

KEUFFEL & ESSER CO.

DRAWING MATERIALS

SURVEYING INSTRUMENTS.

NEW YORK.

CHICAGO. ST. LOUIS. SAN FRANCISCO. MONTREAL.

Tools for Excavations and Embankments.

MICROFILMED
JAN 7 1965

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.
ROADWAY 18 FEET WIDE. SIDE SLOPES 1 TO 1.
FOR SINGLE TRACK EXCAVATION.

"Copyright, 1895, by Keuffel & Esser Co."

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	0
1	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	1
2	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9	2
3	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	3
4	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9	4
5	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	5
6	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	6
7	16.0	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	7
8	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9	8
9	18.0	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	18.9	9
10	19.0	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.9	10
11	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8	20.9	11
12	21.0	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9	12
13	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.7	22.8	22.9	13
14	23.0	23.1	23.2	23.3	23.4	23.5	23.6	23.7	23.8	23.9	14
15	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8	24.9	15
16	25.0	25.1	25.2	25.3	25.4	25.5	25.6	25.7	25.8	25.9	16
17	26.0	26.1	26.2	26.3	26.4	26.5	26.6	26.7	26.8	26.9	17
18	27.0	27.1	27.2	27.3	27.4	27.5	27.6	27.7	27.8	27.9	18
19	28.0	28.1	28.2	28.3	28.4	28.5	28.6	28.7	28.8	28.9	19
20	29.0	29.1	29.2	29.3	29.4	29.5	29.6	29.7	29.8	29.9	20
21	30.0	30.1	30.2	30.3	30.4	30.5	30.6	30.7	30.8	30.9	21
22	31.0	31.1	31.2	31.3	31.4	31.5	31.6	31.7	31.8	31.9	22
23	32.0	32.1	32.2	32.3	32.4	32.5	32.6	32.7	32.8	32.9	23
24	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	24
25	34.0	34.1	34.2	34.3	34.4	34.5	34.6	34.7	34.8	34.9	25
26	35.0	35.1	35.2	35.3	35.4	35.5	35.6	35.7	35.8	35.9	26
27	36.0	36.1	36.2	36.3	36.4	36.5	36.6	36.7	36.8	36.9	27
28	37.0	37.1	37.2	37.3	37.4	37.5	37.6	37.7	37.8	37.9	28
29	38.0	38.1	38.2	38.3	38.4	38.5	38.6	38.7	38.8	38.9	29
30	39.0	39.1	39.2	39.3	39.4	39.5	39.6	39.7	39.8	39.9	30
31	40.0	40.1	40.2	40.3	40.4	40.5	40.6	40.7	40.8	40.9	31
32	41.0	41.1	41.2	41.3	41.4	41.5	41.6	41.7	41.8	41.9	32
33	42.0	42.1	42.2	42.3	42.4	42.5	42.6	42.7	42.8	42.9	33
34	43.0	43.1	43.2	43.3	43.4	43.5	43.6	43.7	43.8	43.9	34
35	44.0	44.1	44.2	44.3	44.4	44.5	44.6	44.7	44.8	44.9	35
36	45.0	45.1	45.2	45.3	45.4	45.5	45.6	45.7	45.8	45.9	36

Calculated by Julien A. Hall, M. Am. Soc. C. E.

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6/30/17 Check Levels

Sub-Level 2
Dilley Road

Sta	+	Ht	-	Elev	
	040	486.97		486.569	X in → East End Dam. USGS BM ↘ Brass Cap in Boulder
FP	014	78.22	8.89	478.08	Rock
FP	032	69.50	9.04	69.18	Rock
FP	123	61.58	9.15	60.35	"
FP	081	53.72	8.67	52.91	"
FP	026	45.72	8.76	44.96	"
TBM ✓			4.98	440.24	(OK) West of Spillway Nail in Boulder half way down slope
FP	032	35.64	9.90	35.32	Rock
FP	167	27.92	9.39	26.25	"
FP	171	21.01	8.62	19.30	"
FP	081	11.88	9.94	11.07	"
FP	032	02.31	9.89	01.99	"
✓			1.20	401.11	See Page 5 for Cor Elev of Bottom. Nail in Ledge West side draw 20' out.
FP	227	94.77	9.81	392.50	Rock
FP	023	85.52	9.48	85.29	"
FP	153	77.72	9.33	76.19	"

✓

Sta	+	2/1	-	2/10		
		377.72				
F.	918	377.39	951	368.21	Stake	
				371.30	Ⓞ	
T.B.M.			621	371.18	Bolt in Rock Point 217' W of Core Wall	
				371.30	Ⓞ	
	925	380.93		371.18		
F.	724	387.58	059	380.34	Rock	
F.	939	396.44	053	387.05	"	
F.	7/2/17	864	404.48	060	395.84	"
F.	911	12.74	085	403.63	"	
F.	859	2091	042	1232	"	
F.	953	2966	078	2013	"	
F.	739	38.99	006	2960	"	
	966	48.13	052	3827		
				440.72		
B.M.			753	440.60	Ⓞ Bolt in Lower Pole Pt of Rd. to Coffin Down	
				440.81	on Pt of Ridge	
F.	944	57.81	026	47.77	Rock	
D	993	66.53	061	56.60	"	
F.	964	75.47	068	65.85	"	
F.	922	84.01	068	74.79	"	

7/2/17

Sta

Check Levels

4

+ 2/1 - E/O

484.01

494.70

371.18

123.52

P 9.13 91.81 133 482.68 Rock

P 6.55 97.70 0.66 91.15
494.79BM 3.00 94.70
8" "N.W. Cor Concrete Basin Rock = 494.88

371.30

B.M. 6.38 377.56 371.18 B.M. Bolt in R. Ledge. 217' W. of Core Wall

P 7.95 78.14 9.37 68.19 Stake

P 9.36 85.52 1.98 76.16 Rock

P 7.98 93.48 0.02 85.50 Rock

P 7.55 400.03 1.00 92.48 "

P 6.78 406.24 0.57 399.46 "

401.22

T.B.M. 5.14 401.10 Nail in Rock Ledge

P 7.08 412.58 0.74 405.50 Rock

P 7.86 420.14 0.30 412.28 "

P 9.34 29.33 0.15 19.99 "

P 9.81 37.82 1.34 28.01 "

✓

7/2/17

Check Levels

5

+ 211 - 510

43782

P.	996	4770	008	37.74	Rock
B.M.			758	44012	Nail in Boulder ^{on West} below Spillway
P.	973	5736	007	47.63	Rock
P.	939	6586	089	56.47	"
P.	926	7484	028	65.58	"
P.	874	8343	015	74.69	"
P.	601	8517	127	82.16	"
B.M.	✓		172	86.45	^{x in 2} Brass Cap in Boulder V.S.G.S 48657
	104	44128		44024	^{OP} Nail in Boulder ^{N.W. Cr} below Spillway W Side
P.	144	3374	898	432.30	Rock
P.	017	2431	960	24.14	"
P.	017	15.56	892	15.39	"
P.	467	11.09	914	06.42	"
P.	321	0569	861	02.48	"
T.M.	✓		447	401.22	^{OP} Nail in Rock Ledge

7-19-17 Profile of Road.

Using Auto + Aneroid

6

Lower Otay Dam to Cookatoo Grove

	83.3	460	
.	81.3	500	Camp -
	81.4	470	Saddle = Elev. 515
x	81.6	490	
	81.7	480	
	81.8	500	↑
	82.1	450	↑
	.2	460	↑
	.3	460	
	.4	445	↓
	.5	455	
	.6	450	
	.7	460	
	.8	440	
	.9	50	
	85.3	475	Junction to Dulzura
	85.9	610	
	86.2	550	Salt Canyon
	83	60	
	.1	60	
	.2	40	

3.00.11

86.7	490	Junction S.W. Rd via Mungers Grade	Dist.	Elev.	Dist.	Elev.
<i>Return</i>			81.3	310		
88.6	490		81.6	250		
89.7	430		82.0	155		
89.5	410					

8/18/17

Profile Roads - Lower Otay Dam via
S.D.L.T.Co. to junction with Telegraph
Canyon Rd. Salt Canyon to Lower
Otay Dam via Sanal Ranch Rd.

Station	82.8	180	89.3
Saddle	83.5	735	
Grade	84.0	260	
Point	84.9	340	
Point	85.6	460	
	86.3	330	
Gule	86.9	290	
Point	87.2	540	
	87.3	350	
	87.5	420	
	.8	400	
	88.4	300	
Cor. Sanal	89.8	365	

Distance	Elev.	Distance	Elev.
Saddle	76.8	78.7	330
400 ft. head	77.2	79.0	450
Top of Salt	77.3	79.6	350
300 ft. head	77.6	79.9	320
X	77.7	80.6	260
	78.2	80.6	200
Adm	78.4	81.0	75

from Road
Three
Badminton
Saddle
Summit
High Rd
Gule
S.D.
Pinnacle
pass
x

7/21/17

3% Grade.

8

Grades for Flume

Sta	+	HI	-	Elev	Rod
		0.75	372.05	371.30	B.M. Bolt in ledge of Rock.
			6.68	365.37	Gr. Taken as Water Level at 1+75
0+00					6.155
0+25					6.230
+50					6.305
+75					6.380
1+00					6.455
+25					6.530
+50					6.605
+75					6.680
2+00					6.755
+25					6.830
+50					6.905
+75					6.98
+90					7.025

7/23/17

3%

9

	Grade	B.S.	I.L.	F.S.	Elev.	Red	
Sta. 11		3.58	369.59		366.01		Top of Hub
0+00							
2+90	365.895						
6+00	364.095					6.50	Set 1" below Grade
5+40	64.275					6.32	Set 1 ft. below grade
5+73	64.275					6.42	"

7/24/17 Same -

		4.31	370.32		366.01		
5+10	364.37					6.95	
5+40	64.27					7.05	Check
7/27/17		6.12	72.13		366.01		
A+32	64.60					8.52 (7.53)	Set 1' low
A+16						8.48	
4+00						8.43	
3+84	64.74					8.39	

$$\begin{array}{r} 5.1 \\ 1.53 \\ \hline 102.37 \end{array}$$

7/30/17 3%

5/5 Grade - H.I. - L/0

640 7241 36601 Sta 11400 T.P.

3+66 64.797

861

3+54 64.833

858

3+38 64.881

853

3+22 64.929

848

3/0 7440 . 371.30

7/31/17

2+90 65.025

(9.38) 01.1 Gr.
10.38 1' low

10.5 74.449

63929

1' low. Top Gr. 3+22

3+00 64.995

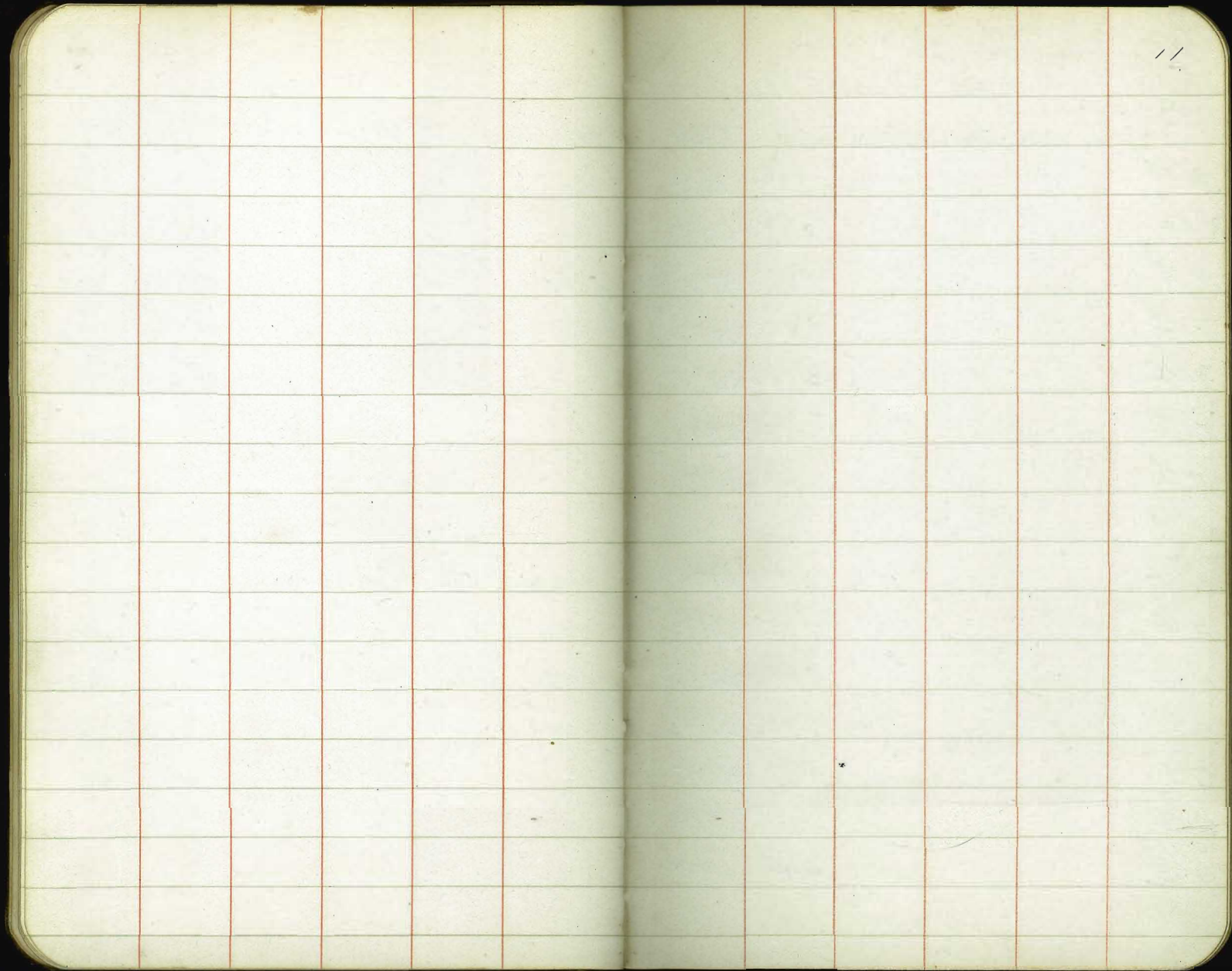
10.45

2+90 65.025

10.42 1' low

2+67 65.094

10.35



7/26/17 Levels for Topog
Exc. Quantities

336 74.66 371.30

I¹¹ 8.32 66.34

I¹² 9.33 65.33

I¹³ 9.26 65.40

I¹⁴ 7.45 67.21

I¹⁵ 7.68 66.98

I¹⁶ 7.54 67.12

I¹⁷ 5.70 68.96

I¹⁸

H¹⁶ 7.12 67.54

H¹⁵ 7.83 66.83

H¹² 8.94 65.72

H¹¹ 8.52 66.14

G¹¹ 8.51 66.15

G¹² 9.46 65.20

G¹³ 9.14 65.52



Willcomb. - Level
Bub - 14012 12
Dilley - Rod.

13.17 Bolt in Rock 50' East S. End
Copper Dam

Etc Copied
in # 3

7/26/17

13

374.66

G ¹⁵	7.86	66.80
G ¹⁶	7.67	66.99
F ¹⁶	9.28	65.38
F ¹⁵	7.74	66.92
F ¹²	9.30	65.36
F ¹¹	8.81	65.85
E ¹¹	0.20	74.46
E ¹²	9.57	65.09
E ¹³	9.59	65.07
E ¹⁵	7.90	66.76
E ¹⁶	9.33	65.33
D ¹⁶	8.68	65.98
D ¹⁵	8.00	66.66
D ¹²	9.57	65.09
C ¹¹	3.95	70.71

Flg. Copied
in # 3

7/26/17

1A

374.66

C ¹²	9.74	64.92
C ¹³	9.56	65.10
C ¹⁵	8.04	66.62
C ¹⁶	7.98	66.68
B ¹⁶	8.25	66.41
B ¹⁵	8.30	66.36
B ¹²	9.61	65.05
B ¹¹	7.97	66.69
A ¹¹	8.11	66.55
A ¹²	9.58	65.08
A ¹³	9.70	64.96
A ¹⁴	8.67	65.99
A ¹⁵	8.71	65.95
M ¹⁵	8.96	65.70
M ¹¹	8.42	66.24

File Copied
in #3

7/26/17

15

37466

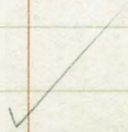
N ¹¹	8.12	66.54
N ¹²	9.84	64.82
N ¹³	9.77	64.89
N ¹⁵	8.66	66.00
O ¹⁵	8.87	65.79
O ¹²	9.91	64.75
P ¹²	9.48	65.18
P ¹³	9.94	64.72
P ¹⁵	9.09	65.57
Q ¹⁵	9.10	65.56
R ¹³	9.96	64.70
R ¹⁴	9.15	65.51
R ¹⁵	9.06	65.60

7/26/17

B.M.	416	375.46	371.30	B.M. Bolt in ledge.
I ¹⁰			403 71.43	
H ¹⁰			752 67.94	
G ¹⁰			811 67.35	
F ¹⁰			216 73.30	

B.M.	972	381.02	371.30	
D ¹¹			302 78.00	
O ¹¹			4.39 76.63	
P.	999	90.88	0.13 80.89	Rock
P ¹⁰			385 87.03	
O ¹⁰			129 89.59	
N ¹⁰			641 84.47	
C ¹⁰			970 81.18	
D ¹⁰			449 86.39	
E ¹⁰			081 90.07	

File Copied
3
17



7/26/17

17

N ¹⁷		390.88	049	390.39	
FP.	030	81.65	953	381.35	Root
N ¹⁶			6.66	74.99	
M ¹⁰			2.36	79.59	
B ¹⁰			7.11	74.54	
FP.	034	73.25	874	72.91	Root
B ¹²			820	65.05	Check. (at)
A ¹⁰			338	69.87	
	998	7549		65.51	R ¹⁴
Q ¹²			997	65.52	
Q ¹¹			943	66.06	
P ¹¹			594	69.55	
R ¹¹			951	65.98	
R ¹⁰			936	66.13	
Q ¹⁰			638	69.11	

File Copied
in # 3

7/26/17

18

R ¹¹	867	7465	365.98	R ¹¹
P ¹²			947 65.18	
R ¹²			998 64.67	
Q ¹²			9.11 65.54	Check
R ⁹			292 71.73	
P	869	82.99	0.35 74.30	Rock
P	9.76	92.43	0.32 82.67	"
R ⁸			986 82.57	
R ⁷			0.67 91.76	
P	8.93	401.26	0.10 92.33	Rock
R ⁶			287 98.39	
R ⁵			1.41 99.85	

Fla. Copied
in # 3

Aug 3

Sand Holes.

At T 11 Sight

T 9 Ar 0 Az Rt.

#1	96°17	660'	00	✓
#2	91°56	460		
#3	86°42	367		
#4	94°50	240		
#5	100°40'	378		
#6	103°30	458		
#7	93°53'	144'		
#8	256°	306'		
#9	258°42'	538'		

19

7/28/17
465
HI 74.4

ATP 11

6955

70	207	30	21	✓
70	207	30	24	✓
68	217	0	29	✓
66	217	0	29	✓
68	215		23.3	✓
66	215		25.8	✓
68	208	30	24	✓
66	208	30	26.5	✓
66	201		23.5	✓
68	202	30	22.5	✓
68	219		8	✓
68	212		17	✓
68	211		11	✓
68	212	30	7	✓
68	137		7	✓
68	72	0	4	✓
68	53		11	✓

Bub Rod + Notes
Dilloy - Instr. 20

Ring Contour Point Ledge

" "

Plotted

7/29/17

H. 1742

AT P 11

6955

68

61° 30' 16.5

68

67 30 20

68

64 23

68

53 24.5

68

52 26

68

43 26.5

± 66

153 24.5

± ⁵⁰⁰ H. 8952

AT N 10

8447

± 84

176 30 4.5

± 84

133 30 8

± 82

189 5.5

± 82

151 30 12

84

136 11

84

137 30 14.5

84

144 30 13.5

84

130 18

84

139 18.5

Plotted

7/28/17

H.I. = 89.52

A + N 10

84.47

84	130	23
82	135	24
82	118	30
84	118 30	27
84	116	25
84	119	23
84	112 30	23.5
84	106 30	29.5
82	108	32.5
86	105	26
88	102	24.5
86	104	21.3
88	102 30	21.5
86	109 30	20.5
86	116 30	22.5
86	120	23
86	120	20.7

Plotted.

7/28/17

Ring Cost

"	"
"	"

H.I. 8952

A4 1410

8007

86

120 18.5

✓

86

120 18

✓

86

111 16.5

✓

88

100 30 15

✓

86

98 8.5

✓

88

63 4.5

✓

86

63 3.

✓

Ring Cont

Plotted

7/28/17

47

H.I. 9429

A4 010

8959

90

297 27.5

✓

92

299 27

✓

90

274 19.5

✓

92

295 30 23.5

✓

94

299 30 22

✓

92

293 30 16.5

✓

92

289 17.5

✓

92

285 16.5

✓

H.L. 94-9

At 0¹⁰

8959

2A

92

289 30 13

✓

92

285 85

✓

90

274 30 15.5

✓

90

265 85

✓

90

200 2

✓

90

351 15

✓

90

335 4

✓

90

5 3

✓

90

25 55

✓

92

312 85

✓

92

328 75

✓

94

351 30 45

✓

92

12 6

✓

90

61 30 75

✓

92

60 85

✓

90

81 30 135

✓

92

66 10

✓

H/E 9429

At 0¹⁰

8959

92

59 13

✓

92

71 12.5

✓

90

60 17.5

✓

92

55 18

✓

90

60 30 21

✓

92

58 30 20

✓

92

57 22

✓

92

61 22.5

✓

92

58 23.5

✓

92

63 30 24

✓

92

69 21.5

✓

90

75 30 21

✓

92

75 30 22

✓

90

74 20

✓

90

81 30 19

✓

90

78 21.5

✓

90

88 30 25

✓

HI 9429

At 0¹⁰

8959

90

87 24.5

✓

94

84 25.5

✓

94

77 22.5

✓

94

72 22.5

✓

94

71 24

✓

94

66 22

✓

94

64 24.5

✓

94

70 26.5

✓

94

73.30 26.5

✓

94

63 30 26

✓

94

44 30 27

✓

94

55 21.5

✓

94

57 19

✓

94

51 17

✓

94

51 15

✓

94

30 15

✓

94

30 10

✓

Ring Coat

" "

" "

" "

" "

" "

" "

" "

H.I.

9429

AHO^{LO}

8959

27

94

8° 80

✓

94

353 110

✓

94

358 12

✓

94

352 30 125

✓

94

350 30 12

✓

94

340 125

✓

94

337 105

✓

94

312 125

✓

94

305 165

✓

94

304 165

✓

94

303 222

✓

94

301 29.3

✓

86

122 6

✓

88

124 45

✓

88

88 30 65

✓

86

129 70

✓

86

150 95

✓

H.I.
9429

At 0¹⁰

89.59

28

86

144-30 12

✓

86

127 30 11

✓

86

119 30 18.5

✓

86

116 18

✓

86

120 11

✓

86

105 30 10.5

✓

86

95 18

✓

88

87 15

✓

88

64 30 18

✓

88

81 30 18.5

✓

88

93 30 19

✓

86

95 19

✓

88

90 30 21

✓

86

97 23

✓

86

90 23.5

✓

88

82 30 22

✓

88

89 30 24

✓

7/30/17

29

14.6			
94.29		0 ¹⁰	89.59
88	90 30	26	✓
86	91 30	25.5	✓
4.7			
41. - 94.3	171	0 ¹⁰	89.59
84	155°	10'	✓
82	144	12.5	✓
84	133	18	✓
82	134	18.5	✓
84	123	18	✓
82	123 30	19	✓
82	120	21	✓
82	116 30	21	✓
82	114 30	22	✓
82	104°	21.5	✓
82	109°	24.5	✓
82	97 30	26	✓
82	97	28.5	✓

Plotted
July 30 1917

7/20/17

H1 - 943

8959

82 87 30 28.5 ✓

84 88 30 26.5 ✓

84 97 27 ✓

84 98 22 ✓

84 102 20.5 ✓

84 103 17 ✓

84 116 30 18.5 E10

485

H1 = 8932

H1 P10 B1N 8447

141

94.30 722 8708 8703

983 84.47

78 226 15 ✓

80 232 30 17.5 ✓

80 215 30 12.5 ✓

80 216 30 9.2 ✓

80 203 8.5 ✓

80 203 6.5 ✓

80 178 8.9 ✓

H.I. = 485
8932

7/30/17

A + P10 Y North

8447

31

80

143 30 7.5

✓

✓

80

131 30 4.0

✓

✓

80

107 30 5.7

✓

✓

80

77° 30 58

✓

✓

80

77° 12.9

✓

✓

80

70 30 13.5

✓

✓

80

71° 14.7

✓

✓

80

67° 23.9

✓

✓

80

66-30 24.2

✓

✓

80

66 30 27

✓

✓

80

57 30 29.5

✓

✓

70

59-30 30.9

✓

✓

80

59 30 30.9

✓

✓

80

57 30 30.9

✓

✓

80

57 30 30.9

✓

✓

80

57 30 30.9

✓

✓

78

59 31

✓

✓

plotted
7/30/17

HI = 48.5

7/30/17

8932

A P 10 2' Nov 17

8447

78

64

28.8
29.5

✓

78

64

28.2
28.8

✓

78

71 30 27

✓

78

69° 23.5

✓

78

75 20.5

✓

78

74 20

✓

78

75 17.3

✓

78

75 30 13.5

✓

78

82 30 11.5

✓

78

88 30 7.3

✓

78

110° 6.0

✓

78

142 11.5

✓

78

158 9.8

✓

78

161 30 11.5

✓

76

68 31.7

✓

76

64
60 30 31
30.5

✓

76

64 00 25.8

✓

32

H.L. = 485

7/30/17

33

8932

A+ P¹⁰ 2' North

8447

76	73	26.6	✓
76	72	22.5	✓
76	76 30	17	✓
76	78	12.7	✓
76	89	88	✓
76	125 30	12.0	✓
76	133	11.3	✓
76	153	14.2	✓
82	70 30	7.7	✓
84	66 30	88	✓
82	60	11.7	✓
84	59	12.2	✓
82	64 30	158	✓
84	63	14.3	✓
86	21 30	7	✓
88	21 30	28	✓
86	29°	38	✓

H.I. = 4.85

8932

7/30/17

At P₁₀

84.47

88

29

4.7

✓

86

60 30

10.8

✓

88

58

11.9

✓

83

11.3 ✓

98.83

181

87.51

TP

H.I. = 9888

At P₁₀

495

South

95.53

88

72 30

11.5

✓

86

72 30

11.8

✓

88

45-30

6.7

✓

88

33-30

7.7

✓

86

52 30

11.5

✓

86

40

10.7

✓

88

39

10

✓

88

44 30

12.7

✓

86

44 30

12.7

✓

86

48

13.5

✓

88

48

14.0

✓

86

59

17.2

✓

7/30/17

34

Undercut

HI-9883

At P¹⁰ 495 South

7/30/17 35

88 59 17.2 ✓ 9553

86 51 30 19.2 ✓

88 51 30 19.2 ✓

88 50 22.8 ✓

88 61 23.7 ✓

86 60 30 19.5 ✓

86 68 28.4 ✓

88 64.30 28.4 ✓

88 52 31.7 ✓

86 54-30 32.9 ✓

88 50 30 32.9 ✓

88 46 37.3 ✓

86 47 36.9 ✓

90 44 32.5 ✓

92 45 30.5 ✓

90 53 31.2 ✓

92 54 22.7 ✓

H.I. 9883

At P.O. 495 South 95.53

7/20/17 36

92 60 26.3 ✓

90 63 30 28 ✓

90 60 23.8 ✓

92 59 24 ✓

90 49 24.6 ✓

92 49 25.5 ✓

90 55 30 16.8 ✓

92 53° 16.7 ✓

90 42 13.3 ✓

92 42 13.3 ✓

90 35 8.6 ✓

90 30 9.2 ✓

92 55 30 9.4 ✓

92 19 12 ✓

92 15 11.7 ✓

92 25 30 9.9 ✓

92 27 30 7.7 ✓

H1-9883

A1 P¹⁰ 495 South 9553

7/30/17 37

92 2 62 ✓

92 2 2.9 ✓

92 87 28 ✓

90 48 30 28 ✓

90 58 56 ✓

90 83 30 64 ✓

92 83 30 59 ✓

92 108 59 ✓

92 130 30 40 ✓

92 189 32 ✓

90 182 30 43 ✓

94 348 68

94 15 30 89

94 14 12

94 21 30 132

94 34 10.8

94 46 30 146

H ₁ = 9883	A P 10	495	South	9553
94	46°	17		✓
94	51.	17.3		✓
94	43 30	18.8		✓
94	49 30	18.8		✓
94	46	21.8		✓
94	37	25.4		✓

H ₁ ⁴⁷ 73.8	A Q 10			6911
68	23.30	8.4	✓	
68	18.4	4.0	✓	
68	86.30	4.3	✓	
68	99.30	5.6	✓	
68	93.	6.6	✓	
68	68.30	7.7	✓	
68	86°	8.3	✓	
68	90°	9.5	✓	
68	55° 30	13.0	✓	

7/31/17

7/31/17 39

47	At Q 10	69.11
Hi. 738		
68	74 30 14'	✓
68	57 30 17.5	✓
68	55 30 21.5	✓
70	46° 20.2	✓
70	52 19.	✓
70	48 15.2	✓
70	36 30 11.4	✓
70	70 30 9.1	✓
70	59 36	✓
70	312 30 0.9	✓
70	185 30 4.	✓
70	212 5.	✓
70	242 4.7	✓
70	247 9.7	✓
70	232 30 11.8	✓
70	213 18.	✓
70	227 30 21.8	✓

Ring Cont. Point of Top. Rock

H. 738

At Q¹⁰

69.11

7/31/17 40

72 227 30 21.8 ✓

74 227 30 21.8 ✓

72 219 16.8 ✓

74 229 30 17.8 ✓

72 235 30 14.6 ✓

74 241 30 15.2 ✓

72 254 30 10.6 ✓

74 257 13.6 ✓

72 257 30 4.5 ✓

74 263 30 6.2 ✓

72 225° 3.7 ✓

72 196 4.3 ✓

72 308 30 3.0 ✓

74 276 30 6.5 ✓

74 301° 3.2 ✓

74 346 3.5 ✓

74 1° 5.1 ✓

H.I. = 73.8

At Q10

69.11

7/31/17

41

72 37 30 4.7 ✓

74 22 6.2 ✓

72 23 10.2 ✓

72 36 12.3 ✓

72 35 19.5 ✓

^{4.8}
H.I. = 69.5

At Rm

64.67

66 269 30 20.2 ✓

Top Bank

(64.8) 238 30 16 ✓

River Bed

66 353 4.5 ✓

T. Bank

66 76 29 ✓

" "

(64.7) 121 38 ✓

River Bed

^{4.5}
H.I. = 70.68

At R10

66.13

66 65 30 32.5 ✓

66 15° 17.5 ✓

66 56 30 23.6 ✓

H.L. 70.68

A+R10

66.13

7/31/17

A2

66

127

8

✓

66

180

25

✓

66

110

22.3

✓

66

101

40.3

✓

68

66

36.6

✓

68

51

28.4

✓

Bank

68.

333

21.7

✓

68

350 30

19.1

✓

68

339

16.8

✓

68

336

15.2

✓

68

322

16.5

✓

70

339

22.2

✓

70

349 30

23.4

✓

70

2-30

24.3

✓

70

23

26.9

✓

70

45

29.3

✓

70

59 30

38

✓

44.	HR		
H1-76.1	HR 9	71.73	
72	90°	27.3	✓
72	76°	18.6	✓
72	65-30	6.7	✓
72	18	3.1	✓
72	236	4.0	✓
72	282 30	4.5	✓
72	269 30	9.0	✓
74	273	9.0	✓
74	329	2.0	✓
74	345 30	7.2	✓
76	345 30	7.5	✓
74	16	8.5	✓
74	27	11.7	✓
74	47	18.2	✓
74	52-30	21.1	✓
74	72 30	26	✓
74	70	31	✓

7/31/17 A3

Ring Cont.

44

M.H.I. = 76.1

ATR 9 71.73

<u>76</u>	70	31	✓
76	71	27.6	✓
76	66	26.4	✓
<u>76</u>	67 30	29.1	✓
76	66 30	30.3	✓
76	58 30	26.5	✓
76	55	26.8	✓
76	44 30	21.4	✓
76	8°	12.6	✓
76	5° 30'	8.2	✓
76	350	10.3	✓
76	336-30	11.3	✓
76	322	6.8	✓
76	308	8.4	✓
76	301	7.1	✓
76	282 30	10.1	✓

Ring contour

" "

" "

Ring Cont.

3 shots

"

AA

H.I. = 86.17

A+R⁸

8257

78 111° 338 ✓

78 107-30 31.9 ✓

78 111-30 29 ✓

78 108-30 27.6 ✓

78 117° 19.6 ✓

78 120 16 ✓

78 124 30 16.3 ✓

78 127 14.8 ✓

78 123 14.3 ✓

78 195 10.6 ✓

78 196 14.9 ✓

78 203 17.7 ✓

78 195 30 17.9 ✓

78 205 23.8 ✓

78 209-30 26.8 ✓

78 223 28 ✓

78 217 34.8 ✓

36

H1-86.17

HRS

82.57

78 210 38 ✓

78 214 41.4 ✓

76 207 44.7 ✓

76 208 39.8 ✓

76 211 37.8 ✓

76 212-30 36.3 ✓

76 216 30 33.8 ✓

76 213 30 30.5 ✓

76 215 30 28.8 ✓

76 209 28.7 ✓

74 207.30 44.5 ✓

74 209 30 37.8 ✓

74 213 36.7 ✓

74 211 35.2 ✓

74 212 30 32.5 ✓

74 200 30 37.1 ✓

80 215 39.4 ✓

46

H. I. 86.17

76 178

82.57

82	215°	39.4	✓
84	216.30	39.4	✓
86	216.30	39.4	✓
80	213.30	36.7	✓
82	216.30	35.6	✓
84	218	34.7	✓
86	222	34	✓
80	218.30	34.5	✓
82	220	34.2	✓
82	220	33.2	✓
80	220	33.2	✓
80	223	31.6	✓
82	225	31.1	✓
84	228	32.3	✓
86	228	32.3	✓
86	228	29.7	✓

H.I. 86.17

F&R P

82.57

41

86 227 25.2 ✓

84 226 25.0 ✓

82 226 25.2 ✓

80 225 25.8 ✓

86 233 24.4 ✓

86 233 23.4 ✓

84 228 23.2 ✓

84 222 24.6 ✓

84 218 24. ✓

84 220-30 23.5 ✓

82 221 26. ✓

80 219 27.5 ✓

80 209-30 26.0 ✓

82 210.30 24.1 ✓

80 208.30 23.2 ✓

80 218 21.8 ✓

82 226 21.6 ✓

Ring Cont.

" "

" "

H.I. 86.17

H&R8

82.57

49

82

234. 19.5

✓

82

222.30 17.9

✓

82

228 19.6

✓

82

223.30 20.3

✓

82

222.30 18.4

✓

82

229. 15.7

✓

82

237.30 16.6

✓

82

238. 15.2

✓

82

232 13.1

✓

82

237 11.9

✓

82

212 8.7

✓

82

208.30 6.0

✓

82

194. 1.5

✓

82

110.30 5.2

✓

82

98.30 6.2

✓

82

99.30 23.3

✓

82

95 28.8

✓

Rigg Cont

" "

" "

H. 186-17

F. 178.

82.57

50

80 104.30 30 ✓

80 105 24.4 ✓

80 111° 20.5 ✓

80 116 16 ✓

80 107.30 14.8 ✓

80 131 5.7 ✓

80 166.30 7.7 ✓

80 188.30 6.1 ✓

80 204.30 7.7 ✓

80 200 10.6 ✓

80 198.30 13.3 ✓

80 212 16.3 ✓

80 204 21. ✓

78 185.30 14 ✓

78 187.30 11.6 ✓

78 175 12.2 ✓

Ring Cont:

" "

" "

8/11/17
 Bib. - Rod
 Dinos. - Instr.
 Fisher - Notes

Az Dist

84	243-30	18.2
84		
84		
HI = 44 86.97	ATRS	8257
84	243-30	18.1
84	245-30	17.0
84	238-30	17.1
84	255-0	17.5
84	250.0	16.7
84	254.0	14.0
84	248.0	13.6
84	243-30	15.0
84	237-30	12.5
84	257-30	18.2
84	271-0	18.7
84	290-30	19.1
84	305.0	19.3

8/11/17

Ring

Ring Boulder

Ring "

Ring "

Ring "

Plotted
8/11/17

86.97

HI

APR 8

AZ D.B.

8257

52

84	307.30	19.5
84	274.0	9.3
84	303.0	3.7
84	65.30	8.0
84	90.30	27.0
84	88.0	29.2
84	89.30	32.6
86	89.30	32.6
86	83.0	27.6
86	80.0	20.8
X86	86.0	15.6 X7
86	326.30	9.2
86	321.0	12.9
86	319.0	17.6
86	316.0	23.0
86	310.0	23.1
86	300.00	20.7

Plotted
8/11/17

86.97

At R8

8257

86 295.0 21.8

82 260.0 17.3

Ring Cont

82 260.0 15.3

Ring Cont

82 282.30 17.6

82 282.30 16.6

9.15
95.91

At R-7

91.76

88 206.30 44.2

88 211.30 38.5

88 228.30 28.0

88 232.30 25.7

88 241.30 27.7

88 244.30 22.7

88 259.0 20.0

88 271.30 20.8

88 271.30 11.5

88 294.0 8.8

88 218.30 11.7

Plotted
8/11/17

HI

AR7

54

95.91	179-0	11.7	91.76
88	146-0	15.0	
88	133.30	20.7	
88	125-0	31.8	
88	124-0	35.3	
90			
90	117-0	34.7	
90	127-0	15.0	
90	149.30	6.4	
90	251-0	6.6	
90	307-0	16.7	
90	287-0	21.0	
90	291-30	22.4	
90	287.30	23.8	
90	264-30	23.3	
90	255-30	24.5	
90	244-30	25.4	
90	231-30	29.0	

Platted
8/11/17

HI 95.91

R-7

91.76

55

~~90 215-0 39.0~~~~90 212-0 49.0~~~~92 212-0 47.0~~~~94 214-30 46.2~~~~94 218-0 41.1~~~~92 216-0 42.6~~~~94 221-0 39.8~~~~92 219-0 39.5~~~~94 233-0 31.5~~

92 231-0 30.8

94 250-30 27.6

92 252-0 26.2

92 257-0 28.0

94 258-30 29.3

94 266-30 29.4

94 268- 26.8 +

94 275-30 25.2

Plotted
8/11/17

H
9591

ARR

9176

94	275.30	28.7
94	279.30	30.1
94	282-	29.6
94	289.0	30.8
94	298.30	26.8
92	266-	25.2
92	277.30	23.7
92	280.30	27.1
92	286.30	26.1
92	290 -	27.3
92	300 -	26.4
92	313.30	27.7
94	307.30	31.4
94	313.0	32.5
94	320 -	30.2
94	327-	36.0
94	332.30	31.5

Plated
8/1/17

9591

A R 7

9176

57

94	338-	32.8
94	335-	24.5
92	328-	23.6
92	330-30	16.8
94	344-0	16.7
92	328-	3.1
94	21-	6.5
92	111-	34.5
94	105-	34.3
96	99-	34.0
96	78-30	14.8
96	14-	13.5
96	347-	23.4
96	342-30	36.5
96	333-30	41.1
96	329-	40.7
96	324-	45.8

Plotted
8/1/17

H/2
95.91

HR7

9176

58

96	320.30	40.7	
96	315 -	39.0	
96	310 -	34.7	
96	304 -	32.4	
96	294.30	31.7	
96	285.30	32.5	
96	278.30	31.0	
96	270.30	27.7	
96	266 -	31.0	OK
96	249 -	27.7	
96	247.30	29.7	
96	237 -	30.6	
96	227.30	35.7	
96	222 -	39.0	
96	221.30	41.4	
96	217.30	45.1	

Platt
8/1/17

H1-
9591

At R7

9176

88 253 - 20.0

Ring Cont.

88 258 - 16.5

Boulder

88 251 - 17.2

92 299-30 23.0

92 305-30 22.4

92 310 - 18.0

92 297 - 17.5

Ring

Boulder

92 292 - 20.9

92 288 - 21.3

94 300 - 17.7

94 304-30 17.0

Ring Cont Boulder

94 307 - 18.5

94 323 - 28.4

94 328 - 28.7

Ring Cont Boulder

94 327 - 27.2

Plotted
8/1/17

H.S.
9591

HR7

9/176

60

96

331-30 32.0

96

336- 33.3

~~336~~

Ring Cont. Boulder

OK

90

211-30 49.0

90

210 - 46.9

90

213-30 41.4

90

216 - 37.1

90

252 - 29.4

92

252 - 26.1

92

243 - 27.5

92

219-30 37.3

92

215.0 42.1

92

217.0 47.0

94

214-30 46.1

94

217-30 41.1

94

220-30 39.9

96

217-30 44.8

Plotted
8/1/17

H.I.
95.31

AR7

91.76

61

96 222-41.1

96 222-30 38.3

96 227-30 35.6

94 230- 32.0

92 236-30 28.9

96 237-30 30.6

96 245.0 29.9

96 249-30 27.6

94 249-30 27.6

96 260-30 29.9

94 259- 28.9

94 266-30 29.5

96 266.30 31.3

Plotted
8/1/17

4.25

402 64

A/R 6

98.39

98	129.30	38.6
100	129-	36.4
98	136.30	27.0
100	130.0	25.3
98	221.30	1.5
100	36.30	2.2
98	329.30	14.7
98	345-	24.3
98	337-	23.3
98	330-	25.4
98	326-	22.0
98	322-	22.5
98	304-	30.3
98	293 ³⁰	29.7
98	282-	29.0
98	270-	29.8
98	268-	27.6

Plotted
8/1/17

0264

HRC

9839

63

98 264³⁰ 26.6

98 257 - 30.1

98 250 - 31.4

98 250 - 34.4

98 245³⁰ 35.1

98 236 - 36.8

98 231 - 40.9

98 228 - 42.9

98 226³⁰ 47.2

98 222 - 48.4

98 215³⁰ 46.5

100 214 - 49.1

100 222³⁰ 51.1

100 225 - 48.9

100 230 - 43.4

100 240 - 37.4

100 251.30 35.3

Plated.
8/11/17

9839

H/W	At	R6
02.64		
100 -	256-	32.2
100	263-	32.3
100	265-	29.6
100	276-	30.0
100	288-	29.3
100	305-30	32.5
100	314 -	30.5
100	320,30	28.4
100	326,30	28.4
100	332.5	26.5
100	335-	29.5
100	347,30	26.6
100	347-	30.6
100	350-	31.2
100	355	36.3
100	00	35.5
100	00	37.7

Plotted
8/1/17

H1 =
02.69

ATR 6

98.39

65

100	358 - 38.7
100	2 - 30 38.9
100	5 - 38.0
100	16 - 37.4
100	26 - 36.1
100	9 - 23.9
100	356 - 9.7
102	123 - 25.7
102	114.30 40.5
102	71.30 6.6
102	213 - 53.2
102	220 - 52.5
102	225 - 50.8
102	227-30 48.8
102	229-30 45.2
102	237-30 42.1
102	243-30 38.3

Plotted
8/1/17

H₁ -
02.64

At R6

9839

102	256 - 37.3
102	259 - 35.0
102	264.30 34.3
102	268 - 31.3
102	279-30 31.1
102	285 - 31.2
102	289 - 29.9
102	303. - 30 32.0
102	310 - 31.9
102	318 - 32.5
102	325.0 29.6
102	329. - 29.8
102	331 - 31.2
102	335 - 30 -
102	341-30 30.8
102	341-30 32.7
102	357. 39.0

Platted
8/1/17

HA
402.64

AR6

9839

67

102	25-28	41.
102	0-30	43.5
102	2-	41.5
102	6-	43.0
102	10-	42.0
102	12-	43.8
102	11-	39.9
102	17-30	38.3
102	20-	41.4
102	16.30	42.7
102	25-	47.7
102	30-30	47.2
102	39-	49.5
102	41-	33.6
102	38-	22.4
102	30-	13.4

Plotted
8/11/17

4.75

10460

At R 5

99.85

68

104

147- 25.6

104

143.30 42.4

104

~~146~~
136 21.3

104

88- 27.4

104

68-30 39.5

104

~~39~~
67.30 39.1

104

63- 34.3

104

59-30 32.9

104

57-30 29.7

104

52- 31.7

104

43- 28.3

104

32- 27.9

104

26- 21.4

104

17- 22.7

104

00 19.7

104

334- 17.7

104

336.30 14.8

platted
8/1/17

HI
04.6

At R5

9985

69

109

296 - 13.7

109

280-30 17.0

104

276 - 18.5

104

276 - 22.6

104

265 - 24.0

104

263 - 25.7

104

295,30 29.5

104

242 - 31.5

104

239-30 39.5

104

233 - 41.7

104

233 - 45.7

104

228 - 48.5

104

223 - 53.0

102

317 - 3.6

102

333-30 5.3

102

10 - 4.5

platted
8/1/17

Ring

H.I. = 4.55
85.19

8064
At Axel Point on Q10-R11 line

70

	100 30	11.4	
82	273 30	12.5	
82	263 30	9.8	
"	284 30	8.6	
"	298 30	7.2	
"	291	5.3	
"	253	5.4	
"	224	2.5	
"	200 30	5.5	
"	130	4.2	
"	99	6.0	
84	103	6.0	
84	151	5.8	
84	175	8.8	
84	200	8.4	X
84	219 30	5.5	
84	207	7.7	

Plotted
8/11/17

W1 8519 At Auxil Point Q10-R1 8064

84 259-30 86

84 265 136

474

H1-9817 At Q 9 4' West 9343

88 46.30 11.2

88 57 6.7

90 27.30 8.5

90 21 3.5

92 22.30 10.7

92 9.0 9.1

92 9.0 7.6

92 34.2 7.1

92 346.30 4.8

92 102.30 3.5

94 13.0 11.8

94 00 8.0

94 34.2 8.0

71

8/2/17

Platted
8/2/17

Hl. 9817	A+ Q9 4'W	9343	
94	332 30 56		✓
94	267 55		✓
96	6° 142		✓
96	347-30 10.9		✓
96	336 30 64		✓
96	270 30 63		✓
96	246 30 55		✓
96	229° 15.3		✓

465				
Hl-7025	A/R 15	6560		
	111 295 4.7	656	✓	
	67-30 26.4 4.8	655	✓	
	29 30 5.3	650	✓	
	35 60 5.7	646	✓	
	7-30 5.3 5.6	647	✓	
	9 312 5.4	649	✓	
	9 182 4.4	659		

Plotted
8/2/17

H.L. = 48.5
69.57

73

At P13		6472			
112°	34.7	48	648	Bottom	✓
120-30	36	39	657	Bank	✓
54°	39.4	4.7	649	Bottom	✓
49-30	40	3.7	659	Bank	✓
00	31.5	3.7	664	Bank	✓
00	21.9	4.7	649	Bottom	✓
316-30	36.1	4.75	648 ^v	"	✓
254	28.7	4.75	648 ^v	"	✓
224-30	33.5	3.5	661	"	✓

H.L. = 69.76

At A13		6496			
124-30	40.6	3.9	659	Bank	✓
78-30	41.4	4.85	6491	Bottom	✓
45-30	40.5	4.8	650	Bottom	✓
38°	43.	4.5	653	Bank	✓
32-30	43.6	3.5	66.3	Bank	✓
386-30	41.5	3.25	66.51	Bank	✓

Platted
8/5/17

6976	A13	Rod	6496		
358	22.5	50	648	Bolton	✓
359	2.9	47.5	6501	Bolton	✓
218°	30.6	33	6646	Bank	✓
234-30	25.5	43	655	"	✓
✓52-30	30.9	50	648	Bolton	✓
329	44	24.5	6631	Bank	✓
309	51	42	6556	Bank	✓
304	50	48.5	6491	Bolton	✓
284	51.5	4.9	649	Bolton	✓
255-30	52	42	656	Bolton	✓
246°	51	32	666	Bank	✓
233-30	50	37.5	6601	"	✓
226	51	30	668	Bank	✓

Platted.
8/5/17

⁴⁴⁶ H16952	A+E13		6507		
66	144-30	28	35	66	✓
✓	137-30	38	25	67.0	Bank ✓

Aug 4. 1917

Aug 4 1

75

6952

AE13

6507

66	131 30	33.1	3.5	66.0		✓
66	116°	27.8	3.5	66.0	Bank	✓
	77 20	27.9	4.6	64.9	Creek Bot	✓
	37	42.3	4.4	65.1	" "	✓
	354	30.8	4.4	65.1	" "	✓
	348°	15.5	4.4	65.1	" "	✓
	254	3.5	4.5	65.0	" "	✓
	209	7.8	3.0	66.5	Bank	✓
	190°	23.7	3.2	66.3	Bench	✓
	185°	31	2.3	67.2	Bank	✓
	221°	39.6	2.3	67.2	"	✓
	227	3.5	3.0	66.5	Bench	✓
	261-30	26.5	3.0	66.5	Bank	✓
66	266°	26.6	3.5	66.0	Cant.	✓
	271°	26.6	4.5	65.0	Ark Bot.	✓
✓	294	30.2	4.4	65.1	" "	✓
	326	46.3	4.5	65.0	" "	✓

Plattool
8/5/17

41.445

6952

A 813

6507

329-30 52 36 659 Bank ✓

455

70.07

A 813

6552

66 93° 21.2 41 660 ✓

66 87-30 8.0 41 660 ✓

66- 180 1. 41 660 ✓

181 28.7 2.7 67.4 Bank ✓

181 23.7 3.5 66.6 Bank ✓

237 46 3.2 66.9 Bank ✓

276 55 4.7 65.4 Gr Bot. ✓

334 16.3 4.7 65.4 " " ✓

342 28 4.8 65.3 " " ✓

341 30.5 4.4 65.7 Bank ✓

344 46.8 4.0 66.1 " ✓

66 317 51 4.1 66.0 " ✓

306 43 4.3 65.8 " ✓

✓ 303 42.2 4.9 65.2 Gr Bot. ✓

Plated
8/5/17

Aug 4/17 77

H.I. -
7007

AG 13

6552

285°	37.4	48	653	Cr. Bot.	✓
262	36.5	46	658	Cr "	✓
256	37.9	31	67.0	Bank	✓
66.	257.30	14.5	41	66.0	✓
66	258.30	30.5	41	66.0	✓
231	37.4	38	66.3	Bank	✓
225	40.5	2.7	67.4	Bank	✓

H.I. 4.1
69.5

AI I 13

6540

66	170°	9.3	3.5	66	✓
66	217	14.2	3.5	66	✓
66	252	33.7	3.5	66	✓
249	34.7	2.9	66.8	Bank	✓
243	36.3	31	66.4	"	✓
235	39.5	2.3	67.2	"	✓
258	35.5	4.2	65.3	Cr Bot.	✓
284	36.8	4.0	65.5		✓

Platted
8/5/17

69.5

At I 13

654

291-30	41.7	4.3	657	Gr Bott	x
305	48.7	4.0	655	" "	x
316	55	3.3	662	Bank	+
346	48	3.2	663	"	✓
344	31.2	3.6	659	"	✓
343	27.8	4.2	653	Gr. Bott.	✓
341	19.6	4.3	653	" "	✓
222	60	4.2	653	" "	✓
184	22.4	3.0	665	Bank	✓
185	26	2.2	673	Bank	✓
145	34.2	2.2	673	"	✓
141-30	31.5	3.2	663	Bank	✓
110°	22.5	2.6	669	"	✓
99	21.7	4.1	654	Bott.	✓
76-30	22.7	4.3	652	"	✓
45-30	32.2	4.3	652	"	✓
43	34	3.7	658	Bank	✓

Acq x 1917
Diller Inst 78
Bub Notes
Fisher - Red.

platted
8/5/17

695

At 113

Rod

654

27

495

34

661

Bank



79

List of B.M.'s

USGS ⁺ in Brass Cap in Boulder East End
 Dam. Elevation 486.569
 #1 Nail in Boulder half way down
 slope below West End Spillway 440.24
 #2 Nail 20' above Draw West side
 below B.M. #1 401.22
 #3 Bolt in Rock Ledge W. Side
 canyon 217' West of Core Wall 371.30
 #4 Bolt in Flat Ledge West Side
 Canyon 50 below Diverting dam 377.59
 #5 Bolt in tower pole to Rt. of Road below
 Toolhouse 440.72
 #6 Rock West end Concrete Basin 494.89

224
 271

 93

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

ROADWAY 14 FEET WIDE. SIDE SLOPES 1½ TO 1.

FOR SINGLE TRACK EMBANKMENT.

	0	.1	.2	.3	.4	.5	.6	7	.8	.9	
0	7.0	7.2	7.3	7.5	7.6	7.8	7.9	8.1	8.2	8.4	0
1	8.5	8.7	8.8	9.0	9.1	9.3	9.4	9.6	9.7	9.9	1
2	10.0	10.2	10.3	10.5	10.6	10.8	10.9	11.1	11.2	11.4	2
3	11.5	11.7	11.8	12.0	12.1	12.3	12.4	12.6	12.7	12.9	3
4	13.0	13.2	13.3	13.5	13.6	13.8	13.9	14.1	14.2	14.4	4
5	14.5	14.7	14.8	15.0	15.1	15.3	15.4	15.6	15.7	15.9	5
6	16.0	16.2	16.3	16.5	16.6	16.8	16.9	17.1	17.2	17.4	6
7	17.5	17.7	17.8	18.0	18.1	18.3	18.4	18.6	18.7	18.9	7
8	19.0	19.2	19.3	19.5	19.6	19.8	19.9	20.1	20.2	20.4	8
9	20.5	20.7	20.8	21.0	21.1	21.3	21.4	21.6	21.7	21.9	9
10	22.0	22.2	22.3	22.5	22.6	22.8	22.9	23.1	23.2	23.4	10
11	23.5	23.7	23.8	24.0	24.1	24.3	24.4	24.6	24.7	24.9	11
12	25.0	25.2	25.3	25.5	25.6	25.8	25.9	26.1	26.2	26.4	12
13	26.5	26.7	26.8	27.0	27.1	27.3	27.4	27.6	27.7	27.9	13
14	28.0	28.2	28.3	28.5	28.6	28.8	28.9	29.1	29.2	29.4	14
15	29.5	29.7	29.8	30.0	30.1	30.3	30.4	30.6	30.7	30.9	15
16	31.0	31.2	31.3	31.5	31.6	31.8	31.9	32.1	32.2	32.4	16
17	32.5	32.7	32.8	33.0	33.1	33.3	33.4	33.6	33.7	33.9	17
18	34.0	34.2	34.3	34.5	34.6	34.8	34.9	35.1	35.2	35.4	18
19	35.5	35.7	35.8	36.0	36.1	36.3	36.4	36.6	36.7	36.9	19
20	37.0	37.2	37.3	37.5	37.6	37.8	37.9	38.1	38.2	38.4	20
21	38.5	38.7	38.8	39.0	39.1	39.3	39.4	39.6	39.7	39.9	21
22	40.0	40.2	40.3	40.5	40.6	40.8	40.9	41.1	41.2	41.4	22
23	41.5	41.7	41.8	42.0	42.1	42.3	42.4	42.6	42.7	42.9	23
24	43.0	43.2	43.3	43.5	43.6	43.8	43.9	44.1	44.2	44.4	24
25	44.5	44.7	44.8	45.0	45.1	45.3	45.4	45.6	45.7	45.9	25
26	46.0	46.2	46.3	46.5	46.6	46.8	46.9	47.1	47.2	47.4	26
27	47.5	47.7	47.8	48.0	48.1	48.3	48.4	48.6	48.7	48.9	27
28	49.0	49.2	49.3	49.5	49.6	49.8	49.9	50.1	50.2	50.4	28
29	50.5	50.7	50.8	51.0	51.1	51.3	51.4	51.6	51.7	51.9	29
30	52.0	52.2	52.3	52.5	52.6	52.8	52.9	53.1	53.2	53.4	30
31	53.5	53.7	53.8	54.0	54.1	54.3	54.4	54.6	54.7	54.9	31
32	55.0	55.2	55.3	55.5	55.6	55.8	55.9	56.1	56.2	56.4	32
33	56.5	56.7	56.8	57.0	57.1	57.3	57.4	57.6	57.7	57.9	33
34	58.0	58.2	58.3	58.5	58.6	58.8	58.9	59.1	59.2	59.4	34
35	59.5	59.7	59.8	60.0	60.1	60.3	60.4	60.6	60.7	60.9	35
36	61.0	61.2	61.3	61.5	61.6	61.8	61.9	62.1	62.2	62.4	36

Calculated by Jullien A. Hall, M. Am. Soc. C. E.