POSTER LEGEND

Glacial Sediments of Various Depositional Environments

A. **Diamicton;** Massive, Matrix-Supported, Subglacial Till Facies (from sidewall excavation). The diamicton has a fine-grained matrix with gravel clasts uniformly distributed within the matrix. There's no indication of bedding. The sedimentary structure is "Massive". The gray color indicates it's "unoxidized". It's USCS classification is 'LEAN CLAY WITH SAND (CL)". Stratigraphic unit is the Wolf Creek Formation mapped in Black Hawk County, Iowa.

B. **Diamicton;** Massive, Matrix-Supported, Subglacial Till Facies (from rotasonic sample). The diamicton has a fine-grained matrix with gravel clasts uniformly distributed within the matrix. Despite the presence of one large gravel clast, the sedimentary structure is "Massive". The gray color indicates it's "unoxidized". It's USCS classification is 'LEAN CLAY WITH SAND (CL)". The diamicton is mapped regionally as the Yorkville Member of the Lemont Formation, sample from Kane County, Illinois.

C. **Diamicton;** Bedded, Matrix-Supported, Resedimented Till Facies (from sidewall excavation). The gravel clasts are not uniformly distributed within the matrix. Larger clasts are concentrated deeper, giving the appearance of a normally-graded clast distribution. The brown color indicates it's "oxidized". It's USCS classification is 'LEAN CLAY WITH SAND (CL)". The unit is mapped as the Wolf Creek Formation mapped in Black Hawk County, Iowa.

D. **Diamicton;** Bedded, Matrix-Supported, Resedimented Till Facies (from rotasonic sample). The gravel clasts are not uniformly distributed within the matrix. Larger clasts are concentrated in upper part of the photo (higher in elevation) giving the appearance of a reverse-graded clast distribution. The grayish brown (10YR 5/2) color and a lack of dilute HCl effervescence (indicating it's Unleached) results with a weathering zone abbreviation of "RU-UU". It's USCS classification is 'LEAN CLAY WITH SAND (CL)". Site stratigraphic nomenclature is "Site Unit B" at a site in western Ohio.

E. **Diamicton;** Bedded, Matrix-Supported, Resedimented Till Facies (from rotasonic sample). The gravel clasts are not uniformly distributed within the fine-grained matrix. Clasts appear normally-graded showing increased frequency and size with depth. Dark Gray (10YR 4/1) color and unleached carbonates indicate a weathering zone abbreviation of "UU". It's USCS classification is 'LEAN CLAY WITH SAND (CL)". Mapped as an ice-marginal facies of the Oak Creek Formation in Wisconsin (Wadsworth Member equivalent in Illinois).

F. **Diamicton;** Bedded, Matrix-Supported, Resedimented Till Facies (from rotasonic sample). The coarse-grained fraction is evenly distributed but the matrix is bedded with horizontal and planar beds. The Olive Brown (2.5Y 4/3) color and unleached carbonates reveal a weathering zone abbreviation of "RU". It's USCS classification is 'LEAN CLAY WITH SAND (CL)". The sample is assigned to the regionally mapped Trafalgar Formation in central Indiana.

G. **Glaciofluvial Facies;** Bedded, Proglacial Outwash (from excavation sidewall). Variably bedded from thin to thick mostly horizontal and planar beds. Brown colors indicate oxidized conditions. Variable coarse-grained USCS classifications; This sand and gravel sequence is mapped as the Henry Formation and located in Antioch, Illinois.

H. **Boring B1.** One boring with depths shown on cones. Quaternary Fill (0' to 5'); Yorkville Member (5' to 60') with four facies: Resedimented Facies (5' to 10'), Subglacial Till Facies A (10' to 29'), Subglacial Till Facies B (29' to 33'), Subglacial Till Facies C (33' to 60'); Alternating Henry Fm and Equality Fm. (60' to 65'); Batestown Member (65' to 72'); Alternating Henry Fm and Equality Fm. (72' to 77'); Pre-Wisconsin Undifferentiated Resedimented Till Facies with Farmdale GeoSol in upper 2 feet (77' to 88'); Pre-Wisconsin Undifferentiated Glaciolacustrine Facies (88' to 93'); Pre-Wisconsin Undifferentiated Glaciofluvial Facies (93' to 99'); Silurian Dolomite Bedrock below 99'. Boring location in Geneva, Illinois.

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I. **Weathering Zone** exposed by road cut. Oxidized brown colors develop into the (originally all) gray deposits of the regionally mapped diamicton unit. Location unknown.

J. **Weathering Zone** exposed by road cut. Oxidized jointing features developed into the unoxidized diamicton. Photo taken in Iowa, location unknown.

K. **Glaciofluvial Facies;** Bedded, Proglacial Outwash (from rotasonic sample). Variably bedded from thin to thick beds. Brown colors indicate oxidized conditions. Variable coarse-grained USCS classifications; This sandy sequence was drilled in Washington County, Minnesota.

L. **Glaciolacustrine Facies;** Laminated to medium bedded with horizontal and planar beds, Proglacial Outwash (from continuous sampler). "UU" weathering zone abbreviation; USCS classifications alternate between "LEAN CLAY (CL)" and "SILT (ML)". Photo from Macomb, Illinois.

M. **Diamicton over Diamicton;** Massive Subglacial "UU" Till Facies over Massive Subglacial "OU" Till Facies. Gravel clast split at the point of contact with overlying unit. Vertical exposure in Iowa.

N. **Diamicton over Glaciofluvial Facies;** Massive Subglacial "UU" Till Facies over Bedded Proglacial "OU" Glaciofluvial Facies. Diamicton is mapped regionally as the Yorkville Member and the Glaciofluvial Facies is assigned to the Henry Formation where it locally occurs, from Batavia, Illinois.

O. **Glaciolacustrine Facies;** Laminated to thinly bedded with horizontal and planar beds, Proglacial Outwash (from rotasonic sample). "UU" weathering zone abbreviation; USCS classification for each bed is "LEAN CLAY (CL)". Thin beds disturbed along edge from sampler. Specimen collected during Midwest GeoSciences Group workshop at the National Geotechnical Experimental Site at University of Massachusetts in Amherst.

T. **Glaciolacustrine Facies;** Massive, Proglacial Outwash (from rotasonic sample). "UU" weathering zone abbreviation; USCS classification is "SILT (ML)". Conchoidal fracturing apparent from opening the specimen. Wisconsin-age Glaciolacustrine Facies in Illinois is assigned to the Equality Formation where it locally occurs. Geneva, Illinois.

Q. **Glaciofluvial Facies;** Thinly to thickly bedded, Proglacial Outwash, channel deposits exposed in excavation sidewall; OU, Variable USCS classifications; Location in northern Illinois.

R. **Glaciofluvial Facies**; Thinly to medium bedded with horizontal and planar beds. Proglacial Outwash (from Standard Penetration Testing). Gray colors indicate unoxidized condition. Lower portion of the sampler shows the variable classified coarse-grained sediment; the middle portion of the sampler contains a single bed of "SILT (ML)"; and the upper portion of the sampler contains slough. 24-inch long split spoon yields 14 inches of recovery. Sample from Gwinner, North Dakota.

S. **Glaciofluvial Facies**; Thinly bedded with dipping and undulatory beds; Proglacial Outwash (from Standard Penetration Testing). Brown colors reveal oxidized alteration within weathered sequence. Classifies as "POORLY GRADED SAND (SP)" with the USCS. 50% sample recovery. Sample from Gonic, New Hampshire.