

**AMERICAN EXPEDITIONARY FORCES
DEPARTMENT OF CONSTRUCTION AND FORESTRY
FORESTRY SECTION**

**INSTRUCTIONS
FOR
SCALING SAWLOGS**

INSTRUCTIONS FOR SCALING SAWLOGS

1. The object of scaling is to obtain an accurate record of the amount of stumpage cut from a tract. The amounts recorded in the scale will be used to determine the amount of money to be paid for the timber or to check the price paid in a lump sum. **ACCURACY IN SCALING IS THEREFORE OF PRIME IMPORTANCE.** The standard of measurement in France for buying and selling timber and timber products is the cubic meter, and the timber acquired by the U. S. will be so purchased. This necessitates that all scaling be done in metric units.

2. Scale as follows : (logs may be numbered if desired) :

(1) Measure and record the length of each log in meters to the nearest fifth. If the log measures between fifths, drop one tenth of a meter and less and raise more than a tenth to the next higher fifth. Example : a log measures 6.30 meters, record as 6.20; another log measures 6.31, record as 6.40.

(2) Measure the average diameter of each log at the middle point outside the bark to the nearest even numbered centimeter. If the diameter is an odd numbered centimeter or less, drop to the next lower centimeter; if over an odd numbered centimeter, raise to the next higher centimeter. Example : a log measures 19 cm. in diameter, record as 18 cm.; another log measured 19.1 cm., record as 20 cm. Note that French diameter measurements are mad *outside* the bark. No allowances for the thickness of bark should be made. If the middle diameter of the log cannot be obtained, average the diameter at top and butt tends.

(3) Under the proper species enter the cubic contents of the log in cubic meters to 2 decimal places.

3. Mark each log with some distinctive mark to show that it has been scales.

4. No cull will be made for defects unless the log is seriously defective. In such cases cull may be allowed for by a reduction in the scaling length of the log.

5 (1) Each column will be totaled in cubic meters at the bottom of the page by species.

(2) When the page is filled the grand totals will be entered, and the total number of pieces will be recorded by species in the space provided at the right of the page

6. Log volumes in cubic meters should be taken from the volume table on pages 2 and 3.

VOLUME OF LOGS

Based on Middle Diameters in Centimeters

Diameter at middle point in centimeters	LENGHT-																
	4	5	6	7	8	9	10	11	12	13							
	LENGHT-																
	1.20	1.40	1.60	1.80	2.00	2.20	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.20	4.40
10	.01	.01	.01	.01	.02	.02	.02	.02	.02	.02	.03	.03	.03	.03	.03	.03	.04
12	.01	.02	.02	.02	.02	.02	.03	.03	.03	.03	.04	.04	.04	.04	.04	.05	.05
14	.02	.02	.03	.03	.03	.04	.04	.04	.04	.05	.05	.05	.06	.06	.06	.07	.07
16	.02	.03	.03	.04	.04	.04	.05	.05	.06	.06	.06	.07	.07	.08	.08	.08	.09
18	.03	.04	.04	.04	.05	.06	.06	.06	.07	.08	.08	.08	.09	.10	.10	.10	.11
20	.04	.05	.05	.06	.06	.07	.08	.08	.09	.10	.10	.11	.12	.12	.13	.14	.14
22	.05	.05	.06	.07	.08	.08	.09	.10	.11	.11	.12	.13	.14	.14	.15	.16	.17
24	.05	.06	.07	.08	.09	.10	.11	.12	.13	.13	.14	.15	.16	.17	.18	.19	.20
26	.06	.07	.08	.10	.11	.12	.13	.14	.15	.16	.17	.18	.19	.20	.21	.22	.23
28	.07	.09	.10	.11	.12	.14	.15	.16	.17	.19	.20	.21	.22	.24	.25	.26	.27
30	.09	.10	.11	.13	.14	.16	.17	.19	.20	.21	.23	.24	.26	.27	.28	.31	.31
32	.10	.11	.13	.14	.16	.17	.19	.21	.22	.24	.26	.27	.29	.30	.32	.33	.35
34	.11	.13	.15	.16	.17	.20	.22	.24	.25	.27	.29	.31	.33	.35	.36	.38	.40
36	.12	.14	.16	.18	.20	.22	.24	.26	.29	.31	.33	.35	.37	.39	.41	.43	.45
38	.14	.16	.18	.20	.23	.25	.27	.29	.32	.34	.36	.38	.41	.43	.45	.47	.50
40	.15	.18	.20	.23	.25	.28	.30	.32	.35	.38	.40	.43	.45	.48	.50	.53	.55
42	.17	.19	.22	.25	.28	.31	.33	.36	.39	.42	.44	.47	.50	.53	.56	.58	.61
44	.18	.21	.24	.27	.30	.33	.36	.40	.43	.46	.49	.52	.55	.58	.61	.64	.67
46	.20	.23	.27	.30	.33	.37	.40	.43	.47	.50	.53	.56	.60	.63	.66	.70	.73
48	.22	.25	.29	.33	.36	.40	.43	.47	.51	.54	.58	.62	.65	.69	.72	.76	.80
50	.24	.27	.31	.35	.39	.43	.47	.51	.55	.59	.63	.67	.71	.75	.78	.82	.86
52	.25	.30	.34	.38	.42	.47	.51	.55	.59	.64	.68	.72	.76	.81	.85	.89	.93
54	.27	.32	.37	.41	.46	.50	.55	.60	.64	.69	.73	.78	.83	.87	.92	.96	1.01
56	.30	.34	.39	.44	.49	.54	.59	.64	.69	.74	.79	.84	.89	.93	.98	1.03	1.08
58	.32	.37	.42	.48	.53	.58	.63	.69	.74	.79	.85	.90	.95	1.00	1.06	1.11	1.16
60	.34	.40	.45	.51	.57	.62	.68	.74	.79	.85	.91	.96	1.02	1.08	1.13	1.19	1.25
62	.36	.42	.48	.54	.60	.66	.73	.79	.85	.91	.97	1.03	1.09	1.15	1.21	1.27	1.33
64	.39	.45	.52	.58	.64	.71	.77	.84	.90	.97	1.03	1.10	1.16	1.22	1.29	1.35	1.42
66	.41	.48	.55	.62	.68	.75	.82	.89	.96	1.03	1.09	1.16	1.23	1.30	1.37	1.44	1.50
68	.44	.51	.58	.65	.73	.80	.87	.94	1.02	1.09	1.16	1.23	1.31	1.38	1.45	1.53	1.60
70	.46	.54	.62	.69	.77	.85	.92	1.00	1.08	1.16	1.23	1.31	1.39	1.46	1.54	1.62	1.69
72	.49	.57	.65	.73	.82	.90	.98	1.06	1.14	1.22	1.30	1.38	1.47	1.55	1.63	1.71	1.79
74	.52	.60	.69	.77	.86	.95	1.03	1.12	1.20	1.29	1.38	1.46	1.55	1.64	1.72	1.81	1.89
76	.55	.64	.73	.82	.91	1.00	1.09	1.18	1.27	1.36	1.45	1.54	1.63	1.72	1.82	1.91	2.00

IN CUBIC METERS.

and Lengths in Meters.

824
508
565 10000
645
4320

FEET.																	
15	16	17	18	19	20	21	22	23	24	25	26						
METERS.																	
4.60	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00	7.20	7.40	7.60	7.80	8.00
.04	.04	.04	.04	.04	.04	.05	.05	.05	.05	.05	.05	.06	.06	.06	.06	.06	.06
.05	.05	.06	.06	.06	.06	.06	.07	.07	.07	.07	.07	.08	.08	.08	.08	.09	.09
.07	.08	.08	.08	.09	.09	.09	.10	.10	.10	.11	.11	.11	.12	.12	.12	.12	.13
.09	.10	.10	.10	.11	.11	.12	.12	.12	.13	.13	.14	.14	.14	.15	.15	.16	.16
.12	.12	.12	.13	.14	.14	.15	.15	.16	.16	.16	.17	.18	.18	.18	.19	.20	.20
.15	.16	.16	.17	.17	.18	.19	.19	.20	.21	.21	.22	.23	.23	.24	.25	.25	.26
.17	.18	.19	.20	.21	.21	.22	.23	.24	.24	.25	.26	.27	.27	.28	.29	.30	.30
.21	.22	.22	.23	.24	.25	.26	.27	.28	.29	.30	.31	.32	.32	.33	.34	.35	.36
.24	.25	.26	.28	.29	.30	.31	.32	.33	.34	.35	.36	.37	.38	.39	.40	.41	.42
.28	.30	.31	.32	.33	.35	.36	.37	.38	.40	.41	.42	.43	.45	.46	.47	.48	.50
.32	.34	.36	.37	.38	.40	.41	.43	.44	.45	.47	.48	.50	.51	.52	.54	.55	.57
.36	.38	.40	.42	.43	.45	.47	.48	.50	.51	.53	.54	.56	.58	.59	.61	.62	.64
.42	.44	.46	.47	.49	.51	.53	.55	.56	.58	.60	.62	.64	.65	.67	.69	.71	.73
.47	.49	.51	.53	.55	.57	.59	.61	.63	.65	.67	.69	.71	.73	.75	.77	.80	.82
.52	.54	.56	.59	.61	.63	.66	.68	.70	.72	.75	.77	.79	.81	.84	.86	.88	.90
.58	.60	.63	.65	.68	.71	.73	.75	.78	.81	.83	.86	.88	.91	.93	.96	.98	1.01
.64	.67	.69	.72	.75	.78	.81	.83	.86	.89	.92	.95	.97	1.00	1.03	1.06	1.08	1.11
.70	.73	.76	.79	.82	.85	.88	.91	.94	.97	1.00	1.03	1.06	1.09	1.12	1.15	1.18	1.22
.76	.80	.83	.86	.90	.93	.96	1.00	1.03	1.06	1.10	1.13	1.16	1.20	1.23	1.26	1.30	1.33
.83	.87	.90	.94	.98	1.01	1.05	1.08	1.12	1.16	1.20	1.23	1.27	1.30	1.34	1.38	1.41	1.45
.90	.94	.98	1.02	1.06	1.10	1.14	1.17	1.21	1.25	1.29	1.33	1.37	1.41	1.45	1.49	1.53	1.57
.98	1.02	1.06	1.10	1.15	1.19	1.23	1.27	1.31	1.36	1.40	1.44	1.48	1.53	1.57	1.61	1.65	1.70
1.05	1.10	1.15	1.19	1.24	1.28	1.33	1.37	1.42	1.47	1.51	1.56	1.60	1.65	1.70	1.74	1.79	1.83
1.13	1.18	1.23	1.28	1.33	1.38	1.43	1.47	1.52	1.57	1.62	1.67	1.72	1.77	1.82	1.87	1.92	1.96
1.21	1.27	1.32	1.37	1.42	1.48	1.53	1.58	1.64	1.69	1.74	1.79	1.85	1.90	1.95	2.00	2.06	2.11
1.30	1.36	1.42	1.47	1.53	1.58	1.64	1.70	1.76	1.81	1.87	1.93	1.98	2.04	2.10	2.15	2.21	2.26
1.40	1.45	1.51	1.57	1.63	1.69	1.75	1.81	1.87	1.93	2.00	2.06	2.12	2.18	2.24	2.30	2.36	2.42
1.50	1.55	1.61	1.67	1.74	1.80	1.87	1.93	2.00	2.06	2.13	2.19	2.25	2.32	2.38	2.45	2.51	2.58
1.56	1.61	1.71	1.78	1.85	1.92	1.98	2.05	2.12	2.19	2.26	2.32	2.39	2.46	2.53	2.60	2.67	2.74
1.67	1.74	1.82	1.89	1.96	2.03	2.10	2.18	2.25	2.32	2.40	2.47	2.54	2.62	2.69	2.76	2.83	2.91
1.77	1.85	1.93	2.00	2.08	2.16	2.23	2.31	2.39	2.46	2.54	2.62	2.70	2.77	2.85	2.93	3.00	3.08
1.87	1.96	2.04	2.12	2.20	2.28	2.36	2.44	2.52	2.61	2.69	2.77	2.85	2.94	3.02	3.10	3.18	3.26
1.98	2.06	2.15	2.24	2.32	2.41	2.50	2.58	2.67	2.75	2.84	2.92	3.01	3.10	3.18	3.27	3.36	3.44
2.09	2.18	2.27	2.36	2.45	2.54	2.63	2.72	2.82	2.91	3.00	3.09	3.18	3.27	3.36	3.45	3.54	3.63

