

Excavation of the by-pass tunnel after the first reservoir drawdown

25 - The window of the by-pass tunnel near Colombèr Bridge

Photo Edoardo Semenza, 20 February 1961
from *Le foto della frana del Vajont - S2_45*

During construction of the access road for the by-pass tunnel, stratified alluvial sediments of the old Vaiont stream channel were exposed (foreground). These sediments were at the same elevation and in an analogous position to those found below the base of Colle Isolato (see photographs 26 below, 13 and 14 in panel 6, and 16 in panel 7).



26 - The base of Colle Isolato after the first drawdown

Photo Edoardo Semenza, 20 February 1961
from *Le foto della frana del Vajont - S2_48*



The base of the rock mass that forms Colle Isolato, as it appeared after the first drawdown (cf. photo 13 in panel 6, showing an area more to the south). A year of inundation and the subsequent lowering of the reservoir had eroded the surficial sediments, bringing to light previously covered important evidence, fluvial gravel and sand deposited by the Vaiont Stream lying beneath Colle Isolato. A few meters of Fonzaso Formation limestone, which Edoardo Semenza interpreted to be a “planed fold” that had been overridden during the movement of the paleolandslide, formed the base of Colle Isolato. Above the Fonzaso Formation, the Socchèr Formation outcropped with attitudes discordant from those of the rest of north valley slope, but in stratigraphic continuity with the formations exposed on the opposite side of the gorge (i.e. the north slope of Monte Toc). This evidence confirmed that Colle Isolato was a part of the body of one or more landslides that occurred in the past when the old Vaiont streambed was located north of its present location.

To the left, the building site of the by-pass tunnel at Colombèr Bridge. To the lower right stable bedrock of the Vaiont Formation. To the upper right, the western wall of Punta del Toc. In the centre is debris of the landslide of November 4, 1960, and to its left is Colle Isolato.

The gradual, controlled lowering of the reservoir was carried out according to the recommendation of Professor Müller to control the movements of the rock mass. The lowering was also required to excavate a by-pass tunnel on the north side of the valley, opposite the landslide, as planned by Engineer Carlo Semenza. If the valley were to be blocked by a landslide, the by-pass tunnel would have prevented an uncontrollable rise in water level to the east, which would have represented a danger to the villages in the valley. In addition, the by-pass tunnel would enable continued power generation.

27 - Vaiont Valley after the first reservoir drawdown

Photo Edoardo Semenza, 10 April 1961 | from *Le foto della frana del Vajont - S2_55*

