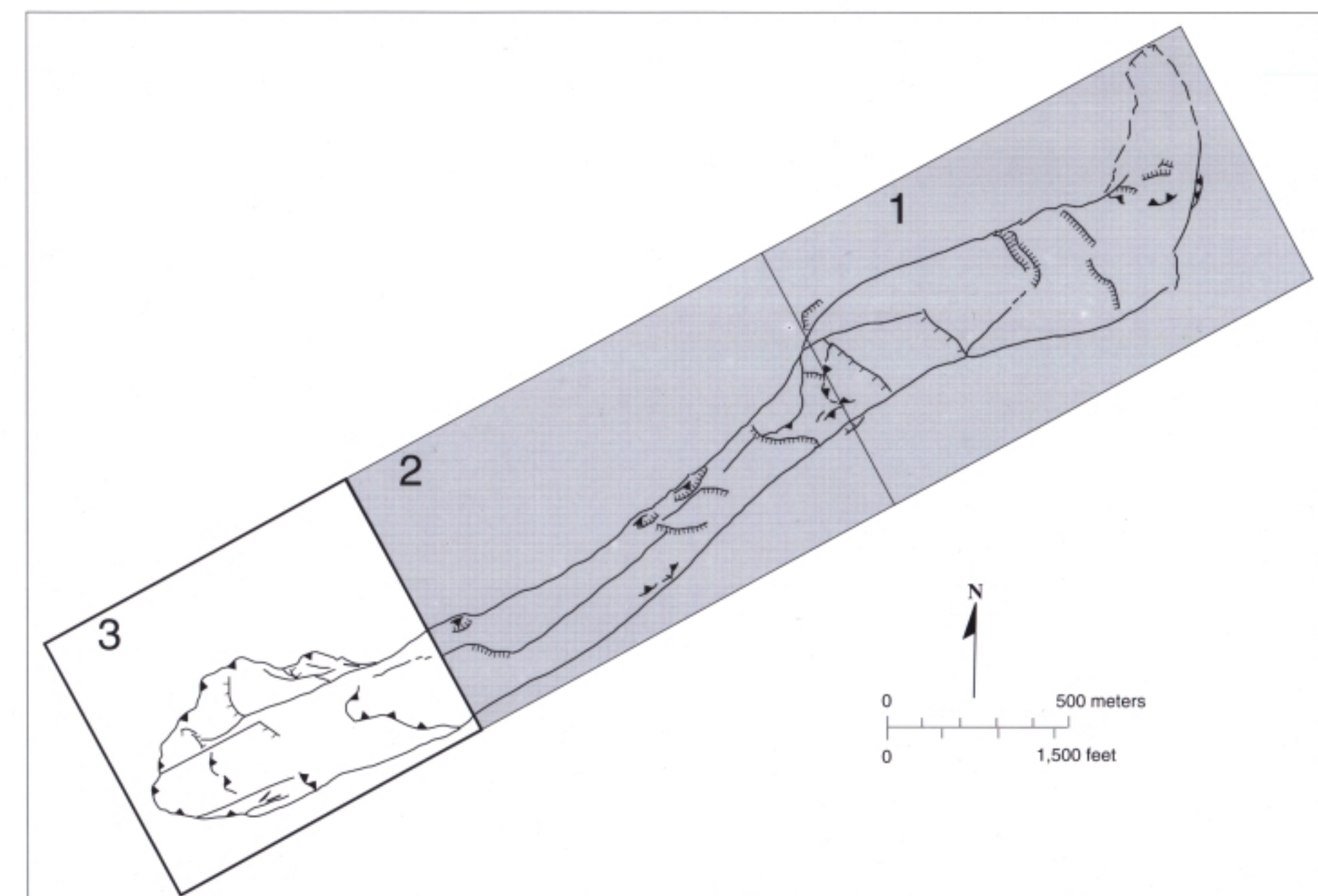


**MAP AND DESCRIPTION OF THE ACTIVE PART OF THE SLUMGULLION LANDSLIDE,
HINSDALE COUNTY, COLORADO**

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- EXPLANATION**
- Direct indicators of deformation**—Solid line indicates that feature is active and accurately located; dashed line indicates feature is apparently inactive but accurately located; dotted line indicates feature is inferred both as to location and type of movement
 - Thrust fault**—Steeply dipping feature in which one block of material overrides another. Sawtooth on overriding block
 - Fault scarp**—Stretching and/or shear feature. Hasches face down slope. Represents a normal or oblique-slip fault. Height in meters given for a few of the scarps. Arrow indicates sense of lateral movement for oblique-slip faults
 - Fracture**—Break in ground surface that is not identifiable as a tension crack or fault. Kinematics may be inferred from other nearby faults and tension cracks
 - Tension cracks**
 - Extensional crack**—Extensional (stretching) feature having maximum stretch direction normal to trend of crack
 - En echelon tension cracks**—Indicate shear deformation. Sense of shift is determined from stepping direction of individual cracks. Example shown is right-lateral shear. Arrow indicates sense of movement
 - Segmented strike-slip fault**—Strike-slip shear zone manifested at the ground surface as a series of en echelon, overlapping fault segments. Arrow indicates sense of movement
 - Indirect indicators of deformation**
 - Highly fractured area**—Internally deformed area; fractures too closely spaced to depict on map
 - Extrusion area**—Material from subsurface extruded onto surface of landslide
 - Buckle fold**—Material on landslide surface compressed into a longitudinal ridge about 1 m or less high. Axial line is normal to compression direction
 - Stretched tree roots**—Arrows show direction of stretching
 - Split tree**—Arrows show direction of stretching
 - Tilted surface**—Surface that has been tilted down in direction of arrow

- Displacement**
 - Displacement vector**—Horizontal component of annual displacement shown in meters per year obtained from measurements on aerial photographs taken in 1985 and 1990
 - Displacement on boundary**—Annual displacement between September 1992 and September 1993 in meters per year measured in offset of wooden stakes around landslide perimeter. Letter and number combinations identify station
 - Displacement of transverse stake line**—Positions of rebar stakes in a line crossing narrowest part of landslide. Number indicates average rate of movement in meters per year
 - Position in September 1992**
 - Position in June 1993**
 - Position in September 1996**
- Survey points**
 - Instrument station for survey of line of rebar**
 - Control point for aerial photography**
 - Quadrilateral (or pair of quadrilaterals) where deformation was measured**
- Water**
 - Spring**—Location where water from subsurface intersects surface and surface flow begins. Small seeps are incompletely mapped, but springs larger than a few liters per minute are shown
 - Stake**—Location where surface water flows into subsurface. Flow is typically into an open fracture
- Reference point for features described in text**

