



moving magma and usually are the first signs of an impending major eruption. The U.S. Geological Survey said yesterday that Nevado del Ruiz suffered "two catastrophic eruptions" Wednesday night between 11 p.m. and midnight.

The back-to-back eruptions on the northeast flank of the mountain melted enough ice and snow on the mountaintop to trigger what the USGS called "two catastrophic mud flows down the northeast flank," which were channeled directly into the Lagunillas River in the broad valley at the base of the mountain. Eyewitnesses said the mud in four

and tallest of six volcanoes strung out in a line through central Colombia. Nevado del Ruiz is the most volcanic in the Andes Mountains. Nevado del Ruiz has also been the most destructive of the six Colombian volcanoes, erupting in a "thunderous" explosion on March 12, 1595, and erupting again in 1828 and 1829. The volcano was "still smoking" in 1831 after its two 19th-century eruptions.

The Colombian mountain was also the scene of a major earthquake on Feb. 19, 1845, that shook loose enough snow and ice on top of the mountain to trigger one of the

largest mud slides in South American history. The USGS' Dr. Darrel G. Herd described it as a "wall of mud, trees and ice that went racing down the valley to the Rio Magdalena, killing an estimated 1,000 people" then living in the valley.

Why did Nevado del Ruiz go almost 400 years without a major eruption? Geologists say they don't know, but many suspect it is in the makeup of the magma that lies below the volcanoes that formed the Andes Mountains.

"The magmas in the Andes are very viscous and stickier, let's say, than the magmas that lie beneath the Hawaiian volcanoes," Christian-

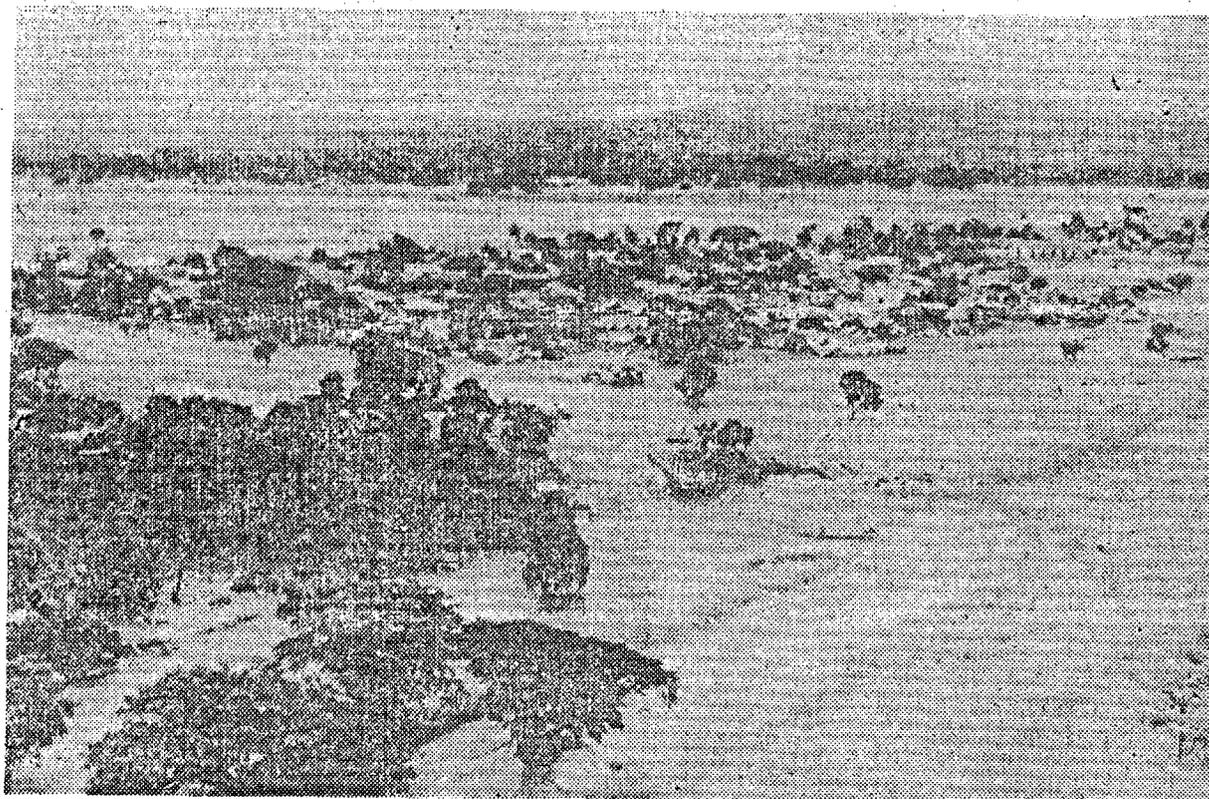
their gases, allowing pressure to build rather than venting them in a way that would relieve the pressure that builds up inside volcanoes, he said. "Hawaiian volcanoes are always blowing off pressure, which might be one reason they don't erupt catastrophically."

Another reason lies with volcanoes themselves, among the most unpredictable phenomena of nature. Said Dr. Meyer Rubin of the USGS: "Volcanoes can go 1,000 years without an eruption. There's no way to predict their behavior."

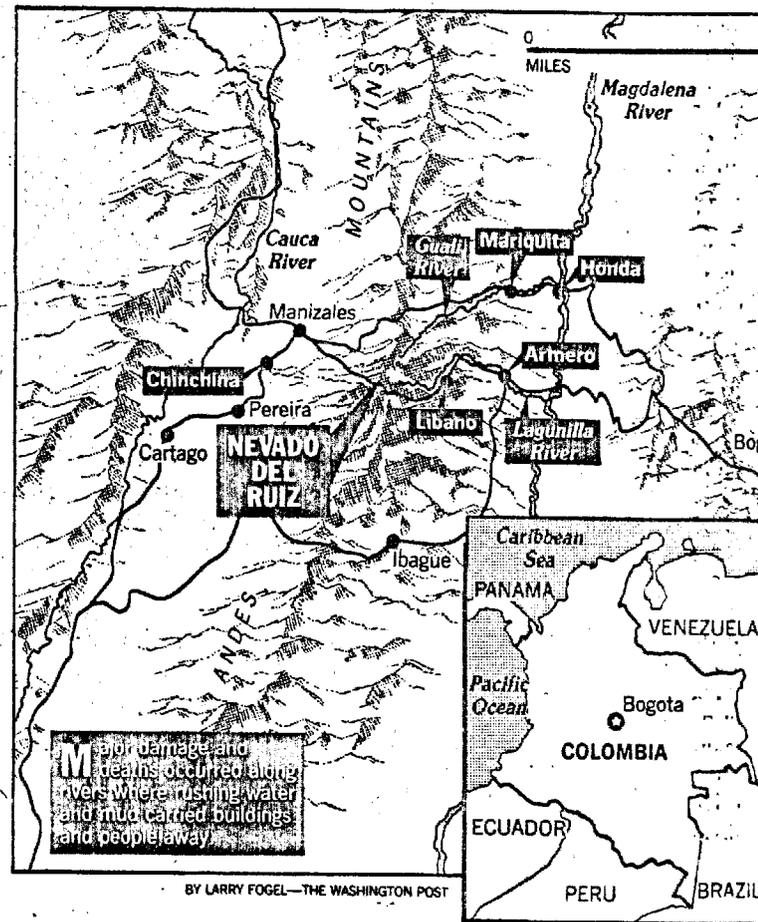
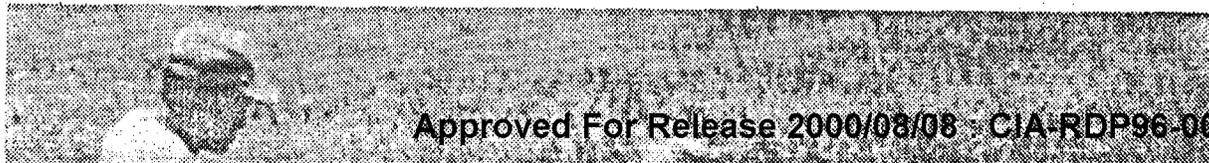
The upward movement of magma can continue off and on for years,

the weight of the rocks above are holding it in. The result could be another eruption. The twin eruption of Nevado del Ruiz Wednesday night could thus signal the start of an eruptive period that could last another 10 years.

There is also the chance Nevado del Ruiz will have an impact on the world's weather. Depending on how much sulfur dioxide gas pumps into the upper atmosphere the erupting volcano could send a cloud of gas and dust around the world blocking just enough sunlight from reaching the surface to cool the earth by a degree or two.

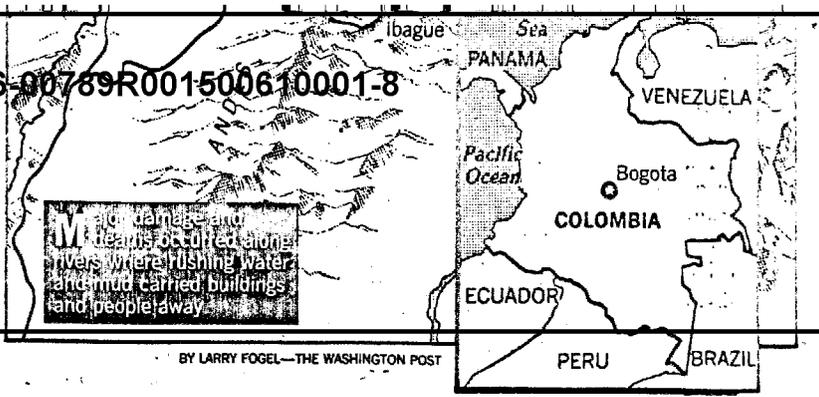


Mud surrounds and partially buries Armero, as seen from a nearby hill. The town center is inundated at lower right.



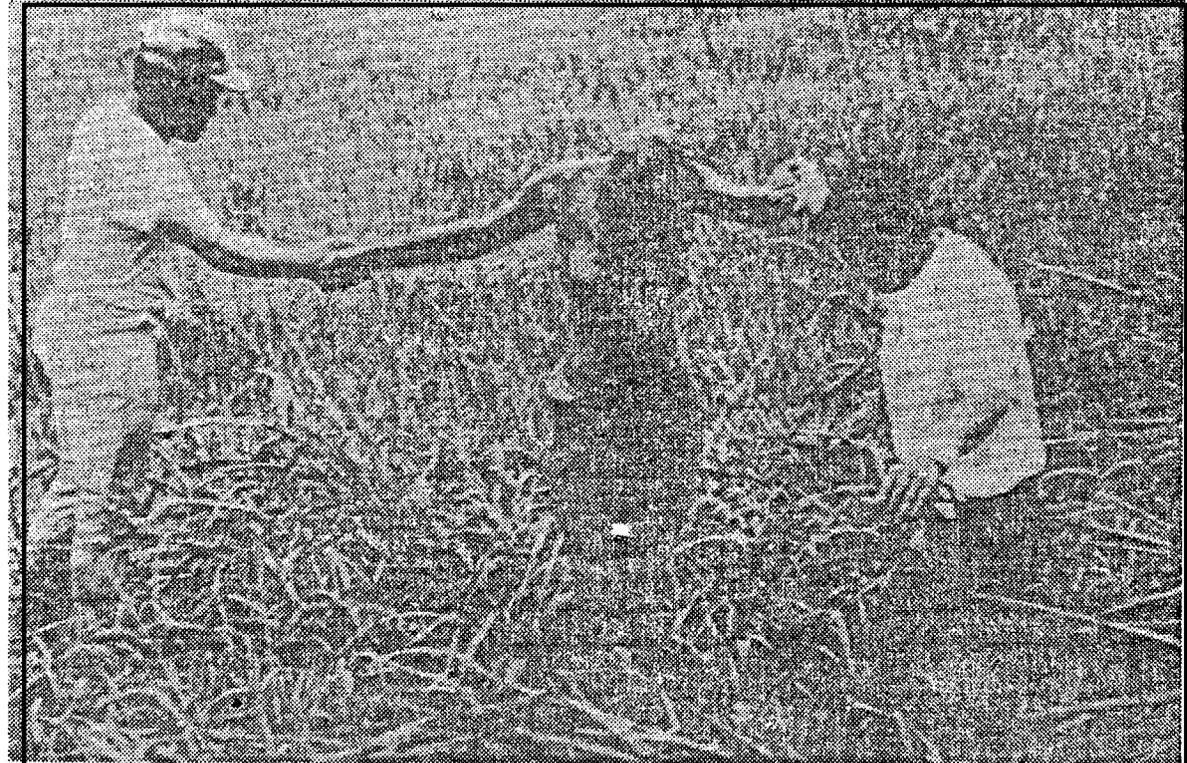
Major damage and deaths occurred along rivers where rushing water and mud carried buildings and people away.

BY LARRY FOGEL—THE WASHINGTON POST



BY LARRY FOGEL—THE WASHINGTON POST

surrounds and partially buries Armero, as seen from a nearby hill. The town center is inundated at lower right.



UNITED PRESS INTERNATIONAL/REUTER

Colombian rescue workers assist a woman washed away from the town of Armero by the muddy flood waters.

n church—a 5- or 6-story build-  
—was almost completely buried,  
said.  
cheverry made it to safety, he  
lained, by building a bridge to  
ground with bits of wood, pick-  
his way past pieces of pots, tele-  
on sets, homes and bodies.  
peaking calmly but bitterly, the  
pital administrator criticized  
ernment authorities for hesitat-  
before declaring an emergency.  
pite reports of volcanic activity  
3 p.m. yesterday, he said, nation-  
adio stations were still advising

after a natural dam of rocks and  
stone above the town broke under  
the force of onrushing waters.  
The destructive mud flows had  
been predicted in a report  
presented only yesterday by Colum-  
bian geologists. The report was or-  
dered several months ago after  
Nevado del Ruiz started showing  
early signs of reawakening. It was  
the scene of an earthquake in 1845  
that set off floods and killed about  
1,000, according to historian Joa-  
quin Acosta.  
The last time lava flowed was in

But less accurately—as last  
night's events proved—the report  
also predicted that the flow of mud  
would be slow and easily permit the  
evacuation of surrounding popula-  
tions. Citing Armero specifically,  
the study—as summarized in to-  
day's editions of the Colombian dai-  
ly El Tiempo—said the town could  
be cleared within two hours without  
danger.  
The disaster occurred in the cen-  
tral air traffic corridor and its ex-  
plosion last night was witnessed by

*Some wept. Others, dressed only in the  
underwear or bedclothes they had on when  
the disaster struck, shivered in shock in  
the warm air here.*

CPYRGHT CPYRGHT

## Ruined Town's Survivors Describe Night of Horror

ARMERO, From A1

her and her family as they climbed  
to the second story to pray for their  
lives.

Sandra Patricia Perez, 13, her  
face badly scratched and her head  
wrapped in a white cloth, said she  
nearly choked beneath the mud but  
somehow remained conscious as  
she tumbled away from Armero in  
the flood.

Hortensia Oliveros, 19 years old  
and eight months pregnant, saw the  
rushing water sweep their 11-  
month-old child out of her hus-  
band's arms. In the panic, she heard  
her husband shout to her to grab a  
branch, but that was the last she  
heard of him. She ended up near a  
road outside of Armero screaming

in Armero instructed him to take  
cover in the stadium. There, he saw  
perhaps 3,000 people pressing  
against the entrance when the tor-  
rent of hot mud came over them.

He, too, was immersed in the  
flood, he said, which scalded his  
body. Holding to a tree branch, he  
drifted six miles to the town of  
GuayaVal, where at 5:30 this morn-  
ing he was rescued. "I was just  
about to give up," he said. His wife,  
eight months pregnant, has not  
been found.

In this town, about six miles  
north of Armero, flood waters  
knocked out a bridge spanning the  
Guali River and demolished 10 to  
20 waterside homes, said residents.  
Some people decided to evacuate,  
but hundreds of curious onlookers

025

AV - none  
PI - none (not)

7 June 1988  
9434

0126  
1155

A. across  
space  
hard  
B. land

0126  
1185

A. slowly up  
over slowly  
down  
B. motion  
movement

\_\_\_\_\_

A. short bursts  
movement  
excitation

0126  
1185-

A. across  
hand  
B. no-B

0126  
1185-

A. enclosed  
ami-hand  
B. no-B

S-2

Dark  
almost black  
pat  
(note (note))

AT-DK  
2 words per line  
as if my hands  
were touching  
speak per line

0126  
1185

A. ~~copy~~

ADL-BK  
Machony  
  
gppppp  
ppppp  
ppppp

S-2  
vibration  
Black  
Dark  
light pencil  
has  
enclaved page  
Dark  
~~no simulation~~  
I be inside

Edited out of comic  
1999/08/08

1507