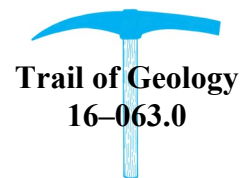


OUTSTANDING GEOLOGIC FEATURE OF PENNSYLVANIA

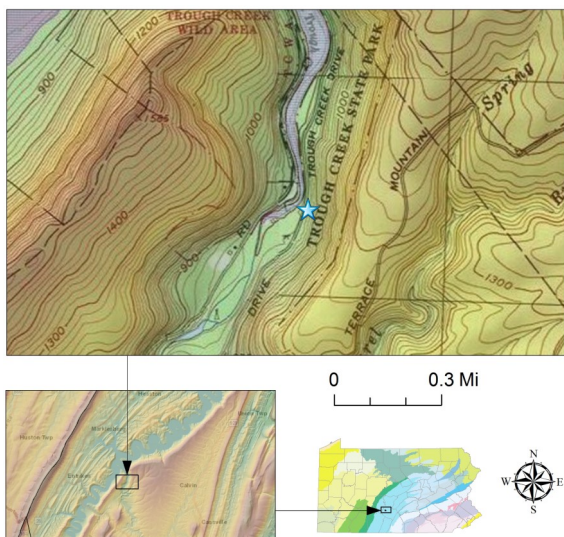
ICE MINE, HUNTINGDON COUNTY

Stuart O. Reese, 2016



Location

Trough Creek State Park, Huntingdon Co., Todd Twp.,
lat: 40.33193, lon: -78.12342; Cassville 7.5-minute quadrangle



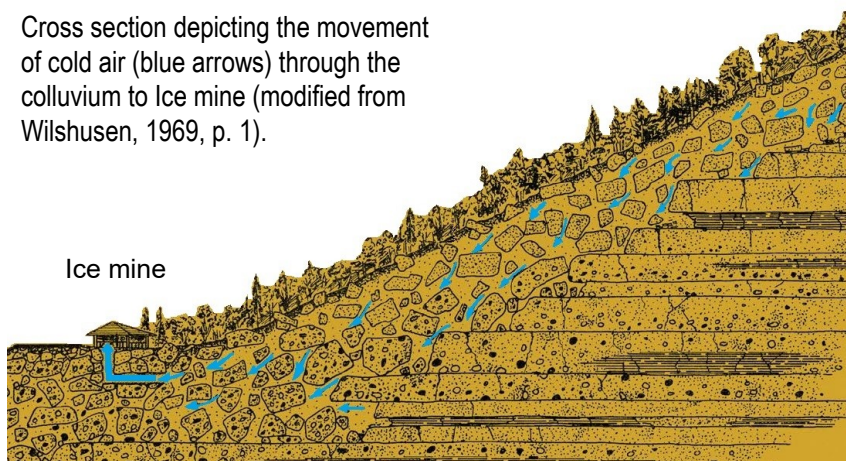
Geology

Ice mine, thought to be a mining prospect hole, is a short opening at the base of a hillside in Trough Creek State Park. The rocks in the area are approximately 350-million-year-old sandstones and conglomerates of the Rockwell and Pocono Formations. Frost action and weathering has broken the rocks near the surface into loose slabs and blocks called colluvium. During the winter months, cold dense air fills the voids in the colluvium and flows down through the rock mass to the mine, which functions as an air duct through which the cold air escapes.

In the spring, melting snow and the warm moist air in the atmosphere are met by the flow of cold air at the mine opening causing ice to form. This accumulation of ice continues into the summer until the flow of cold air from the rock mass stops. Although the cold air is also flowing out in the winter, the icing effect is surprisingly minimal compared to the spring and summer months because of the winter's dry air.



Cross section depicting the movement of cold air (blue arrows) through the colluvium to Ice mine (modified from Wilshusen, 1969, p. 1).



Recommended Reading

Wilshusen, J. P., 1969, Trough Creek State Park—Ice mine and Balanced Rock: Pennsylvania Geological Survey, 4th ser., [Trail of Geology 16-001.0](#), 4 p.

[Trough Creek State Park](#) web page of DCNR.

Views of Ice mine: the outside, the stair steps, and the inside (photographs courtesy of Heidi Mullendore, Pennsylvania Bureau of State Parks).