

W 61
49

LEVEL BOOK.

No. 410 T

Department of Water
City of San Diego

-LEVELS-

COTTONWOOD CONDUIT

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. 39340.

	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.

60
600

70

DULZURA CONDUIT
EXTENSION

INDEX		Page to	Page
" "	A Levels Sta 00 to 186	1	19
B "	Sta 00 to 122+05	40	52
D "	00 to 127+65	53	65
B ³ "	00 to 12+80	66	68
E "	00 to 116+85	20	27
Benchmarks		79	80
<small>E44+50 = E'0+00</small>			
E' "	00 to 39+03	28	30
R' Levels	00 to	74	
E Levels	116+85 to 153+05	31	34
Road	00 to 12+7 ²		35
E ² Levels	00 to 19+57 ²	71	72
R-Levels	00 to 59+50	74	78
Re-setting	BMs	69	70

A Line

STA	B.S.	H.I.	I.S.	EL
	452	3837		1523.85 BM#4
0+00			4.5	23.9
Gate			8.5	19.9
1-			11.0	17.4
1-			4.4	24.0
2-			4.3	24.3
3-			3.7	24.7
T.P. AR 3+45	933	3377	39.3	24.44
4-			8.6	25.2
5-			6.3	27.5
+50			4.4	29.4
6-			5.8	28.0
+20 AR			7.3	26.6
7			8.1	25.7
T.P. BM#5	570	3381	54.6	1529.11
8			5.3	28.6
9			8.8	25.0
10			8.6	25.3
11			7.5	26.3

Rain

2-16-14
Huston
Kneeshaw
Lord

Cottonwood Headgate Bolt on S end of Headgate Frame

Top of Frame

Sill of H Gate

Bottom of Ditch at H.G. Lower Side

on Hub

H.R. STA 7+85 on ROCK

"A" Line

2

1533.81

12+00 T.P. 5.13 31.59 7.35 26.46

peg 0.5 R of STA

12+10 Δ V 3.85 27.74

13 4.7 27.4

13+0 Δ L 4.8 26.8

14 4.8 26.8

15 4.5 27.1

16 T.P. 6.90 34.06 4.43 27.16

peg 0.5 R of STA

B.M. #6 3.70 1530.36

10' L of STA 16+10

17 5.8 28.3

18 4.9 29.2

19 3.9 30.2

20 3.5 31.6

20+40 R T.P. Δ 12.50 45.83 0.74 33.33

21 8.3 37.5

22 7.7 43.6

23 T.P. Δ 2.75 47.53 1.05 44.77

0.0416

24 3.3 44.7

24 6.8 40.7 ✓

"A"

1293

3

A				
34+40 L ^v	1547.52	7.55	39.97	
T.P.				
B.M.#7 ^{1/2}	7.20	49.90	4.87	1542.65
35-		7.3	42.7	
35+60		7.3	42.6	
+75		1.4	48.5	
ΔL				
36+00		4.6	45.3	
+50		5.7	44.2	
37		5.3	44.7	
+40		3.2	46.7	
38		6.2	43.7	
T.P.				
B.M.#8	12.15	54.91	7.14	1542.76
+60		12.6	42.3	
39		9.1	45.8	
30		2.2	52.7	
T.P. A				
+02 L		20.5	53.86	
31		+7.2	62.1	
A				
+30 L		+6.4	56.3	
T.P.	3.73	45.81	12.83	42.09
+75		6.0	39.8	✓

on line 24+55

Stick shell side
Large Boulder
510 25 to 32

9' R of 27+93 on ROCK

= Sta 0+00 B line

peg 100 ft. Bank

32+00		45.81	6.3	1539.5
+15			8.5	37.3
33			5.7	40.1
T.P.				
34	12.50	53.18	5.13	40.68
35			12.0	41.2
+40			11.8	41.4
+80			8.0	45.2
36			9.2	44.0
T.P.	12.62	45.72	0.08	53.10
37			9.4	56.3
38			4.8	60.2
39			5.6	60.1
40 +00 R			4.56	61.16
T.P.	12.4	40.09	6.87	1538.85
41			7.7	52.4
42			8.3	51.8
+80			9.2	57.9
43			4.0	56.1
44 R			6.00	54.09

center of Cottonwood Creek

Peg 1' R of Sta

Peg 8' L of 36+85

Rock 10' L of 40+25

"A" line

6009
946
50.63

Rain

5

Sta B.S. H.I. F.S. Elev

6009

T.P. 12.58 63.21 94.4 50.63 \checkmark

peg 25' L of Sta 45+00

45- 10.9 52.3

46- 4.5 58.7

T.P. 11.88 74.54 05.5 62.44

peg 10' L of Sta 46+00

47- 5.0 69.5

T.P. 12.47 85.29 1.92 72.62

peg 20' L of 48+00

48- 10.9 74.4

49- 3.1 82.2

T.P. 10.88 95.96 0.91 85.08

peg 5' R - 49+30

+80 Δ R 8.33 87.63

50- 8.3 87.7

51- 2.5 93.5

+35- 1.5 94.5

+60- 4.5 91.5

52- 3.4 93.6

T.P. +10 11.71 1605.80 1.87 94.09

1' L of Line

53- 4.9 00.9

+22 Δ R 3.23 2.57 \checkmark

"A"

6

53+80 1605.80 11.2 1594.6

54- 12.0 93.8

55- 6.3 99.6

+75 4.6 1401.2

+55^A_R 5.93 998.7+90
T.P. 0.41 94.60 11.61 1094.19

8'4-

56 0.0 94.6

+85^{peg}
T.P. 1.51 83.13 12.98 81.62

56+80

57 3.7 79.4

+75- 11.4 46.7

+85- 21.0 42.1

58 16.4 46.7

+40^A_L 6.34 768.9

59- 5.3 77.9

60- 7.0 76.1

61- 7.0 76.1

62 3.8 79.3

T.P.+35 7.74 82.15 8.72 744.1

peg

63 14.0 68.3 ✓

"A"

7

	B.S.	H.I	F.S.	Elev
64	1582.18		15.2	47.0
+ 50			19.5	43.7
65			6.9	75.3
+ 13 AL			5.0	77.3
66			4.3	77.9
T.P.+ 90	2.86	83.85	1.16	80.99
67			2.6	81.3
68			2.1	81.8
69			2.6	81.3
+ 37 ΔR			4.7	79.3
70			4.9	79.0
71			5.0	78.9
T.P.+ 75	5.39	87.69	1.55	82.30
72			3.9	83.8
+ 80			2.9	84.8
73			7.2	80.5
+ 30			4.0	83.7
+ 55			7.5	80.3
+ 75			0.8	86.9 ✓

Peg

Peg

"A"

Sta	B.S.	H.I.	F.S.	Elev
		87.69		
T.P.+ 85	6.04	93.11	0.62	87.07
73+95 AR			4.01	89.10
74			3.3	89.8
+25			1.2	91.7
75			7.0	86.1
T.P.+ 65	10.47	102.63	0.95	92.16
76			8.2	94.4
+50			10.0	93.5
77 AL			4.56	98.07
78			3.3	99.3
T.P.	11.14	110.69	3.08	99.55
+25			6.6	104.1
+80			10.1	100.6
79			4.1	6.6
+10			4.1	6.6
+30			9.0	1.7
T.P.+50	11.12	119.90	1.91	108.78
80 AL			10.53	09.37
+25			17.0	2.9

2-17-14

Huston
Kneeshaw
LordRain
A.M. 8

Peg 5' left of 73+85

Peg 4' right of 75+65

Top of Sta. 78.

large boulders

on rock

"A"

9

Station	B.S.	H.I	F.S.	Elev	
80 + 60		1612.90	17.2	1609.7	
81			9.0	10.9	
+ 30			7.4	12.5	
+ 80			13.9	16.0	
82			on boulder		
opposite 82			18.4	1.5	
+ 30			17.4	2.5	
+ 80			3.2	16.7	
T.P. + 8.5	12.66	1630.96	1.60	1618.30	on ROCK
83			10.6	20.4	
+ 50			11.7	19.3	
+ 75			9.5	21.5	
84			10.3	20.7	
+ 50			12.8	18.3	
85			3.8	27.9	
+ 30			0.4	30.4	
+ 48 Δ			1.64	29.32	
T.P.	0.24	1418.21	12.99	1617.97	on ROCK 20' Right of 85+75
T.P.					
E.B. + 30	-0.03	1606.27	11.91	1606.30.	on ROCK

"A"

10

Station	B.S.	H.I.	F.S.	Elev
86+40		1606.21	4.6	1601.7
87			4.4	1.9
88			5.3	1.0
T.P.				
89	0.75	1594.99	12.03	1594.24
90			6.5	88.5
91 A R			6.56	88.43
92			5.7	89.3
93			4.9	90.1
94			4.6	90.4
95	8.35	1599.34	4.00	1590.99
96			7.3	92.0
97			7.2	92.1
97			13.4	85.9
+ 15			13.5	85.8
+ 25			10.9	88.4
+ 65			6.2	93.1
98			5.4	93.9
+70 A L			5.11	94.23
99			4.7	94.6

Peg 1' right sta. 89

Peg 1' right sta 95

A

11

Station	B.S.	I.I.	F.S.	Elev.
99+50		1599.34	5.2	1594.1
+ 80			18.3	81.0
100			18.3	81.0
+ 30			14.6	84.7
+ 40			6.2	93.1
+ 60			5.7	93.6
+ 90			9.3	90.0
101			5.7	93.6
102			2.4	96.9
T.P. + 30	11.49	1609.31	1.52	1597.82
103 Δ R			18.07	1599.34
104			5.4	3.9
T.P. + 50	13.29	1622.53	0.07	1609.24
105			8.3	14.2
T.P. + 75	11.29	1633.83	+ 0.01	1623.54
106			7.3	26.5
+ 50			2.4	31.4
+ 70 Δ R			3.53	30.30
107			8.2	25.6

Peg on line

Peg on line

Rock on line

✓

"A"

1633.83

Station	B.S.	H.I	F.S.	Elev
T.P. 107+90	1.22	1622.04	13.01	1620.82
108			2.3	19.7
T.P. +92	0.19	1609.25	12.98	1609.06
109			1.0	8.3
110			9.4	99.9
111			8.0	1.3
T.P. 112 AL 7.17	1608.62	7.80	1607.45	
113			7.7	1400.9
114			7.1	1.5
115			6.2	2.4
+25			5.3	3.3
+50			7.0	1.6
+80			2.0	4.6
116			2.0	4.6
+15 Δ L			2.14	4.48
+65			13.0	95.5
117 T.P.	9.34	1609.96	7.00	1607.62
+50			2.4	8.6
118			4.0	7.0

12

Peg on line

Peg on line

Hub Sta. 112.

Peg on line

"A"

13

Station	B.S.	H.I	F.S.	Elev
119		140.96	4.7	140.3
120			5.5	5.5
+50			4.0	7.0
T.P.+75	3.87	144.23	0.60	144.36
121			1.6	13.6
+46 AR			3.64	10.59
122			7.3	6.9
+25			9.1	5.1
123			4.3	9.9
T.P.				
124 AR	12.88	125.48	1.63	142.60
125			10.9	14.6
+80			7.1	18.4
126			1.6	23.9
+15			1.2	24.3
+75			13.8	11.7
+90			9.0	16.5
127			7.6	17.9
128			5.2	20.3
T.P.+65	12.21	137.62	0.07	162.51 ✓

Peg. 3' left

Hub Sta 124

Rock on line

"A"

Station	B.S.	H.I.	F.S.	Elev	
129		1637.62	12.8	1624.8	
+15			12.8	24.8	
+50			4.3	33.3	
+87 3/4 AR			3.15	34.47	
130			3.7	33.9	
+45			8.3	29.3	
131			5.0	32.6	
+35			5.4	32.2	
T.P. +75	2.30	1627.46	12.46	1625.16	Rock on line
132			3.1	24.4	
+80			10.0	17.5	
133			8.1	19.4	
+39 AR			7.44	20.07	
134			4.0	23.1	
T.P. +53	4.11	1625.69	5.88	1621.58	Rock 4' left
+47 AR			4.19	21.50	
135			10.9	14.8	
+25			11.8	13.9	
+75			6.2	19.5	✓

"A"

Station	B.S.	I.I.	F.S.	Elev
136		1625.69	10.2	1615.5
137			7.2	18.5
+45 AL			5.77	19.92
138			5.5	20.2
+75			3.6	22.1
139			4.3	21.4
+50			3.4	22.3
140			4.8	20.9
T.P. +20	11.15	1634.51	2.33	1628.36
+80			10.8	23.7
141			8.7	25.9
+70			7.0	27.5
142			2.9	31.4
T.P. ROT +21	9.88	1642.64	1.75	1632.76
143			8.0	34.4
+30 AL			4.85	37.79
144			10.9	31.7
T.P. + 12	5.49	1635.13	13.00	1629.64
+30			11.0	24.1

Rock on line

Hub

Peg online



A

16

Station	B.S.	H.I.	F.S.	Elev
144+75		1635.13	5.6	1629.5
+77AR			5.69	29.44
145			4.0	31.1
+40			6.1	29.0
146			9.0	26.1
T.P.+75	3.01	1634.21	3.93	1631.20
+80 ^v R			4.36	29.85
147			5.5	28.7
T.P.+35	1.49	1622.82	12.88	1621.33
+75			7.2	17.6
148			7.5	15.3
149			7.3	14.5
150			6.3	14.5
151 ^v AL			4.77	18.05
152			3.9	18.9
+25			4.0	18.8
+50			8.4	14.4
T.P. 152+60 ^v AR			8.08	1644.74

on rock 1' right

Rock on line

OK OK
2-17-14

Hub

"A"

17

Station	B.S.	H.I.	F.S.	Elev		
B.M. 15 ¹ / ₂	149	1620.23		1618.74	2-20-14	70 feet left of 156+40
153			5.7	14.5		
+90			4.4	15.8		
154			2.5	17.7		
155			4.6	15.6		
+30 AR			2.79	17.44		
T.P. +80	11.38	1630.30	1.41	1618.89		Rock on line
156			10.4	19.8		
T.P. +25	13.15	1643.35	0.00	1630.20		Peg on line
TP +45	10.88	1654.24	0.19	1643.16		Peg on line
T.P. +65	9.75	1663.68	0.11	1653.93		Rock on line
157 AL			1.50	42.18		1626.3 TOP OF SALAZAR DAM
T.P. +50	0.63	162.97	11.34	1652.34		Rock on line
158 +05 AR			4.9	47.3		
T.P. +20 PEG	0.93	40.33	13.76	40.21		
+85			11.9	29.0		
T.P. on LOG	7.47	34.88	13.83	27.41	2-20-14 OK, OK.	
159?			8.3	26.6		
159 +20 AR			8.34	26.54		✓

A. Line

1634.88

160			8.5	26.4	
+15			6.9	16.80	
161			6.1	28.8	
162			4.5	30.4	
+80			3.4	33.5	
163			3.0	31.9	
164			4.0	30.9	
165	T.P. A ✓	10.66	42.96	25.8	32.80
166			10.5	33.7	
167			8.3	34.7	
168			5.9	37.1	
169			5.6	37.4	
+40	A ✓		5.20	37.74	
170			5.5	37.5	
171			4.9	38.1	
172			4.3	38.7	
173			2.3	40.7	
174	Δ T.P. ✓ R	8.87	46.93	4.90	38.06
175			8.1	38.8	

2-23-14 18
MOVED TO CAMP
HUSTON
KNEESHAW
LORD-

A-Line

19

164.93

176 7.8 39.6

77 6.6 40.3

78 5.9 41.0

79 5.1 41.8

180 3.0 43.9

81 1.4 45.5

T.P.
~~182~~ 10.60 56.94 0.59 46.34

183+00 8' L Peg

182 11.0 45.9

+60 10.2 46.7

183 ^ΔR 7.33 49.41

+70 4.5 53.4

84 5.1 51.8

85 3.4 53.5

86 0.7 56.2

T.P. 0.52 56.42

OK

Peg 20' L - 186

Continued Book 2 Page 1

✓

"E" LINE

20

Station	BS	HI	FS	Elev
	1.57	1613.19		1611.62
00+00			2.90	10.29
1			4.6	08.6
2			1.8	11.4
3			5.8	07.4
4			5.8	07.4
5			6.5	06.7
6			6.6	06.6
7			7.7	05.5
8			6.7	06.5
9			5.7	07.5
10			6.1	07.1
11			7.2	06.0
12			7.8	05.4
	0.42	1606.59	7.02	06.17
13			4.0	02.6
14			2.5	04.1
15 ΔL			3.47	03.1
16			5.0	01.5

Hub 110+50. B line

Hub

Hub

Station	BS	HI	FS	Elev
17		1606.59	5.6	1601.0
18			5.4	01.2
19			6.4	00.2
20			6.0	00.6
21			7.0	99.6
+60 Δ	1.73	1601.08	7.24	1599.35
22			1.8	99.3
23			2.5	98.6
24			3.8	97.3
25			4.5	96.6
26			5.2	95.9
27			5.8	95.3
28			6.4	94.7
29			6.8	94.3
	3.50	98.37	6.21	94.87
30			3.9	94.4
31			3.5	94.8
32			5.2	93.1
+75 ΔR			5.59	Δ.78

Hub

"E"

Station	BS	HI	FS	Elev.
33		¹⁵ 98.37	5.6	¹⁵ 92.7
34			6.7	91.6
35			7.4	90.9
36			8.7	89.6
	2.50	92.98	7.89	90.48
37			3.2	89.7
38			4.3	88.6
39			4.8	88.2
40			5.28	87.70
	7.51	91.25	4.24	88.74
			2.54	88.71
	3.65	92.18		1588.53
41			5.4	86.8
42			5.8	86.4
43			6.6	85.6
	3.18	88.81	6.55	85.63
44			~~~~~	85.1
+50			3.87	84.94

Hub

B.M No 13 1588.53

BM #13

April

Hub 0+00 "E1"

"E"

23

Station	BS	HI	FS	Elev.	
45		88.81	4.1	¹⁵ 84.7	
46			5.1	83.7	
+75AR	2.68	85.86	5.63	83.18	Hub
47			1.8	84.0	
48			3.5	82.3	
+60AR			3.93	81.93	Hub
49			4.2	81.6	
50			5.1	80.7	
51			5.5	80.3	
52			6.2	79.6	
+30DL	2.15	81.34	6.67	79.19	Hub
53			2.80	78.5	
54			3.4	77.9	
55			4.1	77.2	
56			4.7	76.6	
57			5.3	76.0	
58			5.8	75.5	
59			6.5	74.8	
	1.60	76.99	5.95	75.39	✓

"E"

24

Station	BS	HI	F.S	Elev
60		76.99	2.8	¹⁵ 74.1
61			3.3	73.6
62			4.0	72.9
63			4.7	72.2
64			5.5	71.4
65			6.5	70.4
66			6.9	70.0
	4.79	75.37	6.41	70.58
67			6.1	69.2
67 + 45 ^{at}			4.29	71.08
68			5.8	69.5
+ 75			4.5	70.8
69			7.2	68.1
70			7.8	67.5
71			8.5	66.8
72			9.0	66.3
	1.30	68.33	8.34	67.03
73	ΔR		2.53	65.80
74			3.0	65.3

Hub

Hub

✓

"E"

25

	BS	HI	FS	Elev.
75		68.33	3.5	¹⁵ 64.8
76			4.1	64.2
77			4.4	63.9
78			5.0	63.3
79			5.4	62.9
80			6.0	62.3
	2.11	64.97	5.47	62.86
81			3.1	61.8
82			3.9	61.0
+90 Δ			4.31	60.66
83			4.4	60.5
84			5.0	60.0
85			4.3	60.6
86			4.7	60.2
	3.52	64.36	4.13	60.84
87			5.6	58.7
+50			6.5	57.8
88			3.9	60.4
89			7.0	57.3

Hub

Y

"E"

	BS	HI	CS	Elev.
89 +60		64.36	7.42	¹⁵ 56.94
90			7.8	56.5
+90			3.13	61.2
91			3.5	60.8
	4.35	64.11	4.60	59.76
92			5.1	59.0
93			5.1	59.0
94			4.3	59.8
95			7.2	56.9
	4.63	59.54	9.20	54.91
+35 AL			3.87	55.67
96			3.3	56.2
97			3.8	55.7
98			3.8	55.7
99			5.3	54.2
100			6.3	53.2
101			6.8	52.7
102			7.7	51.8
	1.03	53.36	7.21	52.33

Hub P.O.T.

Hub

Hub

✓

"E"

station	BS	HI	FS	Elev.
103		53.36	3.3	¹⁵ 50.0
104			4.1	49.2
105			4.9	48.4
106			5.5	47.8
+90 AL			5.65	47.71
107			5.8	47.5
		53.35	0.37	52.99
108			6.2	47.1
109			8.5	44.8
110			9.7	43.6
	2.75	46.95	9.15	44.20
111			3.7	43.2
112			3.7	43.2
113			4.9	42.0
114			5.5	41.4
115			5.2	41.7
116			4.4	42.5
116 + 85			5.47	41.48

Hub

BM 1169 1552.975

Hub

Continued page 31 ✓

Station	BS	HI	FS	Elev.
0+00	2.73	87.67		1584.94
1			3.1	84.5
2			3.8	83.8
3			4.5	83.1
4			5.2	82.4
5			5.9	81.7
6			6.8	80.8
+10 Δ	2.50	83.45	6.72	80.95
7			3.1	80.3
8			3.7	79.7
9			4.3	79.1
10			4.8	78.6
+23 Δ	2.84	81.29	5.00	78.45
11			3.1	78.2
12			3.8	77.5
13			4.2	77.1
+70 DR			4.62	76.67
14			4.9	76.4
15			5.5	75.8

Hub E "Line 44.50

Hub

Hub

Hub

✓

"E1"

29

	BS	HI	FS	Elev
16		81.29	6.3	¹⁵ 75.0
17			6.9	74.4
	3.15	78.14	6.30	74.99
18	DL		4.24	73.90
19			4.7	73.4
20			4.6	73.5
21			5.2	72.9
22			7.5	70.6
	4.23	75.70	6.67	71.47
23			6.4	69.3
24			3.9	71.8
	710 DR		4.04	71.66
25			4.1	71.6
26			5.1	70.6
27			5.9	69.8
28			6.4	69.3
	1.82	71.78	5.74	69.96
29			6.9	64.9
30			3.6	68.2

Hub

Hub

✓

E1

	BS	HI	FS	Elev
30+55	.	71.78	3.84	67.94 ¹⁵
+75			4.9	66.9
+90			8.6	63.2
31			8.3	63.5
32			9.4	62.4
33			10.5	61.3
34			10.4	61.4
	4.56 ⁷	65.56	10.78	61.00
34+55			4.4	61.1
36			4.3	61.2
37			4.6	60.9
38			4.8	60.7
39+03 ¹			4.86	60.70

30

Hub

Hub

E82+90 6066

END

Cont from Page 27

Sta	+ H	- Ele
116 + 85 ¹ P.O.T	771	49.19
		1541.48
117		75. 41.7
118		70 42.2
+60		40 45.2
118 + 81 ³ P.O.T		441 44.78
119		61 43.1
120		73 41.9
121		94 39.8
121 + 13 ² A.P.		790 41.29
122		95 39.7
+30		125 36.7
T.P.	3.00	+0.03 1216 37.03
123		33 36.7
124		48 35.2
+20		53 34.7
125		68 33.2
126		92 30.8
+15		72 32.8
+22		111 28.9

Hub

Hub

Hub

Edge of Swamp

E Stream

Road

Branch of Creek

Sub Level 31
Anderson - Road

Fair

Sta	+	HA	-	Ele
		N 41.03		
	+50		78	322
126	+80		92	308
	+85		120	280
127	+50		125	275
127	+80		88	312
128	+00		114	286
TP	128	+57 $\frac{1}{2}$ 4.66	3530	939 30.64
129			45	308
130			47	306
	+45		51	302
	+50		69	284
	+65		53	300
131			50	303
132			54	29.9
TP	132	+97 $\frac{3}{4}$ 4.69	3432	567 29.63
133			47	29.6
	+20		54	28.9
	+25		71	27.2
	+30		57	28.6

Creek Bottom

"

Creek Bottom

Hub

Q Creek branch

Hub

$\frac{5}{10}$ + $\frac{21}{1}$ - E10

153432

134 5.5 298

135 5.0 293

135 + 49⁵ Δ R 4.54 2978

Hub

136 4.4 299

137 6.0 283

TP
137 + 80⁵ Δ 377 3109 7.00 2732

Hub

138 3.7 274

139 4.3 268

140 4.8 263

141 5.5 256

141 + 10

Road

TP
141 + 68³ Δ 2.55 2776 5.88 2521

Hub

142 2.8 250

143 3.6 242

144 4.6 232

+ 80 4.7 231

145 3.4 244

TP 1.21 27.80 1.17 26.59

Req at A Point

"E"

34

145+252	27.80	2.19	25.61	Hub AR	
146		6.4	21.4		
147		5.9	21.9		
148		6.5	21.0		
149		7.9	19.9		
+25		8.6	19.2		
T.P. +25	7.61	27.06	8.35	19.45	Pegon Line
+50		6.8	20.3		
150		6.1	21.0		
151		7.3	19.8		
+45		7.3	19.8		
151+524		4.71	22.25	Hub AL	
152		4.5	22.6		
153		3.5	23.6		
153+035		3.53	23.53	Hub EL	
B.M. 4		3.16	23.90	EL 1523.85	

Road Survey
On North side Canyon.
AZIMUTH

Sta	A. Vern.	B. Vern.	C.C.	M.C.	Ext
R00 = E153+03 ⁵	0.0	180° 00'			
0+32	00	180° 00'			
0+32 Δ R	101° 41'	281° 41'	578° 19' E	578° 15' E	
3+02 Δ L	80° 16'	260° 16'		179° 30' E	
3+87 Δ R	103° 57'	283° 57'		176° 30' E	
4+97 Δ R	116° 28'	296° 28'		560° 0' E	
6+93 ⁵ Δ R	124° 36'	304° 36'		355° 45' E	
12+71 ²					

Sighting Palacios Hub

Note Azimuth readings to Right
From North & S. line.

B" Line

Sta	B.S	H.I	F.S	Elev
0+00				156.13
T.P.	5.74	46.42		154.68
1+00			1.9	44.5 ^x 44.3
+40			6.2	40.2
2+00 Δ POT			5.93	40.49
3			5.2	41.2
4			5.5	40.9
5			4.5	41.9
6			4.1	42.3
7			3.7	42.7
8			2.7	43.7
+10 T.P.	5.86	50.62	1.66	44.76
+69 Δ R			3.83	46.8
9			3.6	47.0
10			4.0	46.6
11			3.7	46.9
T.P. 12	8.66	57.06	2.22	48.40
B.M. #9			4.11	52.4 ⁹⁵
12			8.2	48.8 ✓

Rain

40

Huston
Kneeshaw
Lord

- STA "A" 31+30 = B 0+00

Peg by STA. 1' R Sta 34 "A"

Peg on line.

Peg 2' Right Sta. 12

on ROCK Sta. 11+85 15' left

"B"

41

Station	B.S.	H.I.	F.S.	Elev
13+00		57.06	5.0	52.0
+30			3.9	53.1
14			6.6	50.4
+25			6.3	50.6 ⁷
+55			11.1	45.9
15			10.9	46.1
+50			10.1	46.9
+70			6.7	50.3
16			5.9	51.1
T.P. +65 ΔR ✓	12.87	65.92	4.01	53.05
17			12.0	53.9
18			9.3	56.6
19			9.0	56.9
+30			7.7	58.2
+40			10.7	55.2
+75			11.1	54.8
20			5.7	60.2
21			3.7	62.2
22			7.0	58.9 ✓

Hub. Sta. 16+65

"B"

42

Station	B.S.	I.I.	F.S.	Elev
23		65.92	9.8	561
24			6.4	54.5
T.P. +40	11.76	77.13	0.55	65.37
25			10.1	67.0
26			7.3	69.8
+40 ^A L			6.6	70.48
27			5.4	71.7
28			5.0	72.1
29			4.3	72.8
30			4.0	73.1
31			3.4	73.7
T.P. 32	8.97	85.66	0.44	74.69
33			7.0	78.7
34			7.6	78.1
35			6.4	79.1
36			2.8	83.9
T.P. +50	6.19	91.18	0.67	84.99
37			5.4	85.8
+50 ^A L			5.25	85.73

Peg on line

Peg

Peg

✓

B" Line

43

STO	BS	H.I	F.S.
38	1591.18	4.8	1586.4
39		3.6	88.6
T.P.			
+50	10.18	1600.53	0.84 903.4
40-		8.4	93.1
41 ^Δ POT		5.15	95.37
+35		5.3	95.3
+65		17.6	82.8
42		17.3	83.3
+40		15.3	85.3
+80		7.3	93.3
43		6.4	94.1
+30		9.1	91.4
+85 ^Δ R		5.91	94.61
44		6.0	94.5
+30		6.5	94.0
T.P.			
+65	0.16	88.28	12.40 88.12
45		9.1	79.3
+20		7.3	81.0
46		7.0	81.3 ✓

peg

peg 8' left

"B"

44

Sta	B.S.	H.I	F.S	Elev
BM. #11	88.28	6.76	N 81.53	
47			3.0	85.3
+30			2.9	85.4
T.P. +50	11.25	98.66	0.87	87.41
48			8.1	90.6
49			9.5	89.9
+40			10.7	88.0
+55			13.1	85.6
+65			9.5	89.9
50 Δ P.O.T.		8.98		89.48
+40		8.4		90.3
+80		2.1		96.6
51		2.0		94.7
+25 AL ✓		4.68		93.98
52		11.0		87.7
53		17.3		81.4
54		20.0		78.7
+50		14.8		83.9
55		17.0		81.7

spike in tree 35' right of sta 46

peg on line

"B"

45

Station	B.S.	H.I.	F.S.	Elev
56	1598.66		13.5	1585.2
57			10.4	88.3
58			9.4	89.3
T.P. +55 Δ R 1.88	98.44		2.10	96.56
+65			5.4	93.0
59			3.3	95.1
+30			10.1	88.3
+55			6.0	92.4
+80			10.4	88.0
60			9.6	88.8
+60			16.6	81.8
B.M #12			12.59	85.85
61			15.3	83.1
62			15.1	83.3
63			18.2	80.2
T.P. +20	12.20	97.65	12.99	85.45 ^{2/16/14} _{2/20/14}
64			13.4	84.3
65			13.3	84.4
+60			9.0	88.7 ✓

Hob Sta 58+55

Rock 60+90 25' Right

Peg 20' left

"B"

Station	B.S.	H.I.	F.S.	Elev
66	1597.65		3.3	1594.4
+10			2.8	94.9
+20			4.5	93.3
T.P.+30	5.70	1802.42	0.93	96.72
+80 Δ R			2.19	1600.23
67			3.5	98.9
+70			10.4	92.0
68			9.3	93.1
+25			8.3	94.1
+60			8.6	93.8
+70			11.2	91.3
+75			9.0	93.4
69			9.8	92.6
+55			11.7	90.7
T.P.+80	0.53	89.89	13.06	89.36
70			4.8	85.1
71			5.9	84.0
72			4.9	85.0
+80			4.0	85.9

7-30-14

Huston
Kneeshaw
Lord
Clear 46
A.M.

Peg on line

Peg 5' left of 69+80

✓

"B"

8.9.89

47

Station	B.S.	H.I.	F.S.	Elev
T.P. 72+98	12.90	1602.46	0.33	589.56
73			12.2	1490.3
+15			8.8	93.7
+35			5.7	94.8
+75			10.2	92.3
74			4.5	98.0
+15			2.2	1400.4
+50			3.3	99.2
T.P. +65	10.46	1612.82	0.10	1602.36
+85			9.3	1403.5
75			12.3	1400.5
+10			13.6	99.2
+35			9.5	1403.3
76			5.0	7.8
+76 AL			4.26	8.56
77			8.4	4.4
T.P. +40	4.79	1605.76	11.85	1600.97
+90			9.8	94.0
78			6.8	99.0

peg on line

peg on line

Rock on line

"B"

2-20-14

48

Station	B.S.	H.I.	F.S.	Elev
78+35		1605.76	3.5	1602.5
79			2.0	3.8
+65			8.3	97.5
80			9.1	96.7
81			11.2	94.6
82			9.7	96.1
83			10.1	95.7
T.P. 84+00	888	1605.76	8.88	1696.88
85			7.9	97.9
86			7.1	98.7
87 A P.O.T.			6.62	99.14
88			5.5	1600.3
89			4.5	1601.3
90			5.2	1600.4
91			3.7	1609.1
92			2.6	3.7
T.P. 93+00	5.07	1609.32	1.51	1604.25
94 A R			4.60	4.7
95			4.0	5.3 ✓

Peg 2' Right 84+00

Peg 2' Right of 93+00

"B"

109.32

49

Station	B.S.	H.I.	F.S.	Elev	
95+30	6.50	1614.55	1.27	1628.05	Peg on line
+50			5.3	9.3	
96			6.4	8.2	
+60			6.8	7.8	
+80			3.6	11.0	
97 Δ POT			2.63	11.97	
98			7.4	7.2	
99			8.4	6.2	
+03 B.M.#15			6.87	1407.68	Rock on line
100			9.6	5.0	
T.P.+55 AL	8.48	1613.36	9.67	1604.88	Hub. Sta 100 + 50
101			8.2	5.3	
102			9.8	3.6	
103			8.0	5.4	
104			6.7	6.7	
105			5.5	7.9	
+45 Fence					
106			4.7	8.7	
107			4.2	9.2	
108			2.8	10.5	✓

"B"

50

Station	B.S.	H.I.	F.S.	Elev.	
109		1613.36	1.9	1611.5	
110			2.2	11.2	
T.P.+50 AL	8.45	1620.07	1.74	1611.62	Hub sta. 110+50
+75			6.1	14.0	
111			5.7	14.4	
112			5.2	14.9	
113			3.0	17.1	
T.P.+15	12.72	1632.58	0.21	1619.86	Peg on line
+60			3.2	29.4	
+80			1.6	31.0	
114			7.8	24.8	
+10			8.1	24.5	
T.P.+30	9.56	1642.08	0.06	1632.52	Peg on line
+65			6.3	35.8	
+85			9.1	33.0	
115			2.0	40.1	
T.P. +07	13.07	1655.14	0.01	1642.07	Peg on line
115+20			6.5	48.4	
+30 AR			5.53	49.61	✓

Station	B.S.	H.I.	F.S.	Elev
115+85		1655.14	1.3	1653.8
116			1.6	53.5
T.P. +07	12.69	1667.74	0.09	1655.05
117			0.9	66.8
T.P.	11.34	1678.90	0.18	1667.56
+25			7.2	71.7
T.P. +85	9.11	1687.81	0.20	1687.70
118 A POT			8.12	79.69
+56			4.9	82.9
+80			5.1	82.7
119			7.8	80.0
+10			9.6	78.2
+30			6.5	81.3
+45 T.P.	11.39	1697.76	1.44	86.37
+75			5.1	92.7
+85			3.0	94.8
120+00 POT			3.6	94.2
+10			1.5	96.3
121			7.5	90.3

2-20-14

51

Peg on line

on rock 1' right sta 117

Peg 3' left

Rock 4' right

"B"

Station	B.S.	H.I.	F.S.	Elev
122		1697.76	9.1	1488.7 ⁸
+05 AL			9.40	8834
T.P. +		12.45	1685.31	2-20-14 OK

Peg 122 + 20 5' R

Continued Book 2 Page 33

Station	+ BS	HI	FS	Elev.
TP	6.66			1611.62
		1618.28		
0+00 D' NB Creek			8.01	1610.27
1+00			5.00	13.28
2+00			4.30	13.98
2+12 W B Creek			4.30	13.98
2+20 Creek B			8.10	10.18
3+00			6.40	11.88
TP				
Top stake 300				
TP	7.59	2.021	5.66	12.62
4+00			9.10	11.11
4+88 Creek B.			8.40	11.81
4+95 E Bank C.			4.80	15.41
5+00			4.90	15.31
6+00			2.60	17.61
6+85 N Bank C.			2.70	17.51
7+00			4.80	15.41
BM #15 1/2			1.33	18.88
7+10 creek Bot			8.10	12.11

"D"

53

Hub 110+50 B Line

Top Hub 0+00 D'

Creek Bottom

center creek

18.88
BM #15 1/2 Cor Ele 1618.737
Error .14

"D"

Sta	+ BS	H1	FS	EL
7+30			9.00	1611.21
BM #15 1/2	10.82	1619.56		1618.74
7+41 5/8	AR		5.70	23.86
7+65	creek B.		14.60	14.96
8+00	creek B.		10.10	19.76
+10	creek B.		10.10	19.76
+12	Top Dam		3.30	26.26
TP			3.07	26.49
TP	5.23	31.72		26.49
11+24	E. end of pond		5.10	26.62
3 ft. S. of Sta.				
11+24	Water Level		6.50	25.22
	Bot. of Bank			
+95	N. side creek		2.80	28.92
12+00			1.00	30.7
TP	9.91	40.99	0.64	31.08
12+21	Top Bank of wash, S. side		6.10	34.89
+35	Bot. wash S. side		11.80	29.19
+60	Bot. wash N. side		12.60	28.39
+65	Top B. N. side wash		8.80	32.19
+80	N. end of Knoll		5.10	35.89

"D"

54

B.M. #15 1/2 Cor. Ele. 1618.737

Top concrete wall of dam

"D"

55

Sta	+ Bs	HI	FS	EL
		40.99		
POT				
12+98 3			3.09	37.90
13+00			2.80	38.19
BM#16			8.85	32.14 1632.14
+67	Top E end of Knoll		3.20	37.79
14+00	Bot. of Bank E end of Knoll		8.20	32.79
+45	Bot. S. edge of Bank		8.50	32.49
TP		3.86 42.41	2.44	38.55
15+00			6.60	35.81
+25	Top of B. S. edge Flat		3.50	38.91
+55	Top of B. E. edge Flat		4.40	38.01
+80	Bot. of B. E. edge Flat		12.00	30.41
16+00	Top Edge B. at wash	W. side	11.10	31.31
+15	Bot. of Bank at Wash West side		14.60	27.81
+40	Bot. of Bank at Wash E. side		14.50	27.91
+50	Top of B. of DIKE West side		8.00	34.41
+60	Top of B. of DIKE E. side		8.10	34.31
+75	Bot. of B. of DIKE E side		13.80	28.61
17+00			13.90	29.01 ✓

correct EL 1632.119¹⁴

Error .02

sta. 17+00 in wash.

"D" Line // Anderson
Kneeshaw

Sta	B ⁺ S	H ¹	F ⁻ S	EL
17+95	1642.41 B. B. of Flat west side		11.00	31.41
18+00			7.50	34.91
+10	Top B. of Flat W. side		4.70	37.71
TP	4.57	44.11	2.87	39.54 ✓
+50 P.O.T.			5.5	38.6
19+00			9.1	35.0
20+00			8.0	36.1
+60			3.0	41.1
21+00			4.5	39.6
22+00			5.0	39.1
23+00	6.14	46.50	3.75	40.36
+60			6.4	40.1
24+00			0.8	45.7
+10 ⁶ P.O.T.			0.50	46.00
+15			0.5	46.0
+30			12.1	34.4
25+00			11.7	34.8
26+00			11.9	34.6 ✓

Peg 12' N.W. Sta 18+50

Anderson
Kneeshaw
March 25/14

Hub P.O.T.
N. Bank creek

"D"

57

Station	BS	HI	FS	Elev	
27+00	8.43	47.51	7.42	39.08 ¹⁶	
28+00			11.0	36.5	
29+00			7.2	40.3	
30+00			4.7	42.8	
31+00			5.7	41.8	
32+00			8.2	39.3	S Bank creek
33	12.15	52.19	7.47	40.04	Bed of creek.
+70			12.0	40.2	do
+85			7.0	45.2	N. Bank creek
34 ⁺⁰⁰ P.O.T.			6.91	45.2	do
35+00			5.0	47.2	Hub
36+00			4.3	47.9	
+70			7.6	44.6	
+60			3.8	48.7	
37+00			3.4	48.8	
38+30			6.5	45.7	Edge of Water in pond
38 P.O.T. Δ	6.18	55.83	2.54	49.65	N Bank creek Hub
40 +25			9.6	46.2	
+50.31 ΔL			5.92	49.9	✓

"D"

58

Station	BS	HI	FS	Elev.	
40 +60		55.83	5.9	49.9	S Bank creek
+70			10.0	45.8	Bed creek
41 +00					Water
42 +00			9.0	46.8	Bed of creek
43 +00			8.4	47.4	do.
44 -00			8.4	47.4	do.
+60			9.0	46.8	S Bed
+75			5.4	50.4	N Bank creek
45			4.2	51.6	
	7.62	55.97	7.48	48.35	
45 +35			8.9	47.0	creek
+70			7.6	48.3	do.
+80 AR			3.84	52.13	Hub
46			7.7	48.2	cree
47			6.5	49.4	
48			6.3	49.6	
49			4.2	51.7	
50			3.1	52.8	
51			0.6	55.3	✓

"D"

59

Station	B.S.	H.I.	F.S.	Elev.
	6.42	57.94	4.45	¹⁶ 51.52
52			1.90	56.0
+55			1.7	56.2
+75			5.9	52.0
53			6.8	51.4
54			5.3	52.6
55			4.3	53.6
+15 Δ			3.90	54.0
+60			3.90	54.0
+70			5.9	52.0
56			4.2	53.7
57			2.6	55.3
	7.00	62.95	1.99	55.95
58			7.1	55.8
+50			9.0	53.9
59			6.5	56.4
60			5.8	57.1
61			5.4	57.5
62			3.8	59.1

N Bank

Bed of creek

do.

"

"

Hub

"

"

"

"

"

"

"

"

"

"

✓

"D"

60

Station	BS	HI	FS	Elev.	
63		62.95	4.1	58.8	
64			4.0	58.9	
65			3.7	59.2	
66	8.99	67.52	4.42	58.53	Top of Stake
67			9.2	58.3	
68			6.9	60.6	
69			5.8	61.7	
70			5.0	62.5	
71			4.4	63.1	
72 OR			4.35	63.2	Hub
+60			4.0	63.5	creek dry
+70			6.4	61.1	
73			5.8	61.7	
74			5.2	62.3	
75			4.5	63.0	
	7.03	70.38	4.17	63.35	
76			7.6	62.7	
+15			5.1	65.2	
77			4.1	66.2	✓

"D"

61

Station	B.S.	HI	FS	Elev.	
		70.38			
77+80			4.8	65.5	Dry Creek
78			6.4	63.9	"
79			5.7	64.7	"
80			5.9	64.5	"
81			5.0	65.4	"
+50			5.2	65.2	"
+60			2.7	67.7	Bank (sand)
82			2.5	67.9	" Top
+60			2.5	67.9	"
+65			4.2	66.2	"
83			4.0	66.4	"
84			2.5	67.9	"
	8.60	77.09	1.89	68.49	
85			8.9	68.2	
+60			9.4	67.7	Creek dry N.S.
+70			7.6	69.5	"
86			7.4	69.7	"
87			7.7	69.4	"

"D"

	BS	HI	FS	Elev.	
87	+50		4.8	72.3	N Top bank dry creek
88		77.09	4.8	72.3	
89			4.9	72.2	
	+30		5.0	72.1	Top of bank dry creek N.
	+60		8.7	68.4	Bottom bed "
90			4.5	72.6	"
	+70		5.1	72.0	" " S
	+30		0.2	76.9	Top of bank " S
	+40 ΔL	8.03	0.16	76.93	Hub
91			7.0	78.0 84.2	
92			6.0	78.9	
93			5.2	79.7	
94			4.8	80.1	
	+65		4.3	80.6	Top of S. bank ^(sand) dry creek
	+85		8.3	76.6	Bottom "
95			8.2	76.7	
96			7.9	77.0	
	+70		5.4	79.5	Top "
97			5.2	79.7 ✓	

"D"

63

Station	BS	HI	F.S.	Elev.
98 ΔR		84.96	4.03	80.93
+50			4.1	80.8
+70			8.8	76.1
99			8.3	76.6
+10	3.40	81.25	7.11	77.85
100			4.2	77.0
101			2.2	79.0
+25			4.7	76.5
102			4.6	76.6
103			4.8	76.4
104			5.1	76.1
+50			5.3	76.0
105			4.1	77.1
+75			5.1	76.1
106			1.5	79.7
	7.77	88.18	0.84	80.41
+50 BL			6.75	81.43
			6.36	81.82
107			8.5	79.6 ✓

Hub

Top of S bank

Bottom

Creek bed

Hub

BM 21

"D"

64

Station	BS	HI	FS	Elev.
108		88.18	9.1	79.0
109			6.2	81.9
110			5.8	82.3
111			7.4	80.8
112			6.7	81.5
113			6.2	82.0
+66			6.5	81.7
+90			7.8	80.4
114			6.5	81.7
	6.32	88.65	5.85	82.33
115			5.9	82.7
116			4.3	84.3
117			3.9	84.7
118			4.7	83.9
119			2.8	85.8
+85			4.6	84.0
120			0.0	88.6
	10.20	98.20	0.65	88.00
120+15 OL P.O.R.			6.88	91.32

Creek bed

Hub

"D"

65

BS HI FS Elev.

120 +50 98.20 14.8 ¹⁶ 83.4

121 13.7 84.5

7.70 90.50

121 +15 15.6 82.6

+50 12.4 85.8

122 12.1 86.1

123 6.6 91.6

+50 8.9 89.3

124 6.8 91.4

11.25 105.95 3.70 94.50

125 12.4 93.3

126 11.5 94.2

+50 11.1 94.6

127 8.8 96.9

+65 E.W. 1.9 103.8

BM 22

Creek bed (water)

Creek bed

"

do.

do. North Side

On ground 1' R of Hub.

✓

B³

Sta	+	Li	-	Elev.
16+65	B	12.06	1565.11	1553.05
00	= 2.0 + 17.3 ³		4.61	60.50
+	90		3.9	61.2
	+ 40		8.0	57.1
1	+ 00		6.8	58.3
	+ 35		5.2	59.9
TP		12.39	76.95	0.55 64.56
2	+ 00		3.3	73.7
TP		12.26	86.44	2.77 74.18
	+ 35		7.5	78.9
3	+ 00		5.5	80.9
	+ 60		9.1	77.3
	+ 75		0.0	86.4
4	+ 00		2.1	84.3
TP		12.83	99.23	0.04 86.40
	+ 75		6.0	93.7
5	+ 00		8.4	90.8
	+ 15		8.9	90.3
	+ 35		1.2	98.0

Anderson Level
Kneeshaw - Road.

66

Cloudy

3/31/14

On Hub

" "

Center Wash

Peg on line sta 1 + 35

Top Sta 2+00

Peg on line 4+10

Sta	+	Sta.	-	Ele.
		159923		
TP	13.20	1611.69	0.74	98.49
6	+00		10.2	01.5
7	+00		0.8	10.9
TP	12.59	24.18	0.10	11.59
	+50		14.2	14.0
8	+00		7.5	16.7
	11.80	35.20	0.78	23.40
9	+00		1.85	26.7
TP	13.20	48.33	0.07	35.13
	+91		12.8	05.5
TP	00	35.3	13.0	35.3
10	+00		7.9	77.4
	+10		11.8	23.5
	+25		6.8	28.5
	+50		8.2	32.1
	13.14	61.06	0.41	47.92
	+95		8.7	52.4
TP	12.53	72.96	0.63	60.43

Hand Level

Peg on line 5+40

Top Sta 7+00

Stump on line 8+50

Peg on line 9+70

Hand L. TP

Peg on line 10+80

Rock on line 11+00

5/5: + 24 - E1e

167296

T. T.P. 12+9 85.31 0.14 72.82

12+00 6.8 78.5

10+4 95.52 0.23 85.08

T. 12+80 END 1.84 93.68 ✓

Book

Book on line 12+25

Sub.

- Levels for re-setting B.M.s. -

69

No. 9			
BS	HI	FS	Elev
12.361	65.336		1552.975
12.414	76.922	0.828	64.508
5.539	81.243	1.218	75.704
		0.318	80.925
0.325	69.303	12.265	68.978
1.943	60.465	10.781	58.522
		7.485	52.980

No 8			
8.006	50.818		42.812
10.823	60.726	0.915	49.903
9.095	69.701	0.120	60.606
		0.200	69.501
1.937	59.603	12.035	57.666
0.915	48.203	12.315	47.288
		5.385	42.818

BM No 9

BM Mark on rock.

check on No 9

BM No 8.

BM Mark on Rock directly above L27+00

BM No 8 check

No 7 1/2

BS HI FS Elev

11.785 1554.478 1542.693

12.305 1565.357 1.426 1553.052

5.203 1569.658 0.903 1564.454

1.451 1568.206 ✓

2.564 1560.007 12.214 1559.443

5.740 1553.414 12.633 1547.374

10.421 42.693

10.130 40.528 1530.398

12.221 49.337 3.412 57.116

11.069 60.346 0.060 49.277

13.000 73.228 0.118 60.228

10.303 80.428 3.103 70.125

6.668 73.760

0.476 70.601 10.303 70.125

2.315 62.541 10.375 60.226

0.089 50.195 12.435 50.106

0.080 38.002 12.273 37.922

7.605 30.397

BM No 7 1/2

BM mark on rock

Check

BM No 6

Mark on Rock Directly above L 13+99²⁰

check

Sta	+	Sta	-	Ele	
		6745			
8+00			11.3	56.2	
7+00			10.6	56.9	
6+75			10.2	57.3	Edge of Swamp
6+00			5.1	62.4	
TP 5+81 ²	AL 5.80	70.37	2.88	64.57	On Hub
5+55			6.1	64.3	
5+00			11.4	59.0	Edge of Swamp
4+50			12.0	58.4	
4+00			11.3	59.1	Edge of Swamp
3+00			8.3	67.1	
2+65			5.2	65.2	Top Bank
2+00			4.8	65.6	
1+48 ²	OR.		4.95	65.42	Hub
1+10			5.0	65.4	
1+00			6.2	64.2	
1+50			9.7	60.7	Edge of Swamp
0+00 = E' 34+55			9.7	60.90	Hub

$$\text{Hub Ele} = \frac{61.1 + 60.9}{2} \text{ Error}$$

E^2 Levels

72

Sta	+	241	-	File
	12.30	65.35		53.05
19+57 ²			5.20	60.15
19+21 [±] AR			6.68	58.67
19+00			7.5	57.9
TP +55	55.7	58.25	12.67	52.68
18+00			5.7	52.5
17+00			5.3	53.0
16+00			5.0	53.3
15+00			4.2	54.1
14+37 AP			3.95	54.30
14+00			4.0	54.3
TP	10.70	67.45	15.0	56.75
13+00			9.3	58.2
12+00			8.3	59.2
11+00			5.1	62.3
10+39 ¹ AR			4.43	63.02
10+00			7.0	60.5
+70			11.5	56.0
9+00			11.6	55.9

Hub B 16+65 AR 53.05

Hub = 20+17 = 0+00 B³

Hub

Edge of Swamp

#1

1.20 27.79 26.59

1451

6.0 31.29 25.29

7.0 34.39 27.39

5.2 34.89 29.69

9.9 40.59 30.69

12.0 49.09 37.09

5.6 49.19 41.59

159 7.5 52.99 45.49

00 52.99

Road
"R" Line4-17-14 Knees have Level
Whitmore Road

Windy

Sta	+	HI	-	Elev	
BM 4	4.77	28.62		152385	
00			5.02	23.60	Hub
+32			4.88	23.74	" AR
1			6.0	22.6	
2			5.3	23.3	
TP 3+02.0	9.73	33.72	4.63	23.99	Hub AL
+87.1			7.40	26.32	
4			6.9	26.8	Hub AR
+97.4			2.96	30.76	AR
5			3.0	30.7	
+20			4.0	29.7	
+30			3.5	30.2	
T.P.	5.44	39.43	0.73	32.99	Stump + 50
6			5.4	33.0	
+30			7.7	30.7	
+40			5.4	33.0	
+75			7.3	31.1	
+92.5			5.68	32.75	
7			5.8	32.6	

"R" Road

75

7+15		3843	7.2	31.2	
8			5.8	32.6	
T.P.					
9	1.99	38.24	2.18	36.25	Hub P.O.T.
10			8.1	30.2	
11			8.8	29.4	
12			8.8	29.4	
13			8.9	29.3	
T.P.	6.37	40.77	3.84	34.40	Rock 13+50
14			10.8	29.9	
15			10.9	29.8	
T.P.	10.17	48.92	2.02	38.75	Rock +40
16			19.0	29.9	
T.P.	5.45	43.21	11.16	37.76	Rock 17+20
17			13.1	30.1	
B.M.			12.65	30.56	Elev 1530.57
18			8.4	34.8	
19			3.9	39.3	
T.P.	11.08	51.37	2.92	40.29	Top of stake
20			6.4	45.0	
21			1.7	49.7	

Road

	"R" Bs	HI	Fs	Elev.
T.P.	4.99	55.19	1.17	50.20
21 +65			5.00	50.2
22			5.6	49.6
23			7.8	47.4
24			10.7	44.5
TP	0.54	45.89	9.84	45.35
25			4.7	41.2
	7.80	50.49	3.22	42.67
26			9.1	41.4
27			7.3	42.2
28			2.9	47.6
TP	10.19	56.72	3.96	46.53
29			4.7	52.0
TP	8.26	64.24	0.74	55.98
30			8.2	56.0
31			4.5	59.7
32			2.9	61.3
T.P.	3.95	57.12	11.07	53.17
33				58.5
34			3.6	53.5

Rock 21

BM no 7 1/2 1542.69

Hand Level

Road

77

BS HI FS Elev.

57.12

35			8.8	48.3
T.P.	4.52	50.41	11.23	45.89
36			3.2	47.2
37			3.6	46.8
38			2.9	47.5
T.P.	5.66	55.11	0.96	49.45
39			7.1	48.0
40			6.7	48.4
41			5.0	50.1
42			4.6	50.5
43			4.1	51.0
44			4.3	50.8
T.P.	5.91	57.51	3.51	51.60
		57.43	4.46	53.05
45			6.4	51.0
46			4.9	52.5
47			5.2	52.2
48			5.2	52.2
49			5.2	52.2

BM W9

52.97
4.16

Station	Road			
	DS	HI	FS	Elev.
50		57.43	3.2	54.2
TP	12.22	66.71	2.94	54.49
51			10.4	56.3
+75			7.8	58.9
52			11.4	55.3
+15			7 11.2	55.5
52 +50			5.9	60.8
53			4.4	62.3
54			4.3	62.4
TP	6.75	69.96	3.50	63.21
55			7.7	62.2
56			7.9	62.0
57			7.4	62.5
58			5.4	64.5
59			5.3	64.6
+50			5.3	64.6
			1.46	68.50

78

Top of Slope

Bed of Canyon "B3" line

do.

Top.

Road

BM No 10 68.52

B Ms.

No	Elev	
	Old.	New
1	1518.040	
2	1519.636	
3	1521.529	
4	1523.852	
5	1528.134	
6	1530.398	1573.760
7	1530.576	
7½	1542.693	1568.206
8	1542.812	1569.501
9	1552.975	1580.925
10	1568.527	1573.255
11	1581.594	1585.782
12	1585.674	
13	1588.535	
14	1596.492	1637.770
15	1607.559	1639.443
15½	1618.737	1617.017
16	1632.119	

79

Description Old	Description New
Rock N side Ditch	
Spike in Stump Wend No 1 ^{flume}	
Corner Small sand trap	
Bolt head Sand intake	
Rock	
do	Rock above L 13+99 ²⁰
do	
do	Rock above L
do	do. L 27+00
do N side of flat	do. L
R.R. spike in Oak 40' N of road	Spike in Oak 125' R of L 60+50
do. 60' do	do. 75' L of L 81+85 ^{at}
Rock N side creek 10' S of road	
do. road	
do. do	Rock 50' L of L 118+50
do. creek	Rock 50' R of L 142
do. 150' below Salazar dam	Rock 80' R of L 160
do. 150' above. do	

BMs.

80

No.	Elev <u>old</u>	Elev <u>New</u>	Description <u>old</u>	Description <u>New</u>
17	1669.584		R.R. spike in Oak N side	
18	1678.259		do front Salazar house	
19	1686.739		do N side	
20	1694.055		do do	
21	1681.551		Rock in Creek bed	
22	1690.238		do S side do	
23	1699.872		do N do do	
24	1731.850		do N side do	
25	1784.383		do do cañon	
26	1785.280		do do	
27	1820.397		do do	
28	1838.117		do on island facing junction of Cottonwood + Hauser	

