

275

WEST

LEVEL BOOK

W279

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THE FREDERICK POST CO.
ENGINEERING and DRAFTING SUPPLIES
IRVING PARK STATION

CHICAGO, ILL.
MICROFILMED

JUN 24 1965

O.P.-5.D. 2nd. Main Pipe Line.

Index

"A2 Line" Profile	1-44	m.
List of B.M.s	Back of book	
"A4 Line" Profile	46-65	
Location of high point on Detroit St. 2 nd Otay Main	66	

MICROFILMED

O.R.S.D. 2nd. Main Pipe Line.
 Profile Levels Line A² - Sta. 630 to 802+21.00
 See Level Book #277-p.63 for divergence from "A" Line

B.M.			348.00
	3.21	351.21	
			333.1
630+00		-17.8	323.4
+30		16.7	34.5
+50		+7.0	35.1
+75		14.9	34.2
631		15.5	36.3
+25		14.5	35.7
+48 ²²		13.8	36.7
632+00		11.8	37.4
633+00		8.5	39.4
+50		6.8	42.7
634		5.1	44.9
+50		4.2	46.1
+60		3.6	47.0
+75		3.7	47.6
+85		2.6	47.5
634+98		5.6	45.6
635+00		4.3	45.6
+15		4.7	46.7
+40		6.6	46.5
+83		10.7	44.6
+90		10.7	40.5
636		12.0	40.5
T. P.		11.93	39.2

5.24 344.52^x

Barger level # 44897
 Adjusted Sept 24, 1929.

Sept. 24, 1929

O.K. Parker
 Geo. Converse
 Elliott & Notes
 Walton

Top of A.V. 8⁵ Rt of Sta 634+65 City Datum.

City Datum. U.S.G.S. = 6.12.

City = 0.0

National Ranch Line

3' Rt. on top of W.S. Pipe

Top of W.S. Pipe at Xing.

344.52

636+15	6.7	337.8
+15	6.3	38.2
+25	8.6	35.9
+40	8.9	35.6
+45	7.6	36.9
+65	7.6	34.9
+80	8.0	36.5
637	8.3	36.2
+50	7.3	37.2
638	6.7	37.8
+32	6.5	38.0
+50	5.6	38.9
639	4.4	40.1
+35	4.4	40.1
+50	2.9	41.6
640	0.6	43.9
T.P.	0.53	343.99
12.13	356.12	
+50	9.3	46.8
641+00	5.4	50.7
+50	0.7	55.4
T.P.	0.23	355.89
12.93	368.82	
642+00	9.7	59.1
+50	7.5	61.3
+80	6.2	62.6
+95	4.7	64.1
643	5.4	63.4

Top of W.S. Pipe 30' Lt. 636+15

Top of W.S. Pipe 35' Lt. 636+45

" " " 39' " 638+32

" " " 34' " 639+35

Peg in 641+53

A²368.82^x

643+10		4.4	365.11 ✓ 364.4 ✓
+20		4.0	64.8 ✓
+35		4.7	64.1 ✓
T.P.		0.88	367.94 ✓
	8.77		376.71 ^x
+88		6.6	70.1 ✓
644		5.5	71.2 ✓
+25		4.5	72.2 ✓
+50		4.5	72.2 ✓
B.M. 103.		3.54	373.17 ^x Record. 373.19
645+90		4.8	71.9 ✓
+50		6.3	70.4 ✓
+80		8.6	68.1 ✓
		5.7	71.0 ✓
646		8.8	67.9 ✓
+47		8.5	68.2 ✓
+80		8.8	67.9 ✓
647		7.2	69.5 ✓
+17		5.8	70.9 ✓
+50		5.0	71.7 ✓
		5.6	71.1 ✓
648		3.7	73.0 ✓
+50		3.5	73.2 ✓
649		4.5	72.2 ✓
+25		4.5	72.2 ✓

Top of hub 3' RT 643+77

AV. 21' Lt. of 644+89

Top of Pipe 21' Lt 645+50

Top of Pipe 20.5' Lt. 647+53

3

	376.71		
649+50		5.2	371.5
+90		5.2	372.5
T.P.			371.5
			72.5
	12.15	5.14	371.57
	383.72		
650		13.3	70.4
		12.7	71.0
+20		12.1	71.6
+50		11.2	72.5
651		8.6	75.1
		11.3	72.4
+23		6.5	77.2
+50		5.6	78.1
652		4.2	79.5
+20		4.6	79.1
+30		0.0	83.7
T.P.		0.00	383.72
	8.09		391.81
+47		1.7	90.1
+50		2.1	89.7
+76		2.0	89.8
+80		1.6	90.2
+87		2.9	88.9
653		8.3	83.5
+06		12.1	79.7
+30		12.5	79.3

Peg 3' Rth. of 650+00

Top of pipe 3' Lt 650+00

" " " at Xing.

" " " 7' Rth. 650+23

Peg in 652+30

Edge of pavement

" " "

	391.81		77.3
653+50		12.9	378.9
T.P.		12.74	379.07
	0.34		
	379.41		
+90		1.8	77.6
654		4.2	75.2
+15		3.3	76.1
+50		4.3	75.1
+60		5.0	74.4
+67		6.4	73.0
+78		4.8	74.6
655		5.7	73.7
B.M. #104		6.04	373.37
			Record 373.41
		8.2	71.2
+35		7.0	72.4
+65		9.9	69.5
T.P.		12.81	366.60
	0.47		
	367.07		
656		2.0	65.1
+50		7.1	60.0
		11.0	56.1
657		10.9	56.2
+20		12.2	54.9
+27		12.3	54.8
+37		14.6	52.5

Peg 3' Lt. 653+90

Top of A.V. 65 Rt. 655+08

Top of W.S. Pipe 65 Rt 655+08

Peg 655+89

Top of W.S. Pipe 65 Rt 656+88

	367.07 ^x		
657+43		13.5	353.6 ✓
T.P.		11.80	355.27 ^x
	0.97		356.24 ^x
657+50		2.6	53.6 ✓
+51.5		6.3	49.9 ✓
+55		5.4	50.8 ✓
+57.5		6.7	49.5 ✓
+58		1.1	55.1 ✓
+58.5		3.9	52.3 ✓
B.M. #105.		2.04	354.20 ^x
+70		3.2	53.0 ✓
658		3.8	52.4 ✓
		4.9	51.3 ✓
+50		5.2	51.0 ✓
+82		8.1	48.1 ✓
659		10.2	46.0 ✓
T.P.		12.90	343.34 ^x
	0.74		344.08 ^x
+16		1.5	42.6 ✓
+20		3.6	40.5 ✓
+30		5.5	38.6 ✓
+44		7.6	36.5 ✓
+90		12.1	32.0 ✓
660		12.2	31.9 ✓
+40		13.6	30.5 ✓
+50		10.8	33.3 ✓

Nail in Top S. Side Valve Box 657+51

Note: Valve Gear on &
Bottom of Valve Gear of Hor. Stop Valve 657+55

Top of Valve Box

Ground

3 Nails in Plate 6' Lt 657+63 (Elev. Written
on Page 354.12)

Peg on & 659+12

	344.08		334.3
660+70		9.8	334.7
+80		11.2	32.9
661		8.3	35.8
+50		3.4	40.7
+85		1.5	42.6
662		2.8	41.3
+35		5.3	38.8
+50		5.0	39.1
+85		2.9	41.2
663+00		0.7	43.4
T.P.		0.61	343.47 ^x
	13.03		356.50 ^x
+25		6.5	50.0
T.P.		0.72	355.78 ^x
	13.01		368.79 ^x
+50		12.4	56.4
+64		8.1	60.7
+75		6.0	62.8
664		2.3	66.5
		2.5	66.3
+15		1.2	67.6
T.P.		0.32	368.47 ^x
	9.51		377.98 ^x
+25		9.1	68.9
+50		8.2	69.8

Peg on \angle 663+00

" " 663+45

Top of W.S. Pipe 6.2 Rt. 664+15

Peg on \angle 664+20

Sept 26-29
Fisher
Converse
Elliott & Notes
Watson

7

377.98^x

	10.2	367.8	✓
665+00	6.1	71.9	✓
+43	5.8	72.2	✓
+66	3.9	74.1	✓
B.M. #106.	4.46	373.52	Record
		373.55	
+75	3.7	74.3	✓
666	3.9	74.1	✓
+25	4.0	74.0	✓
+50	3.8	74.2	✓
+75	4.1	73.9	✓
667	3.6	74.4	✓
+50	4.3	73.7	✓
+90	7.9	70.1	✓
668	9.3	68.7	✓
	10.2	67.8	✓
T.P.	12.76	365.22	✓
	0.72	365.94	✓
+50	2.4	63.5	✓
669	6.3	59.6	✓
+50	9.7	56.2	✓
670	13.3	52.6	✓
T.P.	12.89	353.05	✓
	0.01	353.06	✓
+32	4.0	49.1	✓
+50	5.6	47.5	✓

Top of W.S. Pipe 6.6 RT. 664+50

Top of A.V. 6' RT 665+66

Top of Pipe 6.5 RT 668+00

Peg 217 ft 668+27

Peg 2' RT. 669+98

	353.06 ^x		
671+00		10.7	342.4 [✓]
B.M. #107.		8.44	344.62 ^x 344.48 ^x Written on Pole
		13.7	39.4 ^x
T.P.		12.95	340.11 ^x
	1.36	341.47 ^x	
+70		5.9	35.6 [✓]
672		7.3	34.2 [✓]
+50		19.9	31.6 [✓]
673		12.5	29.0 [✓]
T.P.		12.58	328.89 ^x
	2.66	331.55 ^x	
B.M. #108		1.29	330.26 ^x 330.29 ^x Record
		4.4	27.2 [✓]
+50		6.2	25.4 [✓]
+70		8.2	23.4 [✓]
+85		10.0	21.6 [✓]
+92		11.6	20.0 ^x
T.P.		12.93	318.62 ^x
	0.77	319.39 ^x	
674		1.3	18.1 [✓]
+50		13.2	06.2 ^x
T.P.		13.04	306.35 ^x
	0.58	306.93 ^x	
		5.4	01.5 [✓]
+75		7.3	299.6 [✓]

9

Nail in (#70901) 44 Lt. 671+37, Street Dept. B.M.
 Top of Pipe 6.5 Rt. 671+16
 Peg on & 671+29

" " 673+00

Nail in Pole #709012' Rt. 672+73
 Top of W.S. Pipe 6.5' 672+95

Peg on & 673+98

" " 674+50

Top of W.S. Pipe 6.5 Rt. 674+62

	306.93		
T.P.		12.64	294.29
	1.60		295.89
675+00		5.6	90.3
T.P.		12.59	283.30
	0.76		284.06
+23		3.1	81.0
+38		10.8	73.3
T.P.		12.64	271.42
	0.55		271.97
+50		3.1	68.9
T.P.		12.90	259.07
	1.45		260.52
+77		1.5	59.0
		3.6	56.9
676		7.5	53.0
+22		12.7	47.8
T.P.		12.74	247.78
	1.52		249.30
+33		4.1	45.2
+35		5.7	43.6
+46		6.5	42.8
+56		10.0	39.3
+80		13.0	36.3
T.P.		12.96	236.34
	0.37		236.71

Peg 12' Rt 674+85

Peg 11' & 675+16

Peg 6' Rt. 675+44

Peg 6 674+77

Top W.S. Pipe 6.5' Rt 675+80

Peg 6 676+23

Edge Road

" "

Peg 6 676+80

		221.23 ^x		
T.P			8.25	212.98 ^x
	5.62	218.60 ^x		
680 +10			5.3	13.3 [✓]
			8.6	10.0 [✓]
+ 14			9.3	09.3 [✓]
+ 20			11.5	07.1 [✓]
+ 29			12.2	06.4 [✓]
+ 38			11.9	06.7 [✓]
+ 42			11.2	07.4 [✓]
+ 46			8.6	10.0 [✓]
			8.9	09.7 [✓]
+ 63			9.0	09.6 [✓]
+ 75			6.2	12.4 [✓]
681			6.4	12.2 [✓]
+ 50			7.1	11.5 [✓]
+ 50			4.5	14.1 [✓]
682			3.7	14.9 ^x
T.P.			0.64	217.96
	13.07	231.03 ^x		
+ 24			9.7	21.3 [✓]
+ 35			8.7	22.3 [✓]
+ 50			7.4	23.6 [✓]
683			2.5	28.5 [✓]
			3.4	27.6 [✓]

Top W.S. Pipe, Start of Steel Syphon 65 Rt 679 + 95

4 of storm drain

Top W.S. Pipe, End of Steel Syphon 65 Rt 680 + 50

" " " 6.5 Rt 681 + 43

Peg 4 682 + 11

Top W.S. Pipe Rt 683 + 02

	231.03 ^x		
683+33		1.7	229.3
T.P.		0.09	230.94 ^x
	12.93		243.87 ^x
+59		12.4	31.5
+64		10.0	33.9
+86 ⁺		9.3	34.6
+84		5.4	38.5
684			
+50		1.4	42.5
685		0.14	243.73 ^x
T.P.			
	12.47		256.20 ^x
+50		7.6	46.6
686		5.6	50.6
+50		1.9	54.3
T.P.		0.13	256.07 ^x
	13.07		269.14 ^x
687		11.5	57.6
+50		7.4	61.7
+75		5.4	63.7
688		3.8	65.3
+50		0.6	68.5
T.P.		0.51	268.63 ^x
	6.16		274.79 ^x
B.M. #110		5.23	269.56 ^x
	5.23		274.79 ^x

continued page 46

Rock 1' Lt 683+46

Edge Pavement

" "

Peg 4 685+13

Peg 5' Lt 686+70

Peg 10' Lt 688+50

Top of Air Valve Rt 688+63
A4 line

(Chillson's Original)
Elev 269.52

268.54
269.52
89
29

A4 a dotted line

274.79^x

689	5.3	69.5
+25	5.5	69.3
	7.6	67.2
+40	4.7	70.1
+60	5.1	69.7
+75	6.1	68.7
690	7.9	66.9
+20	9.3	65.5

turn

Top W.S. Pipe RT 689+35

T.P. 12.68 262.11

Peg on L. 690+38

1.93 264.04^x

+40	2.5	61.5
+58	7.3	56.7
	4.6	59.4
T.P.	13.00	251.04

Top W.S. Pipe RT 690+58

Peg 690+75

0.21 251.25^x

691	8.6	42.6
	7.5	43.7
+30	16.7	34.5
+42	18.0	33.2
+52	16.3	34.9
+70	11.6	39.6
+80	8.4	42.8
692	3.9	47.3

Top of Longitud. Braces of Trestle

Bottom of draw

T.P. 0.16 251.09

Peg 692+20

12.61 263.70^x

turn to page 46

	263.70		
692+50		6.0	57.7
		4.3	59.4
		6.7	57.0
T.P.		0.31	263.39
	12.37		275.76
693		11.2	64.6
+50		5.1	70.7
		6.0	69.8
+85		1.2	74.6
694+00		0.2	75.6
T.P.		0.12	275.64
	12.38		288.02
+40		8.9	79.1
695		4.3	83.7
T.P.		0.13	287.89
	12.79		300.68
+70		10.5	90.2
696		9.6	91.1
		7.5	93.2
+50		1.6	99.1
T.P.		0.21	300.47
	13.07		313.54
697		6.9	306.6
+40		0.7	12.8

Top of pipe Rt. 692+50
 " " " " 691+50; in middle of trestle #39
 Peg 4' Rt 692+87

Top of pipe Rt 693+61

Peg 6 694+00

Peg 6 695+47

Top of W.S. Rt 695+90

Peg 696+62

turn to page 46

	313.54		
T.P.	13.00	326.12	0.42 313.12
698			8.5 17.6
+50			3.7 22.4
T.P.	9.25	335.04	0.33 325.79
699			8.4 26.6
+50			5.9 29.1
700			5.5 29.5
B.M. # 11			4.57 330.47
+50			5.5 29.5
701			5.9 29.1
+50			5.5 29.5
			5.8 29.2
702			5.1 29.9
+50			3.7 31.3
T.P.	10.93	344.80	1.17 333.87
			12.8 32.0
703			11.6 33.2
+30			10.7 34.1
+50			9.5 35.3
			13.5 31.3
+89			11.9 32.9
704			12.2 32.6

Peg in 697+45

Record

~~330.40~~
330.48 - A line

Top A.V. Rt 700+02

(Chilsons Original)
Elev. 330.35

Top W.S. Pipe 701+95

Peg 15' Rt 703+12

Top W.S. Pipe Rt 702+95

" " " " 703+57

Edge pavement

turn topage 46

344.80

B.M. #112

10.40 334.40

Record

~~334.48~~

=334.43-At

line

Top Fire Plug Cor. 63rd & Bach. (Chillson's Original)
Elev 334.40

704+65

12.4 32.4

+65.55

11.6 33.2

+75

11.4 33.4

+90

11.0 33.8

Top Curb

Center Sidewalk

705

9.0 35.8

+30

10.3 ~~35.5~~ 334.5

+50

7.3 37.5

Top W.S. Pipe Rt 705

T.P.

0.56 344.24

Peg 705+94

12.87 357.11

706

12.3 44.8

Top W.S. Pipe Rt 706+38

+50

10.1 47.0

707

8.2 48.9

" " " 707+00

4.1 53.0

T.P.

5.2 51.9

Peg 6' Rt 707+50

3.00 369.62

+50

0.49 356.62

+80

14.3 55.3

708

10.6 59.0

+50

8.7 60.9

T.P.

3.3 66.3

Peg 708+85

7.67 377.20

turn to page 46

352.84

712+75

0.9 351.9

+85

3.7 49.1

713

10.0 42.8

T.P.

12.82 340.02

0.86

340.88

+25

6.3 34.6

+45

12.8 28.1

T.P.

9.2 31.7

12.69 328.19

0.72

328.91

+75

9.9 19.0

T.P.

12.94 315.97

0.70

316.67

+90

3.9 12.8

714

7.0 09.7

+15

13.0 03.7

T.P.

12.94 303.73

0.99

304.72

+50

12.6 292.1

T.P.

12.75 291.97

0.42

292.39

B.M. #114

2.93 289.46

+83

12.8 79.6

T.P.

12.82 279.57

0.75

280.32

Record

~~289.57~~

289.40 AS

like

Spike in EUC. Tree 20' RT 714+62 (Chilsons Orig. Elev. 289.38)

Peg 714+83

Peg 713+09

Top W.S. Pipe RT 713+38

Peg 713+45

Peg 712+82

Peg 714+15

Peg 714+51

turntopage 46

280.32

715

5.2 275.1

+15

8.9 71.4

T.P.

12.82 267.50

0.97 268.47

+40

2.8 65.7

+51

5.7 62.8

1

1.3 67.2

+69

13.0 55.5

T.P.

12.92 255.55

1.24 256.79

+93

9.9 46.9

716

11.1 45.7

+05

12.6 44.2

+15

9.8 47.0

+33

3.1 53.7

T.P.

3.2 53.6

0.18 256.61

11.76 268.37

+57

5.1 63.3

1.7 66.7

2.2 66.2

+73

0.3 68.1

T.P.

0.33 268.04

12.43 280.47

20

Peg 715+82

Top W.S. Pipe at S. End Trestle #40 Sta. 715+51

Peg 715+69

Bottom Draw

Top of Longitud. Brace Trestle #40

Peg 716+39

Top of W.S. Pipe Rt 716+57

Top " " " Middle of Trestle #40

Peg 716+73

Turn to page 46

280.47

717+00	7.8	272.7
+03	6.9	73.6
+19	6.5	74.0
+21	5.1	75.4
T.P.	0.69	279.78

13.08 292.86

+50	12.2	80.7
717+76 ²² P.C. A ³ =	7.8	85.1
717+76 ²² Post. A ²		

718	10.1	82.9
+21	4.0	88.9
+25	0.2	92.7
T.P.	0.1	92.8
	0.13	292.73

12.56 305.29

+43 ²⁹ P.T. A ³	11.2	94.1
+83 ²¹ P.C. A ³	8.1	97.2
719+00 A ³	6.8	298.5
+25 A ³	4.9	300.4
+50 A ³	3.0	02.3
T.P.	0.40	304.89

12.80 317.69

719+85 ⁴⁶ P.T. A ³ =	12.5	05.2
719+82 ⁵⁰ P.O.T. A ²		
720+00 A ²	11.1	06.6

Sept 27-29

Parker
Converse
Elliott & Hoke
Walton

21

Peg 717+45

Top of W.S. Pipe Pit 717+70

Peg 718+21

Peg 9' bit 719+76

A² turn to page 46

	317.69 ^x		
720 +50 A ₂		6.3	311.4 ^x
T.P.		0.28	317.41 ^x
T	13.10		330.51 ^x
721+00		13.7	16.8 [✓]
+50		6.3	24.2 [✓]
+66 ⁵ P.C.		3.6	26.9 [✓]
T.P.		0.15	330.36 ^x
	13.07		343.43 ^x
722		11.1	32.3 [✓]
+25		6.2	37.2 [✓]
+35		3.9	39.5 [✓]
+50		2.1	41.3 [✓]
T.P.		0.36	343.07 ^x
	13.04		356.11 ^x
+75		11.9	44.2 [✓]
723		9.8	46.3 [✓]
+20		9.8	46.3 [✓]
+50		8.3	47.8 [✓]
724		4.9	51.2 [✓]
+10		4.5	51.6 [✓]
+25		2.4	53.7 [✓]
+47		1.5	54.6 [✓]
T.P.		0.74	355.37 ^x
	9.17		364.54 ^x

Peg 11' Lt 721+03

Peg 2' Lt 721+90

Peg 722+68

Peg 1' Lt 724+56

A2

turn to page 46

364.57

724	7.3	357.2
725	5.6	58.9
+50	3.6	60.9
726	4.1	60.4
+45	4.7	59.8
727	6.9	57.6
+30	7.2	57.3
+65	7.2	57.3
+90	7.5	57.0
728	8.1	56.4
+15	9.2	55.3
+50	10.5	54.0
729	12.7	51.8
	12.30	352.24
8.80	361.04	
+50	10.1	50.9
+70	16.6	44.4
730	10.0	51.0
+15	9.6	51.4
+45	7.4	53.6
731	7.0	54.0
+40	9.5	51.5
732	10.3	50.7
+45	11.1	49.9

23

Page 1 of 24 729107

A2 line *turn to page 46*

361.04

732+70	12.2	48.8
+80	10.5	50.5
733	9.3	51.7
+35	7.5	53.2
+50	6.5	54.5
734	6.0	55.0
+35	5.9	55.1
+60	7.6	53.4
+75	10.3	50.7
T.P.	2.35	358.69

#115
B.M. T.P.

6.81 365.50

0.91 364.59

~~Record~~
364.78
364.62 - A.S.M. line

Top of A.V. Pipe 732+25 (Chilsons Original)
Elev. 364.46

0.91 365.50

T.P.

6.81 358.69

2.35 361.04

T.P.

12.77 348.27

1.39 349.66

Peg 734+91

735

3.2 46.5

+25

8.8 40.9

+50

12.9 36.8

T.P.

10.9 38.8

T.P.

12.89 336.77

Top W.S. Pipe 735+35

Peg 735+50

2.76 339.53

+50

5.4 34.1

7.5 32.0

Top W.S. Pipe 735+90

A² line turn top page 46

339.53^x

736+00 7.6 331.9 ✓

+50 9.3 30.2 ✓

+85 9.2 30.3 ✓

737 9.3 30.2 ✓

11.7 27.8 ✓

+20 10.8 28.7 ✓

+50 10.1 29.4 ✓

738 6.2 33.3 ✓

+50 1.8 37.7 ✓

T.P. 0.53 339.00 ✓

12.99 351.99^x

11.1 40.9 ✓

739 7.8 44.2 ✓

+10 5.6 46.4 ✓

+20 4.9 47.1 ✓

+50 0.2 51.8 ✓

T.P. 0.13 351.86 ✓

13.05 364.91^x

740 4.8 60.1 ✓

6.9 58.0 ✓

+18 2.1 62.8 ✓

T.P. 0.30 364.61 ✓

12.85 377.46^x

+30 11.6 65.9 ✓

25

Top W.S. Pipe Rt 736+94

Peg 5' Lt 738+50

Top W.S. Pipe Rt 738+86

Peg 739+50

Top W.S. Pipe Rt 739+95

Peg 3' Lt 740+24

A² line turn top page 46

26

	377.46		
740+40		11.2	366.3 ✓
		12.1	65.4 ✓
+65		7.3	70.2 ✓
+80		6.5	71.0 ✓
741		4.6	72.9 ✓
#116			
BM, T.P.		2.86	374.60 374.83 ^{Record} ✓
	3.90	378.50	374.63-A¹ ✓
+20		6.5	72.0 ✓
+45		3.1	75.4 ✓
+70		2.6	75.9 ✓
742		3.0	75.5 ✓
+15		4.4	74.1 ✓
+25		4.0	74.5 ✓
		9.6	68.9 ✓
+50		5.8	72.7 ✓
+75		7.1	71.4 ✓
743		9.8	68.7 ✓
		10.1	68.4 ✓
+02		10.7	67.8 ✓
		12.4	66.1 ✓
+12		11.0	67.5 ✓
		12.80	365.70 ✓
	0.37	366.07	✓
+50		4.9	61.2 ✓

Top W.S. Pipe Rt 740+40

Top A.V. Rt 741+18 (Chilson's orig. Elev. 374.48)

Top W.S. Pipe Rt 742+30

" " " " 742+82

Top of W. End of 3'x5' Wooden Meter Box

Bottom " " " "

Peg 1' Rt. 743+25

A² line

turn to page 46

366.07

744+00		4.8	61.3
		10.6	55.5
		12.7	53.4
T.P.		12.71	353.36
	1.48		354.84 ^x
+42		2.8	52.0
+72		5.6	49.2
		7.0	47.8
745		9.7	45.1
+25		13.0	41.8
T.P.		12.91	341.93 ^x
	0.51		342.44 ^x
+60		3.6	38.8
		3.5	38.9
746		6.5	35.9
+25		7.8	34.6
+50		10.1	32.3
		10.0	32.4
+75		11.1	31.3
747		12.5	29.9
+25		14.0	28.4

27

Note: Starting at 743+25 the line follows
the East edge of Crouch's 15' Road.
& leaves the road at 748+00

Top of W.S. Pipe Rt 743+58

" " " " 744+21

Peg 1' RT 744+25

Top W.S. Pipe Rt 744+72

Peg 6 745+25

Top W.S. Pipe Rt 745+60

" " " " 746+50

A² line *turn to page 46*

347.44

747 +50	12.8	29.6	
+87	14.3	28.1	
748.	13.7	28.7	
	12.1	30.3	
+20	13.2	29.2	
BM #117	10.6	31.8	
	10.90	331.54	<i>Record</i>
1.79	33.3.33		<i>331.79</i>
+30			<i>331.60 - A² line</i>
+55	1.1	32.2	
+75	1.6	31.7	
749	4.5	28.8	
	9.8	23.5	
+08	12.1	21.2	
T.P.	12.8	20.5	
	12.78	320.55	
0.94	321.49		
+27	8.0	313.5	
T.P.	12.75	308.74	
		312.5	
0.50	309.24		
+51	7.6	01.6	
+54	10.5	298.7	
+65	11.9	97.3	
T.P.	12.81	296.43	
0.46	296.89		

Top W.S. Pipe R/I 747+25

Edge Rd.

Top W.S. Pipe R/I 748+00

Top A.V. Right 748+20 (Chilson's Original Elev. 331.49)

Top W.S. Pipe R/I 749+00

Peg 749+08

Peg 749+37

Edge Road

" "

A² line turn to Page 46

29

296.89^x

749 +82

10.2 286.7[✓]

T.P.

12.67 284.22^x

Peg 749+88

1.00 285.22^x

750+00

5.8 79.4[✓]

+07

7.4 77.8[✓]

+18

12.9 72.3[✓]

T.P.

12.93 272.29^x

Peg 750+18

0.85 273.14^x

+50

11.4 61.7[✓]

Top W.S. Pipe Rt 750+50

+58

15.0 58.1[✓]

T.P.

13.1 60.0[✓]

Peg 750+58

0.38 260.41^x

13.11 260.03^x

T.P.

12.79 247.62^x

Peg 750+98

0.68 248.30^x

751

1.6 46.7[✓]

+19

7.5 40.8[✓]

+39

10.7 37.6[✓]

T.P.

12.68 235.62^x

Peg 751+44

2.08 237.70^x

+47

3.3 34.4[✓]

Top W.S. Pipe Rt 751+47

+65

5.5 32.2[✓]

+68

5.3 32.4[✓]

6.8 30.9[✓]

A² line turn to page 46

237.70

751+80	7.9	29.8
752	6.3	31.4
+27	5.7	32.0
+32	7.1	30.6
	8.1	29.6
+75	7.4	30.3
+80	5.4	32.3
753	5.1	32.6
	7.3	30.4
+50	5.8	31.9
754	4.4	33.3
	6.7	31.0
+07	3.0	34.7
T.P.	0.85	236.85
	10.98	247.83
+15	8.0	39.8
+21	8.2	39.6
+58	8.3	39.5
+67	8.6	39.2
B.M. #118	5.47	242.36
+75	3.7	44.1
T.P.	0.75	247.08
	13.00	260.08
755	9.4	50.7

Record
~~242.66~~
=242.35-A²

Edge Wash
Top W.S. Pipe Rt 752+55
Edge Wash

Top W.S. Pipe 753+31

" " 754+02

Peg 10' Lt 754+10

Edge Pavement

" "

Nail 2nd Guard Post Broadway Bridge (Chilison's Original)
Elev. 242.34
line

Rock 754+88

A² line turn to page 46

260.08 ✓

755+10 7.0 53.1 ✓
+25 5.5 54.6 ✓
+45 3.2 56.9 ✓
T.P. 0.17 259.91 ✓

12.15 272.06 ✓

756 9.1 63.0 ✓
+20 7.3 64.8 ✓
+35 7.4 64.7 ✓
+50 4.8 67.3 ✓
+50 3.7 68.4 ✓
+78 0.5 71.6 ✓
T.P. 0.47 271.59 ✓

12.52 284.11 ✓

757 9.0 75.1 ✓
+50 2.4 81.7 ✓
T.P. 0.14 283.97 ✓

11.14 295.11 ✓

758 8.5 86.6 ✓
+38 8.6 86.5 ✓
T+58 3.2 91.9 ✓
T.P. 0.0 95.1 ✓
0.06 295.05 ✓

11.01 300.06 ✓

+80 7.5 98.6 ✓
759 5.2 300.9 ✓

31

Peg 755+63

Top W.S. Pipe Rt 756+27

Peg 1' Lt 756+78

Peg 3' Lt 757+71

Top W.S. Pipe Rt 758+07

Peg 758+58

AZ line *turn to page 46*

306.06^x

759+34

0.2 305.9

T.P.

0.15 305.91

12.65 318.56^x

+50

9.4 09.2

11.0 07.6

+70

6.8 11.8

760

0.7 17.9

T.P.

0.26 318.30^x

12.39 330.69^x

+50

2.4 28.3^x

T.P.

0.21 330.48

12.74 343.22^x

+80

9.6 33.6

10.7 32.5

761

5.9 37.3

+20

2.1 41.1

+35

0.3 42.9^x

T.P.

0.26 342.96

12.27 355.23^x

+70

6.6 48.6^x

T.P.

0.17 355.06

13.04 368.10^x

762

12.4 55.7

+20

8.0 60.1

32

Peg 759+34

Top W.S. Pipe Rt 759+50

Peg 3' Lt 760+00

Peg 760+61

Top W.S. Pipe Rt 760+80

Peg 761+35

A² line from end of A⁴ line - adopted line EQUATION

33

$$A^2 763 + 49.88 = A^4 763 + 27.51$$

368.10
 762+55 1.9 66.2
 T.P. 0.65 367.45

11.38 378.83
 762+92 11.3 67.5

12.6 66.2
 763 10.9 67.9

+20 10.2 68.6
 +30 9.1 69.7

+45 7.5 71.3
 10.8 68.0

170 8.9 69.9
 764 7.4 71.4

+10 6.7 72.1
 B.M. #119 8.29 370.54 370.50

+13 8.5 70.3
 +50 7.2 71.6

765 7.7 71.1
 10.6 68.2

+50 9.5 69.3
 +70 8.6 70.2

766 9.9 68.9
 +20 12.6 66.2

T.P. 13.05 365.78
 1.36 367.14

1.0 66.1

Peg 762+69

disregard red penciling
 A⁴ ties into A² line at this point
 and A² line is used from here on
 North - P.O.A.

Top W.S. 762+95 line crossing

7

Top W.S. Pipe Lt 763+45

Top of Lt 764+10, (Chillson's Elev. 370.50)
 line 370.53 Continued from page 45

Top of W.S. Pipe Lt 765+10

Peg 766+24

Top of W.S. Pipe 766+10

	367.14		
766+43		4.5	62.6
+55		8.3	58.8
+78		12.3	54.8
T.P.		12.84	354.30
	0.33	354.63	
767		3.5	51.1
+31		11.4	43.2
T.P.		13.3	41.3
T.P.		12.71	341.92
	0.31	342.23	
+40		4.0	38.2
+65		11.2	34.0
T.P.		12.85	329.38
	1.00	330.38	
767+90		9.7	20.7
768		11.6	18.8
+10		14.5	15.9
+14		13.1	17.3
+30		13.7	16.7
		8.1	22.3
+50		7.5	22.9
+70		0.9	29.5
T.P.		0.28	330.10
	12.17	342.27	
		10.4	31.9

1" Lt
Peg 766+86

Top W.S. Pipe Lt 767+33

Peg 767+33

Peg 767+68

Bottom of Draw

Top of Long. Brace of Trestle #41

Peg 768+71

Top of W.S. Pipe Middle of Trestle

A²

342.27

768. +79

9.6 32.7

+92

6.0 36.3

4.9 37.4

769

2.6 39.7

T.P.

0.17 342.10

12.39 354.49

+30

4.8 49.7

T.P.

0.11 354.38

10.63 365.01

+53

8.9 56.1

+78

5.8 59.2

770

1.8 63.2

T.P.

0.17 364.84

9.47 374.31

+25

7.2 67.0

+40

6.1 68.2

10.3 64.0

+50

5.8 68.5

+72

4.8 69.5

771

4.2 70.1

8.5 65.8

+50

5.1 69.2

772

5.5 68.8

+07

5.6 68.7

+15

7.2 67.1

35

Top W.S. Pipe Lt 768+92

Peg 769+07

Peg 769+47

Peg 770+09

Top W.S. Pipe Lt 770+40

" " " " 771+18

T.P.B.M. #120
 374.31
 Use this B.M. 5.64 368.67
 Record 368.96
 369.00

3.38 372.05
 772 +50. 5.0 67.1
 773 6.2 65.9
 7.0 65.1
 +30 7.1 65.0
 +45 6.6 65.5
 +55 7.5 64.6
 +65 7.2 64.9
 +80 8.1 64.0
 774 10.2 61.9
 11.5 60.6
 +20 10.5 61.6
 +40 9.8 62.3
 +60 7.9 64.2
 +75 6.2 65.9
 775 4.1 68.0
 +20 2.7 69.4

T.P. 1.57 370.48

8.24 378.72

+60 6.8 71.9
 776 5.8 72.9
 B.M. #121 Use this B.M. 5.90 372.82
 Record 373.14
 +25 6.5 72.2

Top A.V. Lt 772 +17 (Chilson's Original Elev. 368.68)

Top of W. S. Pipe Lt 773 +10

" " " " 774 +15

Peg on G 775 +38

End Sept 27-1929

Start Sept 28-1929

Top of Center Pin of A.V. Lt 776 +18

Sept 28, 1929
Parker
Converse
Elliott & notes
Watten

37

378.72

776+50	6.3	372.4
+75	5.6	73.1
777	5.3	73.4
+25	2.9	75.8
+35	1.4	77.3
+50	2.5	76.2
+75	5.7	73.0
778	7.8	70.9
	10.7	68.0
	10.8	67.7
+25	10.4	68.3
	11.8	66.9
+50	11.8	66.9
+75	12.1	66.6
	12.7	66.0
779	11.0	67.7
+15	9.5	69.2
	12.7	66.0
+50	7.2	71.5
+65	2.0 0.0	69.7 70.7
+87	11.8	66.9
T.P.	12.88	365.84
	1.33	367.17
780	2.7	64.5

Top W.S. Pipe Lt 777+15
 " " " Lt 777+80
 " " " " 778+25
 " " " " 778+75
 " " " " 779+15
 Peg 12' Lt, 779+87

367.17^x

780 + 40	8.9	58.3
+ 65	8.4	58.8
T. P.	10.7	56.5
	12.81	354.36 ^x

0.83 355.19^x

+ 82	1.6	353.6
	5.4	349.8
781	5.3	349.9
+ 50	13.5	341.7
+ 55	14.7	340.5
+ 75	15.6	339.6
+ 55	14.8	340.4
	17.7	337.5

782	13.8	341.4
+ 65	12.7	342.5
+ 68	13.5	341.7
783	11.4	343.8
+ 20	9.9	345.3
+ 50	6.3	348.9
T. P.	0.16	355.03 ^x

12.88 367.91^x

784	11.1	56.8
+ 38	4.5	63.4
	0.2	67.7
T + 69		

Top W.S. Pipe Lit 780 + 21

Peg 3' TP 780 + 78

Top W.S. Pipe Lit 780 + 82

" " " 781 + 85

Edge Road

Peg 783 + 90

	367.91		
T.P		0.16	367.75
	11.65		379.40
785		8.6	70.8
+20		8.0	71.4
+50		7.8	71.6
B.M. #122		5.90	373.50
		11.9	67.5
786		7.0	72.4
+50		6.0	73.4
		11.9	67.5
787		5.3	74.1
+60		5.9	73.5
		12.3	67.1
788		5.2	74.2
		10.9?	N.G.
+25		4.2	75.2
+50		3.8	75.6
+75		3.3	76.1
+83		4.0	75.4
+91		6.6	72.8
B.M. #123		9.66	369.74
		12.0	67.4
789		6.1	73.3
+13		6.2	73.2
+14		7.6	71.8

Record
373.81

Record
370.96¹⁰

Peg 784 + 68

Top A.V. 785 + 95

Top W.S. Pipe 785 + 95

" " " 786 + 80

" " " 787 + 60

" " " 787 + 95

Top A.V. RT 788 + 98 (Chillson's Orig. Elev 369.74)

Top W.S. Pipe 788 + 98

		379.40 ^x		
789	+22		7.7	371.7 ✓
	+28		5.6	73.8 ✓
	+40		6.3	73.1 ✓
	+55		6.7	72.7 ✓
	+60		8.4	71.0 ✓
	+80		9.4	70.0 ✓
790			12.2	67.2 ✓
	T.P.		12.81	366.59 ^x
		1.51		368.10 ^x
			6.9	61.2 ✓
	+25		4.9	63.2 ✓
	+50		9.2	58.9 ✓
	T.P.		12.92	355.18 ^x
		0.34		355.52 ^x
	+70		0.7	54.8 ✓
791	+00		6.1	49.4 ✓
			11.9	43.6 ✓
	+30		9.6	45.9 ✓
	+36		11.7	43.8 ^x ✓
	T.P.		13.06	342.46 ^x
		0.68		343.14 ^x
	+50		1.5	41.6 ✓
	+75		5.8	37.3 ✓
792			10.9	32.2 ✓

Peg 6' Rt. 790+02

Top W.S. Pipe Rt 790+25

Peg 790+68

Top W.S. Pipe Rt 791+22

Peg 791+45

		343.14 ^x		
T.P.			13.01	330.13 ^x
	0.77	330.90 ^x		
792+20			2.8	28.1 [✓]
+50			9.9	21.0 [✓]
T.P.			12.98	317.92 ^x
	1.07	318.99 ^x		
+76			5.4	313.6 [✓]
793			13.8	305.2 [✓]
+05			14.7	304.3 [✓]
+20			12.4	306.6 [✓]
+45			9.0	310.0 [✓]
+70			6.7	312.3 [✓]
+90			4.3	314.7 [✓]
794			3.7	315.3 [✓]
			4.8	314.2 [✓]
+50			1.5	317.5 ^x
T.P.			0.27	318.72 ^x
	11.61	330.33 ^x		
			13.4	316.9 [✓]
795			9.8	320.5 [✓]
+50			5.5	324.8 [✓]
796			0.0	330.3 [✓]
T.P.			0.14	330.19 ^x
	12.52	342.71 ^x		
+20			10.4	332.3 [✓]

Peg 792+09

Peg 792+60

Bottom Draw

Top W.S. Pipe Rt 794+20

Peg 1' Lt 794+70

Top W.S. Pipe Rt 794+70

Peg 5' Lt 795+98

342.71^x

796 +30

8.9 333.8 ✓

10.5 332.2 ✓

+65

3.8 338.9 ✓

3.3 339.4 ✓

T.P

0.67 342.04 ✓

11.97 354.01^x

797

10.6 343.4 ✓

+35

7.4 346.6 ✓

+50

5.4 348.6 ✓

+65

3.7 350.3 ✓

+82

2.7 351.3 ✓

3.8 350.2 ✓

798

0.9 353.1 ✓

T.P

0.40 353.61^x12.87 366.48^x

+12

12.7 353.8 ✓

+16

13.5 353.0 ✓

+32

13.2 353.3 ✓

+50

10.0 356.5 ✓

11.4 355.1 ✓

+60

9.0 357.5 ✓

799

5.7 360.8 ✓

+15

5.3 361.2 ✓

+32

4.0 362.5 ✓

+45

2.1 364.4 ✓

Top W.S. Pipe Rt 796+30

" " " " 796+84

Peg 796+84

Top W.S. Pipe Rt 797+82

Peg 798+03

Top W.S. Pipe Rt 798+45

	366.48		
799+55		2.1	64.4
T.P.		1.19	365.29
	4.41		369.70
+85		2.6	67.1
B.M. #12A	Use this B.M. Converse	1.32	368.38
		3.4	66.3
800		2.4	67.3
+10		2.8	66.9
+25		2.9	66.8
		2.8	66.9
+50		3.1	66.6
		4.6	65.1
+75		5.0	64.7
+85		6.0	63.7
+89		7.2	62.5
801		9.0	60.7
+10		9.6	60.1
+23		12.8	56.9
T.P.		12.83	356.87
	0.22		357.09
+40		3.0	54.1
+50		5.0	52.1
+75		8.7	48.4
802		12.1	45.0

Reg 799+70

Top A.V. Rt 799+98

Top of Ppc " "

" " RT 800+35

" " 800+75

Top nub. 801 + 23.78

(Chilsons Elev 368.56)

(" " in Book 263
Pg. 12
unconnected = 367.56
w

Records
368.74
no page

		3		
		57.09		
T.P.			3	
		12.89	44.20	
	1.57			
802 + 10		2.5	43.3	
+ 15		3.9	41.9	
+ 18		5.4	40.4	
802 + 21 ⁰⁴ End A2 Lime =		5.5	40.3	
800 + 66 ²⁰ P.I. D ⁴ Lime				
B.M. #125		2.39	3	Record
		43.38		343.78

Contd. in Book 282 - Page 1.

44

Peg 802 + 03

Top of 24" W.S. Pipe, Xing

Top of Bolt on bypass gate valve 13' Rt. of Equation
(Will be in "D" Level Notes.)

Turned check by JTN
10/24/22

O.R. 5 D. 2nd. Main Pipe Line Profile Levels.
 See This Book-p. 13 for divergence from A² Line
 B.M. # 110

A² Levels
 269.56 269.56

	4.74	274.30	
A ² 688+8500 =			5.0 269.3
A ⁴ 688+8500			5.0 269.3
689+00			5.3 269.0
+54			7.1 267.2
			7.1 267.2
+64			5.6 268.7
+75			6.2 268.1
+80			6.1 268.2
+85			5.7 268.6
+93			5.7 268.6
690+00			6.8 267.5
+16			8.3 266.0
+30			10.1 264.2
+48			13.1 261.2
T.P.			13.07 261.23
	0.98	262.21	
+56			1.7 260.5
			2.7 259.5
+70			7.1 255.1
T.P.			12.97 249.24
	1.15	250.39	
691			4.9 245.5
+11			8.9 241.5
+24			11.4 239.0
			12.7 237.7

Sept. 7 - 1929

O.K. Parker
 Walton
 Elliott & notes

46

See Page 13.
 Top A.V. RT of 688 + 63

Top W.S. Pipe Rt. 689+36
 " " " Lt 689+64

Peg 690+48

Top of W.S. pipe Lt 690+60.5. End of trestle

Peg 690+88

Top of Pier Lt. 691+26

	250.39		
691+42		14.9	235.5 ✓
		16.6	233.8 ✓
+50		16.5	233.9 ✓
+56		16.4	234.0 ✓
		17.0	233.4 ✓
+71		12.5	237.9 ✓
		11.5	238.9 ✓
+86		7.5	242.9 ✓
		7.1	243.3 ✓
		5.2	245.2 ✓
692		4.5	245.9 ✓
		3.8	246.6 ✓
+16		0.8	249.6 ✓
		0.5	249.9 ✓
T.P.		0.31	250.08 ✓
	13.05	263.13	
+315		10.3	252.8 ✓
		10.3	252.8 ✓
+48		7.7	255.4 ✓
		4.4	258.7 ✓
+59		4.3	258.8 ✓
T.P.		0.76	262.37 ✓
	11.97	274.34	
+968		10.9	263.4 ✓

Top of pier lit 691+42

Bottom Draw

Top of pier lit 691+56

" " lit 691+71

" " lit 691+86

Top of Longitud. Brace of trestle

Top of pier lit 692+00

" " " lit 692+16

" " " lit 692+315

Top of pipe lit. 692+48 N. End Trestle

Peg 692+83

274.34^x

693+50

4.6

269.7 ✓

6.4

267.9 ✓

T.P.

0.46

273.88 ✓

12.24 286.12

694

11.6

274.5 ✓

10.5

275.6 ✓

+29

9.2

276.9 ✓

+50

6.8

279.3 ✓

695

3.1

283.0 ✓

T.P.

0.50

285.62 ✓

11.64 297.26

+50

9.7

287.6 ✓

6.1

291.2 ✓

696+00

4.7

292.6 ✓

+40

0.5

296.8 ✓

T.P.

0.25

297.01 ✓

13.02 310.03

696+50

12.0

298.0 ✓

5.8

304.2 ✓

697

4.6

305.4 ✓

T.P.

0.49

309.54 ✓

10.81 320.35

+50

8.0

312.4 ✓

Top W.S. Pipe Lit 693+50

Peg 693+89

Top W.S. Pipe Lit 694+29

Peg 695+27

Top W.S. Pipe Lit 695+93

Edge travelled way, about E. of Wunderlin St.

Peg 4' Lit 696+40

Top of Pipe Lit 696+98

Peg 697+27

	320.35		
698		3.0	317.4
T.P.		0.40	319.95
	12.61		332.56
+50		10.5	322.1
		11.7	320.9
699		5.9	326.7
+50		3.8	328.8
700 +00		3.0	329.6
T.P. B.M. #111		2.08	330.48
	6.20		336.68
+50		7.0	329.7
701		6.6	330.1
+50		6.1	330.6
702		5.9	330.8
		7.4	329.3
+50		4.7	332.0
703		3.0	333.7
		4.6	332.1
+18		2.6	334.1
+50		0.9	335.8
+66		2.2	334.5
704		3.4	333.3
+48		4.2	332.5
T.P. B.M. #112		2.25	334.43
	11.83		346.26

Peg 698+30

Top W.S. Pipe Lit 698+55

Top of A.V. Lit 700+06

Top Pipe Lit 702+00

" " " 703+00

Edge pavement

" "

Top of fire plug 63rd & Bach

	346.26		
704 +53		12.9	333.4
+69		12.5	333.8
+74		10.0	336.3
705+00		9.2	337.1
		11.7	334.6
+40		7.0	339.3
+50		6.1	340.2
+74		4.3	342.0
+90		1.8	344.5
706		1.2	345.1
T.P.		0.47	345.79
	12.87		358.66
+20		12.3	346.4
+30		11.0	347.7
		16.6	342.1
+44		10.1	348.6
707		5.3	353.4
		7.7	351.0
+21		4.5	354.2
+50		2.3	356.4
T.P.		0.50	358.16
	12.53		370.69
708		7.9	362.8
+20		3.3	367.4

Top of Pipe Lit 705+07

Peg 706+04

Top pipe lit 706+44

Top of 8" pipe at King 707+06

Peg 707+70

		370.69		
T.P.			1.58	369.11
	8.69	377.80		
708 +58			9.0	368.8
+68			8.6	369.2
			7.8	370.0
709+20 ³			5.4	372.4
+70			3.2	374.6
B.M. #113.	Use this Elev.		4.51	373.29
				373.28
			6.0	371.8
710+00			4.3	373.5
+50			5.2	372.6
711.			5.3	372.5
+50			4.8	373.0
+75			6.9	370.9
712+00			6.9	370.9
T.P.			12.72	365.08
	5.42	370.50		
+20			2.6	367.9
+37			7.0	363.5
+48			9.3	361.2
+59			12.6	357.9
T.P.			12.68	357.82
	0.73	358.55		
T.P.			12.90	345.65
	0.30	345.95		

Top of Pipe Lt 709+16

Top of A.V. Lt 709+80

Ground 5' Lt 709+70

Peg 712+59

Peg 712+95

	345.95 ^x		
		1.2	344.7 ✓
713 +00		2.1	343.8 ✓
+18		7.7	338.2 ✓
+27		11.6	334.3 ✓
T.P.		12.92	333.03 ^x
	0.14		333.17 ^x
+42		2.8	330.4 ✓
		1.1	332.1 ✓
+63		8.8	324.4 ✓
T.P.		12.98	320.19 ^x
	0.17		320.36 ^x
714 +00		10.4	310.0 ✓
T.P.		12.72	307.64 ^x
	0.45		308.09 ^x
+32		9.2	298.9 ✓
+45		12.9	295.2 ^x
T.P.		12.80	295.29 ^x
	0.66		295.95
+55		5.1	290.9 ✓
B.M. #114	Use this B.M.	6.55	289.40 ^x
			289.46 ^x
T.P.		12.94	283.01 ^x
	0.62		283.63
715		7.0	276.6 ✓
+17		11.8	271.8 ✓

87.00 52
Top of Pipe Lt 712+95 (Top of pipe on surface)

Peg 713+21

Top of Pipe Lt 713+31 (Top of pipe on surface)

Peg 713+75

Peg 714+07

Peg 714+45

Spike in Euc. Tree Rt 714+60

Peg 714+78

		283.63 ^x		
T.P.			12.80	270.83 ^x
	0.28	271.11 ^x		
715+31			3.0	268.1
+44			5.3	265.8
			3.7	267.4
+50			7.4	263.7
			9.0	262.1
+65			12.3	258.8
			13.4	257.7
T.P.			12.84	258.27 ^x
	1.35	259.62 ^x		
+80			7.3	252.3
			8.6	251.0
+95			12.3	247.3
			13.2	246.4
T.P.			12.69	246.93 ^x
	8.96	255.89 ^x		
715+97.5			9.3	246.6
715+00			9.6	246.3
+02.5			10.6	245.3
+05			11.7	244.2
+07.5			11.3	244.6
			10.6	245.3
+10			10.4	245.5
+12.5			9.4	246.5

Top pipe Lt. 715+44

Top of Conc pier Lt. 715+50

" " " " " 715+65

" " " " " 715+80

" " " " " 715+95

" " " " " 716+08.5

	255.89 ^x		
		5.8	250.1
716+24		5.8	250.1 ^x
T.P.		0.12	255.77
	12.08		267.85 ^x
+40		10.0	257.8
		9.8	258.0
+55		5.2	262.6
		5.7	262.1
		14.7	253.1
+65		3.3	264.5
		0.8	267.0
+71		0.8	267.0 ^x
T.P.		0.43	267.42
	12.32		279.74 ^x
+86		12.2	267.5
717		6.9	272.8
+04		5.5	274.2
+23		4.9	274.8
+28		2.2	277.5
+40		0.4	279.3 ^x
T.P.		0.38	279.36
	12.99		292.35 ^x
		9.6	282.8
718		2.0	290.4
+03		2.0	290.4

Top of pier on 716+24
on ground
Peg 716+35

Top of conc pier Lt 716+40

" " " " Lt 716+55

Top of Longitudinal Brace of Trestle #40

Top of pipe Lt 716+75

Peg 716+73

Edge of Road

" " "

Peg 717+40

Top of pipe Lt 717+70

Edge of Road

	292.35		
718+18		1.3	291.1
+20		+ 1.2	293.6
T.P.		0.21	292.14
	13.03		305.17
+50		5.2	300.0
T.P.		0.22	304.95
	12.96		317.91
719+00		4.6	313.3
T.P.		0.50	317.41
	12.61		330.02
		12.4	317.6
719+60		1.9	328.1
T.P.		0.93	329.09
	12.08		341.17
720+00		8.6	332.6
+50		2.5	338.7
T.P.		0.56	340.61
	12.76		353.37
		13.5	339.9
721+00		9.6	343.8
+50		4.1	349.3
T.P.		0.38	352.99
	12.78		365.77

Edge of Road

Peg 718+67

Peg 719+15

Top of Pipe Lit 719+20

Peg 719+74

Top of Pipe Lit 720+73

Peg 15' RT 721+60

	365.77		
7. 722 + 00		9.5	356.3
		8.8	357.0
150		1.4	364.4
T.P.		1.35	364.42
	12.82		377.24
+58		11.3	365.9
+65		9.2	368.0
+79		9.3	367.9
7. 723		7.6	369.6
+30		6.3	370.9
+50		4.2	373.0
724 + 00		4.6	372.6
		8.3	368.9
+33		3.1	374.1
+50		4.8	372.4
+83		5.3	371.9
725 + 00		5.0	372.2
T.P.		6.47	370.77
	6.02		376.79
150		9.0	372.8
		6.0	370.8
		7.6	369.2
726 + 00		5.0	371.8
727 + 00		5.7	371.1
		7.8	369.0
+50		5.8	371.0

Top pipe Lt 722+11 (Also ground surface)

Edge of Road

" " "

Top of pipe Lt 724+33

Top of pipe Lt 725+00

Top of pipe Lt 725+75

" " " 727+00

376.79

7	728+00		7.6	369.2
	+		16.1	365.7
	+50		9.8	367.0
	729+00		10.6	366.7
			13.0	363.8
	T.P.		12.98	363.81
	4.44	368.25		
	+50		2.5	365.7
	730		1.7	366.5
			4.9	363.3
	+70		3.2	365.0
	731+00		3.7	364.5
	732+00		4.5	363.7
			6.0	362.2
	+50		4.4	363.8
	733		4.9	363.3
	B.M. #115	Use this B.M.	3.63	364.62
				364.59
			6.4	361.8
	+50		5.4	362.8
	734		8.5	359.7
	+25		10.9	357.3
	T.P.		13.02	355.23
	0.64	355.87		
	+50		2.7	353.2

Top of Pipe Lt 728+38

" " " 729+38

" " " "

" " " 730+52

" " " 732+00

Top A.V. 733+20

Top pipe Lt 733+20

Peg 734+40

		355.87 ^x	
734+75		8.2	347.7 [✓]
T.P.		12.92	342.95 ^x
	0.77	343.72 ^x	
735		1.8	341.9 [✓]
1		5.0	338.7 [✓]
+25		6.1	337.6 [✓]
+32		7.1	336.6 [✓]
+50		10.0	333.7 [✓]
		11.7	332.0 [✓]
736		12.3	331.4 [✓]
+56		12.1	331.6 [✓]
		13.1	330.6 [✓]
		15.9	327.8 [✓]
737		14.4	329.3 [✓]
+50		11.3	332.4 [✓]
		12.2	331.2 [✓]
738 +00		8.8	334.9 [✓]
+50		2.8	340.9 [✓]
		2.8	340.9 ^x
T.P.		0.61	343.11 ^x
	13.09	356.20 ^x	
+85		11.0	345.2 [✓]
+93		8.8	347.4 [✓]
739+11		7.2	349.0 [✓]
+50		0.4	355.8 ^x
T.P.		0.40	355.80 ^x
	12.18	367.98 ^x	

Peg 734+94

Top of pipe Lt 735+12

" " " 735+70

" " " 736+71

" " " 738+65

Peg 738+70

East Line of Crouch Prop.

Peg 739+50

367.98

739+92	4.9	363.1
740	2.3	365.7
+10	2.0	366.0
T.P.	0.29	367.69
11.88		379.57
+28	12.8	366.8
+50	11.9	367.7
	9.0	370.6
	11.0	368.6
B.M. #116 Use this B.M.	4.94	374.63
1.67		376.27
741	3.0	73.3
+34	0.2	76.1
+75	2.4	73.9
742	3.5	72.8
+05 (on left)	7.3	69.0
+25	3.5	72.8
+50	4.8	71.5
+75	6.4	69.9
743	9.7	66.7
+25	13.1	63.2
T.P.	13.04	363.23
9.27		363.50
+25 (left)	2.2	61.3
+50	3.8	59.7

As Levels 374.60

Edge of Road
" "
Peg 740+28

Top of Pipe Lt 740+28 (pipe is at surface of ground)

" " " 740+50 " " "

Top A.V. Lt 740+96

Sept 8 1929

O.K. Parker
Hill Notes
Elliott K
Simpson
Walton

top of pipe

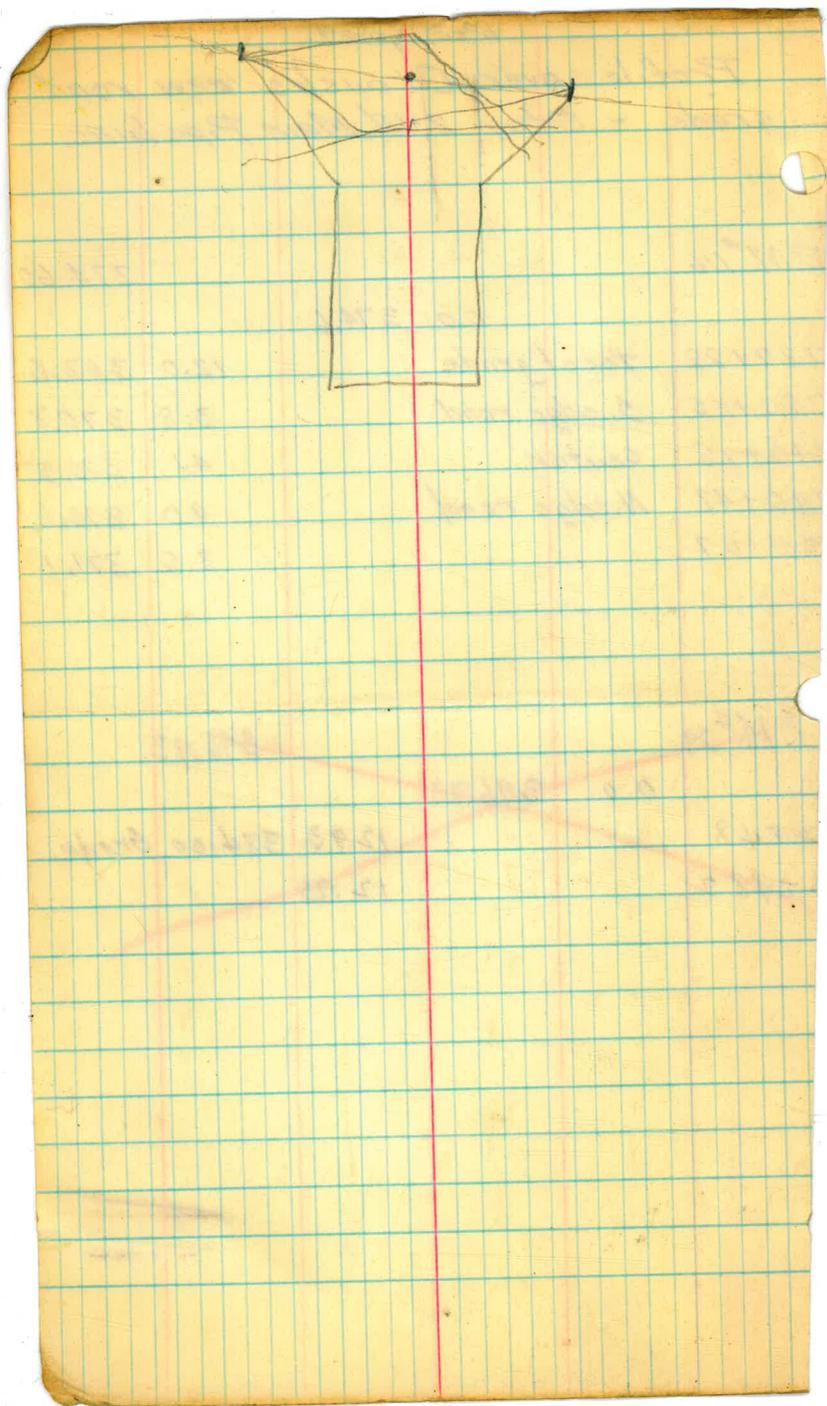
top of pipe

Dec, 17, 1929

Profile over Crouch's new road
grade - Otay 2nd Main Pipe Line

B.M. #116				374.60
	0.0	374.6		
39+88	to top of grade		12.0	362.6
0+05	S. edge road		3.8	370.8
+25	center		4.1	370.5
+47	N. edge road		4.0	370.6
+57			3.5	371.1

42				376.73
	0.0	396.93		
48			12.93	384.00 Grade
82			12.93	



363.50

743+88 (left) 10.1 53.9 ✓

top of pipe

744 9.5 54.0 ✓

peg 744+29

T.P. 12.82 350.68 ✓

9.69 351.32

+38 (left) 8.1 47.9 ✓

top of pipe

+55 3.6 47.7 ✓

745 9.0 42.3 ✓

+20 11.1 39.9 ✓

peg 745+39

T.P. 12.72 338.60 ✓

1.71 340.01

+63 3.3 36.7 ✓

+79 4.7 35.3 ✓

746 5.1 34.9 ✓

+17 (left) 7.5 32.5 ✓

top of pipe

+50 8.1 31.6 ✓

+50 (left) 8.7 31.3 ✓

" " "

+85 8.8 31.2 ✓

747 9.0 31.0 ✓

+90 9.7 30.3 ✓

+90 (left) 10.8 29.2 ✓

" " "

B.M. #117 Use this B.M. 8.1 331.60

Ar levels 331.54

air valve 747+90 (6.5 left)

~~748 8.2 31.8 ✓~~

~~+05 7.4 32.6 ✓~~

~~+24 8.6 31.4 ✓~~

~~+50 12.4 27.6 ✓~~

		340.01		
T.P.	093	327.98	12.96	327.05
748+69			4.3	23.7
+69 (left)			6.7	21.3
+90			12.9	15.1
T.P.			12.97	315.01
	040	315.41		
749			4.3	311.1
T.P.			13.04	302.37
	026	302.63		
+20			0.4	02.2
+26			5.0	297.6
+38			5.2	97.4
T.P.			12.98	289.68
	070	290.38		
+53			3.8	86.6
+76			12.8	77.6
T.P.			12.83	277.55
	028	277.83		
750			8.7	69.1
T.P.			12.77	265.06
	020	265.26		
+23			3.4	61.9
+23 (left)			6.9	58.4
+36			7.2	58.1

peg 748+67
top of pipe
peg 748+90
peg 749+19
peg 749+48
peg 749+76
peg 750+12
top of pipe

		265.26 ^x		18	
T.P.	0.98	253.1 ¹⁶	13.08	252.7 ¹⁸	
750+70			6.5	246.2 ⁷	
T.P.		43	12.95	240.1 ¹¹	240.21
	0.22	240.33			
751+00			2.0	238.1 ³	
+			8.2	232.1 ¹	
+30			7.2	233.2 ⁵	
758			8.8	231.8 ³	
+84			8.0	232.1 ⁷	
7			10.6	229.1 ⁴	
752+00			7.9	232.1 ⁹	
+14			8.4	231.8 ⁰	
+19			9.3	231.1 ¹	
+36			8.8	231.8 ³	
755			10.0	230.1 ⁸	
+61			7.5	232.1 ⁰	
753+00			7.3	233.1 ³	
			10.0	230.1 ¹	
728			7.2	233.1 ⁷	
+50			7.6	232.1 ⁰	
+62			7.3	233.1 ⁰	
+68			6.3	234.1 ¹	
			9.2	231.1 ¹	
+76			6.2	234.1 ⁸	

peg 750+83

peg 750+93

Top pipe Lt 751+16

" " " 751+84

S. Edge Wash

" " "

Top pipe Lt 753+00

" " " 753+70

Sept 8 1929

Dr. Parker

Elliott

Simpson

Walter

Res. End

+ notes

Tape

Rod

62

	40 33 240.88			
753 + 85		0.4	^{39.9} 240.0	
+ 89.75		0.7	239.7 ⁶	
754 + 26.2		0.7	239.7 ⁶	
+ 39		0.8	239.4 ⁵	
T.P.		0.71	239.88 ⁶²	239.7 ²
	251.9 ² 12.20 251.88			
B.M. #118	Use this B.M.	9.47	^{24.45} 242.4 ³⁵	Az Levels 242.36
+ 54		5.8	246.4 ⁰	
+ 70		0.8	251.4 ⁰	
T.P.		0.43	251.98 ³⁹	251.49
	264.19 12.70 264.18			
+ 80		11.6	252.4 ⁵	
755 + 00		7.7	256.4 ⁴	
		11.6	252.4 ⁵	
+ 20		5.7	258.4 ⁴	
+ 43		3.6	260.4 ⁵	
T.P.		0.60	263.58 ⁴⁹	263.59
	276.50 12.91 276.44 ⁴⁰			
756 + 00		9.6	266.4 ⁸	
		11.7	264.4 ⁷	
+ 45		5.5	271.4 ⁹	
+ 62		3.4	273.4 ⁰	
+ 68		1.8	274.4 ⁶	
T.P.		0.63	275.88 ⁷⁷	275.87
	287.6 ² 11.75 287.58 ⁵²			

Edge pavement

" "

Nail in edgeward post Broadway Bridge

Top of pipe lit 754 + 08

Peg 754 + 70

Top of pipe lit 756 + 00

Peg 756 + 77

A4 line

95

85
335.91

760 +53

0.3

335.6

76

T.P.

78

0.19

335.72

Peg 760 +53

13.02

68
348.74

342.1

341.8

761 +00

6.9

+34

1.3

347.4

59

T.P.

47

0.19

348.55

12.88

37
361.42

+65

7.8

353.6

T.P.

19

1.15

360.22

32

12.87

09
373.75

762 +00

12.4

360.7

+20

9.0

364.1

Top pipe Lt 762 +20

+38

10.5

362.6

+50

6.5

366.6

+78

5.6

367.5

763 +00

3.7

369.4

763 +22.5 (A) P.O.T. =

3.2

369.9

763 +49.88 (A2) P.T.

2.0

371.1

370.63

B.M. #119

Use this B.M.

5.0

368.1

53
370.54 370.54

Top pipe Lt of Equation

Top of A.V. Lt 764 +10

continued page 33

65

Location of High point on
 Detroit W. of OTAY Second Main
 Pipeline
 Byler King Stevens
 5-23-44

			389.7	B.M.
	391	392.61		
TP		12.65	379.96	
	1.95	381.41		
TP		10.90	370.51	
	2.99	373.50		
		13.2	360.3	
TP		0.54	372.96	
	12.00	384.96		
		3.0	381.96	
		6.9	378.1	
		16.1	368.9	

edge of plat. shown F.B. # 279 page 1

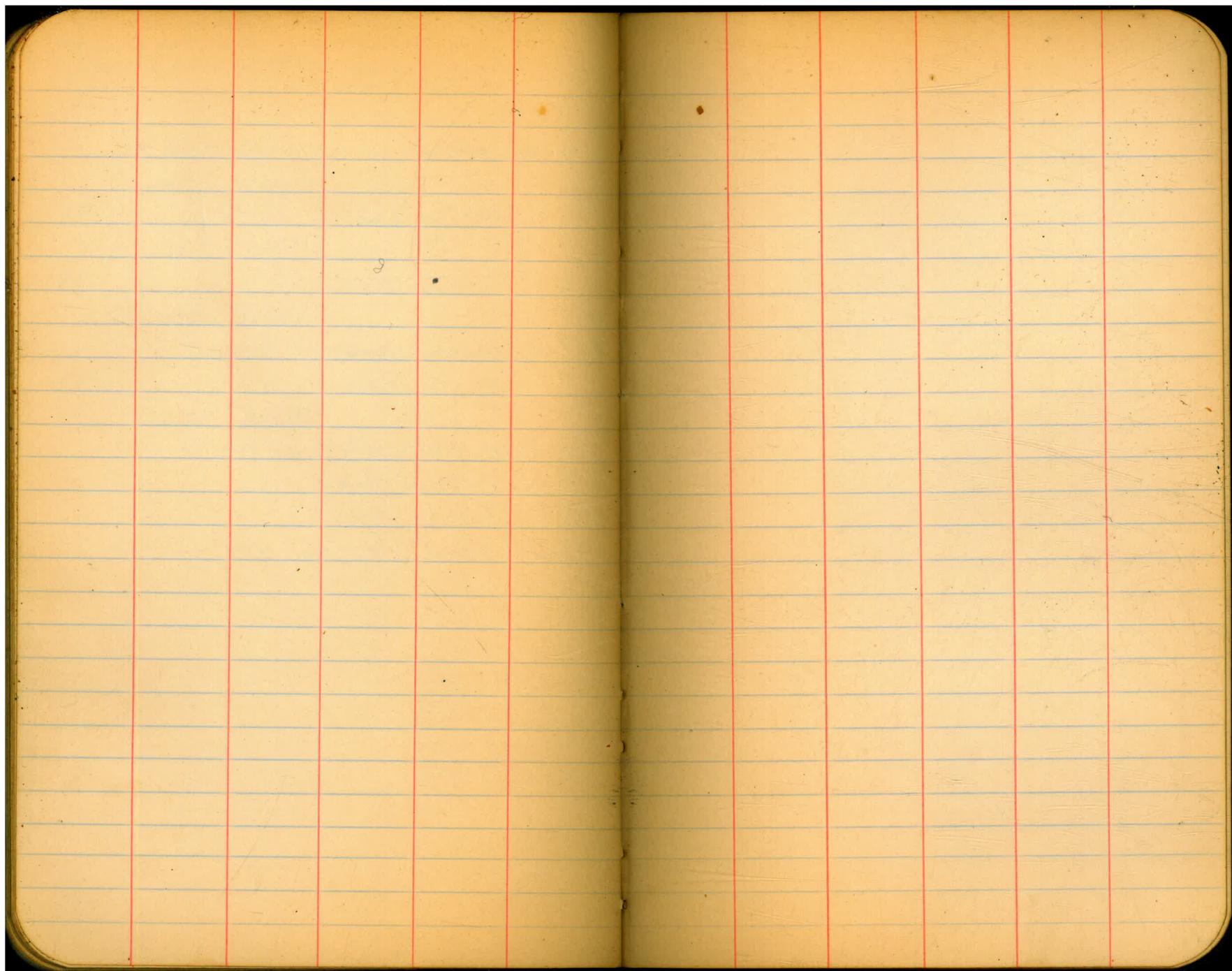
at intersection Woodman & Detroit.

240' ± W. of pipeline on Detroit.

390' ± W. of pipeline " " "

490' ± " " " " " "

About same slope for 200' further



B.M.s 2nd Otay Pipe Line

B.M.	Air Valve 23' Rt	739+88	374.83
	"	746+92	331.79
	Nail in 2nd Guard Post	742+66	242.66
	Air Valve	762+79	370.82
	"	770+85	368.96
	" Top Center Pin	774+80	373.11
	"	784+40	373.81
	"	787+41	370.06
	"	798+45	368.74
	4x6 Tel. Pole	802+30	327.06

OTAY 2nd Main Pipe Line

9/24/29 List of B.M.s from Sta 630 to Sta 732
 10:5 AM. as furnished over phone at Chollas
 Res. Station to O.K.P. by H.D.W.

B.M.	Top of Air Valve	633+56	Elev.	348.00
"	" " " "	643+80	"	373.19
"	" " " "	654+00	"	373.41
"	" " " "	664+50	"	373.55
"	Nail in Power Pole	671+70	"	330.29
"	Top of Air Valve	687+50	"	269.54
"	" " " "	699+16	"	330.40
"	" " Hydrant	703+50	"	334.48
"	" " Air Valve	708+90	"	373.43
"	Nail in Eucalyp. Tr.	713+85	"	289.51
"	Top of Air Valve	723+15	"	371.68
"	" " " "	732+25	"	364.78

DIRECTIONS FOR USE OF TABLES

TABLE No. 1.

Distance of slope stake from side or shoulder stake for any width roadway, slope 1% to 1. If ground is nearly level, the cut or fill at side stake is located by the double entry method in left column and top row. The number in body

IMPROVED TABLES
 AND
 INFORMATION

To find Tangent and External for curve of any other degree, divide by degree of curve and add correction found in column of corrections. Degree of curve with a given L may be found by dividing tangent (or external), opposite L by given tangent (or external).
 The distance from a point on the tangent to the curve is very nearly the square of the tangent length divided by twice the radius.

DIRECTIONS FOR USE OF TABLES

TABLE No. 1.

Distance of slope stake from side or shoulder stake for any width roadway, slope $1\frac{1}{2}$ to 1. If ground is nearly level, the cut or fill at side stake is located by the double entry method in left column and top row. The number in body of table in same row and column gives distance from side stake to slope stake. If ground is not level estimate the difference in elevation between the side stake and slope stake, lower target by this amount if cut, elevate if fill. Add this amount to cut or fill and find distance in table. Set up rod at this point, and line of sight should cut target. If it does not make the slight adjustment necessary.

TABLE No. 9.

To find Tangent and External for curve of any other degree, divide by degree of curve and add correction found in column of corrections.

Degree of curve with a given I may be found by dividing tangent, (or external), opposite I by given tangent, (or external).

The distance from a point on the tangent to the curve is very nearly the square of the tangent length divided by twice the radius.

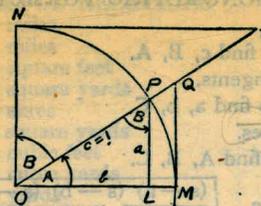


TABLE II

TRIGONOMETRIC FORMULÆ.

$$\angle A = \angle MOP \quad \angle B = \angle PON = \angle OPL$$

$$R = OB = c = 1$$

$$\sin A = \frac{a}{c} = \frac{a}{1} = a = \cos B = LP$$

$$\cos A = \frac{b}{c} = \frac{b}{1} = b = \sin B = OL$$

$$\tan A = \frac{a}{b} = \frac{MQ}{OM} = \frac{MQ}{1} = MQ = \cot B = MQ$$

$$\cot A = \frac{NT}{ON} = \frac{NT}{1} = NT = \tan B = NT$$

$$\sec A = \frac{OQ}{OM} = \frac{OQ}{1} = OQ = \csc B = OQ$$

$$\csc A = \frac{OT}{ON} = \frac{OT}{1} = OT = \sec B = OT$$

$$\text{vers } A = \frac{LM}{OP} = LM = \text{covers } B \#$$

$$\text{covers } A = \frac{OP - LP}{OP} = OP - LP = \text{vers } B$$

$$\text{exsec } A = PQ = \text{coexsec } B$$

$$\text{coexsec } A = PT = \text{exsec } B$$

$$\sin \frac{1}{2} A = \sqrt{\frac{1 - \cos A}{2}} \quad \cos \frac{1}{2} A = \sqrt{\frac{1 + \cos A}{2}}$$

$$\sin 2A = 2 \sin A \cos A \quad \cos 2A = \cos^2 A - \sin^2 A$$

$$\text{Law of Sines} \quad \frac{\sin A}{a} = \frac{\sin B}{B} = \frac{\sin C}{C}$$

$$\text{Law of Cosines} \quad c^2 = a^2 + b^2 - 2ab \cos C$$

$$\text{Law of Tangents} \quad \frac{a+b}{a-b} = \frac{\tan \frac{1}{2}(A+B)}{\tan \frac{1}{2}(A-B)}$$

692 + 50
90 + 58

A	S	C	T	C	S	V	C	S	T	C	S	V	C	S	T	C	S	V
0	0.0000	1.0000	0.0000	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
1	0.0174	0.9998	0.0174	0.9998	0.0174	0.0174	0.0174	0.0174	0.0174	0.0174	0.0174	0.0174	0.0174	0.0174	0.0174	0.0174	0.0174	0.0174
2	0.0349	0.9994	0.0349	0.9994	0.0349	0.0349	0.0349	0.0349	0.0349	0.0349	0.0349	0.0349	0.0349	0.0349	0.0349	0.0349	0.0349	0.0349
3	0.0523	0.9992	0.0523	0.9992	0.0523	0.0523	0.0523	0.0523	0.0523	0.0523	0.0523	0.0523	0.0523	0.0523	0.0523	0.0523	0.0523	0.0523
4	0.0698	0.9991	0.0698	0.9991	0.0698	0.0698	0.0698	0.0698	0.0698	0.0698	0.0698	0.0698	0.0698	0.0698	0.0698	0.0698	0.0698	0.0698
5	0.0872	0.9990	0.0872	0.9990	0.0872	0.0872	0.0872	0.0872	0.0872	0.0872	0.0872	0.0872	0.0872	0.0872	0.0872	0.0872	0.0872	0.0872
6	0.1045	0.9989	0.1045	0.9989	0.1045	0.1045	0.1045	0.1045	0.1045	0.1045	0.1045	0.1045	0.1045	0.1045	0.1045	0.1045	0.1045	0.1045
7	0.1218	0.9988	0.1218	0.9988	0.1218	0.1218	0.1218	0.1218	0.1218	0.1218	0.1218	0.1218	0.1218	0.1218	0.1218	0.1218	0.1218	0.1218
8	0.1392	0.9987	0.1392	0.9987	0.1392	0.1392	0.1392	0.1392	0.1392	0.1392	0.1392	0.1392	0.1392	0.1392	0.1392	0.1392	0.1392	0.1392
9	0.1564	0.9986	0.1564	0.9986	0.1564	0.1564	0.1564	0.1564	0.1564	0.1564	0.1564	0.1564	0.1564	0.1564	0.1564	0.1564	0.1564	0.1564
10	0.1736	0.9985	0.1736	0.9985	0.1736	0.1736	0.1736	0.1736	0.1736	0.1736	0.1736	0.1736	0.1736	0.1736	0.1736	0.1736	0.1736	0.1736
11	0.1908	0.9984	0.1908	0.9984	0.1908	0.1908	0.1908	0.1908	0.1908	0.1908	0.1908	0.1908	0.1908	0.1908	0.1908	0.1908	0.1908	0.1908
12	0.2080	0.9983	0.2080	0.9983	0.2080	0.2080	0.2080	0.2080	0.2080	0.2080	0.2080	0.2080	0.2080	0.2080	0.2080	0.2080	0.2080	0.2080
13	0.2252	0.9982	0.2252	0.9982	0.2252	0.2252	0.2252	0.2252	0.2252	0.2252	0.2252	0.2252	0.2252	0.2252	0.2252	0.2252	0.2252	0.2252
14	0.2424	0.9981	0.2424	0.9981	0.2424	0.2424	0.2424	0.2424	0.2424	0.2424	0.2424	0.2424	0.2424	0.2424	0.2424	0.2424	0.2424	0.2424
15	0.2596	0.9980	0.2596	0.9980	0.2596	0.2596	0.2596	0.2596	0.2596	0.2596	0.2596	0.2596	0.2596	0.2596	0.2596	0.2596	0.2596	0.2596
16	0.2768	0.9979	0.2768	0.9979	0.2768	0.2768	0.2768	0.2768	0.2768	0.2768	0.2768	0.2768	0.2768	0.2768	0.2768	0.2768	0.2768	0.2768
17	0.2940	0.9978	0.2940	0.9978	0.2940	0.2940	0.2940	0.2940	0.2940	0.2940	0.2940	0.2940	0.2940	0.2940	0.2940	0.2940	0.2940	0.2940
18	0.3112	0.9977	0.3112	0.9977	0.3112	0.3112	0.3112	0.3112	0.3112	0.3112	0.3112	0.3112	0.3112	0.3112	0.3112	0.3112	0.3112	0.3112
19	0.3284	0.9976	0.3284	0.9976	0.3284	0.3284	0.3284	0.3284	0.3284	0.3284	0.3284	0.3284	0.3284	0.3284	0.3284	0.3284	0.3284	0.3284
20	0.3456	0.9975	0.3456	0.9975	0.3456	0.3456	0.3456	0.3456	0.3456	0.3456	0.3456	0.3456	0.3456	0.3456	0.3456	0.3456	0.3456	0.3456
21	0.3628	0.9974	0.3628	0.9974	0.3628	0.3628	0.3628	0.3628	0.3628	0.3628	0.3628	0.3628	0.3628	0.3628	0.3628	0.3628	0.3628	0.3628
22	0.3800	0.9973	0.3800	0.9973	0.3800	0.3800	0.3800	0.3800	0.3800	0.3800	0.3800	0.3800	0.3800	0.3800	0.3800	0.3800	0.3800	0.3800
23	0.3972	0.9972	0.3972	0.9972	0.3972	0.3972	0.3972	0.3972	0.3972	0.3972	0.3972	0.3972	0.3972	0.3972	0.3972	0.3972	0.3972	0.3972
24	0.4144	0.9971	0.4144	0.9971	0.4144	0.4144	0.4144	0.4144	0.4144	0.4144	0.4144	0.4144	0.4144	0.4144	0.4144	0.4144	0.4144	0.4144
25	0.4316	0.9970	0.4316	0.9970	0.4316	0.4316	0.4316	0.4316	0.4316	0.4316	0.4316	0.4316	0.4316	0.4316	0.4316	0.4316	0.4316	0.4316
26	0.4488	0.9969	0.4488	0.9969	0.4488	0.4488	0.4488	0.4488	0.4488	0.4488	0.4488	0.4488	0.4488	0.4488	0.4488	0.4488	0.4488	0.4488
27	0.4660	0.9968	0.4660	0.9968	0.4660	0.4660	0.4660	0.4660	0.4660	0.4660	0.4660	0.4660	0.4660	0.4660	0.4660	0.4660	0.4660	0.4660
28	0.4832	0.9967	0.4832	0.9967	0.4832	0.4832	0.4832	0.4832	0.4832	0.4832	0.4832	0.4832	0.4832	0.4832	0.4832	0.4832	0.4832	0.4832
29	0.5004	0.9966	0.5004	0.9966	0.5004	0.5004	0.5004	0.5004	0.5004	0.5004	0.5004	0.5004	0.5004	0.5004	0.5004	0.5004	0.5004	0.5004
30	0.5176	0.9965	0.5176	0.9965	0.5176	0.5176	0.5176	0.5176	0.5176	0.5176	0.5176	0.5176	0.5176	0.5176	0.5176	0.5176	0.5176	0.5176
31	0.5348	0.9964	0.5348	0.9964	0.5348	0.5348	0.5348	0.5348	0.5348	0.5348	0.5348	0.5348	0.5348	0.5348	0.5348	0.5348	0.5348	0.5348
32	0.5520	0.9963	0.5520	0.9963	0.5520	0.5520	0.5520	0.5520	0.5520	0.5520	0.5520	0.5520	0.5520	0.5520	0.5520	0.5520	0.5520	0.5520
33	0.5692	0.9962	0.5692	0.9962	0.5692	0.5692	0.5692	0.5692	0.5692	0.5692	0.5692	0.5692	0.5692	0.5692	0.5692	0.5692	0.5692	0.5692
34	0.5864	0.9961	0.5864	0.9961	0.5864	0.5864	0.5864	0.5864	0.5864	0.5864	0.5864	0.5864	0.5864	0.5864	0.5864	0.5864	0.5864	0.5864
35	0.6036	0.9960	0.6036	0.9960	0.6036	0.6036	0.6036	0.6036	0.6036	0.6036	0.6036	0.6036	0.6036	0.6036	0.6036	0.6036	0.6036	0.6036
36	0.6208	0.9959	0.6208	0.9959	0.6208	0.6208	0.6208	0.6208	0.6208	0.6208	0.6208	0.6208	0.6208	0.6208	0.6208	0.6208	0.6208	0.6208
37	0.6380	0.9958	0.6380	0.9958	0.6380	0.6380	0.6380	0.6380	0.6380	0.6380	0.6380	0.6380	0.6380	0.6380	0.6380	0.6380	0.6380	0.6380
38	0.6552	0.9957	0.6552	0.9957	0.6552	0.6552	0.6552	0.6552	0.6552	0.6552	0.6552	0.6552	0.6552	0.6552	0.6552	0.6552	0.6552	0.6552
39	0.6724	0.9956	0.6724	0.9956	0.6724	0.6724	0.6724	0.6724	0.6724	0.6724	0.6724	0.6724	0.6724	0.6724	0.6724	0.6724	0.6724	0.6724
40	0.6896	0.9955	0.6896	0.9955	0.6896	0.6896	0.6896	0.6896	0.6896	0.6896	0.6896	0.6896	0.6896	0.6896	0.6896	0.6896	0.6896	0.6896
41	0.7068	0.9954	0.7068	0.9954	0.7068	0.7068	0.7068	0.7068	0.7068	0.7068	0.7068	0.7068	0.7068	0.7068	0.7068	0.7068	0.7068	0.7068
42	0.7240	0.9953	0.7240	0.9953	0.7240	0.7240	0.7240	0.7240	0.7240	0.7240	0.7240	0.7240	0.7240	0.7240	0.7240	0.7240	0.7240	0.7240
43	0.7412	0.9952	0.7412	0.9952	0.7412	0.7412	0.7412	0.7412	0.7412	0.7412	0.7412	0.7412	0.7412	0.7412	0.7412	0.7412	0.7412	0.7412
44	0.7584	0.9951	0.7584	0.9951	0.7584	0.7584	0.7584	0.7584	0.7584	0.7584	0.7584	0.7584	0.7584	0.7584	0.7584	0.7584	0.7584	0.7584
45	0.7756	0.9950	0.7756	0.9950	0.7756	0.7756	0.7756	0.7756	0.7756	0.7756	0.7756	0.7756	0.7756	0.7756	0.7756	0.7756	0.7756	0.7756
46	0.7928	0.9949	0.7928	0.9949	0.7928	0.7928	0.7928	0.7928	0.7928	0.7928	0.7928	0.7928	0.7928	0.7928	0.7928	0.7928	0.7928	0.7928
47	0.8100	0.9948	0.8100	0.9948	0													

M. Nakahara
P.T.A. Box 39
Caruthers, Calif

10/2/29
By
Registered Letter

K. Kusumoto
P.O. Box 64 - Encanto -

305.17
12.46
392.71

335.91
5.39
330.52

9.9
5.6
4.3