DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

MISCELLANEOUS FIELD STUDIES
MAP MF-1168

DISCUSSION

The Elko crater field consists of two arrays of rimmed craters in the valleys of Dorsey, Susie, and McClellan Creeks, 30 to 50 km north of Elko, Nevada. In the principal array, more than 165 craters are scattered irregularly in an area 3 km wide and 20 km long. Most of the craters are circular but some, formed by overlap, are oval or irregular. They range from 5 m to 250 m in diameter and the relief of the largest ones, from the sedimentary floor of the crater to the top of the rim, is at least 6 m. The surficial material of the rims is principally gravel similar to that in the surrounding terrane. The surficial material inside the craters is primarily silt, probably blown in by the wind, and pebbles, apparently washed in from the rims. There is also a layer of volcanic ash at a depth of about 2 m. This ash was identified by its physical and mineralogical composition as the Mazama ash (R. E. Wilcox, oral commun., 1976), a ±6600 year old ash bed also present in the alluvium of Dorsey and Susie Creeks. The craters are presently interpreted as having been formed by a meteor shower although no meteor material has been discovered. Investigation is continuing.

REFERENCE

Hope, R. A., and Coats, R. R., 1976, Preliminary geologic map of Elko County, Nevada: U.S. Geological Survey Open-file Report 76-779, scale 1:100,000.

CORRELATION OF MAP UNITS

Qal	QUATERNARY
Ts	TERTIARY
Tt	TERTIARY

DESCRIPTION OF MAP UNITS

Qal ALLUVIUM (QUATERNARY)--Gravel, sand, and silt along modern intermittent streams. Includes vitric ash bed correlated with Mazama ash, about 6600 years old

Ts OLDER ALLUVIUM AND COLLUVIUM (TERTIARY)--Gravel, sand, and silt on slopes and terraces. Includes tuffaceous sand and tuff, especially west of Susie Creek. Late Tertiary in age

Tt ASH-FLOW TUFF (TERTIARY)--Includes some tuffaceous sand and gravel beds. Early Tertiary in age. Distribution based on Hope and Coats, 1976

● CRATER--Queried where identification is uncertain

Base from U.S. Geological Survey, Dinner Station, 1971; Reed Station, 1971; Singletree Creek, 1968; and Wieland Flat, 1971, 1:24,000

Mapped in 1976, 1979

SCALE 1:48 000

1 ½ 0 1 2 3 MILES

1 .5 0 1 2 3 KILOMETERS

MAP SHOWING THE ELKO CRATER FIELD, ELKO COUNTY, NEVADA

By
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