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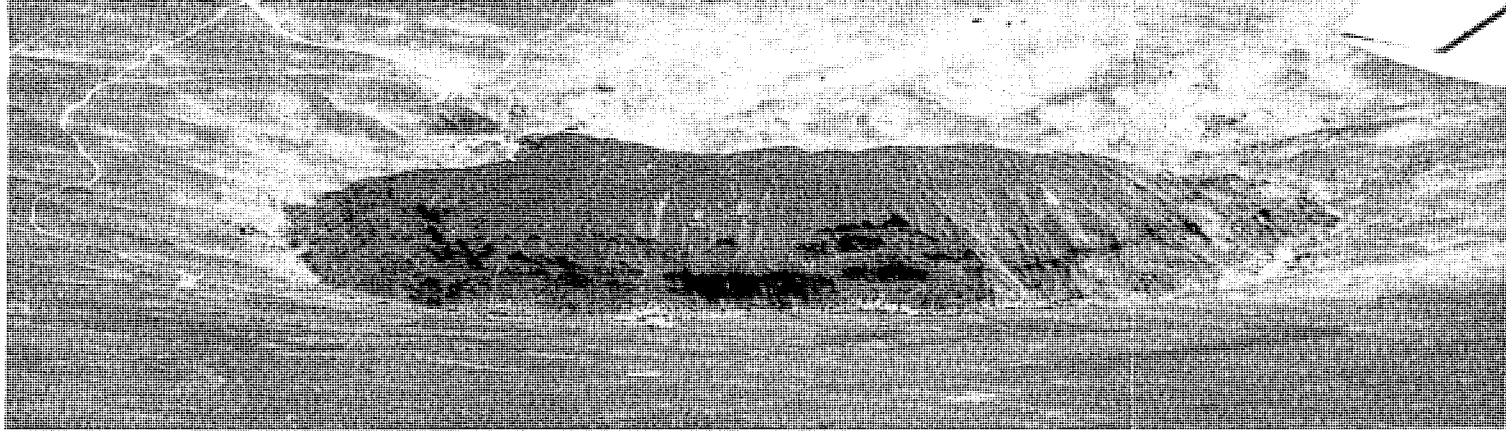
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From

to

**Subject:** METEOR CRATER



Courtesy, Trans World Airlines

The Great Meteor Crater as seen from the air. On the near rim is the road leading up to the little stone building. The 1,376-foot drill hole (see reverse side) is on the far rim, just above the darkest cliff-shadow. The meteor approached the earth very near to the line of sight of this photograph.

The Great Meteor Crater of Arizona is, so far as is known, the world's largest. Other known meteor craters are situated as follows: two near Odessa, Texas; one near Haviland, Kiowa County, Kansas; a group of about thirteen near Henbury, in Central Australia; a very small crater containing the Huckleberry Meteorite, also in Central Australia; a group of seven craters on the Baltic island of Saaremaa (Oesel), in Estonia; the Wabar craters of Arabia; other possible locations, which further exploration might prove to be meteorite craters, such as Ashanti, West Africa, and Campo del Cielo in Argentina. Not only is the Great Meteor Crater of Arizona the world's largest, but it is also the one which has been most thoroughly studied by the scientists of the world.

The Great Meteor Crater was first discovered by white men in 1871, though the Indians had known it for centuries and had attached supernatural significance to it. In 1903, Daniel Moreau Barringer, geologist and mining engineer, acquired the whole Crater area, and, through the Company he formed, the Standard Iron Company, devoted the rest of his life to the study and development of the Crater. It was through his efforts that scientists came to agree on the Crater's meteoritic origin (it had first been thought by some that the Crater was of volcanic origin), and his successors are continuing to maintain the Great Meteor Crater as a noteworthy attraction for the American public and as a continuing study of the great forces of the universe around us.

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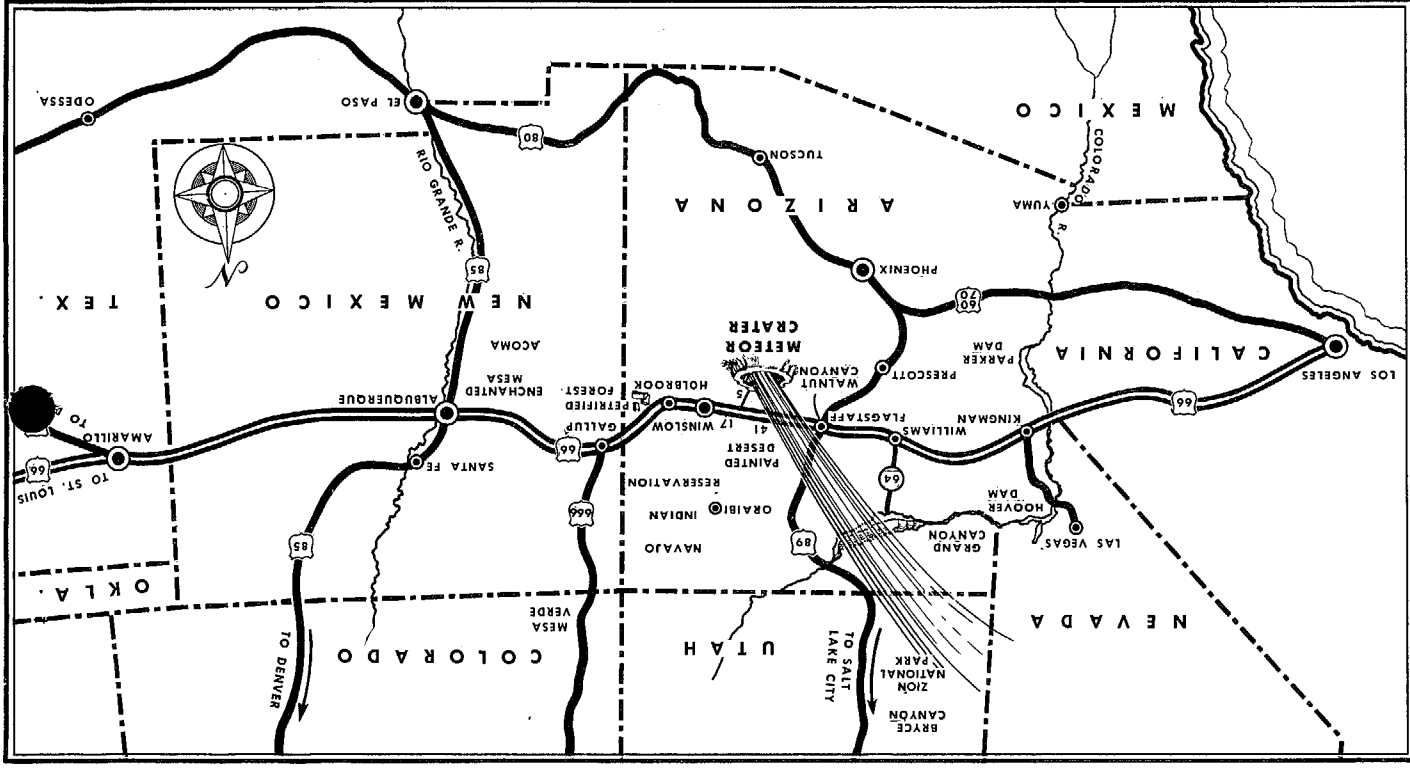
## METEOR CRATER

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STANDARD IRON COMPANY

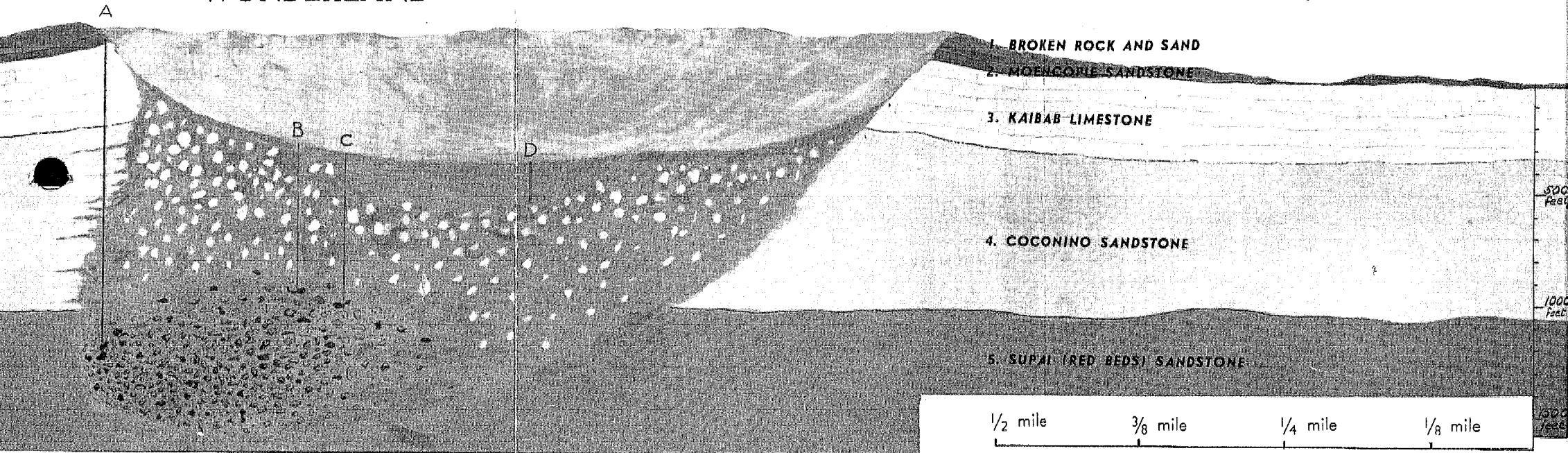
D. MOREAU BARRINGER, President

1528 Walnut Street, Philadelphia 2, Pa.



# A New Experience

## IN ARIZONA'S WONDERLAND



VISIT . . .

# The Great METEOR CRATER of Arizona

This is a cross-section of METEOR CRATER drawn as it would look if the earth were sliced down like a layer-cake. The view is from the east side of the crater.

The layers of rock are seen in this order:

1. Broken rock and sand, thrown out of the hole by the meteorite's impact.
2. Moencopie sandstone.
3. Kaibab limestone.
4. Coconino sandstone.
5. Supai or "Red Beds" sandstone.

Into this series of rock layers plunged the cluster of meteorites (black in the picture) plowing out the hole you see. They approached from the north (right) and lie buried beneath the southern (left) part of the crater. The rock shattered by the crash (light and speckled in the picture) fell back, mostly into the hole, but partly outside to make the rim.

Erosion has washed more of the material back into the crater, part of it being deposited on the bed of an ancient lake in the center, part of it forming the sloping sides.

Fragments of the meteoritic cluster are mingled with this broken rock. On the ground around the crater have been found more iron meteorites than in all of the rest of the world put together.

As shown in the picture, exploration by Daniel Moreau Barringer and his associates has revealed details of the structure of the crater:

1. On the original but mistaken theory that the mass had fallen vertically, because the crater is round, a number of holes were

2. As a result of further study, a deep hole was drilled at "A." This had better luck. From 1,000 to 1,376 feet, where it had to be abandoned, increasing numbers of meteoritic fragments were found.
3. A shaft was sunk from the southern rim, but was stopped by the great amount of water it met.
4. Two more holes were drilled, at "B" and "C." These found similar conditions to hole "A," and were both eventually blocked by iron masses too hard to drill through and too big to shove aside.

No picture can show, of course, the large amounts of study, research, and survey work, by geologic, magnetic, and electronic methods, that have gone into creating this understanding of Meteor Crater. Much more, however, remains to be discovered.

### SALIENT FACTS, KNOWN OR ESTIMATED

**When did the meteorite fall?** . . . Unknown, perhaps fifty thousand years ago.

**How big is it?** . . . Somewhere between a million and ten million tons.

**How much rock did it throw out of the hole?** . . . Between three and four hundred million tons.

**How big is the crater?** . . . About 4,100 feet wide, about 570 feet deep, about three miles around. The outside rim is over 100 feet high.

**What is the meteorite made of?** . . . A nickel-iron alloy.