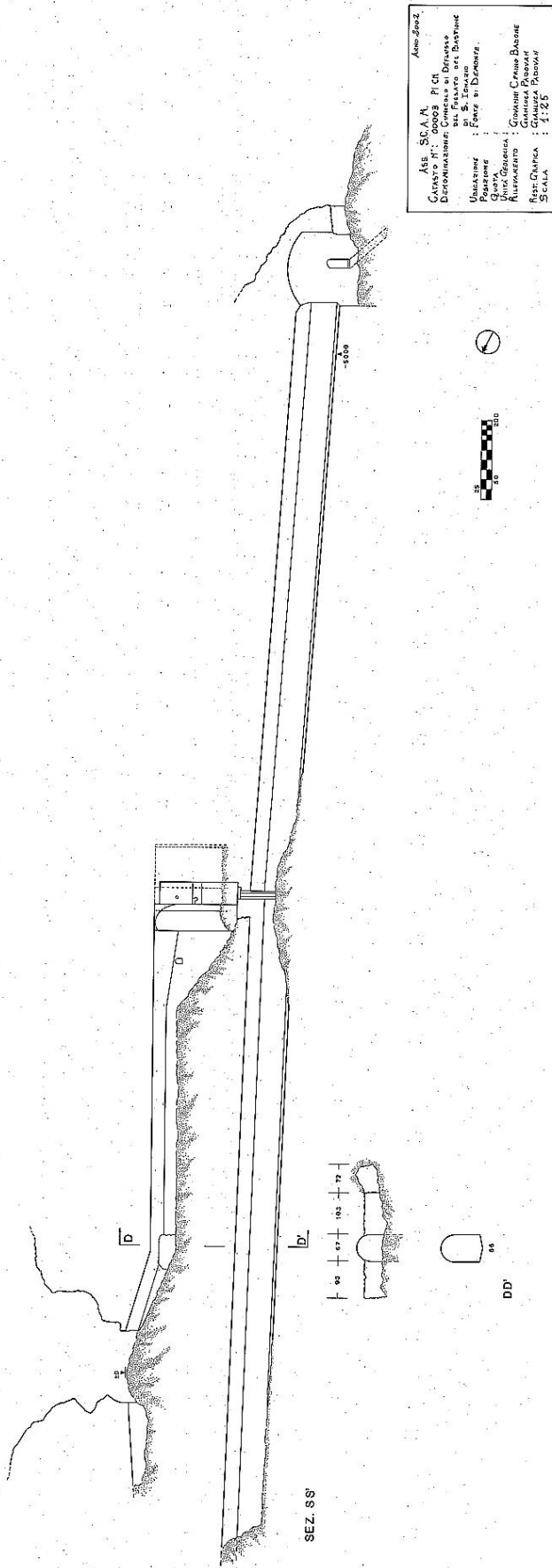
ANNO 2002

ASS. SCAM.  
 CATASTO N°: 00001 PI CN  
 DENOMINAZIONE : GALLERIA DI CONTRASCARPA  
 DEL BASTIONE DI S. IGNAZIO  
 UBICAZIONE : FORTE DI DEMONTE  
 POSIZIONE :  
 QUOTA :  
 UNITA' GEOLOGICA:  
 RILEVAMENTO : GIOVANNI CERINO BADONE  
 GIANLUCA PADOVAN  
 REST. GRAFICA : GIANLUCA PADOVAN  
 SCALA : 1:25

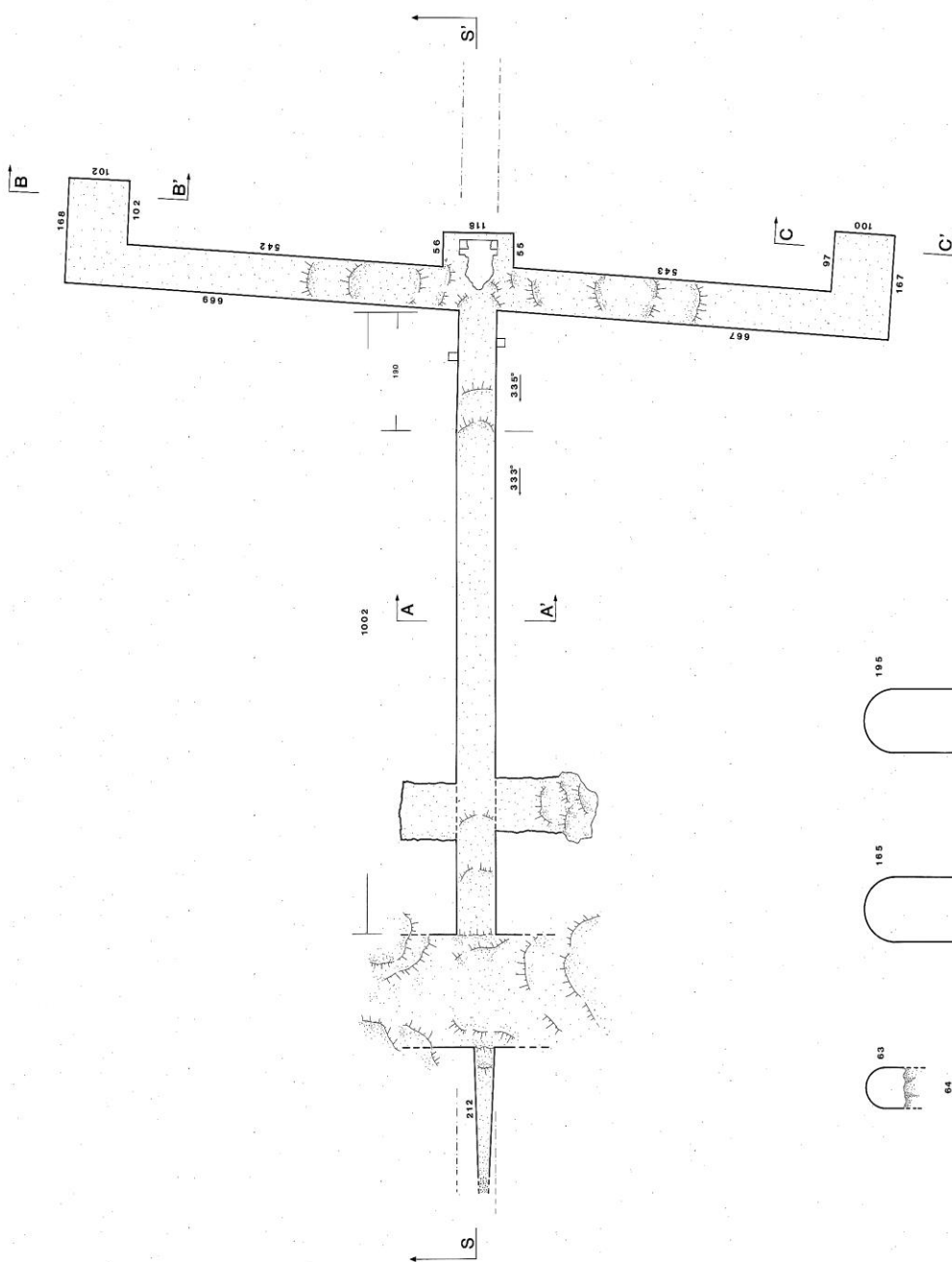
2002 Gianluca Padovan

*Transversal section of the Counterscarp Gallery of the Bastion of Saint Ignatius (CA 00001 PI CN)*

*The Bastion of Saint Ignatius in the Demonto Fort (Cuneo), was defended by a dry ditch with counterscarp gallery, an integral 11.36 m section of which, presenting three deep loopholes overlooking the ditch and the entrance sortie (buried) survives. A loophole and countermine tunnel can be seen in an uncovered section of the same stone, masonry lined tunnel. Beneath the tunnel is a hydraulic conduit for the discharge of water from the ditch.*

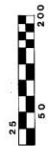
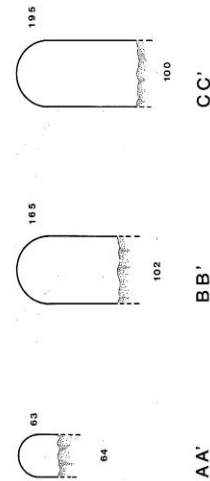


*Demonto Fort (Cuneo). The section shows the upper section (altitude 0) of the uncovered Counterscarp Gallery of the Bastion of Saint Ignatius, its loophole overlooking the ditch (to the left). On the right is the entrance to the Counterscarp Gallery of the Bastion of Saint Ignatius (CA 00002 PI CN), which provides access to the underlying Ditch Drainage Tunnel of the Bastion of Saint Ignatius (CA 00003 PI CN). Section DD' shows the two demolition tunnels which would have contained unutilised demolition chambers.*

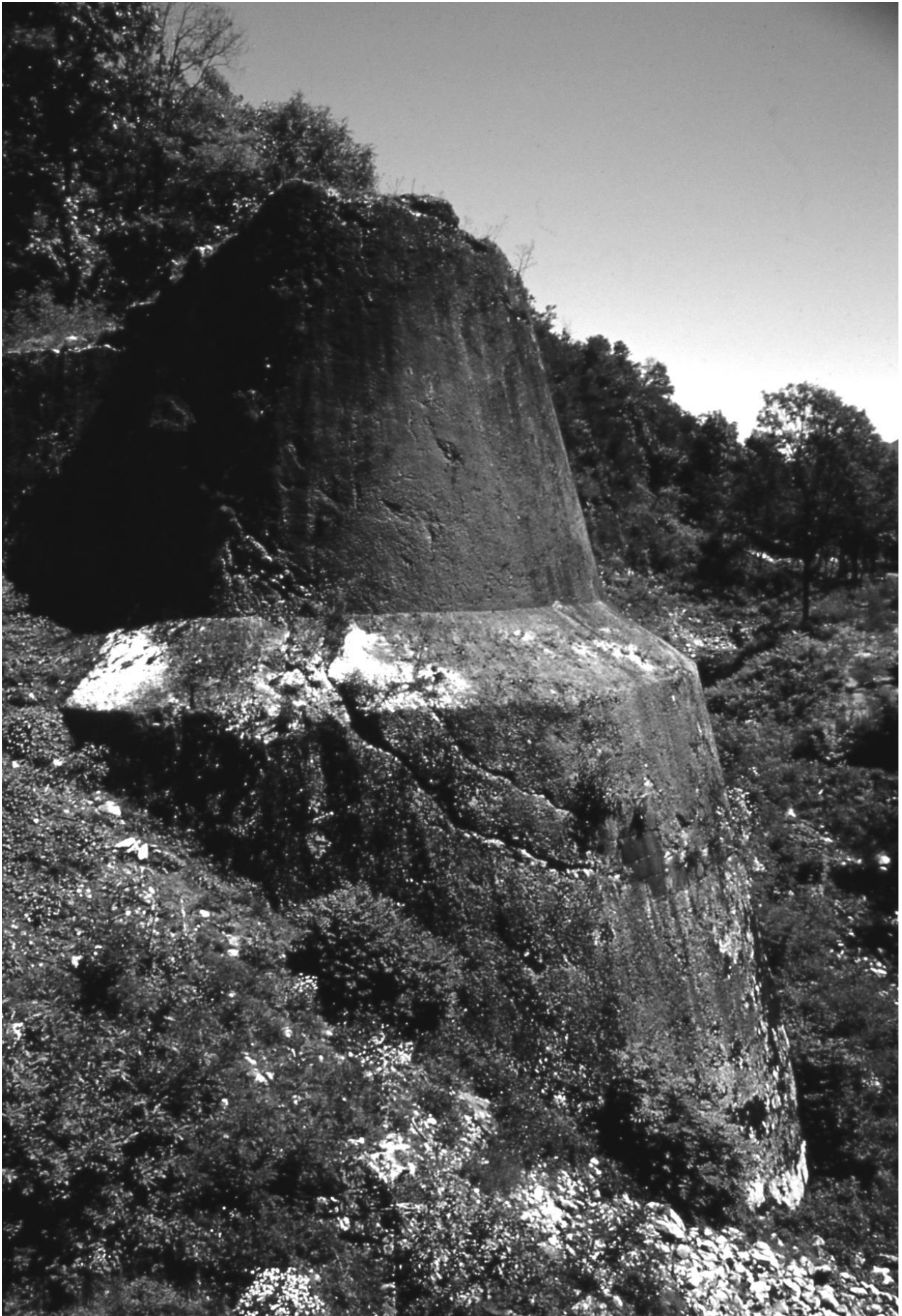


Ottavio G. Natta 1880

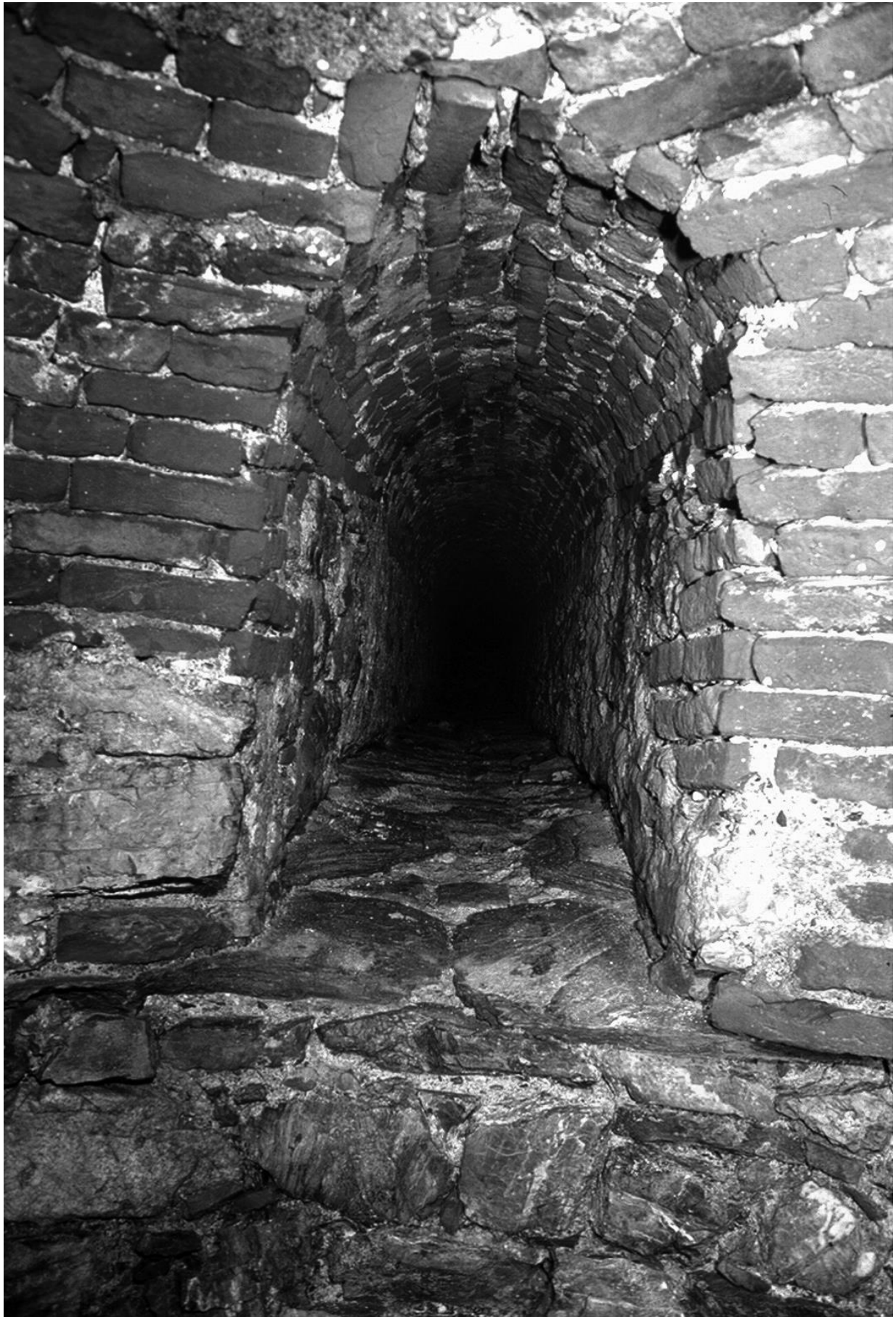
ASS. S.C.A.M.	Anno 2002
CATASTO N° 00002 PI CN	
DENOMINAZIONE : GALLERIA DI CONTROMURA DELLA	
CONFRESCARA DEL BASTIONE DI	
S. IGNAZIO	
UBICAZIONE : FORTE DI DEMONTE	
POSIZIONE	
QUOTA	
UNITA' GEOLOGICA :	
RILEVAMENTO : GIOVANNI CERINO BADONE	
PROGETTO : GIANLUCA PADOVAN	
REST. GRAFICA : GIANLUCA PADOVAN	
SCALA : 1 : 25	



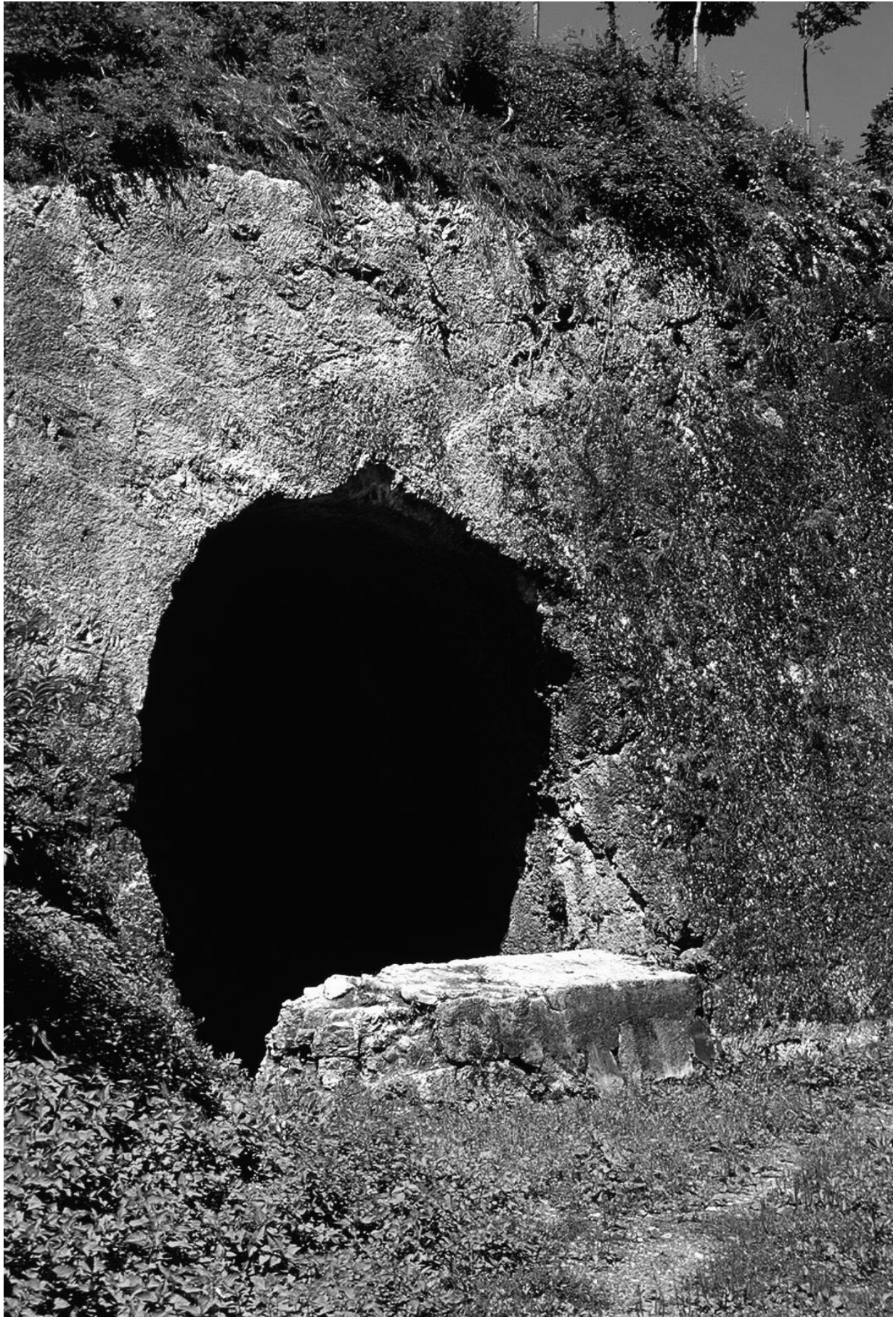
*Demonto Fort (Cuneo). Plan of the Counterscarp Tunnel of the Counterscarp Gallery of the Bastion of Saint Ignatius (CA 00002 PI CN). From the left are the loophole overlooking the ditch, the uncovered Counterscarp Gallery of the Bastion of Saint Ignatius and the Counterscarp Tunnel with its two demolition tunnels; at the front is the guide for the sluice gate of the underlying Drainage Tunnel from which, the counterscarp branches and their relative chambers laterally branch.*



*Demonto Fort (Cuneo).  
"Tenaglione verso Stura" cut into the limestone, situated east of the Bastion of Saint Ignatius  
(photo G. Padovan).*

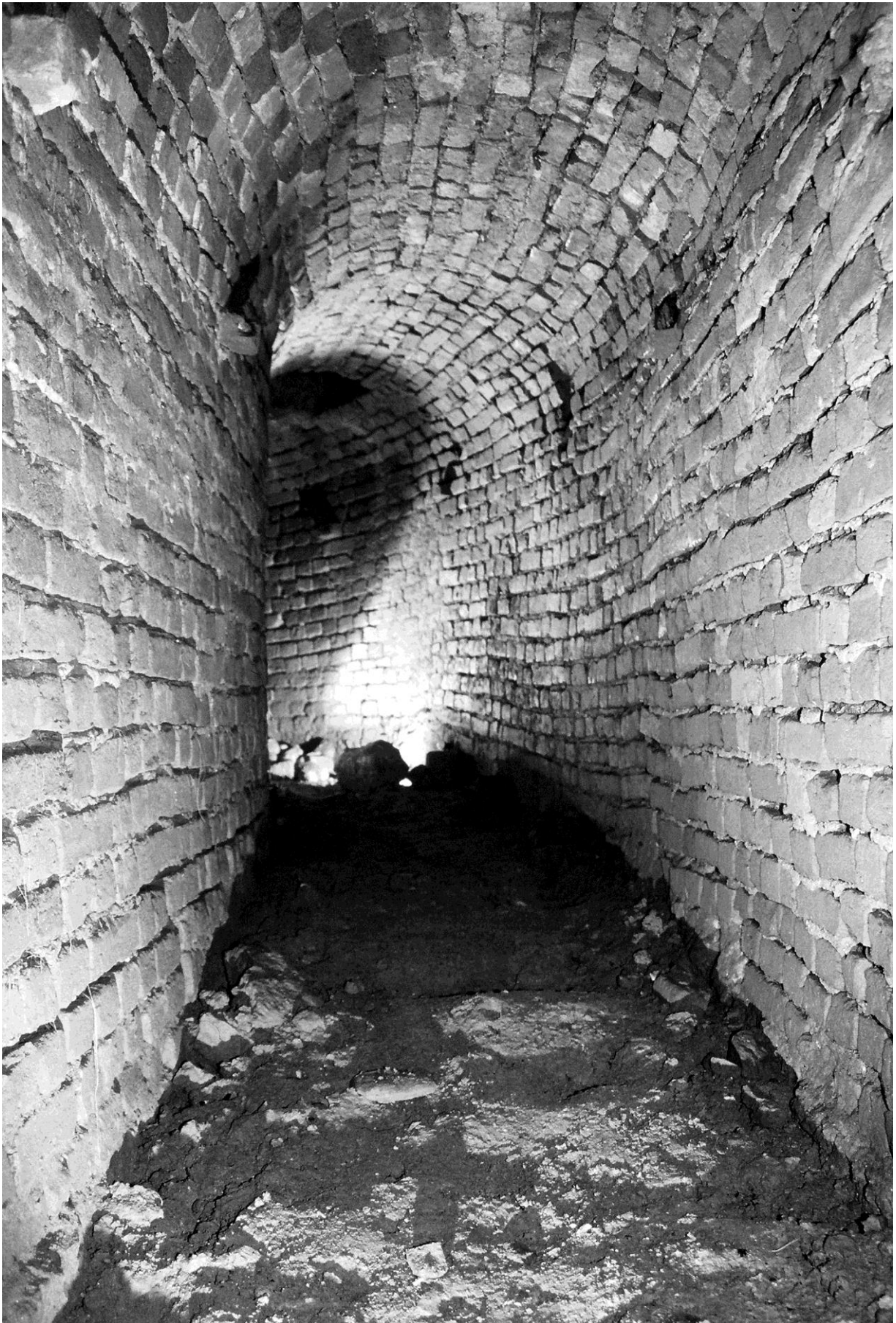


*Demonto Fort (Cuneo).  
Ditch Drainage Tunnel of the Bastion of Saint Ignatius (CA 00003 PI CN) (photo G. Padovan).*



*Demonto Fort (Cuneo).  
Primary Shelter on the Hornwork Counterscarp (CA 00005 PI CN) (photo G. Padovan).*

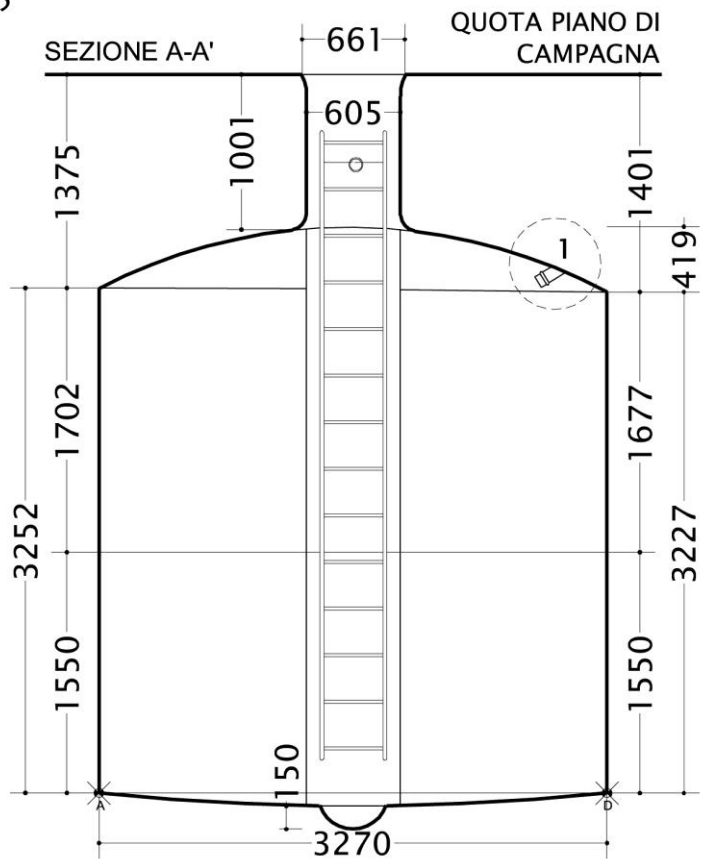
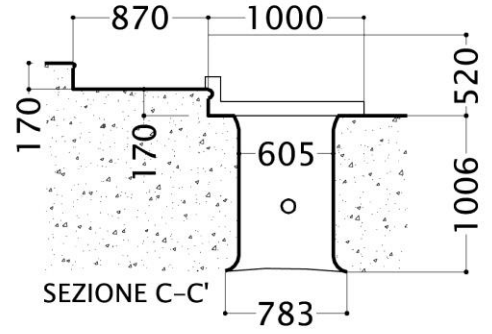
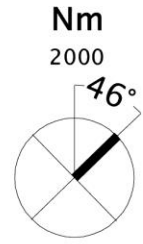
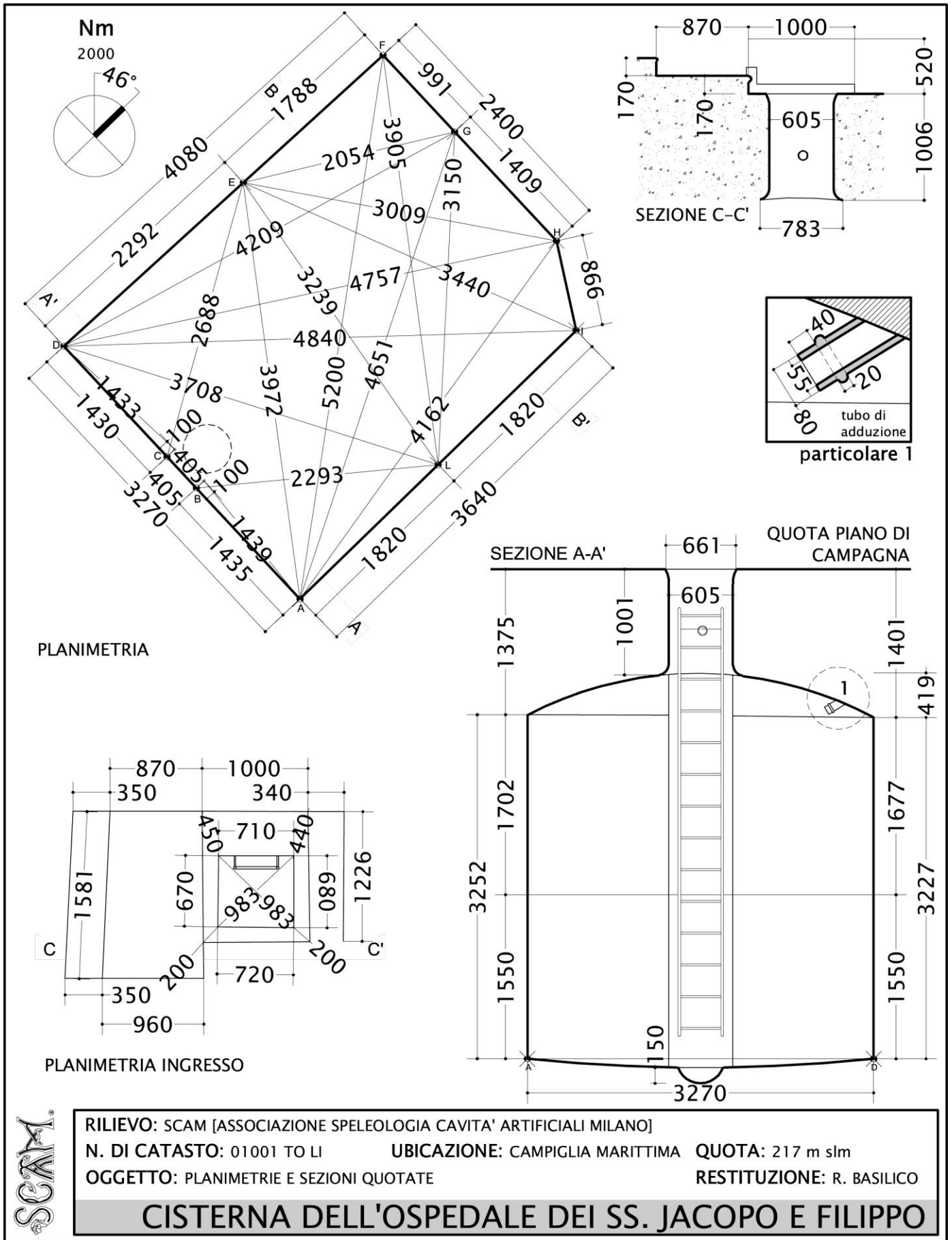




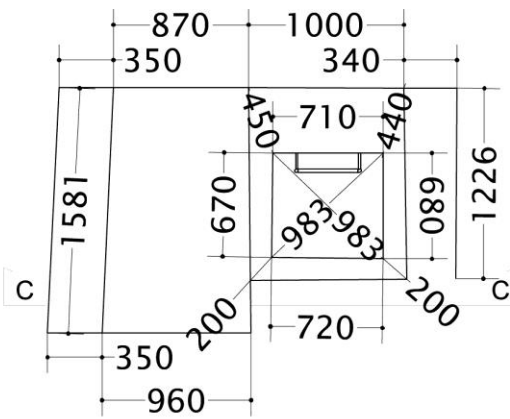
*Verrua Savoia. First section of the Tunnel (CA 00011 PI TO) (photo G. Padovan).*



*Roberto Basilico: internal section of the first part of Pavarolo Castle Well (CA 00030 PI TO).  
The thick copper cable used to earth the lightning conductor, the rubber pipe linked to the motor pump and  
speleological ropes can be seen in the photograph  
(photo G. Padovan).*



PLANIMETRIA



PLANIMETRIA INGRESSO

QUOTA PIANO DI CAMPAGNA

SEZIONE A-A'

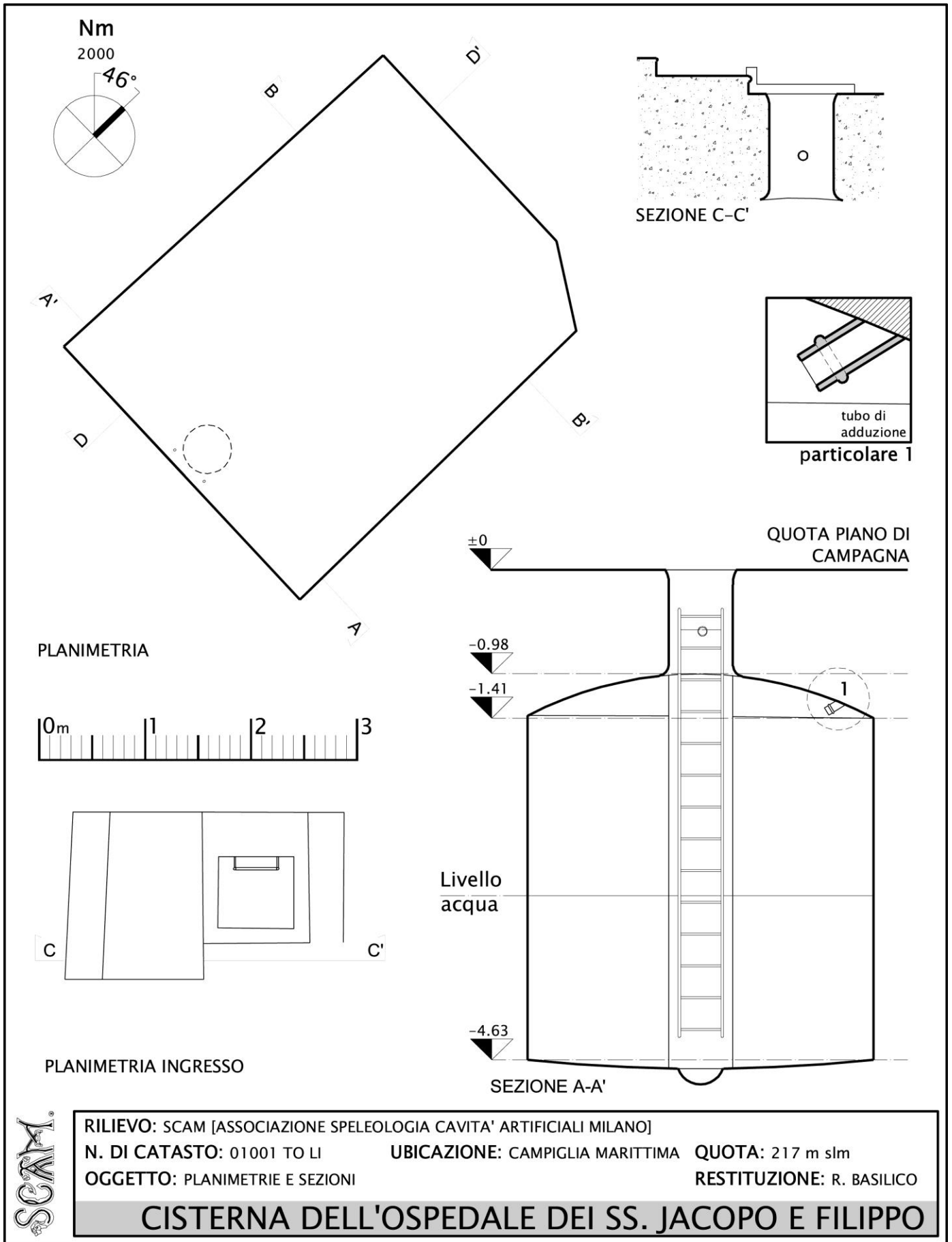
SEZIONE C-C'

particolare 1

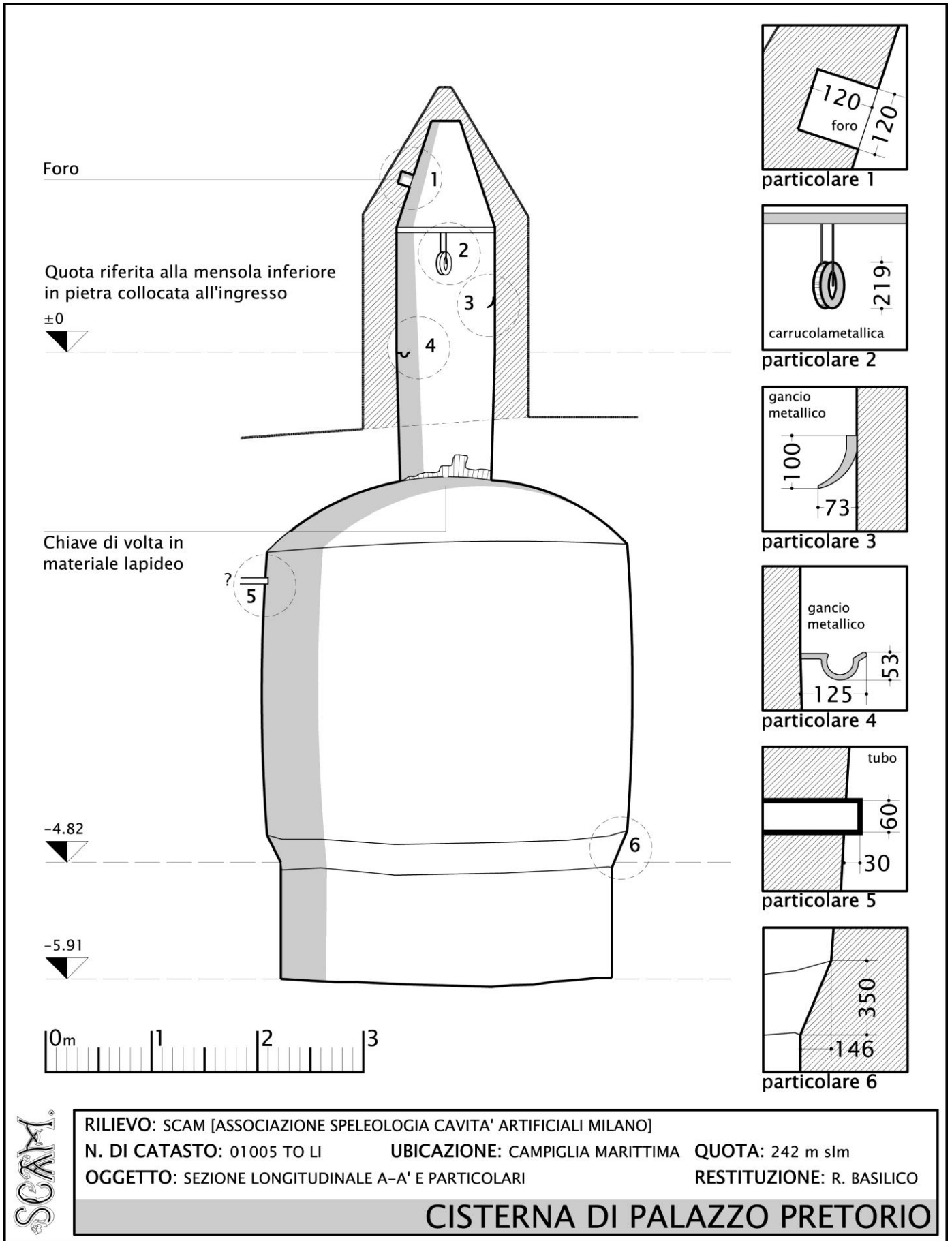


**RILIEVO: SCAM [ASSOCIAZIONE SPELEOLOGIA CAVITA' ARTIFICIALI MILANO]**  
**N. DI CATASTO: 01001 TO LI**      **UBICAZIONE: CAMPIGLIA MARITTIMA**      **QUOTA: 217 m slm**  
**OGGETTO: PLANIMETRIE E SEZIONI QUOTATE**      **RESTITUZIONE: R. BASILICO**

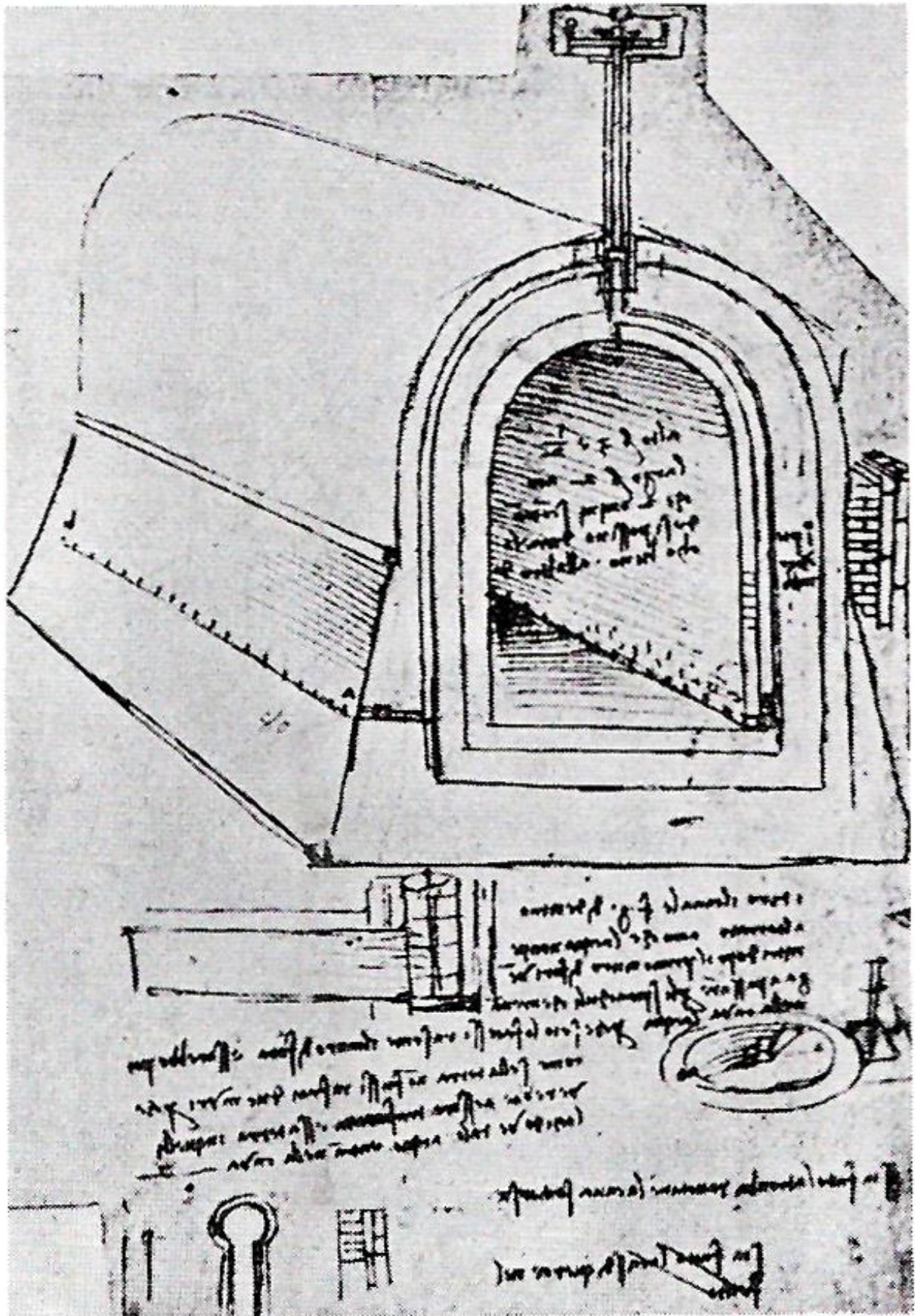
**CISTERNA DELL'OSPEDALE DEI SS. JACOPO E FILIPPO**



Campiglia Marittima (Livorno). San Jacopo and San Filippo Hospital Cistern (CA 01001 PI TO).



Campiglia Marittima (Livorno). Pretorio Palace Cistern (CA 01005 TO LI).



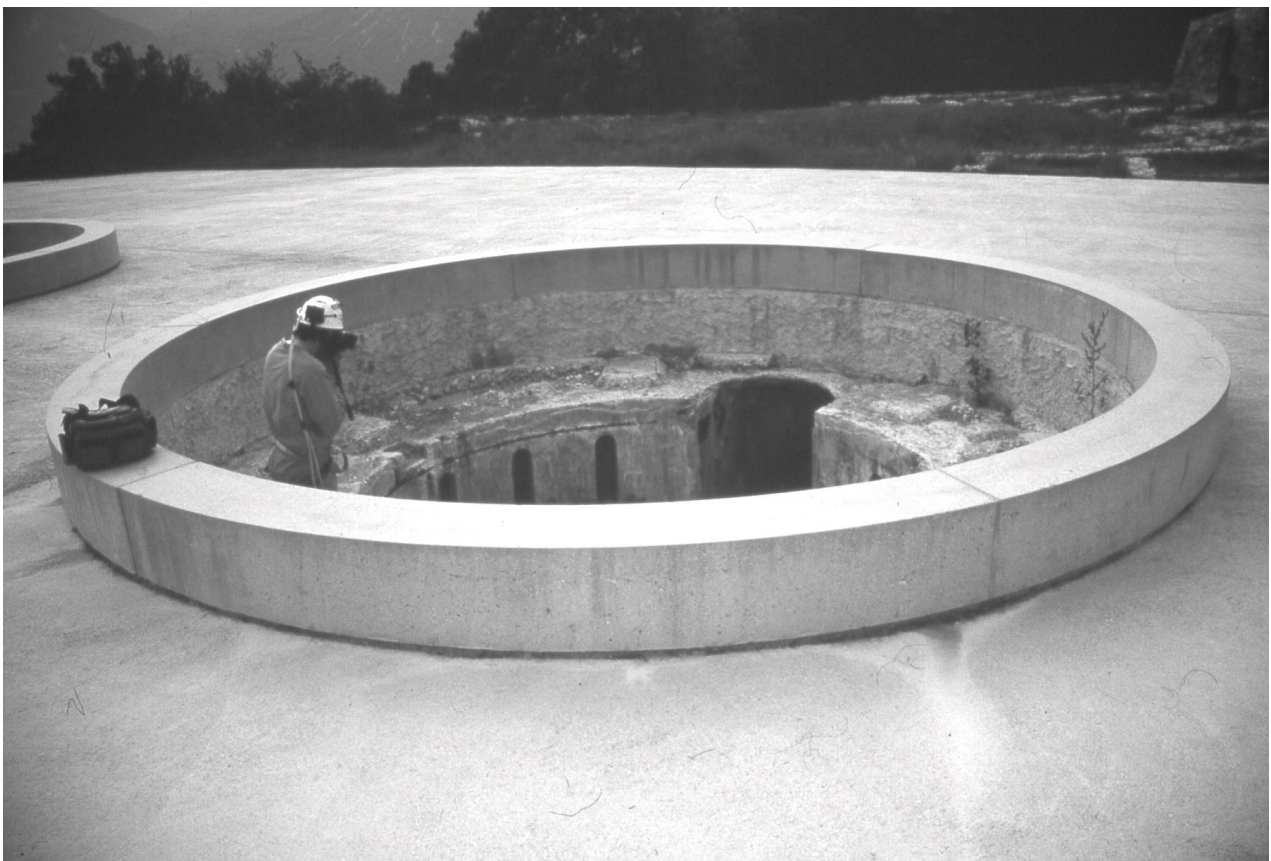
System used to flood a fortification's internal communication tunnel  
(Leonardo da Vinci, Codex Atlanticus, folio 359, verso-a).



*Aquae Olle Hypogeal Stairway (CA 02066 LA RM) in San Cosimato (Rome). The tunnel currently leads to both the Hermitage of St. Benedict, carved into the rock face from a hypogeal tomb and to the subterranean section of aqua Claudia. The roadway was undoubtedly made in Roman times and served the aqueducts, which in this section extend beyond the gorge of the River Aniene and are carved into the overhanging travertine wall (photo G. Padovan).*



*Fort Montecchio Nord, in Colico (Lecco). The only Italian First World War fort to survive intact. In the foreground is one of the four revolving turrets ("S" installation, Schneider), armed with a 149/35 cannon (photo G. Padovan).*



*South Battery of Fort Osoppo (Udine) built at the beginning of the XX century. It consisted of four 149 A "Grillo" armoured cannons (Fiala 1988, pg. 249. Club Alpinistico Triestino 1994, pgs. 34-37). A speleologist inside one of the four well installations with no cupolae or artillery pieces (photo G. Padovan).*





*“Antro delle Gallerie” (Gallery Cavern) in Valganna (Varese) Discovered at the end of the XIX century by Abbot Inganni of Milan. Its purpose is still unknown. The cavern extends for more than two kilometres. The photograph shows a communication shaft between two levels. The lower level is flooded (photo G. Padovan).*