

Killer landslide

Alberta's infamous Frank Slide, Canada's deadliest, is replicated in amazing detail

BY STEVEN FICK AND MARY VINCENT

FISSURES AT THE SUMMIT opened, and within two minutes, 82 million tonnes of rock and earth were hurtling down the precipitous eastern face of Turtle Mountain at 140 kilometres an hour, crossing the Crowsnest River, the railway tracks and the main road and roaring right into the sleeping community of Frank, Alta. At 4:10 in the morning on April 29, 1903, the 600 residents of the Rocky Mountain mining town were jolted awake by the thundering, rumbling horror. At least 70 people perished in what still stands as Canada's deadliest landslide.

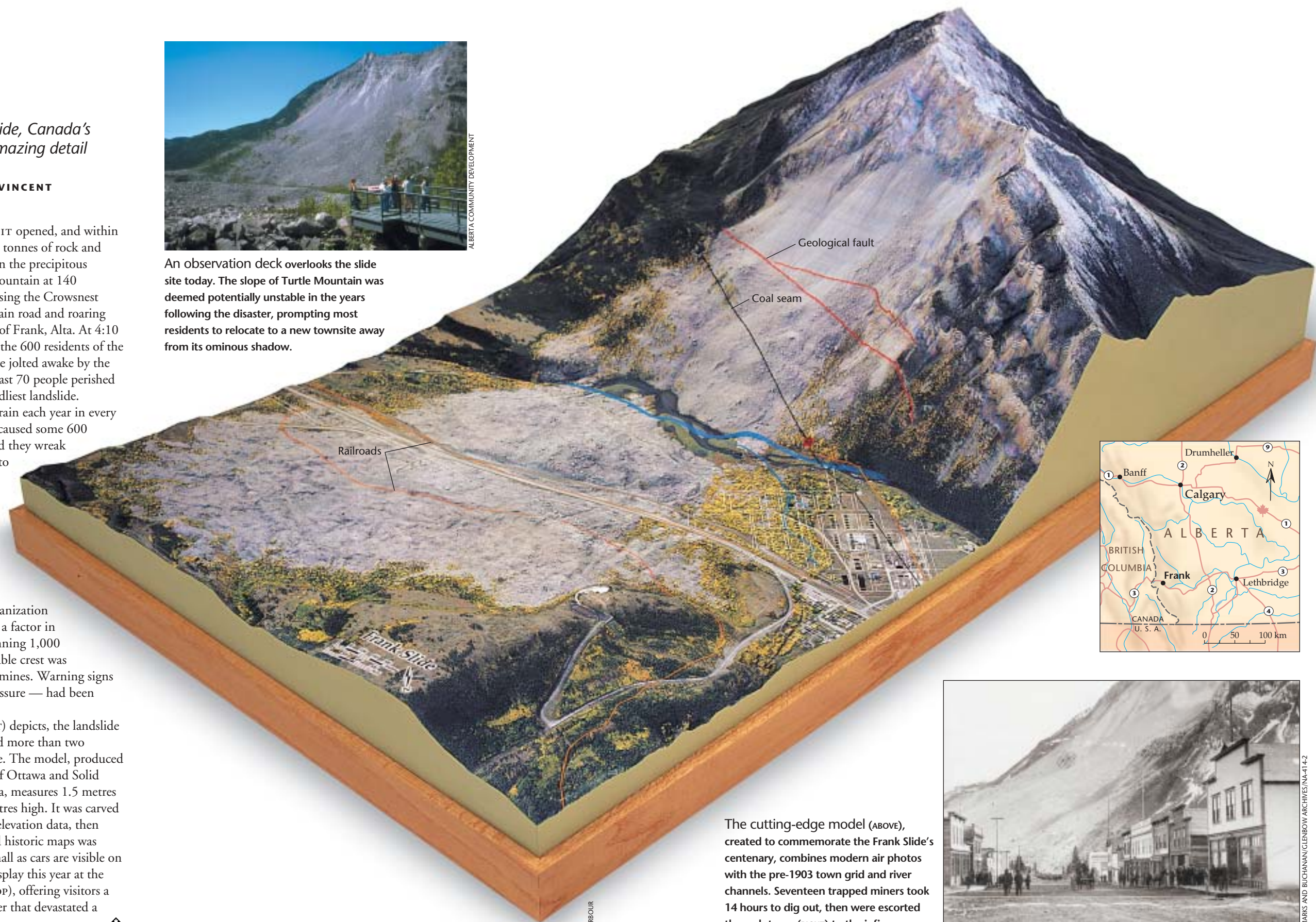
Thousands of slides alter the terrain each year in every province and territory. They have caused some 600 fatalities in Canada since 1850, and they wreak an economic cost of \$100 million to \$200 million a year in property damage, blocked rails and roads and pipeline explosions. Incalculables include damage to salmon spawning grounds. Most slides are triggered by natural factors, such as geology, water, ice, wind and temperature. Human catalysts include deforestation, urbanization and mining, which may have been a factor in the Frank Slide. The coal seam running 1,000 metres under the mountain's unstable crest was honeycombed by room-and-pillar mines. Warning signs — cracked timbers, coal under pressure — had been reported in prior months.

As the 3-D terrain model (RIGHT) depicts, the landslide flowed like thick liquid and reached more than two kilometres from summit to advance. The model, produced by GeoSolutions Consulting Inc. of Ottawa and Solid Terrain Modeling Inc. of California, measures 1.5 metres long, 1 metre wide and 40 centimetres high. It was carved in high-density foam using digital elevation data, then information from aerial photos and historic maps was printed on its surface. Details as small as cars are visible on the model, which will be put on display this year at the Frank Slide Interpretive Centre (TOP), offering visitors a new perspective on a natural disaster that devastated a young community a century ago. ♦



ALBERTA COMMUNITY DEVELOPMENT

An observation deck overlooks the slide site today. The slope of Turtle Mountain was deemed potentially unstable in the years following the disaster, prompting most residents to relocate to a new townsite away from its ominous shadow.



MARSH AND BUCHANAN/GLENBOW ARCHIVES/NA-1142

The cutting-edge model (ABOVE), created to commemorate the Frank Slide's centenary, combines modern air photos with the pre-1903 town grid and river channels. Seventeen trapped miners took 14 hours to dig out, then were escorted through town (RIGHT) to the infirmary.

PHOTO BY DAVID BARBOUR