Snow Survey

1919-21

Summit, West Walker, East Walker

FIELD BOOK

TRAVERSE TABLE FOR TRANSIT BOOK.

From 1° to 90° for a distance of 100.

Degrees.	DEGREES.		¼ DEGREE.		½ DEGREE.		¾ DEGREE.		Degrees.
	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	
0			100 00	0 44	100.00	0.87	99.99	1.31	89
1	99.98	1 75	99 98	2 18	99 97	2.62	99.95	3.05	88
2	99.94	3.49	99 92	3.93	99 91	4 36	99.88	4.80	87
3	99.86	5.23	99 84	5.67	99.81	6.10	99.79	6.54	86
4	99 76	6.98	99.73	7.41	99.69	7.85	99.66	8.28	85
5	99 62	8.72	99.58	9.15	99 54	9.58	99.50	10 02	84
6	99.45	10.45	99.41	10.89	99.36	11.32	99.31	11.75	83
7	99 25	12.19	99.20	12.62	99.14	13.05	99.09	13.49	82
8	99.03	13.92	98.97	14.35	98.90	14.78	98.84	15.21	81
9	98.77	15.64	98.70	16.07	98.63	16 50	98 56	16.93	80
10	98 48	17.36	98.40	17.79	98.33	18.22	98.25	18.65	79
11	98 16	19.08	98 08	19 51	97.99	19.94	97.90	20.36	78
12	97.81	20.79	97.72	21.22	97.63	21 64	97.53	22.07	77
13	97.44	22.50	97.34	22.92	97.24	23.34	97.13	23.77	76
14	97.03	24.19	96.92	24 62	96.81	25 04	96.70	25.46	75
15	96.59	25 88	96.48	26.30	96.36	26.72	96.25	27.14	74
16	96.13	27.56	96.00	27 98	95.88	28 40	95.76	28.82	73
17	95.63	29.24	95.50	29.65	95.37	30 07	95.24	30.49	72
18	95.11	30.90	94.97	31.32	94.83	31.73	94.69	32.14	71
19	94.55	32.56	94.41	32.97	94.26	33.38	94.12	33.79	70
20	93,97	34.20	93.82	34.61	93.67	35.02	93.51	35 43	69
21	93.36	35.84	93.20	36.24	93.04	36.65	92.88	37.06	68
22	92.72	37.46	92.55	37.86	92.39	38.27	92.22	38 67	67
23	92.05	39.07	91.88	39 47	91.71	39.87	91.53	40.27	66
24	91.35	40.67	91.18	41.07	91.00	41.47	90.81	41.87	65
25	90.63	42.26	90.45	42.66	90.26	43.05	90.07	43.44	64
26	89.88	43.84	89 69	44.23	89.49	44.62	89.30	45.01	63
27	89.10	45.40	88.90	45.79	88.70	46.17	88.50	46.56	62
28	88.29	46.95	88.09	47.33	87.88	47.72	87.67	48.10	61
29	87.46	48.48	87.25	48 86	87.04	49.24	86.82	49.62	60
30	86.60	50.00	86.38	50.38	86.16	50.75	85.94	51.13	59
31	85.72	51.50	85.49	51.88	85.26	52.25	85.04	52.62	58
32	84.80	52 99	84.57	53.36	84.34	53.73	84.10	54.10	57
33	83.87	54.46	83.63	54.83	83.39	55.19	83.15	55.56	56
34	82.90	55.92	82.66	56.28	82.41	56.64	82.16	57.00	55
35	81.92	57.36	81.66	57.71	81.41	58.07	81.16	58.42	54
36	80.90	58.78	80.64	59.13	80.39	59.48	80.13	59.83	53
37	79.86	60.18	79.60	60 53	79.34	60.88	79.07	61 22	52
38	78.80	61.57	78.53	61.91	78.26	62.25	77.99	62.59	51
39	77.71	62.93	77.44	63.27	77.16	63.61	76.88	63.94	50
40	76.60	64.28	76.32	64.61	76.04	64.94	75.76	65.28	49
41	75.47	65.61	75.18	65.93	74.90	66.26	74.61	66.59	48
42	74.31	66.91	74.02	67.24	73.73	67.56	73.43	67.88	47
43	73.14	68.20	72.84	68.52	72.54	68.84	72.24	69.15	46
44	71.93	69.47	71.63	69.78	71.33	70.09	71.02	70.40	45
45	70.71	70.71							
Degrees.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Degrees.
	DEGREES.		¾ DEGREE.		½ DEGREE.		¼ DEGREE.		

Published by the A. Lietz Co., San Francisco, Cal.

TABLE OF STADIA REDUCTIONS

For a Constant of 100.

ROD VERTICAL.

Min.	0°		1°		2°		3°	
	Hor. Dist.	Diff. Elev.	Hor. Dist.	Diff. Elev.	Hor. Dist.	Diff Elev.	Hor Dist.	Diff. Elev.
0'	100.00	.00	99.97	1.74	99.88	3.49	99.73	5.23
2	100.00	.06	99.97	1.80	99.87	3 55	99.72	5.28
4	100.00	.12	99.97	1.86	99.87	3.60	99.71	5.34
6	100.00	.17	99.96	1.92	99.87	3.66	99.71	5.40
8	100.00	.23	99.96	1.98	99.86	3.72	99.70	5.46
10	100.00	.29	99.96	2.04	99.86	3.78	99.69	5.52
12	100.00	35	99.96	2.09	99.85	3.84	99.69	5.57
14	100.00	41	99.95	2.15	99.85	3.90	99.68	5.63
16	100.00	.47	99.95	2.21	99.84	3.95	99.68	5.69
18	100.00	.52	99.95	2.27	99.84	4.01	99.67	5.75
20	100.00	.58	99.95	2.33	99.83	4.07	99.66	5.80
22	100.00	64	99.94	2.38	99.83	4.13	99.66	5.86
24	100.00	70	99.94	2.44	99.82	4.18	99.65	5.92
26	99.99	.76	99.94	2.50	99.82	4.24	99.64	5.98
28	99.99	.81	99.93	2.56	99.81	4.30	99.63	6.04
30	99.99	.87	99.93	2.62	99.81	4.36	99.63	6.09
32	99.99	.93	99.93	2.67	99.80	4.42	99.62	6.15
34	99.99	.99	99.93	2.73	99.80	4.48	99.62	6.21
36	99.99	1.05	99.92	2.79	99.79	4.53	99.61	6.27
38	99.99	1.11	99.92	2.85	99.79	4.59	99.60	6.33
40	99.99	1.16	99.92	2.91	99.78	4.65	99.59	6.38
42	99.99	1.22	99.91	2.97	99.78	4.71	99.59	6.44
44	99.98	1.28	99.91	3.02	99.77	4.76	99.58	6.50
46	99.98	1.34	99.90	3.08	99.77	4.82	99.57	6.56
48	99.98	1.40	99.90	3.14	99.76	4.88	99.56	6.61
50	99.98	1.45	99.90	3.20	99.76	4.94	99.56	6.67
52	99.98	1.51	99.89	3.26	99.75	4.99	99.55	6.73
54	99.98	1.57	99.89	3.31	99.74	5.05	99.54	6.78
56	99.97	1.63	99.89	3.37	99.74	5:11	99.53	6.84
58	99.97	1.69	99.88	3.43	99.73	5.17	99.52	6.90
60	99.97	1.74	99.88	3.49	99.73	5.23	99.51	6.96
c= .75	.75	.01	.75	.02	.75	.03	.75	.05
c=1.15	1.15	.01	1.15	.03	1.15	.05	1.15	.07
c=1.90	1.90	.02	1.90	.05	1.90	.08	1.90	.12

Min.	4°		5°		6°		7°	
	Hor. Dist.	Diff. Elev.	Hor. Dist.	Diff. Elev.	Hor. Dist	Diff. Elev.	Hor Dist.	Diff. Elev.
0'	99.51	6.96	99.24	8.68	98.91	10.40	98.51	12.10
2	99.51	7.02	99.23	8.74	98.90	10.45	98.50	12.15
4	99.50	7.07	99.22	8.80	98.88	10.51	98.48	12.21
6	99.49	7.13	99.21	8.85	98.87	10.57	98.47	12.26
8	99.48	7.19	99.20	8.91	98.86	10.62	98.46	12.32
10	99.47	7.25	99.19	8.97	98.85	10.68	98.44	12.38
12	99.46	7.30	99.18	9.03	98.83	10.74	98.43	12.43
14	99.46	7.36	99.17	9.08	98.82	10.79	98.41	12.49
16	99.45	7.42	99.16	9.14	98.81	10.85	98.40	12.55
18	99.44	7.48	99.15	9.20	98.80	10.91	98.39	12.60
20	99.43	7.53	99.14	9.25	98.78	10.96	98.37	12.66
22	99.42	7.59	99.13	9.31	98.77	11.02	98.36	12.72
24	99.41	7.65	99.11	9.37	98.76	11.08	98.34	12.77
26	99.40	7.71	99.10	9.43	98.74	11.13	98.33	12.83
28	99.39	7.76	99.09	9.48	98.73	11.19	98.31	12.88
30	99.38	7.82	99.08	9.54	98.72	11.25	98.29	12.94
32	99.38	7.88	99.07	9.60	98.71	11.30	98.28	13.00
34	99.37	7.94	99.06	9.65	98.69	11.36	98.27	13.05
36	99.36	7.99	99.05	9.71	98.68	11.42	98.25	13.11
38	99.35	8.05	99.04	9.77	98.67	11.47	98.24	13.17
40	99.34	8.11	99.03	9.83	98.65	11.53	98.22	13.22
42	99.33	8.17	99.01	9.88	98.64	11.59	98.20	13.28
44	99.32	8.22	99.00	9.94	98.63	11.64	98.19	13.33
46	99.31	8.28	98.99	10.00	98.61	11.70	98.17	13.39
48	99.30	8.34	98.98	10.05	98.60	11.76	98.16	13.45
50	99.29	8.40	98.97	10.11	98.58	11.81	98.14	13.50
52	99.28	8.45	98.96	10.17	98.57	11.87	98.13	13.56
54	99.27	8.51	98.94	10.22	98.56	11.93	98.11	13.61
56	99.26	8.57	98.93	10.28	98.54	11.98	98.10	13.67
58	99.25	8.63	98.92	10.34	98.53	12.04	98.08	13.73
60	99.24	8.68	98.91	10.40	98.51	12.10	98.06	13.78
c= .75	.75	.06	.75	.07	.75	.08	.74	.10
c=1.15	1.15	.09	1.14	.11	1.14	.13	1.14	.15
c=1.90	1.89	.15	1.89	.18	1.89	.21	1.88	.25

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Table of Stadia Reductions.—Continued.

Min	8°		9°		10°		11°	
	Hor Dist.	Diff. Elev	Hor Dist	Diff. Elev	Hor Dist.	Diff Elev	Hor Dist	Diff Elev.
0'	98.06	13.78	97.55	15.45	96 98	17.10	96 36	18.73
2	98.05	13.84	97 53	15.51	96.96	17.16	96.34	18 78
4	98.03	13.89	97.52	15.56	96 94	17.21	96 32	18 84
6	98.01	13.95	97.50	15.62	96.92	17 26	96.29	18.89
8	98.00	14.01	97.48	15.67	96 90	17.32	96 27	18.95
10	97.98	14 06	97.46	15.73	96 88	17.37	96.25	19.00
12	97.97	14.12	97.44	15.78	96 86	17.43	96 23	19.05
14	97.95	14.17	97.43	15.84	96 84	17.48	96 21	19.11
16	97.93	14 23	97.41	15.89	96 82	17.54	96.18	19.16
18	97.92	14.28	97.39	15.95	96.80	17 59	96.16	19 21
20	97.90	14.34	97.37	16.00	96 78	17.65	96.14	19.27
22	97.88	14.40	97.35	16 06	96 76	17.70	96.12	19.32
24	97.87	14.45	97.33	16.11	96.74	17.76	96.09	19.38
26	97.85	14.51	97.31	16 17	96.72	17.81	96.07	19.43
28	97.83	14.56	97.29	16.22	96 70	17.86	96.05	19.48
30	97.82	14.62	97.28	16.28	96.68	17.92	96.03	19.54
32	97.80	14.67	97.26	16 33	96 66	17 97	96.00	19.59
34	97.78	14.73	97 24	16.39	96.64	18 03	95 98	19.64
36	97.76	14.79	97.22	16.44	96 62	18 08	95 96	19 70
38	97.75	14.84	97.20	16.50	96.60	18.14	95 93	19.75
40	97.73	14.90	97.18	16.55	96 57	18 19	95.91	19.80
42	97.71	14.95	97.16	16 61	96.55	18 24	95.89	19 86
44	97.69	15.01	97.14	16 66	96 53	18 30	95.86	19 91
46	97.68	15 06	97.12	16 72	96.51	18 35	95.84	19 96
48	97.66	15.12	97.10	16.77	96 49	18 41	95.82	20 02
50	97.64	15.17	97 08	16.83	96 47	18.46	95.79	20 07
52	97.62	15.23	97 06	16.88	96 45	18.51	95 77	20.12
54	97.61	15 28	97.04	16 94	96 42	18.57	95 75	20.18
56	97 59	15.34	97 02	16 99	96 40	18 62	95.72	20.23
58	97.57	15 40	97.00	17.05	96 38	18 68	95.70	20.28
60	97.55	15.45	96.98	17 10	96 36	18.73	95.68	20.34
c= .75	74	.11	.74	13	74	14	.73	15
c=1.15	1.14	.17	1.13	.19	1 13	21	1.13	.23
c=1 90	1.88	.28	1.87	.31	1.87	35	1 86	.38

Min.	12°		13°		14°		15°	
	Hor. Dist	Diff. Elov	Hor Dist.	Diff. Elev	Hor Dist	Diff Elev	Hor. Dist	Diff. Elev.
0'	95.68	20.34	94.94	21.92	94.15	23.47	93.30	25.00
2	95.65	20.39	94.91	21.97	94.12	23.52	93.27	25.05
4	95.63	20.44	94.89	22.02	94.09	23.58	93.24	25.10
6	95.61	20 50	94.86	22.08	94.07	23.63	93.21	25.15
8	95 58	20.55	94.84	22.13	94.04	23.68	93.18	25 20
10	95.56	20.60	94.81	22.18	94.01	23.73	93.16	25.25
12	95.53	20 66	94 79	22 23	93.98	23.78	93.13	25.30
14	95.51	20 71	94.76	22.28	93.95	23.83	93.10	25.35
16	95.49	20.75	94.73	22.34	93.93	23.88	93 07	25 40
18	95.46	20 81	94.71	22.39	93.90	23.93	93.04	25.45
20	95.44	20.87	94.68	22.44	93.87	23.99	93.01	25.50
22	95 41	20.92	94.66	22.49	93.84	24.04	92.98	25.55
24	95.39	20.97	94.63	22.54	93.81	24.09	92.95	25.60
26	95.36	21.03	94.60	22.60	93.79	24.14	92.92	25.65
28	95.34	21.08	94.58	22.65	93.73	24.19	92.89	25.70
30	95.32	21.13	94.55	22.70	93.73	24.24	92.86	25.75
32	95 29	21.18	94.52	22 75	93.70	24.29	92.83	25.80
34	95.27	21.24	94.50	22 80	93.67	24.34	92.80	25.85
36	95.24	21.29	94 47	22.85	93.65	24.39	92.77	25.90
38	95 22	21.34	94.44	22.91	93.62	24.44	92.74	25.95
40	95.19	21.39	94.42	22 96	93.59	24.49	92.71	26.00
42	95.17	21.45	94 39	23 01	93.56	24.55	92.68	26 05
44	95 14	21.50	94.36	23.06	93.53	24.60	92.65	26 10
46	95 12	21.55	94.34	23 11	93.50	24.65	92.62	26.15
48	95.09	21.60	94 31	23.16	93.47	24.70	92.59	26.20
50	95.07	21.66	94.28	23.22	93.45	24.75	92.56	26 25
52	95.04	21.71	94.26	23.27	93.42	24.80	92.53	26.30
54	95.02	21.76	94 23	23.32	93.39	24.85	92.49	26.35
56	94.99	21.81	94 20	23.37	93.36	24.90	92.46	26.40
58	94.97	21.87	94.17	23.42	93 33	24.95	92.43	26.45
60	94.94	21.92	94 15	23.47	93.30	25.00	92.40	26 50
c= .75	73	16	.73	17	.73	19	.72	20
c=1.15	1.12	.25	1.12	.27	1 11	29	1.11	.31
c1.90	1.85	.41	1.85	44	1.84	48	1.83	.51

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Table of Stadia Reductions.—Continued.

Min	16°		17°		18°		19°	
	Hor. Dist.	Diff Elev	Hor. Dist.	Diff. Elev.	Hor. Dist.	Diff. Elev.	Hor. Dist.	Diff. Elev.
0'	92.40	26 50	91.45	27.96	90.45	29.39	89.40	30.78
2	92.37	26.55	91.42	28.01	90.42	29.44	89.36	30.83
4	92.34	26.59	91.39	28.06	90.38	29.48	89.33	30.87
6	92.31	26.64	91.35	28.10	90.35	29.53	89.29	30 92
8	92.28	26 69	91.32	28.15	90.31	29.58	89.26	30.97
10	92.25	26.74	91 29	28.20	90 28	29.62	89.22	31.01
12	92.22	26.79	91.26	28.25	90.24	29.67	89.18	31.06
14	92.19	26.84	91.22	28.30	90.21	29.72	89.15	31.10
16	92.15	26 89	91.19	28.34	90.18	29.76	89 11	31.15
18	92.12	26.94	91.16	28.39	90.14	29.81	89.08	31.19
20	92.09	26.99	91 12	28.44	90 11	29.86	89.04	31.24
22	92 06	27.04	91.09	28.49	90 07	29.90	89.00	31.28
24	92.03	27 09	91.06	28.54	90 04	29.95	88.96	31.33
26	92.00	27.13	91.02	28 58	90.00	30.00	88.93	31.38
28	91.97	27.18	90.99	28.63	89.97	30 04	88.89	31.42
30	91.93	27 23	90.96	28.68	89.93	30.09	88.86	31.47
32	91.90	27.28	90 92	28.73	89 90	30.14	88 82	31.51
34	91.87	27.33	90.89	28.77	89.86	30.19	88.78	31.56
36	91.84	27.38	90 86	28 82	89 83	30.23	88 75	31.60
38	91.81	27.43	90 82	28.87	89.79	30.28	88.71	31.65
40	91.77	27 48	90.79	28.92	89.76	30.32	88.67	31.69
42	91.74	27.52	90.76	28 96	89.72	30.37	88.64	31.74
44	91 71	27 57	90.72	29 01	89 69	30.41	88.60	31.78
46	91.68	27.62	90 69	29 06	89.65	30.46	88.56	31.83
48	91.65	27.67	90.66	29 11	89.61	30.51	88.53	31.87
50	91.61	27 72	90.62	29 15	89 58	30.55	88.49	31.92
52	91 58	27.77	90.59	29.20	89.54	30.60	88.45	31.96
54	91.55	27.81	90.55	29 25	89.51	30.65	88.41	32 01
56	91.52	27 86	90 52	29.30	89.47	30 69	88.38	32.05
58	91.48	27.91	90.48	29.34	89.44	30 74	88.34	32.09
60	91 45	27.96	90.45	29.39	89.40	30.78	88 30	32.14
c= .75	.72	.21	72	.23	.71	.24	.71	.25
c=1.15	1 10	33	1 10	35	1.09	.37	1.08	.38
c=1.90	1 82	.54	1.81	57	1.80	60	1.79	.63

Min.	20°		21°		22°		23°	
	Hor. Dist.	Diff. Elev.	Hor. Dist.	Diff. Elev.	Hor. Dis.	Diff. Elev.	Hor. Dist.	Diff. Elev
0'	88.30	32.14	87.16	33.46	85.97	34 73	84.73	35.97
2	88.26	32.18	87.12	33.50	85.93	34.77	84.69	36.01
4	88.23	32.23	87.08	33.54	85.89	34.82	84.65	36 05
6	88.19	32.27	87.04	33.59	85.85	34 86	84.61	36 09
8	88.15	32.32	87.00	33.63	85.80	34.90	84 57	36.13
10	88.11	32.36	86.96	33.67	85.76	34.94	84.52	36.17
12	88.08	32.41	86.92	33.72	85.72	34.98	84.48	36.21
14	88 04	32.45	86.88	33.76	85.68	35 02	84.44	36.25
16	88.00	32.49	86.84	33.80	85.64	35.07	84.40	36 29
18	87.96	32.54	86.80	33.84	85.60	35.11	84.35	36.33
20	87.93	32.53	86.77	33.89	85.56	35.15	84.31	36 37
22	87.89	32.63	86.73	33.93	85.52	35.19	84.27	36.41
24	87.85	32.67	86.69	33.97	85.48	35.23	84.23	36.45
26	87.81	32.72	86.65	34.01	85.44	35.27	84.18	36.49
28	87.77	32.76	86.61	34.06	85.40	35 31	84.14	36.53
30	87.74	32.80	86.57	34.10	85.36	35.36	84.10	36.57
32	87.70	32.85	86.53	34.14	85.31	35.40	84.06	36 61
34	87.66	32.89	86.49	34.18	85.27	35.44	84.01	36.65
36	87.62	32.93	86 45	34 23	85.23	35.48	83 97	36.69
38	87.58	32 98	86.41	34.27	85.19	35.52	83.93	36.73
40	87.54	33.02	86.37	34.31	85.15	35.56	83.89	36.77
42	87.51	33 07	86.33	34.35	85.11	35.60	83.84	36 80
44	87.47	33.11	86.29	34.40	85 07	35 64	83.80	36.84
46	87.43	33.15	86.25	34.44	85.02	35.68	83.76	36.88
48	87.39	33.20	86.21	34.48	84.98	35.72	83 72	36.92
50	87.35	33.24	86.17	34.52	84.94	35.76	83 67	36.96
52	87.31	33.28	86.13	34.57	84.90	35.80	83.63	37.00
54	87 27	33.33	86.09	34.61	84.86	35.85	63.59	37.04
56	87 24	33.37	86.05	34.65	84.82	35 89	83.54	37 08
58	87 20	33.41	86.01	34.69	84.77	35.93	83.50	37.12
60	87.16	33.46	85.97	34.73	84.73	35.97	83.46	37.16
c= .75	.70	.26	.70	.27	.69	.29	.69	.30
c=1.15	1.08	.40	1.07	.42	1.06	.44	1.05	.45
c=1.90	1.78	.66	1.77	70	1.76	.73	1.74	.76

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Min.	24°		25°		26°		27°	
	Hor Dist.	Diff. Elev.	Hor. Dist.	Diff Elev.	Hor. Dirt.	Diff. Elev.	Hor. Dist.	Diff.. Elev.
0′	83.46	37.16	82.14	38.30	80.78	39.40	79.39	40.45
2	83.41	37.20	82.09	38.34	80 74	39.44	79.34	40.49
4	83.37	37.23	82.05	38.38	80.69	39.47	79.30	40.52
6	83.33	37.27	82.01	38.41	80.65	39.51	79.25	40.55
8	83.28	37.31	81.96	38 45	80 60	39.54	79.20	40.59
10	83.24	37.35	81.92	38.49	80 55	39.58	79.15	40.62
12	83.20	37.39	81.87	38.53	80.51	39.61	79.11	40.66
14	83.15	37.43	81.83	38.56	80.46	39.65	79.06	40.69
16	83.11	37.47	81.78	38.60	80.41	39.69	79.01	40.72
18	83.07	37.51	81.74	38.64	80.37	39.72	78.96	40.76
20	83.02	37.54	81.69	38.67	80.32	39.76	78 92	40.79
22	82.98	37.58	81.65	38.71	80.28	39.79	78.87	40.82
24	82.93	37.62	81.60	38.75	80.23	39.83	78.82	40.86
26	82.89	37.66	81.56	38.78	80.18	39.86	78.77	40.89
28	82.85	37.70	81.51	38.82	80.14	39.90	78.73	40.92
30	82.80	37 74	81.47	38 86	80.09	39.93	78.68	40.96
32	82.76	37.77	81.42	38.89	80 04	39.97	78.63	40.99
34	82.72	37.81	81.38	38.93	80.00	40.00	78.58	41.02
36	82.67	37.85	81 33	38.97	79.95	40.04	78.54	41 06
38	82.63	37.89	81 28	39.00	79.90	40.07	78.49	41.09
40	82.58	37.93	81 24	39 04	79.86	40.11	78 44	41.12
42	82.54	37.96	81.19	39 08	79.81	40.14	78.39	41.16
44	82.49	38.00	81.15	39 11	79.76	40.18	78.34	41.19
46	82 45	38.04	81.10	39.15	79 72	40.21	78.30	41.22
48	82 41	38.08	81 06	39.18	79.67	40.24	78.25	41.26
50	82.36	38.11	81.01	39.22	79.62	40.28	78 20	41.29
52	82.32	38.15	80.97	39.26	79.58	40.31	78 15	41.32
54	82.27	38.19	80.92	39.29	79.53	40 35	78.10	41.35
56	82.23	38.23	80.87	39.33	79.48	40.38	78 06	41.39
58	82.18	38.26	80.83	39.36	79.44	40.42	78.01	41.42
60	82 14	38.30	80.78	39.40	79 39	40.45	77 96	41 45
c= 75	68	31	.68	32	67	.33	.66	.35
c=1.15	1.05	48	1.04	.50	1.03	51	1 02	.53
c=1 90	1.73	79	1.72	82	1.70	85	1 69	.88

Min.	28°		29°		30°	
	Hor. Dist	Diff Elev.	Hor. Dist	Diff Elev.	Hor. Dist.	Diff. Elev.
0′	77 96	41 45	76.50	42 40	75.00	43 30
2	77.91	41.48	76.45	42.43	74.95	43.33
4	77.86	41 52	76.40	42.46	74.90	43.36
6	77.81	41.55	76 35	42.49	74.85	43 39
8	77.77	41 58	76.30	42.53	74 80	43.42
10	77.72	41.61	76.25	42.56	74.75	43.45
12	77.67	41.65	76.20	42.59	74.70	43.47
14	77.62	41.68	76.15	42.62	74.65	43.50
16	77.57	41.71	76.10	42.65	74.60	43 53
18	77.52	41.74	76.05	42 68	74.55	43 56
20	77.48	41.77	76.00	42.71	74.49	43.59
22	77.42	41.81	75.95	42 74	74.44	43 62
24	77.38	41.84	75.90	42.77	74.39	43 65
26	77.33	41.87	75.85	42.80	74 34	43.67
28	77.28	41.90	75.80	42.83	74.29	43 70
30	77.23	41.93	75.75	42.86	74.24	43 73
32	77.18	41 97	75.70	42.89	74.19	43.76
34	77.13	42 00	75.65	42.92	74.14	43 79
36	77.09	42.03	75.60	42.95	74.09	43.82
38	77.04	42.06	75.55	42 98	74.04	43 84
40	76.99	42.09	75.50	43.01	73.99	43.87
42	76.94	42.12	75 45	43 04	73.93	43 90
44	76.89	42.15	75.40	43 07	73 88	43.93
46	76.84	42.19	75.35	43.10	73.83	43 95
48	76.79	42 22	75.30	43.13	73.78	43.98
50	76.74	42.25	75 25	43.16	73.73	44 01
52	76.69	42.28	75 20	43.18	73.68	44.04
54	76.64	42.31	75.15	43.21	73.33	44 07
56	76.59	42.34	75.10	43.24	73.58	44.09
58	76.55	42.37	75.05	43 27	73.52	44.12
60	76.50	42.40	75.00	43 30	73.47	44.15
c= .75	.66	.36	.65	.37	.65	38
c=1.15	1 01	.55	1.00	.57	0.99	.58
c=1.90	1.67	91	1.65	.94	1 64	.95

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INDEX

Sunday April 27, 1919.
F. E. Church, Jr.
A. J. Beebe
Harry Armstrong
Ed Fleming.

Summit Station

Nos	Depth	Core	% Water Content	
Course #1				%
1	58	49.3	28.3	57.3
Re-M.	57.5	50.7	28.6	57.0
2	53.5	47	28.5	60.7
Re-M.	53.7	49	28.6	58.4
3	48.7 -1.0 47.4	43.7	23.7	53.7
4	57.4 -1.0 56.4	50.4	28.7	56.0
5	50.8 -0.5 50.3	45.5	24.1	53.0
6	45.3	45.0	24.7	53.9
Re-M.	47.6	45.5cc	24.1	53.0
7	49.5	48.2 -0.5 47.7	24.5	51.4
8	51.5	50.5 -1.0 49.5	24.0	48.5
9	54.3	51.0 -0.5 50.5	25.6	50.7
10	51.8	51.6?	28.0 ?	54.2
Re-M.	52.3	50.8 -0.5 50.3	27.? ok	54.1

Course #2

1	57	47	23.1	(49.2)
Rem	69.8 −0.2 69.6	65.7 −0.2	32.8	48.3
2	62.8	61.5	30.2	49.1
3	69.2	65.0	33.3	51.3
4	63.0	62.6 −2.0	29.2	48.2
5	68.3	67.4	33.0	49.0
6	56	55.3 −0.5	26.7	48.8
Rem.	68.8 −0.7	65.5 −0.7	29.8	46.0
7	70.0 −0.5	66.0 −0.5	34.1	52.1
8	64.8 −0.5	63.0	30.8	49.9
9	77.5 −1.0	74.5	108.5 −73.2 35.3	47.4
Rem.	76.0 −1.0	73.0	33.4	45.7
10	64.5 −0.8	63.5 −0.8	26.2	41.8

bottom not reached

K 2

11	70.5 −0.7	70.7 −0.7	32.8	47.2
12	—	—	—	
Re M.	66.7 −0.5	62.0 −0.5	31.8	51.7
13	49.0 1.5	46.7 1.7	21.5	47.9
14	71.0	63.5 Prob CC	35.0	55.1
Re M. 15	72.3	61.0	34.9	57.2
Re-M.	57.5 −1.0	56.0	27.7	49.5
16	66.3	63.5	31.4	49.5
17	—	—	—	
Re-M	69.0 −1.7	68.5 −1.7	34.0	50.9
19	74.0 −1.5	71.0	36.0	50.8
20	73.3 −1.0	72.7	35.4	49.0
21	68.0 −1.0	64.8	31.9	49.2
22	58.5 −1.5	56.5	27.6	48.9

Scrub.

Note: all holes skipped 1° + forward & followed.

Station #3 Red Mt.

Hens	Depth	Core	Water Content	
Course #1.				
1.	93. -0.5	91.3 -0.5	45.8	50.5
2	87.0 -1.5	84	40.0	47.6
3	75.0 -1.4	73.5	37.2	50.5
4	73.0 1.5	70.	37.3	53.3
5	72.5 -0.7	71.	36.8	51.9
6	77.0 -.5	67.	36.	53.7
Rc M.	78. -0.5	76.5	41.5	54.2
7	74	71.2	38.5	54.0
8	76.5	74.8	42.	56.2
9	82.3	82	44	53.8
10	67.5 -0.8	64.3 -0.8	36.7	57.8
11	75.2	73.5	41	55.8
12	75	73	40.5	55.5
13	67.5	66.5	34.2	51.4
14	53.5	51.5	27	52.5

X 4

April 22, 1919
Ed Roenig
Beahey
Armstrong

Station #4 Saw Mill Flat

April 29, 1919

Meas.	Depth	Core	Water Content	
Course #2				
1	79	78	43.1	55.2
2	84 -1.0	83.0 -1	45.0	54.9
3	88.0 -1.0	86.4 -1.0	51.0	59.7
4	83.5	81.0 -.5	46.5	57.8
5	77.8	80.5 -4.0	44.8	58.6
6	74.5 1.0	79.5 -7 72.5	39.5	54.5

Course #1

1	72.0 -0.5	67.7	38.3	57.0
2	77.5 -1.0	78.3 1.0	42.0	58.9
3	78.5 -1.0	77.5 -6	43.6	61.4
4	81.0 -0.5	80 -0.5	41.9	52.8
5	86.5 -0.5	81.5	49.5	60.8
6	80.5	79.5	45.9	57.8
7	83.0 -0.5	81.5 -0.5	46.0	56.9
8	84	81	48.5	59.2
9	75	73	43.3	59.4
10	81.5 -1.	74	47.6	64.4 !
Rem.	81.0 -3.0	79.3 -2.0 77.3	47.7	61.0
11	85	85	48.6	57.2
12	86.5	85.4	51.6	60.6
13	108.5 -1.	106.0 -1.0	59.7	55.5

Station #5 Furnace Flat

Course #2

1	92.5 −0.5	91.	46.0	50.6
2	94. −0.6	92.0 −0.6	41.9	45.9
3	74.5	71.8	37.5	52.3
4	79.5	78.5	39.5	50.3
5	87. −0.5	86.5 −0.5	45.1	52.5
6	79.5	76	42.3	55.7
7	78.5	73	42.9	58.8
Re-7	78	74.8	42.8	57.2
8	80	77.	43.8	56.9
9	80	79	46	58.3
10	78	77	40	52.0
11	75	73	38.4	52.6
12	73	71.5	38	53.2

Course #1

1	77 −0.5	68.8	35.1	51.0
2	76.5 −0.5	72.1	39.1	54.2

4/29/19 ?

50' apart

3	74.5 1.5	73	40.9	56.0
4	81.5 -1	79.5	41.4	52.2
5	80 -1 79	75.6	41.3	54.1
6	77.5	76.5	40.7	53.3
7	78.5	77	41.0	53.3
8	74	77	38.1	53.0
9	67.5	67	33.9	50.6

Station #6 Mail Box Flat
Fordyce Lake.

1	65.5 -1.5	65.0 -1.5	31.8	50.2
2	66.3	64.5	31.8	49.5
3	48.5	44.5	22.0	49.5
3'	57.0	50.5	29.0	57.5
Re-4.	60.0	55.0	32.7	59.5
4	68.0	67.0	32.3	48.3

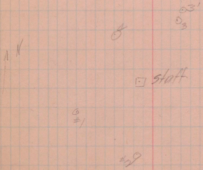
Depth
5) 306.8 (61.4

30.1 W.C.
5) 150.6

April 30, 1919.

gage 5'-2"

28' from staff same radial line.
30' " " " " "
Re-4. core saturated lower half.



Station #1. Ward Creek

Meas.	Depth	Core	Water Content.	
Course #1		**West Series**		
1	55.5	46	24.5	(53.3)
Re-M.	72.5 -2.5 70.0	69.5 -2.5 67.0 C.C	35.0	52.3
2	77.5	73.5	33.8	46.0
3	77.5	77.5	37.5	48.4
4	79.5 -6.0 73.5	75.5 -6.0 69.5	37.5	54.0
5	75.5	71.5	37.3	52.2
6	74.5 -2.0 72.5	67.5	36.7	54.4
7	76.5 -1.5 75.0	72.5	38.8	53.5
	South Series			
1	66 -1 65.0	64.5 -1.0 63.5	36.0	56.8
2	57	54.5	26.5	48.7

May 4th 1919.

Party:- Robt Watson Sr
A. J. Beakey,
Harry A. Armstrong.

Date:- May 4, 1919.
Elev - 7275 (bar.)

All holes of April 12 found and followed.

windy!

East Series.

1	63.	62.5		
	−1	−1.0		
	62.0	61.5	29.5	47.9
2	64			
	−2.			
	62.0	58.5	27.5	47.0

North Series.

1	68.0			
	1.5			
	66.5	62.5	33.0	52.8
2.	72.0	70.0	33.5	47.9

14) 467.1 (Avg. 33.4

Course #2

1	46.5	46.0	22.0	47.9
2.	54.5			
	−2.0			
	52.5	51.0	24.0	47.0
3	52.0	51.0		
	−1.5	−1.5		
	50.5	49.5	24.0	48.5
4	49.0			
	−2.5			
	46.5	46.0	22.3	48.5
5				
Re-M.	50.0			
	−1.0			
	49.0	48.0	23.0	47.9

6	53.	52	24.0	46.2
7				
Re-M.	57 -4. 53.0	53	25.5 -0.5 25.0	47.2
8	54.0 -1. 53.0	54	25.5	47.2
9	50.5	50.0	26.5	53.0
10	31.0 -3 28.0	28.0 -3 25.0	10.5	42.0
11	36.0 -2.0 34.0	35.0 -2.0 33.0	16.0	48.5
12	48.5 -2 46.5	47.0 -2.0 45.0	22.5	50.0
13.	50.5 -2 48.5	47.0	23.0	49.0

13)288.3 (Avg. 22.2

Station #2 Rubicon Peak.

Course #2.

1	28.0 2.5 25.5	27.0 2.5 24.5	10.8	44.0
2	33.0	33.0 -2.0 31.0	13.8	44.5
3	27.0 -1.5 25.5	26.0 -1.5 24.5	11.2	45.8
4	24.0 -1 23.0	23.0 -1.0 22.0	9.6	43.6
5	35.5 +0.5 36.0	35.5	15.8	44.5
6	17.0 -1.5 15.5	17.0 -1.5 15.5	7.8	50.3
7	42.0	39.5	19.0	48.1
			1)88.0	
			Avg. 12.6	

May 6. 1919 AM.

Party. Murray Smith
A. J. Beakey
Harry A. Armstrong.

= 50' N of S. pine

= 25' beyond #1

(twin fir at 100' N. of S pine) Barometer corrected

= 110' N of S. pine = 7340'

Distances paced.

= 150' N. of S pine

= 50 from previous meas.

= " " "

" " " " and 15' from 42" fir (or hemlock) with stub of base.

Ground bare beneath all trees.

At distance 185' is a 48" blazed fir with broken off top.

All blazes on this course are very faint.

1	45.0	42.0	20.5	48.9
2.	35.0 -1.0 34.0	33.5 -1.0 32.5	13.8	42.5
3	38.5 -1.0 37.5	37.5	15.5	41.3
4	29.5 -1.0 28.5	28.0	12.5	44.5
5.				
Re-M.	15.0 -1.7 13.3	14.5 -1.7 12.8	5.7	44.5
6	21.0 -0.5 20.5	18.0	8.2	45.6
7	49.0	41.0	18.4	
Re-M.	50.0 -1.2 48.8	48.5	21.0	43.3
8	42.5 -1.3 41.2	41.5	18.6	44.8

9)134.2

14.9 Average.

11/6. 1919 A.M. 14

This course is the one laid out by Arthur Smith, is approx 1000' Westerly from Course #7, and approx 125' W. of double granite knoll. S. from #2 "Triple blazed fir to 18" fir in a clump of 3 and sugar pine by it and N.E. thereof.

Barometer corrected = 7500'

Distances every 25' beginning 25' S. of N fir. Distances mean with sampler.

=5 = 10' S. of large fir blazed on S side & blaze marked "H.M. Ponsn, April 19 1917"

12' N of S blazed tree.

(Note - had no description of this course. A.C.G.)

Station #2. Rubicon Peak.

May 6 1919 Noon

Bar. - 8.130'

All holes found and followed

(Samples taken vertically — not perpendicular to surface)

Course #1.

1	94.5	94.2	41.3	43.9
2	102.0	101.0	45.2	44.7
3	110.0	108.0	57.2	47.4
4	77.0	69.0	34.8	50.5
Re-M.	76.0	71.0	34.0	47.9
5	40.5	36.0	18.8	52.3
6	85.0	75.0		
	-1.0	-1.0		
	84.0	74.0	34.0	46.0
7				
Re-M	87.5	87.5		
	-2.5	-2.5		
	85.0	85.0	37.5	44.1
8	87.0			
	-1.5			
	85.5	83.5	39.5	47.3
9	35.3	33.5		
	-2.0	-2.0		
	33.3	31.5	15.0	47.7
10	77.2	77.2	35.2	45.6
11	96.7	96.5	39.8	41.3
Re-M	93.0	93.0	39.0	41.9
12	85.0	80.0	38.5	48.1
13	66.5	65.2	29.2	44.8
14	44.0			
	-1.5			
	42.5	42.5	18.5	43.5

In thick cluster of trees

15	74.0	66.5	33.8	30.9
Re-M.	67.8	65.8	31.0	47.1
16	86.5	86.0	35.0	40.7
17	34.5	34.5	23.8	43.7
18	81.5	81.5		
	-0.5	-0.5		
	80.0	81.0	35.0	43.2
19	55.0	51.0	24.8	48.6
20	92.0	91.5	41.0	44.9
21.	95.0	94.5		
	-0.5	-0.5		
	94.5	94.0	41.0	43.6
22.	117.0	117.0		
	-0.5	-0.5		
	116.5	116.5	48.8	41.9
23	63.0	57.5		
	-0.5	-0.5		
	62.5	57.0	26.0	45.6
24	61.0	56.5	27.5	48.7
25	113.0			
	-0.5			
	112.5	109.3	50.5	46.2
26	105.5			
	-108.5	96.0	48.0	50.0
Re-M.	101.5	101.5		
	-0.5	-0.5		
	101.0	101.0 cc	43.5	43.0
27	74.5	70.0		
	-0.5	-0.5		
	74.0	69.5	30.0	43.2
28	118.0	118.5	50.0	42.2
	-3			
	115			

29

Re-M.	79.5 − 1.0 = 78.5	78.3	33.5	42.8
30	67.0	66.4	32.0	48.2
31	68.0 − 0.5 = 67.5	63.0 − 0.5 = 62.5	31.0	49.6
32	113.5 − 0.2 = 113.3	113.5 − 0.2 = 113.3	52.5	46.3

36) 1290.2 (35.8 Average

108

210
180

302
288

14

2 R.M.

June 12th 1919

Snow Survey at Lake Lucille
A. J. Beatty
A. M. Nash

Location Pyramid Peak U.S.G.S. Sheet
38°52' N. 120° 07' W.
Established April 22nd 1913.
One day from Glen Alpine Springs or Fallen Leaf Lodge. Trail from Glen Alpine springs, preferable the Horse Trail

Course 1 on West & South Side of Lake Lucille
Elevation 8000 ft. in semi thick forest of Mountain Hemlock.
From Triple Blazed Fir West of Lake Lucille South East between blazed trees to triple blazed fir near crest of deuide between Lake Lucille & Lake of the Woods
measurements every 50 ft Beginning 50' from triple blazed fir
Total Measuremonts 37

Sta	Total Depth	Core	Water Contents %	Remarks
12ft	44.°	42.	21	
(1) 50'				Bare
(2) 100'				Bare
125.	46	46	23	
(3) 150	23	21½	10	
(4) 200				Bare
(5) 250	26	25	12	old hole
(6) 300				Bare
(7) 350				Bare
(8) 400				Bare
(9) 450	26	25	11	
(10) 500	28	27	12½	old hole
(11) 550				Bare.
(12) 600				"
(13) 650				"
(14) 700				"
(15) 750				"
(16) 800	33	31	16	
(17) 850	54	53	26	old hole
(18) 900	19	18	9	" "
(19) 950				Bare
(20) 1000	44	43	21	
(21) 1050	53	52	25	old hole
(22) 1100	50	50	25	" "
(23) 1150	39	38	20	

Sta		Total Depth	Core	Water Content	%	Remarks
24	1200	34	34	18		
25	1250	40	38	19½		old hole
26	1300					Bare
27	1350					"
28	1400	20	20	10		
29	1450	27	27	14		
30	1500	44	43	22		old hole
31	1550	17	17	9		
32	1600					Bare
33	1650	21	21	10½		old hole

IV Yuba Basin

Station #3 Red Mountain

Course 1.

Meas	Depth	Core	Water content
1	101	99	37.7
re	101	99	39.2
2	104.5	103.3	40.8
3	98.0	94.5	39.6
4	92	85.5	36.0
re	94.5		
re	92.5	90	37.8
5	94	91	36.0
6	100	98	39.1
7	98.5 −1.5	97.0 −1.5	36.8
8	97 −1.	86 −1	
			343.0

Sat. April 3. 1920

J. E Church, Jr
Ed Rosing.
J. B. Brown
[illegible] Armstrong

Meas	Depth	Core	Water Content.
			343.0
re	96.5	91.5	38.4
9	95.5 − 2.3	91.8 − 2.3	37.2
10	89.5 − 1.5	87.° − 1.5	34.2
11	95.° − 0.3	93 0.3	38.2
12	98.° − 1.°	96.° − 1.°	39.2
13	86.5 − 2.4	86.° − 2.4	35.2
14	65.° − 3.5	63.5 − 1.5	21.2

14) 517.9

37.0 Av. - 98.37. of 1917-18

Station 5 — Furness Flat

Course 1. — 50' apart

Meas.	Depth	Core	Water Content
1	90°	84	37°
2	94	80	42.3
& M.	94	83	41.1
3	93 −1.5	84 −1.5	36.1
4	97.5 −2.0	87.0 −3.0	41.0
5	93	84.5	40.4
6	96.5	88	41.8
7	95	78	40.6
8	106 −3	94 −3	44.1
9	90	82	36.5

9)358.7

37.86

Furness Flat

4/4/20

Course #2

1	92	86	37.5
2	89.5	79.5	36.4
3	100	92	40.0
4	93.5	85	39.3
5	92 − 0.5	84.5 − 0.5	38.0
6	94.5	87.5	40.8
Re-M.			
7	99.5	95.0	42.4
8	95.5		
Re-M.	96.0	85.5	41.7
9	97.5 − 2.0	90.0 − 2.0	40.8
10	94.5		
Re-M.	99.0		
"	93.0		
"	94 − 2	86.5 − 2	37.2

84.5 / 10) 394.30 / 39.43

Avg. of 1 and 2, 39.65 in. = 102.7 lb. 1917-18

Station #4 Saw Mill Flat.
Course #1

Easter Sunday April 4. 1920.
Ed Rogers
Harry G. Armstrong -

Nos	Depth	Core	Water Content
1	64 -2.0	59.5 -2.0	29.1
2	82.0 -2.0	79.0 -2.0	36.0
3	84 -1	82.0 -1.0	35.8
4	88 -2	79½	37.1
5	93.5	80.5	39.6
re-M	90.0	83.5	39.6
6	91.5	77	40.1
7	91	82.5	37½
8	96.5	89.5	39.5
9	~~83.5~~ ~~-7.5~~ 83.5	77.5 ~~-1.0~~ 76	37.0 36.3

10	88 −2	83 −2	37.0
11	90.5 −1.5	85.5 −1.5	39.7
12	116.5 −1.5	102 −1.5	52.5

12) 459.70 (38.31

Deep drift beyond Hole # 12

Saw Mill Flat

Course #2

1	100 −0.5	92.5 −ON	43.7
2	110.5	107.5 107.5	42.9
3	105	87	41.8
4	92.5	84	41.0
5	88.5	71	35°
6	78 −4	71	34.1

6 | 238.00

39.67

#

4/4/20 F.W.-

X 28

Avg 1 and 2 38.99 = 92.6% of 197.18

Sterling Lake   April 4, 1920

Ed Ploeny
Harry G. Armstrong

Course Meas.	Depth	Core	W. C.	
1	110 -2	69 -2	59.7	slushy
2	98			
re M.	99	90	41.0	
1	99	90.5	40.8	
2	100	94	41.0	
3	102	92.5	44.6	
4	100	94.5	41.2	
5	103.5	99.5	42.7	
6	99	94	43.0	
7	105. -0.5	101.0 -0.5	41.7	

Southerly part

Sterling Lake

Course 2

1	111.0 −1.5	106.5 −1.5	43.1
2	98	96	37.4
3	103.5 −0.5	96.5 −0.5	42.7
4	100	95.0	41.9
5	97 −0.5	90	40.4
6	87		
12 M.	87.5	83	
1	87.5	80.5	36°

4/24/90

Meadow Lake –

Course 2.

April 5, 1920

Ed Roeny
[illegible] Armstrong

Meas			
1 ~~Meas~~	97.0	97°	42.0
re-M-	95' -1.5	88.0 -1.5	39.8
2	95	74.0	38.6
3	101.5	96.0	41.9
4	111.0 0.5	107.0 0.5	43.8
5	114.0 0.5	91.0 0.5	39.0
6	109.0	99.5	40.8
7	106.5	102.5	42.6
8	105	101.	43.5

between trees.

Meddow Lake
Course #I

Meas.	Depth	Core	W.C
1	91.5 / -1.0	89	37.6
2	~~100~~		
2	105 / -1.5	93.5 / -1.5	44.5
3	102	93	40.0
4	104 / -1.5	92.5 / -1.5	41.1
5	96 / -2.5	~~95.9~~ / -2.5	37.2
Repeat 5	95 / -1.5	94.2 / -1.5	37.6
6	100 / -1.0	74 / -1.0	39.2
6 Repeat	100 / -0.5	85.5 / -0.5	41.6
7	109 / -1.5	104 / -1.5	44.0

4/5/20

Ed. Rooney
J. B. Brown
-Record

50' fr. NWesterly Turn

H.H. Armstrong
Gus. Anderson

Then ea 50'

+81.5 from #7 to end of course

End 1.05 P.M.

Courses Laid out by
Apr. 4, 1920
Ed Roeny-
Harry G. Armstrong

Descriptions of new courses.

Sterling Lake

In open flat about 2000 ft South of Sterling Lake

Course 1.

SW-ly from Southern most snow gage in line with blazed fir one ft. in diam. Meas. 2. being every 50' apart, beginning 50' from snow gage.

Also along same line approx. NE-ly from Southern most snow gage toward small blazed fir at end of clearing. Meas every 50' beginning 50' from snow gage, 7 meas. Total meas in this course 9. Elev. = ?

Course 2

Across flat near Northern most snow gage SW to NE bet. large 4' blazed fir standing alone at base of hill and 16" blazed tamarack.

Meas. every 50' beginning 75' from large fir. Total meas. 6.

Meadow Lake

4/25/20

In open flat about 2000' NW of Meadow Lake.
Elev. 7300'

Course 1

Strong 30" tone tree blazed tamarack SE-ly to blazed tamarack. Measurements every 50', beginning 50' from tree blazed tamarack
Total Measurements. 7.

Course 2

From blazed tamarack 100' NE of most easterly snow gage across flat to blazed tamarack. Measurements every 50' beginning 50' from blazed tamarack at NE end of course.
Total Measurements. 8.

Mail Box Flat.

Meas	Depth	Core	W. C.
1	94.5 - 2.5	72.5 - 2.5	42.7/6
2	89.0	84.0	37.5
3	75		
rc-M.	76	67.0	34.0
4	90.0 - 2.0	86.5 - 2.0	39.0

X

4/5/20

Ed Hoeny
Harry G Armstrong

The Contract Williams, are two legs. Course No 1. should only have 11 holes and Course #2 13, as all further holes run into the aspen grove.

Williams —

Course 1.

On flat, elev. 7,800 feet, open; from triple blazed tamarack 150' S of road & 100' E of barn, S across flat & up to aspen forest. Meas. No 10, 6' E of large scarred up aspen. Meas. every 50 feet, beginning 50' from triple blazed tam. Total Meas. 11.

Course #2. On flat SW to NE across Course #1. From large juniper 4' in diam triple blazed to blazed tamarack with a 1"x6"-4' board on it. Course #2 crosses Course #1 bet. 9 & 10 Meas. every 50 feet, beginning 50' from triple blazed juniper. Total measurements, 13

Burnside Lake
Course 2.

5/1/30

I changed the course here for we could not locate the "SE" blazed

" from small tamarack triple-blazed at upper end of open flat 400 feet, Southerly Eastward high bald peak at lower end of open flat. Measurements every 50 feet, beginning 50' from triple blazed tamarack.

Ward Creek. 6/2/20

Prof Church & Plummer road

West course

#8	16	15½	30.5 / 22.3 / 8.2

East Course

#1	6	5½	25.7 / 21.3 / 3.4

North Course

#2	17	17	31.2 / 22.3 / 8.9

2 Course

no snow

Rubicon Peak
Course 2 extra & new

last hole 17' from 3. tree	11"	11"	5.6"

Course #1

#1	65.4	65.4	31.4
" 2	82	~~74~~80	39.2
3	61	58.5	
Rem	61	60.3	28.6
4	39.5	39.1	18.2
5	0		
6	47.9	47.7	22.6
7	54.3	54.3	25.4
8	31.0	30.4	15.3
9	5.5	6.0	2.4
10	27.4	27.2	13.3
11	52	50.8	23.6
12	45.2	43.5	21.6

6/3/20 Prof Church-
H.A. Armstrong
Left road below saddle at 9 A.M. - arrived Course #1 at 2 P.M.

#2 today is 2' beyond old hole

13	38.2	cc	21.5		
14	24	25	12.7		
15	29	28.5	12.4		
16	18	cc	8.9		
17	38.3	cc	18.4		
18	51.7	51.2	22.2		2 holes about 8' E of this.
19	28	cc	12.4		2 old sets of holes 8' apart. - our hole taken 1/2 way between
20	54	cc	26.8		this one by set of 2 holes farthest E.
Re M.	39.3	39.7	~~18.~~ 19.3		near farthest hole ahead
21	42	41	20.7		old holes 8' apart. April
Re M	43.7	43.0	22.0		
22	48.5	48.3	23.8		near or April hole
Re M	62.8	cc	31.6		
23	52.5	cc	25.0		near
Re M.	41	cc	19.7		
24	35	cc	17.4	May	April hole not found o depth?
25	61.2	60.7	26.9		May hole very near hemlock -
26	63.5	59.0 [4]	29.0		core broken - rock bottom
Re M.	67	66.4	32.0		
27	7.0	cc	3.4		
28	51.3				This hole is 23½ ahead of #27 just beyond
Re M	50.9	cc	25.4		triple blazed ~~to~~ turning point tree

28a	55.5	56	26.6
29	44.7	c.c.	22.4
29a	36.5	cc	18.2
30	41.8	41.4	20.8
30a	36.5	c.c.	17.3
31	15	14	6.9
32	34	32	16.7
32a	60.3		
Rem	61		
11	59.7	59.	30.7
33	39.8	38.	17.4

20.7 Average

~~Spirit~~ hole 73' back

~~Spirit~~ hole

~~Spirit~~ hole

Spirit hole 3 holes 23' back

12' from blazed tree.

This course should be more thoroly blazed, & blaze trail from table rock to beginning of course

<u>East Walker</u>

Station 3 - Cirque Mountain

1	85½	76	29½		
2	93½ -3	89 -3	44½		mud
3	119½	98	41		
rc	111				
rc	126 -1	124 -1	52		mud
4	113	112	47		
5	79^5	77	31.5		rock
6	26½	24	10^5		rock
7	90^5	86	4^{36}	✓	mud
8	102	93^5	39.5		rock
9	62	60^5	24		rock
10	70^5	67^5	23		
~~Av.~~	~~95.5~~		~~38.6~~	~~119%~~	

3/27/71 Clear & warm

Harry L. Armstrong recorder

C. W. Fulton

opp tree.

11	107	102	45		
12	101	89			
rc	101	96	42.5		
13	101	~~96~~ 99	41		core slid out 3 inches 99 corrected -
14	97	92	39	mud -	
15	101	98	42½		
16	96.5	94	39.5		
17	112.5	105	47	ok.	
18	96	94	41.5	gravel -	
19	101	99	42		
20	112	98.5			
rc	125	111	51½		
av.	95.5		38.6 = 119 % 40.5 = 125.4 % (?)		

95.5

Dens. 42.8%

Normal 32.29

40.88

The first half of this course is very good, ~~both~~ last half unsatisfactory - subject to drifts & steep. There seems to be no other available satisfactory location for a course, within a reasonable distance.

Would suggest using only 1st or lower half of course & take measurements every 25' instead of 50'

Station 4 - Big Meadows 3/28/21 bright + warm

Course 1. Near the Roughs. W. Armstrong, C. W. Fulton.

weather clear & calm.

[For notes in re this course see p 47].

1	40^5	36^5	15^5		
2	25^5	19.5		mud.	
rc	25^5 2^5	$15\frac{1}{2}$ $7\frac{1}{2}$	6.5	mud.	
3	35^5	35	14^0		
4	48 $-1\frac{1}{2}$	45 $-1\frac{1}{2}$	21^0	mud	
5	$45\frac{1}{2}$ -1	43 -1	18	"	
6	31	$29\frac{1}{2}$ $+\frac{1}{2}$	12^5	rock.	
7	44 $-1\frac{1}{2}$	42 $-1\frac{1}{2}$	16.5	mud.	
8	47 -1	43 -1	18^5	"	opp. small cedar
9	54	53			
rc	60^5	55	27^5		
10	71				
rc	71	69	33 (33)		

11	46	43.5		
rc	50.5 −½	48 −½	23.5	rock + gravel
12	76.5	71	35	
rc	76.5	73	35	rock
13	98½	96.5	47.2	on S. slope of knoll
14	43.5	39		
rc	44	42 +2	23	rock " " "
15	53½	53	28	mud
16	67.5	65.5	32.0	
17	71.6	67	34.0	mud
18	71.½	67.5 −½		"
19			32.0	
14	61.5 −3	54 −3	24.5	"

20	59	56	23.5	brush
21	59 ½ − ½	56 ½ − ½	24	"
22	68	62	39	"
23	76.5	68.5	30.6	grass
24	55 ½	55 ½	23.5	rock
25	78.5	75.5	32.5	mud
26	70.5	64	32.5	"
27	46	44	17.5	twigs
28	70 − 1½	65 − 1½	26.5	mud
29	101	96.5	40.5	
29	35	35	15.0	twigs + mud
30	74.5	74	30.4	
31	70.5	67.5	28.0	twig

ice 2' below surface

32	88 -½	78⁵ -½	32°	mud	soft snow
33	68 -1½	63 ½	24°	"	
34	84⁵	77⁵	31	twigs	at base of very steep slope.

26.21

61.5 26.4

34) 891.3 / 26.21 ÷ 22.86 = 114.7%

61.5 Rise 42.6% 26.21

45 3.9

This course seems quite satisfactory, as for location. Some willows are on line, & should be brushed out.

The last 6 measurements on a very steep slope (to North), & I have recommended abandoning them.

Pickle - Leavitt Course

1	46.5	44.0 42.0	20.0	rock
2	28.0 -0.5	25.0 -0.5	11.0	mud
3	20.5	19	8.5	rock
4	19.5	14.0	6.5	"
5	21.5 -1	20. -1	9.0	mud
6	36.0	34.5	15.0	rock
7	19.5	19.0	8.5	"
8	52.0	46.5		
10	52.5	52.0	22.5	
9	42.5	41.5	17.0	
10	28.5	26.0	11.5	
11	21.5 -1.5	20.5 -1.5	9.5	

bright & warm.

Joseph Armstrong ——
Chas W. Fulton.

3/30/21.

29' N.W. of 36" juniper tree.

This is a very satisfactory course, except that beyond meas. #28, it runs down a S.W. slope & is entirely dry. We blazed several trees with single blaze on ~~either~~ both sides of course. There is no opportunity for a second course at rt. angles anywhere.

12.	27.0	19.5	10.0	
13	25.5	23.5	11.4	mud-
14	39.1	37.5	15.5	grass
15	38.0	31.	13.0	mud.
16	43	39.	15.5	mud.
17	47.5	46.0	17.5	"
18	28	23.5	10.5	
19	29.0	28.	12.5	
20	28.5	24	12.5	mud
21	26.0 -1	23.0 -1	10.5	"
22	27.0 -0.5	23.5 -0.5	12.5	"
23	16. -3	7.0 -3.0	6.5	
+25'				
~~Av.~~	~~30.2~~	Av. 12.46	~~12.46~~	

2' Jeffrey Pine 10' left of course.

24 dry

25 21
26 22 1/2 19 1/2 10.

26 dry

27

#28 on "all dry"

28)725.0
25.9

)296.60
10.59

Mean 40.99%

Description of Pickle-Leavitt Course.

Starting point, ducked rock, which bears due North 27' from a triple-blazed juniper 18" in diam. on first summit of steep hillside due Westerly from head, or extreme southern end of Pickle Meadow on Poor Creek, said starting point being approximately in center of Sec. 3, T5N R22E as shown on the Dardanelles quadrangle.

1st meas. 40' N.E'ly from ducked rock, thence every 50' SW'ly along blazed course.

Total No. of meas. 27

at top of ridge overlooking Leavitt Cr-

Note: - this description made of this course by me before referring to Fulton's description; all measurements beyond 27 are on S.W'ly slope & should not be included in this course.

Armstrong

Willow Flat - Station 2

bright & warm-
3/31/21 Armstrong
Fulton

Course #1.

~~10~~		9		
1		dry		
2		"		
3	10	9.	4.5	
4	53½ -1½	50½ -1½	24.5	mud
5	63½	61	29.0	"
6	47.0	46.	20.5	grass
7	29	27½	12.0	"
8	32.5	31.	12.3	"
9	29	24.5		"
10	29	25	13.0	grass
10	34½			
10	29½ -3	26 -3	11.0	
11	33 -1½	30 -1½	14.5	

Description OK- except I suggest cutting off all beyond #24 as it thereafter climbs steep rocky knoll, & establishing new course at right angles hereto, as described p 53.

12	30	28½		ice
12	37½			6" mud
12	30½	26½	12.5	mud
13	23	22½	11.5	grass
14	29½	26½	14.0	"
15	26.0	14½	12.0	"
16	26.0 -1.0	22½ -1.0	11.0	mud
17	24	20.0	13½	
18	25	18½	10½	grass
19	25	16	9.0	twigs
20.	30½ -3	27½ -3	13.0	mud
21	30	24	12.5	twigs
22	33½ -1	32½ -1	14½	mud
23	34½	25.0	13.0	twigs

ice cut bottom on all of these

24-	38	34	15.4	~~dead~~ twigs	at base of small steep knoll-

av. ~~31.4~~ av. 12.29

)691.6 (28.8)304.9 (12.70

At right angles to Course No. 1 across Willow flat from bushy topped & stiped top ~~dead~~ cedar 36" in diam with dead tamarack leaning into cedar, toward large tamarack leaning to the North. Beginning 50' from cedar, every 50'. This course ~~ends~~ at meas. ~~7~~ 6-7 crosses course 1 ~~at~~ bet meas 16 & 17.

Total meas. 13

Course 2.

1	41 -2½	39½ -2½	15.0	dry gravel
2	39 -1	36 -1	~~11.4~~ 11.4	
3	27	96		
10	51.°	43	26.°	gravel
X	26	90	10½	

Course 1 should be terminated at 34 on East side of Willow flat at base of hill at creek edge.

5	28	24			?
re	28½	24½			?
re	28	24	12½		grass
6	25	22			?
re	24½	22½	11.8		grass
7	29½	25½	13.5		"
8	27½ -3	26 -3	11.5		dry grass
9	31 -2½	27½ -2½	13.5		"
10	24	15½	~~12~~ 9.7		grass
11	20 -0.5	15 -0.5	9.0		"
12	23 -1	17 -1	9.5		
13	27			~~?~~	?
re	27½	22.	13.7		fudig
av.	28.6		av. 12.89 12.9		

150' ~~is~~ tamarack 30" in dia

1+2 28.7 12.80

~~[illegible]~~ 44.6%

av. 1+2 12.59 = 82.2

West Walker

Pickle Meadow

Course 1.

1	dry			
2	4.5		2.0	rocky
3	14.5	12.5	5.8	"
4	14			
16	17.0	14.5	7.0	
5	27.0	19½	9.0	mud
6	2/3	22½	11.5	rocky
7	18.0	16.0	~~8.6~~ 7.6	
8	20.5 −1.5	16.5 −1.5	7.5	mud
9	16.0	12.5	6.0	
10	21	12.5	6.1	gravel
11	12.5			
12	13.5 −1	14.0 −1	6.0	
13	19.0	14.0	7.0	brush
14	17.5	13.5	7.0	"
14	20	17.0	6.5	
15	23 −7½	17.0 −7½	~~6.6~~ 7.6	

cloudy + windy. 55

4/1/21 Bloomstrand recorder Fulton

Course 1, to me, does not seem to be a satisfactory course. It is not in an open meadow as stated in description of courses, but on top of flat bare ridge, whose general slope is gently to the South.

Course 2 is better; it slopes to North.

With the above exception, description of 2 courses satisfactory.

sage brush-
" "

16	16.0	15.0	7.2	
17	22½			
rc	19.0	15.5	7.2	mud
18	19½ −2	16.½ −2.	6.7	"
19	17½			
rc	18	14.0	7.0	brush.
20	17½			"
rc	21½ −1½	20½ −1½	9.0	
av.	340.5 −17 17.0		~~133.7~~ 7.04	20) 135.6 6,78

Course 2

1	dry			
2	Trace			
3	17	15	5.5	mud
4	30.5	27	13.0	Tulip
5	31.5 −1.0	21.5 −1.0	10.1	
6	36.5	32.5	13.0	"
7	26.5	22	11.0	
8	30	20	11.5	"
9	28	26.5	12.5	

10	28.0 −1.0	23.0 −1.0	10.4	mud
11	30.5	28.5	15.7	tulip
12	17.5	16.0	7.0	
13	21.5 −2.5	16.5 −2.5	6.5	
14	16.5			
16	17.5 −1.5	16.5 −1.5	6.5	
15	13.0	12	4.8	tulip
16	18	16.5	7.7	
17	13.	12	4.5	
18	7.5	6.5	2.2	
19	~~15.0~~ 15.0	13.5	+ 5.8	
20	dry across creek			
20)	375.5		147.7	)
	18.78		7.39	
1+2	~~18.14~~		~~7.09~~	
	17.9	Days 39.1%		

Snow Survey

Prof J. E. Church Jr
358 Washington St. Reno, Nevada

Ed Roening (For alyce)
Cisco, Calif

A. L. Smith (Log House at Dam)
Reclamation Service
Tahoe Calif

Bob Watson (Guide // Ward Ck.)
Tahoe, Calif

Murray Smith (With Math Green)
Tahoe City, Calif
for Rubicon Park & Rubicon Peak

18-14

Ref Sawmill Summers	46.24	Continued Monday	
Ref.	49.3		
S.M. Flatt	53.93	112.1	
F. F.	52.30		
M. B. F.	45.68		

69% Mayfield
63 Sahoe

Table showing the difference of latitude and departure in running 80 chains at any course from 1 to 60 minutes.

Minutes	Lks.	Minutes	Lks.	Minutes	Lks.
1	2⅓	21	49	41	95⅔
2	4⅔	22	51⅓	42	98
3	7	23	53⅔	43	100⅓
4	9⅓	24	56	44	102⅔
5	11⅔	25	58⅓	45	105
6	14	26	60⅔	46	107⅓
7	16⅓	27	63	47	109⅔
8	18⅔	28	65⅓	48	112
9	21	29	67⅔	49	114⅓
10	23⅓	30	70	50	116⅔
11	25⅔	31	72⅓	51	119
12	28	32	74⅔	52	121⅓
13	30⅓	33	77	53	123⅔
14	32⅔	34	79⅓	54	126
15	35	35	81⅔	55	128⅓
16	37⅓	36	84	56	130⅓
17	39⅔	37	86⅓	57	133
18	42	38	88⅔	58	135⅓
19	44⅓	39	91	59	137⅔
20	46⅔	40	93⅓	60	140

TABLE FOR RUNNING ON SLOPES.

In the following table the first column shows the angle, the second the number of links to be added to a chain on the slopes, to make one chain, horizontal measurement.

Angle	Cor. in Links	Angle	Cor. in Links	Angle	Cor. in Links	Angle	Cor. in Links
0		0		0		0	
4	0.24	11	1.88	18	5.14	25	10.54
5	0.38	12	2.24	19	5.76	26	11.26
6	0.55	13	2.63	20	6.42	27	12.24
7	0.76	14	3.06	21	7.11	28	13.37
8	0.98	15	3.53	22	7.85	29	14.34
9	1.24	16	4.02	23	8.64	30	15.47
10	1.55	17	4.56	24	9.47	35	22.07

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THE ALTZ CO

Snow Surveys
1921

Summit &
S. Yuba.

State Dept of Engineering
Forum Bldg
Sacramento
California

Beakey
Snow Surveys 1921

Index

Index - continued

Course 1 -

Upper Part of Big Meadow
East of Castle Rock
Dips & Slopes Elev Approx 7500 ft
semi open, through quaking aspens
to cedars
From dead lodge pole pine 15" dia
triple blazed on North & South sides
25 ft South of creek, S10°W toward
Hennerville Peak to large blazed cedar
2' in diameter
Measure every 50' beginning 2 ft from
dead Lodge pole Pine
Measure No 39 N.E of big cedar blazed
and last measure 30' W of large blazed
Cedar (24" dia)
Total Meas. 40

IV Yuba Basin - Summit Station

"A" South Fork of Yuba River

Station I Summit Station Donner Pass

Truckee Quad.

Established Feb 14th 1914

on S.P. R.R. Summit Hotel ½ mile East

Course 1

Crest of Hill S. of Concrete R.R. station
Elev 7019 ft timber sparse
From window next east of Warehouse
door, S to triple blazed tree
measure every ten feet, beginning
under telegraph wires, and directly
in line with telegraph poles
Total meas 10

omit

Course 2

In Flat approximate 500 ft S.E of
and below R.R. Station; Through
Forest Glades and buried scrub
from Triple blazed medium tamarack
South to Western triple blazed tree
of two tall trees at far end
of opening.
Bearing of triple blazed Medium Tamarack

Course 2 (cont.)

directly south of 1st telegraph pole
west of new snow-board (E of Summit Station)
and on E-W line passing through large
dead tree & large live tree S of Station
Measure every 25 ft from Triple blazed
medium tamarack, Total measure 22

Course 3 Est. 4/27/19

In Flat E of Course 2
From tamarack 30" dia of N edge
of large opening and 100 ft South of
1st. telegraph pole E of U.S.W.B.
snow scale, E of S to easterly twin
tamarack 24" dia and plainly
visible across opening. Measure every
25 ft Beginning 25 ft from North Tamarack
total measure approx 32

Note if snow has melted and water escaped
from bottom and approx quantity as
shown by saturation of soil

Yuba Basin — "Cisco"

Station "2" Extra

½ day from Cisco Station on S.P.R.R.

Hotel & Store at Cisco

Course 1

On Flat on S. Fork Yuba River where wagon road N from Cisco enters Lincoln Highway Open; Elev 5700, sampler liable to injury because of rocks from southernmost (triple blazed) of 3 large pines at mouth of Cisco Ravine N.E to telephone pole (triple blazed) just to right of line passing through south end of red bridge over Yuba measure every 25 ft beginning 25 ft from triple blazed.

Measure Station #20 is 25' S. and 7' W of Sign "Cisco Hotel" & "Geiser Store" etc

Total measurements 22

Course 2 open Flat

From Northernmost of 3 large pines mentioned in course No. 1. N to bushy lone tamarack in center of flat Both ends of course triple blazed Beginning 25' from triple blazed pine last measure 32½ ft from lone tamarack

Total measure 15

Red Mountain or Signal Mt.

Station 3

Summit of trail from Cisco to Fordyce Dam
Two days to survey at stations
3, 4, 5 & 6 between Cisco and Fordyce Dam
Four days if stations 7 & 8 are included
Keeper's House at Fordyce Dam. P.G.&E. Co.

Course 1

On broad shoulder of mountain
Elev 7200 ft tall fir forest
Between blazed firs 2' dia
measure every 25' S to N. beginning
25' from S. Fir
Total measure 14

Station 4 Sawmill Flat
E of and adjoining Sta "3"

Course 1 Open flat elevation 7000'
From 4' dia red fir triple blazed on
N edge of flat, S.W down center of
flat toward distant tree triple blazed
measure every 50' beginning 50' from
red fir total meas 13

Course 2 Cross section of course 1
across flat E from 3' red fir to 2'
tamarack, both blazed. Measure
every 50' from fir total meas 6

Fordyce Lake

Station 5 Furnace Flat
On trail from Cisco to Fordyce Lake
approx 1¼ miles from Fordyce Lake

Course 1 open flat elev 6600 ft
N to S between triple blazed Tamarack Trees
dia 2' Measure Every 50 ft, beginning
50' from N. Tamarack, Total meas. 9

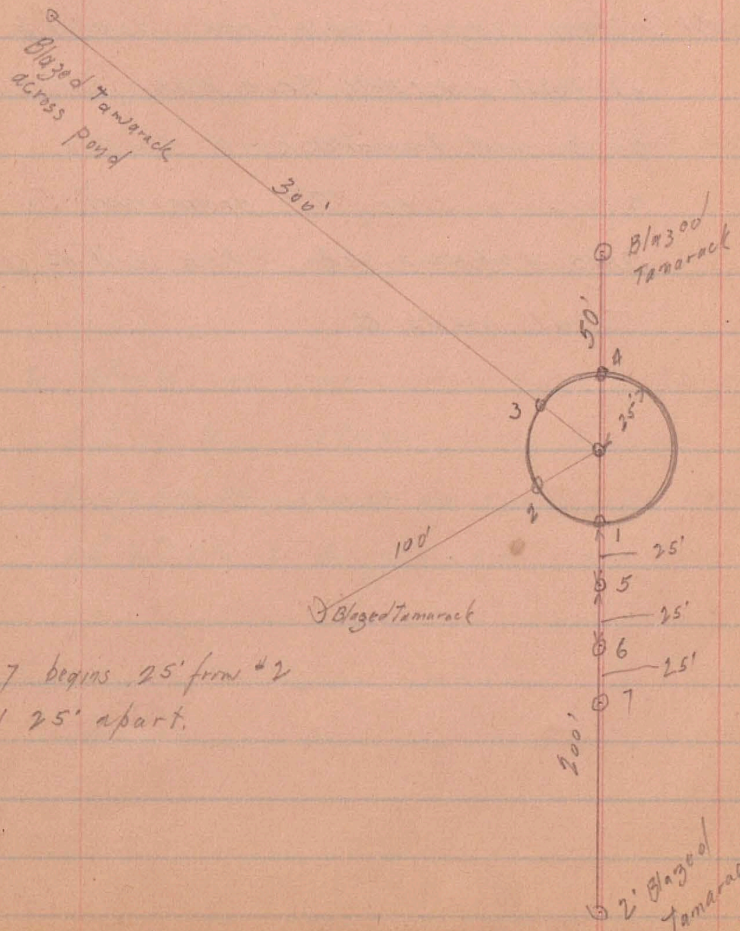
Cours 2

Cross Section of course 1
E to W across flat, meas. every
25' Beginning 75' W of pronged
tamarack 1½' dia, triple blazed
10" dia tamarack at N end of course
Total Meas. 10

Fordyce Lake

Station 6 Mail Box Flat at S.W. end Fordyce Lake

Course 1 Small Flat elev. 6500 ft - open
Circle of 25' Radius around Snow Staff
total meas 4 located by radial lines
from Staff to blazed trees, with 3
additional, as 5, 6 & 7 see sketch



#5, 6 & 7 begins 25' from #2
and 25' apart.

Meadow Lake

Station 7 in open flat about 2000' N.W of Meadow Lake Elev 7300 ft

Course 1 from 30" dia lone bare blazed tamarack S.E ly to blazed Tamarack measure every 50', beginning 50' from lone bare Tamarack. Total Meas 7

Course 2 From Blazed tamarack 100' N.E of most easterly snow guage (snow stake?) to blazed Tamarack. measure every 50' beginning 50' from blazed tamarack at N.E End of course Total meas. 8

Sterling Lake

Station 8 in open flat about 2000 ft south of Sterling Lake

Course 1 S.W.ly from southern most snow gage in line with blazed fir 1' in dia measurements 50' apart, beginning 50' from Snow gage. Total meas 2

also along same line approx N.E ly from Southern most snow gage toward small blazed fir at end of clearing measure every 50' beginning 50' from Snowgage Total meas 7
Total meas. both directions 9

Course 2 Across flat near northern most snow gage S.W to N.E between large 4' dia blazed fir standing alone at base of hill & 16" blazed tamarack.

A.J. Beakey
E.E. Roenning

3/25/21

Summit Station Course 2 (page 2

Station	Depth	Height of Snow in Tube	Deduct	Total Snow	Water	%
1	109	102½	2	100½	51	
2	106	101½	—	101½	48	
3	104	103	1	102	47 3/10	
4	104½	103½	—	103½	48	
5	118	114½	½	114	55½	
6	112½	108½	—	108½	51 5/10	
7	114	109½	1½	108		
again 7	114	109½	1½	108	52 2/10	
8	116	113	1	112	51½	
9	128	118½	—	118½	58 8/10	
10	123	114½	6½	108	48.7	
again 10	126½	119½	4	115½	50½	
11	119	115	—	115	52 8/10	
12	112½	109	3½	105½	50½	
13	107	105½	2	103½	47	
14	101	96	1	95	45	
15	102	98	1	97	47	
16	106½	106	1½	104½	48	
17	114	108	4	104	52 2/10	
18	118½	111½	½	111	55 4/10	
19	118½	117½	½	117	57	
20	119	116½	½	116	52 4/10	

3/25/21 + 7

Summit Sta Course 2 - (page 2

Station	Depth	Height of Snow in tube	Deduct	Total Snow	Water	%
21	113½	109	1	108	51 8/10	
VV	101	99½	3	96½	45	
22)	2,471			22)	1118.4	
	112.3				50.84	

(omit %)

A.J. Beatey
E.E. Roenning

3/25/21

Summit Station Course 3 Page 2

Station	Depth	Height of Snow in tube	deduct	Total Snow	Water	%
1	94	90	1	89	45 8/10	
2	95½	94	1	93	46	
3	102½	97	2	95	47½	
4	102½	97	—	97	50	
5	100	97	2	95	44 8/10	
6	107½	102½	½	102	54	
7	101	99	1	98	47. 2/10	
8	107½	102	3	99	50 8/10	
9	109	102	—	102	52 2/10	
10	107	103	1	102	50 4/10	
11	109	106	½	105½	50	
12	102	99½	2	97½	47 5/10	
13	101½	98½	1½	97	47 8/10	
14	101	98	2	96	46	
15	106	102½	1	101½	50	
16	113½	101½	1½	100	55 5/10	
17	113	109	1	108	51	
18	113	105	3½	101½	45 8/10	
~~19~~	~~101~~	~~87~~	~~1½~~	~~85½~~	~~37 3/10~~	
again 19	110½	105½	—	105½	53	
20	106½	103½	½	103	49½	

3/25/21

+ 8

Station	Depth	Height of Snow in tube	deduct	Total Snow	Water	%
21	112	106½	½	106	51½	
22	115	106½	—	106½	56	
23	118½	113½	1	112½	53	
24	115	110	2	108	57	
25	121	117½	—	117½	51	
26	118½	116	1	115	49	
27	103	101½	2	99½	45 5/10	

27) 3006.5
111.4

27) 1342.8
49.73

2+3, 111.9 in. av 2+3 50.29 in.
Rel. dens. 44.9%

(1) A.J. Beakey, E.E. Roenning, G. Johnson — 3/27/21

Red Mountain Course 1

Station	Depth	Height of Snow in tube	deduct	Total Snow	Water	%
1	140	136½	½	136	57.8	
2	150	147½	1	141½	65.	
3	147½	137½	1	136½	65.8	
4	136	131½	1½	130	59.2	
5	132	128	2"	126	58	
6	129½	121	—	121	58.2	
7	136	127½	—	127½	62	
8	125	118½	1	117½	59.5	
9	138½	97	1½	96½	60.	
10	119	114	—	114	56.2	
11	128½	127	2	125	61.4	
12	140	134½	½	134	64.5	
13	136	134½	1½	133	61.	
14	108	103	2	101	47.5	
				14)	836.1	
					59.72	

14) 1861

132.9

Less 44.9%

(1) Beakey, Roenning — 3/28/21 — A.J. Beakey, E.E. Roenning, G. Johnson

Saw Mill Flat Course 2

Station	Depth	Height of Snow in tube	deduct	Total Snow	Water	%
6	132	127½	—	127½	63	
5	140	134	1½	132½	67.6	
4	134	91	—	91	61.1	
4	143	134	1	133	69.4	
3	139	135½	1½	134	67.2	
2	117	101½	—	101½	59.	
2	144	138	—	138	66.2	
1	150	145	1	144	67.4	
				6)	395.5	
					65.92	

6) 848

141.3

Snow on Staff ~~12 ft~~ 12 ft

~~4 ft~~

A. J. Beakey
E. E. Roenning
G. Johnson

3/28/21

Saw Mill Flat Course 1

Station	Depth	Height of Snow in tube	deduct	Total Snow	Water	%
1	127	122	1	121	61	
2	133	125½	1	124½	64.5	
3	125	114	½	113½	61.2	
4	135½	98	½	97½	62.	
5	152	107	½	106½	66.8	
6	142	134	1	133	71.3	
7	141	134	—	134	70.	
8	145	137	1	136	68.4	
9	127	120	—	120	59.3	
10	141	131	½	129	68	
11	154	139	—	139	73.	
12	136	89½	—	89½	(68)	
12	150	130	—	130	73.2	
13	155	142	1	141	72.6	
13)	1963.5			13)	871.3	
	151.0				67.02	

12 ft on Pole

av. 146.2

av. 1 + 2 66.47.

A. J. Beakey
E. E. Roenning
G. Johnson

3/28/21

10

Sterling Lake Course 1

Station	Depth	Height of Snow in tube	deduct	Total Snow	Water	%
1	154	144½	1	143½	67	
2	154	146	2½	143½	74.6	
Course 1 "A"						
1	150	97½	1	96½	65.8	
2	154	142	—	142	70	
3	160	154	1½	152½	73.8	
4	152	143½	1"	142½	70.	
5	156	147	2	145	75	
6	155½	138½	3	135½	74	
7	157	150	3	147	74.2	
9)	1392.5			9)	644.4	
	154.7				71.60	

Course 2

1	173	159	6	153	75.
2	158	148	1½	146½	76
3	159	152	4	148	73.5
4	151	132	½	131½	71.5
5	137	129½	9	120½	61.2
6	112	108	5	103	50.8
6)	890			6)	408.0
	148.3				68.0

12½ ft on pole

av. 151.5

69.80

Reduce 46.1%

(1)

Beakey
Roenning
Johnson

3/29/21

Furnace Flat Course 1

Station	Depth	Height of Snow in Tube	Deduct	Total Snow	Water	%
1	123	117	6	111	58.4	
~~2~~	~~115~~	~~76~~	~~—~~	~~76~~	~~50~~	
2	127	119	2	117	62.5	
3	122	113½	½	113	59	
4	127	120½	1	119½	61	
5	129	125	3	122	61	
6	127	122	2	120	60	
7	125½	120½	1½	119	60	
~~8~~	~~113~~	~~92½~~	~~—~~	~~92½~~	~~55~~	
8	129	119½	1½	118	61	
9	114½	109	6½	102½	53	
	9) 1124				9) 535.9	
	123.9				59.54	

10¼ on Pole

Beakey
Roenning
Johnson

3/29/21

Furnace Flat Course 2

Station	depth	Height of Snow in tube	deduct	Total Snow	Water	%
1	121½	113½	½	113	59	
2	127	93	1	92	55.4	
3	131	125½	1	124½	61	
4	124½	94	2	92	58.3	
5	126	90	1	89	60.5	
6	132	124	3	121	62	
7	130	86½	½	86	61.2	
8	129	107	3	104	63.4	
9	129	126	6	120	60.8	
10	121	88	½	87½	55.2	
	10) 1271				10) 596.8	
	127.1				59.68	

av. 125.5

av. 1 + 2 = 59.61

Av. Ridew Sm Flat +
Furnace Flt 61.93 in

134.9

~~Dens~~ 45.9%

Beakey
Roenning
Johnson

3/29/21

Mail Box Flat

Station	Depth	Height of Snow in tube	Deduct	Total Snow	Water	%
4	99	90	2	88	45	
3	109½	105	½	104½	47.	
2	110½	103	—	103	51	
1	106	99	½	98½	46.4	
5	120	109	—	109	48.9	
6	117	102½	½	102	50.2	
7	117½	111	—	111	51	
7)	779.5			7)	339.5	
	111.4				48.50	

8½ ft on Pole

Rem. 43.5 %

Beakey
Roenning
Johnson

3/30/21

12

Meadow Lake Course 1

Station	Depth	Height of Snow in tube	Deduct	Total Snow	Water	%
~~1~~	~~143~~	~~126~~	—	~~126~~	~~65.4~~	
1	145	136	1	135	70.0	
2	144½	137½	—	135	65.8	
3	161	156	6	150	73	
4	159	97½	—	97½	62.2	
5	161	153½	3	150½	68.8	
~~6~~	~~158~~	~~88½~~	~~3~~	~~85½~~	~~64~~	
6	164	157	6½	150½	73	
7	164½	150	—	150	74	
8	152	150	—	150	72.5	
8)	1251			8)	559.3	
	156.4				69.91	

Course 2

1	163	153½	6	147½	75
2	152	136	—	136	76
3	150	138½	—	138½	64
4	148	142	6	136	68
5	150	104	1	103	65.5
6	151	146	—	146	70.0
7	147	139	—	139	65.
8	136½	129½	7	122½	61
8)	1197.5			8)	544.5
	149.7				68.06

Av. 153.1 Rem. 45.1% 68.99

Summit Station - Course 2 - March 25th 1921 Beatey Roenning

Station	Depth	Height of Snow in tube	Deduct	in tube Total Snow	Water	
1	109	102½	2	100½	51	
2	106	101½	—	101½	48	
3	104	103	1	102	47.3	
4	104½	103½	—	103½	48	
5	118	114½	½	114	55.5	
6	112½	108½	—	108½	51.5	
7	114	109½	1½	108	—	not weighed
7	114	109½	1½	108	52.2	
8	116	113	1	112	51.5	
9	128	118½	—	118½	58.8	
10	123	114½	6½	108	(48.7)	not satisfactory (omit)
10	126½	119½	4	115½	50.5	
11	119	115	—	115	52.8	
12	112½	109	3½	105½	50.5	
13	107	105½	2	103½	47.	
14	101	96	1	95	45	
15	102	98	1	97	47	
16	106½	106	1½	104½	48	
17	114	108	4	104	52.2	
18	118½	111½	½	111	56.4	
19	118½	117½	½	117	57	
20	119	116½	½	116	52.4	
21	113½	109	1	108	51.8	
22	101	99½	3	96½	45	
	2708					

22) 1118.4

50.84 in.

Normal 41.76

Summit Station Course 3 March 25th 1921

Beatrey Roenning

Station	Depth	Height of Snow in tube	Deduct	Total Snow in tube	Water	
1	94	90	1	89	45.8	
2	95 ½	94	1	93	46	
3	102 ½	97	2	95	47.5	
4	102 ½	97	—	97	50.	
5	100	97	2	95	44.8	
6	107 ½	102 ½	½	102	54	
7	101	99	1	98	47.2	
8	107 ½	102	3	99	50.8	
9	109	102	—	102	52.2	
10	107	103	1	102	50.4	
11	109	106	½	105 ½	50	
12	102	99 ½	2	97 ½	47.5	
13	101 ½	98 ½	1 ½	97	47.8	
14	101	98	2	96	46	
15	106	102 ½	1	101 ½	50	
16	113 ½	101 ½	1 ½	100	55.5	
17	113	109	1	108	51	
18	113	105	3 ½	101 ½	45.8	
19	101	87	1 ½	85 ½	(37.3)	too near to tree - not satisfactory - omit
19	110 ½	105 ½	—	105 ½	53	
20	106 ½	103 ½	½	103	49.5	
21	112	106 ½	½	106	51.5	
22	115	106 ½	—	106 ½	56	
23	118 ½	113 ½	1	112 ½	53	
24	115	110	2	108	52	
25	121	117 ½	—	117 ½	51	
26	118 ½	116	1	115	49	
27	103	101 ½	2	99 ½	45.5	
	3006.5			27) 1342.8		
				49.73		

av. 2+3 = 50.29 in. = 120.4 %.

IV Yuba Basin

Station 3 Red Mt

Course 1

Means	Depth	Core	Water Content
1	101	99	37.7
re	101	99	39.2
2	104	103.3	40.8
3	~~93.0~~ ~~92.8~~	~~94.5~~ ~~94.5~~	39.6
4	92	85.5	36.0
re	94.5		
	92.5	90	37.8
5	94	91	36.0
6	100	98	39.1

Sat. April 3. 1920

Sunny. J. E. Church Jr.
Ed Roeny
J. B. Brown
Harry A. Comstock

7	98½ −1½	97.0 1½	36.8
8	97 −1	86 −1	38.8
re	96.5	91.5	38.4
9	95.5 −2.3	91.8 −2.3	37.2
10	89.5 −1.5	87.0 −1.5	34.2
11	95 −0.3	93.0 −0.3	38.2
12	98.0 1.0	96.0 −1.0	39.2

L

13 $86.5 - 2.4$ $86.0 - 2.4$ 35^2

14 $65 - 2.5$ $63.5 - 1.5$ 26.2

99.9

14 | 1398.0

126

138

126

120

14) 518.30

37.02

X

×

Station 5 Furness Flat Easter Sunday Ed Roay

Course 1 Ap- 4, 1920 Harry A. Armstrong

Meas	Depth		
1	90°	84	~~86~~ 37°
2	94	80	42^{3}
re M.	94	83	41^{1} ✓
3	93 −1.5	84 −1.5	36^{1}
4	97^{5} −3.0	87° −3	41°
5	93	84^{5}	40^{4}
6	96^{5}	88	41^{8}
7	95 −2.0	78 −2	40°
8	106 −3	92 −3	44 ✓
9	90	82	36^{4}

$9\overline{)359.90}$

39.99

Course #2 Furness Flat

1	92	86	37.5
2	89.5	79.5	36°
3	100	92	40°
4	93.5	85	39.3
5	92	84.5	38°
6	94.5	87.5	40.8
re-M.	96°	87.5	41°
7	99½	95°	92.4
8	95.5		
re M	96°		41.7

3 2
1 4
51

4/4/20 AM

9	97½ −2.	90 −2	40.8
10	94½		
re-M.	99		
"	93		
"	94 −2.0	86.5 −2.0	37.2

10) 393.90
39.39

Av. 39.69

Station #4 Saw Mill Flat

1	64 -2.0	59.5 -2.0	29.1
2	82 -2	79.0 -2.0	36.0
3	84 -1	82 -1	35.5
4	88 -2.0	79.2	37.1
5	98.5	80.5	39.6
re-M	90.0	83.5	39.6
6	92		
6	91.5	77	40.1
7	91	83½	37½
8	96.5	89.5	39½

9	83.5	77.5	37.0
re-M.	83.5	76	31.3
10	88 -2	83 -2	37.0
11	90.5 -1.5	85.5 -1.5	39.1
12	116.5 -1.5	102 -1.5	52.5 52.5

Deep drift beyond Hole # 12

87.8 / 1.0 √ 105 / 3.1 / 9.6 / 93 / 84 / 9.1

12) 460.60 = 38.38

4/4/20

Course #2.

1	100 − 0.5	92.5 − 0.5	43.2
2	110.5	107.5	42.9
3	105	87	41.8
4	92.5	84	41.0
5	88.5	71	35
6	78 − .4	71	34.1

$6\overline{)238.00}$

39.67

av. 39.03 = 83.4%

av. all courses 38.58

N. 46.24 = 83.4%

95.0

$6\overline{)570.0}$

95

87.8

12.8

91.4

Sterling Lake

April 4, 1920
Ed Ramy
Harry A. Armstrong

We laid out two courses at Sterling Lake as follows:

On open flat about 2000 feet South of Sterling Lake

Course 1

Southwesterly from Southern most snow gage in line with blazed fir one foot in diam. Measurements 2, being every 50' apart, beginning 50' from snow gage

Also along same line approximately North-easterly from southern most snow gage toward

small blazed fir at end of clearing. Measurements every 50' beginning 50' from snow gage; ~~six~~ 7 measurements.
total meas. in this course 89 elev. (?) 6650 — → elev taken from U.S.G.S. map.

Course 2.

Across flat near northern most snow gage. SW. to NE between large 4' blazed fir standing alone at base of hill and 16" blazed tamarack.

Measurements every 50' beginning 75' from large fir. total meas. 6

Sterling Lake

4/4/20

Course #1

Meas.	Depth	Core	W.C.
1	110 -2	69 -2	59.7
2	93		
re-M	99	90	41.0
1	99	90.5	40.8
2	100	94	41.0
3	102	92.5	44.6
4	100	94.5	41.2
5	103.5	99.5	42.7
6	99	94	43.0
7	105 -0.5		41.7

southern part

slushy

101.7
9)915.0

9) 395.70
43.97

Sterling Lake

Course 2

1	111 −1.5	106.5 −1.5	43.1
2	98	96	37.4
3	1035 −6.5	96.5 −0.5	42.7
4	100.	95	41.9
5	97 −0.5	90.	40.4
6	87		
rem.	87.5	83	
"	87.5	80.5	36.0

99.1

6 ⟌ 594.5

6) 241.50

40,25

av. 42.11

4/4/20.

99.1 | 40.25

101.7 | 43.97

200.8 | 84.22

100.4 | 42.11

Meadow Lake

In open flat about 2000 feet N.W. of Meadow Lake. Elev 7300' (*)

Course 1.

From 30" cone bare tamarack blazed S.E.-ly to blazed tamarack. Measurements every 50' beginning 50' from last bare tamarack. Total meas. 7

Course 2.

From blazed tamarack 100' N.E. of most easterly snow gage across flat to blazed tamarack. Measurements every 50' beginning 50' from blazed tamarack at N.E. end of course No of Meas. 8.

4/5/20.

(*) Elev taken from U.S.G.S. Map.

Meadow Lake

April 5, 1920

Course 2.

Ed Rooney
Harry G. Armstrong

Meas	Depth	Core	W.C.
1	97.°	97.°	42.°
re-M.	95.° -1.5	88.° -1.5	39.8
2	95.°	74.°	38.6
3	101.5	96.°	41.9
4	111.° -0.5	107.°	43.8
5	114.° -0.5	91.° -0.5	39.°
6	109.°	99.5	40.8
7	106.5	102.5	42.1
8	105	101	43.5

8)834.5 = 104.3

8) 331.70 = 41.46

av. 41.19

Meadow Lake-

Course I.

Meas.	Depth	Corr.	W.C.
1	91.5 -1.0	87 ~~-1.0~~	37.6
2	105 -1.5	93.5 -1.5	44.5
3	102	93	40.0
4	104 -1.5	92.5 -1.5	41.1
5	96 -2.5	95.7 -2.5	37.2
5 Repeat	95 -1.5	94.2 -1.5	37.6
6	100 -1.0	74 -1.0	39.8
6 Repeat	110 -0.5	85.5 -0.5	41.6
7	109 -1.5	104 -1.5	44.0

4/5/20

99.9
7|6990

7) 286.40
40.91

50' fr. N. Westerly tree

Then ca 50'

99.9
104.3
956

41.19
40.91
821.0

41.05

End 1.05 PM

+81.5 from #7 to end of Course

Mail Box Flat

Meas.	Depth	Core	W.C.
1	94.5 -2.5	72.5 -2.5	42.7
2	89.0	84	37.5
3	75		
re-M.	76	67	34.0
4	90 -2	86.5 -2.0	39.0

4)345.0 86.25

4)153.20
38.30

April 3/1920
E. d'Rosny
Harry A. Armstrong