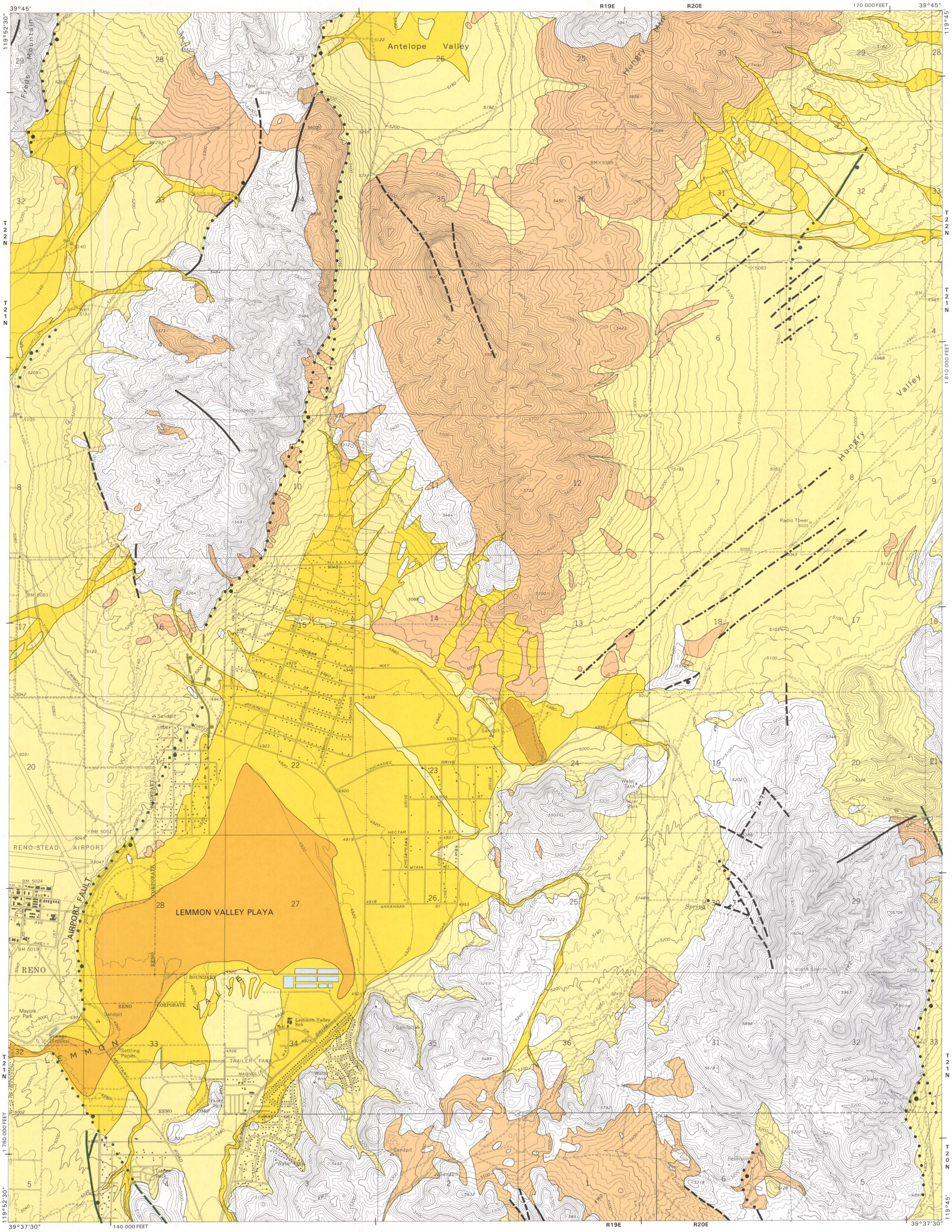
PREPARED IN COOPERATION WITH THE U.S. GEOLOGICAL SURVEY



# RENO NE QUAD




# EARTHQUAKE HAZARDS

*The hazards shown on this map are based upon data currently available. Shaking characteristics are inferred from interpretations of geologic, seismic velocity, soils engineering, and groundwater information. Surface rupture potentials are inferred from generalized geologic and soils (weathering profile) information.*

*These data are intended to be used only as a generalized guide and will be subject to change as more data become available.*

*Assessment of seismic hazard potential for individual sites must be based upon detailed engineering and seismic studies; such assessments should not be inferred from this map.*

## POTENTIAL FOR GROUND SHAKING DURING EARTHQUAKES

*INCREASING INTENSITY OF SHAKING AND POTENTIAL HAZARD*
*Possibly 3 units Mercalli intensity scale difference from I to IV*

**I** — Greatest severity of shaking. Depth to groundwater less than 3 m (10 ft). Unconsolidated deposits with low rigidity. Possible severe liquefaction locally.

**II** — Moderate to possibly severe shaking. Includes unconsolidated deposits with low rigidity where depth to groundwater is greater than 3 m (10 ft); also includes unconsolidated deposits with moderate rigidity where depth to groundwater is less than 10 m (33 ft). May be subject to liquefaction.

**III** — Moderate severity of shaking. Includes unconsolidated to moderately consolidated or cemented deposits of moderate to moderately high rigidity where depth to groundwater is greater than 10 m (33 ft); moderately consolidated or cemented deposits (Tertiary sediments) where depth to groundwater is greater than 3 m (10 ft); and thin, unconsolidated deposits overlying Tertiary sediments where groundwater is 3–10 m (10–33 ft) deep.

**IV** — Least severity of shaking. Underlain by bedrock.

**V** — Variable severity of shaking. Includes landfill of unknown rigidity; thin deposits of windblown sand overlying alluvial and bedrock units; unconsolidated older alluvium overlying shallow bedrock; and quartz monzonite which varies in degree and depth of weathering.

## POTENTIAL FOR SURFACE RUPTURE

*Age of youngest fault displacement*

*INCREASING POTENTIAL HAZARD*

Holocene faults (less than 12,000 years) are considered to have the greatest potential for surface rupture. Evidence of Holocene faulting was not found in the Reno NE quadrangle; however, Holocene movement was noted on a fault in the adjoining Reno NW quadrangle.

Mid- to late Pleistocene (approximately 12,000 years to 100,000 years)

Early to mid-Pleistocene (approximately 100,000 years to 1.8 million years)

Indeterminate; predominantly bedrock faults of probable pre-Pleistocene age and bedrock-alluvial faults of probable pre-Pleistocene to possible late Pleistocene age. Recent movements are not precluded on faults in this category.

**Fault** Dashed where approximately located, dotted where concealed, queried where possible fault. Ball on downthrown side

**Lineaments**

**Gail E. Cordy, 1985**

**Assisted by James Szecsody**

Geology by G. E. Cordy, 1985. Geologic map of the Reno NE quadrangle, Nevada: Nevada Bureau of Mines and Geology Map 4Cg, scale 1:24,000.

*Note:* As a result of new and more detailed geologic mapping, potential for ground shaking units that appear on this map may differ from those directly adjacent on the Reno NW quadrangle earthquake hazards map.

Depth to groundwater based on elevations of groundwater table measured in spring and summer of 1982 by the Regional Planning Commission, Washoe County, Nevada, and from geotechnical borings.

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**Scale 1:24,000**

CONTOUR INTERVAL 20 FEET

0 — 0.5 — 1 kilometer

0 — 0.5 — 1 mile

0 — 1000 — 2000 — 3000 — 4000 — 5000 feet

Base map: U.S. Geological Survey Reno NE 7½′ quadrangle, 1967
First edition, first printing, 1985; 1000 copies
Printing: Williams and Heintz Map Corp., Washington, D.C.
Editing: Bridgett Boulton and Alice Sjoberg
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Order Map 4Ci, [redacted]