

Barrett, Dan Notes

Contours

B

21

W4

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

MICROFILMED

AM 6 1965

MINUTES	LKS.	MINUTES	LKS.	MINUTES	LKS.
1	2 1/3	21	49	41	95 2/3
2	4 2/3	22	51 1/3	42	98
3	7	23	53 2/3	43	100 1/3
4	9 1/3	24	56	44	102 2/3
5	11 2/3	25	58 1/3	45	105
6	14	26	60 2/3	46	107 1/3
7	16 1/3	27	63	47	109 2/3
8	18 2/3	28	65 1/3	48	112
9	21	29	67 2/3	49	114 1/3
10	23 1/3	30	70	50	116 2/3
11	25 2/3	31	72 1/3	51	119
12	28	32	74 2/3	52	121 1/3
13	30 1/3	33	77	53	123 2/3
14	32 2/3	34	79 1/3	54	126
15	35	35	81 2/3	55	128 1/3
16	37 1/3	36	84	56	130 2/3
17	39 2/3	37	86 1/3	57	133
18	42	38	88 2/3	58	135 1/3
19	44 1/3	39	91	59	137 2/3
20	46 2/3	40	93 1/3	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						
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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Pgs Barrett Dam Notes

1-17	Contours Barrett dam E. Side	80 = 15.9
19-35	" " " W "	5.94
37-38	Connection with axis of present dam and axis of proposed new dam site lower down stream (also see Book 79 pp 39)	6.02 5.82 5.20 5.21
40-49	Contours on proposed new dam site (See plan page)	4.86 4.84 4.48 3.86 2.70 2.58 1.46 1.73 2.14 2.74 2.93 3.54 3.99 4.67

167
West Side
16/97

16/97

1

Contours on Barrett's Dam

180' Contours East

Sta.	Def.	Rod.	Dist.
Inst A	180' Contours	West side	
0		6.06	607.
1	3° 30' L	5.98	599.
2	10.36 L	6.18	619.
3	18.03 L	6.80	681.
4	26.06 L	6.79	680.
5	32.08 L	7.14	715.
6	39.53 L	7.16	717.
7	45.24 L	7.52	753.
8	46.35 L	8.14	815.
9	49.05 L	9.30	931.
10	56.25 L	9.47	948.
1	27.47 R	10.55	1056.
2	24.34 R	10.27	1028.
3	17.41 R	9.86	987.
4	15.38 R	9.26	927.
5	12.40 R	9.07	908.
6	11.34 R	8.46	847.
7	8.55 R	8.01	802.
8	2.34 R	7.33	734.

Side Transit set on 180' Contours West Side

Trans. on 180' Contours E. Side

Dist.	Notes	Dist.
	on West side	
	From 170 to 180 = 15.9	
		5.94
		6.02
		5.82
		5.20
	Solid Rock.	5.21
		4.86
		4.84
	on Big Rocks. 25' High	4.48
		3.86
		2.70
	Solid Rock.	2.53
	Earth + Decomposed R.	1.45
		1.72
	Boulders + " R.	2.14
	E. " " R.	2.74
	E. " " R.	2.93
	E. " " R.	3.54
	E. " " R.	3.99
	Earth " "	4.67

3/16/97

190' Contour

- East Side

159

deduct from 12' Pt.

W Side 180 + 190 = 167

Sta.	Def.	Pod	Dist.		
Inst. A	on West Side at 190' Contour			F.S. on 190' Contour E.S.	
1	54.41 L	9.62	963.	Solid Rock	2.38
2	48.00 L	9.49	950.	Boulders & Earth	2.51
3	44.50 L	8.35	836.	"	3.65
4	43.05 L	7.90	791.	Behind Big Boulder	4.10
5	38.24 L	7.44	745.	Boulders & earth	4.56
6	31.44 L	7.40	741.	"	4.60
7	24.15 L	7.02	703.	Solid Rock & Earth	4.98
8	16.52 L	7.09	710.	W. Foot of Solid R.	4.91
9	9.28 L	6.48	649.	Earth slope	5.82
10	2.26 L	6.33	634.	"	5.67
0	" L	6.86	687.	"	5.14
1	0.56 R.	7.41	742.	Earth & Boulders	4.59
2	6.36 R.	8.15	816.	Boulders	3.85
3	9.45 R	8.41	842.	Earth Boulders & decomposed Rock	3.59
4	11.34 R.	9.35	936.	Boulders & decomposed Rock	2.65
5	14.20 R.	9.57	958.	"	2.43
6	15.83 R.	10.54	1055.	"	6.73
7	23.55 R	10.65	1066.	"	1.35
8	26.42 R	10.93	1094.	"	1.07

0.27 (1/2)

3/16/07

190 to 200 W = 25.9 W. side

Sta.	Def.	Rod				
Dist Δ					Dist Set at 200 Contour W. side + 7.5. 200 E. S. side	
0	-----	7.79	780.		Earth + decomposed R.	4.21
1	1° 50' L	6.96	699.		" "	5.04
2	4° 56' L	6.84	685.		" "	5.16
3	9° 50' L	7.01	702		" + Boulders	4.99
4	14° 33' L	7.46	747.		Boulders	4.54
5	22° 00' L	7.41	742.		Solid Rock a little earth on top	4.59
6	27° 35' L	7.65	766.		Earth + Solid Rock cropping up.	4.35
7	33° 54' L	7.65	766.		" + Boulders	4.35
8	38° 47' L	7.92	793.		" + "	4.08
9	41° 12' L	8.24	825.		" + "	3.76
10	43° 00' L	8.85	886.		" " + Solid R.	3.15
11	46° 05' L	9.21	922.		Solid Rock.	2.19
12	52° 40' L	9.27	928.		" "	2.13
13	54° 00' L	10.07	1008.		" "	1.93
1	25° 57' R	1190	1191		Earth + decomposed R.	5.95 (1/2) 6.05
2	26° 20' R	1130	1131		" "	5.65 (1/2) 6.35
3	26° 21' R	1114	1115		" "	5.57 (1/2) 6.43
4	14° 17' R	1114	1115		Big Boulders + Jolly	(1/2) 6.43
5	13° 05' R	1004	1005		" " "	1.96
6	10° 49' R	980	981		" " "	2.20
7	8° 50' R	908	909		" " "	2.92
8	7° 21' R	879	880		" " "	3.21
9	5° 35' R	837	838		" " "	3.63

3/14/97

Reduction from 190 to 200

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210 Contour East Side

From 200 to 210 W-25.2

March 18, 1897

deduct from 12

Sta	Dip	Rod.	
Inst Δ			
1	51.43 L	10.30	
2	48.14 L	10.08	
3	48.56 L	10.00	
4	38.53 L	8.41	
5	33.42 L	8.04	
6	26.18 L	7.98	
7	19.52 L	7.80	
8	14.04 L	7.80	
9	10.41 L	7.56	
10	4.30 L	7.24	
0	----- L	8.20	
1	4.26 R	8.67	868
2	7.35 R	9.26	927
3	10.10 R	10.27	1028
4	12.05 R	10.33	1034
5	13.24 R	11.35	1136
6	17.27 R	11.55	1156
7	22.0 R	11.63	1164
8	24.50 R	12.26	1227

Inst	at 210 Contour W. side + 7.5. 210 ES.	
	Solid R	1.70
	" " "	1.92
	" In gully. (1/2)	7.00
	Large Boulders + E.	3.59
	" + " Return 2 large Boulders	3.96
	" + "	4.02
	E. + Solid Rock	4.20
	E + " "	4.20
	E and + Loose R. at foot of ledge	4.44
	" + decomposed R.	4.76
	Loose R. + decomposed R.	3.80
	" + "	3.33
	" + "	2.74
	" + "	1.73
	" + "	1.67
	Big Boulders " In gully.	0.65
	Earth + decomp R	0.45
	" "	0.37
	" " 6.13 (1/2)	5.87

Sta	Def	Rod.
Inst A		
0	-----	8.65
1	3° 43' L	8.00
2	6° 04' L	7.86
3	11° 40' L	8.28
4	15° 28' L	8.26
5	18° 56' L	8.30
6	22° 30' L	8.52
7	25° 37' L	8.42
8	28° 35' L	8.55
9	34° 56' L	8.56
10	37° 40' L	8.87
11	43° 35' L	10.36
12	46° 11' L	10.36
13	50° 0' L	10.54
1	24° 18' R	13.06
2	22° 30' R	12.04
3	17° 50' R	11.84
4	12° 28' R	11.64
5	11° 10' R	10.72
6	6° 35' R	9.80
7	2° 00' R	8.99

1307
1205
1185
1165
1073
981
900

Inst set on 220 Contour W.S. & 7.5 on 220 E.S.

		3.35
Earth + decomposed R	Foot of ledge	4.00
"	"	4.14
Ledge of solid R		3.72
Earth + Boulders		3.74
"	"	3.70
"	"	3.48
"	"	3.58
"	"	3.45
"	"	3.44
"	"	3.13
Large " in gully	5.18 1/2	6.82
Solid Rock		1.64
"	"	1.46
Earth + decomposed R.	6.53 (1/2)	5.07
"	6.02 (1/2)	5.98
"	5.92 1/2	6.08
Boulders	5.82 1/2	6.18
"	5.36 1/2	6.64
"	"	2.20
	4.52	7.48
	9.04	8.99

230' Contour E. Side

Sta	Def.	Rod	
Instr	0		1
1	49° 20' L	1085	
2	45° 25' L	1065	
3	42° 00' L	1084	
4	35° 20' L	890	
5	31° 15' L	868	
6	25° 43' L	868	
7	22° 03' L	872	
8	17° 30' L	857	
9	13° 33' L	856	
10	5° 54' L	814	
0		904	
1	5° 06' R.	973	974
2	9° 47' R	1093	1094
3	11° 17' R	1148	1149
4	12° 08' R	1230	1231
5	17° 42' R	1222	1223
6	21° 30' R.	1236	1236
7	23° 35' R.	1328	1329

220 to 230 W. = 15.9

Inst at 230 Contour W. S. 7 to S. E. S.

Solid Rock	1.15
" "	1.35
" " in gully	1.16
Earth - Boulders + Decomposed R.	3.10
" " " New large boulders	3.35
" " " above " "	3.32
" " "	3.28
" " "	3.43
" " " above Solid	3.44
Foot of Ledge of S. R.	3.86
Decomposed R. + Boulders -	2.96
Decomp R. + Boulders - S. R. close by -	2.27
" " "	1.07
" " " North side gully	0.55
" " " South " " 615 (1/2)	5.85
" + E. 611 (1/2)	5.89
" + E. 618 1/2	5.82
" + E. 664 1/2	5.36

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240

Contours E. Side

From 230 to 240 W.S. = 21.4

7/11/1907

Sta	Dip	Rd.	
Instr A			
1	22° 28' R.	1358	1359
2	20° 42' R.	1274	1275
3	14° 34' R.	1256	1257
4	10° 57' R.	1258	1259
5	9° 55' R.	1146	1147
6	7° 54' R.	1122	1123
7	5° 12' R.	1070	1071
0	---	934	935
1	4° 35' L	866	
2	8° 57' L	857	
3	15° 26' L	906	
4	19° 00' L	883	
5	23° 47' L	910	
6	27° 02' L	910	
7	31° 34' L	896	
8	34° 02' L	922	
9	41° 12' L	1117	
10	44° 30' L	1159	
11	47° 20' L	1144	

Instr at 240' Contour W.S. + 7.5 on E. Side

Earth + ore	679	521
" "	637	563
" "	620	572
Boulders + " in gully.	629	571
" "	573	627
" "	561	639
" " Near big boulder.	535	665
" Earth + "	467	733
Solid ledge.		334
" "		343
Earth + decomposed R.		294
" "		317
" "		290
" " S.P. Cropping.		290
" "		304
" "		278
Solid R in gully.		083
" "		041
" "		056

250' Contour

List A

1	45°.15' L	1125	
2	39°.32' L	1136	
3	38°.00' L	1070	
4	30°.33' L	939	
5	24°.15' L	937	
6	21°.28' L	944	
7	17°.18' L	929	
8	14°.40' L	942	
9	8°.58' L	888	
10	4°.42' L	895	
11	3°.40' L	934	
0		984	
1	2°.00' R.?	1078	1079
2	4°.00' R	1118	1119
3	8°.18' R	1165	1166
4	9°.36' R	1212	1213
5	10°.24' R	1304	1305
6	14°.12' R	1292	1293
7	19°.50' R	1324	1325
8	21°.33' R.	1374	1375

E. Side

From 240-250 W.S. = 24.0

List set 250' Contour W.S. + 7.5m E. Side

Some Earth on top of S.R.		0.75
Boulders + S.R.	fully	0.64
on smooth Solid Rock		1.30
Earth + decomposed R.		2.61
" " "		2.63
" " "		2.56
" " "		2.71
" " "		2.58
Solid ledge		3.12
" "		3.05
Earth + decomp. R. + Boulders		2.66
" " + "		2.18
Boulders + "		1.22
" " edge of fully	5.59	6.41
" " "		0.35
" " edge of fully W.S.	6.06 (1/2)	5.94
" " + S.R.	" " S.S.	6.52
Earth + decomp. R.		6.46
		5.52
		6.62
		5.38
		6.87
		5.13

260 Contour E Side

Sta	Dip	Rvd.		
Just A				
1	20° 28' R	1408	1409	
2	19° 0' R	1352	1353	
3	14° 43' R	1368	1368	
4	11° 00' R.	1332	1333	
5	9° 08' R.	1340	1341	
6	8° 30' R.	1236	1237	
7	7° 14' R.	1214	1215	
8	3° 18' R.	1160	1161	
9	2° 18' R.	1090	1091	
0	---	1035	1036	
1	3° 24' L	9.90		
2	5° 08' L	9.33		
3	8° 00' L	9.42		
4	14° 14' L	9.89		
5	16° 48' L	9.75		
6	20° 26' L	9.90		
7	24° 10' L	9.80		
8	29° 55' L	9.79		
9	34° 13' L	1065		
10	36° 28' L	11.00		
11	37° 41' L	1180		
12	43.20 L	1168		
13	44° 55' L	1174		

7m 250-260 w.s. = 28.7

Just S of 260 w.s. + 7.5 on E.S.

Bank + decomposed R.	7.04 (1/2)	4.96
"	6.76	5.24
"	6.84	5.16
Large boulders + "	6.66	5.34
"	S.S. of gully 6.70	5.30
"	N.S. 6.18	5.82
"	6.09	5.93
"	ingully 5.80	6.20
"	5.45	6.55
	1035 525 675	165
at S.S. of Solid ledge		2.10
on Solid ledge		2.67
" some earth		2.58
Boulders + decomposed R. in gully		2.11
"		2.25
" in small gully		2.10
"		2.20
" on point of Ridge		2.21
"		1.35
Among big boulders		1.02
" " S.R. in gully 5.90 (1/2)		6.10
S.R. with some earth on top	5.84	6.16
"	5.87	6.13

Sta	Def.	Rod.	
Instr A			
1	44° 15' L	1272	
2	42° 38' L	1210	
3	36° 45' L	1218	
4	35° 35' L	1148	
5	31° 35' L	1072	
6	28° 35' L	1020	
7	23° 10' L	1012	
8	20° 20' L	1021	
9	16° 55' L	1008	
10	14° 00' L	1025	
11	7° 30' L	984	
12	5° 10' L	927	
13	3° 25' L	1029	
0	- - - L	1086	
1	2° 05' R	1130	1131
2	2° 35' R	1194	1195
3	7° 02' R	1238	1239
4	7° 50' R	1270	1271
5	8° 50' R	1374	1375
6	10° 50' R	1368	1369
7	14° 25' R	1398	1399
8	18° 32' R	1412	1413
9	20° 40' R	1478	1479

Instrument Set 270' Contour W.S. + 7.5' on ES.			
Solid R.	some earth on top	6.36	564
Solid R.	some earth on top	6.05	595
"	In gully	6.09	591
Big boulders + S. R.		5.74	626
"	+ decomposed R.	5.36	664
Earth +	"	5.10	690
"	"	5.06	694
"	" near big boulder		1.79
"	decomposed R.	5.04	696
"	Boulders + " in gully		1.75
Solid ledge with some stripping			2.16
"	"		2.23
Boulders + decomp. R.			1.71
"	" on large boulder		1.14
Boulders + decomp. R.		5.65	635
"	" in gully	5.97	603
"	"	6.19	581
"	N.E. of gully	6.35	565
"	S. S. "	6.87	613
"	"	6.84	516
Earth +	"	6.99	501
"	"	7.06	494
"	"	7.39	461

Sta	Dip	Roa
Dist Δ		
1	19° 20' R	1518
2	17° 45' R	1450
Dist x		
3	14° 06' R	1474
4	10° 15' R	1412
5	8° 08' R	1410
6	6° 36' R	1280
7	2° 08' R	1220
0	---	1120 (?)
1	3° 43' L	1060
2	5° 44' L	1016
3	7° 45' L	1025
4	13° 30' L	1061
5	16° 56' L	1059
6	19° 23' L	1064
7	22° 55' L	1045
8	27° 24' L	1059
9	29° 25' L	1084
10	33° 30' L	1165
11	36° 50' L	1252
12	41° 23' L	1234
13	42° 28' L	1260

Just abt 280' Contour W.S. + 7.S. E.S.

Earth + decomposed R	7.59	4.41
"	7.25	4.75
"	7.37	4.63
Boulders	7.06	4.94
" + " S.S. of gully	7.05	4.95
" + "	6.40	5.60
"	6.10	5.90
"	5.60	6.40
Boulders	5.30	6.70
Solid ledge some cobb		1.84
Boulders + decomp. R		1.75
" " N.S. gully		1.39
" " near big boulder		1.41
" " " " in small gully		1.36
Earth + decomposed R		1.55
" "		1.41
" "		1.16
On ledge of S.R. or big boulder		0.35
Big boulder + Solid R in gully	6.26	5.74
Solid ledge some stripping	6.17	5.83
" " " "	6.30	5.70

300' Contour E Side

Sta	Def.	Rod.		
Instr B				
1	17.11 R.	1594	1595	
2	16.30 R.	1550	1557	
3	13.02 R.	1528	1528	
4	9.38 R.	1498	1499	
5	6.43 R.	1482	1483	
6	6.13 R.	1470	1470	
7	5.23 R.	1350	1350	
8	0.33 R.	1288	1289	
0	---	1228	1229	
22/3/97				
1	3.00 L	1132		
2	6.46 L	1108		
3	9.26 L	1108		
4	12.18 L	1147		
5	14.46 L	1127		
6	18.41 L	1143		
7	21.57 L	1134		
8	25.25 L	1119		
9	30.30 L	1224		
10	35.16 L	1346		
11	37.56 L	1290		
12	39.06 L	1340		

290 - 300 = 27.7

Instr	Def.	Rod.		
Instr set 300' Contour W.S. + 7.5 m ES.				
Earth & decomposed R.		7.97	4.03	
" "		7.75	4.25	
" "		7.64	4.36	
Boulders & "		7.49	4.51	
" + S.R. S.S. of fully		7.41	4.59	
" " N.S. "		7.35	4.65	
" " + dump R.		6.75	5.25	
" " S.S. of fully		6.44	5.56	
" "		6.14	5.86	
Boulders T.S. R.		5.66	6.34	
" "		5.54	6.46	
Earth Boulders & decomp R.		5.54	6.46	
" " in fully			6.53	
" "			6.73	
" "			6.87	
" "			6.66	
" "			6.81	
Big boulders + Solid R.		6.12	5.88	
" " in fully		6.73	5.27	
" "		6.45	5.55	
" "		6.70	5.30	

Sta	Dip.	Red.
A		
1	37° 40' L	1372
2	37° 0' L	1358
3	34° 34' L	1374
4	33° 05' L	1352
5	30° 14' L	1260
6	24° 50' L	1164
7	21° 40' L	1172
8	18° 18' L	1185
9	14° 37' L	1178
10	12° 23' L	1186
11	6° 50' L	1146
12	5° 10' L	1180
13	2° 20' L	1236
0	- - L	1334
1	3° 08' R	1372
2	5° 00' R	1410
3	6° 00' R.	1518
4	11° 40' R.	1550
5	12° 42' R.	1560
6	15° 30' R.	1592
7	16° 07' R.	1620

Intersect 310 W.S. + 7.S. on E.S.

solid Rock	6.86	5.14
" " Ledge point	6.79	5.21
" " in Gully	6.87	5.18
" "	6.76	5.24
Boulders & " "	6.30	5.70
East + decomp. R.		0.36
" " under large boulder S.R.		0.28
Boulders & " in small gully		0.15
" "		0.22
" " in small gully	5.93	6.07
Solid Ledge beneath stepping	5.73	6.27
" " " "	5.90	6.10
Boulders & decomp. R.	6.18	5.82
" " on East side of gully	6.67	5.33
" "	6.86	5.14
" "	7.05	4.95
" " on S.S. of gully	7.59	4.41
" "	7.75	4.25
" "	7.80	4.20
" "	7.96	4.04
" "	8.10	3.90

1373

1411

1579

1551

1561

1593

1621

Sta	Def.	Rod
Instr B		
1	15° 06' R	1654
2	14° 30' R	1636
3	11° 40' R	1602
4	7° 54' R	1582
5	5° 15' R	1562
6	4° 26' R	1446
7	2° 48' R.	1404
0	- - -	1372
1	0° 58' L	1366
2	1° 17' L	1320
3	4° 22' L	1228
4	7° 35' L	1188
5	12° 38' L	1218
6	14° 43' L	1204
7	17° 48' L	1224
8	20° 30' L	1214
9	23° 54' L	1202
10	29° 05' L	1290
11	33° 57' L	1404
12	36° 06' L	1392
13	37° 40' L	1454

Instr at 320' Contour r.s. + 7.5. E.S.

Boulders & decomp. R	8.27	3.73
" "	8.18	3.82
" "	8.01	3.99
Large "	7.91	4.09
" " in pulley	7.81	4.19
" "	7.23	4.77
" "	7.02	4.98
" "	6.86	5.14
" " in pulley	6.83	5.17
" "	6.65	5.35
" + Solid Ridge	6.14	5.86
" decomposed R	5.94	6.06
" "	6.09	5.91
" "	6.02	5.98
" "	6.12	5.88
Edge of R sticks up.	6.07	5.93
decomposed R boulders	6.01	5.99
large boulders	6.45	5.55
Solid Rock in pulley	7.02	4.98
" "	6.96	5.04
" "	7.27	4.73

Sta	Def	Rod	
Instr	Δ		
1	36° 35' L	1500	
2	34° 36' L	1448	
3	32° 45' L	1450	
4	30° 25' L	1400	
5	27° 20' L	1326	
6	22° 57' L	1240	
7	20° 05' L	1228	
8	16° 58' L	1262	
9	13° 15' L	1266	
10	11° 08' L	1280	
11	7° 22' L	1246	
12	5° 04' L	1248	
13	1° 40' L	1364	
14	1° 15' L	1410	
0	- - -	1420	
1	3° 00' R.	1450	1451
2	4° 10' R.	1472	1472
3	4° 48' R.	1600	1601
4	8° 02' R.	1608	1608
5	11° 32' R.	1654	1654
6	14° 05' R.	1674	1675
7	14° 35' R.	1728	1729

Instr 330' Contour W.S. + 7.5 m E.S.

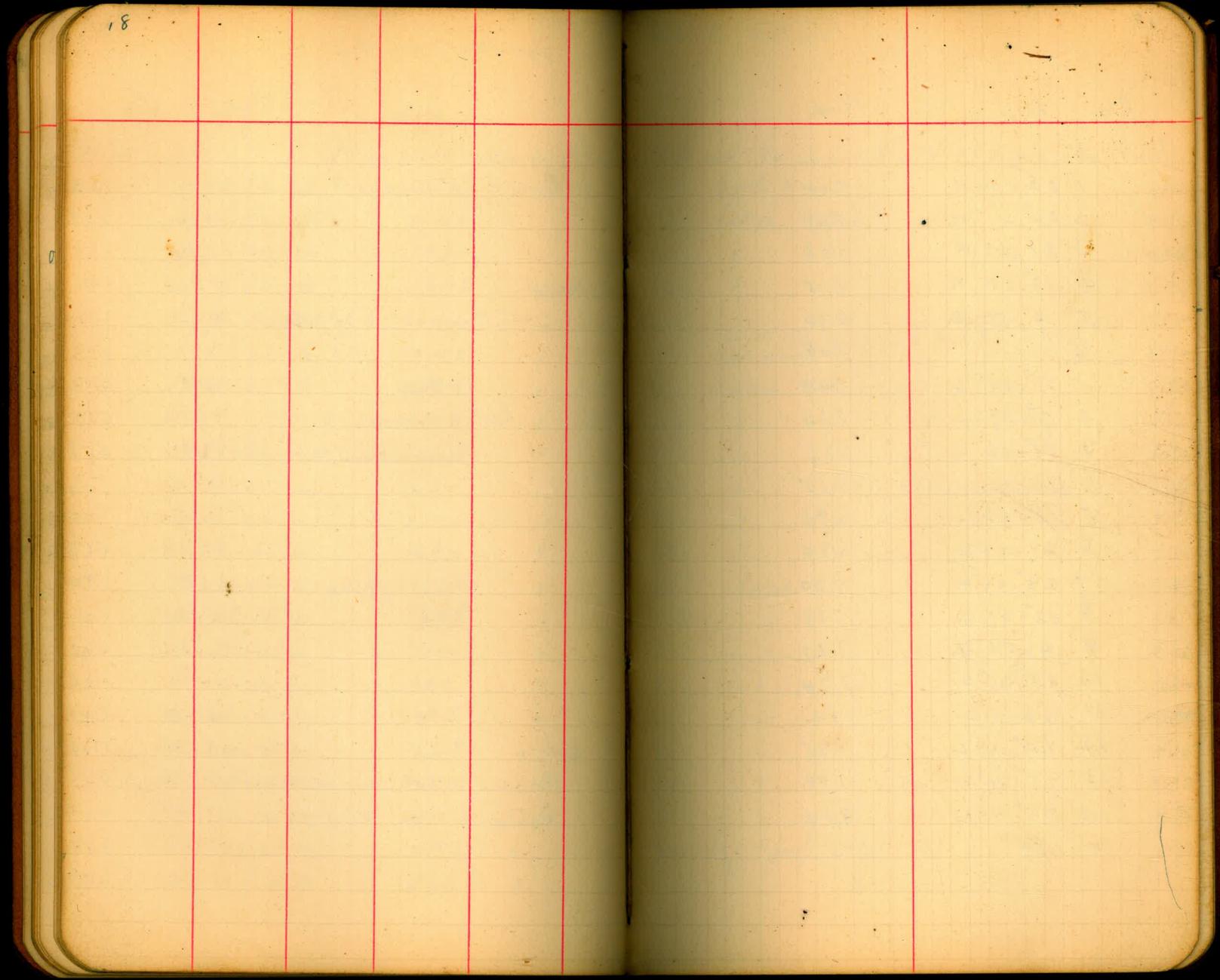
Solid ledge	9.50	4.50
" "	7.24	4.76
" " in gully	7.25	4.75
" "	7.00	5.00
Boulders + decomposed R.	6.63	5.37
" R.	6.20	5.80
" to look like Solid ledge	6.74	5.86
" decomposed R.	6.31	5.69
" "	6.33	5.66
" in gully	6.40	5.60
" slope about 20° south	6.23	5.77
" " " } between }	6.24	5.76
" " " N.S. gully	6.82	5.18
" " " S.S. "	7.05	4.95
Boulders + decomposed R.	7.10	4.90
" "	7.25	4.75
" with Solid Rock capping	7.36	4.64
" " S.S. gully	8.00	4.00
Earth + decomposed R.	8.04	3.96
" "	8.27	3.73
" "	8.37	3.63
" "	8.64	3.36

Sta	Dip	Rod
Instr A		
1	13.38 R	1754
2	13.02 R	1744
3	10.47 R	1690
4	7.0 R	1672
5	4.26 R	1644
6	3.28 R	1540
7	2.27 R	1498
0		1462
1	1.43 L	1458
2	2.20 L	1400
3	5.40 L	1310
4	8.00 L	1296
5	10.56 L	1326
6	12.55 L	1308
7	15.25 L	1306
8	17.40 L	1310
9	21.00 L	1308
10	24.30 L	1328
11	29.0 L	1410
12	32.0 L	1506
13	33.25 L	1492
14	35.0 L	1546

320-340 ws = 38.7

Instr at 340 ws. + 7.5 in ES.

Entr & decompos R	8.77	3.28
" "	8.72	3.28
" "	8.45	3.55
Boulders "	8.36	3.64
" + S. Road " S.S. of gully	8.22	3.78
" " " N.S. "	7.70	4.30
" " + Entr	7.49	4.57
" Entr & decompos R.	7.31	4.69
" + decompos R.	7.29	4.72
" "	7.00	5.00
" "	6.55	5.40
" "	6.48	5.62
" " in gully	6.68	5.32
" "	6.54	5.46
" "	6.58	5.47
" "	6.55	5.45
" "	6.54	5.46
Entr "	6.64	5.36
Boulders + S.R. near big boulder	7.05	4.95
Solid R in gully	7.53	4.47
" "	7.46	4.54
" "	7.73	4.27



18

D

Sta	dip	Rod		
Inst A				
1	28° 00' R.	9.14	915	
2	24° 41' R.	7.94	795	
3	21° 26' R.	7.06	707	
4	13° 20' R.	6.75	676	
5	9° 50' R.	6.90	691	
Q	-	6.08	609	
1	4° 25' L	6.07	608	
2	7° 37' L	6.34	635	
3	11° 42' L	6.26	627	
4	16° 40' L	6.65	666	
5	18° 00' L	6.93	694	
6	21° 00' L	6.89	690	
7	28° 46' L	7.20	721	
8	32° 31' L	7.39	740	
9	41° 53' L	7.37	738	
10	55° 22' L	7.74	775	
11	62° 00' L	7.74	775	
12	69° 50' L	7.85	786	
13	71° 30' L	7.98	799	
14	76° 40' L	8.04	808	
15	89°			

Inst set 180 Contour E.S. + 7.5 hrs.

Earth + d	2.86
Ledge Rock	4.06
" "	4.94
" "	5.25
" " in gutter	5.10
- earth + decomposed R. below - Red rock.	5.92
Random decomposed R.	5.98
" " " in gutter	5.66
" " " "	5.74
" " S.R. closely in gutter	5.35
" " " " in gutter	5.07
" " " "	5.11
Solid R.	4.80
" "	4.61
" "	4.63
" "	4.26
" "	4.15
" "	4.02
" "	3.96

from 14-15 perp cliff

190' Contour N. Side

L = down stream
R = up "

Sta	Dip		Red	
Instr Δ				
1	73° 0	L	8.38	839
2	70° 45	L	8.27	828
3	64° 00	L	8.16	819
4	57° 06	L	8.19	820
5	51° 30	L	8.30	831
6	45° 45	L	8.05	806
7	37° 50	L	8.02	803
8	30° 05	L	8.05	806
9	20° 28	L	7.75	776
10	15° 55	L	7.64	765
* 11	9° 38	L	7.04	705
12	6° 45	L	7.12	713
0	- - -		6.86	687
22/3/97				
1	5° 24	R	7.26	
2	8° 58	R	7.68	
3	13° 40	R	7.52	
4	18° 42	R	7.85	
5	22° 12	R	8.65	
6	23° 28	R	9.36	
7	23° 28	R	9.68	

180-190 E.S. =

Insect 190' Contour E. Side + 7.5 w.s.

Solis R.	362
" "	3.73
" "	3.84
" "	3.81
" "	3.70
" "	3.90
" "	3.98
" "	3.95
" " little strapping	4.25
" " little strapping	4.36
boulders + decomposed R	4.96
" " in small pulley	4.88
" "	5.14
" "	4.74
" "	4.32
" "	4.48
" "	4.15
" "	3.35
" "	2.64
" " over pasture hill	4.84
	7.16

Sta	Dip	Rod
-----	-----	-----

A

1 19°48' R 1006

2 19°08' R 9.45

3 15°52' R 8.67

4 12°43' R 8.44

5 8°43' R 8.62

6 5°30' R 8.32

0 - - - 7.74

1 2°50' L 7.72

2 6°20' L 8.00

3 8°28' L 7.90

4 11°05' L 7.97

5 14°36' L 8.46

6 18°20' L 8.55

7 23°0' L 8.64

8 27°20' L 8.80

9 32°15' L 8.61

10 36°43' L 8.60

11 41°50' L 8.74

12 47°33' L 8.78

13 54°44' L 8.67

14 59°13' L 8.57

15 66°07' L 8.56

773

801

791

798

847

856

865

881

862

861

875

879

868

858

857

Inst. set 200' Contour E.S. & 7.S. ~ 11.S.

Earth + decomposed R 5.03 6.97

" " 2.55

" " 3.33

" " 3.56

Solid R crops up in valley 3.38

Earth + decomp R 3.68

" " 4.26

" " 4.28

" " in valley 4.00

" " 4.10

Solid rock crops up. 4.03

earth + decomp R - S.R. close by in valley 3.34

" " Solid R close by 3.45

Solid ledge 3.36

" " 440 7.60

" " 3.39

" " slope is 2' low 3.40

" " 3.26

" " 3.22

" " 3.33

" " 3.43

" " 4.28 7.72

Sta	Dip	Rod	
Inst A			
1	65° 10' L	8.87	888
2	59° 0' L	8.83	884
3	54° 46' L	8.86	887
4	52° 20' L	8.79	880
5	46° 38' L	8.97	898
6	40° 25' L	8.94	895
7	37° 41' L	8.75	876
8	32° 40' L	8.82	883
---	25° 30' L		
9	23° 08' L	8.89	890
10	17° 51' L	9.16	917
11	14° 05' L	8.79	880
12	10° 0' L	8.32	833
13	4° 50' L	8.46	847
14	2° 35' L	8.14	815
0	---	8.19	
1	3° 33' R	8.38	
2	8° 00' R	9.03	
3	13° 48' R	8.92	
4	16° 45' R	9.49	
5	17° 45' R	10.10	

Inst at 210 Contour E.S. & 7.5. West Side

Ledge Rock.	3.13
" "	3.17
" "	3.14
" " between big boulders * ^{see page 23}	3.21
" "	3.03
" "	3.06
" "	3.25
" "	3.18
Contour dips to about 16° or so	3.11
	3.11
some Earth & decomposed R on top of S.R.	2.84
" " " on top of S.R. in Small gully	3.21
" " " " " " " " " " " "	3.68
" " " " " " " " " " " "	3.74
" " " " " " " " " " " "	3.86
" " " " " " " " " " " "	3.81
Earth & decomposed R.	3.62
" " " " " " " " " " " "	2.97
" " " " " " " " " " " "	3.08
" " " " " " " " " " " "	2.51
Over point of hill 505	6.95

Sta	Def	Rod -	
1	16° 00' R.	10.00	1001
2	15° 23' R	9.69	970
3	12° 55' R	9.25	926
4	7° 00' R	9.36	937
5	4° 40' R.	8.92	893
0	- - -	8.59	860
1	3° 20' L	8.55	856
2	5° 10' L	8.76	877
3	8° 08' L	8.66	867
4	12° 26' L	9.09	910
5	15° 20' L	9.15	916
6	22° 00' L	9.07	908
<u>Omit</u> 7	28° 44' L	8.52	<u>Omit</u> 853
8	32° 35' L	9.00	901
9	41° 26' L	9.21	932
10	44° 47' L	9.17	918
11	48° 25' L	9.15	916
12	51° 20' L	8.87	888
13	55° 23' L	9.02	903
14	58° 45' L	9.07	908
15	64° L(?)	8.91	892
16	68° 40' V	9.20	921

Deduct 220. Contour E.S. + 7.5. W. Side

Considerable work & dump R.	5.00	7.00
" " above S.R.		2.31
" " " "		2.75
Solid ledge above in gully		2.64
Boulders - Earth & dump R on surface		3.08
" " " "		3.41
" " " "		3.41
" " " " in gully		3.24
" " " " + S.R.		3.34
" " " " "		2.91
" " " " "		2.81
Ledge of S.R.		2.93
" " (deduct 10 ft) * in not page 4.26		7.74
" " "		3.00
" " "		2.69
" " "		2.83
" " (Stall in 2' low)		2.85
" " between boulders * ^{see page 22}		3.13
" " "		2.98
" " "		2.93
" " "		3.09
" " "		2.80

Sta.	Dip	Rod
Inst	73° 0'	South side of ledge of Rock.
1	65° 37' L	9.27 928
2	61° 10' L	9.16 917
3	56° 16' L	9.36 937
4	50° 45' L	9.21 922
5	40° 28' L	9.60 961
6	36° 43' L	9.34 935
7	28° 13' L	9.34 935
8	24° 02' L	9.55 956
9	18° 17' L	9.63 964
10	13° 10' L	9.58 959
11	8° 50' L	9.15 916
12	6° 05' L	9.10 911
13	4° 25' L	9.69 970
14	2° 30' L	9.08 909
0	---	9.04 905
1	3° 57' R.	9.26 927
2	6° 36' R.	9.68 969
3	12° 00' R.	9.66 967
4	14° 15' R.	10.26 1027
5	15° 15' R.	12.00 1201

Inst at 230' Contour E.S. + 7. S. in W.S.

Ledge of perpendicular Rock.	2.73
Ledge of Solid R.	2.84
" "	2.64
" "	2.79
" "	2.40
" "	2.66
" "	2.66
" "	2.45
" "	2.37
Sandstone decomposed R.	2.42
boulders + decomposed R. in surface	2.85
" "	2.90
" "	2.31
" "	2.92
" "	2.96
Solid Rock shows up -	2.74
East + decomposed R.	2.32
" " " in gully	2.34
" " "	512 6.87
" " "	600 6.00

(* near No. 7. 9220)

25

240' Contour

Sta.	Dip	Rock	
Δ			
1	14° 15'	R.	1238
2	12° 28'	R.	1074
3	11° 12'	R.	1034
4	9° 08'	R.	1002
5	4° 38'	R.	1005
6	3° 58'	R.	979
0			987
1	1° 52'	L	938
2	4° 33'	L	938
3	7° 20'	L	978
4	11° 45'	L	953
5	17° 0'	L	954
6	22° 32'	L	994
7	27° 45'	L	995
8	35° 48'	L	976
9	42° 40'	L	994
10	51° 25'	L	956
11	55° 12'	L	973
12	63° 10'	L	950
			956
			946

230' to 240' E.S. =

Sta.	Dip	Rock	
Just at 240' Contour E. side + 25' on W. side			
		boulders + decomposed R	S.R. crops up 6.19 581
"	"	"	in gully rising north 5.37 663
"	"	"	5.17 688
"	"	S.R. crops up	1.96
"	"	"	in gully 1.95
"	"	"	crops up 2.21
"	"	"	" 2.63
"	"	"	" 2.62
"	"	"	in gully 2.22
"	"	"	" 2.47
"	"	+ S.R. crops up	2.46
"	"	at foot of cliffs	2.06
"	"	Solid ledge	2.25
"	"	"	2.07
"	"	"	2.45
"	"	"	2.28
"	"	"	2.51
"	"	"	2.45
"	"	in small cove	2.55

26

250' Contour N.S.

Sta	Dip	Red.	
A			
1	62° 40' L	9.65	966
2	60° 22' L	9.52	953
3	49° 10' L	9.72	973
4	41° 22' L	10.00	1001
5	35° 56' L	9.89	990
6	28° 20' L	10.18	1019
7	22° 35' L	10.04	1005
8	16° 30' L	10.26	1027
9	11° 10' L	10.17	1018
10	6° 53' L	9.92	993
11	4° 26' L	10.13	1014
12	1° 30' L	9.79	980
0	- - -	9.84	985
1	3° 10' R	10.11	1012
2	4° 47' R	10.37	1038
3	9° 53' R	10.39	1040
4	10° 54' R	10.86	1087
5	12° 55' R	12.88	1289
6	13° 34' R	12.74	1275

240-210'

Substr. at 250' Contour E.S. + 7.5 on N.S.

Solid ledge in small cave	2.35
" " "	2.48
" " "	4.86 7.14
" " "	2.00
" " "	2.11
" " "	1.82
" " "	1.96
at foot of ledge	1.74
Boulders + s.R. in gully	1.83
Boulders + decomposed R.	2.08
" " in gully	1.87
" " "	2.21
" " "	2.16
" " "	1.89
" " in gully	1.63
" " "	1.61
" " "	1.14
" " "	6.19 5.81
" " "	6.37 5.63

Sta	Def	Red	
Δ			
1	11° 50' R	12.80	1281
2	9° 50' R	11.36	1137
3	8° 42' R	10.93	1094
4	4° 09' R	10.96	1097
5	2° 33' R	10.58	1059
0	---	10.37	1038
1	1° 16' L	10.40	1041
2	4° 48' L	10.65	1065
3	7° 00' L	10.43	1044
4	10° 38' L	10.61	1062
5	18° 25' L	10.60	1061
6	23° 50' L	10.42	1042
7	29° 18' L	10.47	1047
8	36° 18' L	10.29	1029
9	41° 36' L	10.24	1026
10	47° 37' L	10.07	1008
11	53° 00' L	9.94	995
12	58° 55' L	9.68	969
13	60° 36' L	9.84	985
14	64° 13' L	9.88	989

March 24th 1897

	E.S.	W.S.
Int. set at 260' Contour	E.S.	W.S.
Buildings and decomposed rock	6.40	5.60
"	5.68	4.32
"		1.07
"	in gully	1.01
"	"	1.42
"	"	1.63
"	"	1.60
"	in gully	1.35
"	"	1.57
"	"	1.39
"	"	1.40
Top of S.R. ledge		1.58
Buildings and Solid Rock Edges		1.53
"	"	1.71
"	"	1.76
"	"	1.93
"	"	2.06
"	"	2.32
"	"	2.16
on face of S.R. cliff		2.12

Instr	Δ			
1	10° 56'	R.	1318	
2	9° 22'	R.	1274	
3	7° 43'	R.	1140	
4	3° 40'	R.	1144	
5	2° 20'	R.	1118	
0	---		1087	1088
1	2° 51'	L	1097	1098
2	4° 54'	L	1112	1113
3	6° 36'	L	1094	1095
4	9° 41'	L	1108	1109
5	13° 56'	L	1111	1112
6	18° 08'	L	1102	1103
7	23° 50'	L	1092	1093
8	27° 30'	L	1090	1091
9	30° 55'	L	1071	1072
10	37° 55'	L	1080	1081
11	44° 17'	L	1044	1045
12	52° 26'	L	1027	1028
13	57° 26'	L	994	995

Instr cut at 270 E.S. + 7.5 in west side			
		east boulder & dump. R.	6.59 5.41
		"	6.37 5.63
		"	5.70 6.30
		" S. E of pulley 572	6.28
		"	5.59 6.41
		"	1.13
		"	1.03
		" in pulley	0.88
		"	1.06
		" SR, close by.	5.54 6.46
		" Fork of S.R.	0.89
		"	0.98
		"	1.08
		" Solid Leagu	5.45 6.55
		"	1.29
		"	1.20
		"	1.56
		"	1.73
		"	2.06

Sto	Def	Red	
1	8° 47' R	1310	
2	8° 18' R	1286	
3	6° 52' R	1200	
4	5° 54' R	1170	
5	3° 00' R	1158	
6	1° 30' R	1146	
0	-- --	1126	1127
1	1° 50' L	1130	1131
2	4° 42' L	1140	1148
3	7° 13' L	1108	1109
4	9° 55' L	1143	1144
5	13° 27' L	1147	1148
6	18° 20' L	1126	1127
7	20° 14' L	1134	1135
8	24° 10' L	1131	1132
9	26° 04' L	1107	1108
10	27° 13' L	1109	1110
11	30° 54' L	1090	1091
12	37° 02' L	1089	1090
13	41° 20' L	1080	1081
14	44° 58' L	1055	1056
15	49° 52' L	1050	1051
16	57° 04' L	1015	1016
17	60° 28' L	1039	1040

March 24th 1897

Start out at 280' Contour E.S.

F.S. on W.S.

Boulder and disorganized rock	6.55	545
"	6.43	557
"	6.00	600
"		0.30
"		0.32
"		0.54
"		0.74
"		0.70
"	in gully	0.60
"	"	0.92
"	in gully	0.57
"	"	0.53
"	"	0.74
"	"	0.66
Solid Rock ledges and Boulders		0.29
"	top of Solid Rock ledge	0.93
"	"	0.71
"	"	1.10
"	"	1.11
"	"	1.20
"	"	1.45
"	"	1.50
"	"	1.85
"	edge of Solid rock cliff	1.61

Sta	Def	Prod	
Δ			
1	59° 58' L	10.64	1065
2	55° 40' L	10.45	1046
3	49° 17' L	10.77	1078
4	43° 20' L	11.05	1106
5	37° 33' L	11.19	1120
6	31° 04' L	11.17	1118
7	27° 20' L	11.44	1145
8	24° 29' L	11.54	1155
9	20° 12' L	11.76	1177
10	15° 16' L	11.55	1156
11	12° 46' L	11.80	1181
12	6° 54' L	11.70	1171
XV	4° 46' L	12.14	1214
14	3° 08' L	11.76	1177
15	1° 23' L	11.76	1177
0	---	11.83	1184
1	2° 32' R	12.16	1217
2	3° 32' R	12.30	1231
3	6° 00' R	12.28	1229
4	7° 20' R	13.06	1307
5	7° 15' R	13.74	1375

March 24th 1897.

Sut set at 290° Contour E.S. F.S. in W.S.	
on face of Sid Rock ledge	1.36
Boulder and "	1.53
" "	1.23
" "	0.95
" "	0.71
" "	0.53
" "	0.56
Boulder and decomposed rock	0.46
" "	0.24
" " top of large boulder	0.45
" "	0.20
" "	0.30
" " in gully	5.07 6.93
" "	5.88 6.12
" "	0.24
" "	0.17
" "	6.08 5.92
" " in gully	6.15 5.85
" "	6.14 5.86
" "	6.53 5.47
" "	6.87 5.13

300' Contour

April 1, 1897

Sta	Dip	Rod	
4			
1	53°06' L	10.79	1080
2	44°03' L	11.28	1129
3	39°10' L	11.58	1159
4	35°28' L	11.64	1165
5	30°47' L	11.45	1146
6	28°03' L	11.84	1185
7	25°35' L	11.80	1181
8	19°16' L	12.02	1202
9	15°33' L	11.94	1195
10	12°45' L	12.06	1209
-	7.43 L		
11	6.32 L	12.18	1219
12	5°25' L	12.36	1237
13	2°00' L	12.22	1228
0	- - -	12.30	1231
1	3°16' R	12.76	1277
2	5°35' R	12.92	1293
3	6.25 R	14.02	1403

Just at 300' Contour E.S. + F.S. on W.S.

Station	Notes	Left	Right
1.21	Solid Rock Ledge		1.21
0.72	" " "		0.72
5.79	" " "	5.79	6.21
5.82	" " "	5.82	6.18
0.55	" " "		0.55
0.16	" " "		0.16
0.20	water " " "		0.20
6.01	Border to S.R. closely	6.01	5.99
5.97	" " "	5.97	6.03
6.03	angle = " to " " at S. Base of South face R.	6.03	5.97
	also angle to North side of Rock cliff		
6.09	earth borders and decomposed R.	6.09	5.91
6.18	" " " in gully	6.18	5.82
6.11	" " "	6.11	5.89
6.10	" " "	6.10	5.80
6.38	" + decomposed R. S.R. Crops up.	6.38	5.62
6.46	S.R. crops up. gully runs out	6.46	5.54
7.01	Earth = decomp. R.	7.01	4.99

310' Contour

Sta	Dep		Red	
A				
1	4.40	R	1342	
2	3.00	R	1366	
3	1.30	R	1358	
0	---		13.30	
1	2° 03'	L	1314	1315
2	5° 06'	L	1324	1325
3	6° 15'	L	1308	1309
X	7.25	L		
	12.05	L		
4	13° 04'	L	1284	1285
5	15° 23'	L	1276	1277
6	20° 05'	L	1274	1275
7	23° 46'	L	1254	1255
8	24° 57'	L	1238	1239
9	33° 36'	L	1230	1231
10	37° 15'	L	1228	1229
11	42° 45'	L	1200	1201
12	45° 08'	L	1174	1175

Just set at 310' Contour E.S. + F.S. on W.S.

on Rock point ground falls away behind	6.71	5.29
S.S. of R. point	6.83	5.17
earth + decomposed R.	6.79	5.21
"	6.65	5.35
"	6.57	5.43
" boulders "	6.62	5.38
" " "	6.54	5.46
} across face of smooth steep Rock.		
earth loose R. boulders + S.R. points cropping up	6.42	5.58
Solid R.	6.38	5.62
earth boulders "	6.37	5.63
" " "	6.27	5.73
Solid R. ledge	6.19	5.81
" "	6.15	5.85
" "	6.14	5.86
" "	6.00	6.00
" "	5.87	6.13

Sta	Dep	Rid	
1	3.28	R	14.00
2	2.28	R	14.04
0	-	R	13.72
1	2.38	L	13.58
2	4.15	L	13.58
3	4.45	L	13.70
4	7.00	L	13.30
5	13.05	L	13.24
6	15.26	L	12.98
7	19.05	L	13.20
8	23.02	L	13.00
9	25.06	L	12.80

330' Contour

1	25.30	L	13.02
2	22.47	L	13.24
3	19.30	L	13.54
4	17.20	L	13.24
5	15.18	L	13.16
6	12.30	L	13.44
7	8.20	L	13.42
8	5.47	L	13.86
9	4.30	L	14.12
10	3.33	L	13.92
11	1.35	L	13.90
0	1.04	R	14.20
1	2.14	R	14.26
2			14.60

in point of S.R. low ground further 7.00 5.00
 Earth + decomposed R. foot of SR. 7.02 4.98
 " " 6.86 5.14
 " " 6.79 5.21
 foot of large boulder 5.21
 Earth + decomposed R. in gully 6.85 5.15
 " " 6.65 5.35
 foot of large R. 6.62 5.38
 on face of large Rock 6.49 5.51
 large boulder etc. 6.60 5.40
 in gully earth + dec. R. 5.50
 Rock point 6.40 5.60

Just abt 330 on E.S. + 7.5. on W.S.
 6.51 5.49
 earth + decomp. R. in gully 6.62 5.38
 " " 6.79 5.23
 on face of solid R. 6.62 5.38
 in cleft of R. 6.58 5.42
 between walls of S.R. In gully 6.72 5.28
 on face of solid cliff 6.71 5.29
 Earth + decomp. 6.93 5.07
 " " in gully 7.06 4.94
 " " 6.96 5.04
 " " 6.95 5.05
 " " 7.10 4.90
 " " 7.13 4.87
 " " 7.30 4.70

350' Contour West Side

April 1, 1897

Day	Time	Lat	Prod.	Vert.	
L					
1	27° 52'	L	1310	0.30	1311
2	26° 08'	L	1336	"	1337
3	24° 44'	L	1364	"	1365
4	22° 35'	L	1376	"	1377
5	20° 22'	L	1384	"	1385
6	17° 10'	L	1366	"	1367
7	15° 15'	L	1376	"	1377
8	11° 50'	L	1400	"	1401
9	10° 26'	L	1390	"	1391
10	8° 40'	L	1388	"	1389
11	7° 34'	L	1424	"	1425
12	4° 40'	L	1458	"	1459
13	3° 29'	L	1440	"	1441
14	1° 43'	L	1472	"	1473
15	1.26	L	1490	"	1491

Inst set at 340' Contour E.S. & F.S. W.S.

Point of Ledge	6.55	5.45
Solid Ledge	6.68	5.32
" " " " " " " " " " " "	6.82	5.18
earth + boulders on top "	6.88	5.12
boulders earth + S.R.	6.92	5.08
" " " " " " " " " " " "	6.83	5.17
between large boulders - S.R.	6.88	5.12
earth + decomp. - S.R. underneath	7.00	5.00
" " " " " " " " " " " "	6.95	5.05
on Solid R	6.94	5.06
earth + decomp. R.	7.12	4.88
" " " " " " " " " " " "	7.29	4.71
" " " " " " " " " " " "	7.20	4.80
	7.36	4.64
	7.45	4.55

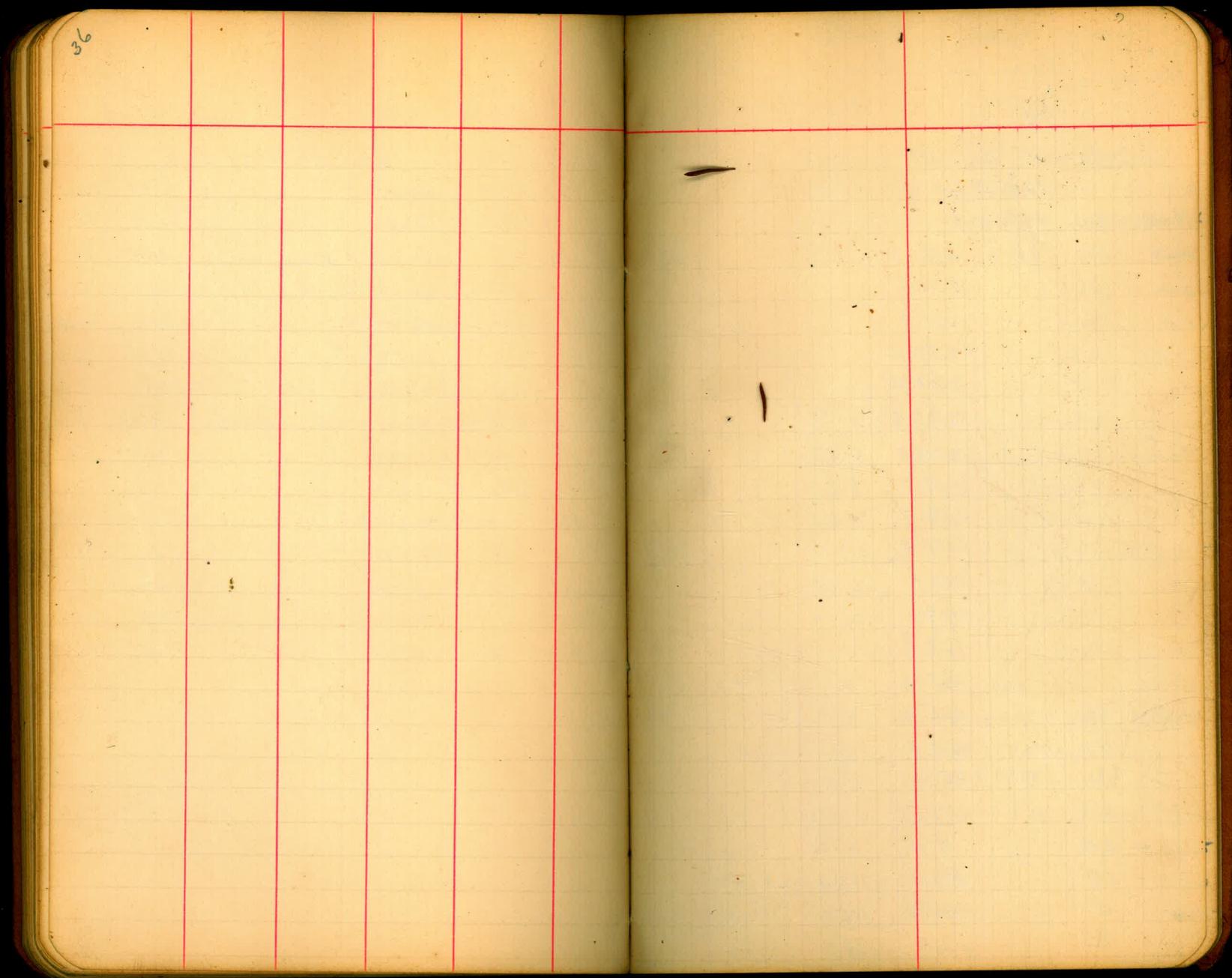
340'
axis = N²40° W. True m.

Rod

1	0°18'	R.	1492	
0	---		1462	
1	1°43'	L	1434	1435
2	3°17'	L	1418	1419
3	4°30'	L	1432	1433
4	7°16'	L	1408	1409
5	8°28'	L	1376	1377
6	10°48'	L	1366	1367
7	11°52'	L	1380	1381
8	15°28'	L	1354	1355
9	17°15'	L	1340	1341
10	19°50'	L	1380	1381
11	23°00'	L	1358	1359
12	24°30'	L	1338	1339
13	26°50'	L	1300	1301

Just pit 340 E.S. & F.S. in W.S.

Earth & decomp. R	7.46	4.54
"	7.31	4.69
"	7.17	4.83
"	7.09	4.91
"	7.16	4.84
"	7.04	4.96
on top of ledge of R.	6.88	5.12
" " " " in earth	6.83	5.17
earth on top of S. R.	6.90	5.10
in cleft of rock	6.77	5.23
on slope earth shoulder	6.70	5.30
" " "	6.90	5.10
earth & decomp. in quarry -	6.79	5.21
on solid R.	6.69	5.31
" ledge	6.50	5.50



210-220=27.9
 200-210=25.5
 190-200=25.7

Connection with axis of present
 dam site lower down stream

Hub	Def	Red	Vert	dist
Hub 190	120° 55' L (?)	550		650
Hub 550	94° 05' R			
Hub 190	9° 10'	356.2	6.33	630
Hub 180		334.1		
Hub 170		311.0		
Hub 160		289.4		
Hub 150		262.2		
Hub 140		242.9		
Hub 130		204.0	4.18	419
Hub 120		178.1	3.35	3° 00'
Hub 110		156.7	3.30	1° 30'
Hub 100		134.4	3.25	325
Hub 90		114.1	2.28	10° 00'
Hub 80		97.3	2.19	7° 40'
Hub 70		78.8	2.05	5° 30'
Hub 60		61.4	1.98	2° 45'
Hub 50		45.4	1.89	189
Hub 40		30.3	1.90	3° 00'
Hub 30		15.3	1.84	7° 05'
Hub 20		0.0	1.68	12° 00'
Hub -20		18.0		
Hub -10		80.0	1.44	23.50
Hub 0		105.0	1.60	17.00
Hub 10		120	1.65	16° 00'

dam and axis of Proposed new

Hub at 190' contour & foresight. That side
 then left 120° 55' had no surveying plan & only app.
 to axis of proposed new dam site 190' cont.

190-200=25.7	6.33	5.67
180-190=22.1	6.33	5.67
170-180=23.1		
160-170=21.6		
150-160=27.2		
140-150=19.3		
130-140=38.9		
120-130=28.9		
110-120=21.4		
100-110=22.3		
90-100=20.3		
80-90=16.8		
70-80=18.5		
60-70=17.4		
50-60=16.0		
40-50 ES=15.1		
30-40 ES=15.0		
20-30 ES=15.3		
20-6' to edge of Prop. Cliff-		

See Book
 79-1439

dep.
 dep.
 dep.
 angle dep.
 angle of dep.

20 ES, 6' - 10 ms about 40'
 20 ES, 6' - 10 ms, 60'
 20 ES, 6' - 10 ms, 10'

10.35
 10.40
 10.56

200
 10
 20
 30
 40
 50
 60
 70
 80
 90
 300
 10
 20
 30
 40

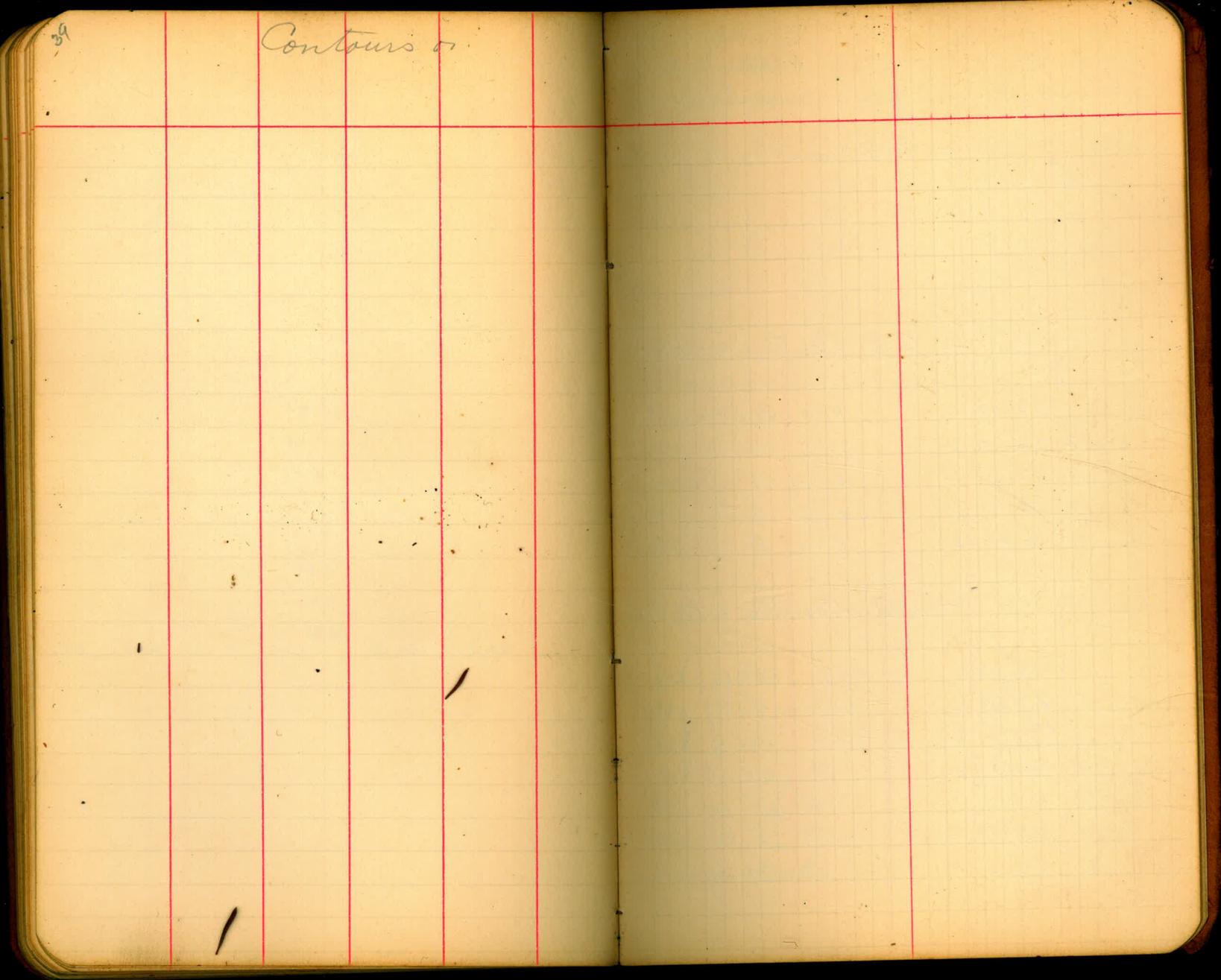
26.6
 23.7
 20.2
 19.7
 21.0
 21
 19.7
 18.5
 18.9

1206 1200

603 597

39

Contours of



Contours on proposed
being an extension of present Contours
former ones by Triangulation

- 30 Contour = 1570

△

- 20 Contour = 1580

April 2

△

1	63° 08'	L	1.40	-28° 20'	110.
2	76° 30'	L	2.35	-15° 45'	218.
3	82° 55'	L	3.04	-11° 45'	292.
4	84° 53'	L	4.08	-8° 30'	400.
5	86° 20'	L	5.34	6° 30'	528.

- 10. Contour = 1590

1	85° 28'	L	5.52	5° 30'	547.
2	81° 25'	L	3.56	9° 00'	348.
3	72° 10'	L	2.37	13° 30'	225.
4	50° 18'	L	1.50	20° 30'	133.
0	---		1.25	25° 30'	103.
1	42° 50'	R	1.57	19° 30'	140.
2	50° 0'	R	1.68	20° 00'	149.

New Dam site below present one
down stream and connected with
measurements - see plan page -

Elev. 1600 = 0.0 = Zero.

Elev.

Inset at 40' Contour E.S. & F.S. on W. Side

edge of water

1.40

666

Elev. - Inset at 40' Contour E.S. & F.S. West Side

steep cliff

102

edge of water

20' Contour West Side
New Dam Silt

Sta	Dip	Red	Vert.	
1	60°00' R	3.34	-3°15'	334.
2	51°00' R.	2.53	-4°30'	253.
3	38°35' R.	1.97	-5°30'	196.
0	-----	1.50	-9°30'	149.0
1	22°00' L	1.57	-6°45'	155.
2	41°00' L	1.77	-6°30'	175.
3	57°45' L	2.00	-5°50'	199.
4	63°10' L	2.44	-4°30'	244.
5	72°12' L	3.00	-3°15'	300.
6	81°03' L	5.45	-2°00'	545.
7	83°10' L.	5.86	-1°45'	586.
8	82°45' L	6.28	-1°35'	628.

30' Contour West Side

1	81°24' L	6.04	0°45'	605
2	80°00' L	5.28	1°00'	529
3	77°06' L	4.19	1°30'	420
4	70°30' L	3.10	2°00'	311
5	55°40' L	2.12	2°45'	212
6	41°20' L	1.86	3°00'	186
7	25°53' L	1.65	3°30'	165
0	-----	1.51	4°00'	151.2
1	20°50' R	1.62	3°45'	162.
2	43°00' R.	2.13	3°30'	213
3	49°30' R.	2.67	2°45'	268
4	58°10' R.	3.62	1°00'	363.

Just at 40' Contour E.S. + F.S. W side

Boulders + S.R.
 " Solid bed rock
 " "
 " "
 " "
 " "
 Boulders + " "
 on big boulder
 Contour dip in between 5+6 865-
 This side of point of Rock 614
 beyond Point of Rock 314 886
 Just at 40' Contour E.S. 596

beyond point of Rock
 boulders + Solid R. 672
 " " 781
 " "
 " "
 " "
 nearly perpendicular R.
 " "
 " "
 Boulders + S.R.
 " "

40' Contour West Side
New Dam site

Sta	Def	Red		
1	57° 12' R	3.88	---	389
2	47° 13' R.	3.00	--	301
3	42° 00' R.	2.15		216
4	15° 10' R.	1.65		166
①	---	1.58		159.0
1	27° 00' L	1.75		176.
2	39° 08' L	1.94		195.
3	50° 35' L	1.98		199
4	56° 55' L	2.27		228
5	68° 35' L	3.16		317
6	72° 20' L	3.90		391
7	76° 45' L	4.48		449.
8	76° 26' L	4.89		490.
9	78° 50' L	5.21		522.
10	78° 22' L	5.68		569.

0.14

Just set 40' Contour E.S. + F.S. W.S.

slide back	812
" "	
" " Nearly perp.	
" "	
" "	
" "	
" "	
boulders + S. 12	
" "	
" "	
" "	755
" "	752
" "	711
on point of Rock	679
beyond " "	2.84 916

50' Contour West side
New Dam Site

Sta	Def.	Rod	
1	75° 50' L	5.21	522
2	73° 00' L	5.00	501
3	73° 00' L	4.55	456
4	66° 15' L	3.75	376
5	58° 20' L	3.02	303
6	52° 20' L	2.49	250
7	45° 38' L	2.16	217
8	35° 35' L	2.16	217
9	29° 50' L	2.00	201
10	20° 47' L	2.00	201
0	---	1.88	189
Hub. 0.0	---	1.84	185
1	17° 00' R	1.95	196
2	32° 35' R	2.13	214
3	38° 50' R.	2.47	248
4	41.40 R.	2.97	298
5	49° 12' R	3.55	356

Just set at 45' Contour E.S.

beyond point of R 5.21 679
 this side - -
 S.R. 745
 boulders + S.R. 825
 " "
 " " S.P. ledge.
 Solid ledge point
 " Rock depression
 " " point perp. overhead
 Hub. put in 4.0 this side of 50' ct.
 on Hub
 Ledge R.
 "
 "
 "

60' Contour W.S.

Sta.	def.		Rod	
1	47° 15'	R	3.87	888
2	40° 25'	R	3.27	328
3	35° 18'	R	2.67	268
4	27° 17'	R.	2.33	234
5	11° 05'	R.	2.10	211
0	---		2.12	213
1	16° 28'	L	2.27	228
2	32° 35'	L	2.38	238
3	40° 10'	L	2.40	241
4	48° 52'	L	2.67	268
5	55° 16'	L	3.28	329
6	65° 0'	L	4.35	435
7	69° 0'	L	4.85	486
8	71.47	L	5.55	556
* 9	72° 10'	L	6.43	644

59. 50-60 = 16.0

Just about 60' Contour E.S. + F.S. W.S.

Sedge R

8.13

" at foot of point R.
Rock point juts out between 1 & 2
in depression between 2 Rock points

beyond Rock point

on Rock point

boulders & S.R.

Solid R.

" "

" "

beyond " " point on Rock here 557
outside

70' Contour W.S.
New dam site

Sta.	dy-		Road	
1	70° 22'	L	6.10	611
2	67° 40'	L	5.35	536
3	62° 16'	L	4.63	464
4	52° 25'	L	3.73	374
5	44° 55'	L	2.97	298
6	31° 17'	L	2.63	264
7	19° 12'	L	2.57	258
0	---	---	2.38	239.
1	16° 20'	R.	2.48	249
* 2	29° 25'	R.	2.85	286
3	37° 20'	R.	3.54	355
4	43° 42'	R.	4.14	415
70-80 = 18.5				
80' Contour				
1	39° 14'	R	4.24	425
2	31° 10'	R	3.63	364
3	26° 30'	R	3.00	301
4	21° 35'	R	2.87	288
0	---	---	2.70	271.
0.0	---	---	2.68 $\frac{1}{2}$	
1	18° 15'	L	2.85	286
2	29° 20'	L	2.88	289
3	39° 43'	L	3.10	311
4	47° 16'	L	3.87	388
5	53° 55'	L	4.41	442
6	61° 20'	L	5.12	513
7	66° 26'	L	5.60	561
8	67° 37'	L	6.20	621

April 7

ES. 70-80 = 18.5
60-70 = 17.4

Inst set 70' Contour E.S. + F.S. on W.S.

Solid point

" Rock

" "

" "

" "

" " in depression between 2 points of R

" " " " "

" "

" "

Just beyond Rock point - point set out 8' beyond

solid ledge

" "

786

Inst set at 80' Contour E.S. + F.S. W.S.

solid ledge

in small gully

behind point of Rock

Hub on centerline 1.5 from 80' Contour East.

in depression between 2 R. points

solid Rock

boulders + decomp R + S, R

" " in small gully

Solid R.

" "

" "

90 Contour West side
New Dam Site

E.S. - 80 - 90 = 16.8

Sta	def	Rod	
1	63.37 L	6.31	632
2	64.10 L	5.82	583
3	57.45 L	5.28	529
4	48.45 L	4.54	455
5	39.28 L	3.56	357
6	31.45 L	3.13	314
7	20.40 L	3.07	308
8	12.52 L	2.96	297
0		2.92	293
00		3.00	301
1	12.20 R	3.00	301
2	24.13 R	3.18	319
3	27.55 R	3.87	388
4	40.14 R	4.73	474
		4.98	

Just at at 90' Contour ES

Reynolds Rock point S.R. 569
 on top of Rock point
 boulders decomp. R & S.R.
 " " "
 Rock point

Nat. 2.5 below 100' contour
 nearly perp. R.
 on point of Rock
 Solid ledge
 " " almost per. down

100 Contour W. Side
New Dam Site

Sta	def	Pod.		
1	38° 04' R	4.98	499	
2	28° 12' R	4.38	439	
3	20° 00' R	3.38	339	
4	9° 43' R	3.29	330	
0	---	3.24	325	
1	12° 20' L	3.26	327	
2	25° 40' L	3.35	336	
3	35° 55' L	3.80	381	
4	42° 05' L	4.49	450	
5	54° 00' L	5.55	556	
6	58° 50' L	6.05	606	
7	59° 10' L	6.33	634	

110 Contour S

1	55° 04' L	6.42	643	
2	54° 10' L	6.10	611	
3	41° 30' L	5.00	501	
4	36° 05' L	4.52	453	
5	32° 33' L	4.05	406	
6	21° 50' L	3.67	368	
7	14° 55' L	3.66	367	
0	---	3.52	353	
1	9° 30' R	3.60	361	
2	17° 55' R	3.78	379	
3	26° 08' R	4.70	471	
4	37° 22' R	5.45	546	

ES. 90-100 = 20.3

100-110 = 22.3

Just at 100 Contour

Solon Ledge

" "

on Rock point

on face of nearly perp. R.

on face of nearly perp. cliff -

boulders + S.R.

just beyond point of Rock

boulders decomp. R + S.R.

some decomposed R on top

on point of S.R.

beyond point of R

Just at 110 ES.

Beyond R point

this side "

boulders + decomp. R.

" "

S.R. point

boulders + decomp. R. on top -

on face of nearly perp. R.

on point of Rock Ledge

beyond point of perp. R.

on smooth sloping R.

120' Contour
New Dam site 110 + 120 = 21.4

Sta	def	Red	
1	34° 0' R	5.67	568
2	25° 03' R	5.08	509
3	16° 35' R	4.08	409
0	---	3.78	379
1	19° 10' L	4.10	411
2	29° 00' L	4.29	430
3	37° 25' L	5.13	514
4	45° 30' L	5.77	578
5	50° 10' L	6.32	633
6	51° 15' L	6.86	687

130' Contour

1	48° 12' L	7.00	701
2	46° 55' L	6.64	665
3	42° 00' L	6.08	609
4	35° 37' L	5.66	567
5	24° 37' L	4.60	461
6	18° 28' L	4.39	440
7	9° 00' L	4.33	434
0	---	4.15	416
1	15° 40' R	4.47	448
2.02	23° 30' R	---	---
3	26° 50' R	5.60	561
	30° 45' R	5.90	591

Inst set at 120' Contour E.S. + F.S. on W.S.

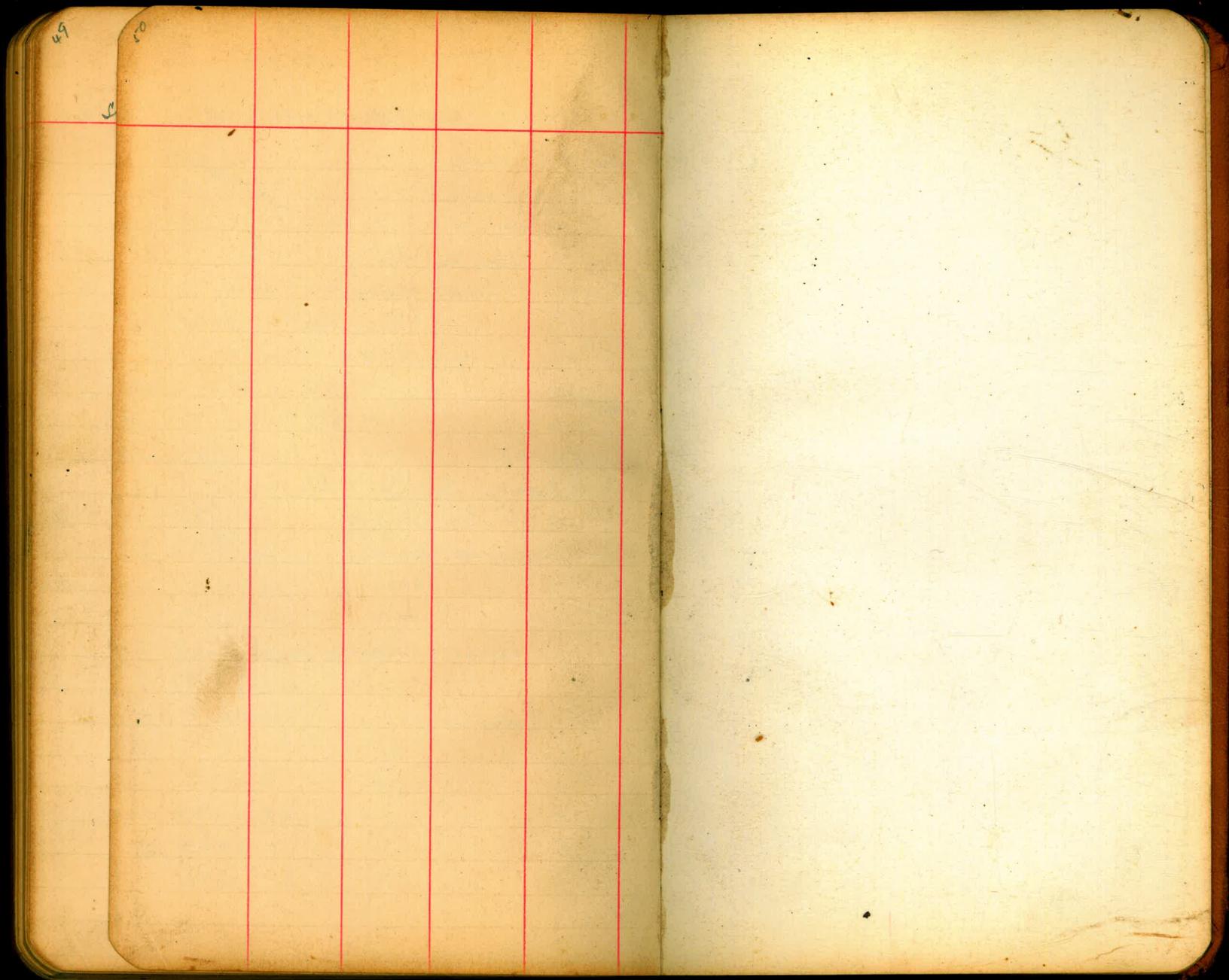
smooth Rock
at foot of perp. cliff
on Rock point
near perp. R.
on slope of boulder + decomp. R.
" " " + S.R.
boulders + decomp. R.
" " atop 623
" " atop 568

beyond point

Inst set 130' Contour

point of decomp. R. atop 3.43 807
decomposed R + boulders 500
" " 536
" " "
" " "
boulders + decomp. R at foot of steep R.
" " " "
" " "
on face of steep Rock 757

to break in Rock when perp. Rock comes



Mr Wood
 Mr Palmer
 Mr Merritt
 Mr. Sloan

23/2/97

6.46

309

1255
 722
 533

6.33
 5.67

1200
 525
 677

2400000
 1082

4.8
 1300

70/5730
 82

198
 116
 214

548
 32

5.70

Dist at 190 + Vert angle 5.40 Rod 677 angle 3.104

260 cont 290 = 9.10

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.	DEGREES.		¼ DEGREE.		½ DEGREE.		¾ DEGREE.		Degrees.
	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	

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