

BY

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1975

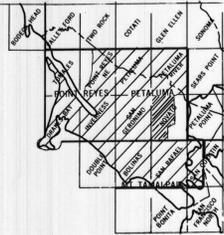
CONSISTING OF BOLINAS, DOUBLE POINT, DRAKES BAY,  
INVERNESS, NOVATO, PETALUMA, PETALUMA RIVER, POINT REYES  
NE, SAN GERONIMO, SAN RAFAEL, SAN QUENTIN, AND TOMALES  
7 1/2 MINUTE QUADRANGLES

75-281 (SHEET 8 OF 12)

References Cited

Blake, M. C., Jr., Bartow, J. A., Frizzell, V. A., Jr., Schlocker, J. J., Sorg, D., Wentworth, C. M., and Wright, E. H., 1974, Preliminary geologic map of Marin and San Francisco Counties and preliminary geologic map of Marin and Sonoma Counties, California, parts of Alameda, Contra Costa and Sonoma Counties, California, U.S. Geol. Survey Misc. Field Studies Map MF-574, scale 1:62,500.  
Brabb, E. E., and Paneyan, E. H., 1972, Preliminary map of landslide deposits in San Mateo County, California: U.S. Geol. Survey Misc. Field Studies Map MF-344, scale 1:62,500.  
Nilsen, T. H., 1972, Preliminary photointerpretation map of landslides and other surficial deposits of the Mt. Hamilton quadrangle and parts of the Mt. Boardman and San Jose quadrangles, Alameda and Santa Clara Counties, California: U.S. Geol. Survey Misc. Field Studies Map MF-339, scale 1:62,500.

NOVATO



INDEX MAP

U. S. Geological Survey  
OPEN FILE REPORT

This report is preliminary and has not been edited or reviewed for conformity with Geological Survey standards and nomenclature.

MAP SYMBOLS

LANDSLIDES

**Landslide**  
Identification confident to probable, except uncertain where queried; inferred movement style variable, including uncertain or indeterminate styles

**Small Landslide Deposits**  
arrows indicate direction of inferred down-slope movement and are generally centered over location of deposits; deposits generally larger than 100 feet but smaller than 500 feet in maximum dimension; confident to probable; queried where uncertain

**Block Slide**  
Identification confident to probable, except uncertain where queried; consists of those landslides inferred to have moved downslope as relatively intact blocks.

**Severe Creep\***  
Identification confident to probable, with "wrinkles" or similarly distorted soil surface; identifiable only on grassy or bare ground

**possible landslide or block slide, arrow types as above**

**Flow\***  
landslide inferred to have moved as a flow well beyond the toe of the failure slope

**Cliff\***  
landslide involving relatively intact blocks that is inferred to have formed by nearly horizontal movement

**Active Landslide\***  
containing evidence of recent movement

ANOMALOUS TOPOGRAPHIC FEATURES

**Scarp of uncertain origin\***  
possibly landslide related (line at base of scarp)

**Sea Cliffs**  
cliffs backing beaches or facing open water, may produce falling rock and debris (line at top of cliff)

**Anomalous Swale, Trench, or Small Valley\***  
possibly landslide related

**Closed Depression**  
"X" located at bottom, line along rim

ROCK AND SEDIMENT

**Young Sedimentary Deposits with Constructional Topography**  
queried where identification uncertain; consists of alluvium, alluvial fans and some terrace deposits; east of and within the San Andreas Rift Zone includes colluvium and dune and beach sands that are distinguished west of that zone

**Colluvial Deposits**  
queried where identification uncertain

**Dune and Beach Sand**  
queried where identification uncertain

**Terrace Deposits**  
queried where identification uncertain; distinguished only locally

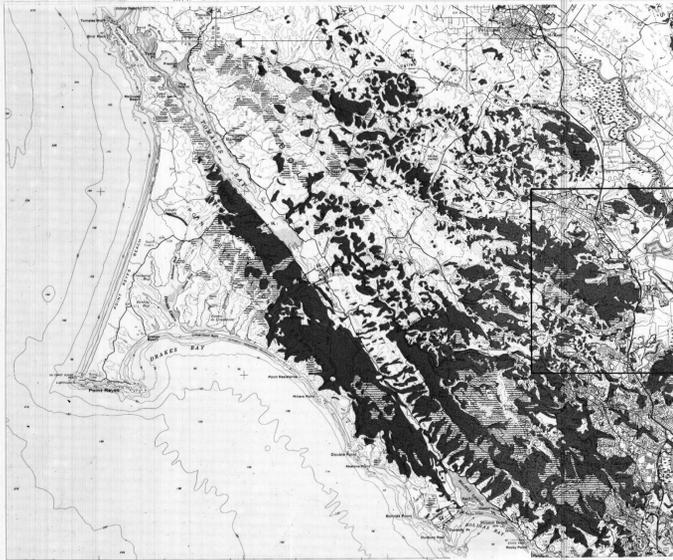
**Bedrock with Erosional Topography**  
queried where identification uncertain; ranges from semi-indurated sediment to hard rock, variably covered with soil, labeled only where identity not otherwise evident.

**\*symbol used exclusively east of the San Andreas Rift Zone**

**Quarry**

**Limit of Landslide Mapping**  
landslides are not mapped outside scratch boundary

MAP SHOWING RELATIVE VISIBILITY OF GROUND SURFACE



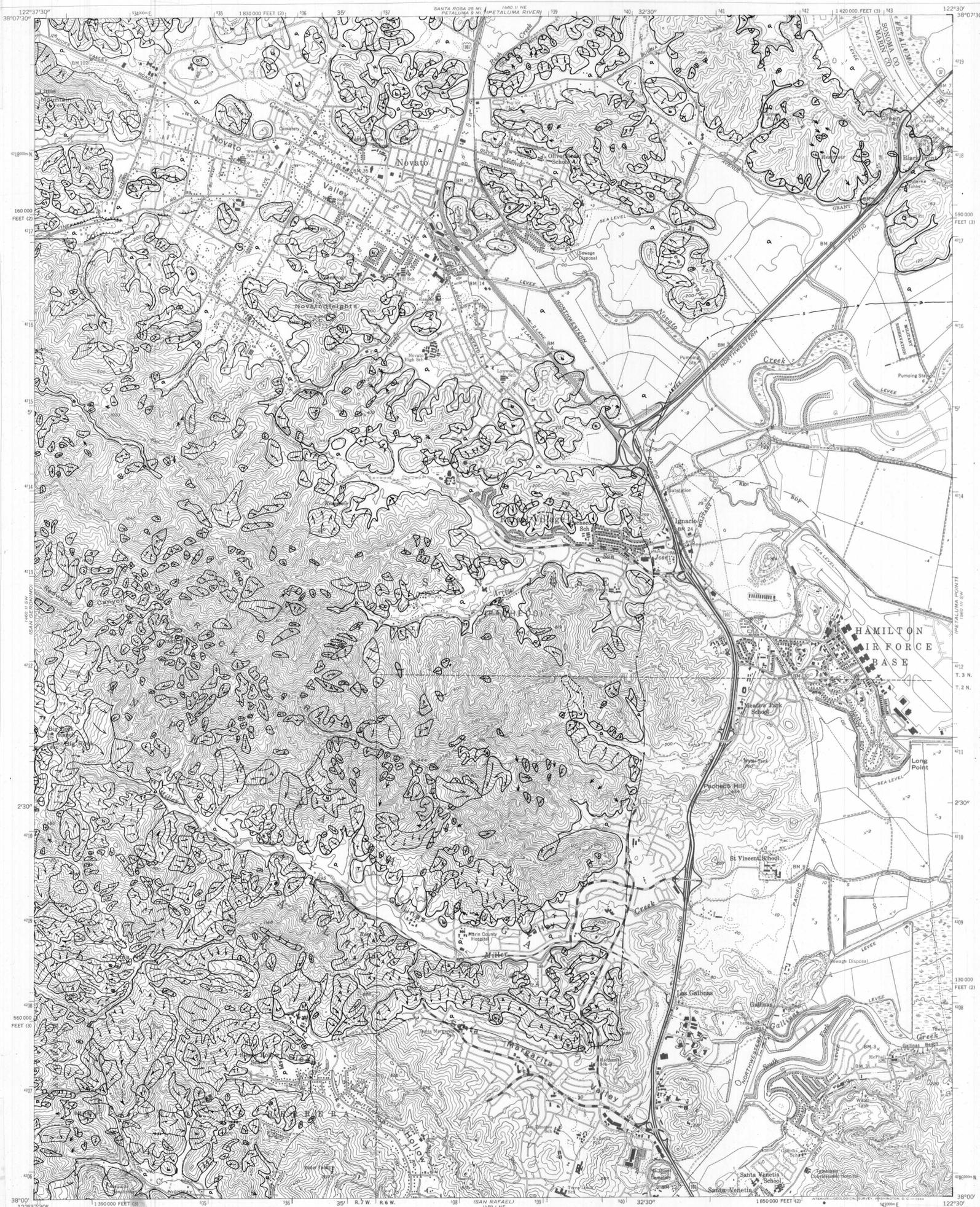
EXPLANATION OF MAP SHOWING RELATIVE VISIBILITY OF GROUND SURFACE

Ground surface least visible, with the ground surface and outline of the ground surface commonly obscured by trees or combinations of trees and brush. Landslides most easily overlooked.

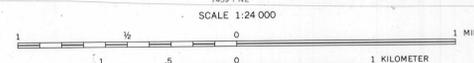
Ground surface usually obscured by brush, but outline of ground surface is observable. Also locally contains areas of trees or grass too small to be shown.

no pattern

Surface of the ground covered by grass and easily visible. Includes some areas of trees or brush too small to be shown. Landslides most obvious.



The following aerial photographs were used in the preparation of the Novato Quadrangle: U.S. Department of Agriculture (ASCS) Series DSM taken in 1952 including photographs numbered 18-135 to 182 and 2K-123 to 131 (1:250,000 scale) and Series DSM taken in 1961 including photographs 188-103 to 105 and 788-106 to 108 (1:250,000 scale). In addition, photographs taken for the U.S. Geological Survey in 1970 were used supplementally. These included Series GS-YCM 1-19, 2-194, and 3-120 (1:62,500 scale).



Mapped by Carl Wentworth