OPEN-FILE REPORT 91-618

SCALE: AS SHOWN	APPROVED BY:	JOB# G8884-SC	DRAWN BY: PV,AA,PC, JN,RJ/se
DATE: 3/23/89			

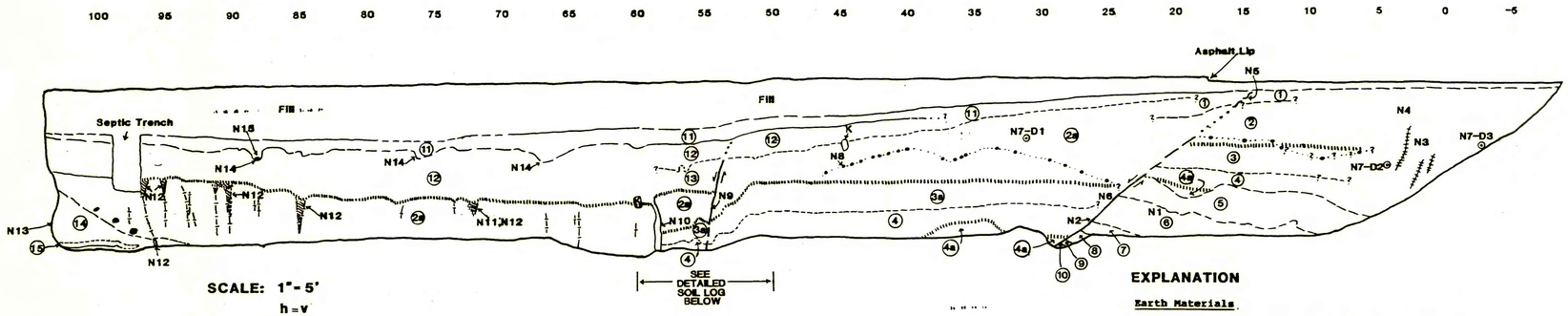
TRENCH AND SOIL LOGS

LOMA PRIETA ELEMENTARY SCHOOL
SANTA CLARA COUNTY, CA.

PLATE 5.3

S89E

EXPLORATORY TRENCH 13



SCALE: 1"= 5'
h=v

EXPLANATION

Earth Materials

1 Colluvium: Light brown with gray mottling; unit contains very abundant siltstone chips.

2 Colluvium: Reddish-brown; clayey silt; occasional sandstone clasts; hard.

2a Similar to unit 2 except unit 2a is slightly redder.

3 Colluvium: Light brown; clayey silt; sandstone clasts less abundant than in unit 4.

3a Similar to unit 3 except unit 3a is slightly lighter.

4 Colluvium: Grayish-brown; clayey sand; unit contains abundant sandstone clasts.

4a Similar to unit 4 except unit 4a contains abundant, randomly-oriented, linear manganese oxide stains.

5 Sandstone: Mottled gray and yellow; weathered; fine to medium grained; very friable; has some partings with manganese oxide staining.

6 Siltstone: Mottled brown and yellow; weathered; brittle (fresher) to highly plastic (more weathered).

7 Same character as unit 5.

8 Same character as unit 6.

9 Same character as unit 5.

10 Same character as unit 6.

11 Colluvium: Grayish-brown; sandy silt to silty sand.

12 Colluvium: Dark brown; clayey silt; lower contact highly bioturbated where in contact with unit 2a; unit 12 contains abundant organic material.

13 Colluvium: Brown-dark brown; clayey silt.

14 Sandstone: Light yellowish brown; fine to very fine grained; friable to indurated; unit has common iron-oxide staining. Upper 1 to 2 feet of unit consists of angular sandstone clasts in a matrix of brown, weathered, very fine sand.

15 Silty sandstone: Brown; lens contains very fine grained sand to clay.

Symbols

- Contact, sharp
- Contact, approximate
- Contact, very approximate
- Contact, gradational
- Contact, indistinct
- Fault, dashed where approximate, dotted where indistinct (arrows indicate apparent vertical sense of motion)
- Zone of shear/soil mixing
- Isolated siltstone or sandstone clasts
- Stone line
- (K) Krotovina
- Subvertical gleyed zones with abundant secondary clay along tension fractures
- Soil-filled tension gashes

Notes

N1 - Bedding; strike N65°E, dip 28°NW.

N2 - Very sharp, planar fault contact between bedrock and colluvium noted on both trench walls and floor. 1/4 to 1/2 inch thick clay gouge along contact. Apparent vertical offset of soil horizons approximately 3 feet. Fault becomes obscure upward and then reappears as shear in unit 1 with little vertical offset. Fault has cross trench strike N18°W, dip 35-45°NE.

N3 - Prominent zones of gleying. Zones are 1/4 to 3/4 inch thick, have sharp boundaries, and are visible in opposite trench wall and on floor of trench. Wall material flakes away easily from gley veins. Gleyed veins strike N18°-25°W, dip 65°-75°NE.

N4 - Large prismatic peds exist from Sta 0 to +5 and are distinct from gleying. Enhanced water movement along this zone may have obliterated the soil horizons mapped to the east.

N5 - Unit 1 east of shear sharply truncated by shear. Material directly west of shear more like unit 2 for several inches (shear mixing of units 1 and 2). Unit 1 is well-expressed and discrete to the west.

N6 - Contacts between units 2a and 3a and between units 3a and 4 become obscure within 1 foot of fault.

N7 - Detrital charcoal samples (D1-D3), not submitted for dating; D2 taken from opposite trench wall, D3 taken from trench floor.

N8 - Slightly lighter color and increase in cobbles and gravels in unit 2a below stone line.

N9 - Gouge zone with roots, moderately loose vertical voids, higher clay content in and around fault zone. Fault plane has cross trench strike N15°W, dip 75-88°NE.

N10 - Zone of dark brown clayey silt to very fine sand that does not have same character as joints to the east. Has apparent vertical offset of contact between units 2a and 13, although shearing not evident. Zone has cross trench strike N35°W, dip 70°NE to 70°NW, variable.

N11 - Joint, striking N35°W, dip is vertical; accentuated weathering on gleyed zone.

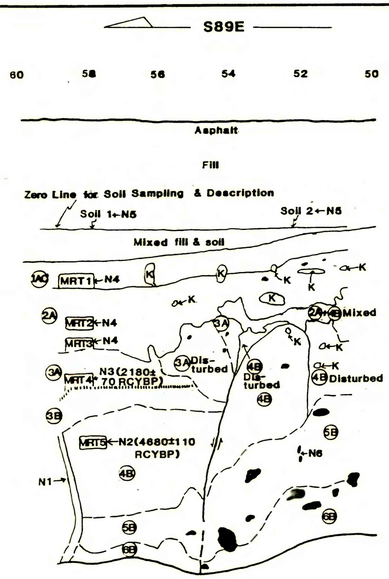
N12 - Weathered, loose, clayey very fine sand to silt translocated into fractured gleyed zone. Fractures strike N25-35°W.

N13 - Bedding exposed at the end of the trench; strike N40°W, dip 13°SW.

N14 - Dips or troughs at the base of unit 11 are always associated with tension fractures in underlying unit 2a.

N15 - Siltstone clast at base of trough.

S89E



SCALE: 1"= 2'
h=v

EXPLANATION

Soil Horizons

NOTE: Soil Conservation Service nomenclature-description below is for soil 1 at Sta +58.

1AC 29-55 centimeters; 2.5Y 5/2 (D), 10YR 4/2 (M); loam; moderate, medium-coarse subangular blocky structure; slightly hard-hard; friable; slightly sticky-sticky, plastic; few, medium and fine roots; 5-10% gravel; abrupt, wavy boundary (equivalent to Earth Material unit 11).

2A 59-109 centimeters, 10YR 4/3 (D), 10YR 3.5/2.5 (M); loam-clay loam; weak, fine-medium, subangular blocky structure; slightly hard; very friable; sticky-very sticky, plastic-very plastic; few, medium and fine roots; 3% gravel; abrupt-clear, wavy-broken boundary (equivalent to Earth Material unit 12).

3A 109-142 centimeters, 10YR 5/3 (D), 10YR 4/3 (M); loam-clay loam; weak-moderate, fine-medium, subangular blocky structure; hard, friable-firm; sticky, very plastic; 10% gravel, gradual, smooth boundary.

3B 142-169 centimeters, 10YR 4/3.5 (D), 10YR 4/3.5 (M); clay loam; moderate, medium-coarse, subangular blocky structure; hard; friable-firm; sticky-very sticky, very plastic; few, thin ped face and pore clay films; 10% gravel; clear, wavy boundary (equivalent to Earth Material unit 13).

4B 169-259 centimeters; 10YR 7/4 (D), 10YR 5/4 (M); sandy clay loam-clay loam; moderate, coarse subangular blocky structure; very hard; firm-very firm; very sticky, plastic-very plastic; many ped face stains, few, thin-moderately thick ped face and pore clay films; 10% gravel; clear, wavy boundary (equivalent to Earth Material unit 2a).

5B 259-292 centimeters; 10YR 6/4 (D), 10YR 5/5 (M); sandy clay loam-sandy clay; strong, medium-coarse subangular blocky structure; hard-very hard; very firm; sticky-very sticky, very plastic; common-many, moderately thick bridge clay films; 10% to 15% gravel; clear, wavy boundary (equivalent to Earth Material unit 3a).

6B 292-300+ centimeters; 10YR 6/3 (D), 10YR 5/5 (M); sandy clay; moderate-strong, medium subangular blocky structure; very hard; very firm; sticky-very sticky, very plastic; common, moderately thick bridge and very few, moderately thick ped face clay films; 10% gravel (equivalent to Earth Material unit 4).

Symbols

- Contact, sharp
- Contact, approximate
- Contact, gradational
- Fault, dashed where approximate (arrows indicate apparent vertical sense of motion)
- Clasts > 1 inch in diameter
- (K) Krotovina
- MRT Area sampled for mean residence time dating

Notes

N1 - Subvertical, organic-filled zone.

N2 - Mean residence time sample 5. BETA-30111, 4680 ± 110 radiocarbon years before present.

N3 - Mean residence time sample 4. BETA 30110, 2180 ± 70 radiocarbon years before present.

N4 - Mean residence time samples 1 and 2 were not submitted for dating. Dating was terminated for sample 3 upon confirmation of dates for samples 4 and 5.

N5 - Soils 1 and 2 were collected. Only soil 1 was described (see soil description, this plate).

N6 - Subvertically aligned clasts.

EXPLORATORY TRENCH LOG #13 FOR LOMA PRIETA SCHOOL EXAMPLE #1 LOCATION