

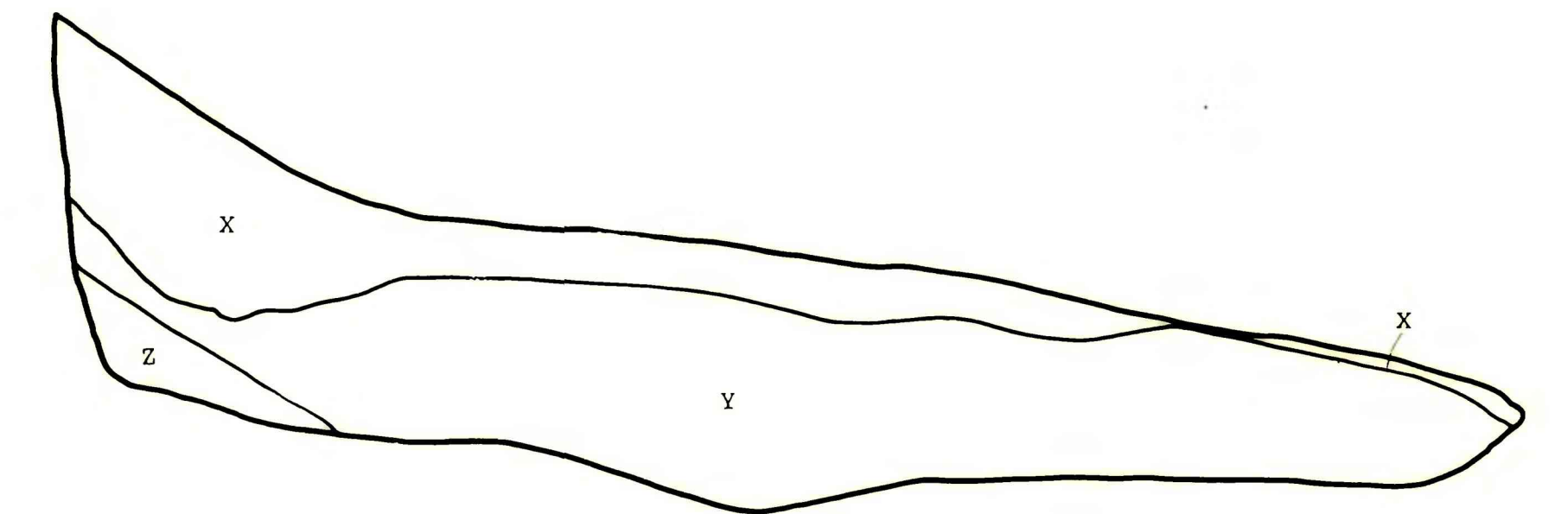
N 47 E

EXPLORATORY TRENCH 2

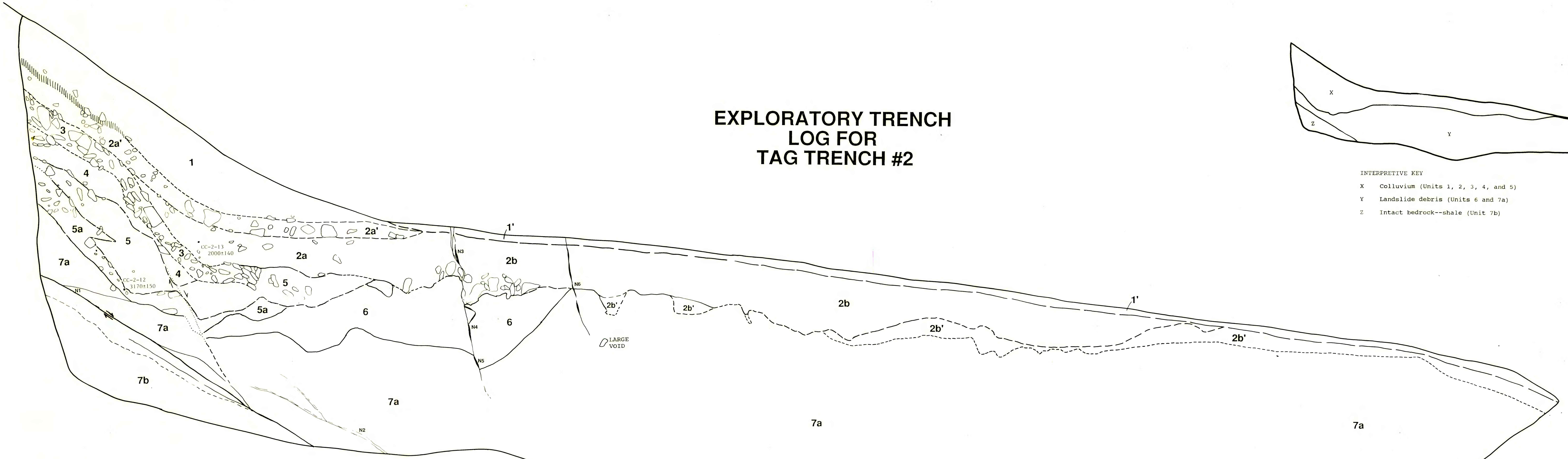
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EXPLORATORY TRENCH LOG FOR TAG TRENCH #2



INTERPRETIVE KEY  
 X Colluvium (Units 1, 2, 3, 4, and 5)  
 Y Landslide debris (Units 6 and 7a)  
 Z Intact bedrock--shale (Unit 7b)



**UNIT 1** SILT with some very fine to medium grained sand and trace clay, dark grayish brown (10YR 4/2). Few to some scattered coarse sand to pebble sized clasts of angular mudstone and very fine grained sandstone. Abundant active roots, trace organic matter. Moderately developed, medium granular structure; dry, stiff to very stiff; slightly plastic and slightly sticky when wet; well developed medium to coarse macropores. Lower contact gradual over 2-4", marked by sudden increase in clast size and clast abundance downward.

**UNIT 1'** Culturally disturbed zone due to orchard activities

**UNIT 2a** SILT with very fine to medium grained sand and trace clay. Light yellowish brown (2.5Y 6/4). Many coarse sand to small cobble sized angular clasts of gray mudstone and brown, very fine grained sandstone; matrix supported with randomly oriented clasts. Common thin clay films on ped faces and colloidal stains on grains. Weak, medium to coarse angular blocky peds. Dry, hard; slightly plastic and slightly sticky when wet; well developed fine to medium sized macropores. Lower contact gradual over 2-4", marked by appearance of cobble to small boulder sized clasts.

**UNIT 2a'** Similar to unit 2 but with pebble to small boulder sized clasts. Appears to onlap onto unit 3. Lower contact abrupt to gradual over 1-2".

**UNIT 2b** SILT AND VERY FINE GRAINED SAND with trace clay and fine to coarse grained sand. Grayish brown (2.5Y 5/2). Few scattered angular gravel to pebble sized clasts of siltstone to very fine grained sandstone. Trace to some organic, few live roots. Few very thin clay films on ped faces; weak to moderate, fine to medium granular to subangular blocky structure. Dry, hard, slightly plastic and slightly sticky when wet; well developed large macropores. Lower contact irregular and abrupt to gradual over 1/2-2". Lateral contact with unit 2a diffuse over 6' near station 18.

**UNIT 2b'** Transitional zone with mixing of unit 2b with underlying bedrock.

**UNIT 3** SILT AND VERY FINE GRAINED SAND with trace clay and medium to coarse grained sand. Light yellowish brown (2.5Y 6/4). Many cobble to boulder sized clasts of well indurated, light gray-brown to brown, very fine grained sandstone to siltstone; matrix supported to partially clast supported. Fewer angular clasts of medium to dark brown, medium to coarse grained sandstone. Clasts show weak to moderate planar preferred orientation with long axis parallel or subparallel to lower contact. Common, moderately thick clay films on ped faces and as colloidal stains on grains; massive to weak, fine to medium angular blocky structure; dry to slightly moist; stiff to hard; slightly plastic and slightly sticky when wet; well developed, medium to large macropores. Lower contact gradual over 2-4", marked by disappearance of large clasts.

**UNIT 4** SILT AND VERY FINE GRAINED SAND with trace clay and coarse grained sand. Light yellowish brown (2.5Y 6/4). Some gravel to pebble sized, angular clasts of very fine grained sandstone to siltstone. Common, moderately thick clay films on ped faces and as colloidal stains on grains. Weak, fine to medium angular blocky structure; dry to slightly moist; hard; slightly plastic and slightly sticky when wet; well developed, medium to large macropores. Lower contact abrupt over 1", marked by decrease in clast size and abundance and change in color downward.

**UNIT 5** SILT AND VERY FINE GRAINED SAND with trace medium to coarse grained sand. Variegated grayish brown (2.5Y 5/2) with iron oxide staining finely disseminated throughout. Some coarse sand to gravel sized angular clasts of mudstone, siltstone, and very fine grained sandstone. Few thin clay films lining pores; massive to weak, medium subangular blocky to granular structure. Dry to very slightly moist; stiff, very slightly plastic and very slightly sticky when wet; well developed, medium to large macropores. Lower contact abrupt over 1", marked by change in color and increase in clast abundance downward.

**UNIT 5a** VERY FINE TO COARSE GRAINED SAND with some silt and trace clay. Light yellowish brown (2.5Y 6/4). Some subangular to subrounded, pebble to cobble sized clasts of very fine to medium grained sandstone; well indurated, matrix supported, decrease in clast abundance to the northwest. Dry; hard; common thin clay films on ped faces and colloidal stains on grains; weak, medium angular blocky structure. Lower contact abrupt over less than 1", marked by transition to coherent siltstone bedrock.

**UNIT 6** FINE TO VERY COARSE GRAINED SANDSTONE, with trace silt. Light yellowish brown (2.5Y 6/4). Arkosic, weak to moderately indurated, moderately strong cementation, moderately hard to friable, slightly to moderately weathered. Massive to thin bedded by grain size, loosely fractured to crushed. Unit displays open voids and internal rotation of clasts common to landslide debris. Lower contact sharp but irregular.

**UNIT 7a** SHALE. Light yellowish brown (2.5Y 6/4). Some portions show parting surfaces, faint internal laminations. Moderately weathered, strong cementation, closely fractured to crushed, dry, medium hardness, fracture surfaces lightly coated with iron and manganese oxides, fractures show infilling of colluvial silt and sand in upper 1' to 1.5'. Zones show abundant mollusc fossils. Unit shows abundant void spaces and interclast rotations common to landslide deposits. Lower contact is landslide slip surface, marked by iron oxide stains, change in color.

**UNIT 7b** SHALE. Very dark gray to black (2.5Y 3/0 to 2/0). Hard, fresh to little weathered, strong cementation. Massive, intensely fractured to crushed, rough conchoidal fracture surfaces, some fine white colored mineral grains on fracture surfaces; moist. Upper surface is shear zone approximately 1.4' wide with a few moderately developed through-going shear (slip) surfaces; shear fabric developed parallel to main shears throughout; shear surfaces are moderately to strongly colored by iron oxide. Lower contact not exposed.

NOTES:  
 N1 Open .3' on opposite wall.  
 N2 Zone of preferential secondary clay deposition, dark brown.  
 N3 Open .1'.  
 N4 Open .02-.03'.  
 N5 Open .01-.02'.  
 N6 Open .04'.

CARBON SAMPLE  
 CC1 3150+/-120

EXPLANATION

CONTACTS BETWEEN UNITS  
 SHARP (<1/16")  
 ABRUPT (1/16-1")  
 CLEAR (1-2")  
 GRADUAL (2-5")

CRACK/FRACTURE WITH OPEN VOIDS

N3 NOTE LOCATION AND DESIGNATION

CC1- CARBON SAMPLE LOCATION AND DESIGNATION

PEBBLE/COBBLE/BOULDER

