

~~W 63~~

LEVEL BOOK.

No. 410 T

Department of Water
City of San Diego

- LEVELS -
COTTONWOOD CONDUIT

sta 0+00 -

MICROFILMED

JAN 6 1965

EUGENE DIETZGEN CO.

Drawing Materials and Surveying Instruments
 NEW YORK. CHICAGO. SAN FRANCISCO

TABLES FOR EXCAVATIONS AND EMBANKMENTS.
 DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.
 ROADWAY 20 FEET WIDE. SIDE SLOPES 1 TO 1.
 FOR SINGLE TRACK EXCAVATION.

Copyright, 1902. No. 39740.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	0
1	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9	1
2	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	2
3	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9	3
4	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	4
5	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	5
6	16.0	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	6
7	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9	7
8	18.0	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	18.9	8
9	19.0	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.9	9
10	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8	20.9	10
11	21.0	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9	11
12	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.7	22.8	22.9	12
13	23.0	23.1	23.2	23.3	23.4	23.5	23.6	23.7	23.8	23.9	13
14	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8	24.9	14
15	25.0	25.1	25.2	25.3	25.4	25.5	25.6	25.7	25.8	25.9	15
16	26.0	26.1	26.2	26.3	26.4	26.5	26.6	26.7	26.8	26.9	16
17	27.0	27.1	27.2	27.3	27.4	27.5	27.6	27.7	27.8	27.9	17
18	28.0	28.1	28.2	28.3	28.4	28.5	28.6	28.7	28.8	28.9	18
19	29.0	29.1	29.2	29.3	29.4	29.5	29.6	29.7	29.8	29.9	19
20	30.0	30.1	30.2	30.3	30.4	30.5	30.6	30.7	30.8	30.9	20
21	31.0	31.1	31.2	31.3	31.4	31.5	31.6	31.7	31.8	31.9	21
22	32.0	32.1	32.2	32.3	32.4	32.5	32.6	32.7	32.8	32.9	22
23	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	23
24	34.0	34.1	34.2	34.3	34.4	34.5	34.6	34.7	34.8	34.9	24
25	35.0	35.1	35.2	35.3	35.4	35.5	35.6	35.7	35.8	35.9	25
26	36.0	36.1	36.2	36.3	36.4	36.5	36.6	36.7	36.8	36.9	26
27	37.0	37.1	37.2	37.3	37.4	37.5	37.6	37.7	37.8	37.9	27
28	38.0	38.1	38.2	38.3	38.4	38.5	38.6	38.7	38.8	38.9	28
29	39.0	39.1	39.2	39.3	39.4	39.5	39.6	39.7	39.8	39.9	29
30	40.0	40.1	40.2	40.3	40.4	40.5	40.6	40.7	40.8	40.9	30
31	41.0	41.1	41.2	41.3	41.4	41.5	41.6	41.7	41.8	41.9	31
32	42.0	42.1	42.2	42.3	42.4	42.5	42.6	42.7	42.8	42.9	32
33	43.0	43.1	43.2	43.3	43.4	43.5	43.6	43.7	43.8	43.9	33
34	44.0	44.1	44.2	44.3	44.4	44.5	44.6	44.7	44.8	44.9	34
35	45.0	45.1	45.2	45.3	45.4	45.5	45.6	45.7	45.8	45.9	35
36	46.0	46.1	46.2	46.3	46.4	46.5	46.6	46.7	46.8	46.9	36
37	47.0	47.1	47.2	47.3	47.4	47.5	47.6	47.7	47.8	47.9	37
38	48.0	48.1	48.2	48.3	48.4	48.5	48.6	48.7	48.8	48.9	38
39	49.0	49.1	49.2	49.3	49.4	49.5	49.6	49.7	49.8	49.9	39
40	50.0	50.1	50.2	50.3	50.4	50.5	50.6	50.7	50.8	50.9	40

Calculated by F. E. Paradis, C. E.

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L line 0+00 to 167+25 1-49

BMs 78-79

Check levels BM 15
to L 167. 50

Syphon across "Dry CANYON" 51

BM #4 $\frac{1}{2}$ 52

Profile Levels on "L" line

Kneashaw
Whitmore 8-20-14
Brackett
1521529

BM#3	+	HI.	-	
	8.23	1529 ⁷⁶		
L 0+00			6.3	23 ⁵
+12			14 ⁰	15 ⁸
+15			10 ¹	19 ⁷
+50			6 ⁰	23 ⁸
1+00			6 ⁰	23 ⁸
+50			7 ¹	22 ⁷
PC 1+78 ⁸⁴			7 ²	22 ⁶
2+00			6 ¹	23 ⁷
PT 2+23 ³⁴	10 ⁸⁵	1533 ⁸³	6 ⁷⁸	22 ⁹⁸
+50			2 ⁸	31 ⁰
PC +74 ⁶⁴			0 ⁹	32 ⁹
3+00			1 ³	32 ⁵
+24 ⁶⁶			3 ²	30 ⁶
PT +68 ⁶³			3 ⁸	30 ⁰⁰
PC 3+74 ⁵⁷			3 ⁵	30 ³
4+54 ⁵⁷			2 ⁷	31 ¹
+74 ⁵⁷			2 ⁶	31 ²

1.

concrete in bottom of conduit below bridge
sand above bridge

on hub

	+	H1	-	elev
PT 4+83 ⁶³	6 ⁶⁷	36 ⁸²	3 ⁶⁸	30 ¹⁵
5+00-			7 ⁰⁰	29 ⁸
+50			4 ²	32 ⁶
6+00			6 ⁴	30 ⁴
+22 ⁶³			4 ⁹	31 ⁹
+47 ⁶³			6 ⁷	30 ¹
+72 ⁶³			4 ⁸	32 ⁰
+79 ⁶¹			5 ³	31 ⁵
+91 ⁹⁹			3 ²	33 ⁶
TP	11 ⁰⁸	44 ⁷²	3 ¹⁸	33 ⁶⁴
7+16 ⁹⁹			5 ³	39 ⁴
+41 ⁹⁹			5 ⁵	39 ²
+67 ⁵⁹			4 ⁰	40 ⁷
8+00			3 ⁰	41 ⁷
+50			3 ³	41 ⁴
+73 ⁷⁸			3 ⁵	41 ²
+83 ⁷⁸			3 ⁵	41 ²
+93 ⁷⁸			3 ²	41 ⁵

Hub

PC 42°L

PT

PC 44°R

Hub PC

PT 7+71¹⁶ P.T. = 7+71⁶⁹

PC 80°L

	+	HI	-	elev
9+03 ⁷⁸	11 ⁰⁸	44 ⁷²	3 ⁶	41 ¹
+07 ⁷⁸			3 ⁸	40 ⁹
TP +	8 ⁸⁵	49 ⁷¹	3 ⁸⁶	40 ⁸⁶
9+40 ⁰⁸			5 ⁶	44 ¹
+50 ⁰⁸			7 ⁰	42 ⁷
+60 ⁰⁸			8 ⁹	40 ⁸
+70 ¹³			8 ⁰	41 ⁷
10+00			3 ⁹	45 ⁸
+50			3 ³	46 ⁴
11+00			5 ⁵	44 ²
+50			5 ⁰	44 ⁷
12+00			6 ²	43 ⁵
+42 ¹⁹			3 ⁷	46 ⁰⁰
+20	2 ⁰²	50 ⁶²		48 ⁶⁰
12+60 ²³ PC			7 ⁶	43 ⁰
+75			6 ²	44 ⁴
13+00			7 ⁰	43 ⁶
+25			7 ⁸	42 ⁸

PT
Hub PC
PC 98°R
PT
PC 42°L POR

	+	HI-	-	elev
	+50	1515 ⁶²	55	45 ¹
	+64 ⁸⁰ PC		56	45 ⁰
	+89 ⁸⁰		52	45 ⁴
	14+21 ²¹ PT		54	45 ²
	+50		51	45 ⁵
	+75		91	41 ⁵
	15+00		54	45 ²
	TP	12 ⁸⁸	52 ¹⁹	1081
	+50		63	45 ⁹
	+93 ⁴² PC		63	45 ⁹
	16+03		18	50 ⁴
	+13 ⁶⁸		+0 ²	52 ⁴
	+25		32	49 ⁰
	+35		+0 ⁴	52 ⁶
	16+75	52 ¹⁹	72	44 ⁹
	+92 ⁰¹ PC		62	46 ⁰
	17+17		38	48 ⁴
	+38 ¹⁸ PT		28	49 ⁴

	+	HI	-	Elev
	⁸⁵ +55	POT	+28	530
TP	+11 ⁰⁹	60 ⁸⁸	2 ⁴⁰	4919
18+00				472
TP	3 ³⁵	55 ⁸⁹	8 ³⁴	52 ⁵⁴
+50			8 ³	476
+74 ⁴³			8 ⁰	479
+99			6 ⁶	493
19+13 ⁰⁰			7 ⁴	485
= 19+14 ⁰⁵				
19+16 ⁵⁵				
= 19+17 ⁶⁴			3 ⁸³	52 ⁰⁰ 52 ⁰⁰
+50			10 ³	496 (02)
TP	3 ⁶⁷	53 ⁶⁹	7 ⁹³	52 ⁰²
20+00			3 ⁶	521
+03 ⁴⁷			3 ⁷	520
+28 ⁴⁷			6 ⁵	492
+52 ⁴⁵			6 ⁴	493

Rock 19

PC 40°R

PT

$\frac{29}{72+02}$
 $72+02$
 $72+02$
 38

$19+17+64$
 $19+17+64$
 $19+17+64$
 $19+17+64$

Date
Sept 1 1914
Hull-
Whitmore
Thompson
elev

Line change # 3

	+	H I	-	
TP	003			50 ⁷⁰
20+83 ³¹		50 ²³	1 ^L	49 ⁶
+98 ⁴⁶			5 ²	45 ⁵
21+30			16 ⁶	34 ^L
+68			16 ⁴	34 ³
+76			8 ^L	42 ⁶
22+00			3 ⁹	46 ⁸
+25 ⁷⁰			2 ⁵	48 ²
+75 ⁻			1 ⁰	49 ⁷
23+25 ⁷			1 ²	49 ⁵
TP	9 ⁷⁵		0 ⁵⁷	50 ¹⁶
+75 ⁻		59 ⁹¹	9 ¹	50 ²
24+25			10 ^L	49 ⁸
+75 ⁻			10 ⁸	49 ^L
+96 ¹²			8 ³	51 ⁶
25+01 ¹⁸			9 ⁷	50 ²
+26			4 ⁷	55 ²

PT 20+94²⁸ old PT
PI
PT NEW PT

PC

22+78⁰⁷ = 22+79⁴⁰

on top stake sta 23+25²

PT

PC

	+	HI-	-	elev	
			2°	57 ⁹	
			3 ⁹	56°	PT
		59 ⁹¹	3 ⁶	56 ³	PC
			8 ⁷	51 ²	
26+10			9 ⁴	50 ⁵	
			2 ⁹	57°	
			6 ⁶	53 ³	
27+00			12 ³	47 ⁶	
			9 ¹	50 ⁸	PT
TP	12 ⁷⁴		10 ⁵⁹	49 ³²	on rock opp PT on r.
		62 ⁰⁶	9 ⁷	52 ⁴	
			7 ²	54 ⁴	
28+00			6 ⁷	53 ⁴	
			12 ⁸	49 ³	
			10 ⁵	51 ⁶	
			10°	52 ⁴	
			11 ⁹	50 ³	
			10 ⁵	51 ⁶	

	+	H I	-	elev	
+92 ³⁸		62 ⁰⁶	9 ⁹	52 ²	PC
29+07			11 ⁹	50 ²	
+26			8 ³	53 ⁸	
+32		62 ⁰⁶	5 ⁴	56 ⁷	
+56			4 ^L	58 ⁰	
+73			9 ⁷	52 ⁴	
+87			7 ⁰	55 ⁻¹	
30+06 ²⁷			7 ²	54 ⁹	PT
+06 ⁹⁹			7 ¹	55 ⁰	PC
+30			3 ⁸	58 ³	on stone L sto 30+30
TP	5 ¹²		12 ⁹	60 ²⁷	
+58 ³⁸		65 ³⁹	8 ⁰	57 ⁴	PT
31+00			6 ⁹	58 ⁵	
+20			8 ⁷	56 ⁷	
+43 ⁷²			8 ⁰	57 ⁴	PC
+70			6 ²	59 ²	
+90			4 ⁹	60 ⁵	
32+34 ³⁰			5 ⁵	59 ⁹	PT

	+	#1	-	elev
TP	10 ¹²		10 ⁷³	5466
32+80		64 ⁷⁸	8 ¹	562
+90			10 ⁹	539
33+00			8 ⁵	563
+12		64 ⁷⁸	6 ²	586
+50			6 ⁹	579
+70			6 ⁰	588
+79 ¹³			7 ⁰	578
+90			8 ⁶	562
34+25			5 ¹	597
+65 ⁵²			4 ⁷	601
+74 ⁴⁶			4 ⁴	604
+78			6 ⁸	580
35+00			4 ⁴	604
+14 ⁵²			5 ⁹	589
+29 ⁰¹			5 ⁰	598
+54			6 ⁴	584
+80			8 ¹	567

on top of stake R. sta 32+50

PC

PT

PL

PT

PC

	+	#1	-	elev
+91 ⁵⁹		6478	68	580
36+07 ⁸³			6.4	584
+20			85	563
+50 ²⁰			59	589
+65			39	610
37+00		6478	57	591
+20			64	584
+42			41	607
+67			39	609
+82 ⁹⁷			33	615
TP	1 ⁹³		273	6205
38+00		6396	14	626
+20			00	640
+50			28	612
39+00			53	587
39+00			54	586
39+15			44	596
TP	373	6484		611

PT

PC

PT

PC

PT

on top of PT stake

PI 39+47 45

Knoeshaw notes

Dilly inst

Rogers rod

- 9-4-14

11i

39+62

+

64~~84~~

62

57~~9~~

+82

102

54~~1~~

40+00

11~~3~~

53~~5~~

+12

15~~5~~

49~~3~~

+50

14~~0~~

50~~8~~

+78

10~~1~~

54~~2~~

41+00

6~~6~~

58~~2~~

+28

8~~2~~

56~~6~~

+35

9~~4~~

55~~4~~

+55

6~~0~~

58~~8~~

+80

5~~6~~

59~~2~~

42+00

6~~6~~

58~~2~~

+10

7~~7~~

57~~1~~

+30

4~~6~~

60~~2~~

+50

4~~8~~

60~~0~~

+67

6~~8~~

58

+92

2~~2~~

62~~6~~

TP

24~~3~~

66~~66~~

06~~1~~

64~~23~~

PC

PC

Rock 42+87

	+	HI	-	elev
39	43+17	66 ⁶⁶	69	598
	+39		76	591
40	+50		74	592
	+75		90	572
	+94		89	578
	44+10		92	570
41	+19		80	582
	+35		53	614
	+44		70	592
	+68		70	592
	TP	676	6695	647 6019
42	45+00		555	614
	+40		96	573
	+80		49	620
	46+00		42	627
	+20		56	613
	+35-		19	650
	+50		19	650

PT

PC

PT

Top 44+68

	+	H1	-	elev
			18	65 ^L
		66 ⁹⁵	28	64 ^L
4 47+00			66	60 ³
			84	58 ⁵
			22	64 ^L
TP	5 ⁰³	66 ⁶⁷	5 ³¹	61 ⁶⁴
			35	63 ²
			43	62 ⁴
			55	61 ²
			33	63 ⁴
48+037⁸		48+0290		
4 = 48+72⁹⁴		=48+7471	19	64 ⁸
			490	61 ⁷⁷
48+79 ⁴⁴			44	64 ^L
			568	63 ⁴⁰
49+15 ⁻			52	63 ⁹
			68	62 ³
			49	64 ²

Rock 10' r of +50

49+18³⁸ P1

	+	H1	-	elev
			6 ²	62 ⁹
TP	67 ⁰	68 ³⁶	7 ⁴²	61 ⁶⁶
50+01 ⁰⁵ PT		68 ³⁶	5 ⁹	62 ⁵
+30			4 ²	64 ²
+59 ³³ PC			6 ⁴	62 ⁰
+69			7 ³	61 ¹
+82 ³⁴ PT			4 ⁰²	64 ³⁴
+84 ⁰⁸ PC			4 ⁰	64 ⁴
51+09 ⁰⁸			4 ⁴	64 ⁰
+45 ³³ PT			5 ⁷	62 ⁷
52+02 ¹³ PC			4 ⁸	63 ⁶
+22			1 ²	67 ²
TP	5 ⁶⁴	70 ⁹²	3 ⁰⁸	65 ²⁸
+32			5 ⁴	65 ⁵
+45 ⁶⁶ PT			5 ¹	65 ⁸
+60			5 ⁰	65 ⁹
+70			7 ⁷	63 ²
53+00			5 ⁴	65 ⁵

Hub 49+81⁵⁷ PI

Rack

	+	HI	-	elev
+50			38	67 ¹
+72 ²⁵ PC			38 ⁵	67 ⁰⁷
+82			47	66 ²
+92 ⁶⁵ PT	70	92	58	65 ¹
54+05 ⁻			12 ⁰	58 ¹
+36			11 ⁸	59 ¹
+46 ³¹ PC			9 ⁵	61 ⁴
+56			5 ⁶	65 ³
+71 ³¹			5 ⁵	65 ⁴
+96			5 ⁶	65 ³
TP	5 ⁶³	71 ⁰⁸	5 ⁴⁷	65 ⁴⁵
55+19 ³⁷			5 ⁷	65 ⁴
+50			5 ²	65 ⁹
56+00			5 ⁰	66 ¹
+16 ³³ PC			4 ⁰	67 ¹
+41			2 ²	68 ⁹
+62 ⁵⁴ PT			2 ⁸	68 ³
57+00			3 ⁹	67 ²

edge of bank
bottom creek

P1 Hub 54+46³¹ 55+14⁶⁴ = 55+15³⁴

	+	HI	-	elev
+50		71 ⁰⁸	4 ¹	67 ⁰
58+00			3 ²	67 ⁹
+30			4 ⁴	66 ²
+40			9 ⁶	61 ⁵
+50		71 ⁰⁸	7 ⁴	63 ⁷
+60			3 ⁸	67 ³
59+00			3 ⁵	67 ⁶
+15 ³³	PC	5 ⁰⁴	72 ⁸⁶	3 ²⁶ 67 ⁵²
+65			5 ⁴	67 ⁵
60+37 ⁹³	PT		5 ¹	67 ⁸
61+00			4 ⁸	68 ¹
+50			4 ⁷	68 ²
62+00			4 ²	68 ⁷
+50			4 ⁰	68 ⁹
BM			4 ²⁸	68 ⁵⁸
BM	5 ³³	73 ⁸⁶		68 ⁵³
61+00			5 ⁸	68 ¹
+50			5 ⁶	68 ³

Hub

BM #10 = old elev 1568^{53}
 68^{58}
 Error = 0.05

	+	HI	-	elev
62+00		73 ⁸⁶	5 ²	68 ⁷
+50			5 ¹	68 ⁸
63+00			4 ⁴	69 ⁵
+63 ⁶⁹ PC			3 ⁴	70 ⁵
64+13 ⁶⁹			3 ⁹	70 ⁰
+63 ⁶⁹		73 ⁸⁶	4 ⁴	69 ⁵
	8 ¹⁶	76 ⁴⁵	5 ⁵⁷	68 ²⁹
65+13 ⁶⁹			6 ⁶	69 ⁹
+60 ⁵⁸ PT			5 ⁷	70 ⁹
66+00			5 ⁰	71 ⁵
+50			4 ⁶	71 ⁹
67+00			5 ⁰	71 ⁵
+50			4 ⁷	71 ⁸
+82 ⁶¹ PC			4 ⁵	72 ⁵
68+07 ⁶¹			4 ⁰	72 ⁵
+33 ⁶³ PT			4 ²	72 ³
+50			4 ¹	72 ⁴
TP	+4 ⁹²	77 ¹²	4 ²⁵	72 ²⁰

PT Hub

	+	HI	-	elev.
69+00		77 ¹²	3 ⁹	73 ²
+50			4 ⁵	72 ⁶
+75 ⁴¹	PC		4 ²	72 ⁹
+95 ⁴¹			4 ⁰	73 ¹
70+13 ⁹³	PT		3 ⁷	73 ⁴
+50			3 ¹	74 ⁰
71+00			2 ⁸	74 ³
+50			2 ⁷	74 ⁴
+64 ⁶⁰	PC	77 ¹²	3 ¹	74 ⁰
+84 ⁶⁰			3 ³	73 ⁸
PT	6 ³³	81 ²⁷	2 ¹⁸	74 ⁹⁴
72+02 ⁴⁹	}		6 ³	75 ⁰
=72+03 ³⁸				
+30			5 ⁹	75 ⁴
+50			7 ⁵	73 ⁸
73+00			6 ¹	75 ²
	6 ⁹	85 ⁶⁴		71 ⁸⁰ +13 ⁵⁰ 78 ⁷⁴
+34 ²⁵			9 ⁹	75 ⁷

	+	HI	-	elev
+84		85 ⁶⁴	9 ⁸	75 ⁸
74+34			9 ⁶	76 ⁰
+84			10 ^L	75 ⁵
75+34			8 ^L	76 ⁹
+84			7 ⁶	78 ⁰
76+34			8 ^L	77 ⁵
+50			7 ⁵	78 ^L
77+00			5 ⁵	80 ^L
+50			4 ⁰	81 ⁶
78+00			3 ⁴	82 ²
+50			3 ⁶	82 ⁰
79+00			6 ⁰	79 ⁶
79+42 ³² DOT	}			
=80+22 ³⁶ old pt			6 ⁸	78 ⁸
80+22 ³⁶			6 ⁸	78 ⁸
+02 ³⁸ PO			6 ⁰	78 ⁰
T.P.	6 ⁴⁰	85 ¹⁴	5 ³⁰	78 ¹⁴
+12 ³⁸			6 ⁶	78 ⁵

Hob 80+13⁵⁰ P1

	+	H1	-	elev
86+06 ⁶⁷		87 ⁶⁸	5 ⁸	81 ⁹
+31 ⁶⁷			3 ⁴	84 ³
+37 ⁴⁰			3 ⁵	84 ²
+66 ⁷⁵			4 ⁹	82 ⁸
TP	11 ⁰¹	93 ⁰⁹	5 ⁶⁰	82 ⁰⁸
+76 ⁷⁵			10 ²	82 ⁴
+82 ⁷⁹			10 ⁴	82 ²
87+00			10 ³	82 ⁸
+50			10 ⁰	83 ¹
+68			10 ⁶	82 ⁵
+78			9 ⁴	83 ⁷
+82 ³²		93 ⁰⁹	8 ⁶	84 ⁵
88+04 ⁷⁴			4 ²	88 ⁹
+50			9 ⁶	83 ⁵
89+00			10 ⁰	83 ¹
+50			8 ⁴	84 ²
90+00			8 ⁸	84 ³
+16 ⁰¹			8 ³	84 ⁸

PT
PC 180°L
Hub P1. 86+75-16
PI
PC 240°L
PT
POT
PC 160°L

	+	H1	-	elev
TP	5"	89 ⁸⁷	8 ³³	84 ⁷⁶
+26 ⁰¹			4 ⁸	85 ⁻¹
+32 ⁹⁰			4 ⁶	85 ⁻³
+79 ⁰⁷			4 ⁹	85 ⁻⁰
+89 ⁰⁷			4 ⁴	85 ⁻⁵
+99 ⁰⁷			5 ²	84 ⁷
91+09 ⁰⁷			5 ⁵	84 ⁴
+12 ⁸²			5 ²	84 ⁷
+45 ⁻²³			3 ⁶	86 ³
+55 ⁻²³			3 ⁶	86 ³
+63 ⁹⁶			3 ⁶	86 ³
TP	4 ⁹⁵	91 ²⁰	3 ⁶²	86 ²⁵
92+00			4 ²	87 ⁰
+25			7 ²	84 ⁰
+50			4 ¹	87 ⁻¹
93+00			4 ⁹	86 ³
+50			4 ⁹	86 ³
+75			5 ³	85 ⁹

PT

PC 310⁰R

PT

PC 310⁰L

PT

Hub PT.

	+	HI	-	elev
94+00		91 ²⁰	3 ⁹	87 ³
+50			3 ¹	88 ¹
95+00			3 ⁴	87 ⁸
+19 ⁸¹			3 ⁸	87 ⁴
+44 ⁸¹			4 ⁴	86 ⁸
+69 ⁸¹			0 ⁷	90 ⁵
TP	7 ¹⁶	96 ⁸³	15 ³	89 ⁶⁷
+84 ⁸¹			4 ⁵	92 ³
+98 ³⁷			4 ⁹	91 ⁹
96+13 ⁴⁴			9 ⁵	87 ³
+23 ⁴⁴			8 ⁶	88 ²
+33 ⁴⁴			6 ⁸	90 ⁰
+43 ⁷⁶			6 ⁷	90 ¹
+57 ¹⁰		96 ⁸³	6 ⁹	89 ⁹

Bub rod 5-29-14.
Dilly level
Kneeshaw notes

TP	5 ⁶⁶	94 ¹⁹	7 ¹⁰	89 ¹³
+67			7 ¹	87 ⁷

PC 29°R

PI 95+69⁷² Hub

96+87⁹⁶ = 96+90.94 P.T.

PT

PC 98°L

PC 112°R checked on profile

Hub PI 96+74⁸⁴

	+	HI	-	elev
96+90 ²⁴	}	9479		
=96+87 ^{26 FT}			4 [±]	90 [±]
96+96			4 [±]	90 [±]
97+16			7 [±]	87 [±]
+25 ⁻			7 [±]	87 [±]
+40			5 [±]	89 [±]
+65 ⁻			7 [±]	87 [±]
+85 ⁻			2 [±]	92 [±]
98+02 ³¹			4 [±]	90 [±]
+20			6 [±]	88 [±]
+35			6 [±]	88 [±]
+60			4 [±]	90 [±]
+75 ⁻			5 [±]	89 [±]
99+00			4 [±]	90 [±]
+42 ⁵²			5 [±]	89 [±]
+58 ⁴⁹			5 [±]	89 [±]
+90 ⁵²			4 [±]	90 [±]
100+07		9479	4 [±]	90 [±]

3' cut

PC

PC

PT

PC

	+	HI	-	elev	
		9479	54	894	
			29	919	
			44	904	PC
			47	901	
			23	925	
			17	931	PT
101+05			36	912	101+02 82 = 101+03 32
+19 ⁸⁸			31	917	PC
+39			39	909	5.0' cut
TP	659	9876	262	9217	Top of 101+39
+57 ⁰⁹			82	908	PT
+70			83	905	
102+05 ⁸³			63	925	PC
+20			47	941	
+35			62	926	
+55			36	952	
+65 ⁸⁶			39	949	PT
+80			58	932	5.0' cut

	+	HI	-	elev
103+00		98 ⁷⁶	6 ⁰	92 ⁸
+50			5 ²	93 ⁶
+70			4 ¹	94 ⁷
+80			6 ³	92 ⁵
+95			3 ⁸	95 ⁰
104+14 ⁸⁵			3 ⁵	95 ³
+35			4 ⁴	94 ⁴
+42 ⁵⁷			5 ⁴	93 ⁴
+55			6 ³	92 ⁵
105+02 ⁷⁵			4 ⁶	94 ²
+27			4 ⁷	94 ¹
+40			5 ⁴	93 ⁴
+74 ⁹⁹			4 ⁶	94 ²
+81 ⁰⁰			4 ⁵	94 ³
106+07 ⁵⁷			4 ⁵	94 ³
+25			3 ⁵	95 ³
+35			6 ³	92 ⁵
+45			3 ³	95 ⁵

PC

PT

3' cut

PC

PT

PC

PT

	+	H I	-	elev
TP	9 ²²	1602 ⁹⁵	5 ⁰³	93 ⁷³
107+00			6 ⁰⁰	96 ⁹
+20 ¹¹			5 ³	97 ⁶
+50			6 ⁰	96 ⁹
+55			9 ⁴	93 ⁵
+70			4 ⁵	98 ⁴
+77 ⁹⁴			4 ³	98 ⁶
+91 ³⁶			4 ¹	98 ⁰
108+14 ⁵²⁴			4 ⁰	98 ⁹
+30			4 ⁵	98 ⁴
+35			7 ⁸	95 ¹
+40			5 ²	97 ⁷
+70			4 ⁹	98 ⁰
+80			2 ³	00. ⁶⁰
TP	10 ⁰⁴	1611 ⁴⁴	15 ⁵	01. ⁴⁰
109+00			10 ³	01 ¹
+03			13 ⁵	97 ⁹
+05			9 ⁸	01 ⁶

P1 105+94⁸⁹

PT

PT

PC

PT

108+26²⁷=108+26⁶⁰

R & 108+95

	+	H1	-	elev
+35 ⁻			6°	05 ⁴
+51 ⁹²			47	06 ⁷
+61		1611 ⁴⁴	7°	04 ⁴
+70			67	04 ⁷
+75			137	97 ⁷
+83 ⁰⁷			66	04 ⁸
110+00			38	07 ⁶
+35 ⁻			7 ⁴	04 ⁰
+40			16 ⁹	94 ⁵
+55 ⁻			15 ⁶	95 ⁸
+65 ⁻			10 ⁶	00 ⁸
+75 ⁻			14 ⁵	96 ⁹
111+00			117	99 ⁷
+119 ⁹			118	99 ⁶
+22			114	00 ⁰⁰
+36 ⁵⁷			112	00 ²
+53 ⁴⁷			135	97 ⁹

PC

PT

$$110+05^{06} = 110+06^{25}$$

PC

PT

PC

	+	H1	-	elev
TP	2 ⁹⁹	1602 ³⁹	12 ¹³	99 ³¹
+60			4 ³	98 ⁰
+69			1 ²	01 ⁴
+87 ¹¹			2 ⁶	99 ⁷
112+00			3 ¹	99 ²
+11 ⁰⁴			3 ³	99 ⁰⁰
+35			3 ³	99 ⁰⁰
+50			0 ⁵	01 ⁸
+65			00 ⁰⁰	02 ³
TP	9 ⁷⁰	1606 ⁰³	5 ⁹⁷	96 ³³
112+90			6 ⁶	99 ⁴
+95			7 ⁶	98 ⁴
113+04 ⁸⁰			6 ³	99 ⁷
+15			6 ⁹	99 ¹
+40			4 ²	01 ⁸
+54 ⁹⁰			4 ²	01 ⁸
+79 ⁹⁰			5 ⁰	01 ⁰
114+04 ⁹⁰			5 ⁵	00 ⁵

110+88²⁵ old sta Δ L elev 9928

PC

PT

$$112+13⁵⁵ = 112+13⁸⁰$$

25' R of 112+90

PC

	+	#1	-	elev
+17 ⁷⁸		1606 ⁸³	6 ²	99 ⁸
+36 ⁸¹			5 ⁶	00 ⁴
TP	12 ⁵⁵	1607 ⁹⁵	10 ⁶³	95 ⁴⁰
+51 ⁸⁰			7 ⁶	00 ³
+74			6 ⁹	01 ⁰
+86		1607 ⁹⁵	6 ⁹	01 ⁰
115+11 ⁹⁸			5 ⁷	02 ²
+35			5 ⁰	02 ⁹
+45			5 ⁸	02 ¹
+61 ¹²			8 ⁸	99 ¹
+71			8 ⁹	99 ⁰
+81			9 ⁵	98 ⁴
+88 ⁹⁰			9 ¹	98 ⁸
116+05 ⁵⁰			5 ⁶	02 ³
+15			5 ⁸	02 ¹
+25			6 ⁴	01 ⁵
+35			7 ²	00 ⁷

PT

PC

Rock N¹ R 114+40

PT

PC

PT

PC

Sep 8 1914

J.C. Kraashaw level

C.H. Tiesdale notes

B. Rogers road
clear + hot

	+	HI	-	elev
+47			6 ⁹	01 ⁰
TP	5 ⁴⁸	1607 ²¹	6 ²²	017 ³
+71			5 ³	01 ⁹
+81			4 ¹	03 ¹
+96			5 ⁰	02 ²
117+21			4 ⁷	02 ⁵
+46			5 ¹	02 ¹
+50		1607 ²¹	5 ⁶	01 ⁶
+65			6 ⁶	00 ⁶
+81			6 ⁹	00 ³
+95			4 ⁶	02 ⁶
118+20			3 ⁴	03 ⁸
+35			4 ⁹	02 ³
+48			4 ⁵	02 ⁷
+73			3 ¹	04 ¹
+99			3 ¹	03 ³
TP	9 ⁶³	1613 ³¹	3 ⁵³	1603 ⁶⁸
119+24			7 ³	06 ⁰

PT

116+47 top of stake, 116+53⁶⁹ = 116+54⁵¹

PC

Top of stake 118+99

	+	#1	-	elev	
	+48	16B ³¹	10 ²	03 ¹	
	+78		11 ¹	02 ²	
	+98		10 ⁶	02 ⁷	PT
	120+05		13 ⁰	00 ³	
	+17		8 ⁶	04 ⁷	PC
1	+35		13 ⁴	99 ⁹	
	+50		9 ⁵	03 ⁸	
	+76		11 ⁰	02 ³	
	+86	1613 ³¹	9 ⁵	03 ⁸	PC
	+96		7 ⁴	05 ⁹	
	121+11		9 ¹	04 ²	
1	+25		13 ⁰	00 ³	
	FP	10 ⁶⁰ 1611 ⁸⁸	12 ⁰³	16012 ⁸	121+36 top stake
	+36		11 ¹	00 ⁷⁸	
	+53		8 ⁴	03 ⁵	
	+63		7 ⁷	04 ²	
	+86		10-	01 ⁹	PC
1	+96		10 ³	01 ⁶	

	+	H1	-	elev
122+06		11 ⁸⁸	11 ²	00 ⁷
+16			11 ²	00 ⁷
+26			10 ⁹	01 ²
+35			10 ¹	01 ⁸
+55-			3 ⁶	08 ³
+65-			8 ⁹	03 ⁰
+79			3 ⁸	08 ¹
+89			2 ⁸	09 ¹
+99			1 ²	10 ⁷
123+15-		1611 ⁸⁸	1 ⁵	10 ³⁸
+30			3 ⁶	08 ³
+50			11 ⁶	00 ³
+60			8 ⁸	03 ⁰⁸
+70			9 ⁴	02 ⁴⁸
+80			9 ⁷	02 ¹⁸
+90			10 ⁶	01 ³
124+00			10 ⁰	01 ⁸⁸
+14			8 ⁸	03 ⁰⁸

	+	HI	-	elev
+29		<u>1188</u>	<u>79</u>	<u>04</u> ⁰
TP			<u>12</u> ⁵⁵	<u>1601</u> ⁸⁶
TP			<u>11</u> ⁸⁰	<u>1602</u> ⁶¹
124+20		<u>1614</u> ⁴¹	<u>11</u> ³	<u>1603</u> ¹
+40		do	<u>10</u> ³	<u>1604</u> ⁴
+60		do	<u>13</u> ³	<u>1601</u> ¹
+71		do	<u>10</u> ⁴	<u>1604</u> ⁰
125+00		do	<u>13</u> ⁰	<u>1601</u> ⁴
+25		do	<u>10</u> ⁴	<u>1604</u> ⁰
+65		do	<u>10</u> ⁷	<u>1603</u> ⁷
126+00		do	<u>9</u> ⁴	<u>1605</u> ⁰
+50		do	<u>7</u> ⁵	<u>1606</u> ⁹
+75		do	<u>10</u>	<u>1604</u> ⁴
TP	<u>-5</u> ⁸⁰		<u>+10</u> ³⁰	<u>1604</u> ⁴
+80		<u>1609</u> ⁹¹	<u>8</u> ¹	<u>1601</u> ⁸⁰

PC

These levels were backed in from sta
133+66, for elev 1616.23 see X set

book #2, page 10 -

on grade hub 123+94

P1-123+93 ⁶⁹

	+	H1	-	elev
127+00		do	7 ⁸	1602 ¹
+50		do	7 ⁸	02 ¹
128+00		do	7 ⁴	1602 ⁵
+50		do	7 ⁰	02 ⁹
129+00		do	4 ⁸	05 ¹
+20		do	4 ⁰	05 ⁹
+33		1609 ⁹¹	4 ²	05 ⁷
+58		do	6 ⁴	1603 ⁵
130+00		do	5 ²	04 ⁷
+18			4 ³	05 ⁶
+40			4 ²	05 ²
+60			4 ⁶	05 ³
+75			3 ⁴	06 ⁵
131+00	37 ⁸⁰ shot + sta.		3 ⁴	06 ⁵
132+00			4 ³	05 ⁶
+10			4 ³	05 ⁶
TP	+116	1609 ⁹¹	12 ⁶	16097 ⁵
TP	478	1621 ⁰¹		1616 ²³

	H1	-	elev
+26	1621 ¹	10 ⁶	10 ⁴
+50		11 ⁰	10 ⁰
+82		11 ¹	09 ⁹
133+13		9 ⁹	11 ¹
+35		10 ⁰	11 ⁰
+66 PT		10 ⁴	10 ⁶
134+00		10 ²	09 ⁵
+30		8 ⁴	11 ³
+50		6 ⁵	13 ²
+75		7 ⁸	11 ⁹
135+00		7 ⁵	12 ²
+38		7 ³	12 ⁴
+50		8 ¹	11 ⁶
+63		7 ⁷	12 ⁰
136+00		3 ⁶	16 ¹
+13		5 ³	14 ⁴
+43		6 ⁸	12 ⁹
+70		7 ⁹	11 ⁸

PT

	+	HI	-	elev
137+00			5 ⁴	14 ³
+15		1619 ⁷	4 ⁵	15 ²
+30			6 ⁸	12 ⁹
+50			5 ²	14 ⁵
+80			4 ⁰	15 ⁻⁷
+85			6 ⁸	12 ⁹
138+00			7 ⁹	11 ⁸
+30			3 ⁹	15 ⁸
+50			3 ⁶	16 ¹
+70			6 ³	13 ⁴
+72			5 ⁴	14 ³
+89			5 ⁰	14 ¹
TP	6 ⁷	1620 ⁸⁰	5 ⁷	14 ⁴
TP	12 ⁶⁵	1631 ⁹¹	0 ⁴⁵	19 ²⁶
TP	11 ⁵⁷	1642 ³²	1 ⁶	30 ⁷⁵
BM#15			2 ⁹²	39 ⁴⁰
139+05			5 ⁰	15 ⁸
+29			5 ¹	15 ⁻¹

PC

139+02 PI (on hwy)

correct elev = 1639.44³

PT

	+	H1	-	elev
+35		42 ³²	86	12 ²
+50			49	15 ⁹
+70		1620 ⁸⁰	25	18 ³
+75			12	19 ⁶
+80			32	17 ¹
+90			54	15 ⁴
140+00			59	14 ⁹
+12			45	16 ³
+22			47	16 ¹
+32			50	15 ⁸
+42			45	16 ³
+49			50	15 ⁸

PT

PT

	88 ⁵	24 ⁸⁵	1616 ⁰⁰
140+59 ⁴⁸ PC			86 16 ³
+69			80 16 ⁹
+79			65 18 ⁴

Sept 21

Level Bub

P1 140+82 on Hub abandoned line

	+	H1	-	elev
	+89	24 ⁸⁵	6°	189
	+99		6°	182
	141+10 ³⁷ PT		6°	189
	+23 ⁸⁵ PC		6°	182
	+33		9°	152
	+38		11°	137
	+43		9°	154
	+52 ⁷⁰ PT		7°	172
	+71 ⁶¹ PC		6°	186
	+81		6°	181
	+91		6°	186
	142+03 ⁷⁸		8°	169
	+05		9°	150
	+30		8°	169
	+50		4°	205
	TP 972	1624 ⁸⁵ 1626 ⁰⁹	848	1637
	+65		5°	203
	+80 ⁸⁷ PC		11°	146

TP Hub 142+40⁹⁸ old PI.

	+	H1	-	elev
	+91	26 ⁰⁹	8 ³	17 ⁸
143	+02 ⁰⁶ PT		6 ⁶	19 ⁵
	+15 ³⁵ PC		7 ⁵	18 ⁹
	+25 ⁻		7 ⁹	19 ²
	+35 ⁻		7 ⁰	19 ¹
	+43		6 ¹	20 ⁰
	+45 ⁻		3 ⁵	22 ⁶
	+48		1 ⁸	24 ³
	+53 ⁶⁷		6 ²	19 ⁹
	+70		2 ⁴	23 ⁷
	+72 ⁰³ PC		6 ¹	20 ⁰
	+82		10 ²	16 ⁰
	+95 ⁰² PT		7 ⁸	18 ³
144	+05 ⁹⁸ PC		6 ⁹	19 ²
	+15 ⁻		7 ²	18 ⁹
	+33 ⁴⁰ PT		7 ¹	19 ⁰
	+41 ⁴⁷ PC	1626 ⁰⁹	6 ⁹	19 ²
	+51		9 ⁶	16 ⁵

bottom Rock

on boulder

Top boulder

PT

Top boulder

	+	H I	-	elev
	+60		26 ⁰⁹	9 ³ 16 ⁸
	+65-			64 191
TP	4 ³⁹	162474	574	20 ³⁵ -
	+95-			71 176
145+00				5 ² 19 ⁵
	+137 ⁵ PC			20 221
	+21 ³¹ POT			27 ² 22 ⁰²
	+30			67 180
	+38			8 ⁵ 16 ²
	+43			70 171
	+63			50 191
	+75-			56 191
	+89			46 201
146+13				40 201
	+18 ²⁹ PT			40 201
TP	4 ¹⁴	2486	40 ²	20 ¹²
	+30			71 178
	+50	2486	20	22 ⁹

Rock 5' L of sta 144+65-

on Hub

Rock 8' R 146+13

	+	H1	-	elev
+74	³⁶ PC	248 ⁶	3 ³	21 ⁶
+84			6 ⁹	18 ⁰
+92	¹² PT		7 ⁸	17 ¹
147+05	¹⁰ PC		3 ⁵	21 ⁴
+30	¹⁰		2 ³	22 ⁶
+55			1 ¹	23 ⁸
TP	107 ⁸	1630 ⁹⁰	47 ⁴	20 ¹²
+80			8 ²	22 ⁷
148+05			10 ⁻	20 ⁹
+30			11 ⁹	19 ⁰
+55			10 ⁴	20 ⁵
+65			9 ⁴	21 ⁵
+70	^{148+73¹²} ^{=148+70⁸⁸}		5 ⁵	25 ⁴
+75			10 ⁰	20 ⁹
+78	⁷³ PT		11 ⁰	19 ⁹
149+00			10 ⁸	20 ¹
+50			9 ⁴	21 ⁵
+70	¹⁰ PC		10 ⁴	20 ⁵

on hub 147+88⁸³ old PI.

top boulder

	+	HI	-	elev
149+95		1630 ⁹⁰	83	22 ⁶
BM			6 ³⁷	24 ⁵³
150+36 ⁴¹ PT	}		8 ⁰	22 ⁹
=150+4 ⁹ 74				
+55			7 ²	23 ⁷
+65			2 ⁷	28 ²
TP	12 ⁹⁵	37 ⁴⁸	6 ³⁷	24 ⁵³
+80			3 ⁹	33 ⁶
+89 ⁹² POT			2 ⁰	35 ⁵
151+00			0 ³	37 ²
+35			5 ⁶	35 ⁶
+50			3 ⁴	37 ⁸
+81			4 ⁰	37 ²
+95			5 ²	36 ⁰
152+20			10 ⁶	30 ⁶
+70			7 ⁷	33 ⁵
+79			8 ²	33 ⁰

TP stake and Hub 20' R 150+65

elev 1624⁶⁵

PC

	+	HI	-	elev
153+00		37 ⁴⁸	10 ¹	31 ¹
TP	185 ⁻	33 ⁶⁶	94 ¹	31 ⁸¹
+32			12 ²	21 ⁵
+50		33 ⁶⁶	11 ²	22 ⁰
+65			11 ²	22 ⁰
+80			5 ⁴	28 ³
154+00			4 ⁵	29 ²
+30			5 ⁰	28 ⁷
+40			7 ²	26 ⁵
+57			8 ⁴	25 ³
+70			12 ⁸	20 ⁹
TP	108 ³	34 ⁸⁸	9 ⁶	24 ⁰⁵
155+07			8 ⁶	26 ³
+12			11 ¹	23 ⁸
+24			19 ⁷	15 ²
+56			16 ²	18 ⁶
+75			12 ⁹	22 ⁰
TP	108 ²	34 ⁸⁷		24 ⁰⁵

153+00 Top of stakes

PC

Rock 12' R 153+07

Kneeshaw
DillyRogers
Evans 9-10-14

clear

on rock

PT

R 12' R of 155+07

	+	HI	-	elev
156+00		<u>34⁸⁷</u>	12 ¹	<u>228</u>
+30			11 ³	<u>236</u>
+40				<u>30¹</u>
+50				<u>35⁹</u>
+75		<u>34⁸⁷</u>		<u>39⁶</u>
+85			15 ³	<u>19⁶</u>
157+00			15 ²	<u>19⁷</u>
+50			11 ⁸	<u>23¹</u>
+65			0 ⁸	<u>34¹</u>
+75			9 ³	<u>25⁶</u>
TP	<u>2⁶⁴</u>	<u>1636⁶³</u>	0 ⁸⁸	<u>3399</u>
+85				<u>38⁰⁰</u>
158+00			15 ⁹	<u>20⁷</u>
+50			18 ⁰	<u>18⁶</u>
TP	<u>0⁶¹</u>	<u>29³</u> <u>29⁴⁰</u>	<u>7⁸⁴</u>	<u>2879</u>
BM 15 ¹ / ₂			10 ⁷⁹	<u>18⁶¹</u>
+75			10 ⁸	<u>18⁷</u>

R

R

Rock hand level

do do do

do do do

ground

to

do

R.

R

R + 90

Rock hand level

R + 90

correct elev = 1618.737

	+	H	-	clev
159+00		29 ⁴⁰	127	168
+25-			17 ⁵	12 ⁰
+50			17 ⁶	119
+75-			19 ⁶	099
+90			0 ⁶	289
160+00			7 ⁰	22 ⁵
+15-		29 ⁵³	72	218
+30			5 ⁶	239
+50			37	258
TP	123 ⁶	412 ⁸		2892
+80			89	324
+85-			9 ²	321
+96			98	315

oct 13 1913

Bell

Rogers

Wineburgh

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PC FOR

	+	HI	-	elev
BM	11 ⁰⁰			1632 ¹²
161+06		1643 ¹²	78	35 ³
+30			71	36 ⁰
+40			113	31 ⁸
+60			108	32 ³
+80			100	33 ¹
+96			99	34 ¹
162+10			112	31 ⁹
+20			68	36 ³
+43			63	36 ⁸
+53			73	35 ⁸
TP	5 ²⁹		604	37 ⁰⁸
163+00		1642 ³⁷	62	1636 ²
+30			110	31 ⁴
+50			87	33 ⁷
+65			97	32 ⁷
+73			46	37 ⁸
+90			38	38 ⁶

BM #16

on rock

	+	HI	-	elev
TP	5 ⁰⁸		4 ³⁸	1637 ⁹⁹
		1643 ⁰⁷		
164+08			5 ⁶	37 ⁵
+40			4 ⁹	38 ²
+50			7 ⁸	35 ³
+80			7 ⁸	35 ³
BM =			10 ⁹⁴	$\frac{1632^{12}}{1632^{13}}$
+90			10 ⁶	35 ¹
TP	4 ³⁸	1640 ⁶⁴	9 ⁵⁸	36 ⁰⁸
165+00			4 ⁵	36 ¹
+25			4 ⁴	36 ²
+50			4 ⁵	36 ¹
166+00			4 ⁵	36 ¹
+10		1640 ⁶⁴	4 ⁵	36 ¹
+25			7 ⁵	33 ¹
+50			5 ⁰	35 ⁶
+75			4 ⁵	36 ¹
167+00			3 ¹	37 ⁵

Hub PI +90.36

	+	HI	-	elev
+25-		1640 ⁶⁴	3 ⁰	376
TP			4 ³⁰	3634
BM#16			8 ⁵²	3212

PI 167+44⁴⁵
 correct elev 1632 119 BM#16

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Bench Marks

78.

No	OLD ELEV	New elev	Description old	Description new
1	1518.04			
2	1579.636		Rock N side ditch	
3	1521.529		Spike in stump Wand 16" Flume	
4	1523.852		Corner Small Sand Trap	
5	1528.134		Boilhead Sand intake	
6	1530.398	1573.760	Rock	
7	1530.576		"	Rock above L 16+15-
7 1/2	1542.693	1568.206	"	
8	1542.812	1569.501	"	Rock above L
9	1552.976	1580.925	"	Rock above L 28+95-
10	1568.527	1573.225	" N side Flat	Rock above L
11	1581.594	1585.782	RR spike in oak 40' N of R.	Spike in oak 125' L of L 61+73
12	1585.674		" " " " 60' " " " " " " 75' L of L 82+72 ⁵⁴	
13	1588.535		10' S of Road	
14	1596.492	1637.770	Rock N side creek	
15	1607.589	1639.443		Rock 50' L of L 118+70
15 1/2	1618.737	1617.017	Rock N side creek	Rock 50' R of L 141+50
16	1632.119		Rock 150' below SALAZAR DAM	Rock 80' R of L
17	1669.584		" 150 above " "	
			RR spike in oak N side bottom	

- | | | |
|-----|---------------------|--------------------------|
| 18 | 1678 ²⁵⁹ | RR spike in oak front of |
| 19 | 1686 ⁷³⁹ | do N side Salazar House |
| 20 | 1694 ⁰⁵⁵ | do do |
| 21 | 1681 ⁵⁵¹ | Rock in creek bed |
| 22 | 1690 ²³⁸ | do S side " " |
| 23 | 1699 ⁸⁷² | do do |
| 24 | 1731 ⁸⁵⁰ | do N " |
| 25- | 1784 ³⁸³ | Rock N side canyon |
| 26 | 1785 ²⁸⁰ | do do |
| 27 | 1820 ³⁹⁷ | do do |
| 28 | 1838 ¹¹⁷ | Junction of Cottonwood |

↑ Houser Canyons on large boulder

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	7.00	7.15	7.30	7.45	7.60	7.75	7.90	8.05	8.20	8.35	0
1	8.50	8.65	8.80	8.95	9.10	9.25	9.40	9.55	9.70	9.85	1
2	10.00	10.15	10.30	10.45	10.60	10.75	10.90	11.05	11.20	11.35	2
3	11.50	11.65	11.80	11.95	12.10	12.25	12.40	12.55	12.70	12.85	3
4	13.00	13.15	13.30	13.45	13.60	13.75	13.90	14.05	14.20	14.35	4
5	14.50	14.65	14.80	14.95	15.10	15.25	15.40	15.55	15.70	15.85	5
6	16.00	16.15	16.30	16.45	16.60	16.75	16.90	17.05	17.20	17.35	6
7	17.50	17.65	17.80	17.95	18.10	18.25	18.40	18.55	18.70	18.85	7
8	19.00	19.15	19.30	19.45	19.60	19.75	19.90	20.05	20.20	20.35	8
9	20.50	20.65	20.80	20.95	21.10	21.25	21.40	21.55	21.70	21.85	9
10	22.90	22.15	22.30	22.45	22.60	22.75	22.90	23.05	23.20	23.35	10
11	23.50	23.65	23.80	23.95	24.10	24.25	24.40	24.55	24.70	24.85	11
12	25.00	25.15	25.30	25.45	25.60	25.75	25.90	26.05	26.20	26.35	12
13	26.50	26.65	26.80	26.95	27.10	27.25	27.40	27.55	27.70	27.85	13
14	28.00	28.15	28.30	28.45	28.60	28.75	28.90	29.05	29.20	29.35	14
15	29.50	29.65	29.80	29.95	30.10	30.25	30.40	30.55	30.70	30.85	15
16	31.00	31.15	31.30	31.45	31.60	31.75	31.90	32.05	32.20	32.35	16
17	32.50	32.65	32.80	32.95	33.10	33.25	33.40	33.55	33.70	33.85	17
18	*34.00	34.15	34.30	34.45	34.60	34.75	34.90	35.05	35.20	35.35	18
19	35.50	35.65	35.80	35.95	36.10	36.25	36.40	36.55	36.70	36.85	19
20	37.00	37.15	37.30	37.45	37.60	37.75	37.90	38.05	38.20	38.35	20
21	38.50	38.65	38.80	38.95	39.10	39.25	39.40	39.55	39.70	39.85	21
22	40.00	40.15	40.30	40.45	40.60	40.75	40.90	41.05	41.20	41.35	22
23	41.50	41.65	41.80	41.95	42.10	42.25	42.40	42.55	42.70	42.85	23
24	43.00	43.15	43.30	43.45	43.60	43.75	43.90	44.05	44.20	44.35	24
25	44.50	44.65	44.80	44.95	45.10	45.25	45.40	45.55	45.70	45.85	25
26	46.00	46.15	46.30	46.45	46.60	46.75	46.90	47.05	47.20	47.35	26
27	47.50	47.65	47.80	47.95	48.10	48.25	48.40	48.55	48.70	48.85	27
28	49.00	49.15	49.30	49.45	49.60	49.75	49.90	50.05	50.20	50.35	28
29	50.50	50.65	50.80	50.95	51.10	51.25	51.40	51.55	51.70	51.85	29
30	52.00	52.15	52.30	52.45	52.60	52.75	52.90	53.05	53.20	53.35	30
31	53.50	53.65	53.80	53.95	54.10	54.25	54.40	54.55	54.70	54.85	31
32	55.00	55.15	55.30	55.45	55.60	55.75	55.90	56.05	56.20	56.35	32
33	56.50	56.65	56.80	56.95	57.10	57.25	57.40	57.55	57.70	57.85	33
34	58.00	58.15	58.30	58.45	58.60	58.75	58.90	59.05	59.20	59.35	34
35	59.50	59.65	59.80	59.95	60.10	60.25	60.40	60.55	60.70	60.85	35
36	61.00	61.15	61.30	61.45	61.60	61.75	61.90	62.05	62.20	62.35	36
37	62.50	62.65	62.80	62.95	63.10	63.25	63.40	63.55	63.70	63.85	37
38	64.00	64.15	64.30	64.45	64.60	64.75	64.90	65.05	65.20	65.35	38
39	65.50	65.65	65.80	65.95	66.10	66.25	66.40	66.55	66.70	66.85	39
40	67.00	67.15	67.30	67.45	67.60	67.75	67.90	68.05	68.20	68.35	40

Calculated by F. E. Paradis, C. E.

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING

ROADWAY 16 FEET WIDE. SIDE SLOPES 1½ TO 1.

FOR SINGLE TRACK EMBANKMENT.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	8.0	8.2	8.3	8.5	8.6	8.8	8.9	9.1	9.2	9.4	0
1	9.5	9.7	9.8	10.0	10.1	10.3	10.4	10.6	10.7	10.9	1
2	11.0	11.2	11.3	11.5	11.6	11.8	11.9	12.1	12.2	12.4	2
3	12.5	12.7	12.8	13.0	13.1	13.3	13.4	13.6	13.7	13.9	3
4	14.0	14.2	14.3	14.5	14.6	14.8	14.9	15.1	15.2	15.4	4
5	15.5	15.7	15.8	16.0	16.1	16.3	16.4	16.6	16.7	16.9	5
6	17.0	17.2	17.3	17.5	17.6	17.8	17.9	18.1	18.2	18.4	6
7	18.5	18.7	18.8	19.0	19.1	19.3	19.4	19.6	19.7	19.9	7
8	20.0	20.2	20.3	20.5	20.6	20.8	20.9	21.1	21.2	21.4	8
9	21.5	21.7	21.8	22.0	22.1	22.3	22.4	22.6	22.7	22.9	9
10	23.0	23.2	23.3	23.5	23.6	23.8	23.9	24.1	24.2	24.4	10
11	24.5	24.7	24.8	25.0	25.1	25.3	25.4	25.6	25.7	25.9	11
12	26.0	26.2	26.3	26.5	26.6	26.8	26.9	27.1	27.2	27.4	12
13	27.5	27.7	27.8	28.0	28.1	28.3	28.4	28.6	28.7	28.9	13
14	29.0	29.2	29.3	29.5	29.6	29.8	29.9	30.1	30.2	30.4	14
15	30.5	30.7	30.8	31.0	31.1	31.3	31.4	31.6	31.7	31.9	15
16	32.0	32.2	32.3	32.5	32.6	32.8	32.9	33.1	33.2	33.4	16
17	33.5	33.7	33.8	34.0	34.1	34.3	34.4	34.6	34.7	34.9	17
18	35.0	35.2	35.3	35.5	35.6	35.8	35.9	36.1	36.2	36.4	18
19	36.5	36.7	36.8	37.0	37.1	37.3	37.4	37.6	37.7	37.9	19
20	38.0	38.2	38.3	38.5	38.6	38.8	38.9	39.1	39.2	39.4	20
21	39.5	39.7	39.8	40.0	40.1	40.3	40.4	40.6	40.7	40.9	21
22	41.0	41.2	41.3	41.5	41.6	41.8	41.9	42.1	42.2	42.4	22
23	42.5	42.7	42.8	43.0	43.1	43.3	43.4	43.6	43.7	43.9	23
24	44.0	44.2	44.3	44.5	44.6	44.8	44.9	45.1	45.2	45.4	24
25	45.5	45.7	45.8	46.0	46.1	46.3	46.4	46.6	46.7	46.9	25
26	47.0	47.2	47.3	47.5	47.6	47.8	47.9	48.1	48.2	48.4	26
27	48.5	48.7	48.8	49.0	49.1	49.3	49.4	49.6	49.7	49.9	27
28	50.0	50.2	50.3	50.5	50.6	50.8	50.9	51.1	51.2	51.4	28
29	51.5	51.7	51.8	52.0	52.1	52.3	52.4	52.6	52.7	52.9	29
30	53.0	53.2	53.3	53.5	53.6	53.8	53.9	54.1	54.2	54.4	30
31	54.5	54.7	54.8	55.0	55.1	55.3	55.4	55.6	55.7	55.9	31
32	56.0	56.2	56.3	56.5	56.6	56.8	56.9	57.1	57.2	57.4	32
33	57.5	57.7	57.8	58.0	58.1	58.3	58.4	58.6	58.7	58.9	33
34	59.0	59.2	59.3	59.5	59.6	59.8	59.9	60.1	60.2	60.4	34
35	60.5	60.7	60.8	61.0	61.1	61.3	61.4	61.6	61.7	61.9	35
36	62.0	62.2	62.3	62.5	62.6	62.8	62.9	63.1	63.2	63.4	36
37	63.5	63.7	63.8	64.0	64.1	64.3	64.4	64.6	64.7	64.9	37
38	65.0	65.2	65.3	65.5	65.6	65.8	65.9	66.1	66.2	66.4	38
39	66.5	66.7	66.8	67.0	67.1	67.3	67.4	67.6	67.7	67.9	39
40	68.0	68.2	68.3	68.5	68.6	68.8	68.9	69.1	69.2	69.4	40

Calculated by F. E. Paradis, C. E.

