Appendix A
Soil Boring Logs

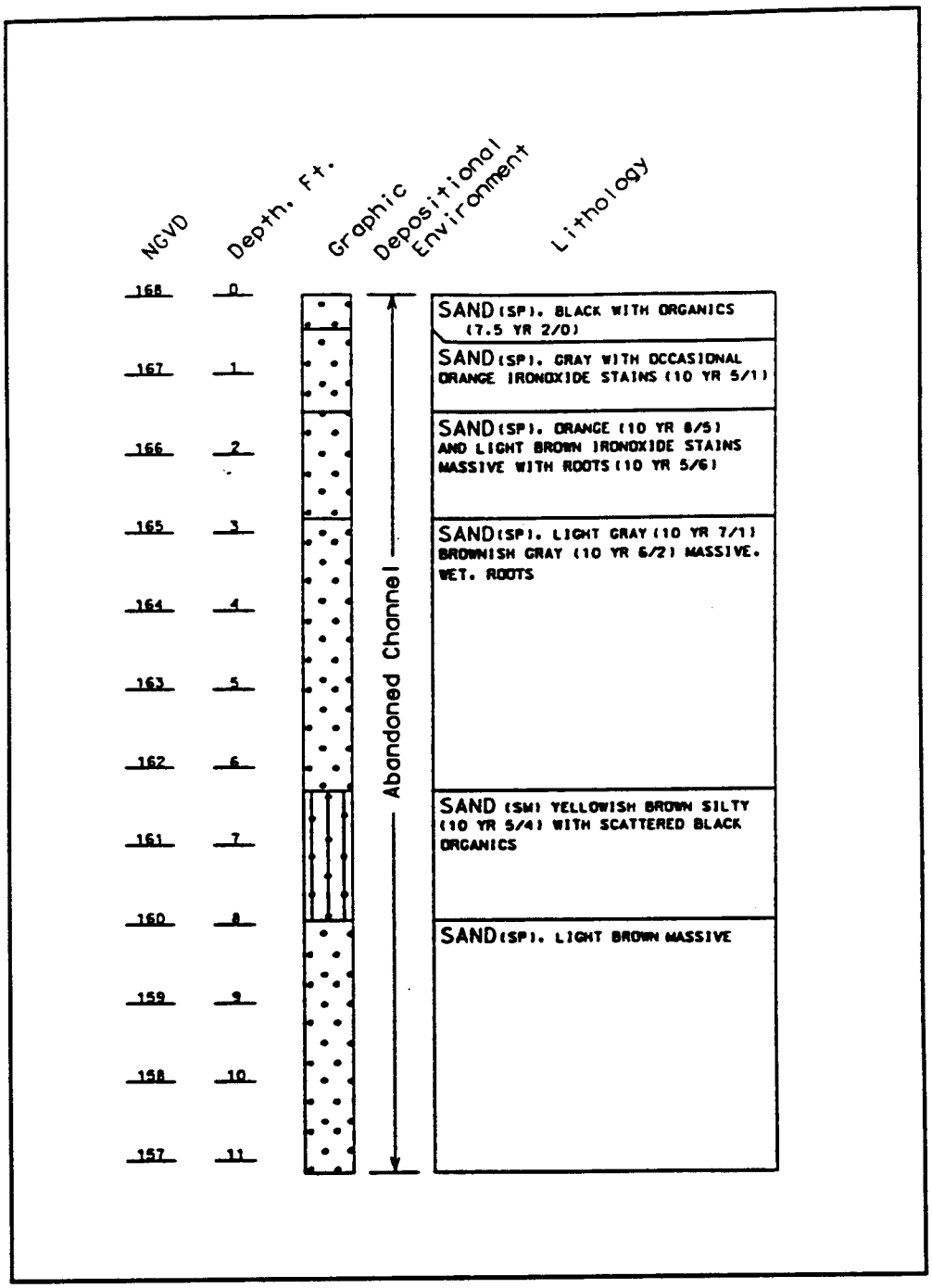

Figure A1. Boring log V-1; for location, see Plate 7

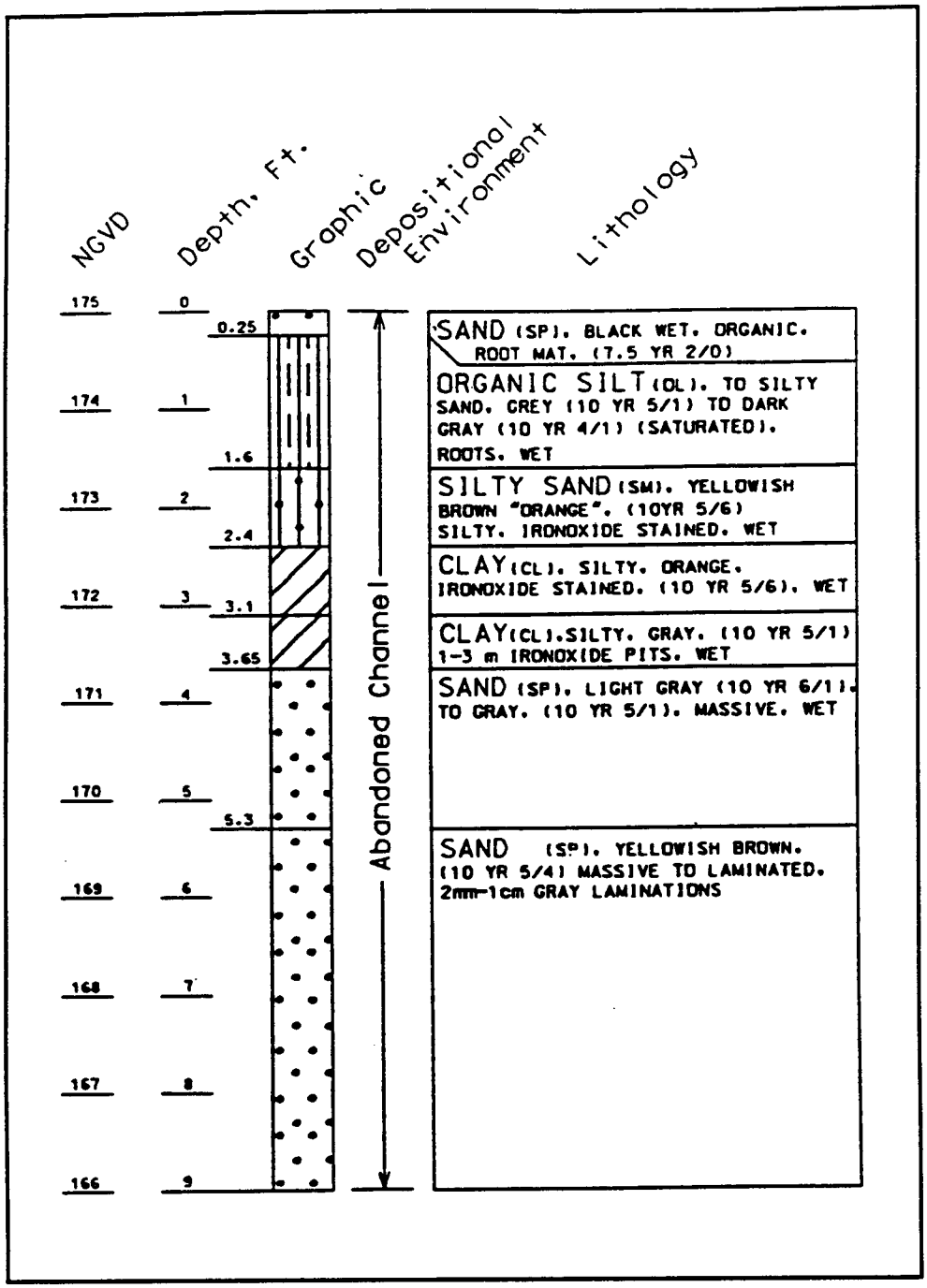

Figure A2. Boring log V-2; for location, see Plate 6

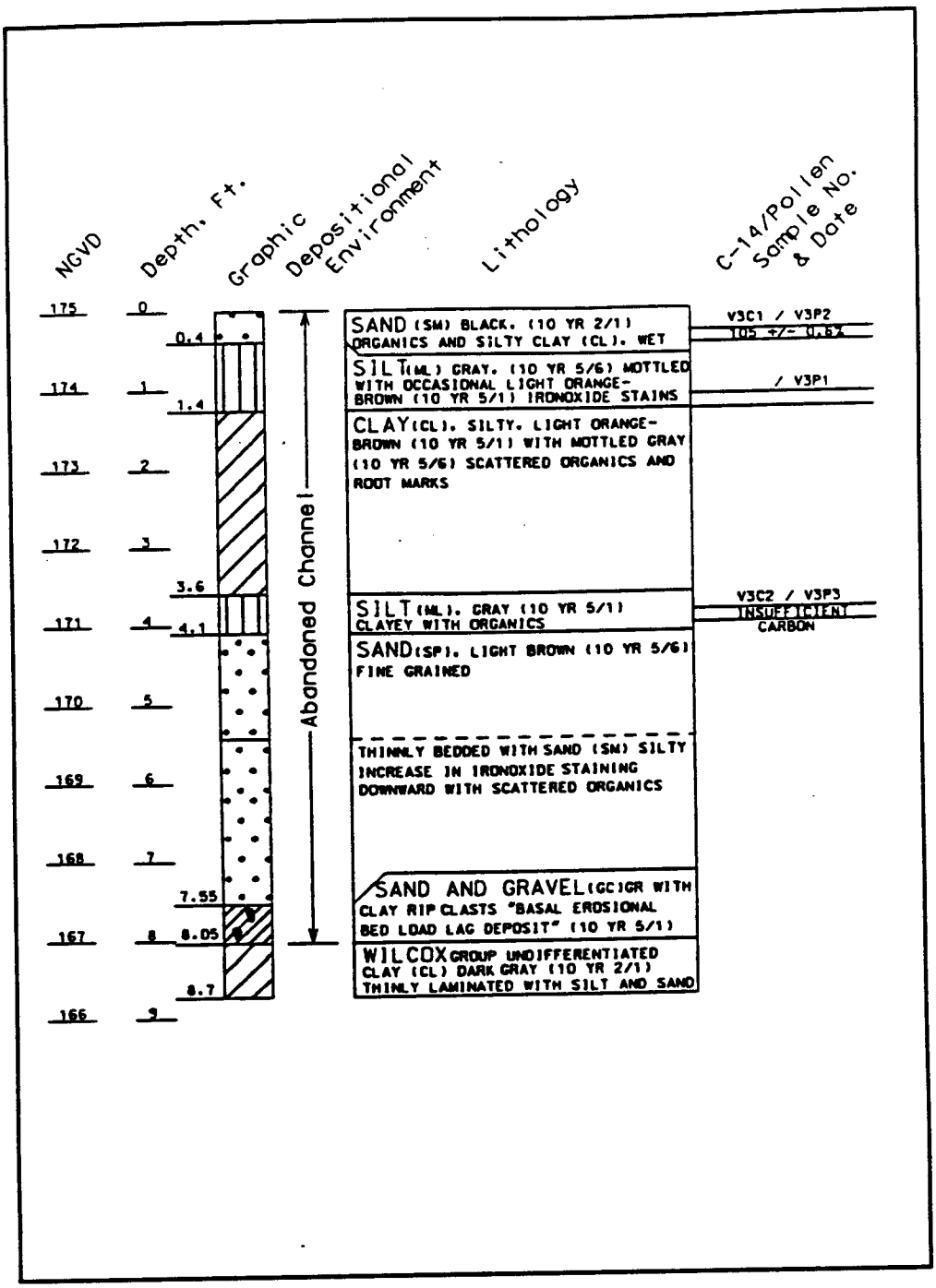

Figure A3. Boring log V-3; for location, see Plate 6

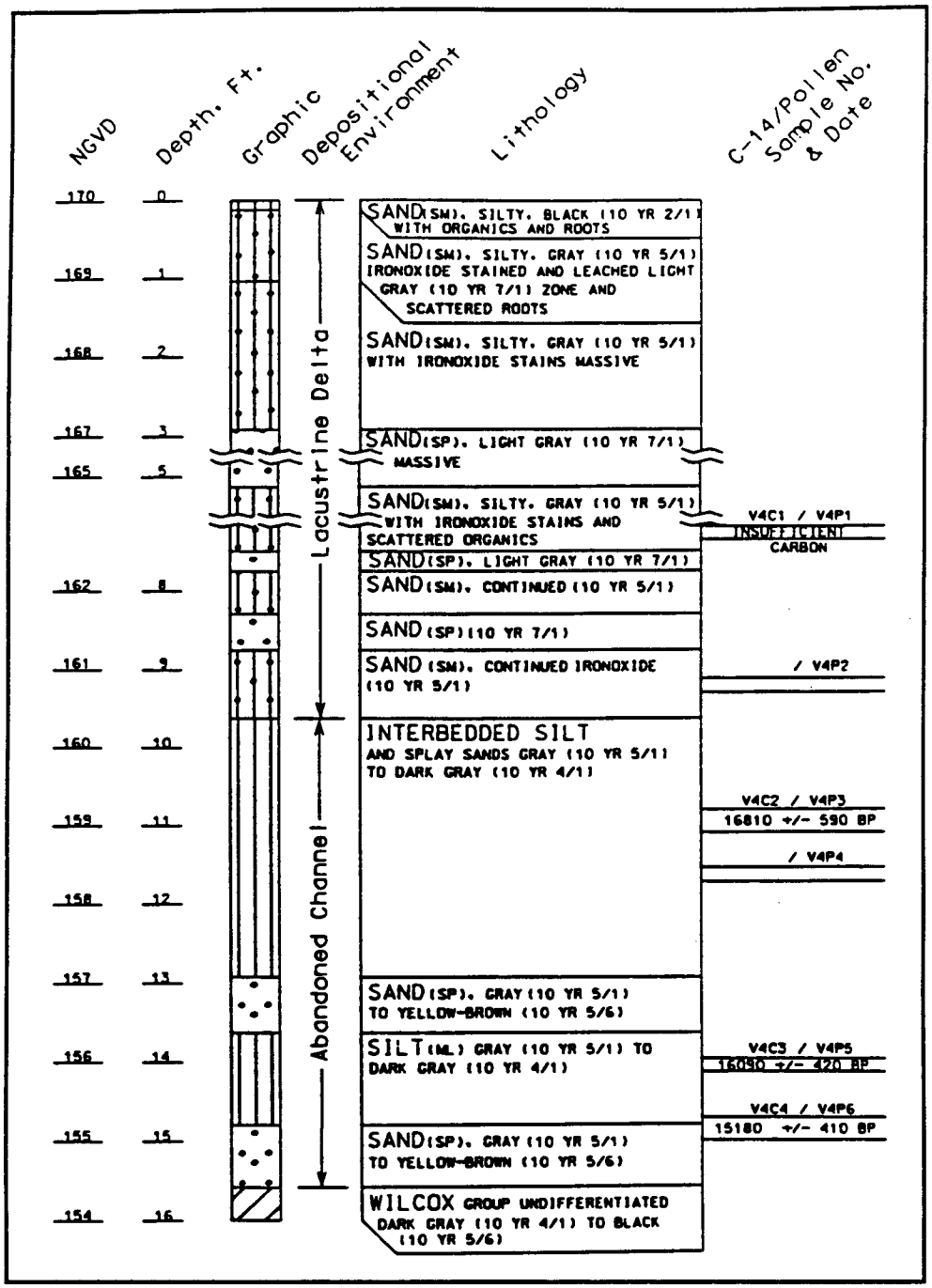

Figure A4. Boring log V-4; for location, see Plate 7

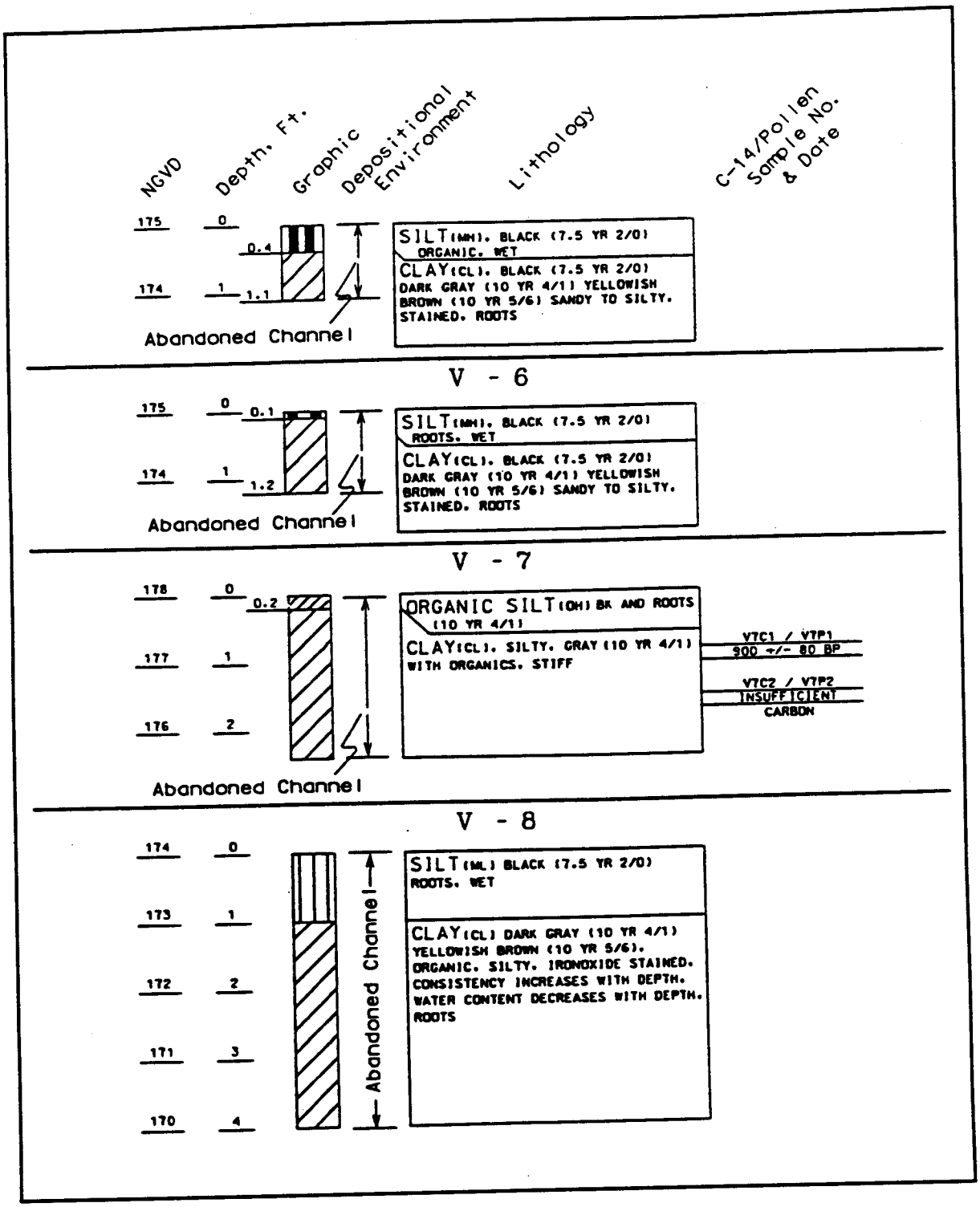

Figure A5. Boring logs V-5, V-6, V-7, and V-8; for location, see Plates 6 and 7

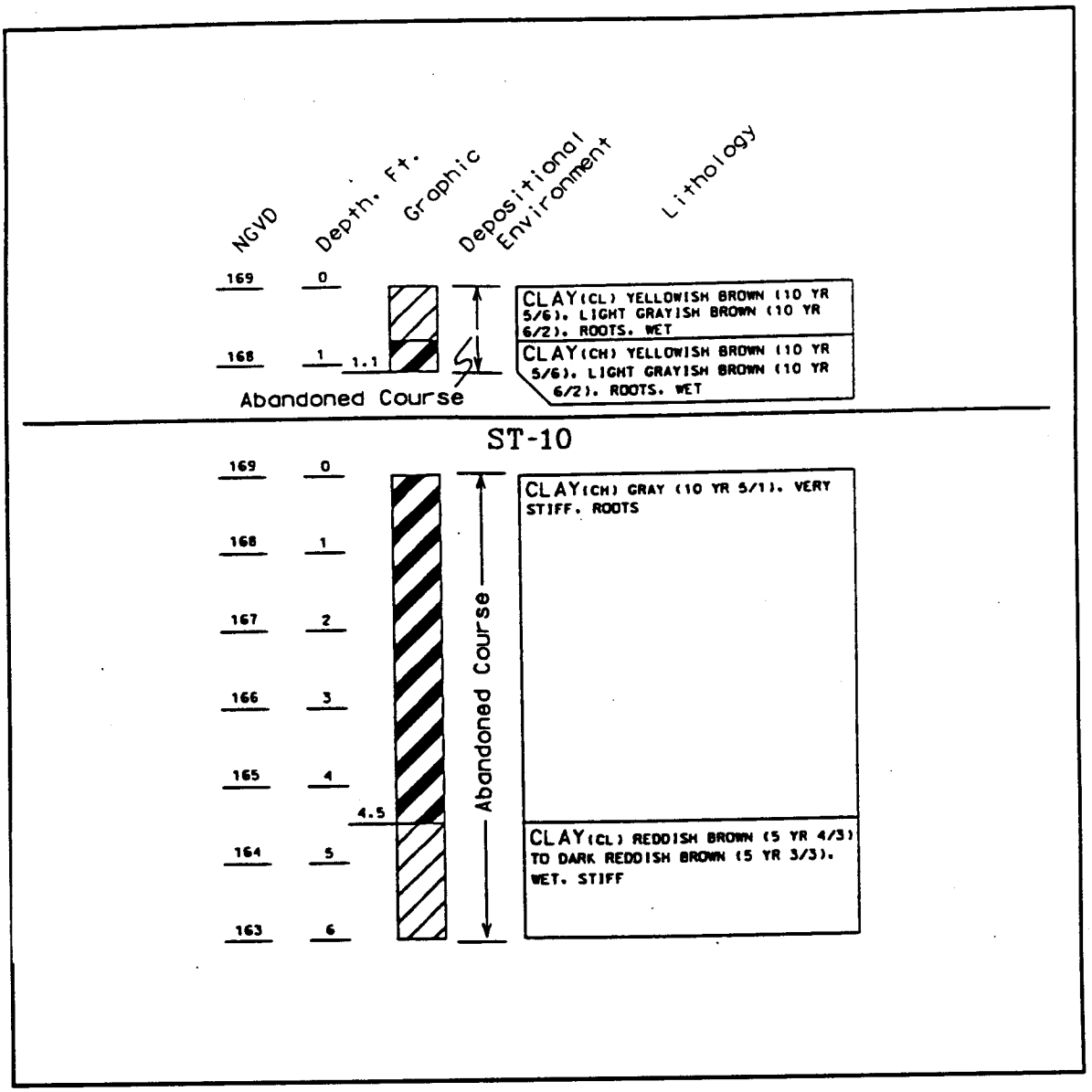

Figure A6. Boring logs V-9 and ST-10; for location, see Plate 12

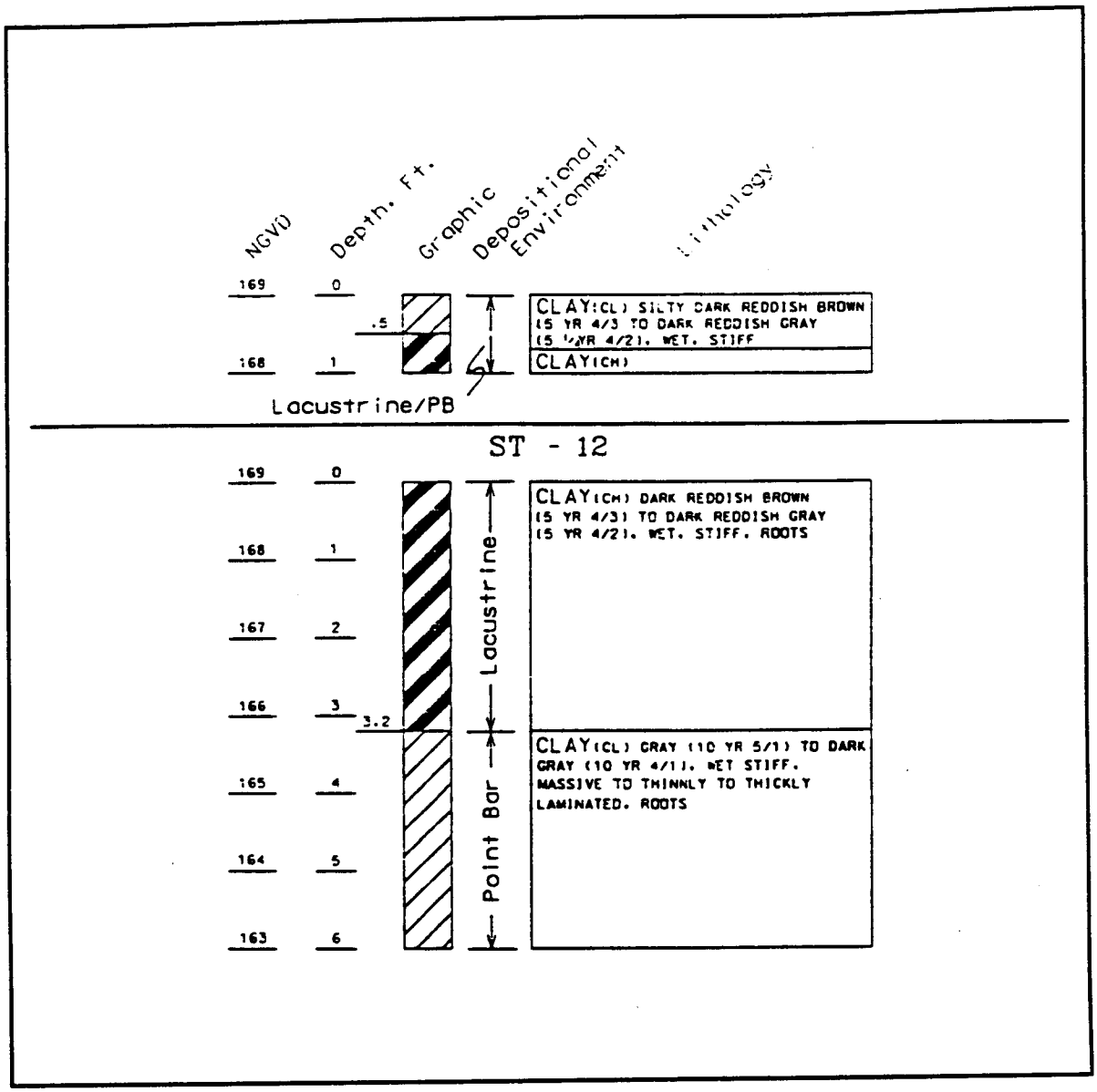

Figure A7. Boring logs V-11 ST-12; for location, see Plates 12 and 13

Appendix, B
Radiocarbon Test Results

Table B1
C-14 Test Results

Boring Number	Sample Number	Lab Number	Sample Depth, ft	Material Dated	C14 Date (years BP 1950)
V3	C1	55718	0.3 - 0.5	Sediment	105.1 ± 0.8%
V3	C2	55719	3.8 - 4.0	Sediment	Insuff. Carbon
V4	C1	55720	7.1 - 7.3	Sediment	Insuff. Carbon
V4	C2	55721	10.8 - 11.1	Sediment	16,810 ± 590 BP
V4	C3	55722	13.9 - 14.1	Sediment	16,090 ± 420 BP
V4	C4	55723	14.7 - 15.0	Sediment	15,180 ± 410 BP
V7	C1	55724	0.8 - 1.0	Sediment	900 ± 80 BP
V7	C2	55725	1.5 - 1.7	Sediment	Insuff. Carbon
ST12	14C	55726	5.2 - 5.6	Sediment	2,680 ± 90 BP
ST12	2	55727	3.7 - 4.0	Sediment	510 ± 60 BP

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REPORT OF RADIOCARBON DATING ANALYSES

FOR: Paul E. Albertson
US Army Corps of Engineers WES

DATE RECEIVED: September 2, 1992
DATE REPORTED: September 30,1992

SUBMITTER'S PURCHASE ORDER #

OUR LAB NUMBER	YOUR SAMPLE NUMBER	C-14 AGE YEARS B.P. ±1σ	CI 3/C12	CI3 adjusted age
Bet a-5571 8	V3-C1 (sediment)	105.1 +/- 0.8 %	-27.2 0/00	105.5 +/- 0.8 %
Bet a-557 19	V3-C2 (sediment)	Insufficient carbon for analysis		
Bet a-55720	V4-C1 (sediment)	Insufficient carbon for analysis		
Bet a-55721	V4-C2 (sediment)	16810 +/- 590 BP	-24.9 0/00	16810 +/- 590 BP
Bet a-55722	V4-C3 (sediment)	16090 +/- 420 BP	-26.4 0/00	16070 +/- 420 BP
Bet a-55723	V4-C4 (sediment)	15180 +/- 410 BP	-26.1 0/00	15160 +/- 410 BP
Bet a-55724	V7-C1 (sediment)	900 +/- 80 BP	-29.1 0/00	840 +/- 80 BP
Bet a-55725	V7-C2 (sediment)	Insufficient carbon for analysis		
Beta-55726	ST-12 14C 1 (sediment)	2720 +/- 90 BP	-27.2 0/00	2680 +/- 90 BP
Bet a-55727	ST-12 2 (sediment)	510 +/- 60 BP	-27.0 0/00	470 +/- 60 BP

These dates are reported as RCYBP (radiocarbon years before 1950 A.D.). By International convention. the half-life of radiocarbon is taken as 5568 years and 95% of the activity of the National Bureau of Standards Oxalic Acid (original batch) used as the modern standard. The quoted errors are from the counting of the modern standard, background, and sample being analyzed. They represent one standard deviation statistics (89% probability), based on the random nature of the radioactive disintegration process. Also by international convention no corrections are made for DeVries effect, reservoir effect, or isotope fractionation in nature. unless specifically noted above. Stable carbon rattosaremeasuredon request and are calculated relative to the PDB-1international standard; the adjusted ages are normalized to -25 permil carbon 13.

EXPLANATION OF AGE DETERMINATION TERMS

Conventional radiocarbon date

1. Conventional radiocarbon date is age 8033ln (counts per minute of the oxalic acid - counts per minute of the background times 0.7459 (1-(17.8 + del13C/1000)/counts per minute of the sample, counts per minute of the background times (1-2-25 + del 1 C/1000). This term also implies:

a. the use of the 5568 year half-life (mean life 8033).

b. the assumption of constancy of 14C atmospheric level during the past.

c. the use of oxalic acid (direct or indirect) as a standard.

d. isotopic fractionation normalization of all sample activities to the base of del 1 C = -25 per mil (relative to the $^{13}C/^{12}C$ ratio of the PeeDee Belemnite).

e. the year 1950 is automatically the base year, with ages given in years BP (i.e., present is 1950 AD).

Counting time

2. All samples are counted for at least 24 hours. Samples that are less than 1 gram, less than 1000 years BP, or greater than 25,000 years BP are counted for at least 48 hours to reduce the error factor on the age.

Error factor

3. Error factor is based on the size of the sample and the number of accumulated counts of the sample, oxalic acid, ant background. The statistical uncertainty of the age determination is reported as +/- one standard deviation.

Raw age

4. Raw age does not take into consideration the del ^{13}C value of the sample. The equation is age = 8033ln (counts per minute of the oxalic acid, counts per minute of the background/counts per minute of the sample, counts per minute of the background).

Sample size

5. Samples that are less than 1 gram are counted for extended counting times to increase the reliability of the age and reduce the error factor.

Standard pretreatment

6. Once the size fraction to be dated has been isolated, the following steps are followed:

a. Sample is boiled for 30 min in 500 ml of 0.2N HCl.

b. Sample is rinsed repeatedly in deionized distilled water till the pH is neutral.

c. Sample is boiled for 30 min in 500 ml of 0.2N NaOH.

d. Sample is rinsed repeatedly in deionized distilled water till the water is clear.

e. Sample is decanted and dried overnight at 75^{O}C.

f. Sample is crushed with a mortar and pestle, weighed, and stored in an air tight container.