

W468

468

# KEUFFEL & ESSER CO.

DRAWING MATERIALS  
AND  
SURVEYING INSTRUMENTS.  
NEW YORK.

CHICAGO. ST. LOUIS. SAN FRANCISCO. MONTREAL.

## TABLES FOR EXCAVATIONS AND EMBANKMENTS.

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

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

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

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

160 80 40

Sta 0

Sta 0.1

Sta 0.2

Sta 1.400

Sta 1.402

Sta 1.4

Sta 1.4

Sta 2.1

Sta 2.40

Sta 2.50

Sta 3.10

Sta 3.6

Sta 4.00

Nov 6

Nov 2, 1933  
36.5  
795.35

Nov 4  
36.5  
795.35

Nov 3, 1933  
36.5  
795.35

Nov 4  
36.5  
795.35

Nov 3, 1933  
36.5  
795.35

Nov 6, 1933  
36.5  
795.35

Nov 7, 1933  
36.5  
795.35

Nov 4, 1933  
36.5  
795.35

Nov 4, 1933  
36.5  
795.35

Nov 6, 1933  
36.5  
795.35

Nov 7  
36.5  
795.35

Nov 6, 1933  
36.5  
795.35

Nov 15  
36.5  
795.35

Nov 21  
36.5  
795.35

Nov 21  
36.5  
795.35

Nov 19  
36.5  
795.35

Nov 19  
36.5  
795.35

Nov 19  
36.5  
795.35

Nov 19  
36.5  
795.35

Nov 19  
36.5  
795.35

Nov 19  
36.5  
795.35

Nov 19  
36.5  
795.35

Nov 19  
36.5  
795.35

Earth Fill  
for "Hoppel" flow

Nov 23

Nov 25

Nov 25

Book → Another Miles in Book No. 467 to have this  
to 1944

GENE DIEZEL CO. NO. 375  
39  
58  
57



729 729

112  
108  
4

27  
15  
12

489  
12  
501

58  
87  
3

15  
76

27  
15  
12

29 = 56

2 Carpenters  
1 Carpenters helper

112  
108  
4

169  
5  
845  
15  
21  
881

19  
76

19  
76

169  
6  
1014  
15

944

19  
76

19  
76

19  
76

Concrete Field Book #468

By

Otto von Seggern

Concrete Inspector

Nov 13, 1933 to Dec. 18, 1933.

✓  
Nov 13 1933

Spillway Floor.

Anchor Holes. 1- Gen. Foreman 4 hrs.

1- Compressor }  
2- Jackhammers } 8  
2- Drillers }  
1- Nipper 4 hrs.

Placing  
Laying Reinf. 1- Steel Foreman <sup>7 to 9 am. ✓</sup>  
Steel 2- Steel Men <sup>12:30 to 1:30 ✓</sup>  
Bending & Cutting 9 to 11:30 ✓

Anchor Holes. 1- Compressor 8 am.  
1- Jackhammer 7  
1- Miller 7

Forms. 1- Carpenter Foreman. <sup>9 am. to 11:30 ✓</sup>  
1- " Helper. ✓  
1- Laborer.

2- Laborers. 2 hrs.

Laying 6" Drain N of O.G. Toe from

Sta 3+86 to Sta 4+20 <sup>= 34'</sup> 6x12" Clay Tile placed.

2 Laborers.

1- Carpenter Foreman. 12:30 to 1:30

Laying 4" Drain Tile 1 hr.

Sta 3+65 to Sta 3+86 = 21' 4x12" Clay Tile

See Anchor Schedule  
Correction. 78 Batches? Nov 10.  
2 Grout.

✓  
Nov 13, 1932

O. G. Section

Sta. 4+80 to Sta 4+95

Elev. 729 to Elev. 740 = 11' Lift.  
1/50

Forms  
2 hrs. 1- carpenter Foreman  
1- " Helper  
1/4- Laborers  
Clean & wet surface. 1- Laborer 2 hrs.  
18' copper.

Pouring Conc Start 9am. Finish 3:30 = 5 1/2

Mix 5 sks cement 150 Batches of Conc.  
1250# Sand  
850# 2 1/2" rock 2 Batches of Grd  
1250# 1 1/2" rock  
2100# 10 970# 1 1/2" rock  
970 770# 3/4" rock 750 sks cement  
3070  
770  
3840  
Gals. H<sub>2</sub>O. added

more sks cleaned more sks recast.

Equipment 1 Mixing Plant  
2 Blaw Knox Truck Mixers  
1 Barber Greene  
1 Truck #42

✓  
Labor

Mixing Plant. 1- mixer man  
3 men.

Placing Conc. 3 Laborers.  
1 Laborer 3pm. to 3:30

Conc. Delivery 2 Truck Drivers

App. Supply 1 Truck Driver.

Forms.

1- carpenter Foreman. 1:30 to 4pm  
1- " Helper 2 1/2

11) 150  
11  
40  
150  
25  
125



✓  
Nov 13 1933

Corewall Concrete

Sta N 4056 to Sta N 4072 Elev. 716<sup>5</sup>

Sta N 4072 to N 4088<sup>5</sup> Elev 718<sup>5</sup>

Forms. 1- carpenter.

✓  
Nov 13 1933

Test Samples. O.G. Section

Sta 4480 to Sta 4495 Elev. 729 to Elev. 716

Numbers. 588-589-590

Mix 5 sks cement (1-2 $\frac{1}{2}$ -5)

1250<sup>#</sup> Sand

850<sup>#</sup> 2 $\frac{1}{2}$ " rock

970<sup>#</sup> 1 $\frac{1}{2}$ " rock

770<sup>#</sup>  $\frac{3}{4}$ " rock

33 Gals H<sub>2</sub>O. for 1st no batches

31 Gals. H<sub>2</sub>O. for Balance.

Note Water regulator & Gauge  
out of order at 11 am. operator  
intended to repair during Noon hr.  
4<sup>00</sup> Still out of order.

4<sup>00</sup> pm.

First Drum leaks. Mixer man had  
operator. cleaning up about 600<sup>3</sup> lbs. of  
GROUT. from 5 $\frac{1}{2}$  hr. operation -

✓  
Nov 14 1933 7 a.m.

O.G. Section

Sta 4+80 to Sta 4+95

✓  
Chipping Conc. 3 Laborers. 1 hr.

Forms	1- Carpenter Foreman	9 a.m. to 11:30
3 1/2 hrs.	1- " Helper	
2 1/2	1 Laborer	1:30 to 4
6		

✓ Cleanup.	2 Trucks	7 a.m.
4 1/2 hrs	2 Truck Drivers	to 11:00
	3 Laborers.	to 1:30

Mr. Woods 1-2" Grout pipe closed

1:30 p.m. Repaired  
O.V.S.

at a bend to 1/8" to 1/4" passage. Old pipe with scale, may choke. "Bill" objects and said "see Mr. Woods" when I suggested that the welder repair it.

✓  
Nov 14 1933 7 a.m.

Spillway Floor 1-Gen Foreman

Anchor Holes (2) <sup>1 1/2</sup> - Compressor 7 to 11:30 = 4 1/2 hrs.  
 3 - Jackhammers. 12:30 to  
 3 - Drillers  
 1 - Nipper

✓ Forms.	1- Carpenter Foreman	} 2 hrs.
wetting & cleaning	1- " Helper	
Laying 10' of 4" Tile	2 Laborers *	1 hr.

✓  
Placing Conc. in Spillway Floor

Sta 2+46 Begin 32 1/2' N. to 55 1/2' N of O.G. Toe to Sta 2+65 Begin 32 1/2' N to 60 1/2' N of O.G. Toe. Cutoff wall at Sta 2+55 to 37' N of O.G. Toe then stepped up over large boulder to begin at 60' N.

Sta. 3+65 Begin 37' N to 73' N of O.G. Toe to Sta. 3+86 Begin 37' N to 74' N of O.G. Toe.

Sta. 3+86 Begin at O.G. Toe to 37' N to Sta 4+07 Begin at O.G. Toe to 37' N  
Not poured, today.

✓ Grouting Anchor Bars.

1- Blanking Truck Mixer	2 pm to 3 pm
1- Mixer man & Truck Driver	1 hr.
3 Laborers.	2 hrs.
4 Batches Grout 1/2	1 hr.
	3 hrs

Nov 14, 1933 7 a.m. to 4 p.m.

Spillway Floor Continued.

Mix 6 sks cement 55 Batches. Conc.  
1250# Sand = 5<sup>30</sup> sks Cement.  
1340# 1/2" Rock  
1030# 3/4" Rock  
32 1/2 gals H<sub>2</sub>O

Sacks cleaned. ~~new~~ Sks. recovered.

Equipment Start 9<sup>30</sup> a.m. Finish 1<sup>30</sup> p.m.

2 1/2 hrs. 1-Mixing Plant.  
4 hrs. (1 Barber Greene.) 7 a.m. to 10 a.m.  
4 hrs. 1-Truck Water 1<sup>30</sup> p.m. to 4 p.m.  
8 hrs. 1-10' crane say 8 hrs.

2-Blaw Knox Trucks.  
1-Water Tank Truck 1 hr.

Mr. Wood: - The contractors have difficulty in keeping the rock excavation to grade due to "overbreak" and I have permitted points of hard rock

Bounded the rock deep into surface with

Nov 14 1933 7 a.m. to 4 p.m.

Spillway Floor Continued

Labor ✓ App. Supply 1 Truck Driver 7 a.m. to 10 a.m.  
4 hrs.  
4 hrs.  
8 hrs.

✓ Mixing Plant. 1 Mixer man  
3 1/2 3 Laborers

✓ Conc. Delivery 2 Truck Drivers  
3 1/2

✓ Placing Conc. 1-10' Crane operator  
9 1/2 1-10' Oiler,  
4 Laborers.

✓ Hunt Process. 1-Laborer 1 hr.  
1 hr. 1-Finisher 10<sup>30</sup> to 11<sup>30</sup>  
1/2 1-Helper 12<sup>30</sup> to 2

✓ Forms. 1-Carpenter Foreman 12<sup>30</sup>  
1 hr. 1- " Helper  
1-Laborer.

✓ Rebar 1-Steel Foreman } 7 to  
Right Steel 2 " Men.  
Banding & Cutting 2 hrs.

✓ Drain Tile. Sta. 2+65 to 2+65 = 10'  
Sta 3+58 to 3+86 = 28'  
Labor. 2 Men. 1 hr. (Carpenter crew)  
3 Men 2 hrs.  
3

Nov 14, 1933  
Corewall Conc.

Forms 1- Carpenter  
8 hrs

8 a.m.

Mr. Wood. No water until 10 o'clock  
due to congestion of crane &  
truck operations keeping  
water tank truck beyond  
reach. "Bill" ordered truck to  
move over as soon as crane  
moved out.

+ Water Tank Truck. 1 hr

Nov 15, 1933 7am to 4 pm

Spillway Floor

Forms 1- Gen Foreman } 1 hr.  
1- Carpenter Foreman } 1/2 hr.  
1- " Helper. }  
1- Laborers.

Clean & Wet  
Surface.

4- Laborers 1 hr.

Anchor Holes 1 1/2 compressors. 1- Compressor.  
4 hrs. ✓ 3 Jackhammers. 1- Jackhammer  
3 hrs. ✓ 2 Drillers 1- Driller  
7 hrs. 1 Nipper

3 hrs. \* 1- Driller 1 to 4

Laying " 6" Tile Drain From Sta 4+20  
to Sta 4+47 = 27'  
to Sta 4+64 = 17' 1/2  
3- Laborers. = 1 1/2 hr.

Laying " 4" Tile Drain From Sta. 3+86 to Sta. 4+07 = 21'

1- carpenter Foreman } 1/2 hr  
1- " Helper }  
1- Laborer.

Steel.

1- Steel Man. 1/2 hr. ? on Tower all night  
8 a.m.

✓ 3 1/2 hrs.

1- Steel Foreman } 12:30 to 4  
2 Steel men. }

✓ Forms

1/2 hr.

1- Carpenters Helper } 7:30 to 3:30  
1- Laborer }

✓  
Nov 15, 1933 7 am to 4 pm.

Spillway Floor. Continued

Placing Concrete.

③ Sta 3+86 Begin. at O.G. Toe to 37' N  
to Sta. 4+07 Begin. at O.G. Toe to 37' N

④ Sta 4+27 Begin. at O.G. Toe to 38' N  
to Sta. 4+47 Begin. at O.G. Toe to 38' N.

Sta

to Sta.

<sup>30</sup>  
3<sup>1/2</sup> to 4

1- B.K Truck Mixer  
1- Truck Driver

✓ Grouting Anc. Holes. 3- Laborers.

✓ 2 Batches 1/2 Grout = 10 sks. cement.

Mix 6 sks cement

1250<sup>#</sup> Sand 60 Batches Conc.

1240<sup>#</sup> 1/2" rock

1230<sup>#</sup> 3/4" rock 300 - sks cement.

9 gals. H<sub>2</sub>O

✓ 1600 sks cleaned 13 sks recovered

7  
✓  
Nov 15 1933

Spillway Floor Continued

Equipment 1 Mixing Plant 8 am. to 11<sup>30</sup>  
3<sup>1/2</sup> 1- #6 Crane  
3- Blaw Knox Truck Mixers  
1- Barber Greene } None  
1- Truck No 42 }

✓ 1- Water Tank Truck 1 hr.

Labor. 1- Mixerman  
Mixing Plant. - Laborers.  
3<sup>1/2</sup>

✓ Conc. Delivery 3- Truck Drivers  
3<sup>1/2</sup>

✓ Placing Conc. 1- #6 Crane operator  
3<sup>1/2</sup> 1- #6 " Oiler  
4 Laborers.

✓ Finishing Conc 1- Finisher 10<sup>30</sup> a.m. to 11<sup>30</sup> = 1  
4<sup>1/2</sup> 1- Helper. 12<sup>30</sup> to 4 = 3<sup>1/2</sup>  
1 hr. \* 2 Laborers 12<sup>30</sup> to 1<sup>30</sup> = 1

\* Blasting in next section threw rocks  
on green concrete.

✓ Hunt process 1 laborer - 1 hr.

Nov 15, 1933

O.G. Section

8:30 a.m.  
11:00 a.m.

1 hr  
1/2 hr  
2 1/2 hr  
1/2 hr  
Forms Sta 4+80 to Sta 4+95 Elev. 740 to 750

Forms  
2 1/2  
1 hr  
3 1/2  
1 1/2  
5 1/2  
1 hr - 2 Laborers. 1:30 to 2:30 = 1 hr  
2 Laborers.

Clean up

1 Truck

removing Forms

1/2 hrs. 1 - Truck Driver } 1/2 hr.  
1 - Carpenter Foreman } 1 hr.  
1 - " Helper } 1 1/2  
1 - Laborer }  
1 hr. - 2 Laborers. 12:30 to 1:30

General  
Cleanup

O.G. Sections, 1 Truck } 1:30 to 2:30  
1 - Truck Driver }  
4 Laborers }

Forms

Foreman  
1 - Carpenter 9:30 to 11:15  
4 Laborers  
1 - Carpenter's Helper

Nov 15 1933

Core wall

Sta 4056 to Sta N 4072 Elev. 718 1/2 to 726  
(8' lift)

Sta N 4072 to Sta. 4088 Elev. 718 1/2 to 726  
to 730 1/4  
W. Wood

9:30 a.m. No water due to conjection of  
crane & truck operations.  
Concrete 7 days old.

Forms 1 - Carpenter. 7 to 10 = 3 hrs  
3:30 to 4 = 1 1/2

4 1/2 hrs. on Beets for Hydr. Fill. 4 1/2

1/4 Copper. 40-6

3/4 " 40-8  
1/6 " 40-8

Nov 16 1933 7 to 4

Spillway Floor

Removing Forms 1- Carpenter Foreman 1 hr.  
 1- " \* Helper 1 hr.  
 2- Laborers  
 130 tot → 1- Laborer  
 1- Gen Foreman 4 hrs.

Cleaning & Wetting

3 Laborers 1 hr.

√ Sta 4427 to 4464 37'-4" Diam Tile

Setting Tile

1- Carpenter Foreman 1/2 hr.  
 2- Laborers 1 hr.  
 3- Laborers 100 p.m. to 2 p.m. 1 hr.

Drucker Holes

1/2 hr delay acct Blasting

7 1/2 hrs.

1 1/2 Compressor

3 Jackhammers  
 3 Drillers  
 1 Ripper

Placing Reinf

1- Steel Foreman } 2 p.m. to 4 = 2 hrs.  
2- " Men }

Steel

Bending & Cutting for Spillway Walls 7 to 100 = 5 hrs.

Mix 6 sks cement

99

1250<sup>+</sup> Sand 90 Batches Cement

1340<sup>+</sup> 1 1/2" Rock = 540 sks.

89.10

1030<sup>+</sup> 3/4" Rock 2 Batches Grout

900 lb H<sub>2</sub>O

10 sks cement  
Total 550 sk cement

Nov 16 1933 7 to 4

9

Spillway floor Continued

③ Sta 4407 Beginning at O.G. toe to 36' N to Sta 4427 " at O.G. toe to 36' N  
 ④ Sta 4427 Beginning at O.G. toe to 36' N to Sta 4464 Beginning at O.G. toe to 36' N.  
 ⑤ Sta 3-56 Beg at 37' N to 74' N of O.G. toe.  
 to Sta 4407 Beg. at 32' N to 74' N of O.G. toe.

Equipment Start 8:00 a.m. Finish 1:00 p.m.

1- Mixing Plant  
 1- Nob Crane  
 3- Blue Knox Truck Mixers

The MIXING PLANT 4 1/2 hrs. to 10:00 a.m.

1- Barber Greene } 10 a.m. to 1:00 p.m.  
1- Truck No 42 }

1- Water Tank Truck 1 hr.

Varooring

1- Blue Knox Truck Mixer  
 1- Truck Driver  
 2- Laborers

Anc. Holes

√ Labor Mixing Plant 1- Mixer man  
3 1/2 3 Laborers

3 1/2 Conc. Delivery 3 Truck Drivers

3 1/2 Placing Conc.

1- Nob Crane operator  
2 " " Ditcher  
4 Laborers

1 1/2 √ Finishing Conc.  
1 1/2 3 hrs.

10 a.m. to 2 p.m.  
1- Finisher  
1- Helper

√ Hunt Process

1- Laborer 1 hr.

Nov 16 1933.

Core Wall Conc.

Sta N 4056 to Sta 4088<sup>5</sup> Elev. 716<sup>5</sup> ft  
726

Forms. 1- carpenter Foreman.  
Woffing  
Conc.

(150 sq ft)  
Loaden  
End Area

Nov 16 1933 7 to 9

10

O. G. Section

Form to 4

Forms. 1- Carpenter Foreman.

\*1- " Helper

1- Laborer

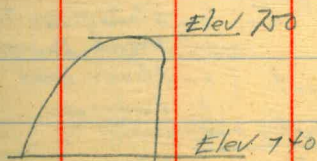
1- Laborer. 100 yds. to 4 = 3 hrs

Hunt Process 1- laborer 1 hr.

(Loose Backfilling no tamping)

Memo. Setting Dredging Pump

(Will Finish Floor over 2nd 4" Drain)



End area = 150 sq. ft.

$$\text{Vol} = \frac{150 \times 15}{27} = \underline{\underline{83 \text{ cu yds}}}$$



Nov 17, 1933 7am to 4pm

Spillway Floor  
 1 - Gas Foreman  
 1 - Carpenter Foreman  
 1 - Carpenter Helper } 1 hr.  
 1 - Laborer }  
 Clean up }  
 wetting } 2<sup>30</sup> to 4<sup>00</sup>  
 1 - Carpenter Helper }  
 1 - Laborer } - 1 1/2 hr.  
 3 - Laborers 1 1/2 hrs.

Anchor Holes  
 1 - Compressor 1/2 comp.  
 1 - Jackhammers 1 Jack.  
 1 - Drillers 1 Driller  
 1 - Nipper 4 hrs.

Placing Reinf. Steel  
 1 - Steel Foreman }  
 2 - Steel Men. }  
 Grouting Anc. Holes  
 1 - Blaw Knox Truck Mixer }  
 1 - Truck Driver } 1 hr.  
 1 - Mixer Man }  
 1 - Laborer } 1 hr.  
 5x Cement }  
 (Use tamping rod) } 2 hrs.

Laying 6" Tile Sta. 4+64 to 4+83 - 19'  
 2 - Laborers 1 hr.

Sta 2+54 Lost  
 add Anc. No 18.

Sta 2+55 3' 6" wide  
 Begin Cut off wall at Anc No 17

following slope of Hard Rock

Nov 17, 1933 7am to 4pm

Spillway Floor  
 Sta. 4+07 Beg. 38' N to 75' N of O.G. Tie  
 to Sta. 4+27 Beg. 38' N to 75' N of O.G. Tie.  
 Sta. 4+47 Beg. 38' N to 75' N of O.G. Tie.  
 to Sta. 4+64 Beg. 38' N to 75' N of O.G. Tie.  
 Sta. 4+64 Beg. of O.G. Tie to 38' N.  
 to Sta. 4+83 Beg. of O.G. Tie to 38' N.

(3 1/2 hrs) Start 9<sup>30</sup> Finish 2<sup>00</sup> pm.

Mix 6 5x cement 1250<sup>#</sup> Sand 1340<sup>#</sup> 1 1/2" Rock 1030<sup>#</sup> 3/4"

83 Batches Conc. 2 Batches 1/2 Grout

900 sq. cleared (None sq. recovered)

Equipment  
 1 - Mixing Plant 1 - Barber Greene  
 3 - Blaw Knox Truck Mixers  
 1 - No 6 Crane

Labor  
 1 - Mixer man  
 Laborers

Conc. Delivery  
 3 - Truck Drivers 3 1/2  
 1 - No 6 Operator  
 1 - Oiler  
 4 - Laborers

\* App Supply 1 - Truck Driver 3 1/2 hrs.

Finishing Conc  
 1 - Finisher 10<sup>30</sup> to 2<sup>30</sup>  
 1 - Helper

Hunt Process 1 - Laborer 2<sup>30</sup> to 3<sup>30</sup>

469  
 7  
 7  
 2  
 1  
 8

Nov 17 1933 7am to 4pm  
Corewall

Forms: 6' = 1 Carpenter foreman 7am to 10am

6.6 cu yds  
1/2 1 Carpenter } 130 to 200  
1/2 1 " Helper }

Sta N 4056 to N 4072 Elev  $718\frac{5}{10}$  to  $726\frac{2}{7}$

13.4 cu  
20.02 Sta N 4072 to N 4088 Elev  $718\frac{5}{10}$  to  $730\frac{2}{11}$



Per 8' length.

5 cu yds.

5.00

2.66



Per 8' length.

$0.8 \times 1.5 =$

2.66 cu yds.

2.66

2.66

$\frac{2.66}{2.7} =$

.44 " per lift.

13.4

13.42

Nov 17, 1933

O.G. Section

Sta 4+80 to 4+95 Elev 740 to 750

Forms. 1. Carpenter Foreman 8am. to 1<sup>30</sup>  
5<sup>1</sup>/<sub>2</sub> 1- " Helper

Removing Forms

2. Laborers. 3<sup>1</sup>/<sub>2</sub> hrs.

13

✓  
Nov 18, 1933

O.G. Section Concrete

Sta 4+80 to 4+95 Elev 740 to 750

Start 7<sup>30</sup> Finish 10<sup>30</sup>  
8<sup>4</sup>

\* Mix 5-Sx Cement ~~2~~ Batches Concrete  
1250<sup>+</sup> Sand  
see 850<sup>+</sup> 2<sup>1</sup>/<sub>2</sub>" Rock 2 Batches 1:2 Gravel  
suppl. 970<sup>+</sup> 1<sup>1</sup>/<sub>2</sub>" Rock  
mix 770<sup>+</sup> 3<sup>1</sup>/<sub>4</sub>" Rock  
for 1000<sup>+</sup> Cels. H<sub>2</sub>O added 3 hrs  
O.S. 6<sup>1</sup>/<sub>2</sub>  
4<sup>20</sup>

150 Sx cleaned None Sx recovered 9<sup>30</sup>

Equipment 1- Mixing Plant 1- #10 Crane  
3 hrs 3 Blaw Knox Truck Mixers 1 hr.  
1- Barber Greene  
1- Truck No 42

Label 1- Mixer man 1 hr. Placing Conc.  
Mixing Plant. 2 Men. 1- Crane operator  
3 hrs 1- " Oiler

Conc. Delivery 3 Truck Drivers

Placing Conc. 4 Laborers.

App. Supply 1 Truck Driver

Forms. 1- Carpenter Helper 1 hr.

Finishing Conc. 1- Finisher } 12<sup>30</sup> to 1<sup>30</sup>  
1- Helper. } 1 Sx cement.

Nov 18 1933

(90) Spillway Floor. 2 Laborers 1 hr.  
 Laying 6" Clay Tile Sta. 4464 to 4483 = 18'  
 6" " " 4483 to 5423 = 20'  
 Clearing " 1 - Laborer. - 3 hrs.  
 Wetting  
 Finishing Subgrade 1 - Laborer. - Road of  
 Sta. 4427 Beg. 38' N to 75' N of O.G. Tie  
 to Sta. 4447 Beg. 38' N to 76' N of O.G. Tie  
 Sta. 4464 Beg. 38' N to 76' N of O.G. Tie  
 to Sta. 4483 Beg. 38' N to 76' N of O.G. Tie  
 Sta. 4480 Beg. at O.G. Tie to 38' N  
 to Sta. 5403 Beg. at O.G. Tie to 38' N

3 1/2 Start. 12:30 Finish 4

Mix 6 Sx. cement. 73 Batches Cement  
 1250 Sand  
 1340 1 1/2" Rock X Batches 1:2 Grout  
 1030 3/4" Rock

Forms 1 - Carpenter's Helper 1/2 hr.  
 1 - Laborer  
 Equipment 1 - Mixing Plant. 1 - Barber Greene.

3 Blaw K. Truck Mixers 1 - Truck No 42  
 1 - No 6 Crane.

1 - Mixer man

Labor. - Men.

Conc Delivery 9 - Truck Drivers  
 1 - No 6 Crane operator.

Placing Conc 2 - Laborers.

Agg Supply 1 - Truck Driver

1 - Finisher 1:30 to 4:30  
 1 - Helper 3  
 1 - Laborer 1 hr.

Finishing Conc. Hunt Process

Nov 18, 1933.

14

Core Wall. Concrete

Test Samples.

Start 4056 to Sta N4088 Eled 718 to 730

Nos - 593 - 594 - 595

Mix 7 Sx. cement.

1350 Sand  
 1340 1 1/2" Rock  
 1030 3/4" Rock

✓  
Nov 18, 1933.

(20) Core wall Conc.

Sta N 4056 to N 4072 Elev 718<sup>5</sup> to Elev 726<sup>5</sup>  
15

Sta N 4072 to N 4088 Elev 718<sup>5</sup> to Elev 730<sup>0</sup>  
16

2 hrs. Start 10<sup>30</sup> Finish 1<sup>30</sup>

Mix 7 sx. cement. 20 Batches Concrete  
\* 1350 Sand. 1.03  
\* 1340 1 1/2" Rock 60  
1030 3/4" Rock 200  
\* Modified 20.60  
2 Batches Grout

Equipment

- 1- Mixing Plant.
- 3- Bow Knox Truck Mixers to 11<sup>30</sup> 12<sup>30</sup> to 1<sup>30</sup>  
1- P.K.T.M.
- 1- No 10 Crane
- 1- Barber Grease
- 1- Truck No 42
- 1- Mixer man

Labor.

Men

- Conc. Delivery 3- Truck Drivers to 11<sup>30</sup> 12<sup>30</sup> to 1<sup>30</sup>  
1- Crane Operator
- Placing Conc. 1- Crane Oiler  
3 Laborers.
- ✓ Agg. Supply 1- Carpenter Foreman  
1- Truck Driver.
- ✓ 22' Cooper

✓  
Nov 19 Sunday.

15

Spillway Floor. None

O.G. Section

Water Bay 1/2 hr

Core Wall

Water Bay 1/2 hr

1- Water Tank Truck 1 hr

Nov 20, 1933

Spillway Floor Removing Forms  
3 Laborers.  $\frac{1}{2}$  hr.

Spillway Floor Sta. 1+45 to Sta. 3+05  
Forms  
2 hrs.  
1 - Carpenter Foreman  
1 - " Helper  
\* Laborer.

Cleaning & Wetting 1 1/2 hr. 1 Laborer 9:20 to 10:30

clay 1 hr. 5 Laborers 10:30 to 11:30

Laying 4" Tile Drain 2nd line 1/2 hr. 2 Laborers 11:30 to 12:00

Laying 4" Tile Drain 2nd line

Sta. ~~1+45~~ to 2+04 Sta. 3+05  
3 hrs. \* 3 1/2 Laborers. 7:30 to 10:30

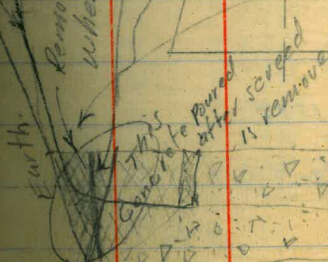
Anchor Holes.  
3 hrs.  
1 - Compressor 7 to 11:00  
2 - Jackhammer  
2 - Driller  
1 - Nipper

placing Reinf. Bars.  
1 - Steel Foreman 9:30 to 10:30  
1 - Steel Man. 2/4

Grouting Anc. Holes. Equipment 1 - Blow Knox Track 10:30 to  
Labor. 1 - Track Driver 11:00  
1 - Mixerman  
1 hr 2 - Men.

Rods bent up at least 2 ft from shipped line of future concrete.

Remove this concrete when future extension is made to North Wall.



Fill with gravel.

This arrangement is OK. 11/20/33  
H. Wood

Nov 20 1933

Modified to protect steel bars with gravel from the mud in "hog wall" also leave 2x6 screed.

Nov 20 1933 7 to 4

Core wall

Removing  
Forms.

1 Carpenter Foreman

Wetting Concr.

7 to 3

7 hrs.

~~Nov 20~~  
Nov 20, 1933

Spillway Floor.

12<sup>30</sup> to 4

Anchor Holes

1- compressor,  
1- Jackhammer  
1- Driller  
1- Nipper

Nov 20 1933

O.G. Section Sta. 4+80 to 4+95

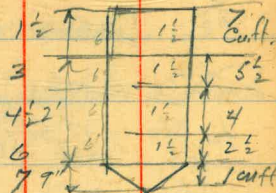
Stripping  
Forms.

1- Laborer

9 to 4

Nov 20, 1933 7 to 4 17  
Grouting O.G. Section.

Sta. 4+86 to 4+95



2' = 6 cutt.

4" = 1 cutt.

4.80  
7.00  
11.80

Equipment

2 1/2 hrs

1 Compressor  
1 Portable Mixer 1- Glow Knox Truck Mixer.  
1- 7 cutt. Grout Tank  
3 Hose.

Start 8<sup>00</sup> Finish 10<sup>30</sup>

Labor + Mixer man

(100 # per sq in)

2 1/2

1- Grout Tank man.

3 Hose Men,

1- Truck Driver + Mixer man

Sta.	No	(Roy Sewell)	(Mr. Converse)	cu. ft		
1	1	4+86	4+85.5	5	E	S
2	2	4+95	4+60	5	W	N
3	3	5+30	4+65	6 1/2	E	S
4	4	5+15	4+70	6 1/2	W	N
5	5	5+10	4+75	6	E	S
6	6	5+15	4+80	6	W	N
7	7	5+30	4+85	6	E	S
8	8	5+25	4+90	5	W	N
9	9	5+30	4+95	5	E	S

51 cu ft Grout

35 sq Cement.

7 cutt.  
11.80

Nov 20 1933

Spillway Floor.

X Sta 1+57 Beg.  $36\frac{1}{2}'$  N to  $44\frac{1}{2}'$  N of O.G. Toe.  
to Sta 1+97 Beg.  $36\frac{1}{2}'$  N to  $52\frac{1}{2}'$  N of O.G. Toe

<sup>2+26</sup> Sta. 1+97 Beg.  $36\frac{1}{2}'$  N to  $52\frac{1}{2}'$  N. of O.G. Toe  
to Sta. 3+05 Beg.  $68\frac{1}{2}'$  N to  $86\frac{1}{2}'$  N of O.G. Toe.

3 1/2 hrs. Start 1:00 Finish 4:30

Equipment  
1- Mixing Plant  
1- Barber Greene  
<sup>(134)</sup> 1- Truck No 42  
2- Blow Knox Truck Mixers  
1- No 6 Crane

Labor. 1- Mixer man  
Men.

Conc. Delivery. 2- Truck Drivers

Placing Conc. 1- Crane operator.  
3- Laborers.

Agg. Supply. 1- Truck Driver

Finishing Conc. 1- Finisher  
2 hr. 1- Helper.

Hunt Process. X

Nov 20, 1933

<sup>(134)</sup> Spillway Floor Continued.

Mix 6 Sx cement 6.9 Batches Concrete  
1250 Sand. Plus <sup>(4)</sup>  
1340  $1\frac{1}{2}$ " Rock 73 Total.  
1030  $3/4$ " Rock

2 Batches of Grout.

new Sx cleaned new Sx recovered

7.3  
7.6  
4.38

7.3  
6.57  
6.57

230 to 500  
300



✓  
Nov 21, 1933 7am to 4pm.

Spillway Floor.

Sta. 1457 Beg.  $36\frac{1}{2}' N$  to  $44\frac{1}{2}' N$  of O.G. Toe  
to Sta. 2426 Beg.  $36\frac{1}{2}' N$  to  $61' N$   
 ~~$58\frac{1}{2}' N$~~  to  $56\frac{1}{2}' N$  of O.G. Toe.

4 hrs Start 7:30 ~~Finish~~

Mix 65x cement.  $\frac{75}{6}$  Batches Conc.  
1250 Sand  $\frac{450}{}$   
1340  $1\frac{1}{2}"$  Rock  
1030  $3/4"$  Rock  
No Grout.

Equipment 1-Mixing Plant }  
2 Blow Knox Truck Mixers } 4 hrs  
1- No 6 Crane. }  
1- Barber Greene } 3 hrs  
1- Truck No 42 }

Labor 1- General Foreman 4 hrs.  
1- Mixer man  
— Men.

Conc. Delivery 2 Truck Drivers

Placing Conc. 1 Crane operator.

Removing Forms. 4 Laborers.  
4 Laborers  $\frac{1}{2}$  hr.

Agg. Supply 1- Truck Driver 3 hrs.

Finishing 1- Finisher } 9:20 to 11:30 =  $2\frac{1}{2}$   
1- Helper } 11:30 to 1:30 =  $1\frac{1}{2}$

31  $\frac{1}{2}$  hrs. 1- Compressor } 12:30 pm to 1:30 = 1

Hunt. Process. 2- Laborer } 1 hr. 30 to 3:30 = 2  
1 laborer }

✓  
Nov 21 1933 7am to 4pm.

Forms.

1- Carpenter  
1- Carpenter Foreman }  $1\frac{1}{2}$  hr.  
1- " Helper }  
1- Laborer  $\frac{1}{2}$  hr.  
Placing 1- Steel Foreman } 2 hrs?  
Reinf Steel 1- Steel Man. }

Laying

Sta. 4483 to Sta 5403 = 20'  
4" Drain Tile 1- Carpenter Foreman }  $\frac{1}{2}$  hr.  
1- " Helper }  $\frac{1}{2}$  hr.

Cleaning & Wetting

1- Carpenter Foreman }  $\frac{1}{2}$  hr.  
1- " Helper }  $\frac{1}{2}$  hr.

Sta. 4483 Beg.  $36' N$  to  $76' N$  of O.G. Toe  
to Sta 5403 Beg  $38' N$  to  $76' N$  of O.G. Toe

Start Finish 11:30

Anchor Holes

1- Compressor 11:00 to 11:30  $\frac{1}{2}$   
1- Jack hammer 11:30 to  
1- Driller 2:30 to 4  $1\frac{1}{2}$   
1- Nipper 1 hr.  
1- Driller 3 pm to 4  $\frac{1}{2}$

Nov 21 1933 7am to 4pm  
✓ O.G. Section

Remaining  
Forms

1 - laborer }  $\frac{1}{2}$  hrs.  
2 Laborers } 9:30 to 11:30 = 2 hrs  
                  } 1:30 to 4 = 2 1/2 hrs.  
                  } 4 1/2 hrs.  
No 6 Crane }  
No 6 " Operator } 12:30 to 1:45  
2 - Laborers } 1 hr.

Finishing

1 - Finisher } 2:30 to 4  
1 - Helper }

Nov 21, 1933

✓ Corewall

Forms - 1 - Carpenter Foreman  
8 hrs. Sta. N 4072 to Sta 4088 Elev 750 to 758  
(col no 4084)

18" corewall to Sta. N 4160.

✓  
Nov 21 1933

20

Company. Bullhead. for Dredge Pump.

Start, 11:30 Finish: 12:40 any 1/2 hr.  
15 minutes

1 - Blaw Knaw Truck Mixer

1 - No 6 Crane

1 - Truck Driver

1 - No 6 Crane operator

4 - Laborers

1 - Gen. Foreman.

(No Mixing Plant.  
Used part of load on  
Spillway Floor.)

$$4 \frac{3}{4} \times 14 \frac{1}{2} \times \frac{5}{12} = \text{cu yds}$$

27

Nov 21 1933

Grouting South Abutment

Start 12<sup>30</sup> Finish 3<sup>30</sup>

Equipment

- 1- Compressor
- 1- 7 cu. Ft. Grout Tank } 3 hrs.
- Hose Line
- 1- Blaw Knox Truck Mixer
- 1- Tractor 1/2 hr.

- Labor.
- 1- Truck Driver
  - 1- Mixer man }
  - 3- Hose men. }
  - 1- Caterpillar operator 1/2 hr.

No	Approx Sta.	Pressure used.	Cu. Ft.	Remarks
1	N 3118 ±	100	5	Free air
2	3110	120	5	"
3	3102	120	6	"
4	3094	140	5 1/2	Tight hole
5	3086		7-14-21	Free air
6	3078	120	28-36-48	40 # 746
7	3070		50-57-63	
8	N 3062		7-14-21	
			28-35-42	
			44-51-58	
			65-72-	
			79-88-94	

Note Sullivan Compressor

pumping air from

2<sup>00</sup> Start Finish 3<sup>30</sup>  
1 1/2 hr.

Nov 22

Grouting South Abt. Continued

Start 7 a.m. Finish 2 p.m.  
(Grouting)

No	Sta.	Pressure	Cu. Ft. Grout
7		120	4
waste		120	4
8		120	3 1/2

100 5X cement

190 1/2 cu ft Grout.  
4 Waste  
186 1/2 cu ft Grout. ✓

Lost Hole Grouted

Way 18, 1933 # N 3122

✓  
Nov 22, 1933.

Spillway Floor.

Anchor Holes. 7 to 2<sup>30</sup>  
2 Compressor 1 1/2 comp.  
3 Jack Hammer 2<sup>30</sup> to 4  
3 Drillers  
1 Nipper 4 hrs.

Removing Forms. 2 Laborers. 1/2 hr.

Cleaning & Wetting. 2 Laborers. 11 am to 2<sup>15</sup> ✓

Laying 4" Drain Tile  
2 hrs. 3 Laborers. 9 am to 11 am

Sta. 3+65 to Sta. 4+47  
3+65

Placing Reinf. Steel. 1 1/2 hr.  
1- Steel Man. } 1<sup>30</sup> to 3  
1- Laborer }

Forms. 1/2 hr.  
1- Carpenter Helper } 1<sup>30</sup> to 2  
1- Laborer }

Grouting Anc. Holes. 1- 72x Batch.

1- Blaw. Knox Truck Mixer

1/2 hr.  
1- Mixer Man 2 pm to 3  
1- Truck Driver on Placing Steel.  
3- Men. 3 to 3<sup>30</sup>  
grouting

✓  
Nov 22 1933.

22

O.G. Section

Stripping Forms. 2 Laborers. 1/2 hr.  
3 Laborers. 3<sup>15</sup> to 4

Finishing X

Hand Process.

1- Laborer 9 am to 1<sup>30</sup>

Grout Holes. 1- Compressor 7 am to 4 pm.  
8 hrs. 1- water liner  
1- Driller.  
\* 2- Helpers.

Sta. Depth of Hole. Length of pipe

1- Helper injured on the head  
at 3<sup>30</sup> (minor head injury)

✓  
Nov 22, 1933

Core wall.

Water Bay  $\frac{1}{2}$  hr. 9 am.

Mr. Wood.

1<sup>30</sup> p.m. notified Mr. Bryan

Core wall part of Nov 18 needed  
more water. Hot dry East  
wind blowing.

2 p.m. Mr. Bryan informs  
me the contractors have  
shipped out one water <sup>Tank Truck</sup> ~~trailer~~  
to some other job and are  
using his water tank truck  
for hauling water to the camp.

3 p.m. Mr. Bryan informs  
me he is going to let  
Steve stay had no business to  
take the water tank truck away.

23

✓  
Nov 23 1933 7 am to 4 pm

O.G. Section

Stripping 3-Laborers 1 hr.

(Mucking)

7 am to 11<sup>30</sup>

12<sup>30</sup> to

Great Holes

1- Compressor  
1- Water liner  
1- Driller  
2- Helpers

1- Compressor  
1- Jackhammer  
1- Driller  
1- Helper

Sta.

Depth  
of Hole

Length of  
Pipe

1  
2  
3  
4  
5  
6

Finishers 1- Finisher } 8<sup>00</sup> am to 2<sup>00</sup>  
1- Helper }

Hunt Process. 1-Laborer  $\frac{1}{2}$  hr.

3<sup>00</sup> to

Nov 23, 1933

Spillway Floor

Anchor Holes

4' in  
7 to 11<sup>30</sup> 12<sup>30</sup> to 1<sup>30</sup>  
2 - Compressors 1 - Compressor  
3 - Jackhammers 2 - Jackhammers  
3 - Drillers 2 - Drillers  
1 - Ripper 4 hrs. 1 - Ripper

Forms

1 - Carpenter Foreman }  
-1 - " Helper } 1 hr. 1/2  
1 - Laborer }

placing

Reinf Steel

1 - Steel man. 4 hr. } 11<sup>30</sup> to 1<sup>30</sup>  
2 - Steel men 1/2 hr. } 1/2 hr.

Bending  
Reinf Steel

1 - Steel man. 4 hr.

Placing  
Reinf Steel

1 - Steel Foreman } 12<sup>30</sup> to 4  
2 Steel Men }

Laying

\* 4" Drain Tile

3 - Laborers. 1<sup>00</sup> to 1<sup>15</sup>

Sta 4+47 to Sta.

Mix

6 Sx Cement  
1250# Sand  
1340# 1 1/2" Rock  
1030# 3/4" Rock

45 Batches Concrete

Sx 1500 cleaned

21 Sx. Recovered  
yesterday?

Nov 23, 1933

24

Spillway Floor

Sta. 3467 Beg. 73' N to 104' N of O.G. Tie  
to Sta. 3488 Beg 74' N to 109' N of O.G. Tie.  
Sta 4+07' Beg 75' N to 110' N of O.G. Tie  
to Sta 4+27' Beg 75' N to 110' N of O.G. Tie.

On road Side }  
Blocking Road } 2<sup>30</sup> 1 Truck  
130 2 Trucks. \*

Start 12<sup>30</sup> 1 Truck Finish

Equipment \* 1 - Mixing Plant  
\* 2 - Blaw Knox Truck Mixers  
1 - Barber Greene  
1 - Track No 42  
1 - #10 crane

Labor

1 - Mixer man  
3 - Men

Conc Delivery

\* 2 - Truck Drivers

Placing  
Conc.

1 - #10 Crane operator  
1 - #10 " Oiler

see file \* 4 Laborers.

\* Only Blaw Knox Truck Mixer 12<sup>30</sup> to 1<sup>30</sup>

Finishing

1 - Finisher } 2<sup>00</sup> to 4 = 2  
1 - Helper }  
5 to 6<sup>00</sup> - 1 1/2  
3 1/2

✓  
Nov 23, 1933. Tonto Area

Core wall

7. am. General foreman ordered water tank truck. Superintendent counter ordered water tank truck sending truck to camp, or some other place.

7<sup>15</sup> reported condition to Mr. Wood.

7<sup>30</sup> Mr. Wood, Mr. Stevens in

conference. Mr. Stevens promised to have water tank truck as soon as pipe line is covered. crew of men working to cover line.

10. am. No water tank truck

Wet wall from hydraulic core wall pond. ok

✓  
Nov 23, 1933

25

Corewall Excavation

3<sup>15</sup> a<sup>17</sup> p  
12<sup>30</sup> to 4<sup>15</sup>  
4<sup>15</sup>  
1- Compressor } 1/2 compressor.  
1- Jackhammer } 1- Jackhammer  
1- Driller } 1- Driller  
2- Laborers. } 2- Laborers.  
4 hrs. - 1- Foreman. Tony DeLuca?

Nov 24 7am to 4 pm.  
Spillway Floor

Forms. 1- Carpenter Foreman }  $\frac{1}{2}$  hr.  
1- " Helper. }  $\frac{1}{2}$  hr.

Removing Forms. 4- Laborers  $\frac{1}{2}$  hr.

Cleaning 3 Laborers.  $\frac{12:30$  to 1 hr.

Banding  
Placing Remf Steel X

Anchor Hole Grout. 7<sup>00</sup> to 9 - 2 hrs.\*

1- Blaw Knox Truck Mixer.

1- Truck Driver

3- Laborers.

\*  $1\frac{1}{2}$  hrs removing mortar  $\frac{1}{2}$  hr. Grouting

1-5x Batch Grout. (Mortar)

Dumped  $\frac{3}{4}$  of Batch in Spillway

Floor Holes.

Hunt Process 1- Laborer  $\frac{1}{2}$  hr.

Finishing 1- Finisher }  $\frac{1}{2}$  hr.  
1- Helper }  $\frac{1}{2}$  hr.

Nov 24, 1933 7am to 4 pm  
Spillway Floor.

Mix 6x cement 49 Batches Concrete

1250# Sand

13x0"  $1\frac{1}{2}$ " rock 1-5x Batches Grout.

1030#  $\frac{3}{4}$ " rock

2250 5x cleaned 15 5x recovered

Start 8<sup>30</sup> Finish 10<sup>30</sup> = 2 hrs

Start. 2<sup>00</sup> Finish 3<sup>30</sup>

Equipment

1- Mixing plant

1- Blaw Knox Truck Mixer.

1- No 10 Crane

Labor 1- Mixer man

3 Men.

Conc. Delivery 1- Truck Driver  $3\frac{1}{2}$

1- Truck Driver  $1\frac{1}{2}$

Conc. Placing 1- No 10 Crane Operator

1- " " Oiler

$3\frac{1}{2}$

3 Laborers.

Finishing 1- Finisher } 10<sup>30</sup> to 11<sup>00</sup>  $\frac{1}{2}$  hr.

1- Helper } 3<sup>00</sup> to 4<sup>00</sup>  $\frac{1}{2}$  hr.

Sta. 4+07 Beg 95' N to ~~109~~<sup>114</sup> N of O.G. Tie  
to Sta. 4+27 Beg 95' N to 114' N of O.G. Tie.

Sta. 4+29 Beg 76' N to 116' N of O.G. Tie  
to Sta. ~~4+68~~<sup>4+68</sup> Beg 76' N to 116' N of O.G. Tie.



✓  
Nov 24 1933 7am to 4pm.

O. G. Section

Finishing }  
1- Finisher }  $\frac{1}{2}$  hr.  
1- Helper }

Hunt Process 1- Laborer  $\frac{1}{2}$  hr.

Grout Holes. 1 Compressor 10<sup>30</sup> to 4

1- Water Liner  $3\frac{1}{2}$

1- Driller  $1\frac{1}{2}$

2- Helpers  $5$

27

✓  
Nov 24 1933 7am to 4pm.

Corewall Excavation

$\frac{1}{2}$  Compressor

1- Jackhammer

1- Driller

3- Muckers

1- #10 Crane 10<sup>30</sup> to 11<sup>30</sup> 1

1- #5 Truck 12<sup>30</sup> to 2pm.  $1\frac{1}{2}$

$2\frac{1}{2}$

1- #10 Crane Operator

1- " " Oiler

1- Truck Driver

✓  
Nov 24, 1933.

9 a.m. Spillway Floor Cutoff Sta 5+10

Mr. Stevens:- We are going to place steel  
today and pour cutoff wall  
tomorrow. Where is the  
State Inspector?

O. & S.:- I will immediately see Mr. Wood.

Mr. Stevens:- He is over at the tower.

Mr. Wood. Hog Wallow Pond. The contractors  
are about ready to pump water into  
pond. No D.G. has been hauled to cover  
exposed steel bars.

✓  
Nov 24 1933.

28

Anchor Holes

2 pm. to 4

1- Compressor

2- Jackhammers

2- Drifters

1- Nipper

✓  
Nov 25 1933 7am to 4pm.

Cave Wall Excavation

✓ 1- Comp 7 to 9  
2- Compressor 9 to 6

1- Jackhammer

1- Driller

4- Muckers

1- Nipper 1/4 time

1- No 6 Crane 12<sup>30</sup> to 4

1- Truck No 17

1- No 6 Crane Operator.

1- Truck Driver

Top shattered from Blast

Bill ordered it removed.

✓  
Nov 25 1933 7am to 4pm.

29

O.G. Section

Drilling Graft Holes 7 to 3 pm. 4 1/2

1- Compressor 2 1/2

7 hr.

Used Blow  
Pipe 35' 8" long.

1- Water Liner

1- Driller

2- Helpers.

1- Nipper 1/4 time ?

Forms

1- Carpenter Foreman } 8<sup>30</sup> to 4

1- Helper

✓ 1- Laborer.

✓ 3- Laborers 10 to 2

Clean up.

3- Laborers. 2 to 4

Removing  
Forms.

1- No 10 Crane

1- Truck No 15

1- Crane operator } 10 am to 11:30

1- " " Oiler } 1 1/2 hr.

1- Truck Driver

No	Sta.	Depth	Length of Pipe
1		26	21
2		26	21
3		25'-6"	21
4		25'-6"	21
5		25'-8"	21
6		25'-8"	21
7		25'-8"	19
8		25'-10"	19'-6"

Nov 25 1933 Jan to 4 pm

Sprinkly Floor.

Remaining Forms. 1- Carpenter Foreman } 1/2 hr  
1- " Helper. }  
1/2 hr. 3 Laborers.

Cleaning & Molding 1- Laborer 1/2 hr 1/2 hr  
1 hr 8:00 to 8:30

Forms (1 hr) 1- Carpenter Foreman } 7:30 to 8:30  
1- " Helper. }  
1/2 hr. 1- Carpenter Helper. } to to to  
1- Laborer. }  
(80)

Mix 6 5x Cement 55 Batches Conc.  
1250# Sand, 1/2  
1340# 1 1/2" rock 330 V.S.  
1030# 3/4" rock @ .99 = 54.45 cu. yd.  
1- 5x Batch.  
1.2 GROUT.

Equipment Start 7:30 Finish 10:00

2 1/2 hr. 1- Mixing Plant  
1- Barber Greene  
1- Truck No 42  
1- No 10 Crane  
2- Blaw Knox Truck Mixers

Label. 1- Genl Foreman  
1- Mixer man  
3 Men

Conc Delivery 2 Truck Drivers

Placing Conc. 1- No 10 Crane Operator  
1- " " Oiler  
3 Laborers.

Nov 25, 1933 Jan to 4 pm

Sta. 3+88 Beg 74' N to 109' N of O.G. Tie

to Sta. 4+07 Beg 75' N to 114' N of O.G. Tie.

Sta. 4+27 Beg 75' N to 114' N of O.G. Tie

to Sta. 4+49 Beg 76' N to 116' N of O.G. Tie.

Sta. 4+68 Beg 76' N to 116' N of O.G. Tie

to Sta. 4+87 Beg. 76' N to

1 1/2 hr. Cent Process. 1- Laborer 11:00 to 11:30  
12:30 to 1:30

Anchor Holes.

1- Compressor } 7:00 to 10:00 am

2- Jack hammers } 3 hrs.

1- Drilled  
1/2 Nipper

Placing Reinf 1- Steel Foreman 7:00 to 11:30  
Steel 1 Steel Man. } + Steel Man 12:30 to

Finishing 1- Finisher } 9:00 to 11:00  
1- Helper.

Grouting 1- Blaw Knox Truck Mixer.

Anc Bars 1 Truck Driver.

1- Mixer man

3- Men. } 10 to 11

✓  
Nov 25 1933.

Remarks.

Spillway Floor.

9<sup>30</sup> am. 2 sections already poured.

3<sup>rd</sup> section delayed acct. failure  
of <sup>contractors</sup> purchasing department  
to furnish 4" Drain Tile.

General Foreman ordered  
tile a week ago.

Tile arrived at 3 o'clock.

9<sup>00</sup>. Compressor spattering oil  
on reinf steel Had some  
moved.

Excavation at Sta. 5+18

Req 20' x 1 to 40' N of O.G. Tie  
to Sta. 5+30 about 4" below  
Subgrade. Soft O.G. No rocks,  
to cause overbreak plenty of stakes,  
waste about 3 cu yds. cone.

✓  
Nov 25, 1933

11<sup>15</sup> am.

Placing Reinf Steel for  
Cutoff wall at Sta 5+10 before  
trench excavation has been  
inspected and approved by  
the State Inspector.

Nov 26 Sunday.

Nov 27, 1933

7<sup>00</sup> am.

Mr Steves: Is it ok to pour  
that chunk on the other end?  
O.V.S. what chunk?

Steves: That short piece of O.G.  
Section.

O.V.S. As far as I know the State  
Inspector has never passed on  
that Section. He has not been out  
here since the cutoff trench was  
spared. Somebody is going to go to borrow  
Mr Steves: For holding up this job.

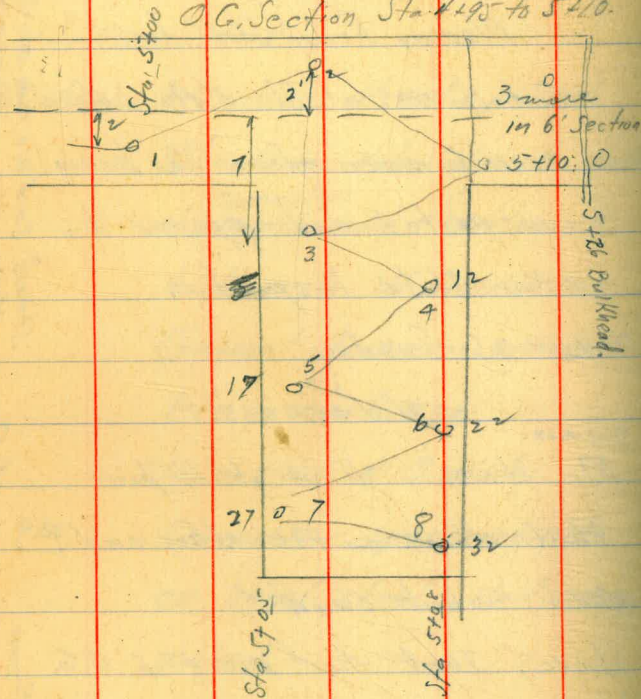
31  
Steves said we can do it great  
them when forms are stripped.  
O.V.S. That will cost time, money & trouble.  
Yes. They can put them in now.

Mr Bryan.  
How about the dowel?  
O.V.S. to Mr Bryan.

Nov 25

Location of Groat Holes.

O.G. Section Sta. 495 to 540.



Monday

Nov 27, 1933.

32

7 am to 4 pm.

Spillway Floor

Forms. 1- Carpenter Foreman } 1/2 hr  
1- " Helper }

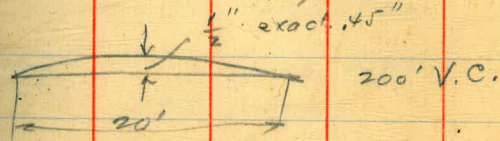
4" Drain Tile 3- Laborers. 1 1/2 hr.

Sta. to Sta.

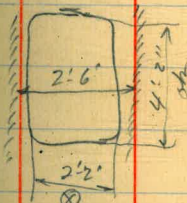
Placing Reinf. Steel. 1- Steel Foreman. 1/2 hr.

Note

Cut off wall excavation only clears.  
steel 1/2" in some places. MIN-2"



Place Header 1/2" High at 10'



only 2" clearance in trench.

✓  
Nov 27 1933 7am to 4pm.

Corewall Excavation.

1- No 6 Crane

1- Truck No 17

$\frac{1}{2}$  Compressor

1- Jackhammer.

1- Driller

5- Muckers to 11<sup>30</sup> to 4pm.

1- No 6 Crane Operator

1- Truck Driver

33

✓  
Nov 27, 1933

Elev. 706<sup>2</sup> to 717<sup>2</sup>

O.G. Section Sta 4+95 to 5+10

Cleanup 9- Laborers. 1hr.

7<sup>30</sup> to 8<sup>30</sup>

140<sup>2</sup> Batches Conc

Start 8<sup>30</sup> Finish 3<sup>30</sup> pm. 3<sup>2</sup> Batches Grout.

Mix 5 5x cement 1:2 $\frac{1}{2}$ :5

Equipment 1- Mixing Plant.

2- Blow Knux Truck Mixers.

3 hrs.

1- Barker Greene

1- Truck

Labor 1- Mixerman  
Men.

Conc. Delivery 2- Truck Drivers

Reinforcement 1- General Foreman.

4 $\frac{1}{2}$  Laborers.

Agg. Supply. 1- Truck Driver.

Forms 1- Carpenter Foreman 8<sup>30</sup>

1- " Helper 10<sup>30</sup>

1- " Helper 10<sup>30</sup> to

12' Copper 7172  
15 7060  
27 117 say 12'

Nov 27, 1933. 7am to 4pm

Spillway Floor

Sta. 5423 Beg at <sup>7' N of</sup> Toe of Ret. Wall to 40' N  
to Sta. 5440 Beg at <sup>7' N of</sup> Toe of Ret. Wall to 40' N

Start 3<sup>00</sup> Finish 4<sup>00</sup> = 1 hr.

Mix <sup>65x</sup> 1:2:4 (25) Batches. Concrete.

Equipment 1- Mixing Plant.

1- Barber Greene  
1- Truck

1- No 10 Crane

Labor. Mixing  
2- Blaw Knox Truck Mixers  
1- Mixer man  
3- Men.

Labor. Placing Conc  
1- General Foreman.  
1- No 10 Crane Operator  
4- Laborers.

Conc. Del. 1- No 10 " Oiler  
2- ~~two~~ Truck Drivers

Finishing 1- Finisher } 3<sup>30</sup> to 4<sup>30</sup> 1 1/2 hr.  
1- Helper } 5<sup>00</sup>

Estimate  $17 \times 33 \times 1.2 = 25$  cu yds.

27

Nov 28, 1933. 7am to 4pm

O.G. Section

Removing Forms 1- Laborers

8am. Rain

12<sup>30</sup> to 1pm No work.

Nov 28 1933 7am to 4pm.

Cadwall Excavation

3- Muckers

(1- No 6 Crane operator)  
repairing Crane

1/2 compressor.

1- Jackhammer.

8a.m. Rain

12<sup>30</sup> pm. to 1pm No work



Nov 28, 1933 Jan to 4pm

Spillway Floor.

Clean up of Cut off wall

2- Laborers - 8<sup>00</sup> to X

1- General Foreman

1- Mixerman } 1 hr.

2- Men

1- Laborer

Removing Forms. 1- Laborer. 1 hr.

Forms. 1- Carpenter Foreman } 1 hr.  
1- " Helper

Placing Steel 1- Steel Foreman } 1 hr.  
1- " Man

8<sup>00</sup> a.m. Rain.

12<sup>30</sup> pm to 1<sup>00</sup> No work.

Nov 29 1933 Jan to 4pm

O.G. Section 1- General Foreman 2 hrs.

Forms. 1- Carpenter Foreman } 7<sup>00</sup> to 4  
1- " Helper

4- Laborers } to 9<sup>00</sup> ✓

1- Laborer } 9<sup>00</sup> to 4

1- Truck } 1 hr. 12<sup>30</sup> to = 2 hr.

1- " Driver

1- Laborer

Clean up 1- Laborer 10<sup>30</sup> to 11<sup>30</sup> = 1

Forms 1- Mixerman } 2<sup>30</sup> to 4 1/2  
4- Laborers }  
13- Laborers

ready. Mending pit crew!

Nov 29, 1933

Corewall Excavation.

Equipment 1- compressor

1- Jack Hammer

1- No6 Crane

1- Truck see to

Labor 1- No6 Operator

34<sup>2</sup> Muckers. 1/2 hr.

3- Riggers (1- 30' accorple)

1- Truck Driver see to

1- Driller 9<sup>30</sup> to 4 = 5 1/2

✓ Cold & Stormy.  
✓ Nov 29, 1933 7am to 4pm.  
1700SX cleaned.

Spillway Floor 9 st Recovered.

Start 9<sup>00</sup> Finish <sup>2<sup>30</sup></sup> <sup>2<sup>45</sup></sup> <sup>4<sup>45</sup></sup>

Mix 6 SX 1:2' 4. 100 Batches.

Equipment \* 2 - B.K. Mixer Trucks <sup>12:30 to 1:20 to</sup>  
+ Trucks

1 - Mixer  
4 - Men. 1 - Mixing Plant

2 - Truck Drivers 1 - Plow mix  
\* 1 " " 9:30 to 10:00 Truck down  
\* 1 " " 11:00 to 12:30 = 2 hr.

Laborer 1 - General Foreman 2 hrs  
Placing 12:30 to 3:00 = 2 1/2

3 - Laborers 9:00 to 11:30 = 2 1/2  
Finishing 1 - Finisher } 9:30 to 10:30 = 1 hr.  
1 - Helper } 1:00 to 4 = 3  
9' Not

Sta 5+03 Beg at 0.9 to 44' N

to Sta 5+23 Beg at Baseline to 40' N

including cutoff wall at Sta 5+10.

- 1 - Barber Greene } 1 15
- 1 - Truck } 2 30
- 1 - No 10 Crane } 1 hr.
- 1 - No 10 Crane Operator
- 1 - " " Oiler

Sta 5+23 Beg 40' N to 76' of Base Line  
to Sta 5+40 Beg 40' N to 76' Not Base Line

✓ Nov 30, 1933

Thanksgiving

Spillway Floor

Plant Process

- 1 - Compressor } 4
- 1 - Spray outfit } 1/2 hr.
- 1 - laborer

Dec 1, 1933 7am to 4pm

Gate wall Excavation

1/2 compressor & Jackhammer } 8:00 to  
1- No 6 Crane  
1- Truck

3- Muckers  
1- No 6 Crane Operator  
1- Truck Driver  
1- Driller - 8 to

Test Samples

O.G. Section #626-627-628

Sta 4+95 to 5+10

Elev 717 to

Mix 55x cement

1250<sup>th</sup> Sand

850<sup>th</sup> 2 1/2" Rock

970<sup>th</sup> 1 1/2" Rock

770<sup>th</sup> 3/4" Rock

Gals. additional water.

730.46  
84  
729.66

Dec 1, 1933 7am to 4pm

O.G. Section Sta 4+95 to Sta 5+10

Elev 717 to 730

(13' Lift)

Forms

1- General Foreman 4 hrs.  
1- Mixer man  
1- Carpenter Foreman } 9:00 to 11:00 } 2 1/2  
1- " Helper } 1 1/2 hr.  
2 1/2 } 1- Laborers 1 1/2 hr 8:00 to 9:30 }  
5- Laborers 8 to 8:30 4 1/2 hr.  
1- Truck Driver } 1 hr  
1- Truck }  
1- Carpenter Helper 2:30 to 4-1/2  
Hopper

Cleanup

Waiting

1- Laborer 1 hr.  
1- Water Tank Truck 1 hr.

188

940

Mix 55x 1-2 1/2-5 188 Batches Concrete

Start 9:30 finish 4:15 3 Batches Grout

Equipment

1- Mixing Plant  
1- Barber Greene }  
1- Truck }  
2 Stow Knox Truck Mixers 1 hr.  
3 Stow Knox Truck Mixers 10:30 to 4:15

Labor

1- Mixer man  
3- Truck Drivers 10:30 to  
2- Truck Drivers 1 hr.  
4 B Laborers 1 hr

Consol.

Crane Operator  
3 Laborers 10:30 to 11:30 - 12:30 to 3

acing Con.

4 Laborers 12:30 to 4

Fin

Dec 1, 1933

Spillway Floor

Removing Forms

1 - Laborer 1 hr

Placing Steel

1 - Steel Man 4 hrs.

Anchor Holes

1/2 Compressor } 8:00 to 9:00  
1 - Jackhammer } 1 hr  
1 - Driller }

Clean up 2 Laborer 8 to 8:30 1/2 hr

1/2  
1/2  
3/2  
1 Laborer 8:30 to 9:30 1 hr.

1 Laborer 10:30 to 11:00 1/2

2 Laborers 11:30 to 11:30 1/2

Forms

1 Carpenter Helper 11:00 to 11:30

2nd  
Laying 4" Clay Drain Tile 1 - Laborer 1 hr

Sta 4+89 to 5+03  
4+89

\*at Sta 5+05

4" Tile Drain from 40' N to 112' N  
40  
72

38

Dec 2, 1933

O.G. Section

Chipping Surface 1 - Gen Foreman

5 - Men 1 3/4 hr 7:00 to 8:00

Removing Forms

1 - Carpenter Foreman } 7:00 to 7:30  
1 - " Helper } 1/2 hr  
1 - Laborer }

Forms

1 - Carpenter Foreman } 7:00 to 4  
1 - " Helper }

4 - Laborers - - - - - } 4:00 to 4:30 = 1/2

5 - Laborers - - - - - } 8:00 to 11:30 = 3 1/2

2 - Laborers - - - - - } 12:30 to 2 = 1 1/2  
7:00 to 8:00 = 1/2

1 - Water Tank Truck } 7:00  
8:00 to 9

Clean up 3 Laborers 1 hr.

✓  
Dec 2, 1933

Spillway Floor

1 1/2 Compressor

2+ Jackhammers

2 # Driller

Sta 4+68 - Beg 76' N to 116' N of O.E. Toe to Sta 4+59

Beg 76' N to 116' N of O.E. Toe.  
Placing Joint Steel X

✓ Tile see Dec 1

1/2 hr. Cleanup wet 3-Laborers 12:30 to 1:00

Start 1:00 Finish 2:00 = 1 hr.

Mix 6.5x 1:2:4 27 Batches Conc.

Equipment

1 - Mixing Plant

1 - Barber Greene

1 - Truck

3 Blaw Knox Truck Mixers

Mixing

1 - Mixerman

Labor

3 - Men

Conc. Delivery

3 Truck Drivers

Placing Conc

3 - Laborers

Finishing

1 - Finisher

1 - Helper

} 2:00 to 3:00

✓  
Dec 2, 1933

Core wall Excavation

39

1 - Compressor

1 - Jackhammer

1 - No 6 Crane

1 - Truck # 17

1 - Crane Operator

1 - Truck Driver

1 - Driller

3 - Mechanics

Dec 3, 1933

Sunday

Monday Dec 4, 1933 ✓ 7am to 4pm  
 O.G. Section (Showers)  
 1- Laborer } 3:00 to 4  
 1- Carpenter Helper }  
 1- Carpenter Foreman } 7:00 to 8:30  
 1- " Helper } ~~7:00 to 8:30~~  
 1- Mixerman } 1 1/2 hr.

4 Laborers. 7:00 to 8:30. 1 1/2 hr.

Removing Forms. 3-Laborers. 12:30 to 4

Clean up 1- Water Tank Truck } 1 1/2 hr.  
 & }  
 Wetting 1- Laborer. } - 5x Cleared  
 } - 5x Recoreded.

Mix 5 SX 1:2 1/2 : 5, 135 Batches Conc.

Start 8:30 Finish 11:30 3 Batches Grout

Sta 4+95 to 5+10 Elev 730 to 739. 9' Ltr

Equipment 1- Mixing Plant } 12 1/2 hr  
 1- Barber Greene }  
 1- Truck } 6 1/2 hr  
 3- Blackknox Truck Mixers

1- General Foreman.

Labor. 1- Mixerman

3- Men

Conc. Delivery 3- Truck Drivers

Placing Conc. 4- Laborers

Agg Supply 1- Truck Driver

Estimate  $\frac{9}{11} \times 150 = 125$

$\frac{10}{11} \times 150 = 136$

Dec 4, 1933. ✓

40

Spillway Flood.

Anchor Holes. 7am to 11:30 + 1/2

1/2 Compressor. 12:30 to 4 3 1/2

1# Jackhammers 2- Jackhammer

1- Driller 2- Driller

Placing Reinf. 1- Steel Foreman } 7:00 to 8:00

Steel 1- " Man. }

2- Laborers. } 2:15 to 3:00 3/4

1- Mixerman } 3:00 to 3:30 1/2

1- Laborer } 1 1/4

Removing Forms.

1- Carpenter Foreman } 8:30 to 10:45

1- Laborer. } 10:45 to 11:30 3/4

1- Carpenter Foreman } 12:30 to 3:00 - 2 1/2

1- " Helper } 3:00 to 4

1- Laborer. } 3:30 to 4

Clean up

1- Laborer. 10:45 to 11:30 1/4

1- Laborer. 12:30 to 3:30 3

Grouting Anc Holes. 12:45 to 2:15 1 1/2

1- Blackknox Truck 3:00 to 3:30 1/2

1- Mixerman 2 Batches Grout.

2- Men.

1- Truck Driver

Notes to Mr. Wood re faulty grouting.

✓  
Dec 4, 1933

Corewall Excavation 7am to 4pm

1- Compressor } <sup>7:00 to</sup> idle } 12:30 to  
2- Jackhammer }  
1- No 6 Crane  
1- No 17 Truck

Excavation:

2- Muckers }  
1- Truck Driver } 7am to 11:30 = 4½

Timbers

✓  
1- Mucker  
1- Driller  
1- Carpenter Helper } 7am to 11:30  
1- No 6 Crane Operator } 4½

Excavation:

3- Muckers } 12:30 to 4 = 3½  
1- Drillers } Tran. to Luca  
1- No 6 Crane Operator  
1- Truck Driver

✓  
Dec 5, 1933

Wind 41

7am to 4pm

O.G. Section add 9' Copper

Chipping Core.

3- Laborers - ½ hr.

1- General Foreman

Forms 1- Carpenter Helper

1- Carpenter Foreman

3 \* - Laborers ½ hr. 9:30 to 4 = 6½ ✓

6 \* - Laborers 7:30 to 9:30 = 2

Dec 5, 1933 Jan to 4 pm.

Corewall Excavation

4  
~~5~~ Muckers  
1- Driller  
1- Hoist Crane Operator  
1- Truck Driver

1- No 6 Crane  
1- Truck No 17  
1- Compressor  
1- Jackhammer

Dec 5, 1933 Jan to 4 pm.

Spillway floor (see Anc Holes log)  
Doc 2.

1- Compressor  
2- Jackhammers } 7<sup>00</sup> to 11<sup>00</sup>  
                          } 12<sup>30</sup> to 4  
2- Drillers  
1- Ripper 9<sup>30</sup> to 10<sup>30</sup> = 1 hr.

Placing Reinf Steel

1- Steel Foreman } 12<sup>30</sup> to 2<sup>30</sup>  
1- " Man }



Clear Cold.  
Dec 6, 1933 7am to 4pm.

O.G. Section 1- General Foreman }  
1- Carpenter Foreman } 4 1/2 hrs.  
Forms 1- " Helper }  
3 Laborers }

Sta 4+95 to 5+10 Elev. 739 to Elev 750 = 11'

Mix 55x 1:2 1/2:5 85 Batches Conc.

Start 12<sup>30</sup> Finish 4<sup>15</sup> } 3 Batches Grout.  
= 3 3/4 } 2000 5x Clean

Equipment 1 Mixing Plant 15 sq recovered.  
1 Barber Greene  
1 Track  
2 Blaw Knox Track Mixers 7<sup>30</sup> to  
1 Blaw Knox " " 7<sup>30</sup> to

Labor 1 Mixer man  
3 Men 12<sup>30</sup> to

Conc Delivery 2 Truck Drivers 7<sup>30</sup> to  
1 Truck Driver 7<sup>30</sup> to

Placing Conc. 3 Laborers. to 3<sup>00</sup> = 2 1/2  
4 Laborers 3<sup>00</sup> to 4<sup>15</sup> = 1 1/4

App. Supply 1 Track Driver.

11' Copper.

1- Nob Crane } 3<sup>00</sup> to 4<sup>15</sup>  
1- " " Operator } = 1 1/2  
1- " " Oiler }

Finishing 1- Finisher } 1-hr  
1- Helper }

43

Dec 6, 1933

Corewall Excavation 7<sup>00</sup> to 3<sup>00</sup> = 7

1- Nob. Crane = 7

1- No 17 Truck = 7

1- Compressor } 8

2 Jackhammers }

1- Nob Crane Operator 7

1 " " Oiler 7

1- Truck Driver 7

7<sup>00</sup> to 9<sup>00</sup> 12<sup>00</sup> to  
1- Driller = 2 1/2 hr. + 3 1/2 = 6 hrs

8<sup>00</sup> 7<sup>00</sup>  
5 Muckers - 1 hr + 3<sup>00</sup> to 4 = 2 hrs  
6 hrs. Muckers.

1- Laborer 8

1- Carpenters Helper 12<sup>30</sup> to 4 = 3 1/2

Dec 6, 1933.

Spillway Floor.

Placing Rein Steel. 1 Steel Foreman } 7<sup>00</sup> to 9<sup>30</sup> = 2 1/2  
1 " Man }

Anchor Holes.

~~12<sup>30</sup> to.~~ 7<sup>00</sup> to 9<sup>30</sup> = 2 1/2  
1 - Compressor 1/2 Compressor  
2 - Jackhammers 1 - Jackhammer  
2 - Drillers 1 - Driller  
1 - Ripper 1/4

\* Dec 7, 1933.

Test Samples Spillway Floor

Mix 6 5x cement Sta. 4+89 to

1250 # Sand Sta 5+01

1340 # 1 1/2" rock 80' N of O.G. toe.

1030 # 3/4" Rock

Nos. 671-672-673

Memo to Mr. Wood on  
excess concrete for  
grading below subgrade

Dec 7, 1933.

Spillway Floor

1 - General Foreman 7<sup>00</sup> to 8<sup>00</sup> 1 hr  
1 - Carpenter Foreman 8<sup>00</sup> to 10<sup>00</sup> 2 hr  
1 - " Helper 10<sup>00</sup> to 12<sup>00</sup> 2 hr  
100 to 200

4 Laborers 7<sup>00</sup> to 8<sup>00</sup> = 1 hr  
2 - Laborers 8<sup>00</sup> to 8<sup>30</sup> 1/2 hr  
1 - Water Tank Truck 1 hr  
1 - Laborer. 5+40 to 5+81  
(Sta 5+63 to 5+23) = 4  
= 37

2nd  
Laying 4" Clay Drain Tile Sta 5+23 to Sta 5+40 = 17  
1 - Carpenter Foreman 8<sup>00</sup> to 8<sup>30</sup> 1/2 hr  
1 - " Helper 10<sup>00</sup> to 10<sup>30</sup> 1/2 hr  
12<sup>30</sup> to 1<sup>00</sup> = 3/4 hr. 9.5

Sta 5+05 from 112' N to 140' N 28  
Grouting Anchor Holes 8<sup>00</sup> to 8<sup>30</sup> = 1/2 hr. 2 Batches

1 - Bow King Truck Mixer

1 - Mixer man 2<sup>00</sup> to 2<sup>30</sup> = 1/2 hr.  
2 - Man Total 1 hr.  
1 - Truck Driver

Hunt Process 1 - Laborer 2<sup>30</sup> to 3<sup>30</sup> = 1 hr

4 1/2  
Placing Rein Steel 7<sup>00</sup> to 11<sup>30</sup> 12<sup>30</sup> to 3 = 2 1/2  
1 - Steel Foreman 1 - Steel man.

1 - " Man  
Bending & Cutting 1 Steel Foreman 2 1/2 hrs. } 1 hr.

Anchor Holes 1 - " Man 10<sup>00</sup> to 2<sup>15</sup> = 3 1/4

1/2 Compressor

1 - Jackhammer

1 - 2 Drillers

Dec 7, 1933 7am to 4pm

Corewall Excavation

- 1- Compressor
- 1- Jackhammer } 2<sup>15</sup> to
- 1- Driller

Dec 7, 1933

O.G. Section

- Removing Forms. 1- carpenter Foreman <sup>200 to 4</sup> = 2 hrs.
- 1- " Helper
  - 2- Laborers.
  - 1- Laborer <sup>1</sup>/<sub>2</sub> hr.

Dec 7, 1933

Corewall Excavation 2<sup>15</sup> to

- 1- Nob Crane
- 1- Truck No 17
- 1- Truck Driver.
- 1- Nob Crane Operator
- 1 Nob Oiler
- 4- Muckers
- 1- Driller

Dec 7, 1933 7am to 4pm

Spillway Floor

- Start 8<sup>30</sup> Finish 2<sup>00</sup> = 4<sup>1</sup>/<sub>2</sub> hrs.
- Mix 6 sy 1:2:4 114 Batches Conc.
- 1 Sta. 4-33 Beg 114' N to 126' N of O.G. Toe
  - to Sta. 4-68 Beg 116' N to 138' N of O.G. Toe
  - 1 Sta. 4-68 Beg 116' N to 138' N of O.G. Toe
  - to Sta. 4-89 Beg 116' N to 140' N of O.G. Toe
  - 1 Sta. 4-89 Beg 116' N to 140' N of O.G. Toe
  - to Sta. 5-01 Beg 116' N to 140' N of O.G. Toe
  - 1 Sta. 5-23 Beg 116' N to 142' N of O.G. Toe
  - to Sta. 5-44 Beg 116' N to 142' N of O.G. Toe

- Equipment:
- 1- Mixing Plant
  - 1- Barber Greene
  - 3- Flow Know Truck Mixers
  - 1- Nob Crane

Mixing 1- Mixer man

- Labor. 3 Men
- App. Supply. 1- Truck Driver
- Conc. Del. 3 Truck Drivers
- Placing Conc. 1- Nob Crane Operator
- 3 Oiler
- 3 Laborers

1- Finisher } 12<sup>30</sup> to 2<sup>30</sup> = 2 hrs.

1- Helper }

Dec 8, 1933 7am to 4pm

Spillway Floor 1-Cor Foreman

Removing Forms 1-Cor Foreman  
1 hr.  
7:00 to 8:00 1- " Helper 8:45 to 9:00  
1- Laborer.

Clean up 1 1/2 hr. 2-Laborers

Wetting 1 1/2 hr. 1-Water Tank Truck  
1-Laborer.

Forms. 1-Cor Foreman 8:00 to 8:45  
3/4 hr. 1- " Helper.

Anchor Hdes. 1/2 Compressor 1:00 to 1:30  
1-Jack Hammer  
1-Driller

Hant Process - 1-Laborer 1-Compressor 2:45 to 4:15

Sta 5+0 Beg 76' N to 110' N of O.G. Tie

to Sta 5+23 Beg 76' N to 112' N of O.G. Tie

including 2 1/2 x 4 Cut off wall of Sta 5+10

• Sta 5+40 Beg 7' N to 76' N of <sup>Base Line</sup> O.G. T

to Sta 5+61 Beg 7' N to 74' N of Base Line

• Sta 5+61 Beg 7' N to 3' N of Base Line

to Sta 5+81 Beg 7' N to 3' N of Base Line

Dec 8, 1933

Spillway Floor

Start 8:45 Finish 11:30 = 2 3/4  
12:30 2:00 1 1/2  
Mix 63x 11:21 119 Batches 4 1/4  
71 1/4

1-Mixing Plant 1300 SX cleaned

1-Barber Greene 8 SX Recovered

1-Truck (wheel empty)

3-Blaw Knox Truck Mixers

1-No 10 Crane - 12:30 to 1:30 = 1

Mixing 1-Mixer Man  
Men  
119  
99  
1071  
1071  
11781

Con Delay 3 Truck Drivers

\*Placing Conc. 3 Laborers.

App. Supply 1 Truck Driver

Finishing 1-Finisher 10:30 to 11:30

1-Helper

\*Placing Conc 1-No 10 Crane Operator } 12:30 to 1:30  
1- " " Oiler }

Dec 8, 1933 7am to 4pm

Core wall Excavation

1- No 6 Crane

1- No 17 Truck

1- Compressor

1- Jackhammer

1- No 6 Crane Operator

1- " " Oiler

1- Driller to 2<sup>00</sup> pm.

5- Muckers to 2 pm.

1- Truck Driver

4- Muckers 2<sup>00</sup> to

Timbering

1- carpenters Helper. 10<sup>00</sup> to

1- Mucker } 2<sup>00</sup> to

1- Driller

Dec 8, 1933 7am to 4pm

J.G. Section

Stripping  
Retaining Forms

1- Corp Helper 9<sup>00</sup> to 10<sup>00</sup> = 1 hr.

1- No 10 Crane

1- No 10 Crane Operator

1- " " Oiler

1- Laborer.

1<sup>30</sup> to 2<sup>30</sup>

2<sup>45</sup> to 4

2- Laborers.

2<sup>00</sup> to 2<sup>30</sup>

3 Laborers

2<sup>30</sup> to 2<sup>45</sup>

1- Carpenter Foreman

3 to 4 = 1 hr.

↓  
Dec 9, 1933 7am to 4pm

Casewall Excavation

1- No 6 Crane

1- No 13 Truck

1- Compressor

2- Jackhammers

1- No 6 Crane Operator

1- " " Oiler

1- Driller

6- Muckers to 11<sup>30</sup>

5- Muckers 12<sup>30</sup> to 1<sup>30</sup>

4- Muckers 1<sup>30</sup> to 4

1- Carpenter Foreman 7 to 4

1- General Foreman 2 hrs.

( " " 2 hrs on Tunnel)

Partial Shut Down.

Bill & Crew Repairing Tunnel.

Spillway Floor.

48

Dec 9, 1933 7am to 4pm.

Anchor Holes. 3 hrs.

$\frac{1}{2}$  Compressor

1- Jackhammer

1- Driller

Clean up 1- Carpenter Foreman. 7<sup>00</sup> to 7<sup>30</sup> =  $\frac{1}{2}$  hr.

✓  
O.G. Section

1- Water Tank Truck

1- Laborer 7<sup>00</sup> to 4

Dec 10, 1933

Sunday

Wet O.G. Section

1- Water Tank Truck }  
1- Laborer } 1 hr.

Hunt Process

1- Compressor }  
1- Laborer } 2 hrs.

Dec 9, 1933.

5 to 1/2 hr. Brickman

work on Corewall Excavation.

Dec 11, 1933

Tunnel Repair

1- Compressor }  
1- Truck & Frame } 8 hrs  
1- Jackhammer }

1- General Foreman 6 hr.  
1- Carpenter Foreman 6 hr.  
1- Driller  
1- Finishers Helper } 8 hrs.  
1- Laborer.

Total time  
1 Laborer 5 1/2 hrs  
2 hrs on power

49

Monday Dec 11, 1933. Jan to 4 pm.

Corewall Excavation

1- No. 10 Crane  
1- No. 13 Truck  
1- Compressor  
2- Jackhammers  
1- No. 10 Operator  
1- " " Driller  
1- Truck Driver  
1- Driller

6 Muckers 7 to 2 = 6 hrs.

5- Muckers 2 to 4 = 2 hrs.

1- Carpenter Foreman }  
1- General Foreman } 1 hr.

O.G. Section

1- Water Tank Truck } 2 to 4 pm = 2 hrs.  
1- Laborer

✓  
Dec 12, 1933 Jan to 4 pm

### Cure wall Excavation

1- No 10 Crane

1- No 13 Truck

1- Compressor

2- Jackhammers

1- Track Driver

1- No 10 Crane Operator

1- " " Oiler

1- Driller

6- Muckers? } 4 Muckers 7<sup>30</sup> to 10<sup>30</sup>  
2 Laborers

5- Muckers, 10<sup>30</sup> to 11<sup>30</sup>

4- Muckers } 12<sup>30</sup> to 4

3- Laborers } 12<sup>30</sup> to 2 = 1<sup>15</sup>

2- Laborers 2 to 4 = 2

### Timbering

1- Carpenter Foreman } 12<sup>30</sup> to

1- General Foreman

50

✓  
Dec 12, 1933

### Tunnel Finishing

1- Truck & Scaffold Frame

1- Finisher

1- Finishers Helper

1- Carpenter Foreman 7 to 11<sup>30</sup>

1- Laborer

1- Driller

### Tunnel Repair

1- Truck

1- Compressor

1- Jackhammer

~~1- Driller - "Olivette"~~

1- Laborer - "Ed" working as driller

1- Laborer "Joe"

1- General Foreman 7 to 11<sup>30</sup>

### O.G. Section

1- water Tank Truck 2 to

1- Laborer



✓ Showers  
Dec 13, 1933 7am to 4pm  
Corewall Excavation

1- No 10 Crane  
1- Truck  
1- Compressor. } 2 hrs  
2- Jackhammers

1- No 10 Crane Operator  
1- " " Oiler  
1- Truck Driver } 2 hrs.  
6- Muckers or laborers

Rain at 9<sup>00</sup> am

✓ Finishing Tunnel Dec 13, 1933  
see Memo from Mr Wood.

(Drill Grout Hole) Dec 13, 1933  
1:2:4 Mix  
✓ Tunnel Repair 5x cement.

✓ Unsettled weather 51  
Dec 14, 1933 7am to 4pm  
Corewall Excavation

1- No 10 Crane  
1- Compressor  
2- Jackhammers  
1- Truck (Delayed 2 hrs)  
1- Handy Truck 1 1/2 Ton 1 hr  
1- Foreman Frank Moulletti  
1- No 10 Crane Operator  
1- " " Oiler  
1- Driller "Tony"  
1- Muckers or laborers to 11<sup>30</sup>  
11- Muckers or laborers 12<sup>30</sup> to 1  
1- Truck Driver  
1- Truck Driver 1 hr. (5x cement used)

Finishing Tunnel. Dec 14, 1933  
Equipment  
1- Truck & Jumbo Frame  
1- Welding Cutting Outfit 2 hr  
Labor  
1- Finisher - 1- Finishers Helper  
Driller 7 to 4  
1- Welder 1- Carpenter Foreman  
1- Laborer  
Tunnel Repair - 2- laborers. ? limits of work

Anchor Holes					
Sta.	Date.	Sta.	Date.	Sta.	Date.
Depth	Depth	Depth	Depth	Depth	Depth
3490	Nov 13 Day a 11 42"	3494	Nov 13 Day a 11 42"	3498	Nov 13 Day a 11 42"
1		1		1	
2		2		2	
3		3		3	
4		4		4	
5		5		5	
6		6		6	
7		7		7	
8		8		8	
9		9		9	
10		10		10	
11		11		11	
12		12		12	
13		13		13	
14		14		14	
15		15		15	
16		16		16	
17		17		17	
18		18		18	
19		19		19	
20		20		20	
21		21		21	
22		22		22	
23		23		23	
24		24		24	
25		25		25	
26		26		26	
27		27		27	
3490	Nov 14 Day a 11 42"	3494	Nov 14 Day a 11 42"	3498	Nov 14 Day a 11 42"
1		1		1	
2		2		2	
3		3		3	
4		4		4	
5		5		5	
6		6		6	
7		7		7	
8		8		8	
9		9		9	
10		10		10	
11		11		11	
12		12		12	
13		13		13	
14		14		14	
15		15		15	
16		16		16	
17		17		17	
18		18		18	
19		19		19	
20		20		20	
21		21		21	
22		22		22	
23		23		23	
24		24		24	
25		25		25	
26		26		26	
27		27		27	
3490	Nov 15 Day a 11 42"	3494	Nov 15 Day a 11 42"	3498	Nov 15 Day a 11 42"
1		1		1	
2		2		2	
3		3		3	
4		4		4	
5		5		5	
6		6		6	
7		7		7	
8		8		8	
9		9		9	
10		10		10	
11		11		11	
12		12		12	
13		13		13	
14		14		14	
15		15		15	
16		16		16	
17		17		17	
18		18		18	
19		19		19	
20		20		20	
21		21		21	
22		22		22	
23		23		23	
24		24		24	
25		25		25	
26		26		26	
27		27		27	
3490	Nov 16 Day a 11 42"	3494	Nov 16 Day a 11 42"	3498	Nov 16 Day a 11 42"
1		1		1	
2		2		2	
3		3		3	
4		4		4	
5		5		5	
6		6		6	
7		7		7	
8		8		8	
9		9		9	
10		10		10	
11		11		11	
12		12		12	
13		13		13	
14		14		14	
15		15		15	
16		16		16	
17		17		17	
18		18		18	
19		19		19	
20		20		20	
21		21		21	
22		22		22	
23		23		23	
24		24		24	
25		25		25	
26		26		26	
27		27		27	
3490	Nov 17 Day a 11 42"	3494	Nov 17 Day a 11 42"	3498	Nov 17 Day a 11 42"
1		1		1	
2		2		2	
3		3		3	
4		4		4	
5		5		5	
6		6		6	
7		7		7	
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19		19		19	
20		20		20	
21		21		21	
22		22		22	
23		23		23	
24		24		24	
25		25		25	
26		26		26	
27		27		27	

Sta	Date	Anchor	Holes	Sta	Date	Anchor	Holes
	Depth	Sta	Depth	Sta	Depth	Sta	Sta
4414		4418		4422		4426	4430
1							4434
2							
3							
4							
5							
6							
7							
8							
9		9		9		9	9
10							
11							
12							
13							
14							
15							
16							
17		18		18		17	
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
		<del>28</del>		<del>29</del>		<del>29</del>	
		29		29		31	31

## Anchor Holes.

Sta.	Date Depth	Sta.	Date Depth	Sta.	Date Depth
4438		4442		4446	
1	Nov 14 Day all 42°				
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22	Nov 23				
23					
24					
25					
26					
27					
28					
29					
30					
31					

3132

## Anchor Holes

Sta.	Date Depth	Sta.	Date Depth	Sta.	Date Depth
4450		4454		4458	
1	Nov 14 Day all 42°				
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					

32

32

33

Sta	Date Depth	Sta	Date Depth	Sta	Date Depth	Sta	Date Depth	Sta	Date Depth	Sta	Date Depth
4462	✓ 1 2 3 4 5 6 7 8 9 10	4466	✓ 1 2 3 4 5 6 7 8 9 10	4470	✓ 1 2 3 4 5 6 7 8 9 10	4474	✓ 1 2 3 4 5 6 7 8 9 10	4478	✓ 1 2 3 4 5 6 7 8 9 10	4482	✓ 1 2 3 4 5 6 7 8 9 10
	Nov 15 all 42"		Nov 15 all 42"				Nov 16 Day all 42"		Nov 16 Day all 42"		Nov 16 Day all 42"
	11 12 13 14 15 16 17 18		Nov 16 Day all 42"		Nov 16 Day all 42"		11 12 13 14 15 16 17 18 19 20 21		Nov 17 all 42"		Nov 17 all 42"
	19	19		19			19	19		19	
	20 21 22 23 24 25 26 27 28 29 30										
	31						Nov 23			Nov 23	
	Nov 23										
	32										
	33	33		33			33	33		34	

Sta.	Date	Sta.	Date	Sta.	Date
	Depth		Depth		Depth
4786	✓ 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	4790	✓ 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	4794	✓ 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
	Nov 16 Day 91142"		Nov 17 91142"		Nov 18
	Nov 23				

Sta.	Date	Sta.	Date	Sta.	Date
	Depth		Depth		Depth
4798	✓ 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	5402	✓ 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	5406	✓ 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
	Nov 18 Day 91142"				
	Dec 4				

Sta	Date Depth	Sta	Date Depth	Sta	Date Depth	Sta	Date Depth	Sta	Date Depth	Sta	Date Depth
5710	6 Feet	<del>5714</del>	<del>5718</del>	<del>5722</del>	<del>5726</del>	<del>5730</del>					
1		16	20	24	28	32					
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19		19	19	19	19	19					
20											
21											
22											
23											
24											
25											
26											
27											
28		28	28	28	28	28					
29											
30											
31											
32											
33											
34											
35											
36											

cut off wall.

bleed

Rec P

Nov 24  
all 42'

Nov 24

Nov 24

Nov 24

Sta	Date	Sta	Date	Sta	Date	Sta	Date	Sta	Date	Sta	Date
✓	Depth	✓	Depth	✓	Depth	✓	Depth	✓	Depth	✓	Depth
36 <del>5+34</del>		40 <del>5+38</del>		44 <del>5+42</del>		5+48		5+52		5+36	
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
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25											
26											
27		27		27							
28											
29											
30											
31											
32											
33											
34											
35											
36 ✓		36 ✓		36 ✓		36 ✓		<del>36</del> 37 ✓		37 ✓	

Nov 25

Dec 4

Dec 8

Dec 1

~~Dec 5~~

~~Dec 5~~

Dec 7

Dec 9

Dec 4

~~Dec 5~~

Dec 5

Dec 7

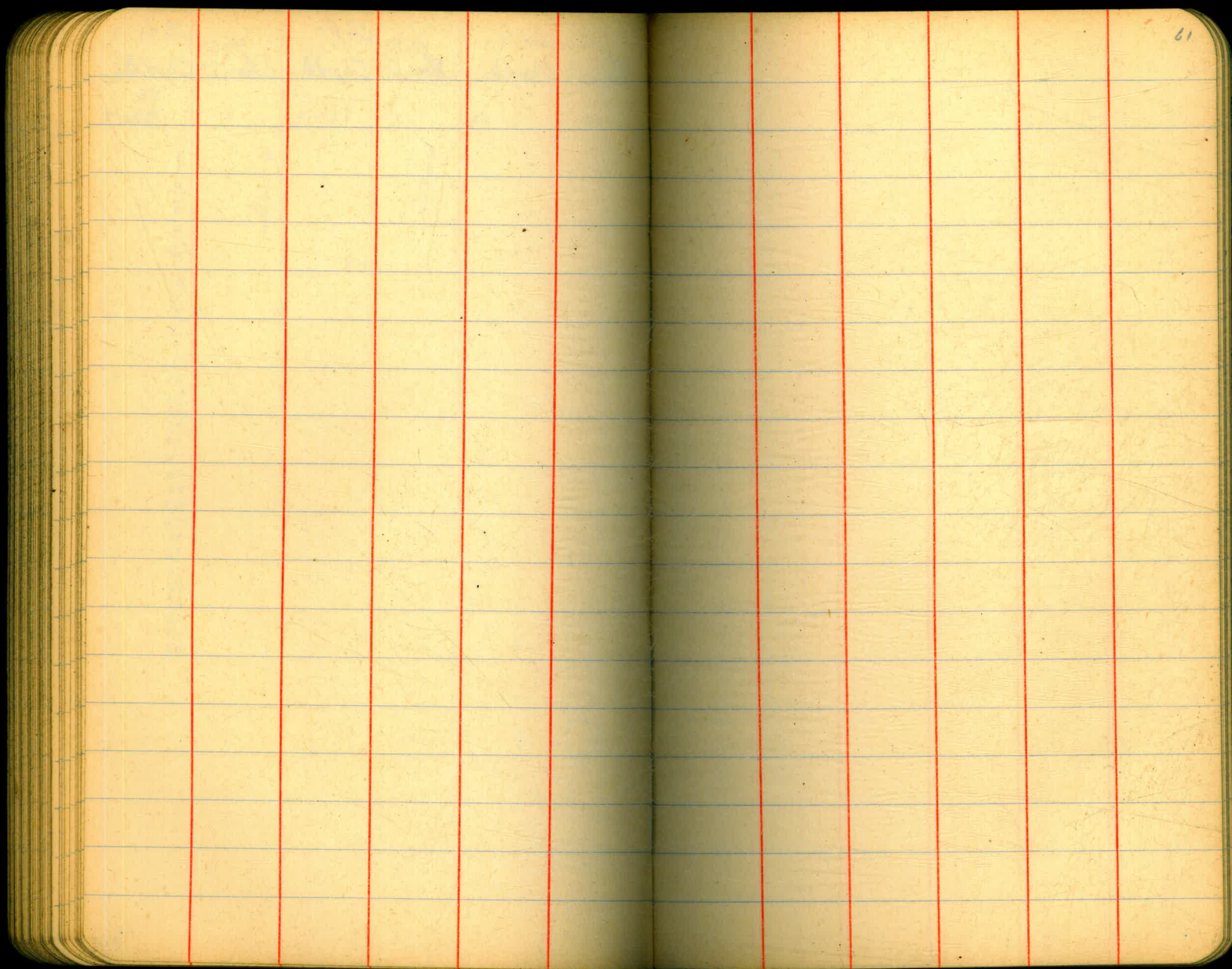
Dec 7

Date 58

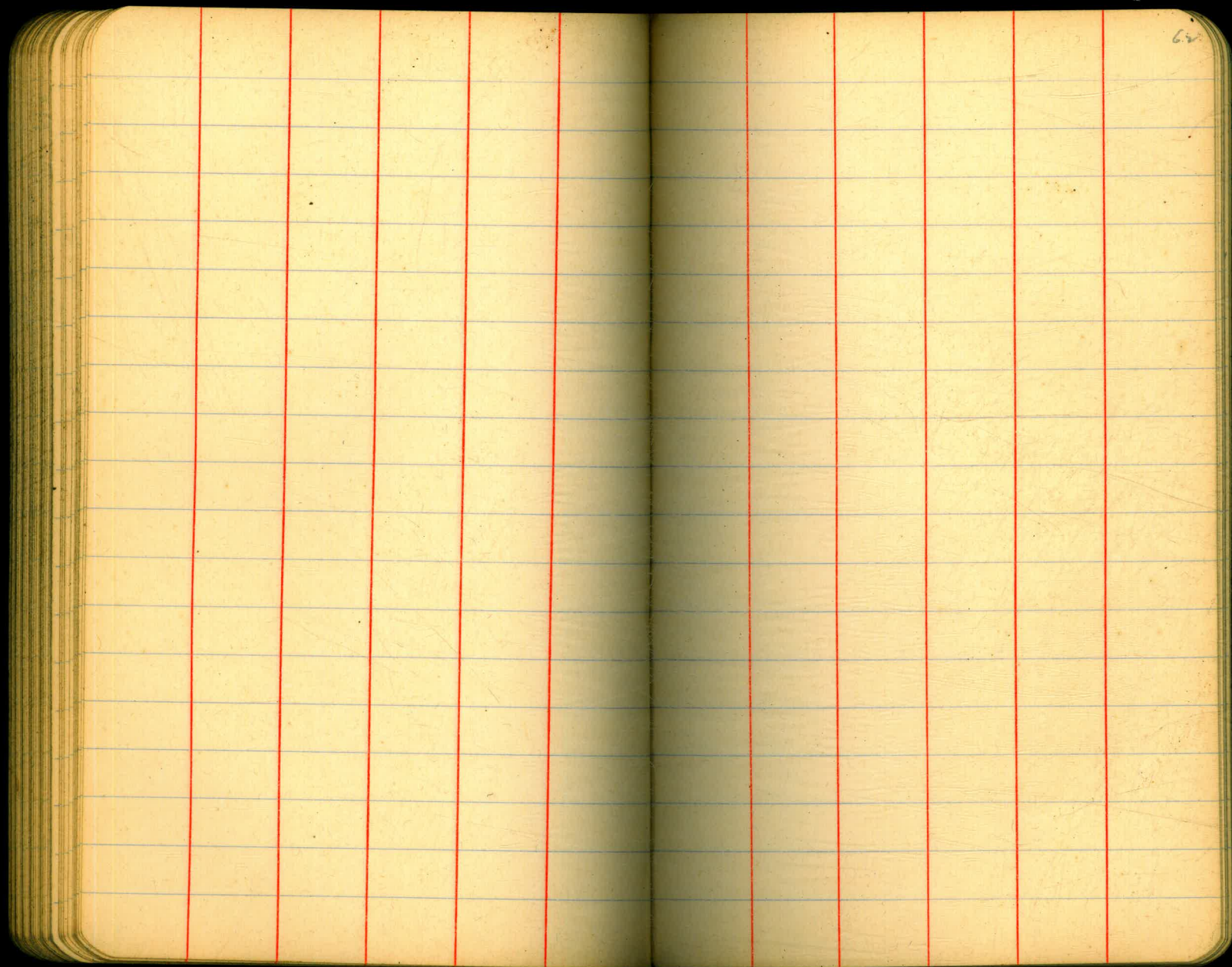


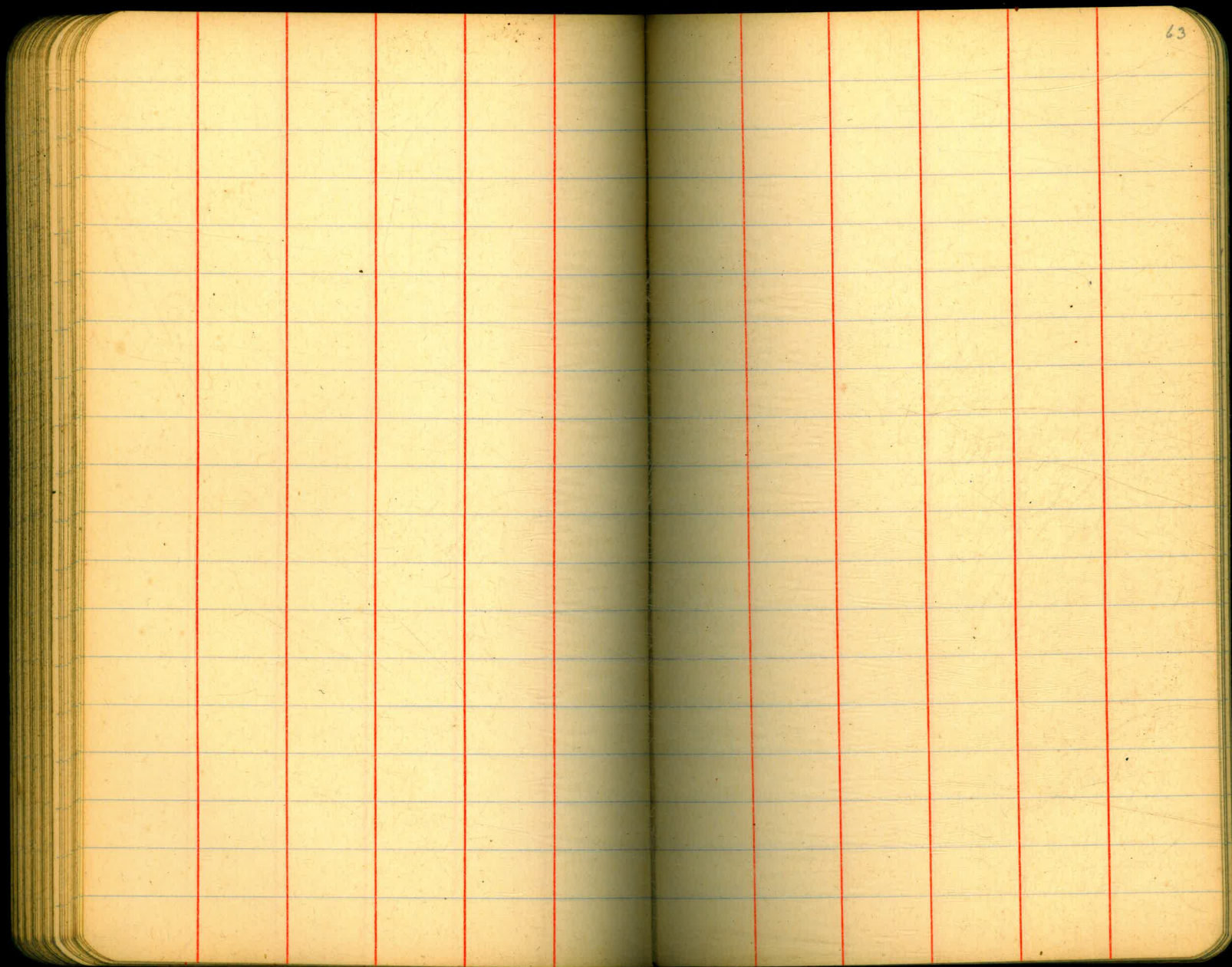


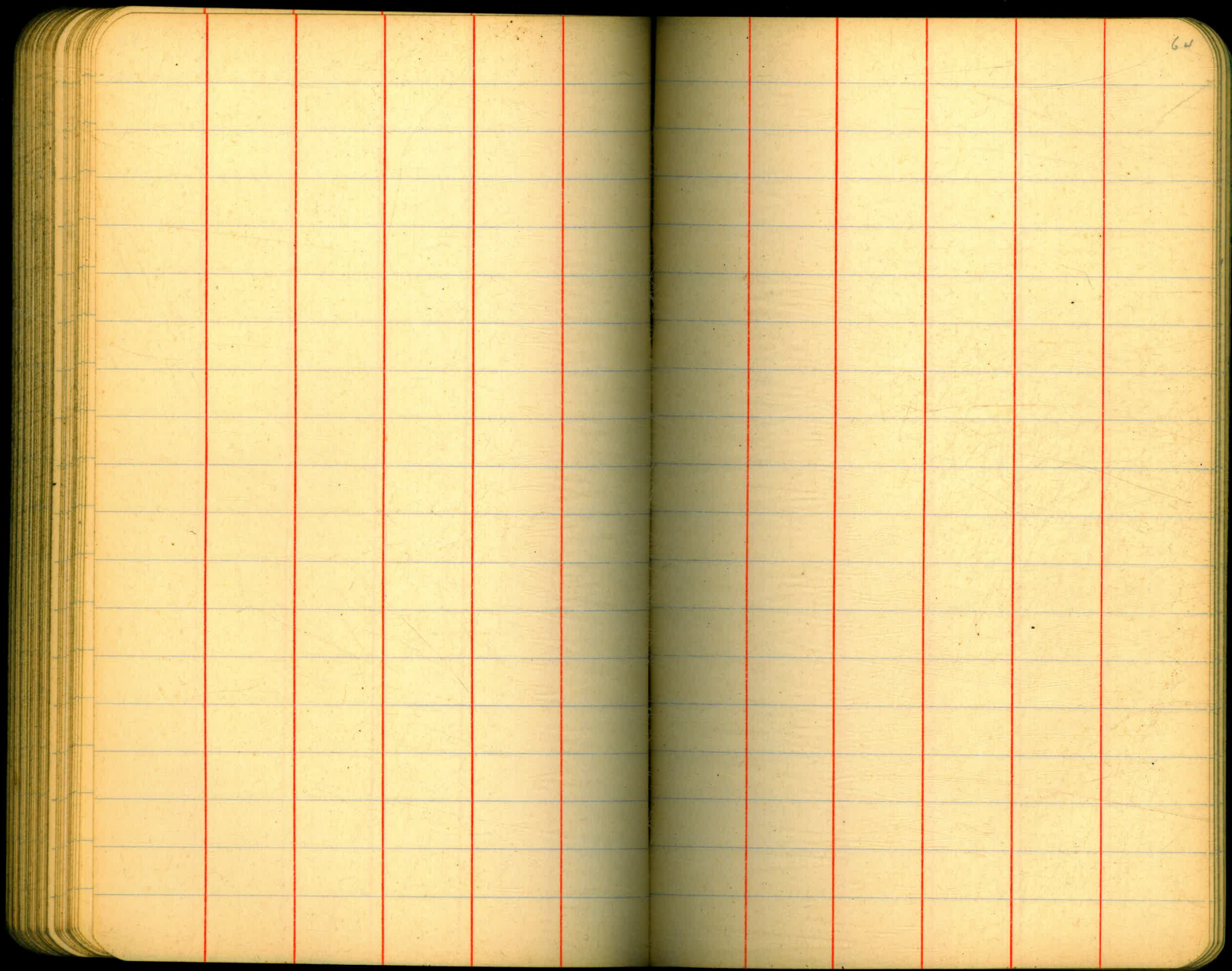




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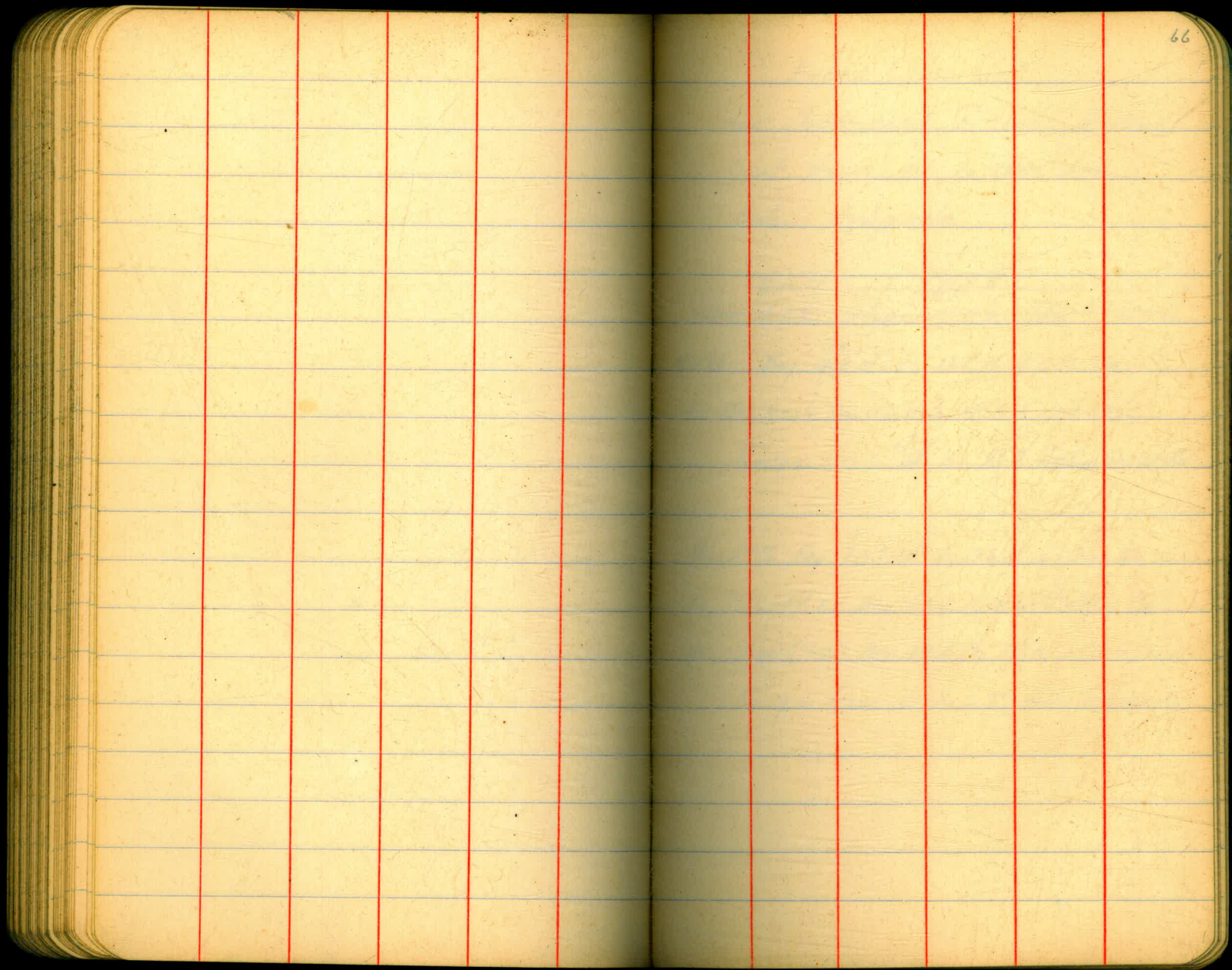






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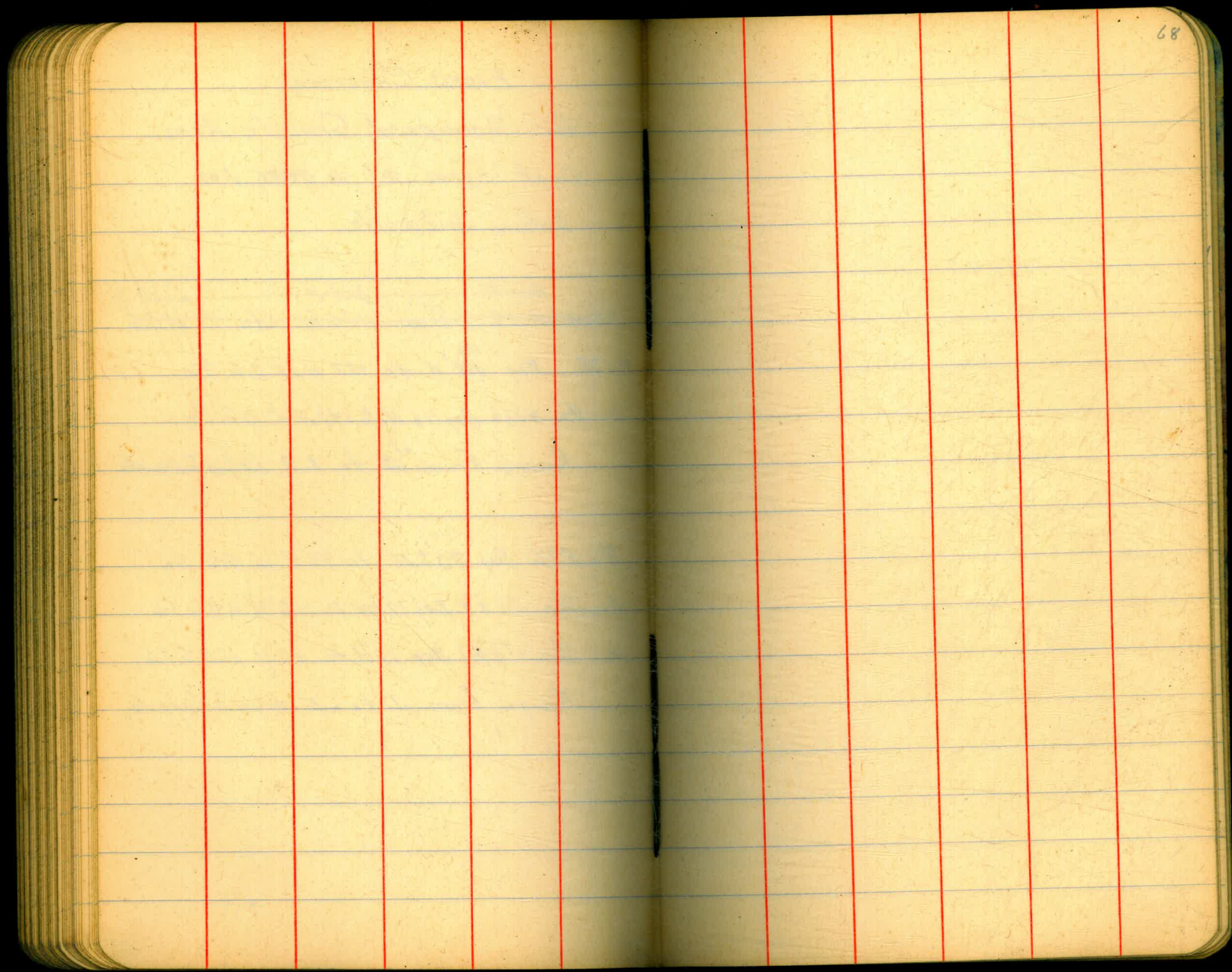


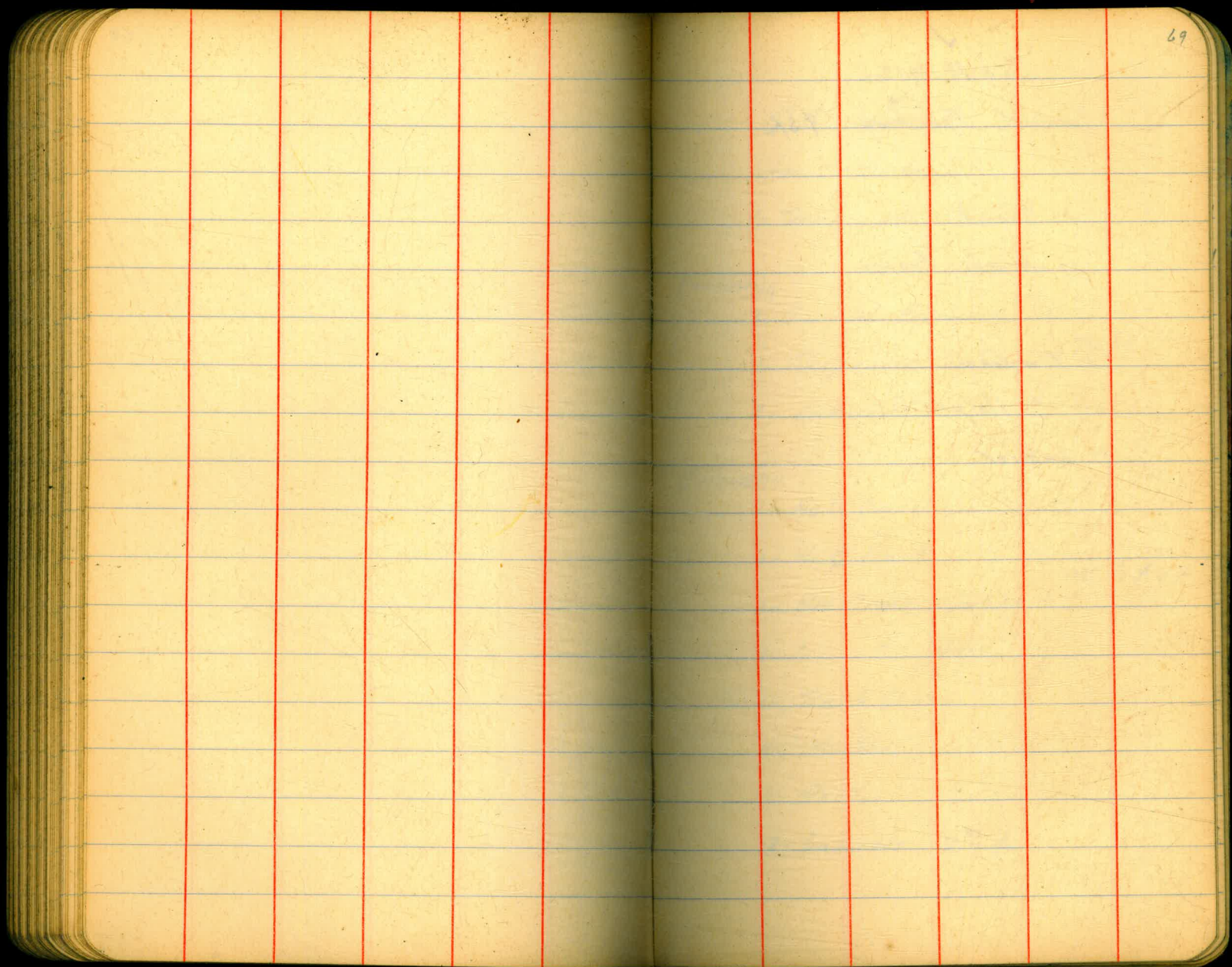


Excess Concrete  
for Decomposed Granite Areas.  
Cast from 0.1 to over 1.00  
below Subgrade.

Dist. N. Sta. of O.G.	Dist. N. Sta. of O.G.	Dist. N. Sta. of O.G.
4438	116' N to 127' N of O.G. Tee.	
	to Sta. 4486	116' N to 140' N of O.G. Tee
Range from $\frac{1}{2}$ to 1.2 below Subgrade		

Sta. 5416	70'± N to 96' N of O.G. Tee
to Sta. 5424	70'± N to 116' N of O.G. Tee
to Sta. 5440	70' N to 88' N of O.G. Tee.
Range from 1 to 1.5 below Subgrade	





✓  
Dec 18, 1933.

Tunnel Finishing 457

1- Truck

1- Jumbo Frame

1- Finisher

1- " Helper

1- Laborer.

Dec 18, 1933.

O.G. Section

Sta 5+10 to

1- Truck 1 hr.

Excavation

1- General Foreman

1- Carpenter Foreman

2- Laborers

} 7<sup>00</sup> to 11

Excavation

1- No 10 Crane

1- No 6 Truck

1- No 10 Crane Operator

1 " " Oiler

1- Truck Driver

4- Muckers

1- Drifter

2- Laborers. 2<sup>30</sup> to

} 11<sup>00</sup> to 1<sup>00</sup> at

✓  
Dec 18, 1933. 7<sup>00</sup> to 11 = 4 hrs.

Corewall Excavation

1- No 10 Crane

1- No 6 Truck

1- Compressor

2- Jack hammer.

1- No 10 Crane Operator

1 " " Oiler

1- Truck Driver

1- Driller 7<sup>00</sup> to 11<sup>00</sup>

4 Muckers.

Drilling Grout Holes 7<sup>00</sup> to 4<sup>00</sup> = 8 hrs.

1- Compressor

1- water Liner

1- Driller

2- Helpers

Timbering - 2 Laborers 11<sup>00</sup> to 2<sup>30</sup>

71  
✓  
Dec 16, 1933

O.G. Section

Stripping & Cleaning

2- laborers 1<sup>00</sup> to 4<sup>00</sup>

Dec 17, 1933

Sunday

✓  
Dec 18, 1933

Corewall

Forms

1- General Foreman } 12<sup>00</sup>

1- Carp Helper }

1- Carp Foreman 11 to

✓  
Dec 16, 1953 7am to 4pm

Tunnel Repair 4 ST

1- Truck + Jumbo frame

1- Finisher

1- " 1-helper

1- laborer

} 7<sup>00</sup> to 9<sup>00</sup> = 2  
10<sup>00</sup> to 12<sup>00</sup> = 2 1/4  
3 to 4

Memo. trying to patch without  
use of Drain pipes. Will have  
to cut out seepage places,  
locate "drain pipe and pack end  
with oakum. re fill with cone.

✓  
Dec 16, 1953 7am to 4pm

Corewall Excavation

1- No 10 Crane

1- No 13 Truck

1- Compressor

2- Jack hammers

1- Crane Operator

1- " Driver

1- Truck Driver

4- Muckers or laborers

1- Driller <sup>200</sup>  
~~12<sup>30</sup>~~ to

Drilling Grout Ables.

1- Sullivan Compressor

1- Water Liner

1- Driller

1- Helper

1- Laborer 12<sup>30</sup> to

Dec 16, 1933 7am to 4pm

Spillway Floor

Cleanup.

1- General Foreman

3- Laborers  $\frac{1}{2}$  hr

Forms 1- Carpenter Foreman

Dec 16, 1933 7am to 4pm

Spillway Floor.

Mix 65x 1:2:4 99 Batches 594 sq

Start 7:30 Finish  $10^00$   $4\frac{1}{2}$  x 5x, closed

1 Mixing Plant x 5x, Recovered

2 Blow Knox Truck Mixers

1- Barber Greene

1- Truck

Moving 1- Mixer man

Men

1- Truck Driver

Concrete Delivery 2 Truck Drivers

Placing Concrete 3 Laborers

1- Finisher } 900 to 1000 - 1

Finishing 1- " Hopper } 1200 to 3000 3

to Sta 5+40 Beg 76' N to 149' N of Base Line

to Sta 5+61 Beg 76' N to 153' N of Base Line

to Sta 5+01 Beg 116' N to 140' N of Base Line

to Sta 5+23 Beg 112' N to 144' N of Base Line incl. cutoff  $2\frac{1}{2} \times 9'$

to Sta 5+23 Beg 112' N to 144' N of Base Line

to Sta 5+41 Beg 112' N to 149' N of Base Line

Hunt Process

1 Compressor 1 Laborer 100 to 300

Dec 15, 1933 Jaw to 4pm  
Tunnel Finishing 6 ss

1- Truck & Jumbo Frame

1-

1- Finisher

1- " Helper

1- Driller

1- Laborer

} 7<sup>00</sup> to 3<sup>00</sup> = 7 hrs

} 8 hrs.

74  
Dec 15, 1933 unsettled weather  
Corewall excavation Jaw to 4pm

1- No 10 crane

1- Truck

1- compressor

2- Jack hammers

} 8 hrs.

1- Foreman

1- Crane operator

1- " Oiler

} 8 hrs.

1- Driller 7<sup>00</sup> to 9<sup>00</sup> = 2 hrs

11- Muckers or Laborers 7 to 8<sup>00</sup> = 1 hr

1- Truck Driver

12<sup>00</sup> to 4 = 3<sup>1</sup>/<sub>2</sub>

9 Muckers or Laborers 8<sup>00</sup> to 10 = 2 hrs

10 Muckers or Laborers 10 to 11<sup>30</sup> = 1<sup>1</sup>/<sub>2</sub>

1- Carpenter Foreman 2 hrs.



Dec 15, 1933. Unsettled & w. roads

Spillway Floor

1- 1 1/2 Ton Truck 1 hr

1- Truck Driver 1 hr

Placing Reinf Steel

1- General Foreman. 7<sup>00</sup> to 11<sup>30</sup> = 4 1/2

1- Carpenter Foreman 7<sup>00</sup> to 8<sup>00</sup>, 10<sup>00</sup> to 12<sup>00</sup> = 3 1/2

2- Laborers. 12<sup>00</sup> to 1<sup>00</sup> = 1 hr

2 1/2- Laborers. 7<sup>00</sup> to 10<sup>00</sup> = 3

4- Laborers. 10<sup>00</sup> to 11<sup>00</sup> = 1 hr

Placing 4" Clay Tile 2nd line

Sta 5+40 to 5+61 = 40'

2- Laborer 7<sup>00</sup> to 10<sup>00</sup> = 3 hr.

Clean up

1- Laborer 12<sup>00</sup> to 1<sup>00</sup> = 1/2

2 1/2- Laborers 8<sup>00</sup> to 10<sup>00</sup> = 2

4- Laborers. 10<sup>00</sup> to 11<sup>30</sup> = 1 1/2

Forms 1- Carpenter Foreman } 8<sup>00</sup> to 10<sup>00</sup> = 2

1- Laborer }

Anchor Hole Grouting

2<sup>00</sup> to 2<sup>30</sup> = 1/2

Start 11<sup>00</sup> to 11<sup>30</sup> = 1/2

1- Blow Gun Truck Mixer

1- Truck Driver

1- Mixer Man

3- Laborers = 1 1/2

4- Laborers - 2<sup>00</sup> to 2<sup>50</sup> = 1/2

Rejected 1/2 10SX Batch of 1/2 Grout.

Too much coarse sand.

4- Batches Grout used 2 1/2

2 1/2 " Rejected

Screening Sand

4- Laborers 12<sup>30</sup> to 2<sup>00</sup> = 1 1/2

1/2 hr.  
1/2  
1/2  
1/2

Dec 15, 1933. From 6 to 4 pm

Spillway Floor

6 sx 1:2:4 40 Batches Conc

Start  $2^{\text{30}}$  Finish  $3^{\text{30}}$  =  $1^{\text{hr}}$   
 $\frac{1^{\text{00}}}{2}$   $\frac{9^{\text{00}}}{2}$  =  $4^{\text{hr}}$

Equip. 1- Mixing Plant  
 2 Blaw Knox Truck Mixer

App Supply. 1- Barber Green & Truck 1- Truck Driver  
 1- General Foreman. 4 hrs.

Labor 1- Mixerman } 2 hrs.  
 4 Men }

Conc Delivery 2 Truck Drivers

Placing Conc. 3 - laborers.

Finishing 1- Finisher }  $3^{\text{00}}$  to  $4^{\text{00}}$  1 hr.  
 1- Finisher Helper }

Sta 5+61 Beg 31' N to 74' N of Base Line

to Sta 5+81 Beg 31' N to 72' N of Base Line

El	718	Sta 4088
	9	12
El	<u>709</u>	4100
cut	- 9	
	700	

Sta 4100 to O.G.

709
cut 3
<u>706</u> $\frac{3}{4}$

## Batch Measures.

55x 1:2½:5 Mass Concrete 1600 min  
Per. Sq. in.

55x Cement

✓ 1250# Sand. (Tests Running upto 2000)

✓ 850# 2½" rock

✓ 970# 1½" rock No over 4" Slump

✓ 770# ¾" rock

1:2:4 Regular. 2000# min.

65x cement. (Tests Running upto 2200)

✓ 1250# Sand.

✓ 1340# 1½" rock

✓ 1030# ¾" rock

Use not over 40 gallons  
added mixing water.  
Use any slump to fit the  
work for workability.

1:2:4 Modified 2000# min.

(Reg. Sand Modified 1400) 75x cement. Tests running up to 2500

1250# Sand 3" Slump in 6" Butter Sec.

1190 1340# 1½" Rock 8" to 9" Slump in 18" wall.

1030 1030# ¾" Rock

## Steel

lap steel 40 diameters

L"	Bars	20"
2 5/8"	"	25"
3/4"	"	30"
7/8"	"	35"
1"	"	40"

Mix Yields.

		yields		cu. yds. per batch.
55x	1:2½:5	1.1		
65x	1:2:4 Modified	0.99	"	"
75x	1:2:4	1.03	"	"
	1:2	0.40	"	"

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

ROADWAY 14 FEET WIDE. SIDE SLOPES  $1\frac{1}{2}$  TO 1.

FOR SINGLE TRACK EMBANKMENT.

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

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

MADE IN GERMANY.