

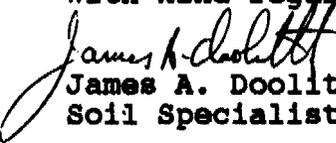
Alabama series: fine-loamy, siliceous, thermic Typic Hapludults), Leetonia (sandy-skeletal, siliceous, mesic Entic Haplorthods), and Ungers (fine-loamy, mixed, mesic Typic Hapludults) soils were traversed. These moderately-deep to deep soils formed on upland areas underlain by sandstone. The following map units were transected with GPR:

CoB - Cookport loam, 3 to 8 percent slopes
 CpB - Cookport very stony loam, 0 to 8 percent slopes
 DaB - Dekalb channery loam, 0 to 3 percent slopes
 DkB - Dekalb very stony soils, 0 to 8 percent slopes
 DkC - Dekalb very stony soils, 8 to 25 percent slopes
 DkE - Dekalb very stony soils, 25 to 100 percent slopes
 HsB - Hartsells very stony loam, 0 to 8 percent slopes
 LnC - Leetonia very stony sandy loam, 8 to 25 percent slopes
 UnB - Ungers loam, 3 to 8 percent slopes

The data appearing in Tables 1 and 2 are the interpreted depths to bedrock along the 19.3 miles of roadways transected with GPR. In many upland areas, it is difficult to excavate and examine soil profiles and determine depths to bedrock. Rock fragments and irregular or weathered bedrock boundaries limit the effectiveness of conventional probing techniques. Ground-penetrating radar can extend the depth of observation and improve the quality of soil information at lower depths. The data collected with GPR in Clinton County can help improve both soil correlation and interpretations of soil map units.

All radar profiles have been returned to Jake Eckenrode for further analysis under a separate cover letter. It was a pleasure to work with members of your fine staff.

With kind regards.


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cc:

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Table 1

GPR Transect completed on 18 October 1994

Distance (miles)	Depth (inch)	M.U.	Distance (miles)	Depth (inch)	M.U.
0	46	DkE	7.1	39	CoB
0.1	28	DkE	7.2	43	DkB
0.2	115	DkE	7.3	68	DkB
0.3	>151	DkE	7.4	125	DkB
0.4	27	DkE	7.5	95	DkB
0.5	109	DkE	7.6	91	DkB
0.6	92	DkE	7.7	84	DkB
0.7	59	DkE	7.8	84	DkB
0.8	58	DkE	7.9	56	DkB
0.9	47	DkE	8	92	DkC
1	28	DkE	8.1	29	DkC
1.1	64	DkE	8.2	58	DkE
1.2	66	DkE	8.3	67	DaB
1.3	30	DkE	8.4	41	DaB
1.4	22	DkE	8.5	45	DaB
1.5	41	DkE	8.6	63	DaB
1.6	60	DkE	8.7	62	DaB
1.7	51	DkE	8.8	67	DaB
1.8	38	DkE	8.9	101	DaB
1.9	73	DkE	9	96	DaB
2	29	DkE	9.1	>151	DaB
2.1	>151	DkC	9.2	46	DaB
2.2	105	DkC	9.3	105	DkB
2.3	104	DkE	9.4	>151	DkB
2.4	134	DkE	9.5	76	DkB
2.5	>151	DkE	9.6	78	DkB
2.6	60	DkC	9.7	96	DkB
2.7	48	DkC	9.8	57	DkB
2.8	>151	DkC	9.9	50	DkB
2.9	58	DkC	10	81	DkB
3	59	DkC	10.1	55	DkB
3.1	94	DkC	10.2	105	DkB
3.2	50	DkC	10.3	86	DkB
3.3	90	DkC	10.4	53	DkB
3.4	73	DkC	10.5	41	DkC
3.5	112	DkC	10.6	104	DkC
3.6	125	DkC	10.7	78	DkC
3.7	48	DkC	10.8	118	DkC
3.8	52	DkE	10.9	71	DkE
3.9	121	DkE	11	50	UnB
4	95	DkE	11.1	99	UnB
4.1	>151	DkC	11.2	56	UnB
4.2	47	DkC	11.3	69	UnB
4.3	56	DkC	11.4	22	UnB
4.4	106	DkC	11.5	34	UnB
4.5	64	DkC	11.6	36	UnB
4.6	55	DkB	11.7	61	DkB
4.7	>151	DkB	11.8	41	DkB
4.8	73	DkB	11.9	41	DkB

Table 1 (continued)

GPR Transect completed on 18 October 1994					
Distance (miles)	Depth (inch)	M.U.	Distance (miles)	Depth (inch)	M.U.
4.9	73	DkB	12	60	DkB
5	54	DkE	12.1	41	DkE
5.1	123	DkE	12.2	36	DkE
5.2	41	DkE	12.3	118	DkB
5.3	75	DkB	12.4	52	DkE
5.4	56	DkB	12.5	31	DkE
5.5	57	DkB	12.6	76	DkE
5.6	39	DkB	12.7	52	DkE
5.7	43	DkB	12.8	34	DkE
5.8	60	DkB	12.9	40	DkE
5.9	59	DkB	13	70	DkE
6	40	DkE	13.1	98	DkB
6.1	37	DkE	13.2	45	DkB
6.2	43	DkE	13.3	65	DkB
6.3	34	DkE	13.4	43	DkB
6.4	39	DkE	13.5	82	DkB
6.5	39	DkE	13.6	63	DkB
6.6	49	CoB	13.7	62	DkB
6.7	82	CoB	13.8	45	DkB
6.8	76	CoB	13.9	117	DkB
6.9	34	CoB	14	117	Dab
7	84	CoB			

Table 2

GPR Transect completed on 19 October 1994					
Distance (miles)	Depth (inch)	M.U.	Distance (miles)	Depth (inch)	M.U.
0	68	DkB	2.7	28	DkB
0.1	105	DkB	2.8	55	CpB
0.2	>151	CoB	2.9	62	CpB
0.3	103	CoB	3	53	CpB
0.4	55	DkC	3.1	112	DkB
0.5	125	DkC	3.2	75	DkB
0.6	105	DaB	3.3	59	DkB
0.7	>151	DaB	3.4	50	DkB
0.8	75	DaB	3.5	25	DkB
0.9	112	DaB	3.6	43	DkB
1	102	DaB	3.7	39	DkB
1.1	113	DaB	3.8	26	DkB
1.2	110	DaB	3.9	32	DkB
1.3	88	DaB	4	65	DkB
1.4	110	DaB	4.1	34	DkB
1.5	111	DaB	4.2	105	CpB
1.6	111	DkC	4.3	124	DkB

Table 2 (continued)

GPR Transect completed on 19 October 1994

Distance (miles)	Depth (inch)	M.U.	Distance (miles)	Depth (inch)	M.U.
1.7	98	DkC	4.4	39	DkB
1.8	75	CpB	4.5	121	DkB
1.9	50	UnB	4.6	81	DkB
2	72	UnB	4.7	125	DkB
2.1	66	DkB	4.8	73	DkC
2.2	132	DkB	4.9	34	DkC
2.3	55	DkB	5	72	LnC
2.4	31	HsB	5.1	37	LnC
2.5	47	HsB	5.2	108	LnC
2.6	33	HsB	5.3	91	LnC