University of Wisconsin-Extension

GEOLOGICAL AND NATURAL HISTORY SURVEY
3817 Mineral Point Road
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LOCATIONS AND RESULTS OF ANALYSES OF SAMPLES TAKEN IN FOREST COUNTY, WISCONSIN

by

Simpkins, McCartney, and Mickelson

Open-File Report 87-7
5 p.

1987

Locations and stratigraphic data -- 1977-79

Sample	Location ¼	¼	¼	Sec	TN	RE	Exposure/ Material	Lobe	Bulk Color	Susp. Color	Depth in Feet	Collector	Grain Size Percentages % Sand	% Silt 2μ	% Clay 2μ	% Silt 4μ	% Clay 4μ	Semi-Quantitative Clay Mineralogy % Illite	% Kaol & Chl	% Vermiculite	% Expandables	Comments
FR-77																						
2	NW	NW	NW	31	36	13	P/T	LL	--	7.5YR5.5/6	2	WS	70.52	19.98	9.50	18.07	11.41					
14	NW	NW	SE	11	40	12	RC/T,A	LL	5YR5/7	7.5YR6/4	8	WS	85.38	7.87	6.75	6.78	7.84					
19	SE	NW	NW	22	40	13	RC/T	LL	7.5YR4/6	7.5YR4.5/6	3	WS	77.24	18.18	4.58	15.33	7.43					
20	SE	SE	NE	18	38	12	RC/S	LL	--	10YR5/6	2	WS	94.59	3.54	1.87	3.54	1.87					
32	SE	NW	NW	26	37	12	P/T,A	LL	5YR5/6	7.5YR6/6	6	WS	83.40	10.32	6.28	8.66	7.94	81.47	14.3	4.18	0	
62	SW	NW	NW	14	40	14	P/T	LL	5YR4/4	10YR4.5/6	4	WS	80.44	12.86	6.70	10.89	8.67					
68	SE	SE	SE	15	41	13	RC/T	LL	7.5YR4/5	10YR5.5/6	3	WS	79.23	16.47	4.29	13.94	6.82					
77	NE	SW	SW	8	39	13	A/T	LL	7.5YR4/5	10YR5.5/6	4	WS	71.57	20.79	7.84	19.04	9.39					
94	SE	NW	NW	22	39	14	A/T	LL	7.5YR4/4	10YR6/6	5.5	WS	76.28	14.68	9.04	13.50	10.22					
97	NE	SW	NE	31	38	14	A/T	LL	7.5YR4/6	7.5YR5.5/6	5	WS	70.12	20.09	9.79	16.56	13.32					
107	SW	SW	SW	19	36	13	RC/T	LL	5YR4/6	7.5YR5/6	3	WS	77.51	13.65	8.84	11.12	11.36					
110	NE	NE	SW	23	36	12	RC/T	LL	7.5YR4/6	7.5YR6/5	4	WS	78.49	13.13	8.38	11.61	9.90	80.29	6.55	6.91	0	
116B	SE	NW	NW	26	37	12	P/T	LL	5YR4/6	7.5YR6/6	4	WS	83.78	10.26	5.95	9.33	6.89					
116A	SE	NW	NW	26	37	12	P/T	LL	5YR5/6	7.5YR6/6	6	WS	86.84	11.00	2.16	9.87	3.29					
119A	SE	SW	SE	7	35	12	P/T	LL	7.5 YR4/5	10YR 6/6	6	WS	77.26	15.53	7.20	13.87	8.87	79.08	7.85	9.73	3.84	Nashville Till
119B	SE	SW	SE	7	35	12	P/T	LL	5YR3/4	7.5YR6/6	8	WS	76.06	14.67	9.27	12.53	11.41					Nashville Till
139	NW	SE	SE	16	35	12	P/T	LL	5YR4/6	7.5YR6/6	5	WS	80.24	13.87	5.89	12.96	6.80					
150A	SE	SW	SE	7	35	12	P,A/T	LL	7.5YR4/5	7.5YR6/4	5	WS	75.80	17.65	6.55	16.26	7.94					Nashville Till
150B	SE	SW	SE	7	35	12	P,A/T	LL	7.5YR4/4	7.5YR6/3	10	WS	74.64	17.79	9.57	15.80	7.57					Nashville Till
152H	SE	SW	SE	7	35	12	P,A/T	LL	7.5YR4/4	7.5YR6/3	10	WS	69.42	21.70	8.88	19.36	11.22					Nashville Till
153D	NW	NW	NW	31	36	13	P,A/L	GB	5YR4/3	7.5YR6/6	75	WS	7.07	81.43	11.50	--	--					
153E	NW	NW	NW	31	36	13	P,A/L	GB	7.5YR4.5/3	10YR5.5/4	90	WS	27.38	65.00	7.62	60.67	11.96					
164AA	SE	NW	NW	26	37	12	P,A/T	GB	5YR3.5/6	7.5YR5.5/4	1	WS	77.82	14.19	7.99	13.00	9.18	75.19	7.36	9.61	7.84	Sl calcareous
164BB	SE	NW	NW	26	37	12	P,A/T	GB	5YR3.5/6	7.5YR6/6	4	WS	77.63	14.67	13.63	7.70	8.74	79.26	7.37	5.25	8.14	Sl calcareous
164CC	SE	NW	NW	26	37	12	P,A/T	GB	5YR3/4	7.5YR5.5/6	9	WS	77.50	11.32	11.18	7.81	14.69	80.41	7.39	6.51	5.76	Sl calcareous
154A	SE	NW	NW	26	37	12	P,A/T	GB	5YR4/4	7.5YR6/6	5	WS	74.36	16.94	8.70	15.21	10.43	82.99	10.33	4.96	3.50	Sl calcareous
154B	SE	NW	NW	26	37	12	P,A/T	GB	5YR 3/4	7.5YR6/6	10	WS	68.28	24.33	7.39	22.59	9.13	79.41	9.79	6.94	3.85	Calcareous
154C	SE	NW	NW	26	37	12	P,A/T	GB	7.5YR4/6	7.5YR5.5/6	15	WS	77.02	15.38	7.60	13.56	9.42	79.53	5.54	6.77	8.17	Calcareous
154D2	SE	NW	NW	26	37	12	P,A/T	GB	5YR4/4	10YR5/4	18	WS	76.46	20.62	2.92	19.28	4.28	80.01	15.96	0	4.02	Calcareous
154E	SE	NW	NW	26	37	12	P,A/T	GB	7.5YR4/6	7.5YR5/6	30	WS	79.81	15.75	4.44	13.77	6.42	75.76	3.81	6.99	13.48	Very calcareous
154F	SE	NW	NW	26	37	12	P,A/T	GB	7.5YR4/6	7.5YR5.5/7	35	WS	86.26	6.72	7.02	4.85	8.89	77.42	7.05	4.16	11.35	Very calcareous
154I	SE	NW	NW	26	37	12	P,A/DR	GB	10YR3/2	10YR4/3	72	WS	13.00	74.17	12.83	71.47	15.53					
155B	SW	NW	NW	12	37	12	P,A/T	LL	7.5YR4/6	7.5YR6/6	10	WS	78.10	15.04	6.86	13.22	8.68	79.39	6.60	7.07	7.25	
155C	SW	NW	NW	12	37	12	P,A/T	LL	7.5YR4/6	7.5YR6/4	20	WS	78.27	15.28	6.45	14.27	7.46					
155D	SW	NW	NW	12	37	12	P,A/T	LL	5YR4/6	7.5YR6/5	25	WS	76.45	16.37	7.18	14.46	9.09					
157B	SW	SE	SW	25	40	12	P,A/T	LL	7.5YR4/5	7.5YR6/6	10	WS	80.38	13.80	5.82	12.04	7.58	83.66	12.42	0.5	3.67	
157D	SW	SE	SW	25	40	12	P,A/T	LL	7.5YR4.5/6	7.5YR6/6	20	WS	80.66	14.48	4.86	11.29	8.05					
158B	SE	SE	SW	25	40	12	A/T	LL	5YR4/6	7.5YR5/6	10	WS	81.17	17.17	1.66	17.03	1.80					
160B	SW	SW	SW	5	40	12	A/T	LL	5YR4/4	7.5YR6/4	8	WS	81.48	9.62	8.90	8.08	10.44	72.75	22.52	1.55	3.18	
160D	SW	SW	SW	5	40	12	A/T	LL	5YR4/6	7.5YR6/6	15	WS	84.99	7.80	7.20	6.11	8.90					
160F	SW	SW	SW	5	40	12	A/T	LL	5YR4/6	7.5YR6/4	25	WS	81.60	9.67	8.73	7.40	11.00					
160G	SW	SW	SW	5	40	12	A/T	LL	5YR4/6	7.5YR6/6	30	WS	80.05	9.44	10.51	7.15	12.80					
160L	SW	SW	SW	5	40	12	A/T	LL	5YR4/6	7.5YR6/6	50	WS	82.83	7.86	9.31	6.91	10.26					
161A	NE	NE	NE	2	40	14	A/T	LL	7.5YR4/6	7.5YR5.5/4	5	WS	86.35	7.05	6.60	4.77	8.88					
161B	NE	NE	NE	2	40	14	A/T	LL	7.5YR3.5/5	7.5YR5.5/6	10	WS	84.63	8.87	6.50	6.44	8.93					

Sample	Location			Sec	TN	RE	Exposure/ Material	Lobe	Bulk Color	Susp. Color	Depth in Foot	Collector	Grain Size Percentages					Semi-Quantitative Clay Mineralogy				Comments
													% Sand	% Silt 2μ	% Clay 2μ	% Silt 4μ	% Clay 4μ	% Illite	% Kaol & Chl	% Vermic-ulito	% Expand-ables	
FR-77																						
161C	NE	NE	NE	2	40	14	A/T	LL	7.5YR3.5/5	7.5YR5.5/4	13	WS	62.31	26.77	10.92	24.34	13.35					
161D	NE	NE	NE	2	40	14	A/T	LL	7.5YR3.5/4	7.5YR5/4	15	WS	81.60	10.26	8.14	8.49	9.91					
161G2	NE	NE	NE	2	40	14	A/L	LL	5YR5/8	10YR5/3	39	WS	44.18	43.37	12.45	40.37	15.45					
161H	NE	NE	NE	2	40	14	A/L	LL	7.5YR4/6	7.5YR5/4	40	WS	83.54	10.27	6.19	9.10	7.36					
163B	NW	SE	SE	35	41	13	A/T	LL	5YR3/5	7.5YR6/6	15	WS	82.70	10.00	7.30	8.31	8.99	82.16	10.93	2.87	4.03	
163C	NW	SE	SE	35	41	13	A/T	LL	7.5YR6/6	7.5YR6/5.5	20	WS	79.00	11.95	9.05	10.82	10.18					
163D2	NW	SE	SE	35	41	13	A/T	LL	5YR4/6	7.5YR6/5.5	22	WS	77.60	13.44	8.96	12.15	10.25					
200	C	NW	NW	31	36	13	P/T	LL		7.5YR6/6	1-4	MCM	71.40	20.43	8.17	14.50	14.10					
202	SW	NW	SW	7	35	15	RC/T	LL		10YR6/4	<1	MCM	69.98	25.19	5.13	24.58	5.77					V. sl. calcareous
206	SW	NW	NE	29	36	13	P/T	LL		7.5YR6/6		MCM	67.98	22.77	9.25	19.61	12.41	89	6	4	1	Sl. calcareous
224		NE	NW	9	35	15		LL		10YR6/6	1	MCM	79.86	17.58	2.54	16.63	3.49					V. sl. calcareous
244	SE	NW	NW	7	34	15	RC/T	LL	10YR4/6*			MCM	75.73	19.28	4.99	17.64	6.63	86	9	4	1	Non-calcareous
247	C	NW	NW	18	34	15	P/T	GB	7.5YR7/3*	10YR6/3	20	MCM	74.40	21.33	4.27	19.96	5.64	89	10	0	1	V. calcareous
248	C	NW	NW	18	34	15	P/T	GB	5YR5/6*	5YR6/6	25-30	MCM	82.89	12.88	4.23	12.26	4.85	86	10	1	3	Calcareous
249	SW	SE	SE	26	35	12	P/T	LL	7.5YR6/3-4*	7.5YR6/4	30-40	MCM	75.20	18.17	6.63	14.92	9.88					Sl. calcareous
250		SE	SE	28	36	13	P/T	LL	5YR4/4*	7.5YR5-6/4	5	MCM	74.57	17.85	7.58	16.34	9.09	89	11	0	0	Non-calcareous
251	SW	SE	SE	16	35	13	RC/T,A?	LL	7.5YR4/4*	7/5YR6/4	10-15	MCM	73.31	20.46	6.23	18.81	7.88					V. sl. calcareous
252	SE	SW	NW	34	35	13	RC/T,A?	LL	7.5YR5/6	7.5-10YR6/6	25	MCM	61.38	31.54	7.08	29.70	8.92					V. sl. calcareous
264	NW	NW	SW	36	35	13	P/T,A?	LL	7.5YR5/6	7.5YR6/6	4	MCM	79.93	16.12	3.95	13.88	6.19					V. sl. calcareous
265	NW	NW	SW	36	35	13	P/T,A?	?	7.5YR6/3*	7.5YR6/4	5-10	MCM	78.91	15.76	5.33	11.96	9.13					Calcareous
266	NE	SW	SW	3	35	13	RC/T	LL	7.5YR4/6	7.5YR6/4		MCM	69.39	17.89	12.72	15.22	15.39					Non-calcareous
267	SW	NE	NW	3	35	13	RC/T	LL	7.5YR4/6	7.5YR6/6		MCM	76.07	18.27	5.66	16.77	7.16					V. sl. calcareous
268	C	NW	NW	31	36	13	P/T	LL	7.5YR6/6*	7.5YR6/6	2-2.5	MCM	72.75	18.68	8.57	17.76	9.49	94	4	1	1	
270	SW	NE	NW	35	36	13	RC/T,A?	LL	7.5YR4/6	7.5YR6/6	2-3	MCM	81.17	9.61	9.22	9.12	9.71					Non-calcareous
271	SE	SW	SW	30	36	12	RC/T	LL	7.5YR5/6	7.5YR6/6	4	MCM	71.02	18.62	10.36	15.49	13.49					V. sl. calcareous
274	NW	SE	NE	30	35	12	P/T,A?	LL	10YR4/4		2-3	MCM	78.18	10.60	11.24	7.61	14.23					Sl. calcareous
281	C	NW	NW	18	34	15	P/T	LL?	5YR6/6*	5YR6/4	35	MCM	82.69	12.37	4.94	11.27	6.04	86	11	0	3	V. sl. calcareous
297	NW	NW	NE	35	36	13	RC/T?		7.5YR4/6	7.5YR6/4	surf.	MCM	77.11	15.30	7.59	15.05	7.84	89	8	3	0	Sl. calcareous
298	SW	SE	SE	26	35	12	P/T		5YR4/4*	7.5YR6/4		MCM	79.12	16.03	4.85	13.09	7.79	86	12	1	1	Calcareous
299	SW	SE	SE	26	35	12	P/T		7.5YR4/6	7.5YR6/6		MCM	90.24	6.24	4.93	3.52	4.84	81	16	1	2	Calcareous
309	NE	NE	NW	6	35	13	P/T	LL	7.5YR7/3*	7.5YR6/6	4	MCM	75.28	16.91	7.81	14.40	10.31	89	8	3	0	Non-calcareous
310	SW	SW	NE	26	36	13	RC/T	LL	7.5YR4/4	7.5YR6/6		MCM	77.56	15.49	6.95	14.11	8.33					V. sl. calcareous
312	SE	NE	NW	23	36	13	RC/T	LL	7.5YR4/6		5	MCM	75.60	19.09	5.31	16.74	7.66					Sl. calcareous
321	NE	SE	SE	3	34	13	P/T	LL	7.5YR5/4	7.5YR5.5/6	2-5	MCM	79.28	12.78	7.94	11.17	9.54					V. sl. calcareous
322	NW	SE	NW	9	34	13	RC/T,A?	LL	10YR4/6	7.5YR6/6		MCM	76.89	18.29	4.82	16.73	6.38					V. sl. calcareous
324	SW	SE	SE	26	35	12	P/T		7.5YR6/3*	7.5YR6/4		MCM	86.96	10.59	2.45	8.74	4.30					Calcareous
339	NE	NW	NW	2	35	13	P/T	LL	10YR4/6*	7.5YR6/6		MCM	75.30	17.19	7.52	15.42	9.28	89	7	3	1	
352	SW	NW	SW	30	36	13	P/T		7.5YR4/6*	5YR5/6	6	MCM	78.06	16.53	5.41	15.30	6.64					Sl. calcareous
395	SW	NW	SE	26	36	13	A/T	LL	7.5YR6/3*	7.5YR6/4	20	MCM	78.25	14.72	7.03	13.41	8.34					Non-calcareous
396	SW	NW	SE	26	36	13	A/T	LL	10YR7/3*	10YR6/4	25	MCM	66.54	26.23	7.24	23.53	9.93					Non-calcareous
398	SE	SW	NE	35	36	13	A/T	LL	7.5YR5/4	7.5YR5/6	5	MCM	79.86	11.38	8.76	10.33	9.81					Non-calcareous
399	SE	SW	NE	35	36	13	A/T	LL	7.5YR5/3	7.5YR6/6	10	MCM	80.75	11.55	7.70	10.06	9.19					Non-calcareous

Sample	Location ¼	¼	¼	Sec	TN	RE	Exposure/ Material	Lobe	Bulk Color	Susp. Color	Depth in Feet	Collector	Grain Size Percentages % Sand	% Silt 2μ	% Clay 2μ	% Silt 4μ	% Clay 4μ	Semi-Quantitative Clay Mineralogy % Illite	% Kaol & Chl	% Vermic-ulite	% Expand-ables	Comments
FR-77																						
400	SE	SW	NE	35	36	13	A/T	LL	7.5YR6/3	7.5YR6/4	15	MCM	83.36	11.43	5.21	9.82	6.82					Non-calcareous
401	SE	SW	NE	35	36	13	A/T	LL	7.5YR6/2	7.5YR6.4	20	MCM	83.85	11.63	4.52	10.15	6.00					Non-calcareous
402	SE	SW	NE	35	36	13	A/T	LL		7.5YR6/3	25	MCM	82.79	12.91	4.30	12.03	5.18					V. sl. calcareous
403	SE	SW	NE	35	36	13	A/T	LL	7.5YR7/3	7.5YR6/4	35	MCM	85.67	9.24	5.09	7.86	6.47					Sl. calcareous
404	NE	NW	SE	35	36	13	A/T	LL	7.5YR7/3	7.5YR5.5/4	5	MCM	78.26	15.18	6.56	14.02	7.72					Non-calcareous
405	NE	NW	SE	35	36	13	A/T	LL		7.5YR6/4	15	MCM	83.19	11.54	5.27	10.76	6.05					Non-calcareous
406	NE	NW	SE	35	36	13	A/T	LL	7.5YR6/3	7.5YR7/4	21	MCM	82.24	12.30	5.46	10.56	7.18					Non-calcareous
423	SE	SW	SW	17	35	13	A/T	GB	10YR6/3*	10YR6/3	35	MCM	63.71	26.57	9.72	24.41	11.88					Calcareous
424	SE	SW	SW	17	35	13	A/T	GB	10YR6/3*	10YR5/3	37	MCM	53.81	38.15	8.04	31.40	14.79	93	7	0	0	Calcareous
FR-78																						
12A	SE	SW	SW	11	38	14	A/T	LL	7.5YR5/4	7.5YR5.5/6	7	WS	81.94	12.39	5.67	11.06	7.00					
16	SW	NW	SW	23	39	14	A/T	LL	7.5YR5/6	10YR5.5/6	15	WS	63.40	28.80	7.80	26.71	9.89					
19A	NW	NW	NW	34	38	13	A/T	LL	7.5YR5/4	7.5YR6/4	16	WS	71.59	21.68	6.73	20.13	8.28					
19B	NW	NW	NW	34	38	13	A/T	LL	7.5YR5/4	7.5YR6/4	17	WS	73.29	20.98	5.74	19.29	7.43					
19C	NW	NW	NW	34	38	13	A/T	LL	5YR5/6	5YR5/6	26	WS	66.18	26.11	7.78	23.15	10.73					
22A	SE	NW	NW	27	38	13	A/T	LL	10YR6/4	10YR6/4	30	WS	75.44	19.01	5.54	16.90	7.68					
24A	NW	NE	NE	31	38	13	A/T	LL	10YR4/6	10YR5/4	12	WS	77.01	16.20	6.69	16.05	6.94					
26A	NW	SE	SE	29	34	13	A/T	LL	7.5YR4/4	7.5YR6/4	7	WS	74.86	16.04	9.10	14.57	10.57					
39	NE	NE	SE	2	38	14	RC/T	LL	7.5YR5/6	7.5YR5.5/6	4	WS	78.18	13.48	8.34	12.25	9.57					
17A	NW	NE	SE	5	38	14	A/T	LL	7.5YR5/4	10YR6/6	3	WS	72.51	22.07	5.42	19.61	7.89					
18A	SE	SW	SW	14	37	12	A/T	LL	7.5YR5/6	7.5YR6/5	12	WS	72.23	19.18	8.60	17.43	10.35					
23A	SW	NW	NE	31	38	14	A/T	LL	7.5YR5/6	7.5YR5.5/6	5	WS	67.02	23.75	9.23	21.85	11.13					
24C	SW	SW	NW	6	36	14	A/T	LL	7.5YR4/4	10YR6/4	12	WS	73.27	19.04	7.69	17.82	8.91					
37A	NE	SE	SE	9	39	12	A/T	LL	7.5YR4/4	7.5YR6/6	18	WS	75.51	16.40	8.09	14.48	10.07					
All Langlade Till Samples																						
Mean													77.22	15.68	7.13							
Std. Dev.													5.58	4.91	1.98							
All Green Bay Till Samples																						
Mean													77.23	16.29	7.07							
Std. Dev.													4.71	6.06	3.97							

Symbols and Abbreviations

Exposure

P - Pit
RC - Roadcut
A - Augered

Material

T - Till
A - Ablation till
L - Lacustrine sediment
BR - Bedrock residuum
S - Sand

Lobe

LL - Langlade
GB - Green Bay

* dry color, all others moist
Nashville till - type section description in Appendix A

Collectors

MCM - M. Carol McCartney
WS - William Simpkins

INPUT MODULE 1 - LOCATIONS AND STRATIGRAPHIC DATA — 1985

Sample no.	Year	Litho-strat. unit (code)	Mat. (code)	Sample source (code)	Sample depth (m)	Drill hole no.	LOCATION 1/4	1/4	1/4	1/4	Sec.	Tnsp.	Range	COLOR (Munsell) Hue value/ chroma	TILL STRATIGRAPHIC INDICATORS Clay mineralogy (in appar. abund.) smec.	illite	+kaol.	verm.	Mag. susp. (prev. units)	Mag. susc. dim. MKS units)	Reaction with HCL (NC,C,VC)	Carb. content (%) (Chittick) calc.	dolo.	total carb.	GRAINSIZE PERCENTAGES (< 2mm) Percent sand (2.0 to 0.0625mm)	Percent silt (0.0625 to 0.002mm)	Percent clay (<0.002 mm)
EX1-13	1985	CFNa	5	2	37	EX1	NW	SW	NE	12	T34N	R12E	5YR4/4					3.6	9E-04	C	0.0	6.1	6.1	14	56	29
EX2-4	1985	CFNa	3	2	9	EX2	NW	NW	NW	3	T34N	R12E	5YR5/6					5.5	1E-03	C				74	19	7
EX2-13	1985	CFNa	3	2	37	EX2	NW	NW	NW	3	T34N	R12E	5YR5/6					3.2	8E-03	NC	0.2	2.8	3.0	70	23	7
EX2-19	1985	LN	3	2	58	EX2	NW	NW	NW	3	T34N	R12E	7.5YR5/4	H	H	M	H	3.4	8E-04	VC	0.0	1.9	1.9	60	31	9
EX3-7	1985	CF	99	2	19	EX3	NW	NW	NE	3	T34N	R12E	10YR5/4					5.5	1E-03	SC	0.9	0.9	1.8	42	49	9
EX3-14a	1985	CFNa	3	2	40	EX3	NW	NW	NE	3	T34N	R12E	7.5YR5/6					4.8	1E-03	SC	1.0	1.0	2.0	67	28	5
EX3-15	1985	CFNa	3	2	44	EX3	NW	NW	NE	3	T34N	R12E	5YR5/6					5.0	1E-03	SC	0.0	13.0	13.0	71	25	4
EX3-16	1985	MA	3	2	46	EX3	NW	NW	NE	3	T34N	R12E	7.5YR4/2	M	M	M	M	4.6	1E-03	VC	0.0	2.0	2.0	51	39	10
EX4-21	1985	CFNa	3	2	34	EX4	SW	SW	NE	25	T35N	R12E	5YR4/6					5.4	1E-03	NC	0.0	1.0	1.0	69	27	4
EX5-15	1985	LN	3	2	43	EX5	NW	NW	NW	30	T35N	R12E	5YR4/6	H	H	M	M	3.0	7E-04	NC	0.0	1.1	1.1	66	27	7
EX8-12A	1985	HOMa	3	2	43	EX8	SE	SW	SW	28	T35N	R13E	7.5YR4/4					6.4	2E-03	VC	1.0	6.0	7.0	74	20	6
EX8-16	1985	MA	3	2	46	EX8	SE	SW	SW	28	T35N	R13E	7.5YR5/4	H	H	M	H	2.4	6E-04	VC	0.0	5.5	5.5	49	32	18
EX9-11	1985	HOMa	3	2	43	EX9	SW	SW	SE	29	T35N	R13E	7.5YR4/6					2.4	4E-04	VC	0.0	12.5	12.5	53	36	11
EX9-12	1985	HOMa	3	2	38	EX9	SW	SW	SE	29	T35N	R13E	5YR5/6					1.8	6E-04	VC	0.0	11.0	11.0	75	18	6
EX9-16	1985	HOMa	3	2	50	EX9	SW	SW	SE	29	T35N	R13E	5YR5/6					2.6	1E-03	C	0.0	1.2	1.2	81	13	5
EX9-17	1985	HOMa	3	2	52	EX9	SW	SW	SE	29	T35N	R13E	5YR4/6					4.0	1E-03	C	0.0	9.5	9.5	76	19	5
EX9-26	1985	LN	3	2	81	EX9	SW	SW	SE	29	T35N	R13E	5YR5/6	L	H	M	L	4.7	8E-04	NC	0.0	1.3	1.3	72	22	6
EX10-7	1985	CFNa	3	2	22	EX10	SE	NE	NW	32	T35N	R13E	5YR5/6					1.2	1E-03	NC	0.5	2.2	2.7	74	16	10
EX10-14	1985	CFNa	3	2	44	EX10	SE	NE	NW	32	T35N	R13E	7.5YR5/6					5.1	3E-04	NC	0.4	7.5	7.9	77	20	3
EX11-4a	1985	CFNa	3	2	10	EX11	SW	NE	SW	32	T35N	R13E	5YR4/3					1.2	8E-04	NC	0.0	9.3	9.3	77	16	6
EX11-11	1985	CFNa	5	2	22	EX11	SW	NE	SW	32	T35N	R13E	7.5YR4/4					3.2	2E-03	NC	0.4	1.0	1.4	44	44	12
EX11-13	1985	CFNa	3	2	29	EX11	SW	NE	SW	32	T35N	R13E	5YR4/6					7.0	7E-04	SC	0.0	18.0	18.0	73	21	5
EX11-17	1985	HOMa	3	2	41	EX11	SW	NE	SW	32	T35N	R13E	5YR5/6	L	H	M	L	2.8	6E-04	VC	0.0	9.8	9.8	78	15	7
EX12-12	1985	HOMa	3	2	37	EX12	SE	SW	NE	32	T35N	R13E	7.5YR5/8					6.2	6E-04	NC	0.0	7.6	7.6	79	14	6
EX12-22	1985	HOMa	3	2	68	EX12	SE	SW	NE	32	T35N	R13E	5YR5/8					2.7	6E-04	NC	0.0	0.9	0.9	76	18	6
EX13-5	1985	LN	3	2	59	EX13	NW	SW	SE	32	T35N	R13E	5YR6/4	H	L	M	H	2.5	1E-03	C	0.0	1.1	1.1	57	33	10
EX14-17	1985	HOMa	3	2	50	EX14	NE	NE	NE	5	T34N	R13E	7.5YR5/8					2.5	6E-04	VC	0.0	9.4	9.4	77	16	7
EX14-28	1985	LN	3	2	84	EX14	NE	NE	NE	5	T34N	R13E	5YR4/6					2.7	8E-04	VC	0.0	10.0	10.0	79	16	6
G40H9	1985	CFNa	3	2	10	G40H16	SW	NW	NE	35	T35N	R12E	10YR5/4					3.2	2E-03	VC	0.1	1.1	1.2	73	19	8
G40H14	1985	CFNa	3	2	18	G40H16	SW	NW	NE	35	T35N	R12E	7.5YR4/4					8.0	1E-03	C	0.0	3.8	3.8	76	20	4
G40H31	1985	HOMa	3	2	57	G40H16	SW	NW	NE	35	T35N	R12E	5YR5/6	M	M	M	M	5.1	1E-03	VC	0.5	4.0	4.5	71	22	7
G40H35	1985	LN	3	2	70	G40H16	SW	NW	NE	35	T35N	R12E	5YR5/6	M	M	M	M	5.4	1E-03	VC	0.5	3.0	3.5	61	28	11
G40H36	1985	MA	3	2	73	G40H16	SW	NW	NE	35	T35N	R12E	7.5YR5/4	M	M	M	M	3.0	7E-04	C	0.0	1.3	1.3	41	48	11
G40M38	1985	LN	3	2	80	G40M15	SW	SE	NW	36	T35N	R12E	7.5YR5/4					2.6	6E-04	VC	0.0	18.2	18.2	58	28	14
G41H09	1985	CFNa	3	2	24	G41H9	SE	NW	SE	29	T35N	R13E	10YR5/2					1.8	4E-04	C	0.1	1.1	1.2	68	25	8
G41H19	1985	CFNa	3	2	55	G41H9	SE	NW	SE	29	T35N	R13E	5YR5/6					3.9	9E-04	C	0.0	7.7	7.7	76	17	7
G41H20	1985	CFNa	3	2	59	G41H9	SE	NW	SE	29	T35N	R13E	5YR6/6					4.6	1E-03	C	0.0	26.6	26.6	77	18	5

Locations of samples taken from boreholes drilled near the
Crandon site. For reaction with acid: VC= very calcareous
C = calcareous, SC = slightly calcareous, and NC = non-calcareous
Relative abundance of clay minerals is H = high, M = moderate, L = low.
Formations are abbreviated as follow:
CF=Copper Falls, HO=Horicon, MA=Marathon, LN=Lincoln
Members are Na=Nashville, Ma=Mapleview.
Materials are 3=till, 5=lake sediment, 99=unidentified
Samples all taken from borings by STS and Golder and Associates by William M. Simpkins

INPUT MODULE 1 - LOCATIONS AND STRATIGRAPHIC DATA -- 1985

Sample no.	Year	Litho-strat. unit (code)	Mat. (code)	Sample source (code)	Sample depth (m)	LOCATION Drill hole no.	1/4 1/4	1/4 1/4	1/4	Sec.	Tnshp.	Range	COLOR (Munsell) Hue value/ chroma	TILL STRATIGRAPHIC INDICATORS Clay mineralogy (in apparent abund.) smec.	illite	chlor. +kaol.	verm.	Mag. suep. (prev. units)	Mag. susc. dim. MKS units)	Reaction with HCL (NC,C,VC)	Carb. content (%) (Chittick) calc.	dolo.	total carb.	GRAINSIZE PERCENTAGES (< 2mm) Percent sand (2.0 to 0.0625mm)	Percent silt (0.0625 to 0.002mm)	Percent clay (<0.002 mm)
EX1-13	1985	CFNa	5	2	37	EX1	NW	SW	NE	12	T34N	R12E	5YR4/4					3.6	9E-04	C	0.0	6.1	6.1	14	56	29
EX2-4	1985	CFNa	3	2	9	EX2	NW	NW	NW	3	T34N	R12E	5YR5/6					5.5	1E-03	C				74	19	7
EX2-13	1985	CFNa	3	2	37	EX2	NW	NW	NW	3	T34N	R12E	5YR5/6					3.2	8E-03	NC	0.2	2.8	3.0	70	23	7
EX2-19	1985	LN	3	2	56	EX2	NW	NW	NW	3	T34N	R12E	7.5YR5/4	H	H	M	H	3.4	8E-04	VC	0.0	1.9	1.9	60	31	9
EX3-7	1985	CF	99	2	19	EX3	NW	NW	NE	3	T34N	R12E	10YR5/4					5.5	1E-03	SC	0.9	0.9	1.8	42	49	9
EX3-14a	1985	CFNa	3	2	40	EX3	NW	NW	NE	3	T34N	R12E	7.5YR5/6					4.8	1E-03	SC	1.0	1.0	2.0	67	28	5
EX3-15	1985	CFNa	3	2	44	EX3	NW	NW	NE	3	T34N	R12E	5YR5/6					5.0	1E-03	SC	0.0	13.0	13.0	71	25	4
EX3-16	1985	MA	3	2	46	EX3	NW	NW	NE	3	T34N	R12E	7.5YR4/2	M	M	M	M	4.6	1E-03	VC	0.0	2.0	2.0	51	39	10
EX4-21	1985	CFNa	3	2	34	EX4	SW	SW	NE	25	T35N	R12E	5YR4/6					5.4	1E-03	NC	0.0	1.0	1.0	69	27	4
EX5-15	1985	LN	3	2	43	EX5	NW	NW	NW	30	T35N	R12E	5YR4/6	H	H	M	M	3.0	7E-04	NC	0.0	1.1	1.1	66	27	7
EX8-12A	1985	HOMa	3	2	43	EX8	SE	SW	SW	28	T35N	R13E	7.5YR4/4					6.4	2E-03	VC	1.0	6.0	7.0	74	20	6
EX8-16	1985	MA	3	2	46	EX8	SE	SW	SW	28	T35N	R13E	7.5YR5/4	H	H	M	H	2.4	6E-04	VC	0.0	5.5	5.5	49	32	18
EX9-11	1985	HOMa	3	2	43	EX9	SW	SW	SE	29	T35N	R13E	7.5YR4/6					2.4	4E-04	VC	0.0	12.5	12.5	53	36	11
EX9-12	1985	HOMa	3	2	38	EX9	SW	SW	SE	29	T35N	R13E	5YR5/6					1.8	6E-04	VC	0.0	11.0	11.0	75	18	6
EX9-16	1985	HOMa	3	2	50	EX9	SW	SW	SE	29	T35N	R13E	5YR5/6					2.6	1E-03	C	0.0	1.2	1.2	81	13	5
EX9-17	1985	HOMa	3	2	52	EX9	SW	SW	SE	29	T35N	R13E	5YR4/6					4.0	1E-03	C	0.0	9.5	9.5	76	19	5
EX9-26	1985	LN	3	2	81	EX9	SW	SW	SE	29	T35N	R13E	5YR5/6	L	H	M	L	4.7	8E-04	NC	0.0	1.3	1.3	72	22	6
EX10-7	1985	CFNa	3	2	22	EX10	SE	NE	NW	32	T35N	R13E	5YR5/6					1.2	1E-03	NC	0.5	2.2	2.7	74	16	10
EX10-14	1985	CFNa	3	2	44	EX10	SE	NE	NW	32	T35N	R13E	7.5YR5/6					5.1	3E-04	NC	0.4	7.5	7.9	77	20	3
EX11-4a	1985	CFNa	3	2	10	EX11	SW	NE	SW	32	T35N	R13E	5YR4/3					1.2	8E-04	NC	0.0	9.3	9.3	77	16	6
EX11-11	1985	CFNa	5	2	22	EX11	SW	NE	SW	32	T35N	R13E	7.5YR4/4					3.2	2E-03	NC	0.4	1.0	1.4	44	44	12
EX11-13	1985	CFNa	3	2	29	EX11	SW	NE	SW	32	T35N	R13E	5YR4/6					7.0	7E-04	SC	0.0	18.0	18.0	73	21	5
EX11-17	1985	HOMa	3	2	41	EX11	SW	NE	SW	32	T35N	R13E	5YR5/6	L	M	M	L	2.8	6E-04	VC	0.0	9.8	9.8	78	15	7
EX12-12	1985	HOMa	3	2	37	EX12	SE	SW	NE	32	T35N	R13E	7.5YR5/8					6.2	6E-04	NC	0.0	7.6	7.6	79	14	6
EX12-22	1985	HOMa	3	2	68	EX12	SE	SW	NE	32	T35N	R13E	5YR5/8					2.7	6E-04	NC	0.0	0.9	0.9	76	18	6
EX13-5	1985	LN	3	2	59	EX13	NW	SW	SE	32	T35N	R13E	5YR6/4	H	L	M	H	2.5	1E-03	C	0.0	1.1	1.1	57	33	10
EX14-17	1985	HOMa	3	2	50	EX14	NE	NE	NE	5	T34N	R13E	7.5YR5/8					2.5	6E-04	VC	0.0	9.4	9.4	77	16	7
EX14-28	1985	LN	3	2	84	EX14	NE	NE	NE	5	T34N	R13E	5YR4/6					2.7	8E-04	VC	0.0	10.0	10.0	79	16	6
G40H9	1985	CFNa	3	2	10	G40H16	SW	NW	NE	35	T35N	R12E	10YR5/4					3.2	2E-03	VC	0.1	1.1	1.2	73	19	8
G40H14	1985	CFNa	3	2	18	G40H16	SW	NW	NE	35	T35N	R12E	7.5YR4/4					8.0	1E-03	C	0.0	3.8	3.8	76	20	4
G40H31	1985	HOMa	3	2	57	G40H16	SW	NW	NE	35	T35N	R12E	5YR5/6	M	M	M	M	5.1	1E-03	VC	0.5	4.0	4.5	71	22	7
G40H35	1985	LN	3	2	70	G40H16	SW	NW	NE	35	T35N	R12E	5YR5/6	M	M	M	M	5.4	1E-03	VC	0.5	3.0	3.5	61	28	11
G40H36	1985	MA	3	2	73	G40H16	SW	NW	NE	35	T35N	R12E	7.5YR5/4	M	M	M	M	3.0	7E-04	C	0.0	1.3	1.3	41	48	11
G40M38	1985	LN	3	2	80	G40M15	SW	SE	NW	36	T35N	R12E	7.5YR5/4					2.6	6E-04	VC	0.0	18.2	18.2	58	28	14
G41H09	1985	CFNa	3	2	24	G41H9	SE	NW	SE	29	T35N	R13E	10YR5/2					1.8	4E-04	C	0.1	1.1	1.2	68	25	8
G41H17	1985	CFNa	3	2	55	G41H9	SE	NW	SE	29	T35N	R13E	5YR5/6					3.9	9E-04	C	0.0	7.7	7.7	76	17	7
G41H20	1985	CFNa	3	2	59	G41H9	SE	NW	SE	29	T35N	R13E	5YR6/6					4.6	1E-03	C	0.0	26.6	26.6	77	18	5

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