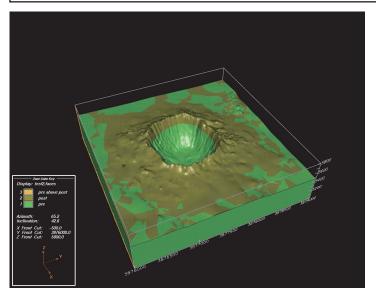


Barringer Meteorite Crater, Arizona (Meteor Crater)

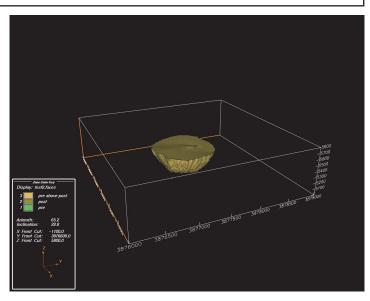
David J. Roddy and Trent M. Hare Astrogeology U.S. Geological Survey Flagstaff, AZ 1998

This crater was formed by the impact of an iron-nickel meteorite impacting into the high arid plains of the Colorado Plateau about 50,000 years ago. The body, estimated to have been about 50 meters in diameter and weighed several hundred thousand metric tons, was traveling on the order of 15 kilometers per second and impacted with a kinetic energy of some 30-40 megatons of TNT equivalent. The result of the collision was to form, in just a second or so, a large bowl-shaped crater 1.2 kilometers across and over 150 meters deep. Nearly 100 million tons of rock were thrown out to form a continuous ejecta blanket around the crater. Strong air and ground shock waves were felt for tens of kilometers away. Relatively little erosion has occurred leaving the crater well-preserved. The Barringer Meteorite Crater now serves as the prototype of the classic bowl-shaped impact crater found thruout in our solar system. It has played a dominant role in public education, NASA planetary studies, and scientific research in impact cratering.

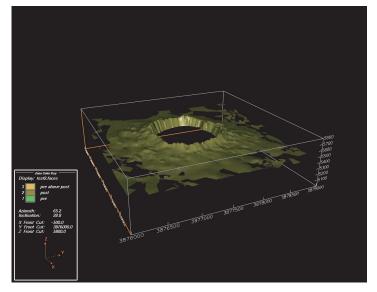
Figures below were created in May of 1998 using the software package EarthVision by Dynamic Graphics. The verticle relief has an approximate exaggeration factor of two. These figures and the data used is not final and should be consider work in progress.



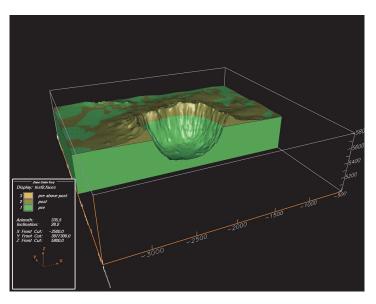
1.) Oblique view of crater (green), showing uplifted rim and eject blanket (brown).



2.) Oblique view of crater in cross-section.



3.) Oblique view of crater showing the rim and ejecta blanket. Pre-impact ground level shown inside crater.



4.) Oblique view of region excavated during impact to form crater.