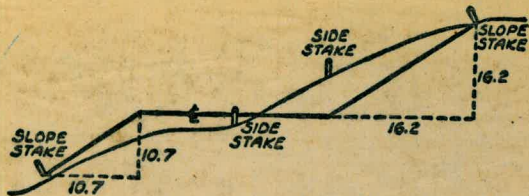


W 840



DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING
SLOPE 1 TO 1. ROADWAY OF ANY WIDTH

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	0.00	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	0
1	1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80	1.90	1
2	2.00	2.10	2.20	2.30	2.40	2.50	2.60	2.70	2.80	2.90	2
3	3.00	3.10	3.20	3.30	3.40	3.50	3.60	3.70	3.80	3.90	3
4	4.00	4.10	4.20	4.30	4.40	4.50	4.60	4.70	4.80	4.90	4
5	5.00	5.10	5.20	5.30	5.40	5.50	5.60	5.70	5.80	5.90	5
6	6.00	6.10	6.20	6.30	6.40	6.50	6.60	6.70	6.80	6.90	6
7	7.00	7.10	7.20	7.30	7.40	7.50	7.60	7.70	7.80	7.90	7
8	8.00	8.10	8.20	8.30	8.40	8.50	8.60	8.70	8.80	8.90	8
9	9.00	9.10	9.20	9.30	9.40	9.50	9.60	9.70	9.80	9.90	9
10	10.00	10.10	10.20	10.30	10.40	10.50	10.60	10.70	10.80	10.90	10
11	11.00	11.10	11.20	11.30	11.40	11.50	11.60	11.70	11.80	11.90	11
12	12.00	12.10	12.20	12.30	12.40	12.50	12.60	12.70	12.80	12.90	12
13	13.00	13.10	13.20	13.30	13.40	13.50	13.60	13.70	13.80	13.90	13
14	14.00	14.10	14.20	14.30	14.40	14.50	14.60	14.70	14.80	14.90	14
15	15.00	15.10	15.20	15.30	15.40	15.50	15.60	15.70	15.80	15.90	15
16	16.00	16.10	16.20	16.30	16.40	16.50	16.60	16.70	16.80	16.90	16
17	17.00	17.10	17.20	17.30	17.40	17.50	17.60	17.70	17.80	17.90	17
18	18.00	18.10	18.20	18.30	18.40	18.50	18.60	18.70	18.80	18.90	18
19	19.00	19.10	19.20	19.30	19.40	19.50	19.60	19.70	19.80	19.90	19
20	20.00	20.10	20.20	20.30	20.40	20.50	20.60	20.70	20.80	20.90	20
21	21.00	21.10	21.20	21.30	21.40	21.50	21.60	21.70	21.80	21.90	21
22	22.00	22.10	22.20	22.30	22.40	22.50	22.60	22.70	22.80	22.90	22
23	23.00	23.10	23.20	23.30	23.40	23.50	23.60	23.70	23.80	23.90	23
24	24.00	24.10	24.20	24.30	24.40	24.50	24.60	24.70	24.80	24.90	24
25	25.00	25.10	25.20	25.30	25.40	25.50	25.60	25.70	25.80	25.90	25
26	26.00	26.10	26.20	26.30	26.40	26.50	26.60	26.70	26.80	26.90	26
27	27.00	27.10	27.20	27.30	27.40	27.50	27.60	27.70	27.80	27.90	27
28	28.00	28.10	28.20	28.30	28.40	28.50	28.60	28.70	28.80	28.90	28
29	29.00	29.10	29.20	29.30	29.40	29.50	29.60	29.70	29.80	29.90	29
30	30.00	30.10	30.20	30.30	30.40	30.50	30.60	30.70	30.80	30.90	30
31	31.00	31.10	31.20	31.30	31.40	31.50	31.60	31.70	31.80	31.90	31
32	32.00	32.10	32.20	32.30	32.40	32.50	32.60	32.70	32.80	32.90	32
33	33.00	33.10	33.20	33.30	33.40	33.50	33.60	33.70	33.80	33.90	33
34	34.00	34.10	34.20	34.30	34.40	34.50	34.60	34.70	34.80	34.90	34
35	35.00	35.10	35.20	35.30	35.40	35.50	35.60	35.70	35.80	35.90	35
36	36.00	36.10	36.20	36.30	36.40	36.50	36.60	36.70	36.80	36.90	36
37	37.00	37.10	37.20	37.30	37.40	37.50	37.60	37.70	37.80	37.90	37
38	38.00	38.10	38.20	38.30	38.40	38.50	38.60	38.70	38.80	38.90	38
39	39.00	39.10	39.20	39.30	39.40	39.50	39.60	39.70	39.80	39.90	39
40	40.00	40.10	40.20	40.30	40.40	40.50	40.60	40.70	40.80	40.90	40
41	41.00	41.10	41.20	41.30	41.40	41.50	41.60	41.70	41.80	41.90	41
42	42.00	42.10	42.20	42.30	42.40	42.50	42.60	42.70	42.80	42.90	42
43	43.00	43.10	43.20	43.30	43.40	43.50	43.60	43.70	43.80	43.90	43
44	44.00	44.10	44.20	44.30	44.40	44.50	44.60	44.70	44.80	44.90	44
45	45.00	45.10	45.20	45.30	45.40	45.50	45.60	45.70	45.80	45.90	45
46	46.00	46.10	46.20	46.30	46.40	46.50	46.60	46.70	46.80	46.90	46
47	47.00	47.10	47.20	47.30	47.40	47.50	47.60	47.70	47.80	47.90	47
48	48.00	48.10	48.20	48.30	48.40	48.50	48.60	48.70	48.80	48.90	48
49	49.00	49.10	49.20	49.30	49.40	49.50	49.60	49.70	49.80	49.90	49
50	50.00	50.10	50.20	50.30	50.40	50.50	50.60	50.70	50.80	50.90	50

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 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.

Please Return to
City of San Diego Water Dept.
Room 903 Civic Center

MICROFILMED

JAN 20 1965

TABLE IX
MIDDLE ORDINATES OF RAILS
Length of Rail (feet)

C o'	R Feet	30 Inch	28 Inch	26 Inch	24 Inch	22 Inch	20 Inch	C o	R Feet	30 Inch	28 Inch	26 Inch	24 Inch	22 Inch	20 Inch
0-20	17189	.08	.07	.06	.05	.04	.03	8	716.8	1.88	1.64	1.42	1.20	1.01	.84
0-40	8594	.16	.14	.12	.10	.08	.07	9	637.3	2.12	1.84	1.60	1.35	1.14	.94
1-0	5730	.24	.20	.18	.15	.13	.10	10	573.7	2.36	2.05	1.78	1.50	1.27	1.04
1-20	4297	.31	.27	.23	.20	.17	.13	11	521.7	2.59	2.26	1.95	1.65	1.39	1.15
1-40	3438	.39	.34	.29	.25	.21	.17	12	478.3	3.83	2.47	2.15	1.81	1.54	1.26
2-0	2865	.47	.41	.35	.30	.25	.20	13	441.7	3.05	2.66	2.30	1.96	1.66	1.36
2-20	2456	.55	.48	.41	.35	.29	.23	14	410.3	3.30	2.87	2.48	2.10	1.78	1.46
2-40	2149	.63	.55	.47	.40	.33	.27	15	383.1	3.54	3.08	2.68	2.26	1.91	1.57
3-0	1910	.71	.62	.53	.45	.38	.31	16	359.3	3.76	3.28	2.83	2.40	2.04	1.67
3-20	1719	.78	.68	.59	.50	.42	.35	17	338.3	4.00	3.48	3.02	2.57	2.16	1.78
3-40	1563	.86	.75	.65	.55	.46	.38	18	319.6	4.21	3.67	3.18	2.70	2.28	1.87
4-0	1433	.94	.82	.71	.60	.50	.42	19	302.9	4.45	3.89	3.36	2.86	2.41	1.98
4-20	1323	1.02	.89	.77	.65	.55	.45	20	287.9	4.70	4.09	3.55	3.00	2.54	2.09
4-40	1228	1.10	.96	.83	.70	.59	.48	22	262.0	5.16	4.44	3.84	3.30	2.80	2.29
5	1146	1.18	1.03	.89	.75	.63	.52	24	240.5	5.64	4.92	4.20	3.59	3.04	2.50
6	955.3	1.41	1.23	1.06	.90	.76	.62	26	222.3	6.07	5.29	4.58	3.88	3.29	2.70
7	819.0	1.65	1.44	1.24	1.05	.89	.73								

15-06
7-33
82-27

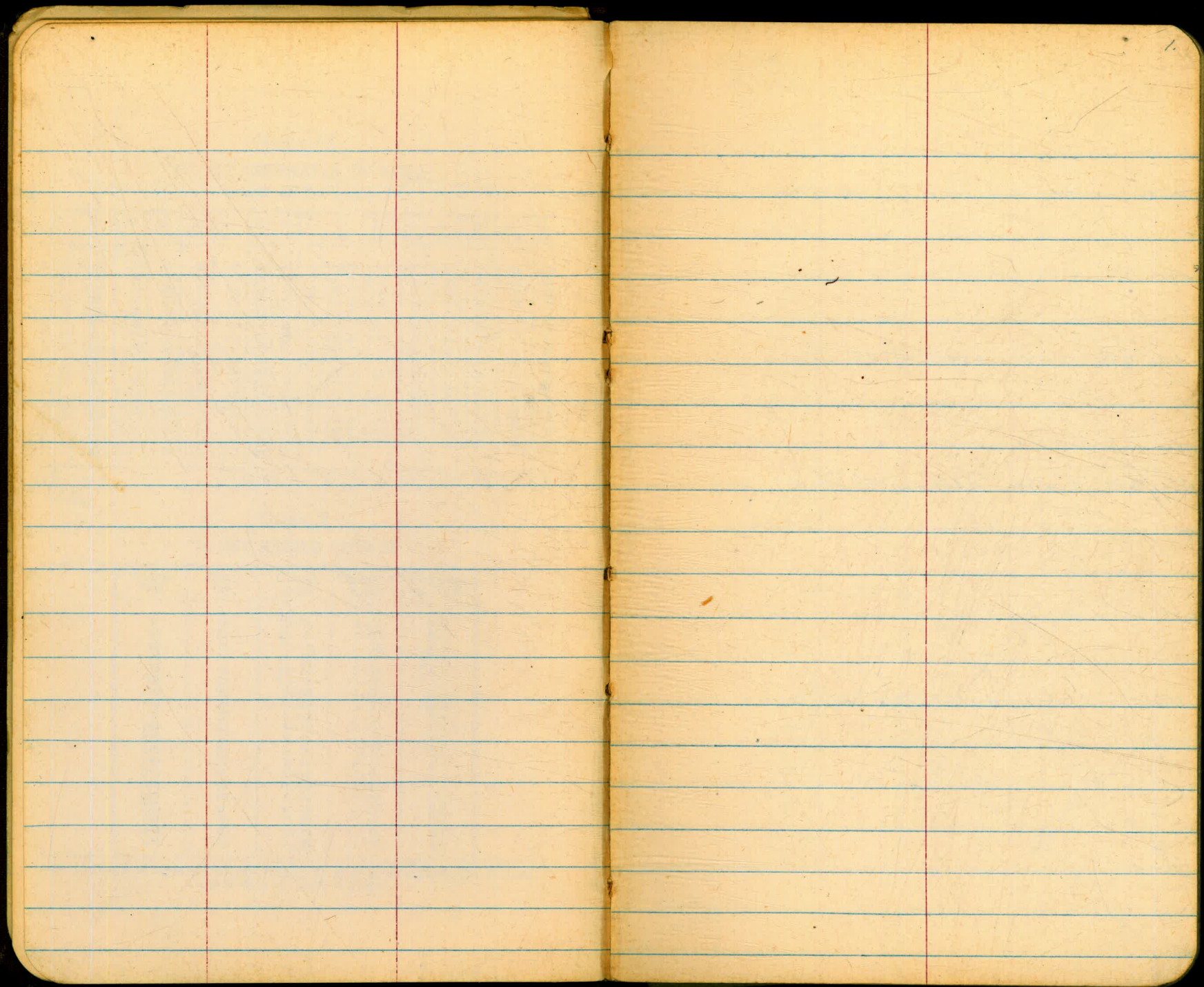
TABLE X
SHORT RADIUS CURVES

Radius Feet	Chord Feet	Central Angle	Deflection Angle	Deflection for 1 Foot
35	10	16-26	8-13	49.3
45	10	12-46	6-23	38.3
50	15	17-16	8-38	34.5
60	15	14-22	7-11	28.8
75	15	11-30	5-45	23.0
100	20	11-30	5-45	17.3
120	20	9-34	4-47	14.3
150	20	7-39	3-49	11.5
190	25	7-32	3-46	9.15
200	25	7-10	3-35	8.6
225	25	6-25	3-12	7.7
240	25	5-58	2-59	7.2
250	25	5-44	2-52	6.9
275	25	5-12	2-36	6.2
288	50	9-58	4-59	6.0
300	50	9-32	4-46	5.7
350	50	8-12	4-06	4.9
376	50	7-40	3-50	4.6
400	50	7-10	3-35	4.3
410	50	7-00	3-30	4.2

To find length of curve divide angle from P. C. to P. T. by central angle of chord, and multiply by length of chord.

INDEX

SAN VICENTE AQUEDUCT CONN. & REFERENCES ✓ 2-7
 " " " " Additional T.B.M.s 8-12 ✓
 Construction Grd. Stks; Pipeline Alice ✓
 " " " " Val. Boxes 47 ✓
 " " " " Additional & pipe 48 ✓
 " " " " Slope Stakes @ Tunnel Portal 48-50 ✓
 Cross-Sections showing Rock in Channel 51-52 ✓
 ELEV. & B.M.s. ON 2" I. PIPE MON. 53-56 ✓
 Alice



SAN VICENTE AQUEDUCT CONN.
Cont'd.

12/10/54

3

17+76⁹⁰ P.I. 23°29'30" RT

Indicates (SEE Pg. 53)
2" I.P. & L.T. FOR Elev.



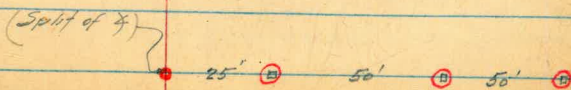
15+95⁰⁹ P.I. 1°58'30" LT



14+99⁵⁰ P.I. 8°58' LT



14+14⁶⁹ P.I. 5°50' LT



JAN VICENTE AQUEDUCT CONN.
(Cont'd.)

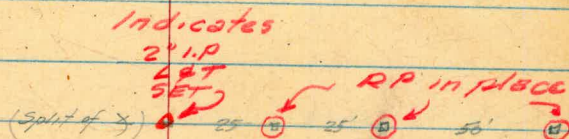
12/16/36

4.

25+65 P.O.T.



24+12.75 P.I. 2° 56' 30" LT



21+43.56 P.I. 15° 05' 45" RT



18+34.86 P.I. 39° 22' 30" LT



JAN. VICENTE AQUEDUCT
CONN.
(Cont'd.)

12/15/52

5.

34+36.21 P.I. Δ 8°03' LT

Indicates
2" H.P.
L & T
set
RP
gone
RP in
place
(split of X) 25' X 25' \oplus 40' \oplus

33+00 P.O.T

(Ref 90°) 25' \oplus 25' \oplus 50' \oplus

31+92.93 P.I. Δ 16°29'30" RT

(split of X) 25' X 25' X 50' X

30+48.30 P.I. Δ 29°35'15" RT

(split of X) 25' \oplus 25' X 50' X

26+39.43 P.I. Δ 35°46' RT

(split of X) 25' \oplus 25' X 50' X

JAN VICENTE AQUEDUCT
CONN.
(Cont'd)

49+08⁸⁶ P.O.T

40+50 P.O.T

39+08⁷² P.I. Δ 19°01'30" RT

37+96⁹² P.I. Δ 9°04'30" RT

37+00 P.O.T

34+85²¹ P.I. Δ 5°30'30" LT

12/12/54

6.

Indicates
2" I.P.
L & T
Set

50' 40' 35' (Ref 90°)

(Ref 90°) 25' X 25' X 50' X

(split of X) 25' X 25' X 50' X

(split of X) 25' X 25' X 50' X

(Ref 90°) 25' X 25' X 50' X

(Ref split of X) 25' X 25' X 50' X

SAN VICENTE AQUEDUCT
CONN.
(Cont'd.)

12/14/52

7

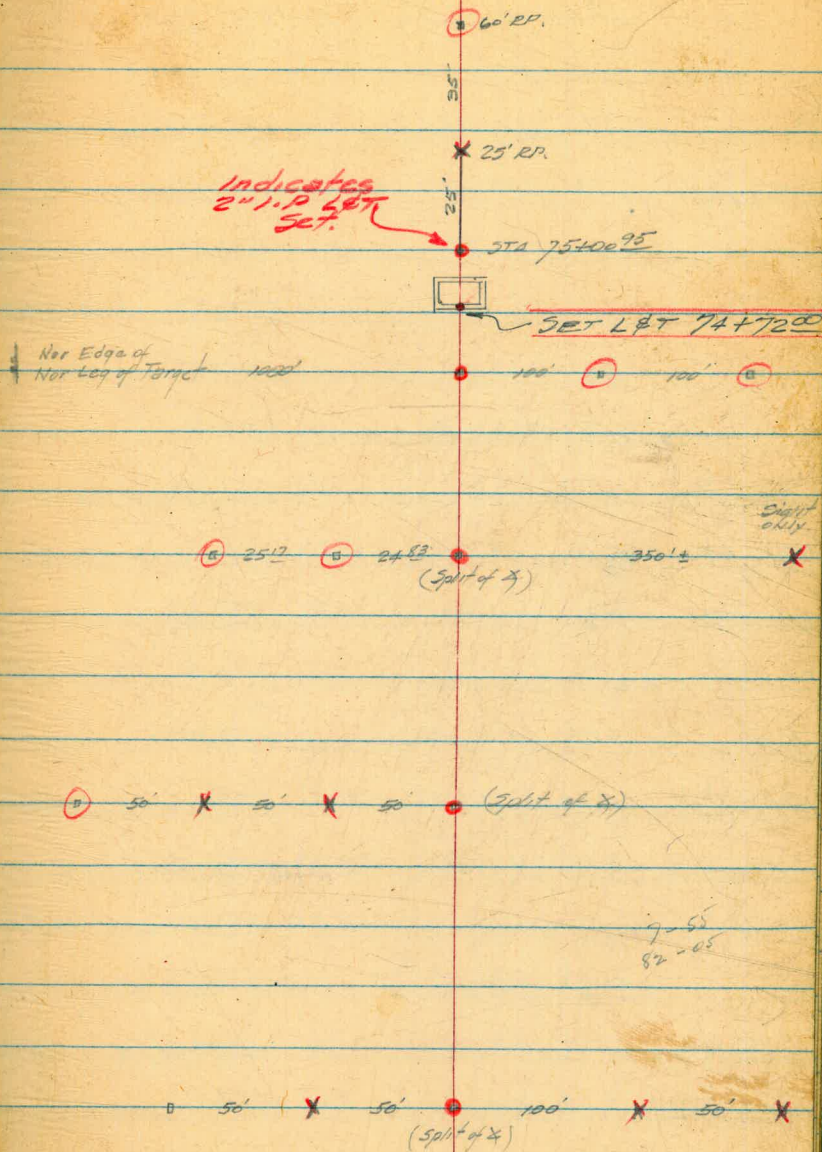
75+00⁹⁵ Intersection SAN VICENTE #2

69+69⁵⁸ P.I. $1^{\circ}25'45''$ LT.

58+08⁴ P.I. $16^{\circ}52'15''$ LT.

55+25⁹⁷ P.I. $\Delta 15^{\circ}49'15''$ LT.

52+92⁹¹ P.I. $\Delta 19^{\circ}26'30''$ LT.



SAN VICENTE AQUEDUCT
CONNECTION
ADDITIONAL T.B.M.'s SET

DEC. 17 1954
BEATTY
MARTELL
ALEXANDER

8.

P	2.82	734.88		732.06
<u>SET TBM</u>	0.51	735.23	0.19	<u>734.69</u>
P	5.71	727.83	13.11	722.12
CK P			7.46	720.37 = 720.39
P	12.00	760.08		747.68
P	11.40	768.65	3.03	757.05
<u>SET TBM</u>			10.42	<u>758.03</u>
<u>SET TBM</u>	0.16	768.04	0.25	<u>768.20</u>
<u>CK TBM</u>	3.26	761.29	12.31	<u>758.03</u>
CK P			12.11	750.18 = 749.19
P	13.08	655.00		642.32
<u>SET TBM</u>	0.10	655.29	0.21	<u>655.19</u>
<u>SET TBM</u>	3.18	619.32	9.15	<u>646.14</u>
CK P			6.96	642.36 = 642.31
P	12.93	693.46		680.53
<u>SET TBM</u>	12.20	702.21	3.45	<u>690.01</u>
<u>SET TBM</u>	2.76	701.84	3.13	<u>699.08</u>
<u>SET TBM</u>	1.30	701.50	1.64	<u>700.20</u>
P	9.72	707.28	3.94	697.56
CK P			2.10	705.18 = 705.17

on Boulder 1430±	FB 898-A pg. 7
" " 65' RT 2415	
on RI Hub 347396	FB 898-A pg. 7
on RI Hub 8400	" " pg. 9
25' RP 8400	
50' RP 8400	
25' RP 8400	
100T 549862	FB 898-A pg. 9
on RI Hub	" " "
75' RP 14+14.69	
75' RP 14+99.30	
on RI Hub 14+99.50	" " pg. 13
on RI Hub 17+76.90	" " pg. 13
25' RP 17+76.20	
50' RP 17+76.90	
on Boulder 65' RT 17+00.±	
on Rock	FB 898-A pg. 13

T.B.M. 3
(Cont'd)

IP 10.69 767.65 756.96

Set TBM 8.46 773.81 2.30 765.35

Set TBM 0.38 773.37 0.82 772.99

CK TBM 0.78 766.13 8.02 765.35

CK IP 9.18 756.95 = 756.96

IP 9.99 702.23 692.24

Set TBM 10.07 713.70 0.60 703.63

Set TBM 0.24 713.86 0.08 713.62

CK TBM 0.32 703.97 10.23 703.63

CK IP 9.72 692.25

IP 10.97 762.29 752.52

Set TBM 8.77 769.11 2.15 760.34

Set TBM 1.27 768.69 1.09 767.42

CK TBM 3.91 762.25 8.35 760.34

CK IP 10.73 752.52

IP 12.26 764.32 752.06

Set TBM 9.58 770.75 3.15 761.17

Set TBM 0.24 770.45 0.54 770.21

CK TBM 0.48 761.65 9.78 761.17

CK IP 9.59 752.06

12/17/54.
12/20/54.

9

on Pl. hub 21+43⁵⁶

EB 898-A pg. 13

25' RP 21+43⁵⁶

50' RP 21+43⁵⁶

25' RP 21+43⁵⁶

on Pl. hub

on Pl. hub 22+14⁷⁵

25' RP 22+14⁷⁵

50' RP " "

25' RP

on Pl. hub 22+14⁷⁵

on Pl. hub 26+39⁴³

25' RP " "

50' RP " "

25' RP

on Pl. hub 26+39⁴³

on Pl. hub 30+48³⁰

25' RP " "

50' RP " "

25' RP " "

on Pl. hub " "

12/20/52

10

TBM.3
(Cont'd.)

4 IP	12.59	764.94		752.35	on Pl. hub	31+92.72
5 SET TBM	7.21	767.01	5.14	759.80	25' RP	"
2 SET TBM	0.20	766.75	0.46	766.55	50' RP	"
6 CK TBM	1.05	761.26	6.94	759.81	on 25' RP	
6 CK IP			8.90	752.36	on Pl. hub	"
4 IP	11.32	731.63		720.31	on Reck	
5 SET TBM			4.76	726.87	25' RP	33+00
5 SET TBM	0.10	731.85	1.02	731.75	50' RP	33+00
6 CK TBM			4.99	726.86	on 25' RP	
6 CK IP			11.54	720.31	on Reck	
4 IP	9.95	681.26		671.31	on Pl. hub	30+85.21
5 SET TBM	8.47	688.21	1.52	679.74	25' RP	
5 SET TBM	0.67	688.08	0.80	687.41	50' RP	
6 CK TBM	1.94	681.69	8.33	679.75	25' RP	
6 CK IP			10.37	671.31	on Pl. hub	30+85.21
4 IP	8.25	746.05		737.80	on P.O.T. Hub	37+00
5 SET TBM	7.34	752.62	0.77	745.28	25' RP	
6 SET TBM	0.64	752.41	0.85	751.77	50' RP	
6 CK TBM	0.87	746.15	7.13	745.28	on P.O.T. Hub	37+00
6 CK IP			8.35	737.80		

T.B.M. 5
(Cont'd.)

P	10.61	759.83		749.22
SET TBM	8.83	765.00	3.66	756.17
SET TBM	1.70	764.96	1.72	763.26
CK TBM	1.42	757.59	8.79	756.17
CK P			8.37	749.22
P	8.07	745.89		737.42
SET TBM	8.75	752.89	1.75	744.14
SET TBM	0.31	752.62	0.58	752.31
CK TBM	1.47	745.61	8.48	744.14
CK P			8.19	737.42
P	10.11	699.22		689.11
CK 42+50			5.3	693.9 - 693.7
SET TBM	4.25	698.94	4.53	694.69
CK P			9.83	689.11
P	11.47	638.72		627.25
SET TBM	1.07	638.54	1.25	637.47
CK 45+00			9.1	629.4 = 629.4
CK P			11.28	627.26
P	10.10	674.49		664.39
CK 49+50			8.5	666.0 = 666.0
SET TBM	3.92	674.36	4.05	670.44
CK P			9.97	664.39

12/20/54

11.

on PI hub 39+05R

25' RP

50' RP

25' RP

on PI 409

on Rock

25' RP 40+50 POT

50' RP

25' RP

on Rock

on Rock

on Rock 40' RT 42+75

on Rock

on Rock 30' LT 45+00

on Rock

on Rock

on Rock 50' LT 49+00

on Rock

TBM: 5
(Cont'd)

P 0.42 627.81 627.39

SET TBM 8.00 627.69 8.12 619.69

CK P 0.30 627.39

12/23/50

P 13.23 748.88 735.65

P 11.57 760.74 0.21 748.67

SET TBM 13.29 760.21 13.32 746.92

P 5.60 764.42 1.39 758.82

CK P 1.96 753.30 13.08 751.34 = 751.35

SET TBM 0.11 753.21 0.20 753.10

P 0.10 740.93 12.38 740.83

CK P 13.16 727.77 = 727.78

on Rock 47+02

on Rock 90' LT 46+75

on Rock

Top of 52+50 FB 895A-27

on rock 75' RT 52+10

90' LT 56+15

12/22/52

13

TBM. 5
(Cont'd)

TD	3.87	681.58		677.71	on rock 58+84+
SET TBM.	3.02	673.82	10.78	670.80	on rock outcrop 75' LT 59+00
CK TD			8.56	665.26 = 665.27	
TD	10.08 8.66	594.73 593.31		584.65	on rock 60+97 P/B 573 pg. 56
SET TBM	0.04	594.68	0.09	594.64	
TD	0.60	583.07	12.21	582.47	
CK TD			8.64	574.83 = 574.44	
TD	9.05	529.92		520.87	on rock 63+30
SET TBM	10.7	529.65	13.04	528.58	on rock 125' LT 64+90
TD	0.15	517.77	12.03	517.62	
CK TD			9.00	508.77 = 508.77	on rock 64+00
TD	4.76	466.83		462.07	
SET TBM 66+00	4.22	466.62	4.43 11.1	462.40 455.5 =	on B'der. 150' RT 65+00
			4.56	462.06	

SAN VICENTE AQUEDUCT CONN.
GRDS & STKS SET
for Construction

T&M	0.47	637.94		<u>637.47</u>
45+00		(15) R 5.57	632.37	GRADE BOTTOM PIPE
		(15) L 7.32	630.62	619.00
45+05 ²¹		(15) L 9.75	628.19	618.22
45+18 ⁰⁶		(15) 11.74	626.20	616.38
W	0.67	626.00	12.61	625.33
45+29 ²¹		(15) L 5.66	620.31	611.58
45+80 ⁷¹		(15) L 8.10	617.90	609.36
46+12 ¹⁹		(15) L 8.18	617.82	610.43
46+43 ⁶⁷		(15) L 6.24	619.76	611.50
46+75 ¹⁶		(15) L 3.82	622.18	612.56
W	12.44	637.61	0.83	625.17
46+88 ⁰		(15) L 12.94	624.67	613.00
47+12 ⁰		(15) L 5.91	631.70	619.00
W	12.87	650.34	0.14	<u>637.47</u> ✓
W	12.84	662.18	1.00	609.34
W	9.73	671.05	0.86	661.32
CK T&M			0.60	<u>670.45</u> = 670.44
		MAR 1, 1955		
W	1.00	625.64		624.64
47+06 ⁵⁸			8.45	617.19 617.65
47			.71	621.93

JAN 17, 1955
BEATTY
SUGREY
MARTELL

12

on Rock 30' LT 45+00 (pg 11)				
C134				
C116	(20) RT 6.57	631.79	C125	FEB 21 1955 638.12 638.36 13.15
C102	(20) RT 7.03	631.33	C131	625.21
	(20) LT 2.87	633.49	C153	
C99	(20) LT 9.01	629.35	C131	+0.35 625.26
C88	(20) LT 5.27	620.29	C87	
C85	(20) LT 8.37	617.19	C78	
	(15) LT 8.00	617.56	C82	
C74	(13) LT 7.33	618.23	C78	
C83	(15) LT 5.85	619.71	C82	
C96	(15) LT 3.57	622.0	C94	0.92 620.64
C112	(15) LT 0.92	624.64	C117	12.23
C127	(15) LT 4.85	632.02	C130	636.87
on Rock 25' LT 47+25				
on Rock 50' LT 49+00				
F045				

J.V.A. Conn.
GRO. & STR. S
(Cont'd)

1/18/55

633

15.

Item	Weight	Value	Weight	Value	Notes	Weight	Value	Notes
TBM	11.72	649.19	637.47		rock 30' LT #5400			
44+76 ³³	(15) RT	9.82	639.37	626.87	C125	(20) RT	12.31	638.12 C113
44+61 ⁷⁹	(15) RT	7.97	641.22	630.14	C111	(20) RT	9.55	640.88 C102
P 44+29 ⁶³	(15) RT	0.00	649.19	637.87	C113	(20) RT	0.80	649.63 C118
		12.34	661.53					
44+17 ⁷²	(15) RT	9.57	651.96	640.57	C114	(20) RT	11.17	651.99 C114
43+82 ⁵⁰	(15) RT	1.80	659.73	649.51	C102	(20) RT	1.62	661.50 C120
P		13.33	674.80	0.06	661.47	(15)	3.78	659.78 C102
43+47 ⁹⁸	(15) RT	5.11	669.69	658.46	C112	(20) RT	3.50	671.59 C131
						old str (15) RT	5.41	669.48 C112
43+36 ³⁶	(15) RT	1.93	672.87	661.42	C114	E 9.47	661.31	661.46 F02
P		12.95	687.72	0.01	674.79			672.57
43+13 ¹²	(15) RT	9.32	678.42	667.46	C110	E 3.20	667.58	667.46 C02
P		12.85	699.93	0.66	687.08			675.09
42+78 ²⁶	(15) RT	11.51	688.42	676.45	C120	E 7.23	676.20	662.34
								12.80
42+66 ⁶⁵	(15) RT	9.01	690.92	679.35	C116	E 4.25	679.18	650.26
OK TBM			5.22	694.71	682.69			0.07
P 42+31 ⁷²	(15) RT	0.05	699.88	688.07	C118	Rock 40' LT 42+75 ⁺		650.43
		12.92	712.82			E 7.93	687.81	688.07 F02
42+20 ⁰⁸	(15) RT	10.15	702.67	690.97	C117	E 5.06	690.68	690.97 F02
								710.53
41+81 ⁶⁰	(15) RT	1.06	711.76	698.55	C122			683.43
P		12.78	725.31	0.29	712.53			12.29
41+38 ¹²	(15) RT	2.77	722.54	710.62	C119			706.82
								0.46
P 41+26 ⁴⁴	(15) RT	0.91	724.40	713.30	C111			670.14
		13.03	737.43					0.64
40+90 ⁹⁹			5.80	731.63	719.56	C121		707.28
P		12.06	749.10	0.39	737.04			11.93
40+55 ⁵⁴			11.38	737.72	725.82	C119		12.29
								695.42
								0.39
								649.66
								4.32
								649.63
								683.66
								650.85
								683.43
								0.99
								723.53
								11.78
								711.95
								0.01
								712.45
								13.06
								719.56
								737.18
								0.96
								702.67
								12.97
								719.74
								0.39
								719.53

FEB 21 1955

SPT & GRAVITY TO 20' 1/2" 4/11/55

✓

SVA. CONN.
GRDS & STRS
(Contd)

1/18/55

16

749.10

40+1371 (5) RT		10.12	738.98	727.88
40+3178		8.49	740.61	729.29
OR TBM.	5.07	749.21	4.89	744.21 = 744.12
39+9595		6.48	742.73	732.67
39+7205		3.45	745.76	732.93
39+6012		1.80	747.41	735.97
39+3622	7.86	755.88	1.19	748.02 737.89
39+2427			7.25	748.63 738.77
39+1152			7.08	748.80 739.62
38+9925		5.80	750.08	740.44
38+8728		3.01	752.87	741.23
38+7602		1.94	753.94	741.95
38+7302		1.72	754.16	742.00
38+6960 (pg. 34)		1.90	753.98 = 753.95	

C112 728.90

C113 740.51

Mar. 4 1955

C101

C108

C114

C101

C99

C92

Horiz. \times 13°22"

C96

Horiz. \times 5°37'30" 251 Con

C116

C120

C122

+ 11.24

+ 24.27

08.72

08.72

99.25

15.55

9.47

2.52

2.52

13.04

6.86

12.63 inches

0.39 long
from 50

S.V.A. Conn.
Grd.s & Str.s
(Cont'd)

1/20/55
BEATTY
SHOREY
MARTELL
ALEXANDER

17.

BM	5.60	461.07	455.47	GRADE	Spike in P.P. No. of paved road	50' LT. 77+80'	
72+58.81	(20) RT		7.25 453.82	Bottom Pipe 440.40	C134		455.47 3.33 458.80 12.75 466.02 892 466.74 440.20 SET 6.54
72+27.31	"		4.90 456.17	439.69	C165		92 466.02 12.61 458.63 3.15 458.28
71+95.80	"		5.67 455.40	438.97	C164		
71+66.28	"		4.94 456.13	438.47	C177		
71+32.76	"		6.50 454.57	438.31	C163		
71+01.24	"		7.96 453.11	438.15	C150		
70+69.74	"		7.00 454.07	438.00	C161		
70+38.25	"		3.65 457.42	438.86	C186		
70+06.80	9/11	464.96	5.22 455.85			(20) LT 9.10 455.86 C170	455.47 3.88 459.35 12.61 445.94 4.07 450.01 439.86 SET 11.15
69+75.35	"		3.33 461.63	440.57	C21'	" 4.36 460.60 C20'	
69+69.58	RS	1025' 45" LT	3.28 461.68	442.29	C194	" 2.30 462.60 C204	SET 450.01 440.57 SET 9.44
69+44.08	"		9.38 455.58	442.68	C129	(20) LT 5.37 459.59 C169	4.02 445.99 12.57 452.56 3.02 455.47
69+12.57	"		10.00 454.96	442.77	C122		
68+81.06	"		10.44 454.52	442.86	C112		
68+49.55	"		10.13 457.83	442.95	C112	(20) LT 10.26 454.70 C118	
68+18.04	"		10.38 454.58	443.04	C115	(20) LT 3.21 461.75 C187	
67+86.53	"		10.40 454.56	443.13	C114	(20) LT 1.12 463.84 C207	
67+55.02	(20) RT		10.80 454.16	443.22	C109	(20) LT 9.10 455.86 C126	

✓

J.V.A. Conn.
Geds & STR. S
(Cont'd)

1/20/55

18.

464.96

67+2351	(20)		11.06	453.90	443.31	C10 ^e	
66+9201	(20)		10.95	454.01	443.56	C10 ^f	
66+6051	(20)		11.08	453.88	444.19	C9 ^g	
66+2904	(20)		12.05	452.91	445.66	C7 ^h	
65+9754	(20)		10.78	454.18	447.55	C6 ⁱ	
CK TBM			2.42	462.54 = 462.00	450.78		✓ Bidr. 150' RT 65+
65+6021	(20)						
65+3507		Void			455.54		
65+0427					462.16		
61+890	(15)				470.00		
64+4470		505.80		11.3			
TP			8.19	497.61	483.02	C14 ^e	(SEE PAGE 40)
64+6922	(15)	1.72	12.85	492.95			
TP		0.70	6.28	488.39	470.00	C18 ^f	
65+0427	(15)		12.67	481.98			
TP			6.00	476.68	462.16	C14 ^e	
65+3507	(15)	0.67	12.84	462.84	455.54	C14 ^e	
65+6621	(15)		7.81	462.70	450.78	C11 ^g	
65+9754	(15)		12.82	457.67	447.55	C10 ^h	
CK TBM			8.18	462.33 = 462.40			Bidr. 150' RT. 65+

S.V.A. CONN.
GRS & STR.
(Cont'd.)

11	10.09	647.56		637.47
47+35 ²⁵	(13) LT		12.75	634.81 624.93
47+46 ⁸⁹	(13) "		11.29	636.27 627.85
47+58 ⁸⁰	(13) "		10.73	636.83 629.32
47+82 ⁷³	(13) "		7.45	640.11 631.08
48+06 ⁶⁷	(13) "		4.17	643.39 632.85
48+19 ¹⁰	(13) "		2.19	645.37 633.81
48+42 ⁸³	(13) "	12.44	659.99	0.01 647.55
48+66 ⁵⁶	(13) "		10.47	649.52 637.15
48+78 ⁶³	(13) "		7.78	652.21 640.49
48+90 ⁴⁶	(13) "	13.19	672.94	0.22 659.75
49+02 ²⁷	(13) "		10.60	662.34 647.09
49+02 ²⁷ CK TBM.	(20) "		10.29	662.65 647.09
49+25 ⁸⁴	(20) "		2.49	670.45 = 670.44
49+37 ⁶⁴	(20) "		6.43	666.51 651.61
49+49 ⁵¹	(20) "		5.20	667.74 653.86
49+61 ³⁷	(20) "		4.88	668.06 655.60
49+85 ¹⁴	(20) "	12.82	685.08	0.68 672.26
			9.42	675.66 660.56

1/19/53
BEATTY
SHOREY
MARTIN
ALEXANDER

		on rock, from 79.14		FEB 21, 1955		N. 636.87	
C99	(15) LT	190	632.97	C100		0.64	
C84	(15) LT	0.64	636.23	C84		11.33	
C75	(15) LT	10.35	637.21	C78		N. 647.56	
C90	(15) LT	7.48	640.08	C90			
C105	(15) LT	2.15	643.21	C106			
C110	(15) LT	2.16	645.40	C116		0.51	
C124	(15) LT	10.35	649.38	C122		12.68	
C112	(15) LT	7.55	652.18	C117			
C133	(15) LT	3.92	655.81	C133		0.12	
C156	(15) LT	11.59	660.09	C153		12.02	
C153	(15) LT	9.33	662.29	C152			
C152	20 LT	9.02	662.60	C155			
C149	Rock 50' LT 49+00	5.13	666.99			0.24	
C139	✓	3.91	667.71			662.60	
C124	✓	3.60	668.02			0.20	
C122	✓	5.51				669.56	
C151	✓					3.70	
						667.56	
						1.86	
						667.70	
						669.56	
						668.01	

S.V.A. Conn.
(Cont'd)

BM.	0.49	766.15		765.66	
0+26.01 (15)			6.01	760.14	740.73
HP	0.00	753.40	12.75	753.40	
0+62.2 (15)			1.35	752.05	740.04
0+66.25 (15)			2.22	751.18	738.92
0+86 (15) vert. pl.			10.08	743.32	730.30
HP	0.02	740.14	13.28	740.12	
1+00.72 (15)			1.50	738.64	726.78
1+24.25 (15)			8.41	731.73	721.12
HP	0.28	727.70	12.72	727.42	
1+46.73 (15)			2.74	724.96	713.24
1+57.74 (15)			8.06	719.64	708.46
1+73 (15) vert. pl.			10.54	717.16	700.40
1+92.02 (15)			10.63	717.07	700.36
2+28.14 (15)			10.35	717.35	700.29
2+64.25 (15)			8.63	719.07	700.22
3+00.36 (15)			5.73	721.97	700.15
3+36.47 (15)			6.98	720.72	700.08
3+72.57 (15)			9.03	718.67	700.00
3+84.35 (15)			10.15	717.55	699.51
1+08.37 (15)	1.00 1.06		10.60	717.10	698.38
4+25 (15) vert. pl.			10.16	717.54	697.60

JAN. 28 1955
BEATTY
SHOREY
MARTELL

21

TOP TUNNEL PORTAL

						(FG 873 pg. 6)
						FEB 22, 1955
C194		597	760.13	C194		765.66 40.44
C120		254	752.05	C120		4766.10 19.68
C123		243	751.16	C122		1752.82 4752.87
C130		1132	749.27	C130		3223
C119		320	738.63	C119		P 721.36 9.7
C106		1012	731.71	C106		1320
C112		288	728.90	C112		P 728.63 0.15
C112		910	719.68	C112		724.69 5.71
C168		1163	717.15	C168		46.740.40 12.54
C167		1168	717.10	C167		727.86 0.41
C171		1137	717.21	C171		HP 728.27 13.23
C189		960	719.18	C189		715.04 1.16
C220		659	722.19	C220		HP 716.20 13.24
C202		797	720.81	C202		702.96 2.43
C187		995	718.83	C188		HP 705.37 0.61
C180		1100	717.78	C183		HP 704.78
C182		1155	717.22	C188		
C199		1118	717.60	C200		

S.V.A. Conn.
GRO. S & STR. S
(Cont'd)

FEB. 3, 1955
BEATTY
SHOREY
MARTELL

23

	754.26							753.04
6+8459 (10)		3.28	751.18	739.85	C112	✓		1.84 750.20
7+1159 (10)		4.22	750.24	739.46	C108	✓		2.78 750.24
7+3859 (10)		5.30	749.12	739.07	C102	✓		3.90 749.12
7+6559 (10)		7.03	747.43	738.68	C88	✓		5.61 747.43
7+9258 (10)		7.75	746.71	738.28	C84	✓		6.33 746.71
¹¹ 8+10482 (10)	0.50	743.30	11.66	742.80	736.45	C64	✓	10.34 742.77
8+1609 (10)			2.97	740.37	733.57	C64		OK 2/8/55 740.37 0.22 740.59
8+4554 (10)			8.19	735.15	726.04	C92		5.00 735.19 C92
¹¹ 8+7500 (10)	1.15	731.20	13.29	730.05	718.50	C116		10.55 730.04 OK
8+8696 (10)			2.86	728.34	717.05	C113		12.19 728.40 C114
9+2317 (10)			6.81	724.39	712.67	C117		728.44 4.06 724.45 728.71 C118
9+3545 (10)			8.13	723.07	711.52	C116		5.69 723.22 C117
9+4731 (10)			9.63	721.57	711.25	C103		7.30 721.61 C104
¹¹ 9+7149 (10)	0.33	720.03	11.50	719.70	710.72	C90		721 719.70 OK
9+9567 (10)			4.10	715.93		C53		
9+9567 (13)			2.90	717.13	710.18	C70		FEB. 4 1955
10+0760 (13)			4.99	715.04	708.96	C61		
10+1871 (13)			7.30	712.73	705.50	C72		
10+3052 (13)			10.72	709.31	701.83	C75		
¹¹	0.02	707.89	12.16	707.87				

S.V. A. CONN.
GRDS & STR. S. SET.
(CONT. D.)

FEB. 2 1955

24.

707.89

10+41 ⁰⁴ (13)			1.90	705.99	696.88	C91
10+52 ³⁶ (13)			5.68	702.21	691.56	C107
10+63 ¹⁷ (13)			10.23	697.66	686.96	C102
10+85 ²⁶ (13)	0.22	694.85	13.26	694.63		C102
10+97 ²⁷ (13)			6.19	688.66	677.57	C111
11+09 ⁰⁵ (13)	0.20	681.91	9.96	684.89	673.69	C112
11+32 ⁵³ (13)			13.14	681.71		C106
11+43 ³³ (13)			0.96	680.95	670.39	C106
11+55 ¹⁸ (13)			9.22	672.69	663.84	C89
11+66 ⁷⁹ (13)	0.11	669.65	12.37	669.54	659.52	C100
11+78 ⁷³ (13)			3.42	666.23	654.78	C115
11+90 ³¹ (13)			7.35	662.30	651.66	C106
12+01 ⁵⁰ (13)			11.30	658.35	648.92	C94 ✓
12+12 ⁶² (13)	0.22	656.62	13.25	656.40		C98
12+31 ⁸⁰ (13)			1.07	655.55	645.76	C98
12+38 ⁰⁰ (13)					641.52	✓ OMIT
12+41 ⁰⁰ (13)	4.00	627.47	8.54	648.08	632.11	C110
12+80 ⁰⁰ (13)			13.15	643.47		C112
			5.18	642.39	627.94	C112
			6.14	641.33	626.60	C117
			6.73	640.74	626.59	C112
			9.00	638.47	626.46	C120

2/2/55

S.V. A. CONN
GRO. & STR. SET.
(Cont'd)

647.47

13+19 ⁰⁰ (13)		8.87	638.60	626.33	C123	✓
13+58 ⁰⁰ (13)		8.25	639.22	626.20	C130	✓
13+97 ⁰⁰ (13)		8.32	639.15	626.06	C131	✓
14+08 ⁶⁵ (13)		7.93	639.54	626.02	C135	✓
14+21 ⁰⁷ (13)		8.76	638.71	625.44	C133	✓
14+45 ²⁶ (13)		8.89	638.58	623.34	C152	✓
14+57 ⁴⁷ (13)		8.69	638.78	622.80	C160	✓
14+70 ²⁵ (13)		8.95	638.52	621.67	C139	✓
14+91 ⁸⁵ (13)		7.38	640.09	630.32	C98	✓
CKTBM	• 7.92	654.06	1.21	646.06 = 646.14		
15+06 ⁸⁹ (13)		10.45	643.61	633.54	C101	
15+29 ⁸⁸ (13)		3.67	650.39	640.26	C101	
P 15+41 ⁴⁰ (13)	13.05	666.33	0.78	653.28	643.75	C95
15+75 ⁸⁶ (13)		2.65	663.68	650.18	C95	
P 15+87 ⁵³ (13)	12.88	679.08	0.13	666.20	657.70	C85
15+99 ⁴⁴ (13)		9.43	669.65	661.05	C86	
16+11 ¹⁰ (13)		7.57	671.51	663.87	C76	
16+23 ⁰⁵ (13)		5.74	673.34	665.02	C83	
16+59 ⁰³ (13)		2.96	676.12	666.27	C99	
16+95 ⁰¹ (13)		1.01	678.07	667.53	C105	

TBM
616.14
3.37
16 649.53
12.95
636.58
0.30
636.58
.08
636.88 H
0.92
635.96
11.54
647.50 H
635.67
11.54
647.25
10.12
637.09

6.38
66
7.04

75' RP 14+99⁵⁰

2/7/55

667.4
11.7

S.V.A. CONN
GRD.S & STR.S SET.
(Cont'd)

FEB. 7, 1955
BEATTY
SHERIDAN
MARSHALL

26

		679.08			
17+30 ⁹⁹	(13)		1.17	677.91	668.79
17+66 ⁹⁶	(13)		2.25	676.83	670.05
17+74 ⁰⁰	(13)		2.52	676.56	670.20
17+76 ⁹⁰	(13)				670.40
17+79 ⁹⁰	(13)	13.27	2.52	676.56	670.40
P ₂ 11.64		700.38	1.09	688.74	
CK TBM.			4.15	700.23 =	700.20
27	4.21	680.77		676.56	
17+95 ⁰⁹			3.54	677.23	670.39
18+07 ⁰¹			2.66	678.11	669.04
18+30 ⁴⁶			1.12	679.65	663.96
18+32 ⁸⁶ W			2.00	678.77	663.00
18+36 ⁸⁶ E			3.73	677.04	
18+38 ⁹³			5.17	675.60	661.01
18+49 ⁰²			7.43	673.34	655.99
18+61 ⁸³			6.62	674.15	652.32
CK			1.39	679.35	
18+61 ⁸³	10.18	686.74		676.56	
18+69 ⁰⁰			11.94	674.80	652.34
18+72 ⁶⁴			7.34	679.40	? 652.00
18+82 ³⁷			6.24	680.30	654.65
			5.39	681.35	661.65

C91

C68

C63

not necessary } only 65' apart
on 13' offset

C62

Rec 60' RT 18+70+

Rec 65' RT 19+00+

FEB. 21, 1955

C68

C91

C157

C158

C140

C146

C174

C218

17+792

FEB. 8, 1955

~~C225~~

C274

C257

C197

FEB. 8, 1955

27

S.V.A. CONN.
(Cont'd)

		686.74				
18+92 ²² (13) ✓			3.64	683.10	668.50	C146
P 19+02 ⁴ (13) 12.59	698.61		0.72	686.02	675.28	C107
19+13 ²¹ (13)			8.47	690.14	679.85	C103
P 13.30	711.70		0.21	698.20		
19+47 ⁴⁰ (13)			9.41	702.29	692.83	C95
19+58 ²³ (13)			5.65	706.05	697.99	C81
P 19+69 ³⁸ (13) 12.69	723.42		0.97	710.73	702.45	C83
19+80 ⁶⁰ (13)			7.10	716.32	706.70	C96
19+91 ⁸³ (13)			2.12	721.30	710.81	C105
P 12.50	735.09		0.83	722.59		
20+03 ¹² (13)			9.72	725.37	714.85	C105
20+14 ⁵⁰ (13)			4.98	730.11	718.68	C114
P 12.78	747.68		0.19	734.90		
20+49 ¹⁶ (13)			7.93	739.75	728.41	C112
20+60 ⁷² (13) ✓			7.07	740.61	731.64	C90
20+72 ³² (13)			2.92	744.76	734.70	C101
20+95 ⁶⁹ (13)			1.81	745.87	740.15	C57
P 21+07 ⁵⁷ (13) 5.81	752.49		1.00	746.68	741.85	C48
21+31 ⁴⁸ (13)			3.75	748.74	743.92	C48
21+44 ³¹ (13)			3.37	749.12	744.71	C44
21+48 ⁶⁰ (13)			3.05	749.44	744.97	C45

S.V.A. CONN
GRS & STRS SET
Cont'd

FEB. 8, 1955

28.

752.49

21+5102 (13)		2.88	749.61	745.00	C46	
21+5386 (13)		2.72	749.77	744.99	C48	
21+6513 (13)		2.17	750.32	744.75	C56	
21+8912 (13)		3.71	748.78	744.12	C47	
22+0082 (13)		4.40	748.09	741.27	C66	
22+1211 (13)		5.18	747.31	737.42	C99	✓
22+1211 (18)		4.36	748.13		C107	
22+4594 (18)		11.21	741.28	725.12	C162	✓
22+7972 (18)	0.80 0.38	740.20 727.80	13.09 12.78	739.40 727.22		
			2.30	725.50	712.81	C127 ✓
22+9034 (18)		6.68	721.12	707.14	C142	✓
23+0075 (18)		11.75	716.25	701.16	C149	✓
23+1190 (18)	0.96	715.62	13.14	712.66		
			4.27	711.35	695.64	C157 ✓
23+2273 (18)			9.18	706.44 703.64	690.39	C162
OK TBM	0.03	703.66	11.95	703.67 = 703.63		✓
23+3360 (18)			2.19	701.47	685.28	C162 ✓
23+5537 (18)				701.47	685.28	2.17-701.47 C162 *
TBM	0.01	703.64		703.63		
23+5900 (18)			9.40	694.24	673.50	C207 ✓
23+6302			10.24	693.40	673.55	C199 ✓
23+7602			11.20	692.44	674.77	C177 ✓
23+9931			9.16	694.48	680.57	C139 ✓

MAR. 1, 1955
Dug out STRS

25' RP 22+1425

2.17-701.47 C162 *

8.69 694.95 C182

FEB. 10, 1955

S.V.A. CONN.
GRDS & STRS SET
(CONT'D)

Feb. 10, 1955

29

Station	Time	Grd	Str	Set	Notes	
24+1105 (18)		7.22	696.42	683.49	C129 ✓	
24+2272 (18)		3.81	699.83	686.21	C136 ✓	
24+4708 (18)	12.27	715.21	0.70	702.94		
24+4708 (18)		9.00	706.21	692.02	C102 ✓	
24+5897 (18)		4.83	710.38	697.03	C134 ✓	
24+6937 (18)		1.69	713.52	703.02	C105 ✓	
24+8001 (18)	12.73	727.47	0.47	714.74		
24+8001 (18)		8.50	718.97	708.58	C104 ✓	
25+0184 (18)	12.29	739.35	0.41	727.06		
25+0184 (18)		9.06	729.89	718.56	C113 ✓	
25+1276 (18)		4.72	734.63	723.53	C111 ✓	
25+2395 (18)	12.10	751.09	0.36	738.99	727.87	C111 ✓
25+4666 (18)		1.00	749.69	735.62	C101 ✓	
25+4666 (18)	8.63	759.70	0.02	751.07		
25+5830 (18)		7.95	751.55	738.50	C103 C129 ✓	
25+5830 (18)		8.35	751.25			
25+8181 (18)		5.00	754.70	743.29	C110 ✓	
25+9350 (18)		3.23	756.47	743.94	C125 ✓	
25+9650 (18)		2.92	756.78	743.92	C129 ✓	
25+9947 (18)		2.95	756.75	743.91	C128 ✓	
26+1076 (18)		3.76	755.94	743.83	C121 ✓	
26+3476				743.66		
26+3362 BR				743.63		
26+4324 AH		6.32	753.38	743.63	C98 ✓	
26+4752				743.60		
26+4752 (18)		6.07	753.63	743.57	C101	
26+4752 (18)		6.55	755.15		C96	

Mar 1 1955

746.44
743.29
10.82

797 749.67 C101
756.67
1.17
757.62
2.00
6.20 751.44 C129
759.64 ✓
2.22
746.44
743.29
3.15
755.88
746.44
743.91
2.52
746.44
743.91
2.53
746.44
743.83
2.61

3.33 752.55 C90

FEB. 10 1955

30

S.V.A. CONN
GRDS. & STRS SET
(CONT'D)

Point	Dist	Lat	Long	Dist	Lat	Long	Notes
			759.70				
P 26+66 ⁴⁵ (15)	7.86	765.83	1.73 757.97	743.44			C145 ✓
CK TEM.			5.42 760.39	760.34			25' RP 26+39 ⁴³
				760.34			
26+66 ⁴⁵ (15)	3.51	763.85	10.55 753.30	743.44			C92 ✓
26+78 ⁴³ TP	112	751.67	10.48 753.37	742.69			C102
26+90 ³⁶			13.30 750.55	741.43			C85 ✓
			1.78 749.89				594 749.94 C85
27+02 ²⁵ (12)			1.97 749.70	739.85			755.88
27+02 ²⁵ (15)			0.70 750.97				2.20
27+13 ⁹⁵ (15)			2.01 749.66	737.19			753.64
27+37 ³⁵ TP	0.24	738.55	6.78 744.89	731.81			
			13.36 738.31				
27+60 ⁷⁶ (15)			0.44 738.11	726.43			
27+72 ⁵² (15)			3.25 734.80	723.85			
28+07 ²⁷ (15)			8.92 729.63	716.53			
28+19 ⁷⁶ (15)			10.08 728.47	714.37			
28+35 ⁰⁹ (15)			9.74 728.79	714.45			
28+70 ¹⁸ (15)			5.75 732.80	722.51			
28+82 ¹¹ TP	13.37	751.88	2.08 736.47	725.30			
			0.04 738.51				
29+05 ²⁸ (15)			7.45 744.43	731.57			
29+16 ⁸⁶ (15)			3.59 748.27	736.68			
29+28 ⁶⁴ (15)			3.72 748.16	737.00			
29+28 ⁶⁴ (13)			3.38 748.00				
29+52 ⁴² (12)			3.81 748.07	740.22			
29+64 ³⁹ (12)			3.04 748.84	741.11			

MAR. 1 1955

594 749.94 C85
6.69 748.19 C93
4.88 751.00 C112
6.81 749.07 C119
9.42 746.06 C147

748.84
3.89
752.73 K

4.98 747.75 C108
4.78 747.95 C110
4.64 748.09 C99

SVA Conn

(Cont'd)

2/12/55

31

TP		751.88						
	4.53	755.90	0.51	751.37				
30+00 ³⁸	(12)		2.22	753.68	741.70	c ₁₂ ⁰	✓	
30+36 ³⁸	(12)		5.22	750.68	742.79	c ₈ ²	✓	
30+43 ⁶⁷	(12)		5.17	750.73	742.49	c ₈ ³	✓	
30+52 ³⁰	(12)		4.96	750.94	742.51	c ₈ ⁴	✓	
30+88 ³⁰	(12)		2.58	753.32	742.55	c ₁₀ ²	✓	
31+24 ³⁰	(12)		1.45	754.45	742.60	c ₁₁ ²	✓	
31+60 ³⁰	(12)		2.24	753.66	742.65	c ₁₁ ⁰	✓	
31+66 ⁷²	(12)		2.79	753.11	742.65	c ₁₀ ⁵	✓	
TP								
31+69 ⁷²	(12)	9.06	761.81	3.15	752.75	742.65	c ₁₀ ¹	✓
CK.TBM				1.98	759.83 =	759.80		
TP	0.89	753.64		752.75				
								2.5' R.P. 31+92.25
								Mar. 2 1955
31+73 ¹⁴	(12)		1.32	752.37	742.64	c ₉ ⁷		
31+84 ⁴³	(12)		2.90	750.74	742.61	c ₈ ¹ +		
31+96 ⁴⁵	(12)		3.76	749.88	742.38	c ₇ ⁵		
32+08 ⁴⁵	(12)		3.69	749.95	741.77	c ₈ ²		
32+20 ⁴³	(12)		5.30	748.34	741.05	c ₇ ³		
32+32 ³¹	(12)		7.47	746.17	739.39	c ₆ ⁸		
32+32 ³¹	(13)		6.08	747.56		c ₈ ²		
32+44 ¹¹	(15)		8.55	745.09	737.17	c ₇ ⁹		
32+55 ²⁹	(15)		9.55	744.09	733.47	c ₁₀ ⁷		
32+66 ⁸⁵	(15)		10.20	743.44	729.56	c ₁₃ ⁹		

32.31
31.01
66.36

S.V.A. CONN
(Cont'd)

3/2/55
BEATTY
MARTELL
KELLHOFFER

32

P	32+78.43	(15) RT 753.64	0.28	740.59	13.33	710.31	725.89	C114
	32+90.27 "				6.09	734.50	722.65	C119
P	33+01.78 "	0.60	729.67	11.52	729.07	719.24		C98
	33+24.03 "				10.11	719.56	710.25	C93
P	33+46.27 "	0.07	716.76	12.98	716.69			
					6.93	709.83	701.22	C86
	33+57.19 "				10.86	705.90	696.25	C97
P	33+68.01 "	0.60	702.05	13.31	703.45			
					3.12	700.93	691.09	C98
	33+78.84 "				7.95	796.10	685.92	C102
P	33+89.70 "	0.29	691.24	13.10	690.95	680.82		C101
	34+02.02 "				5.67	685.57	676.92	C87
	34+12.90 "				10.24	681.00	671.88	C91
P	34+23.36 "	0.00	678.43	12.81	678.43			
					1.18	677.25	666.06	C112
	34+33.81 "				6.10	672.33	660.15	C122
	34+44.22 "				8.18	670.25	654.18	C162
	34+48.00 "				8.34	670.09	652.00	C181
	34+52.82 "				8.06	670.37	652.11	C183
	34+66.02 "				6.48	671.95	652.15	C178
	34+77.32 "				6.01	672.42	658.18	C143
P	34+88.66	9.06	684.88	2.61	675.82			
		(15) RT		10.57	674.31	662.11		C122

50' RT 34+36+

26.21
33.81
2.40
1.05
3.25

8.01
1.05
9.1

+85.21
77.32
4.89
8.62

SVA CONN
Cont'd

Nov. 3 1955
BETTY
MAYELL
KOLLHOFFER

33

			684.88					
34+88 ⁶⁶	(13) RT					662.11		C122
TP								
35+22 ⁷⁴	"	13.08	697.34	0.62	684.26	678.10		C112
35+34 ³⁷	"			9.85	687.09	676.72		C108
35+45 ⁸¹	"			6.17	691.17	680.19		C110
TP		12.65	709.92	0.05	697.29			
35+80 ²⁴	"			7.65	702.29	690.65		C116
35+91 ⁸⁷	"			4.43	705.51	694.31		C112
TP		12.76	722.50	0.20	709.74			
36+14 ⁵⁹	"			9.04	713.46	702.01		C115
TP		12.27	734.68	0.09	722.41			
36+48 ⁶⁹	"			10.85	723.83	713.58		C103
36+60 ⁰⁵	(15) RT			5.18	729.50	717.43		C121

19.7
4
77.68
11.562

S.V.A. CONN
(Cont'd)

3/2/55

34

		734.68			
36+71 ⁵⁶	(15) RT 10.92	745.60	0.00	734.68	720.82
36+94 ⁹⁸	"		8.44	737.16	726.04
CKT BM	11.23	756.51	0.27	745.33 = 745.28	
37+30 ¹²	"		9.56	746.95	733.87
37+41 ⁸³	"		8.66	747.85	736.46
37+53 ⁶⁵	"		7.77	748.74	738.51
37+77 ⁶¹	"		5.61	750.90	739.89
37+89 ⁵⁹	"		4.98	751.53	740.58
38+01 ⁶⁰	"		4.03	752.08	741.10
38+37 ⁵⁹	"		0.16	756.35	741.78
38+61 ⁵⁶	"		1.31	755.20	741.84
38+69 ⁶⁰	(15) RT		2.56	759.95	742.00
TBM			12.38	744.13 = 744.14	

C139

C111

C121

C114

C102

C110

C110

C114

C116

C133

C120

C120

C120

C120

125' RD 37400

0.26 short

SET 2 GRD. TO 37+96⁹² H.P. 1/12/55

37+96.92	7.33
89.59	1.19
7.33	6.14
	7.08

01.60	
96.92	
4.21	3.45
1.19	
7.29	
3.55	MISS

25' RD 40+50

S.V.A. CONN
(CONT'D)

3/24/55
SHOREY
MARTEL
KELLHOFER

35

TBM	10.48	694.53	684.05	SEE PAGE 20
50+50 ⁰⁰ V.P.I.	(20) LT	12.13	682.40	669.00 C13 [±] x
50+56 ⁸⁸	(20) LT	8.87	685.66	670.39 C15 [±] ✓
50+80 ³⁹	(20) LT	4.30	670.23	675.23 C15 ⁰ ✓
50+84 ⁰⁰ V.P.I.	(20) LT	1.52	673.01	676.00 C17 ⁰ ✓
TP	12.70	706.76	0.67	678.86
51+00 ⁰⁰ V.P.I.	(20) LT	10.37	676.39	679.30 C17 [±]
51+25 ⁰⁰	(20) LT	5.31	701.45	686.15 C15 [±]
TP	12.98	719.60	0.14	706.62
51+50 ⁰⁰ V.P.I.	(20) LT	12.05	707.55	693.00 C14 [±]
51+67 ⁰⁰ V.P.I.	(20) LT	7.54	712.06	697.50 C14 [±]
TP	13.18	732.69	0.09	719.51
51+96 ³⁵	(20) LT	11.04	721.65	707.37 C14 [±]
52+07 ⁷¹	(20) LT	7.57	725.12	711.36 C13 [±]
52+19 ⁰³	(20) LT	4.52	728.17	715.33 C12 [±]
52+30 ³⁷ TP	12.74 (20) LT	2.12	730.57	719.21 C11 [±]
52+35 ⁰⁰ V.P.I.	(20) LT	10.30	733.01	720.80 C12 [±]
52+41 ⁸³	(20) LT	6.23	737.08	722.79 C14 [±]
TP	8.62	750.59	1.36	741.95
52+76 ³⁹	(20) LT	3.31	747.26	732.85 C14 [±]
52+81 ⁰⁰ V.P.I.	(20) LT	2.63	747.94	734.20 C13 [±]
52+87 ²²	(20) LT	1.27	749.30	735.97 C13 [±]
52+92 ⁹¹ H.P.I.				
CK. (20) LT 52+97 ⁴		0.94	749.63 = 749.54	

(20) 1.0' ERROR

± 0.87 "

6.58 meas.
5.07 plan.
0.87

S.V.A. Conn.
STR'S & GRDS (CONT'D)

SHOREY
MARTEL
KELLHOFER

36

TBM	10.99	764.09	753.10	
CK. TBM 91	10.99	762.58	12.50	751.59
52+92	H.P.I. (20) LT		9.47	753.11 = 753.10
				737.60
52+97 ¹¹	(20) LT		13.04	749.54
				737.61
53+09 ¹¹	(20) LT		9.30	753.28
				737.63
53+45 ¹¹	(20) LT		4.55	758.03
				737.70
53+81 ¹¹	(20) LT		0.26	762.32
				737.77
54+17 ¹¹	(20) LT		4.01	758.57
				737.84
54+53 ¹¹	(20) LT		9.88	752.70
				737.91
54+89 ¹¹	(20) LT		8.74	753.84
				737.98
54+96 ¹⁹	(20) LT		10.63	751.95
				737.99
55+03 ⁹²	(20) LT		10.99	751.59
				737.97
55+11 ⁰⁰	(20) LT		11.34	751.24
				737.73
55+20 ⁰⁰	(20) LT		12.30	750.28
TBM	0.65	753.75		753.10
				737.43
55+25 ⁹⁷	H.P.I.			
55+27 ³⁹	(15) LT		5.25	748.50
				737.40
55+30 ³⁹	(15)		5.36	748.39
				737.38
55+40 ⁶⁶	(15)		5.66	748.09
				737.34
55+52 ⁶⁵	(15)		5.19	748.56
				736.78
55+64 ⁴⁷	(15)		8.03	745.72
				734.72
55+88 ⁰⁹	(15)		12.19	741.65
TP	1.71	742.48	12.98	740.77

TBM ON ROCK 90' LT. STA. 56+15 (PAGE 12)

OMIT

C11²

C15²

C20³

C24⁶

C20⁷

C14⁸

C15²

C14⁰

C13⁶

C13⁵

C12²

TBM ON ROCK 90' LT. STA. 56+15 (Pg. 12)

OMIT

C11¹

C11²

C10⁸

C11⁸

C11⁰

C11^L

6.50 pieces
5.97 plan
.53 short

S.V.A. CONN
STK'S & GRD'S (CONT'D)

4/4/55
SHOREY
MARTEL
KELLHOFER

37

TP	0.16	715.88		715.72	
58+06 ⁵⁰	(15) LT		12.90	702.98	691.59
57+83 ⁵⁶	(15)		3.68	712.20	698.64
TP	11.40	727.12	0.16	715.72	
57+72 ⁰⁷	(15)		10.32	716.80	702.08
57+60 ⁰⁸	(15)		7.20	719.92	702.61
57+48 ⁰⁸	(15)		6.48	720.64	702.73
57+36 ⁰⁵	(15)		8.20	718.92	703.02
57+22 ⁷¹	(15)		6.20	720.22	703.86
OK TP	10.56	735.97	1.71	725.41	
OK TP	11		2.64	728.33 = 728.30	
57+10	(15)		5.91	722.03 = 725.30	708.31
57+03 ¹⁸	(15)		10.80	722.92	713.00
57+00 ⁰⁰	(15) 1 SPEC. ELBOW		6.71	727.01	715.20
56+96 ⁰⁰	(15)		7.59	726.13	715.22
56+84 ⁰⁰	(15)		5.36	728.36	715.29
56+71 ⁷¹	(15)		5.87	727.85	715.39
TP	32	733.12	12.63	729.85	
56+59	(15)		9.98	732.50	716.22
56+35 ⁵⁷	(15)		9.44	733.04	719.68
56+23 ⁰⁹	(15)		6.69	735.79	721.50
56+11 ³⁵	(15)		5.85	738.63	724.83
55+99 ⁹⁰	(15)	742.48	2.78	739.70	728.39

TP (SEE PAGE 38)

C11 ⁴					191 plan 103 meas.
C13 ⁶					
C14 ²					
C17 ³					
C17 ²					7.31
C15 ³				703.02	7.02
C16 ⁴				702.86	6.18
C13 ²	TP			708.91	7.48
C9 ²					709.31 73 710.04
C11 ⁸				715.20	6.35
C10 ⁹				0.59	
C12 ¹				715.79	
C12 ⁵				715.39	6.17
C16 ³				716.22	5.33
C13 ⁴				719.68	1.87
C14 ³				721.50	715.20 PD 18
C13 ⁸				721.55 pd	715.11 715.25 18
C11 ³					6.80 8.31-807 11.25 3.86 4.52 12.09 3.02 -12.36 12.38 2.72 -12.65
					12.13
					702.25

S.V.A. CONN.

STR'S & GRDS (CONTD)

3/30/55
SHOREY
MARTEL
KELLHOFER

38

TBM	0.66	753.86		753.10		
TP	0.65	741.34	13.07	740.69		
	0.49	728.79	13.04	728.30		
	0.04	715.76	13.07	715.72		
58+18 ⁶²	(15) LT					
TP	1.64	704.68	12.82	703.74	687.87	C15 ²
			12.72	703.04		
58+30 ⁵²	(15)		3.35	701.33	684.83	C16 ²
58+42 ⁷⁰	(15)		3.56	701.12	682.60	C18 ²
58+54 ⁹⁰	(15)		2.39	695.29	679.95	C15 ³
TP	0.02	691.36	13.34	691.34		
58+65 ⁹⁰	(15)		0.71	690.65	676.54	C14 ¹
58+77 ¹⁴	(15)		5.59	685.77	672.35	C13 ⁴
58+87 ⁷⁰	(15)		7.18	684.18	666.69	C17 ²
TP	1.34	679.34	13.36	678.00		
58+97 ³⁸	(15)		3.24	676.10	659.60	C16 ²
59+09 ³⁹	(15)		8.50	670.84	653.79	C16 ²
CR. TBM			8.55	670.79 = 670.80		
TP			13.19	666.15		
59+20 ⁵²	(15) 0.67	666.82	1.53	665.30	649.25	C16 ¹
TP	0.98	655.01	12.79	654.03		
59+53 ⁶⁵	(15)		5.42	649.59	635.15	C14 ²
59+70 ⁰⁰	V.P.1 (15)		12.29	642.72	624.50	C18 ²
TP	0.40	642.35	13.06	641.95		
59+79 ⁸⁰	(15)		7.13	635.22	621.72	C19 ²
TP	2.25	631.40	13.20	629.15		
60+07 ⁸¹	(15)		3.16	628.24	613.21	C15 ²
60+27 ⁰¹	(15)		8.96	622.44	607.07	C15 ⁴
TP	2.17	620.35	13.22	618.18		
60+55 ⁸⁵	TP (15) 0.84	608.15	13.06	607.29	595.06	C12 ³
60+84 ²¹	TP (15) 0.95	595.83	13.27	594.88	581.36	C13 ⁵
61+00 ⁰⁰	V.P.1 (15)		2.66	588.17	574.80	C18 ⁴

20' LT. 56+15 (Pg. 12)

TBM ON DOCK 75' LT. 59+00 (Pg. 13)

S.V.A. Conn.
STR'S & GRDS. (CONT'D)

595.83

61+14 ⁶²	(15) LT		6.56	589.27	571.82	C18 ^E
TP	0.65	590.36	6.12	589.71		
61+45 ⁷⁶	(13) 0.73	577.93	13.16	577.20	568.69	C7 ^E
			16.0	576.33		
61+50 ⁰⁰	V.P.I. (15)		3.75	573.98	568.50	C5 ^E
61+76 ²²	(15)		8.00	569.93	562.43	C7 ^E
61+88 ⁰⁰	V.P.I. (15)		8.85	569.08	559.70	C9 ^E
62+04 ⁵⁵	(15)		11.24	566.69	550.58	C16 ^L
TP	2.41	567.52	12.82	565.11		
62+32 ¹⁴	(13) 0.11	554.61	13.02	554.50	535.38	C14 ^L
			4.59	550.08		
62+41 ⁰⁰	V.P.I. (15)		7.36	547.25	530.50	C16 ^B
TP	0.95	542.75	12.81	541.80		
62+62 ⁷³	(15)		2.26	540.49	526.21	C14 ^B
62+73 ⁶²	(15)		9.54	533.21	520.05	C13 ^B
63+24 ²⁹	(13)		11.34	531.41	513.78	C17 ^E
TP	8.03	529.81	12.97	529.78		
63+54 ⁸⁵	(15)		7.14	522.65	506.14	C16 ^E
TP	1.01	518.25	12.57	517.24		
63+85 ⁸³	(15)		3.44	512.81	500.42	C12 ^L
64+09 ⁰⁰	V.P.I. (15)		10.75	507.50	497.80	C9 ^L
TP	0.26	505.80	12.71	505.54		
64+16 ⁰¹	(13)		1.70	504.10	495.00	C9 ^L
64+44 ⁷⁰	(15)		8.19	497.61	483.02	C14 ^E

4/1/55
SHOREY
MARTEL
KELLHOFER

40

ON ROCK 61+34 3' LT

(SEE PAGE 18)

S.V.A. CONN.
(Cont'd)

AIR VALVE FLEV. STKD

TBM	7.33	767.13	759.80		25' RP 31+92.93
			3.13	764.00	AV. 31+68
61 CK TBM			7.33	759.80	
61 TBM	10.79	771.13	760.34		25' RP 26+39.43
			7.13	764.00	AV. 25+94
61 CK TBM			10.79	760.34	
62 TBM	2.40	767.75	765.35		25' RP 21+135.6
			3.75	764.00	AV. 21+49
63 CK TBM			2.40	765.35	
62 TBM	12.72	711.80	699.08		50' RP 17+76.90
	12.96	724.54	0.22	711.58	
63 TBM	13.15	737.13	0.56	723.98	
71	13.00	749.85	0.28	736.85	
63 TBM	13.02	762.80	0.07	749.78	
	6.23	768.65	0.38	762.42	
			4.65	764.00	AV. 17+80
64	4.27	760.40	12.52	756.13	
63 CK TBM			5.79	754.61 = 754.60	orig. PI 17+
6 TBM	8.82	777.02	768.20		50' RP 8+00
			13.02	764.00	AV. 6+18.92
CK TBM			8.82	768.20	765.66 3.27 768.93

SVA Conn
(Cont'd)

Air Valve Elev Cont'd

TBM 9.20 765.37 756.17

1.37 764.00

CL TBM 9.20 756.17

4/29/54

42

25' RD 39+08.72

AV 38+71

SU Aqueduct Conin.
Cont'd
± Grd stks

April 29 1955
Beatty
Sperry
Norton
Kellinger

23

P	0.19	690.96		690.77	
58+1862			3.09	Grd ✓	687.82
58+3052			6.13	Grd ✓	684.83
58+0270			8.36	9.42 (F1)	682.60
P 58+5140			11.01	13.12 (F2)	679.95
	0.11	677.95	13.12	677.82	
58+6590			1.41	4.10 (F2)	676.54
58+7714			5.60	8.95 (F3)	672.35
58+8770			11.26	13.13 (F1)	666.69
P 58+9738	0.38	665.20	13.13	664.82	
59+0939			11.21	Grd ✓	653.99
P 59+2052	0.10	652.43	12.87	652.33	
			3.18	4.57 (F1)	649.25
P 59+5365	0.51	639.75	13.19	639.24	
			4.60	7.50 (F2)	635.15
P 59+70	1.13	627.80	13.08	626.67	
			3.30	7.42 (C09)	624.50
59+7980			6.08	Grd.	621.72
P 60+0981	0.50	615.47	12.83	614.97	
			2.26	Grd	613.21
60+2701			8.40	9.37 (F1)	607.07
P 60+5585	1.05	603.49	13.03	602.44	
			8.43	9.36 (F1)	595.06
P 60+8421	0.17	590.35	13.31	590.18	
			9.00	Grd	581.36
P 61+00	0.83	578.10	13.08	577.27	
			3.30	Grd	574.80

P 647.86

06

N 647.92

12.77

P 635.15

0.00

N 635.12

12.73

P 622.37

10.62

N 622.37

1.60

N 623.99

2.22

10.76

5V.A. Conn.
 & Grd (Cont'd)

4/29/55

44

	578.10				
61+14 ⁶²			6.28	812 (F8)	571.82
CK 61+45 ⁷⁶ (15)			1.74	576.36 = 576.36	109.40 ✓
FPM (20)			7.71	452.76 = 452.91	
66+2900 (End of pipe laid)					
65+97 ⁵⁴			12.92	1378 (F09)	447.55
65+66 ³¹			9.69		450.78
65+35 ⁰⁷			4.93		455.54
TP 65+04 ²⁷	1.52	460.47	13.08	458.95	6.64
64+69 ⁰			9.87		462.16
			2.03		470.00
TBM	9.63	472.03			462.40
TP 65+04 ²⁷	17.60	474.76			462.16
64+69 ⁹⁰			4.76	Grd	470.00
64+44 ⁷⁰ TD	12.82	487.03	0.53	474.21	483.02
			4.00		
TD	12.40	498.89	0.54	486.49	
64+16 ⁰¹			3.89	5.25 (F10)	495.00
64+09			1.09	3.55 (E25)	497.80
TD	13.36	511.51	0.74	498.15	
63+85 ⁸³			11.09	12.45 F1+	500.42
63+54 ⁸⁵			5.37	8.66 F32	506.14
TD	12.86	523.71	0.66	510.85	
63+24 ²⁹			9.93	10.95 F10	513.78
62+93 ⁶²			3.66	Grd	520.05
TD	12.97	535.99	0.69	523.02	
62+62 ⁷³			9.78	Grd	526.21
62+41			5.13		530.86

D 462.16
 02
 462.18

May 3, 1955

5/3/55

45

535.99

62+32.4 0.61 2.33 (F17) 535.38

TP 12.76 548.61 0.14 575.85

62+04.55 +1.97 2.40 (F14) 550.58

TP 12.70 560.92 0.39 548.22

61+88 1.22 332 (F23) 559.70

61+76.22 (cant set this one) 562.43

TP 13.06 573.57 0.41 560.51

TP 5.75 578.51 0.81 572.76

ck (15) 2.16 576.35 = 576.36

p9, 40

May 3 1955
 Beach,
 Shady
 Mount
 Kelling

BM		3.19	458.66	455.47		Nail in Pa. Pole	No. of paces
72+81 ⁰	x PT Δ = 8°41' LT.	5.04	453.62	441.00	C126	(20) RT	
		2.32	454.34		C133	(20) LT	
		4.14	454.52		C133	(20) LT	
72+88 ⁵⁸		4.18	454.48	441.10	C133	(20) LT	
73+13 ⁶⁵		4.48	453.98	443.41	C109	(20) LT	
		2.16	454.50		C111	(20) LT	
73+40 ⁶⁹	x PT Δ = 8°41' RT	4.88	453.78	445.90	C77	(20) LT	
73+44 ⁸⁶		4.93	453.73	445.92	C78	(20) LT	
73+67 ⁴³	x PT. Δ = 5°00' RT	5.09	453.57	446.00	C76	"	
73+76 ³⁶		4.78	453.88	446.07	C78	"	
74+07 ⁸⁶		4.35	454.31	446.21	C81	"	
74+39 ³⁶		4.34	454.32	446.26	C80	"	
74+70 ⁶⁹ BK.		4.11	454.55	446.50	C81	"	
74+69 ⁶² AH.							
74+69 ⁶²	BC.	3.71	454.95	447.2	C78	"	
74+84 ⁶⁸	EC.	3.91	454.75	447.35	C74	"	
74+95 ⁵¹	x PT.	3.95	454.71	447.5	C72	"	

CUT-OFF WALL STAKED

May 5 1955

TBM	5.61	758.71	753.10	95' LT	561.00
		8.71	750.00		
		3.71	755.00		C50
		2.71	756.0		C60

S.V. A CONN
(Cont'd)
VALVE BOXES

May 23 1955

47

BM	6.60	462.07	455.47		
	8.07	454.00	443.23	NW Cor (10) C10 ⁷⁷	F Floor
	8.32	453.75	443.20	SW Cor (10) C10 ⁵⁵	" "
	7.49	454.58	443.15	NE Cor (15) C11 ⁴³	" "
	11.63	450.44	443.10	SE Cor (7) C7 ³⁴	" "
	7.39	454.68	444.92	NE Cor (10) { C9 ⁷⁶ F1 ⁰²	F Floor
	7.12	454.95	444.87	SE Cor (10) { C10 ⁰⁸ F0 ⁷⁵	" "
	7.87	454.20	444.97	SW Cor (10) { C9 ²³ F1 ⁵	" "
	8.04	454.03	445.00	NW Cor (10) { C9 ⁰³ F1 ⁰²	" "
CK BM	6.60	455.47			

VALUE BOX

S.V. #1 CONN

Value Box

S.V. #2 CONN

S.V.A. Conn.
(CONT'D)

B.M.					TOP OF TUNNEL	
0+00	0.89	766.55	765.66			
	(20)					
		0.33	766.22	756.03	C15 ²	
0+04	⁵²		1.26	765.29	747.15	C18 ^L
0+10			3.76	762.79	741.67	C21 ^L
0+18	⁰⁰		8.75	757.80	741.42	C16 ²
0+20	⁴²		11.55	755.00	741.34	C13 ^L
0+25	⁹⁵		15.63	750.92	741.17	C9 ²
0+62			15.20	751.35	740.84	C11 ³
			0.89	765.66		

11.05
36.05
25.95
62.00

					Tunnel Portal	
	0.26	765.92	765.66			
	0.48	753.68	753.26			
0+00	4		4.89	748.79	752.03	F R ²⁹
0+00	²⁰ L		2.50	751.18	751.03	C0 ¹⁵ to R
0+09	⁵³ R		6.46	747.22	747.33	E0 ²
+04	⁵³ 4.75 L		4.46	749.22	747.33	C 2 ¹¹ 189 ✓
0+10	2		10.10	743.58	741.67	C 1 ⁹¹
+10	⁵²⁰ 4		5.41	748.27	741.67	C 6 ⁶⁰
+18	²²		11.57	742.17	741.41	C 0 ⁷⁶
+18	³³		7.59	746.09	741.41	C 4 ⁶⁸
0+20	⁴²		12.29	741.39	741.34	C 0 ²

753.68

0+25⁹⁵ 12.23 741.45 741.17
 +61⁹³ 14.39 739.29 740.06

12.99 766.25 0.42 753.26

BM 0.21 765.87 0.59 765.06 =

CO²³
 FO¹⁷

7.49
 6.90
 14.39

753.68
 2.21
 751.47

- 6/16/55

0+30 11.07 754.80 755.13

753.85

FO³³ Fin Floor & Chan.

12.02 Grd Red. 57 LT.

762.6
 225 C⁸⁸ / C¹

0+20 12.69 753.18 755.11

F¹⁹³ Fin Floor & Chan.

12 / TOP GUNITE

752.7

12.12 Grd Red. 62 LT

757.5
 837 C³⁸ / F⁴²

0+0950 12.89 752.98 755.09

F²¹¹ Fin Floor & Chan.

0.5 / TOP GUNITE

753.27

12.50 Grd Red 715 LT

761.2
 4.5 C⁸⁰ / F⁰¹

P 4.72 757.71 12.88 752.99

0+00 & 11.13 746.58 751.03

F¹⁴⁵

0+00 (625) RT 6.34 751.37 "

CO³⁴

} End of pipe (69°)

0+30 (overflow channel) 7.02 750.69 753.25

F²⁵⁶ Fin floor overflow Channel

P 12.79 765.82 4.08 753.03

OK BM 0.15 765.67 = 765.66

J.V.A. Conn.

6/28/55

50

BM 0.09 765.75 765.66

0-395 5.56 760.19 753.95 C624 out 535

761.68
4.07
64
|
c77
12

0-30 10.86 754.89 753.85

C104 out 59

762.65
3.1
72
|
c88
11

11.9
3.1
88

0-20 12.55 753.20 753.7

F05 out 67

757.50
6.25
72
|
c38
05

0-092 12.73 753.02 753.37

F035 out 75

4.39
85
|
c80
12

D 4.59 757.54 17.80 752.95

0-04 6.08 757.46 753.20

F174 out 858

761.3
+4.8
97
|
c91
11

D 12.72 765.67 4.59 752.95

0+0683 4.41 753.13 752.8

C03 out 858

5.0
95
|
c79
10

0+10 7.37 750.17 752.7

F253 out 858

761.0
2.7
95
|
c83
12

12.9
5.25
7.65
95
8.58
9.53
12.9
78

0+20 10.44 747.10 752.35

F525 out 858

756.9
8.8
92
|
c45
05

0+26 8.00 749.54 752.2

F266 out 858

757.47
8.20
92
|
c53
05

0+30 6.87 750.67 752.0

F133 out 60

SVA Conn.
X-SECTS SHOWING
ROCK 10' Channel

6/30/55

51

L.T. (N14)

Channel

RT (S14)

0 0-092 6.0 759.0 753.02

753.0 754.0 755.5 756.8 759.0
6.0 5.0 3.5 2.2 0.0
R R R R R

0 0-04 9.3 760.8 751.06

751.2 753.7 755.1 759.7
9.6 7.1 5.7 1.1
R R R R

0 0+03 7.6 760.7 753.13

750.6 755.0 758.7
10.1 5.7 2.0
R R R

0 0+068 7.6 760.7 753.13 Top of pipe

753.0 753.0 750.6 755.0 758.7
7.7 2.7 10.1 5.7 2.0
8.6 5.5 1.1 1.3 1.6
R R R R R

0 0+20 3.4 754.1 750.67

752.4 752.1 747.1 746.9 748.1 750.5 754.1
1.7 2.0 7.0 7.2 Pipe 6.0 3.6 0.0
8 R 6.5 R 0.8 R Sand 2.3 R 2.6 R
12.0 R

0 0+29 4.0 754.67 750.67

758.2 753.5 751.4 750.8 750.3 748.0 747.8 742.8
12.5 1.2 3.3 3.9 4.4 6.7 6.9 11.9
R R R R R R R R

0 0+30 4.0 754.67 750.67

758.1 753.5 751.3 750.7 750.3 748.4 747.6 745.3 745.1 742.1
12.3 1.2 3.4 4.0 4.4 6.3 7.1 9.4 9.6 12.6
R R R R R R R R R R R

0 0+35 4.2 754.87 750.67

753.9 752.3 751.3 750.3 749.7 747.8 747.2 745.3 745.2
1.0 2.6 3.6 4.6 5.2 7.1 7.7 9.6 9.7 Back
10 5.5 4.5 1.5 2 3.5 5.3 11 Fill
D R R R R R R R R

0 0+41 1.0 751.67 750.67

751.2 747.8 746.4 745.4 745.3
0.5 4.5 5.3 6.3 6.9 Back fill
10 4.5 5 11
Dirt R R R

cont'd next page

0+44 00 750.67 750.67

Channel - Shattered rock
falls off 2' in 10'

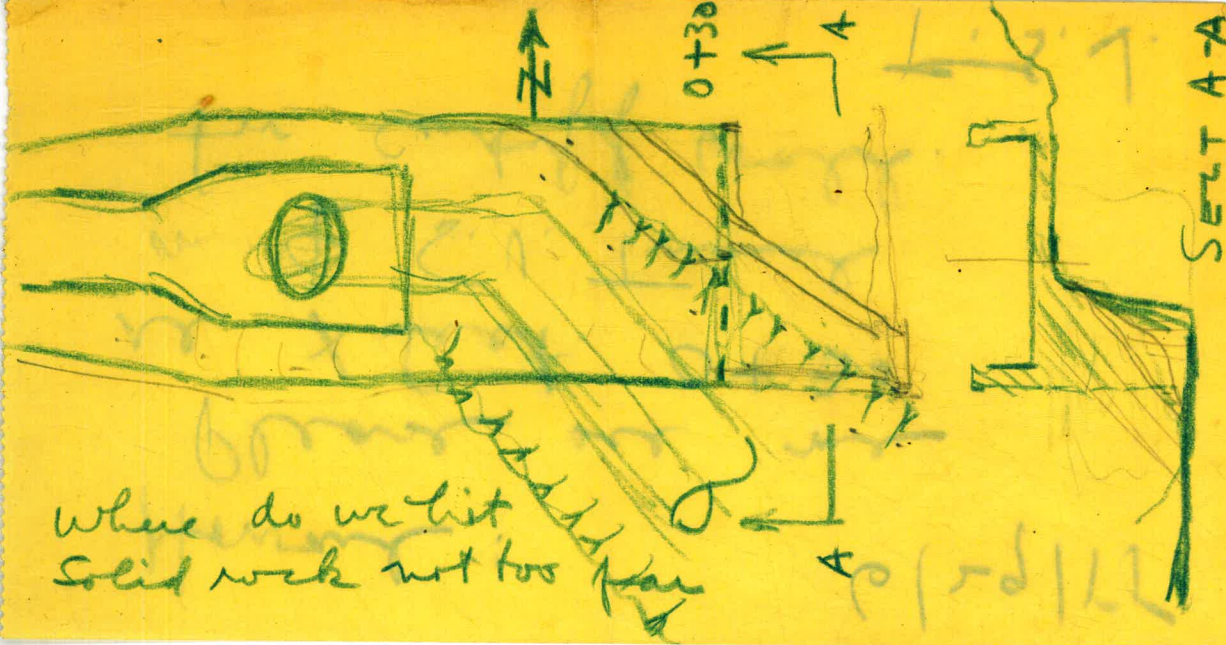
52

744.6 744.6
6' 6'
5' 5'

Howard
Please see me
at X Sect. 0+30
on Φ S.V. Tunnel
for cut-off wall.

6/29/55

P.S.V.



Where do we hit
solid rock not too far

SECT A-A

0444

00

750.67

750.67

Channel - Shattered rock
falls off 2' in 10'

749.2	745.2	746.1	745.6	744.6	744.6
15	55	46	51	61	61
D	D	R	R	D	D

ELEV. & B.M.
ON 2" I.P. MON.

B.M.	1.42	767.08		765.66
TP	0.88	755.52	12.44	754.64
TP	0.49	743.04	12.97	742.55
TP	0.70	732.65	11.09	731.95
<u>TBM SET</u>	12.27	732.91	12.01	<u>720.64</u>
<u>TBM SET</u>	12.67	742.00	3.60	<u>729.31</u>
TP	2.64	731.99	12.65	729.35
TP	0.97	719.92	13.04	718.95
TP	0.08	706.74	13.26	706.66
TP	0.88	695.52	12.10	694.64
TP	0.48	682.93	13.07	682.45
TP	0.74	670.49	13.18	669.75
TP	1.41	660.96	10.94	659.55
CK. TBM	0.51	655.67	5.80	655.16 = 655.19
<u>TBM SET</u>	12.62	655.56	12.73	<u>642.94</u>
<u>TBM SET</u>	12.70	658.55	9.71	<u>645.85</u>
CK. TBM			3.39	655.16 = 655.16

7/29/55
SHOREY
MARTEL
KEMP
KELLMAYER
HOLAHAN

53

TOP OF PORTAL

TOP 2" I. PIPE 3+73⁹⁶ P.I.

" " " 4+77⁰⁰ P.I.

75' R.P. 14+14⁶⁹ (PAGE-8) ✓

TOP 2" I. PIPE 14+14⁶⁹ P.I.

TOP 2" I. PIPE 14+99⁵⁰ P.I.

75' R.P. 14+14⁶⁹

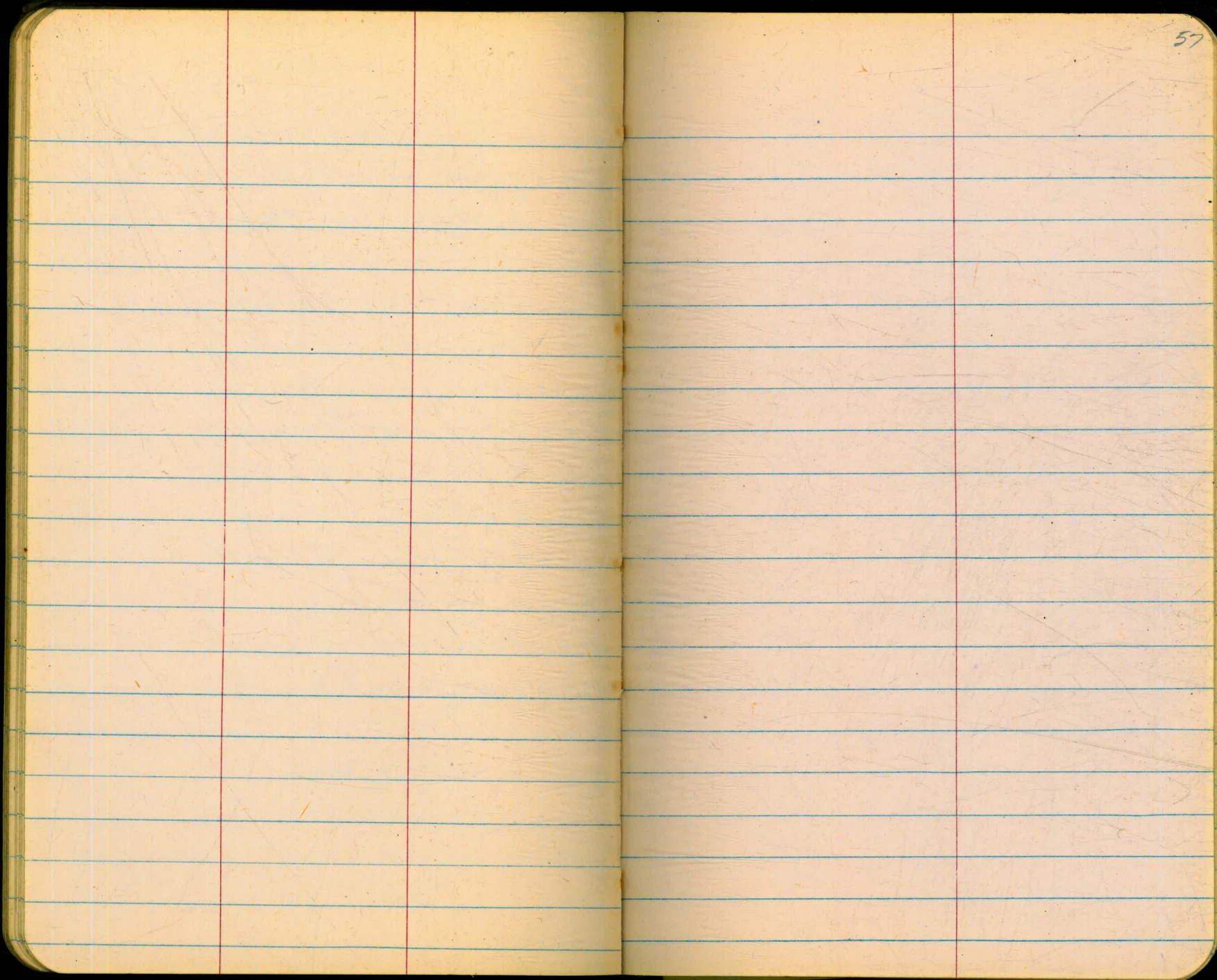
ELEV. & B.M.
(CONT'D)

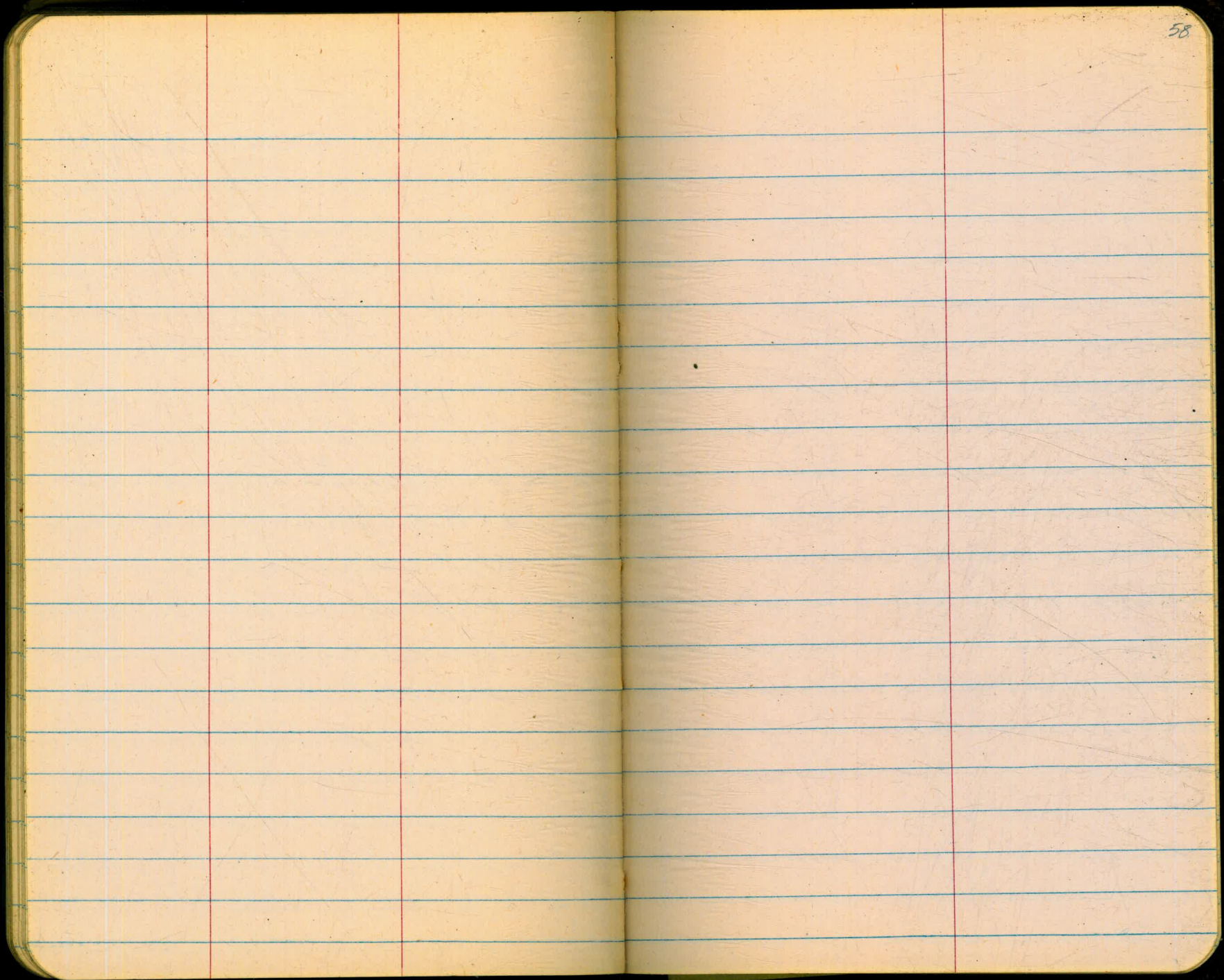
TBM	12.97	658.82		645.85	TOP 2" I. PIPE 14+99 ⁵⁰ P.I.
TP	13.29	676.12	0.99	657.83	
<u>TBM SET</u>	13.07	683.59	0.60	<u>670.52</u>	TOP 2" I. PIPE 15+95 ⁰⁹ P.I.
<u>TBM SET</u>	12.77	694.56	1.80	<u>681.79</u>	" " " " 17+76 ⁹⁰ P.I.
TP	5.84	699.96	0.44	694.12	
CK. TBM.	0.57	699.64	0.89	699.07 = 699.08	50' R.P. 17+76 ⁹⁰ (PAGE 8)
TP	0.39	687.57	12.46	687.18	
<u>TBM SET</u>	11.10	687.77	10.90	<u>676.67</u>	TOP 2" I. PIPE 18+34 ⁸⁶ P.I.
TP	12.21	699.88	0.10	687.67	
CK. TBM			0.81	699.07 = 699.07	50' R.P. 17+76 ⁹⁰
TBM	0.84	766.19		765.35	25' R.P. 21+43 ⁵⁶ P.I.
<u>TBM SET</u>	10.75	766.40	10.54	<u>755.65</u>	TOP 2" I. PIPE 21+43 ⁵⁶ P.I.
CK. TBM			1.05	765.35 = 765.35	
TBM	3.63	707.26		703.63	25' R.P. 24+14 ⁷⁵ P.I.
<u>TBM SET</u>	10.84	708.34	9.76	<u>697.50</u>	TOP 2" I. PIPE 24+14 ⁷⁵ P.I.
CK. TBM			4.71	703.63 = 703.63	
TBM	2.00	762.34		760.34	25' R.P. 26+39 ⁴³ P.I.
<u>TBM SET</u>	8.60	762.62	8.32	<u>754.02</u>	TOP 2" I. PIPE 26+39 ⁴³ P.I.
CK. TBM			2.28	760.34 = 760.34	

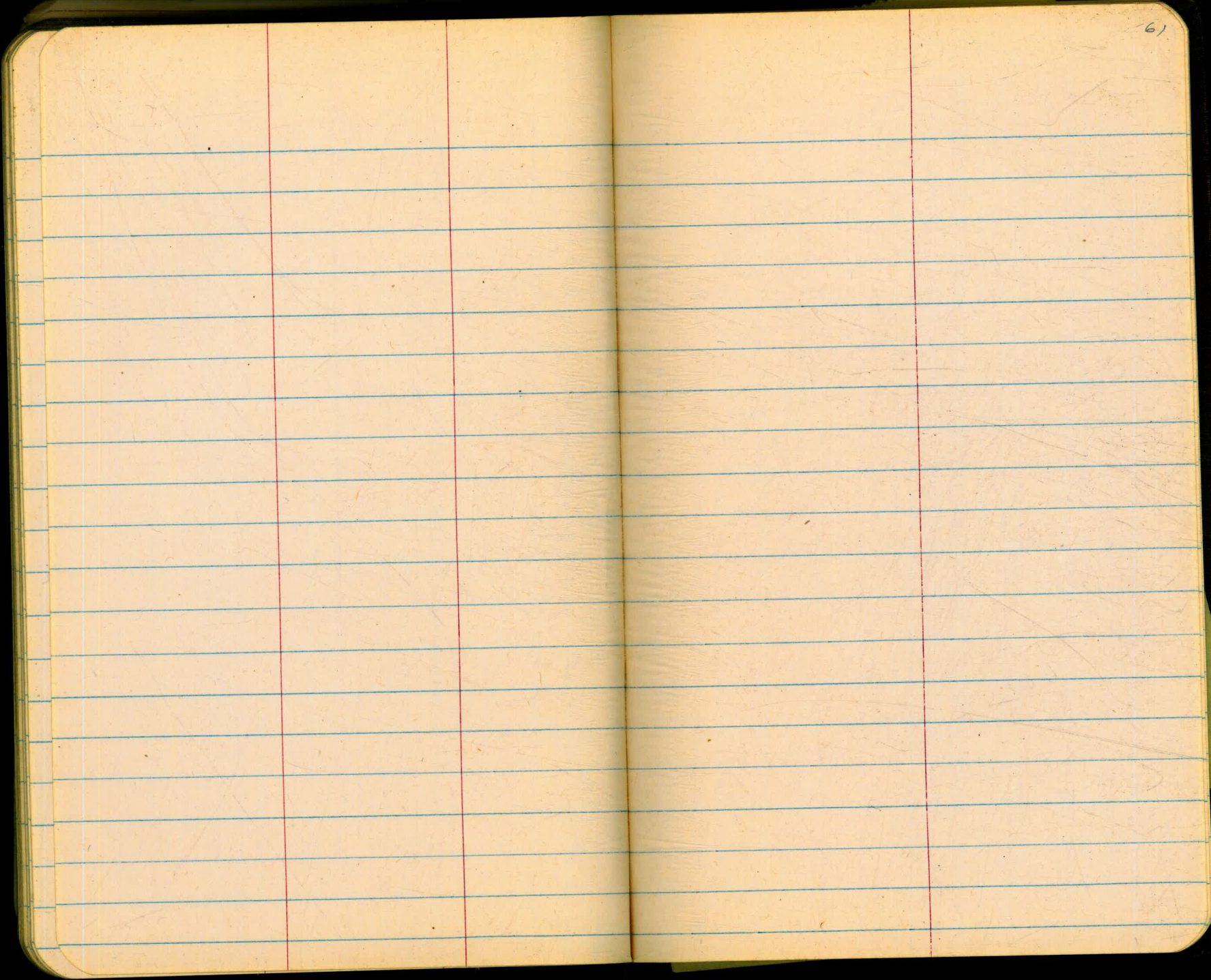
TBM	1.66	677.48		675.82	50' R.P. 34+36 ²¹ P.I.
<u>TBM SET</u>	5.71	677.64	5.55	<u>671.93</u>	TOP 2" I. PIPE 34+36 ²¹ P.I.
<u>TBM SET</u>	2.52	677.73	2.43	<u>675.21</u>	TOP 2" I. PIPE 34+85 ²¹ P.I.
CK. TBM.			1.90	675.83 = 675.82	
TBM	7.10	768.27		761.17	25' R.P. 30+48 ³⁰ P.I.
<u>TBM SET</u>	13.13	768.32	13.08	<u>755.19</u>	TOP 2" I. PIPE 30+48 ³⁰ P.I.
CK. TBM			7.15	761.17 = 761.17	
TBM	9.74	764.93		755.19	TOP 2" I. PIPE 30+48 ³⁰ P.I.
<u>TBM SET</u>	11.75	765.08	11.60	<u>753.33</u>	TOP 2" I. PIPE 31+92 ⁹³ P.I.
CK. TBM			9.89	755.19 = 755.19	
TBM	11.75	765.08		753.33	TOP 2" I. PIPE 31+92 ⁹³ P.I.
<u>TBM SET</u>	11.81	765.20	11.69	<u>753.39</u>	TOP 2" I. PIPE 37+96 ⁹² P.I.
CK. TBM			11.87	753.33 = 753.33	
TBM	5.99	759.38		753.39	TOP 2" I. PIPE 37+96 ⁹² P.I.
<u>TBM SET</u>	7.90	759.62	7.66	<u>751.72</u>	TOP 2" I. PIPE 39+08 ⁷² P.I.
CK. TBM			6.23	753.39 = 753.39	
TBM	1.86	672.30		670.44	ON ROCK 50' LT. 49+00
<u>TBM SET</u>	9.51	672.40	9.41	<u>662.89</u>	TOP 2" I. PIPE 49+08 ⁸⁶ P.O.T.
CK. TBM.			1.95	670.45 = 670.44	

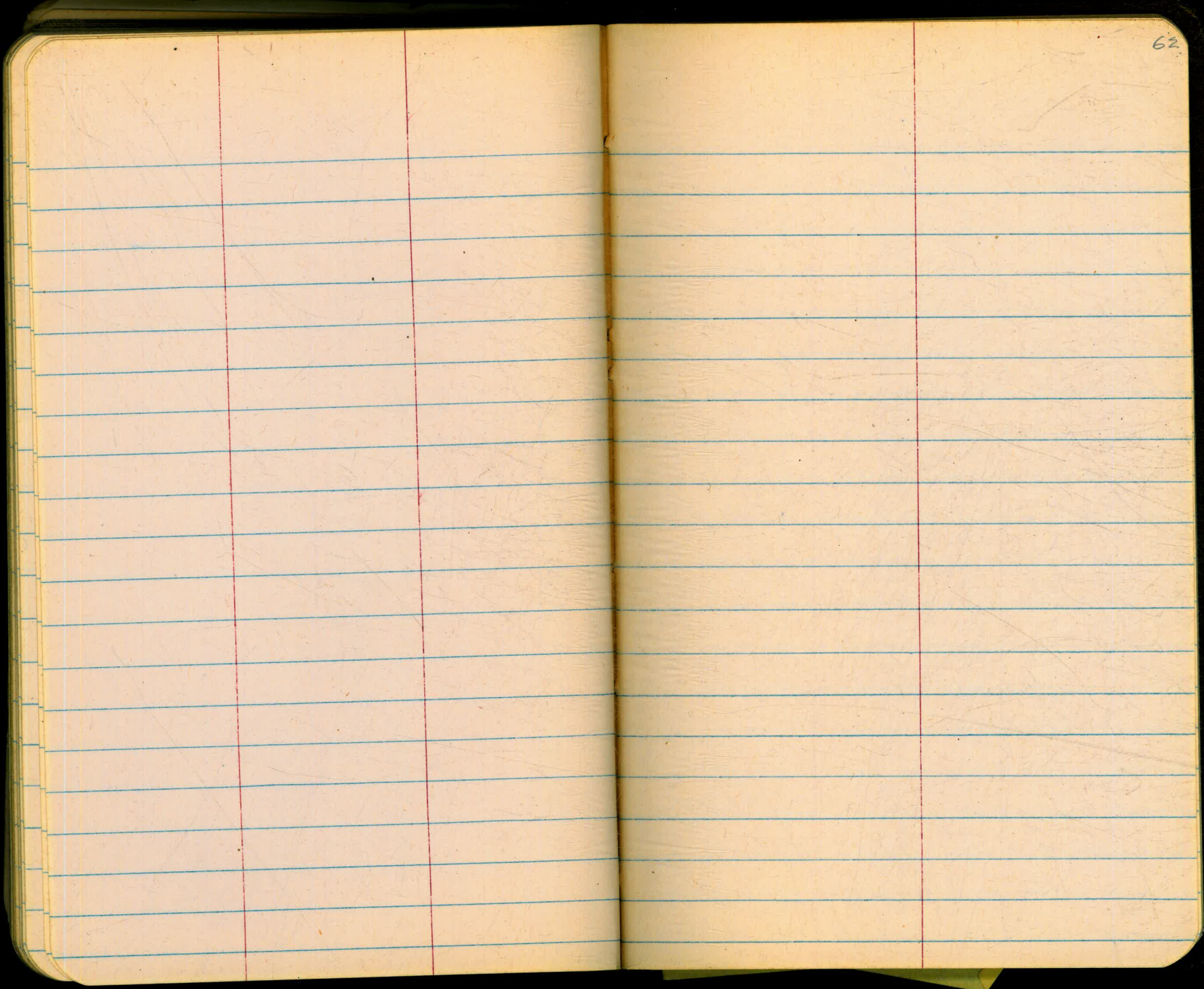
ELEV. & B.M.
(CONT'D)

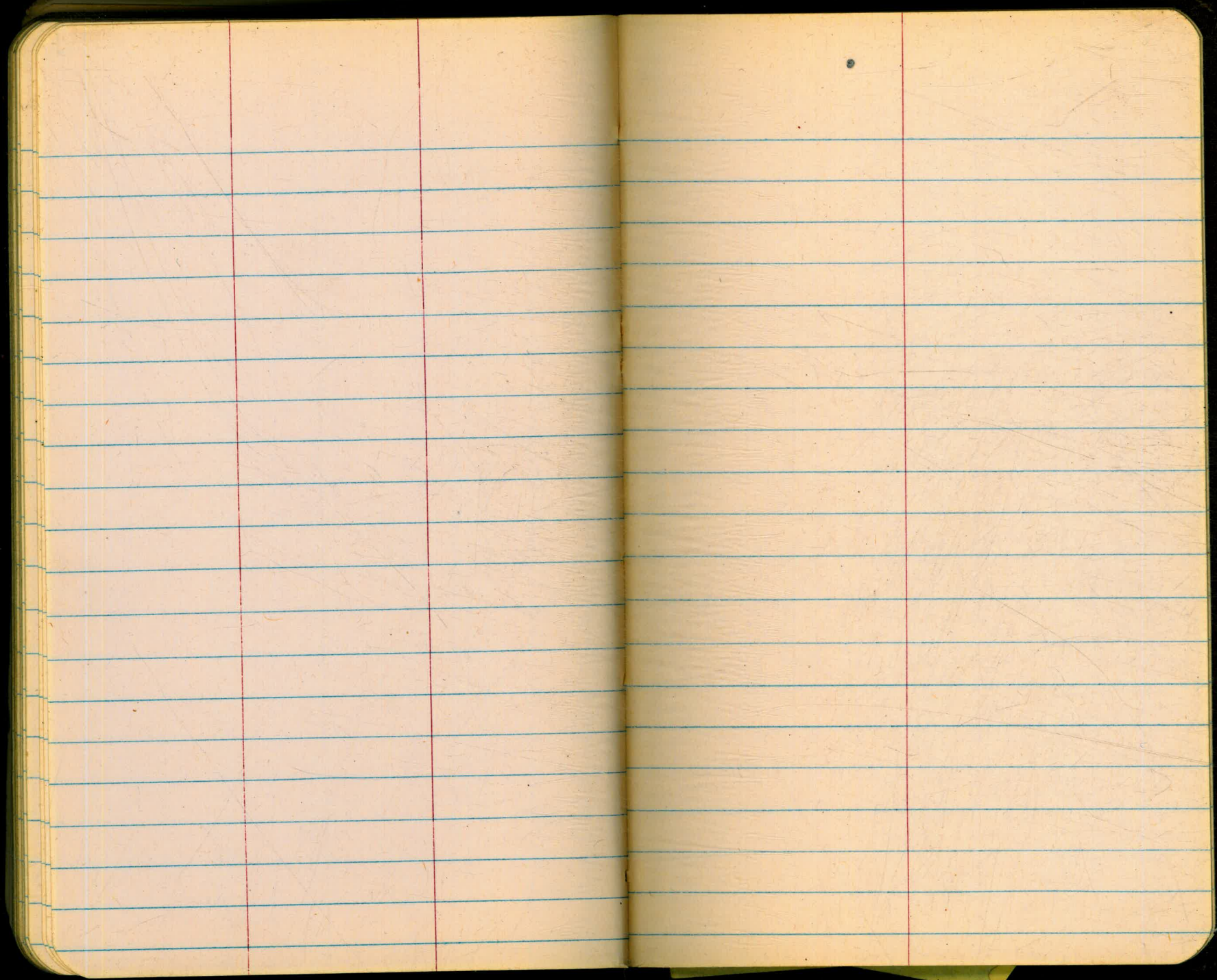
TBM	8.25	761.35		753.10	TOP ROCK 90' LT. 56+15
<u>TBM SET</u>	8.91	761.36	8.90	<u>752.45</u>	TOP 2" I. PIPE 55+25 ⁹² P.I.
<u>TBM SET</u>	11.64	761.37	11.63	<u>749.73</u>	TOP 2" I. PIPE 52+92 ⁹¹ P.I.
CK. TBM			8.26	753.11 = 753.10	
TBM	12.90	683.70		670.80	ROCK OUTCROP 75' LT. 59+00
TP	12.92	696.62	0.00	683.70	
TP	12.74	708.62	0.74	695.88	
<u>TBM SET</u>	13.05	718.96	2.71	<u>705.91</u>	TOP 2" I. PIPE 58+08 ⁴¹ P.I.
TP	13.12	731.21	0.87	718.09	
TP	12.43	743.41	0.23	730.98	
TP	11.58	754.90	0.09	743.32	
CK. TBM			1.82	753.08 = 753.10	
TBM	5.17	460.64		455.47	NAIL IN P.P. NOR. OF PAVT.
<u>TBM SET</u>	3.35	460.68	3.31	<u>457.33</u>	TOP 2" I. PIPE 49+69 ⁵⁸ P.I.
CK. TBM			5.22	455.46 = 455.47	
TBM	3.77	459.24		455.47	NAIL IN P.P. NOR. OF PAVT.
<u>TBM SET</u>	3.99	459.14	4.09	<u>455.15</u>	
CK. TBM			3.67	455.47 = 455.47	











SAN VICENTE PIPELINES #1 & 2
ELEVATIONS OF GAUGES
FOR FLOW TEST. 5/4/55

MAY 5 1955
Basity
Suresh
MORSELL
Kallinger

BM 2.18 409.63 407.45

5.89 403.74

IP 9.16 418.39 0.40 409.23

3.55 414.84

4.48 413.91

IP 1.91 411.14 9.16 409.23

CK BM. 3.69 407.45

BM. 2.89 421.59 418.70

IP 3.95 419.07 6.47 415.12

SET TBM 3.15 417.42 4.80 414.27

5.71 411.71

7.73 409.69

CK TBM. 4.69 418.96 3.15 414.27

IP 6.04 420.97 4.03 414.93

CK BM. 2.25 418.72 = 418.70

B.M. 7.64 463.24 155.60

IP 11.78 471.20 3.82 459.42

NE COR LARGE VAL CHAMBER LAKESIDE PUMP PLANT

G GAUGE #1

G GAUGE #2

G GAUGE #3

NAIL IN P. Pole 74' RT 118+70 FB 681 pg 55
FB 601 pg 61

CHIS □ NWLY COR Middle val chamber 136+70

G GAUGE #4

G GAUGE #5

NAIL IN P. Pole Nly of City Camp FB 681 pg 60

5/5/55

	471.20		
HP	13.28	484.48	0.00 471.20.
HP	5.79	190.20	0.07 484.41
SET TBM.	4.75	489.45	5.50 484.70 = 484.77
CK Top of pipe. & outlet	5.21	484.24 = 484.31	
	3.01	<u>486.44</u>	
	0.46	<u>488.99</u>	
CK TBM	4.75	484.70	

is chiseled - no orig mark in evidence
 Top Conc wall at spillway East end of dam

FD 681
 pp. 6
 FD 466
 pp. 62

& GAUGE # 6

& GAUGE # 7

080 ahead @ 66+29⁰⁰ or for grade 3/55

+3.87

13.23 748.88 735.65

11.57 760.24 0.21 748.67

9.90 750.34 = 749.88 Rogers

4.52 755.72 = 755.12 P.I.

7.9 752.7

JET TOM 13.29 760.21 13.32 746.92

75 RT 52100

P 5.60 764.42 1.39 758.82

CK P 1.96 753.30 13.08 751.34

= 751.35

JET TOM 0.20 753.10

90' LT 56415

P 0.10 740.93 12.47 740.82

CK P 12.16 727.77 =

727.78

112
729.2
717.6
11.6

Please Return to
 City of San Diego Water Dept.
 Room 903 Civic Center

3.11 458.58 455.47
 43.29
 15.48

452.95
 412
 459.27 Ni
 444.92
 14.15 FF

755.10 13.8

13.2 741.2

752.3 12.9

11.2

10.6

753.7

41.1

12.9

13.8

753.6

51.0

2.6

6+19 6+1892 ✓
 17+95 17+80
 21+50 21+436
 25+90 - 25+9350
 31+88 - 31+6822
 38+70 - 38+71
 55+00

7

764



- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20
- 21
- 22
- 23
- 24
- 25
- 26
- 27
- 28
- 29
- 30
- 31
- 32
- 33
- 34
- 35
- 36
- 37
- 38
- 39
- 40
- 41
- 42
- 43
- 44
- 45
- 46
- 47
- 48
- 49
- 50

COMPANY
 MASSACHUSETTS
 NEW YORK CHICAGO SAN FRANCISCO

30+4830 P1

752.06 P

12.24

764.32 46

3.15

761.17 25' TBM

9.58

770.75 4

54

770.21 50' TBM

24

770.45 4

9.28

761.17 ✓

48

761.65 4

9.59

752.06 ✓ P

379.96

10.22

89.18

17

SVA Conn.

NEED SHEETS No 28, 24

17+7990 670.40

17+9509 670.39

18+0701 669.04

18+3046 663.96

18+3486 663.00

18+3893 661.01

18+4902 665.99

18+6184 652.34

6+19

6+1892 ✓

17+95

17+80

21+50

21+436

25+90

25+9350

31+88

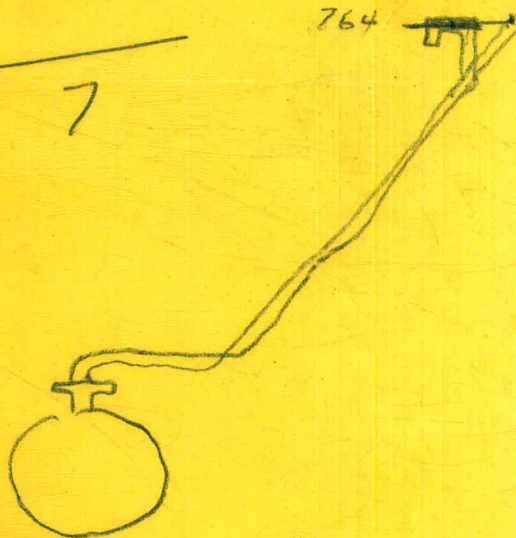
31+6822

38+70

38+71

55+00

764



694.24 TP 24+12.75

~~2.98~~

~~691.26 25' RD TBM~~

~~10.07~~

~~701.33~~

~~2.08~~

~~701.25 50' RD TBM~~

~~+0.24~~

~~701.49 TP~~

~~10.33~~

~~691.26 TP ✓~~

~~0.60~~

691.86 ✓ 694.24 TP

+9.99

TP 26+29.43 704.23

+10.97

753.52 703.63 TBM 25'

764.49 ck +10.07

-4.15

760.34 25' RD 713.70

+8.77

769.11 713.62 TBM 50'

-1.69

767.42 50' RD 713.86

+1.27

768.69 10.23 ck 25'

-8.35

760.34 25' ck TBM 703.97

3.91

764.25 ck TP 694.25 ck TP

10.73

753.52 ck TP

214 BANK
NEED SHEETS NO. 28, 29

759.80 TBM

7.33

767.13 ck

764

3.13

760.30 TBM

10.79

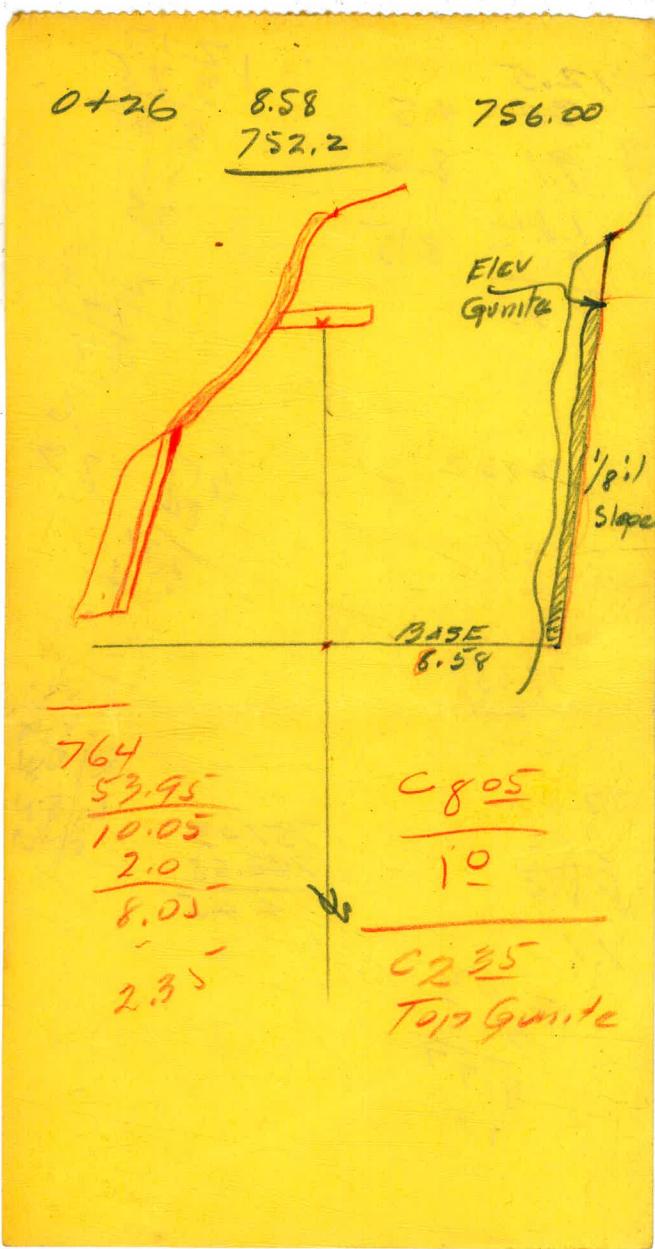
771.13

7.13

764.00



	BASE	Gunite elev
-25	$\frac{175}{222} \frac{5.1}{5.8}$ RT & LT	761.5
	<u>754.0</u> ✓	
-40	$\frac{2.02}{230} \frac{5.35}{5.8}$ R&L	761.5
	<u>758.95</u> ✓	
0-30	$\frac{2.555}{232} \frac{5.9}{5.85}$ R&L	761.5
	<u>753.85</u> ✓	
0-20	$\frac{2.77}{234} \frac{6.7}{6.0}$ R&L	761.5
	<u>753.7</u> ✓	
0-09	$\frac{2.8}{237} \frac{7.15}{7.0}$ RT & LT	761.5
	<u>753.37</u> ✓	
0-04	$\frac{5.33}{3.1}$ 8.58 R<	761.3
	<u>753.20</u>	
0+06	8.58 R<	761.5
	<u>752.8</u>	
0+10	8.58 R&L	760.6
	<u>752.7</u>	
0+20	8.58 R&L	757.7
	<u>752.35</u>	



12.50

12.5

3.4 4.5

9.1 8.0

1.04 1

7.15 8.15

8.30

761.37

757.5

40

12.02

3.46

8.56

1.1

12.02

3.46

8.77

1.1

2.17
3.35
8.82

11
7.8

12.17
7.43
4.7

12.17
8.4
3.77
4

9.6
7.3

751.03
746.58
4.45

751.03
750.56
0.47

Please Return to
 City of San Diego Water Dept.
 Room 903 Civic Center

3.71 458.58
 43.28
 15.48

455.47
 4

454.95
 4.12
 459.07
 444.92
 14.15 FF

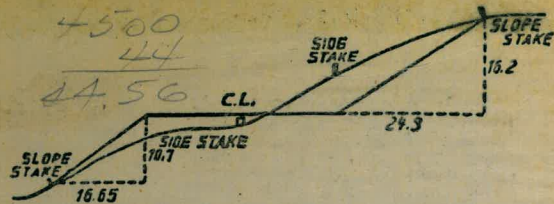
12.662.89

13.0
 752.3
 11.7
 10.6

755.10
 13.8
 791.2
 12.7

753.7
 7.1
 12.3

13.0
 753.6
 51.8
 2.6



DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING.
 SLOPE 1 1/2 TO 1. ROADWAY OF ANY WIDTH.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	0.00	0.15	0.30	0.45	0.60	0.75	0.90	1.05	1.20	1.35	0
1	1.50	1.65	1.80	1.95	2.10	2.25	2.40	2.55	2.70	2.85	1
2	3.00	3.15	3.30	3.45	3.60	3.75	3.90	4.05	4.20	4.35	2
3	4.50	4.65	4.80	4.95	5.10	5.25	5.40	5.55	5.70	5.85	3
4	6.00	6.15	6.30	6.45	6.60	6.75	6.90	7.05	7.20	7.35	4
5	7.50	7.65	7.80	7.95	8.10	8.25	8.40	8.55	8.70	8.85	5
6	9.00	9.15	9.30	9.45	9.60	9.75	9.90	10.05	10.20	10.35	6
7	10.50	10.65	10.80	10.95	11.10	11.25	11.40	11.55	11.70	11.85	7
8	12.00	12.15	12.30	12.45	12.60	12.75	12.90	13.05	13.20	13.35	8
9	13.50	13.65	13.80	13.95	14.10	14.25	14.40	14.55	14.70	14.85	9
10	15.00	15.15	15.30	15.45	15.60	15.75	15.90	16.05	16.20	16.35	10
11	16.50	16.65	16.80	16.95	17.10	17.25	17.40	17.55	17.70	17.85	11
12	18.00	18.15	18.30	18.45	18.60	18.75	18.90	19.05	19.20	19.35	12
13	19.50	19.65	19.80	19.95	20.10	20.25	20.40	20.55	20.70	20.85	13
14	21.00	21.15	21.30	21.45	21.60	21.75	21.90	22.05	22.20	22.35	14
15	22.50	22.65	22.80	22.95	23.10	23.25	23.40	23.55	23.70	23.85	15
16	24.00	24.15	24.30	24.45	24.60	24.75	24.90	25.05	25.20	25.35	16
17	25.50	25.65	25.80	25.95	26.10	26.25	26.40	26.55	26.70	26.85	17
18	27.00	27.15	27.30	27.45	27.60	27.75	27.90	28.05	28.20	28.35	18
19	28.50	28.65	28.80	28.95	29.10	29.25	29.40	29.55	29.70	29.85	19
20	30.00	30.15	30.30	30.45	30.60	30.75	30.90	31.05	31.20	31.35	20
21	31.50	31.65	31.80	31.95	32.10	32.25	32.40	32.55	32.70	32.85	21
22	33.00	33.15	33.30	33.45	33.60	33.75	33.90	34.05	34.20	34.35	22
23	34.50	34.65	34.80	34.95	35.10	35.25	35.40	35.55	35.70	35.85	23
24	36.00	36.15	36.30	36.45	36.60	36.75	36.90	37.05	37.20	37.35	24
25	37.50	37.65	37.80	37.95	38.10	38.25	38.40	38.55	38.70	38.85	25
26	39.00	39.15	39.30	39.45	39.60	39.75	39.90	40.05	40.20	40.35	26
27	40.50	40.65	40.80	40.95	41.10	41.25	41.40	41.55	41.70	41.85	27
28	42.00	42.15	42.30	42.45	42.60	42.75	42.90	43.05	43.20	43.35	28
29	43.50	43.65	43.80	43.95	44.10	44.25	44.40	44.55	44.70	44.85	29
30	45.00	45.15	45.30	45.45	45.60	45.75	45.90	46.05	46.20	46.35	30
31	46.50	46.65	46.80	46.95	47.10	47.25	47.40	47.55	47.70	47.85	31
32	48.00	48.15	48.30	48.45	48.60	48.75	48.90	49.05	49.20	49.35	32
33	49.50	49.65	49.80	49.95	50.10	50.25	50.40	50.55	50.70	50.85	33
34	51.00	51.15	51.30	51.45	51.60	51.75	51.90	52.05	52.20	52.35	34
35	52.50	52.65	52.80	52.95	53.10	53.25	53.40	53.55	53.70	53.85	35
36	54.00	54.15	54.30	54.45	54.60	54.75	54.90	55.05	55.20	55.35	36
37	55.50	55.65	55.80	55.95	56.10	56.25	56.40	56.55	56.70	56.85	37
38	57.00	57.15	57.30	57.45	57.60	57.75	57.90	58.05	58.20	58.35	38
39	58.50	58.65	58.80	58.95	59.10	59.25	59.40	59.55	59.70	59.85	39
40	60.00	60.15	60.30	60.45	60.60	60.75	60.90	61.05	61.20	61.35	40
41	61.50	61.65	61.80	61.95	62.10	62.25	62.40	62.55	62.70	62.85	41
42	63.00	63.15	63.30	63.45	63.60	63.75	63.90	64.05	64.20	64.35	42
43	64.50	64.65	64.80	64.95	65.10	65.25	65.40	65.55	65.70	65.85	43
44	66.00	66.15	66.30	66.45	66.60	66.75	66.90	67.05	67.20	67.35	44
45	67.50	67.65	67.80	67.95	68.10	68.25	68.40	68.55	68.70	68.85	45
46	69.00	69.15	69.30	69.45	69.60	69.75	69.90	70.05	70.20	70.35	46
47	70.50	70.65	70.80	70.95	71.10	71.25	71.40	71.55	71.70	71.85	47
48	72.00	72.15	72.30	72.45	72.60	72.75	72.90	73.05	73.20	73.35	48
49	73.50	73.65	73.80	73.95	74.10	74.25	74.40	74.55	74.70	74.85	49
50	75.00	75.15	75.30	75.45	75.60	75.75	75.90	76.05	76.20	76.35	50

THE NATIONAL BLANK BOOK COMPANY
 HOLYOKE MASSACHUSETTS
 NEW YORK CHICAGO BOSTON SAN FRANCISCO