

EL CAPITAN DAM

W
418

DIETZGEN
ENGINEERS

ENGINEERS'
LEVEL BOOK

No. 418

AREAS OF CROSS-SECT'S
ITEM II

NORTH 3320 - 3540

EUGENE DIETZGEN CO.

DRAWING MATERIALS, MATHEMATICAL and
SURVEYING INSTRUMENTS

Chicago New York San Francisco New Orleans Pittsburg Toronto

Distances from Center of Roadway for Cross-Sectioning
Roadway 16 feet wide. Side Slopes 1 on 1.
For Single Track Embankment.

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	0
1	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	1
2	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	2
3	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9	3
4	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	4
5	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9	5
6	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	6
7	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	7
8	16.0	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	8
9	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9	9
10	18.0	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	18.9	10
11	19.0	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.9	11
12	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8	20.9	12
13	21.0	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9	13
14	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.7	22.8	22.9	14
15	23.0	23.1	23.2	23.3	23.4	23.5	23.6	23.7	23.8	23.9	15
16	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8	24.9	16
17	25.0	25.1	25.2	25.3	25.4	25.5	25.6	25.7	25.8	25.9	17
18	26.0	26.1	26.2	26.3	26.4	26.5	26.6	26.7	26.8	26.9	18
19	27.0	27.1	27.2	27.3	27.4	27.5	27.6	27.7	27.8	27.9	19
20	28.0	28.1	28.2	28.3	28.4	28.5	28.6	28.7	28.8	28.9	20
21	29.0	29.1	29.2	29.3	29.4	29.5	29.6	29.7	29.8	29.9	21
22	30.0	30.1	30.2	30.3	30.4	30.5	30.6	30.7	30.8	30.9	22
23	31.0	31.1	31.2	31.3	31.4	31.5	31.6	31.7	31.8	31.9	23
24	32.0	32.1	32.2	32.3	32.4	32.5	32.6	32.7	32.8	32.9	24
25	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	25
26	34.0	34.1	34.2	34.3	34.4	34.5	34.6	34.7	34.8	34.9	26
27	35.0	35.1	35.2	35.3	35.4	35.5	35.6	35.7	35.8	35.9	27
28	36.0	36.1	36.2	36.3	36.4	36.5	36.6	36.7	36.8	36.9	28
29	37.0	37.1	37.2	37.3	37.4	37.5	37.6	37.7	37.8	37.9	29
30	38.0	38.1	38.2	38.3	38.4	38.5	38.6	38.7	38.8	38.9	30
31	39.0	39.1	39.2	39.3	39.4	39.5	39.6	39.7	39.8	39.9	31
32	40.0	40.1	40.2	40.3	40.4	40.5	40.6	40.7	40.8	40.9	32
33	41.0	41.1	41.2	41.3	41.4	41.5	41.6	41.7	41.8	41.9	33
34	42.0	42.1	42.2	42.3	42.4	42.5	42.6	42.7	42.8	42.9	34
35	43.0	43.1	43.2	43.3	43.4	43.5	43.6	43.7	43.8	43.9	35
36	44.0	44.1	44.2	44.3	44.4	44.5	44.6	44.7	44.8	44.9	36
37	45.0	45.1	45.2	45.3	45.4	45.5	45.6	45.7	45.8	45.9	37
38	46.0	46.1	46.2	46.3	46.4	46.5	46.6	46.7	46.8	46.9	38
39	47.0	47.1	47.2	47.3	47.4	47.5	47.6	47.7	47.8	47.9	39
40	48.0	48.1	48.2	48.3	48.4	48.5	48.6	48.7	48.8	48.9	40

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 30.6. For same slopes but other widths of roadbed, correct above figures by one-half difference in width of roadbed; thus in example above, for 20 ft. roadbed distance will be $30.6 + (20 - 16) \div 2$ or 2 ft. added to $30.6 = 32.6$. For slopes of 1 on 1½ see inside of back cover.

Copyright, 1914, by Eugene Dietzgen Co.

418

MICROFILMED

JAN 12 1965

El Capitan Dam.

Index. Pg. 1-67

Computations of Areas of
Cross sections for stripping
under schedule Item 11

The headings "Below down-
stream toe wall, Downstream
rock Emb., Hydraulic fill,
Upstream rock Emb. Above
upstream toe wall," indicate
the part of dam under which
the stripping was done

MICROFILMED

JAN 13 1983

N3320

HYDRAULIC Fill

N 3320 is most south.
 Section of Item 11 except
 at extreme east of upstream
 Rock emb. where it goes
 to N3310 show at end of
 this book. The Item 11
 cut was vertical on this
 section so that Item 3
 must have this same end
 section plus additional area
 in Item 3 cut on this North
 as seen on cross section.

East	Top El.	Bottom El.	Ht.	Mean	Dist.
4980	599.4	590.8	4.3'	8.6'	
90	600.5	90.7	9.8'		
5000	00.7	90.7	10.0'		
10	00.9	90.7	10.2'		
20	00.8	87.6	13.2'		
30	01.7	87.7	14.0'		
40	01.1	88.1	13.0'		
50	01.0	88.7	12.3'		
60	01.2	88.2	13.0'		
70	00.0	90.4	9.6'		
80	99.1	91.5	7.6'		
90	99.1	92.7	6.4'		
100	99.9	92.9	7.0'		
10	00.9	00.9	0.0'		1304.00'

Upstream Rock Emb.

Item 11 Vol. for Finals was Planimeted Areas per Inst
 checked 5-25-38
 R.E.L.

5280	28.4	28.4	0.0'	
90	27.7	22.8	4.9'	
300	28.2	20.4	7.8'	

4/21/35

Note: Some of Cuts in this book were

Subject to change due to subsequent

Checking of Final Striping as plotted on Sec

N3320

Upstream Rock Emb.

East	Top El.	Bottom El.	Ht.	Mean Dist.	
5310	628.6	620.9	7.7 [✓]		
20	29.9	23.2	6.7 [✓]		237.50 [✓]
				7.25 [✓] 4 [✓]	✓29.00 [✓]
24	30.1	22.3	7.8 [✓]		
				3.9 [✓] 7 [✓]	<u>27.30[✓]</u>
31	30.5	30.5	0.0 [✓]		293.80 [✓]

N3330

Hydraulic Fill

4940	599.2	592.6	6.6 [✓]		
50	97.9	91.9	6.0 [✓]	6.3 [✓] 10 [✓]	✓63.00
				3.5 [✓] 5 [✓]	✓17.50
55	97.1	96.1	1.0 [✓]		
				6.5 [✓] 5 [✓]	✓2.50
60	96.2	96.2	0.0 [✓]		
70	96.2	91.8	4.4 [✓]	7.2 [✓] 10 [✓]	✓22.00
				6.8 [✓] 5 [✓]	✓34.00
75	95.9	86.7	9.2 [✓]		
				9.15 [✓] 5 [✓]	✓45.75
80	95.6	86.5	9.1 [✓]		

N3330

2

East Top El. Bottom El. Ht. Mean Dist.

East	Top El.	Bottom El.	Ht.	Mean Dist.	
					Hydraulic Fill
					4.55 [✓]
4980	595.6	586.5	9.1 [✓]		
90	96.5	86.7	9.8 [✓]		
				4.8 [✓]	
5000	96.3	86.7	9.6 [✓]		191.50 [✓]
				9.65 [✓] 5 [✓]	48.25 [✓]
05	96.4	86.7	9.7 [✓]		
				4.8 [✓]	
10	96.6	87.0	9.6 [✓]		
20	95.9	86.6	9.3 [✓]		
30	96.5	87.2	9.3 [✓]		
40	96.6	86.9	9.7 [✓]		
50	96.6	87.2	9.4 [✓]		
60	96.5	87.5	9.0 [✓]		
70	96.2	88.2	8.0 [✓]		
80	95.1	88.1	7.0 [✓]		
90	96.2	87.9	8.3 [✓]		
100	97.0	87.9	9.1 [✓]		
				2.95 [✓]	
10	97.5	91.6	5.9 [✓]		868.50 [✓]
				5.6 [✓] 4 [✓]	22.40 [✓]
14	98.4	93.1	5.3 [✓]		

N3330

Hydraulic Fill

East Top El. Bottom El. Ht. Mean Dist.

5114 598.4 593.1 5.3 ✓

2.65 ✓ 6 ✓

15.90 ✓

20 99.2 99.2 0.0 ✓

1379.55 ✓

Upstream Rock Emb.

5200 601.4 601.4 0.0 ✓

10 04.3 00.9 3.4 ✓

20 08.2 02.6 5.6 ✓

30 11.6 11.3 0.3 ✓

40 14.1 14.1 0.0 ✓

50 17.5 14.1 3.4 ✓

60 18.2 16.8 1.4 ✓

70 22.9 19.6 3.3 ✓

80 23.5 17.8 5.7 ✓

90 23.4 16.6 6.8 ✓

300 24.3 17.2 7.1 ✓

10 25.7 17.2 8.5 ✓

20 27.3 17.5 9.8 ✓

30 27.6 19.3 8.3 ✓

594.50 ✓

N3330

upstream Rock Emb.

5330 27.6 19.3 8.3 ✓

5337 27.5 27.5 0.0 ✓

4.15 ✓ 7 ✓

290.5 ✓

5337 27.5 27.5 0.0 ✓

623.55 ✓

N3340

Hydraulic Fill

4840 595.6 595.6 0.0 ✓

50 95.3 88.1 7.2 ✓

60 94.9 82.7 12.2 ✓

70 93.7 82.8 10.9 ✓

80 93.1 83.7 9.4 ✓

90 93.3 83.6 9.7 ✓

900 92.9 83.5 9.4 ✓

10 92.9 84.2 8.7 ✓

20 93.7 84.6 9.1 ✓

30 93.4 84.8 8.6 ✓

40 92.8 85.9 6.9 ✓

50 93.1 86.1 7.0 ✓

60 93.4 86.2 7.2 ✓

70 94.5 86.0 8.5 ✓

80 2.75 ✓ 5.7 ✓

1176.50 ✓

N3340

Hydraulic Fill

4980	591.6	585.9	5.7	✓		
			5.75	✓	5	28.75
85	91.9	86.1	5.8	✓		
			5.7	✓	4	22.80
89	92.2	86.6	5.6	✓		
			5.55	✓	11	61.05
5000	92.1	86.6	5.5	✓		
			2.75	✓		
10	91.5	86.6	4.9	✓		
20	92.1	86.6	5.5	✓		
30	93.1	86.7	6.4	✓		
			4.85	✓		
40	93.2	83.5	9.7	✓		244.00
40	93.2	79.0	14.2	✓		
			9.85	✓	15	147.75
55	91.9	86.4	5.5	✓		
			5.1	✓	5	25.50
			2.35	✓		
60	91.9	87.2	4.7	✓		
70	91.6	88.2	3.4	✓		
80	91.3	87.4	3.9	✓		
90	91.7	87.3	4.4	✓		

N3340

4

Hydraulic Fill

5100	592.8	587.1	5.7	✓		
10	94.0	87.3	6.7	✓		
			4.05	✓		
20	96.3	88.2	8.1	✓		305.00
			4.05	✓	7	28.35
27	97.5	97.5	0.0	✓		2039.70
upstream Rock Emb.						
5200	598.5	598.5	0.0	✓		
10	602.1	96.1	6.0	✓		
20	05.7	97.6	8.1	✓		
30	08.4	605.9	2.5	✓		
40	11.4	09.9	1.5	✓		
50	13.9	10.1	3.8	✓		
60	15.3	10.3	5.0	✓		
70	17.3	11.7	5.6	✓		
80	18.9	12.4	6.5	✓		
90	19.5	13.6	5.9	✓		
300	20.8	14.7	6.1	✓		
10	22.2	15.1	7.1	✓		

N3340

upstream Rock Emb.

5320	622.3	616.0	6.3	✓	
			3.55	✓	
30	23.0	15.9	7.1	✓	679.50
			6.5	✓	9
				✓	58.50
39	23.4	17.5	5.9	✓	
			2.95	✓	7
				✓	20.65
46	23.8	23.8	0.0	✓	758.65

N3350

Hydraulic Fill

4830	593.4	593.4	0.0	✓
40	91.3	80.6	10.7	✓
50	90.5	81.1	9.4	✓
60	89.7	81.1	8.6	✓
70	89.5	81.8	7.7	✓
80	90.0	82.6	7.4	✓
90	88.6	82.8	5.8	✓
900	88.6	82.3	6.3	✓
10	89.0	82.3	6.7	✓
20	89.5	84.3	5.2	✓

N3350

5

4930	588.7	584.6	4.1	✓	
40	88.3	84.9	3.4	✓	
50	88.2	85.8	2.4	✓	
60	88.1	85.1	3.0	✓	
70	88.3	82.1	6.2	✓	
80	88.0	77.4	10.6	✓	
			6.45	✓	
90	88.1	75.2	12.9	✓	1039.50
			13.55	✓	1
				✓	13.55
91	88.1	73.9	14.2	✓	
			14.0	✓	9
				✓	126.00
5000	87.7	73.9	13.8	✓	
			13.65	✓	7
				✓	95.55
07	87.4	73.9	13.5	✓	
			13.05	✓	1
				✓	13.05
08	87.3	74.7	12.6	✓	
			12.3	✓	12
				✓	147.60
20	87.7	75.7	12.0	✓	
			11.45	✓	5
				✓	57.25
25	88.0	77.1	10.9	✓	

				11.8 ✓	5 ✓	59.00 ✓
5030	588.3	575.6	12.7 ✓	6.35 ✓		
40	89.2	72.3	16.9 ✓	7.65 ✓		
50	88.5	73.2	15.3 ✓			309.00 ✓
				14.35 ✓	5 ✓	71.75 ✓
55	88.2	74.8	13.4 ✓			
				9.4 ✓	5 ✓	47.00 ✓
60	88.0	82.6	5.4 ✓	2.7 ✓		
70	87.7	79.9	7.8 ✓			
80	87.9	81.3	6.6 ✓			
90	88.0	82.8	5.2 ✓			
100	89.2	86.7	2.5 ✓			
10	91.6	86.2	5.4 ✓			
20	92.7	85.8	6.9 ✓	3.45 ✓		336.50 ✓
				7.15 ✓	5 ✓	35.75 ✓
25	93.5	86.1	7.4 ✓			
				6.15 ✓	5 ✓	30.75 ✓
30	94.4	89.5	4.9 ✓			
				2.45 ✓	3 ✓	7.35 ✓
33	94.7	94.7	0.0 ✓			

5170	596.5	596.5	0.0 ✓			
80	94.8	94.7	0.1 ✓	0.05 ✓	10 ✓	0.50 ✓
						2390.10 ✓
						upstream Rock Emb.
5180	94.8	94.7	0.1 ✓	0.05 ✓		
90	95.2	91.8	3.4 ✓			
200	97.2	94.5	2.7 ✓			
10	601.0	95.1	5.9 ✓			
20	03.2	95.4	7.8 ✓			
30	04.5	99.6	4.9 ✓			
40	08.1	605.8	2.3 ✓			
50	09.9	07.9	2.0 ✓			
60	12.1	07.7	4.4 ✓			
70	15.4	08.2	7.2 ✓			
80	14.7	09.2	5.5 ✓			
90	16.0	10.8	5.2 ✓			
300	17.0	12.8	4.2 ✓			
10	17.7	12.2	5.5 ✓			
20	18.8	14.2	4.6 ✓			
30	19.4	14.8	4.6 ✓			

N3350

5340	619.4	613.6	5.8 ✓		
50	19.5	14.4	2.55 ✓ 5.1 ✓		786.00 ✓
				2.55 ✓ 5 ✓	12.75 ✓
55	20.7	20.7	0.0 ✓		798.75 ✓

N3360

Hydraulic Fill

4810	591.1	591.1	0.0 ✓		
20	89.4	82.1	7.3 ✓	3.65 10 ✓	36.50 ✓
				8.45 ✓ 5 ✓	42.25 ✓
25	88.2	78.6	9.6 ✓		
				9.05 ✓ 5 ✓	45.25 ✓
30	87.1	78.6	4.25 ✓ 8.5 ✓		
40	88.2	79.0	9.2 ✓		
50	87.5	79.7	7.8 ✓		
60	86.1	79.4	6.7 ✓		
70	85.5	74.8	10.7 ✓		
80	85.6	72.8	12.8 ✓		
90	85.1	74.3	10.8 ✓		

N3360

7

4900	586.1	575.0	11.1 ✓		
10	84.9	76.9	8.0 ✓		
20	84.6	78.4	6.2 ✓		
30	85.3	80.3	5.0 ✓		
40	84.4	80.7	3.7 ✓		
50	84.9	79.8	5.1 ✓		
60	84.8	73.4	11.4 ✓		
70	83.9	71.9	12.0 ✓		
80	85.1	72.1	13.0 ✓		
90	84.5	71.6	6.45 ✓ 12.9 ✓		1442.00 ✓
				13.35 ✓ 7	93.45 ✓
					120.15 ✓
				13.8 ✓ 6 ✓	82.80 ✓
5003	84.1	70.3	13.8 ✓		
				13.7 ✓ 7 ✓	95.90 ✓
10	84.5	70.9	6.8 ✓ 13.6 ✓		
20	84.7	70.3	14.4 ✓		
30	85.7	70.1	15.6 ✓		
40	84.4	70.2	14.2 ✓		

N3360

5050	585.2	570.6	14.6	✓		
60	85.5	72.8	12.7	✓		
70	84.8	73.4	11.4	✓		
80	84.9	75.4	4.75 9.5	✓	944.50	
			7.6	5	38.00	
85	85.1	79.4	5.7	✓		
			5.6	5	28.00	
90	85.3	79.8	5.5	✓		
100	86.4	83.2	3.2	435	10	43.50
			2.4	5	12.00	
05	87.6	86.0	1.6	✓		
			2.3	5	11.50	
10	88.9	85.9	1.5 3.0	✓		
20	89.7	85.6	4.1	✓		
30	91.2	84.9	3.15 6.3	✓	87.50	
			6.4	5	32.00	
35	91.5	85.0	6.5	✓		
			4.8	5	24.00	
40	91.8	88.7	3.1	✓		

40

N3360

8

						3.1	1.55	5	7.75
5145	592.3	592.3	0.0	✓					3066.90
									3093.60
									Upstream Rock Emb.
5180	90.9	87.9	1.5 3.0	✓					
90	92.7	90.5	2.2	✓					
200	96.4	91.4	5.0	✓					
10	98.9	92.2	6.7	✓					
20	600.5	93.7	6.8	✓					
30	02.1	94.4	7.7	✓					
40	03.7	97.8	5.9	✓					
50	05.3	03.7	1.6	✓					
60	08.4	05.3	3.1	✓					
70	10.4	06.1	4.3	✓					
80	10.7	06.9	3.8	✓					
90	11.7	07.8	3.9	✓					
300	12.9	07.1	5.8	✓					
10	14.4	08.4	6.0	✓					
20	15.9	08.7	7.2	✓					
30	16.6	09.2	7.4	✓					
40	16.8	10.7	6.1	✓					

N3360

5350	617.0	611.6	5.4	✓
60	17.5	11.1	3.2 6.4	✓
			3.2	2
62	17.5	17.5	0.0	✓

936.00 ✓

6.40 ✓

942.40 ✓

N3370

Hydraulic Fill

4800	589.0	589.0	0.0	✓
10	86.5	76.3	10.2	✓
20	84.8	76.0	8.8	✓
30	82.9	77.0	5.9	✓
40	82.1	77.8	4.3	✓
50	81.2	75.0	6.2	✓
60	81.6	68.9	6.35 12.7	✓
			14.15	5
65	81.4	65.8	15.6	✓
			15.1	5
70	81.1	66.5	7.3 14.6	✓
80	82.5	66.5	16.0	✓
90	81.4	66.7	14.7	✓

417.50 ✓

70.75 ✓

75.50 ✓

N3370

9

4900	581.7	567.0	14.7	✓
10	82.1	67.9	14.2	✓
20	81.0	68.7	12.3	✓
30	81.1	69.7	11.4	✓
40	81.2	71.1	10.1	✓
50	80.9	70.8	10.1	✓
60	80.8	71.2	9.6	✓
70	81.3	71.7	9.6	✓
80	81.3	71.6	9.7	✓
90	80.3	71.5	4.4 8.8	✓
			9.45	2
92	80.4	70.3	10.1	✓
			10.3	8
5000	80.8	70.3	5.25 10.5	✓
10	80.7	70.3	10.4	✓
20	80.7	69.9	10.8	✓
30	79.9	69.7	10.2	✓
40	81.3	70.4	10.9	✓
50	81.7	70.4	11.3	✓

1441.00 ✓

18.90 ✓

82.40 ✓

N3370

5060	582.3	571.3	11.0	✓
70	82.2	71.6	10.6	✓
80	82.9	72.4	10.5	✓
90	83.6	73.3	10.3	✓
100	83.6	78.9	4.7	✓
10	84.6	84.6	0.0	✓
20	87.2	85.3	1.9	✓
30	87.5	85.0	2.5	✓
40	88.4	84.1	4.3	✓
50	88.9	83.8	5.1	✓
60	88.1	83.5	4.6	✓
70	87.7	87.7	0.0	✓
				1243.50 ✓
				3349.55 ✓
				upstream Rock Emb.
5170	87.7	87.7	0.0	✓
80	88.4	85.5	2.9	✓
90	91.2	88.2	3.0	✓
200	94.8	90.1	4.7	✓
10	95.6	91.6	4.0	✓
20	98.1	92.7	5.4	✓

N3370

10

5230	599.8	592.6	7.2	✓
40	601.0	93.7	7.3	✓
50	03.2	95.8	7.4	✓
60	04.1	99.8	4.3	✓
70	05.3	01.3	4.0	✓
80	07.3	02.1	5.2	✓
90	09.3	05.3	4.0	✓
300	11.2	09.4	1.8	✓
10	11.5	05.9	5.6	✓
20	12.3	05.0	7.3	✓
30	13.3	04.8	8.5	✓
40	13.8	06.9	6.9	✓
50	13.5	08.2	5.3	✓
60	13.3	08.5	4.8	✓
				972.00 ✓
				4.2 ✓ 8 ✓
				33.60 ✓
68	13.0	09.4	3.6	✓
				1.8 ✓ 3 ✓
				5.40 ✓
71	12.8	12.8	0.0	✓
				1011.00 ✓

N 3380
Hydraulic Fill

4790	586.3	586.3	0.0	✓	
800	84.4	74.6	9.8	✓	
10	81.3	74.6	6.7	✓	
20	79.9	75.1	4.8	✓	
30	80.0	73.5	6.5	✓	
40	79.0	67.4	11.6	✓	336.00
			^{5.8}		
			25.3	12.65	5
45	78.5	64.8	13.7	✓	63.25
				13.7	5
					68.50
50	78.0	64.3	13.7	✓	
			^{6.85}		
60	77.6	64.4	13.2	✓	
70	77.8	64.6	13.2	✓	
80	77.5	65.0	12.5	✓	
90	77.4	65.7	11.7	✓	
900	77.9	66.5	11.4	✓	
10	77.3	67.2	10.1	✓	
20	77.4	68.3	9.1	✓	
30	76.9	69.4	7.5	✓	
40	76.8	70.0	6.8	✓	

N 3380

4950	577.1	570.8	6.3	✓	
60	81.1	71.0	10.1	✓	
70	80.8	70.7	10.1	✓	
80	80.4	70.8	9.6	✓	
90	78.6	63.4	15.2	✓	1460.50
			^{7.6}		
			16.45	7	115.15
97	77.4	59.7	17.7	✓	
				17.15	3
					51.45
5000	76.3	59.7	16.6	✓	
				16.65	3
					49.95
03	76.4	59.7	16.7	✓	
				12.35	12
					148.20
15	76.7	68.7	8.0	✓	
				7.85	5
					39.25
20	76.8	69.1	7.7	✓	
			^{3.85}		
30	77.3	69.8	7.5	✓	
40	77.4	69.9	7.5	✓	
50	78.1	70.7	7.4	✓	
60	78.7	71.0	7.7	✓	

N3380

5070	579.2	571.5	7.7	✓
80	79.8	71.8	8.0	✓
90	80.0	71.6	8.4	✓
100	80.1	71.6	8.5	✓
10	80.1	72.0	8.1	✓
20	80.5	79.5	1.0	✓
30	83.9	83.9	0.0	✓
40	84.7	84.2	0.5	✓
50	85.2	83.2	2.0	✓
60	85.1	83.3	1.8	✓
70	85.9	82.8	3.1	✓
upstream Rock Emb.				
70	85.9	82.8	3.1	✓
80	87.1	82.9	4.2	✓
90	89.3	84.9	4.4	✓
5200	91.3	86.1	5.2	✓
10	92.4	88.9	3.5	✓
20	93.8	91.2	2.6	✓
30	95.5	93.4	2.1	✓

815.00 ✓

3147.25 ✓

N3380

12

5240	597.4	592.4	5.0	✓
50	99.7	91.4	8.3	✓
60	600.8	93.2	7.6	✓
70	01.5	95.8	5.7	✓
80	03.8	99.0	4.8	✓
90	05.2	601.1	4.1	✓
300	09.2	04.9	4.3	✓
10	08.3	03.6	4.7	✓
20	08.5	02.9	5.6	✓
30	10.4	02.9	7.5	✓
40	09.5	01.6	7.9	✓
50	09.2	01.5	7.7	✓
60	09.4	01.8	7.6	✓
70	10.1	00.4	9.7	✓
77	09.6	99.6	10.0	✓
83	09.2	09.2	0.0	✓

1092.00 ✓

68.95 ✓

30.00 ✓

1190.95 ✓

N3390

Hydraulic Fill

4780	583.6	583.6	0.0	✓	
			4.75	5	23.75
85	82.5	73.0	9.5	✓	
			9.25	5	46.25
90	81.4	72.4	9.0	✓	
4800	78.9	73.1	5.8	✓	
10	78.6	73.9	4.7	✓	126.50
			3.95	5	19.75
15	78.1	74.9	3.2	✓	
			3.65	5	18.25
20	77.5	73.4	4.1	✓	
30	76.8	63.6	13.2	✓	
40	76.1	63.4	12.7	✓	
50	76.1	63.3	12.8	✓	
60	74.5	62.5	12.0	✓	
70	74.7	62.4	12.3	✓	
80	72.6	61.9	10.7	✓	
90	72.5	62.4	10.1	✓	

N3390

13

4900	572.1	561.6	10.5	✓	
10	72.7	60.3	12.4	✓	
20	72.8	62.3	10.5	✓	
30	72.6	63.4	9.2	✓	
40	72.6	66.7	5.9	✓	
50	74.3	66.8	7.5	✓	
60	76.8	61.7	15.1	✓	
70	76.9	63.1	13.8	✓	
80	76.9	57.6	19.3	✓	
90	74.3	56.4	17.9	✓	1990.00
			19.15	4	76.60
94	74.7	54.3	20.4	✓	
			20.95	13	272.35
5007	75.8	54.3	21.5	✓	
			21.05	3	63.15
10	76.2	55.6	20.6	✓	
20	76.8	62.8	14.0	✓	
30	77.2	70.0	7.2	✓	
40	77.9	69.4	8.5	✓	

N 3390

5050	577.6	569.6	8.0	✓	
60	79.0	69.5	9.5	✓	
70	78.8	72.0	6.8	✓	
80	79.5	71.8	7.7	✓	
90	80.1	71.5	8.6	✓	
100	80.6	71.2	9.4	✓	
10	80.6	71.2	9.4	✓	
20	80.3	71.0	9.3	✓	
30	80.6	70.9	9.7	✓	1135.50
			5.7	✓	28.50
35	80.6	78.9	1.7	✓	
			8.5	✓	42.5
40	80.7	80.7	0.0	✓	
50	81.2	80.8	0.4	✓	
60	83.8	82.1	1.7	✓	
70	84.6	83.0	1.6	✓	29.00
					3833.85

N 3390

14

Upstream Rock Emb.

5170	584.6	583.0	1.6	✓	
			^{0.8}		
80	85.2	82.6	2.6	✓	
90	87.4	81.9	5.5	✓	
200	88.9	83.1	5.8	✓	
10	90.4	84.4	6.0	✓	
20	91.5	89.4	2.1	✓	
30	92.9	91.2	1.7	✓	
40	94.3	92.2	2.1	✓	
50	97.8	93.2	4.6	✓	
60	99.1	94.8	4.3	✓	
70	97.7	91.5	6.2	✓	
80	98.8	93.1	5.7	✓	
90	99.2	96.4	2.8	✓	
300	601.7	98.6	3.1	✓	
10	02.8	99.0	3.8	✓	
20	03.8	00.4	3.4	✓	
30	03.7	01.4	2.3	✓	
40	04.9	99.5	5.4	✓	

N3390

N3400

15

5350	605.7	598.2	7.5	✓	
60	07.0	98.1	8.9	✓	
70	05.1	96.1	9.0	✓	
80	04.8	95.9	8.9	✓	980.50
			9.4	✓	56.40
86	05.2	95.3	9.9	✓	
			4.95	✓	39.60
94	06.0	606.0	0.0		1076.50

4850	571.2	563.8	7.4	✓	
60	70.9	60.6	10.3	✓	
70	71.3	60.1	11.2	✓	
80	71.7	60.1	11.6	✓	
90	71.9	59.6	12.3	✓	
900	72.2	58.7	13.5	✓	
10	72.4	58.8	13.6	✓	
20	72.4	58.6	13.8	✓	
30	72.6	57.9	14.7	✓	
40	72.7	58.8	13.9	✓	
50	72.8	56.5	16.3	✓	
60	72.9	55.3	17.6	✓	
70	73.2	53.9	19.3	✓	
80	73.4	53.5	19.9	✓	
90	74.1	53.9	20.2	✓	
5000	74.3	53.1	21.2	✓	2923.00
					2115
06	74.2	53.1	21.1	✓	126.90
					20.1
10			19.1	✓	8040

N3400

Hydraulic Fill

4770	585.1	585.1	0.0	✓	
80	80.8	70.7	10.1	✓	
90	78.8	70.8	8.0	✓	
800	78.0	72.3	5.7	✓	
10	76.4	68.8	7.6	✓	
20	75.3	63.3	12.0	✓	
30	74.7	61.9	12.8	✓	
40	72.7	62.8	9.9	✓	

N 3400

50	10	574.2	555.1	^{9.55} 19.1 ✓
20		74.0	54.1	19.9 ✓
30		74.1	54.9	19.2 ✓
40		74.8	56.7	18.1 ✓
50		75.4	57.5	17.9 ✓
60		76.0	56.9	19.1 ✓
70		76.3	60.6	15.7 ✓
80		76.5	68.7	7.8 ✓
90		77.0	72.4	4.6 ✓
100		77.5	71.7	5.8 ✓
10		77.5	71.0	6.5 ✓
20		79.8	70.9	8.9 ✓
30		80.5	70.0	10.5 ✓
40		80.5	70.4	10.1 ✓
50		81.1	79.7	1.4 ✓
60		81.4	79.6	1.8 ✓
70		82.4	82.1	^{0.15} 0.3 ✓

1770.00 ✓

4900.30 ✓

N 3400

16

upstream Rock Emb.

5170	582.4	582.1	^{0.15} 0.3
80	83.1	81.6	1.5 ✓
90	84.7	80.8	3.9 ✓
200	86.4	80.5	5.9 ✓
10	87.5	80.6	6.9 ✓
20	88.9	83.5	5.4 ✓
30	89.9	86.1	3.8 ✓
40	90.7	88.0	2.7 ✓
50	91.7	90.4	1.3 ✓
60	93.0	91.6	1.4 ✓
70	94.1	90.8	3.3 ✓
80	95.2	91.0	4.2 ✓
90	96.4	90.4	6.0 ✓
300	98.0	90.8	7.2 ✓
10	98.9	89.6	9.3 ✓
20	600.2	89.2	11.0 ✓
30	599.6	89.3	10.3 ✓
40	600.2	91.6	8.6 ✓

N3400

5350 600.3 594.8 5.5 ✓

60 599.0 96.3 2.7 ✓

70 600.0 94.9 5.1 ✓

80 00.6 93.3 7.3 ✓

90 00.4 91.8 8.6 ✓

9.25 ✓ 9 ✓

99 01.5 91.6 9.9 ✓

4.95 ✓ 6 ✓

5405 601.6 601.6 0.0

11 77.50 ✓

83.25 ✓

29.70 ✓

12 90.45 ✓

N3410
Hydraulic Fill

17

East	Top El.	Bottom	Ht.	Man	Dist
4765	582.7	582.7	0.0		
70	81.6	78.6	1.5 ✓	1.5 ✓	5 ✓
80	78.4	69.1	3.0 ✓		7.50 ✓
90	76.5	69.8	9.3 ✓		
90	76.5	69.8	6.7 ✓		
A800	75.6	65.0	10.6 ✓		
10	74.3	62.2	12.1 ✓		
20	72.1	60.9	11.2 ✓		
30	69.9	61.1	8.8 ✓		
40	70.3	61.9	8.4 ✓		
50	70.6	59.5	11.1 ✓		
60	70.9	59.1	11.8 ✓		
70	71.1	58.7	12.4 ✓		
80	71.2	58.6	12.6 ✓		
90	71.3	58.1	13.2 ✓		
4900	71.2	57.8	13.4 ✓		
10	71.1	56.8	14.3 ✓		
20	71.2	55.7	15.5 ✓		
30	71.7	55.6	16.1 ✓		
40	71.2	52.7	18.5 ✓		

N 3410
Hydraulic Fill.

4950	65.4	51.7	137	✓	
60	62.9	51.9	110	✓	
70	68.6	52.3	163	✓	
80	64.8	52.0	128	✓	
90	65.6	51.6	140	✓	2683.00
			14.4	✓ 2	28.80
92	65.7	50.9	148	✓	
			15.8	✓ 8	120.00 126.40
5000	66.1	50.9	15.2	✓	
			18.6	✓ 10	186.00
10	72.9	50.9	22.0	✓	
			22.5	✓ 1	22.50
14	72.9	49.9	23.0	✓	
			23.9	✓ 9	215.10
20	73.1	48.3	24.8	✓	
			12.4	✓	
30	73.4	49.2	24.2	✓	
40	73.4	49.2	24.2	✓	
50	72.8	47.6	25.2	✓	
60	74.3	52.4	21.9	✓	
70	74.7	54.6	20.1	✓	

N 3410
Hydraulic Fill

18

5080	75.3	57.6	177	✓	
90	75.4	63.3	12.1	✓	
5100	75.4	65.3	10.1	✓	
10	76.2	67.7	8.5	✓	
20	76.9	70.9	6.0	✓	
30	77.6	70.0	7.6	✓	
40	78.4	69.1	9.3	✓	
50	79.6	68.7	10.9	✓	
60	80.2	69.9	10.3	✓	
			5.15	✓	
			2153.50	✓	
			5422.80	✓	
			Emb. 5416.40	✓	
			5.15	✓	
60	80.2	69.9	10.3	✓	
70	80.3	74.3	6.0	✓	
80	80.1	79.9	0.2	✓	
90	82.2	79.8	2.4	✓	
5200	83.0	79.7	3.3	✓	
10	84.5	79.6	4.9	✓	
20	85.7	78.6	7.1	✓	
30	87.1	81.0	6.1	✓	
40	87.6	84.0	3.6	✓	
50	88.5	86.6	1.9	✓	

N3410
Upstream Rock Emb.

5260	89.5	88.4	1.1	✓	
70	91.1	89.4	1.7	✓	
80	92.5	90.6	1.9	✓	
90	93.1	90.3	2.8	✓	
5300	93.3	89.1	4.2	✓	
10	94.3	88.5	5.8	✓	
20	93.8	87.6	6.2	✓	
30	94.9	86.8	8.1	✓	
40	94.5	86.7	7.8	✓	
50	95.1	86.4	8.7	✓	
60	95.2	88.0	7.2	✓	
70	95.5	90.6	4.9	✓	
80	96.6	91.7	4.9	✓	
90	99.2	89.3	9.9	✓	
5400	97.6	88.8	8.8	✓	
10	99.0	87.3	11.7	✓	
20	98.4	87.8	10.6 ^{5.3}	✓	1416.50
			5.3	✓	37.10
27	97.9	97.9	0.0		1453.60

N3420
Downstream Rock Emb.

19

East	Top El	Bottom	Ht	Man Dist	
4499.5	5763	563.5	128	✓	
				15.0	7.5 ✓ 112.50 ✓
4507	77.8	60.6	17.2	✓	
				8.6	3 ✓ 25.80 ✓
10	78.6	78.6	0.0		138.30 ✓
					Hydraulic Fill.
4760	80.0	80.0	0.0	✓	
				5.6	5 ✓ 28.00 ✓
65	79.2	68.0	11.2	✓	
				10.8	5 ✓ 54.00 ✓
70	78.4	68.0	10.4 ^{5.2}	✓	
80	76.1	68.3	7.8	✓	
90	74.4	70.0	4.4	✓	
4800	71.6	61.7	9.9	✓	
10	69.7	60.5	9.2	✓	
20	69.8	60.6	9.2	✓	
30	69.9	60.6	9.3	✓	
40	70.2	60.9	9.3	✓	
50	70.2	59.2	11.0	✓	

N3420
Hyd. Fill.

4860	69.9	59.0	10.9	✓
70	70.2	58.7	11.5	✓
80	70.1	58.2	11.9	✓
90	69.8	57.8	12.0	✓
4900	69.8	57.1	12.7	✓
10	65.1	55.7	9.4	✓
20	61.4	53.9	7.5	✓
30	59.1	52.2	6.9	✓
40	58.5	51.4	7.1	✓
50	58.2	51.0	7.2	✓
60	58.5	50.3	8.2	✓
70	60.1	49.7	10.4	✓
80	58.6	49.4	9.2	✓
90	59.1	49.5	9.6	✓
			10.3	✓ 7
97	59.1	48.1	11.0	✓
97			11.05	✓ 3
5000	59.2	48.1	11.1	✓
			11.2	✓ 8
5008	59.4	48.1	11.3	✓

20 50.00

72.10
70.29

33.15

89.60

N3420
Hyd. Fill.

20

5008	59.4	48.1	11.3	✓
			11.05	✓ 2
10	59.5	48.7	10.8	✓
20	61.5	47.3	14.2	✓
30	62.8	46.7	16.1	✓
40	67.6	46.1	21.5	✓
50	73.1	45.1	28.0	✓
60	73.2	49.3	23.9	✓
70	73.4	52.4	21.0	✓
90	74.9	53.7	21.2	✓
90	73.8	56.4	17.4	✓
5100	74.7	62.1	12.6	✓
10	74.5	59.6	14.9	✓
20	75.4	58.2	17.2	✓
30	75.8	67.7	8.1	✓
40	76.4	68.6	7.8	✓
50	77.3	68.2	9.1	✓
60				
70	77.3	69.3		
80	80.1	69.6		

2338.50

4687.45
4685.62

N3420
Upstream Rock Emb.

5150	77.3	68.2	4.55 9.1	✓
60	78.3	68.7	9.6	✓
70	79.3	69.3	10.0	✓
80	81.0	69.6	11.4	✓
90	79.5	74.0	5.5	✓
5200	78.9	78.7	0.2	✓
10	80.4	78.9	1.5	✓
20	82.2	77.5	4.7	✓
30	83.1	78.8	4.3	✓
40	84.6	80.4	4.2	✓
50	85.3	82.1	3.2	✓
60	86.1	82.8	3.3	✓
70	87.0	83.8	3.2	✓
80	89.3	86.1	3.2	✓
90	90.6	90.4	0.2	✓
5300	89.4	84.5	4.9	✓
10	89.2	86.1	3.1	✓
20	89.4	86.7	2.7	✓
30	91.4	86.1	5.3	✓
40	90.6	86.1	4.5	✓

N3420
Upstream Rock Emb

21

5350	91.6	86.1	5.5	✓	
60	91.1	85.6	5.5	✓	
70	91.3	83.4	7.9	✓	
80	91.7	84.1	7.6	✓	
90	91.7	85.2	6.5	✓	
5400	92.3	84.8	7.5	✓	
10	93.2	83.9	9.3	✓	
20	92.6	84.3	8.3	✓	
30	92.7	84.0	4.35 8.7	✓	1520.00
			8.7	3	26.10
33	92.8	84.1	8.7	✓	
			4.35	7	30.45
					31.05
40	93.0	93.0	0.0	✓	1576.55
					1577.15
Above Upstream Toe wall					
5540	83.4	83.4	0.0	✓	
			1.55	10	15.50
50	81.8	78.7	3.1	✓	
50	81.8	75.0	6.8	✓	
			6.6	6	39.60
56	81.4	75.0	6.4	✓	

N 3420
Above Upstream toe wall.

5456	81.4	75.0	6.4	✓		
			5.55	✓	4	✓
					22.20	✓
60	81.2	76.5	4.7	✓		
			3.7	✓	10	✓
					37.00	✓
70	82.3	79.6	2.7	✓		
			1.35	✓	10	✓
					13.50	✓
80	79.3	79.3	0.0			
					127.80	✓

N 3430
Downstream Rocks Emb
East

22

1489.3	574.5	554.0	20.5	✓		
			20.15	✓	18.7	✓
					376.80	✓
4508	77.5	57.7	19.8	✓		
			15.0	✓	2	✓
					30.00	✓
10	77.9	67.7	10.2	✓		
			5.1	✓	5	✓
					25.50	✓
15	78.0	78.0	0.0	✓		
					432.30	✓

Hydraulic Fill

H710	83.3	83.3	0.0	✓		
			3.95	✓	4	✓
					15.80	✓
14	82.5	74.6	7.9	✓		
			7.85	✓	6	✓
					47.10	✓
20	81.4	73.6	7.8	✓		
			3.9	✓		
30	81.3	74.0	7.3	✓		
40	80.5	70.0	10.5	✓		
50	78.7	68.2	10.5	✓		
60	76.8	67.1	9.7	✓		
70	75.5	67.3	8.2	✓		

N 3430
Hyd. Fill.

4780	72.7	67.8	4.9	✓
90	69.3	67.2	2.1	✓
4800	69.5	61.0	8.5	✓
10	69.2	60.4	8.8	✓
20	69.0	60.0	9.0	✓
30	69.1	60.4	8.7	✓
40	69.1	60.4	8.7	✓
50	64.6	59.6	5.0	✓
60	64.6	59.2	5.4	✓
70	62.2	58.8	3.4	✓
80	60.1	58.7	1.4	✓
90	60.0	58.8	1.2	✓
4900	58.4	57.2	1.2	✓
10	57.6	56.1	1.5	✓
20	57.3	54.0	3.3	✓
30	57.4	52.2	5.2	✓
40	57.6	50.4	7.2	✓
50	57.5	49.4	8.1	✓
60	57.5	49.4	8.1	✓
70	58.6	48.7	9.9	✓

N 3430
Hyd. Fill.

23

4980	58.8	48.3	10.5	✓	
90	59.2	48.2	11.0	✓	
			5.5	✓	
			11.25	✓ 2	
				22.50	✓
92	59.2	47.7	11.5	✓	
			11.7	✓ 8	
				93.60	✓
5000	59.1	47.2	11.9	✓	
			5.95	✓	
10	59.1	47.2	11.9	✓	
20	59.1	47.5	11.6	✓	
30	59.5	46.4	13.1	✓	
40	60.5	45.6	14.9	✓	
50	64.5	45.2	19.3	✓	
60	72.2	47.5	24.7	✓	
70	72.4	50.6	21.8	✓	
80	72.8	50.9	21.9	✓	
90	72.9	53.6	19.3	✓	
5100	73.2	59.0	14.2	✓	
10	73.4	60.3	13.1	✓	
20	73.8	53.1	20.7	✓	
30	74.4	57.9	16.5	✓	
40	75.0	63.4	11.6	✓	

N 3430
Hyd. Fill.

2447.00 ✓

5150 75.6 67.3 4.15 ✓
8.3 ✓

4403.00 ✓

Upstream Rock Emb.

5150 75.6 67.3 4.15 ✓
8.3 ✓

60 76.3 68.5 7.8 ✓

70 76.4 68.6 7.8 ✓

80 77.9 68.8 9.6 ✓

90 78.8 67.7 11.1 ✓

5200 79.4 67.6 11.8 ✓

10 78.8 69.9 8.9 ✓

20 78.6 72.9 5.7 ✓

30 79.6 70.6 9.0 ✓

40 81.4 70.0 11.4 ✓

50 82.1 75.2 6.9 ✓

60 82.8 76.7 6.1 ✓

70 83.0 78.1 4.9 ✓

80 83.6 79.2 4.4 ✓

90 84.6 79.7 4.9 ✓

5300 84.4 78.4 6.0 ✓

10 85.2 81.2 4.0 ✓

20 85.7 82.1 3.6 ✓

N 3430

Upstream Rock Emb.

24

5330 85.6 80.3 5.3 ✓

40 86.0 79.6 6.4 ✓

50 87.0 80.0 7.0 ✓

60 87.1 80.1 7.0 ✓

70 87.6 80.7 6.9 ✓

80 87.7 78.9 8.8 ✓

90 87.8 78.5 9.3 ✓

5400 88.3 80.0 8.3 ✓

10 90.4 81.1 9.3 ✓

20 89.5 81.6 7.9 ✓

30 89.7 81.9 7.8 ✓

40 89.0 81.2 7.8 ✓

2159.50 ✓

7.85 ✓ 5 ✓ 39.25 ✓

45 89.1 81.2 7.9 ✓

3.95 ✓ 7 ✓ 27.65 ✓

52 89.1 89.1 0.0

2226.40 ✓

N 3440
Hyd. Fill

4770	68.9	67.2	1.7		
				17.5	8.50
75	69.0	67.3	1.7		
				36.5	18.25
80	69.2	63.6	^{2.8} 5.6		
90	69.3	62.8	6.5		
4800	66.4	60.7	5.7		
10	59.6	59.6	0.0		
4910	57.1	57.1	0.0		
20	57.4	51.9	5.5		
30	57.6	49.0	8.6		
40	57.7	47.9	9.8		
50	58.1	46.7	11.4		
60	58.3	46.4	11.9		
70	57.4	46.0	11.4		
80	58.0	45.3	^{6.25} 12.7		799.50
				12.85	51.40
84	58.1	45.1	13.0		

N 3440
Hyd. Fill

26

84	58.1	45.1	13.0		
				13.0	6
90	58.3	45.3	^{6.5} 13.0		78.00
5000	58.5	46.0	12.5		
510	58.9	46.4	12.5		
20	59.0	46.8	12.2		
30	58.8	46.8	12.0		
40	58.8	44.7	14.1		
50	59.1	43.8	15.3		
60	60.1	46.3	13.8		
70	62.1	49.1	13.0		
80	71.7	49.3	22.4		
90	71.8	50.7	21.1		
5100	72.2	54.0	18.2		
5110	72.4	53.8	18.6		
20	72.6	52.3	20.3		
30	72.8	52.8	20.0		
40	73.4	54.9	^{9.25} 18.5		
					2417.50
					3849.65

N 3440
Upstream Rock Emb.

5140	73.4	54.9	9.25 ✓ 18.5 ✓
50	73.9	61.2	12.7 ✓
60	74.3	65.9	8.4 ✓
70	74.4	68.3	6.1 ✓
80	75.1	69.0	6.1 ✓
90	75.3	68.0	7.3 ✓
5200	76.4	67.5	8.9 ✓
10	78.6	67.1	11.5 ✓
20	78.6	66.7	11.9 ✓
30	78.6	66.2	12.4 ✓
40	78.3	66.2	12.1 ✓
50	78.0	66.4	11.6 ✓
60	79.2	66.3	12.9 ✓
70	78.9	66.4	12.5 ✓
80	80.9	67.0	13.9 ✓
90	80.4	67.7	12.7 ✓
5300	80.8	69.7	11.1 ✓
10	80.9	73.1	7.8 ✓
20	81.5	75.7	5.8 ✓
30	81.9	77.9	4.0 ✓

N 3440
US RE

27

5340	82.3	78.5	3.8 ✓
50	83.2	79.2	4.0 ✓
60	85.2	79.0	6.2 ✓
70	85.3	78.4	6.9 ✓
80	85.1	76.9	8.2 ✓
90	85.3	76.4	8.9 ✓
5400	84.9	77.1	7.8 ✓
10	85.1	78.1	7.0 ✓
20	85.5	79.1	6.4 ✓
30	85.2	79.6	5.6 ✓
40	85.8	80.0	5.8 ✓
50	84.6	79.2	5.4 ✓
60	84.4	79.2	2.6 ✓ 5.2 ✓
			2.6 ✓ 3 ✓
63	84.1	84.1	0.0 ✓
			0.35 ✓
5510	79.2	78.5	0.7 ✓
20	78.1	74.6	3.5 ✓
30	76.1	71.3	4.8 ✓
40	75.1	69.7	2.7 ✓ 5.4 ✓

2775.50 ✓

7.80 ✓

113.50 ✓

2896.80 ✓

N 3440

Above Upstream toe wall.

5540	75.1	69.7	5.4	✓			
			8.7	✓	11	✓	95.70
51	75.4	63.4	12.0	✓			
			10	✓	9	✓	90.00
60	75.6	67.6	8.0	✓			
			4.0	✓			
70	75.6	71.4	4.2	✓			
80	75.8	69.6	6.2	✓			113.00
			3.1	✓	5	✓	15.50
85	76.0	76.0	0.0	✓			314.20

Below N 3450
downstream toe wall. 28

4438.4	69.9	42.0	27.9	✓			
			27.9	✓	1.6	✓	44.64
40	69.9	42.0	27.9	✓			
			26.3	✓	10	✓	263.00
50	66.7	42.0	24.7	✓			
			25.3	✓	4	✓	101.20
54	67.9	42.0	25.9	✓			
54	67.9	35.5	32.4	✓			
			32.6	✓	6	✓	195.60
60	70.0	37.2	32.8	✓			
			30.3	✓	15	✓	454.50
75	70.9	43.1	27.8	✓			1058.94
Downstream Rock Emb.							
75	70.9	43.1	27.8	✓			
			27.6	✓	5	✓	138.30
80	71.2	43.8	27.4	✓			
			13.7	✓			
90	71.7	45.8	25.9	✓			
4500	72.2	48.0	24.2	✓			
			11.4	✓			
10	72.8	50.0	22.8	✓			752.00

N 3450
Downstream Rock Emb.

N 3450
Hydraulic Fill.

29

4510	72.8	50.0	22.8	✓	
					22.5 ✓ 4 ✓ 90.20
14	73.0	50.8	22.2	✓	
					21.25 ✓ 6 ✓ 127.50
20	73.2	52.9	20.3	✓	
					10.15
30	73.7	60.4	13.3	✓	
40	74.3	65.9	8.4	✓	
50	74.7	70.4	4.3	✓	
60	75.5	75.5	0.0	✓	361.50

4750	68.4	62.1	6.3	✓	
60	68.6	63.2	5.4	✓	
70	69.0	64.0	5.0	✓	
80	67.7	57.1	10.6	✓	
90	61.8	56.9	4.9	✓	
4800	59.8	58.7	1.1	✓	
10	59.9	59.5	0.4	✓	
20	59.5	59.5	0.0	✓	

4687	81.5	81.5	0.0	✓	
					2.2 ✓ 3 ✓ 6.60
90	81.7	77.3	4.4	✓	
					2.2
4700	78.5	72.2	6.3	✓	
					3.4 ✓ 119.00
10	78.1	71.3	6.8	✓	
					1595.10

4880	56.4	56.4	0.0	✓	
90	57.1	55.6	1.5	✓	
4900	57.4	56.8	0.6	✓	
10	57.5	54.6	2.9	✓	
20	57.8	50.3	7.5	✓	
30	58.1	45.3	12.8	✓	
40	58.1	45.3	12.8	✓	
50	57.8	44.1	13.7	✓	
60	57.0	43.5	13.5	✓	
70	58.3	43.5	14.8	✓	
80	58.6	41.1	17.5	✓	

Hydraulic Fill

10	78.1	71.3	6.8	✓	
					3.4
20	74.1	70.3	3.8	✓	
30	72.9	69.9	3.0	✓	
40	68.1	63.5	4.6	✓	

80	58.6	41.1	17.5	✓	
					8.75
					1373.50

N 3450
Hyd. Fill.

4980	58.6	41.1	17.5	✓	
			18.05	✓ S ✓	90.25 ✓
85	58.2	39.6	18.6	✓	
			36.2	✓	18.2 ✓ S ✓
			8.9	✓	91.00 ✓
90	57.8	40.0	17.8	✓	
5000	57.8	41.6	16.2	✓	
10	58.2	43.5	14.7	✓	
20	58.3	44.9	13.4	✓	
30	58.6	45.5	13.1	✓	
40	58.4	44.6	13.8	✓	
50	58.4	45.2	13.2	✓	
60	58.1	45.8	12.3	✓	
70	59.3	48.7	10.6	✓	
80	60.9	49.3	11.6	✓	
90	62.6	49.2	13.4	✓	
5100	70.7	52.8	17.9	✓	
10	71.0	53.0	18.0	✓	
20	71.5	51.9	19.6	✓	
			9.9	✓	
30	71.9	52.1	19.8	✓	

2066.00

3620.75 ✓

N 3450
Upstream Rock Emb. 30

5130	71.9	52.1	19.8	✓	9.9 ✓
40	72.1	51.9	20.2	✓	
50	72.4	54.8	19.6	✓	
60	72.6	58.3	14.3	✓	
70	72.6	62.2	10.4	✓	
80	73.1	64.8	8.3	✓	
90	73.7	64.1	9.6	✓	
5200	73.9	62.4	11.5	✓	
10	74.6	64.3	10.3	✓	
20	76.0	66.1	9.9	✓	
30	78.0	67.0	11.0	✓	
40	78.7	65.5	13.2	✓	
50	78.5	64.8	13.7	✓	
60	77.9	64.5	13.4	✓	
70	77.6	64.0	13.6	✓	
80	77.1	63.3	13.8	✓	
90	76.7	63.7	13.0	✓	
5300	76.5	63.3	13.2	✓	
10	77.9	65.7	12.2	✓	
20	78.6	68.9	9.7	✓	

N 3450
Upstream Rock Emb.

5330	79.1	70.3	8.8	✓
40	79.4	71.2	8.2	✓
50	80.0	74.7	5.3	✓
60	80.1	75.4	4.7	✓
70	81.8	74.1	7.7	✓
80	81.9	72.3	9.6	✓
90	81.6	73.0	8.6	✓
5400	81.5	75.5	6.0	✓
10	81.9	74.7	7.2	✓
20	82.1	75.4	6.7	✓
30	81.6	78.8	2.8	✓
40	81.8	77.1	4.7	✓
50	78.1	76.8	1.3	✓
60	76.6	76.1	0.5	✓
70	79.1	74.5	4.6	✓
80	78.1	77.1	1.0	✓
90	76.7	73.5	3.2	✓
5500	74.9	70.8	4.1	✓
10	74.9	68.1	6.8	✓
20	75.1	65.8	9.3	✓

N 3450
Upstream Rock Emb. 31

5530	75.0	63.2	5.9 11.8	✓	3658.00	✓
			11.9	✓ 6	71.40	✓
36	75.0	63.0	12.0		3729.40	✓
Above Upstream toe wall						
36	75.0	63.0	12.0			
			13.6	✓ 11	149.60	✓
47	75.2	60.0	15.2			
			13.8	✓ 3	41.40	✓
50	75.2	62.8	6.2 12.4	✓		
60	75.5	64.1	11.4	✓		
70	75.5	64.8	10.7	✓		
80	75.5	65.0	10.5	✓		
90	75.6	75.6	0.0	✓	388.00	✓
					579.00	✓

N 3460
Below downstream toe wall.
East

N 3460 ³²
Downstream Rock Emb

4418.8	64.3	42.0	22.3	✓	
			22.65	✓	253.68
30	65.0	42.0	23.0	✓	
40	63.7	42.0	21.7	✓	
50	64.1	42.0	22.1	✓	
60	68.0	42.0	26.0	✓	683.00
			26.3	3	78.90
63	68.6	42.0	26.6	✓	
63	68.6	35.3	33.3	✓	
			32.5	7	227.50
70	70.1	38.4	31.7	✓	
			30.45	10	304.50
80	71.3	42.1	29.2	✓	1547.58

Downstream Rock Emb.

80	71.3	42.1	29.2	✓	
90	71.7	42.9	28.8	✓	
41500	72.0	44.9	27.1	✓	
10	72.2	45.3	26.9	✓	
20	73.1	45.8	27.3	✓	
30	73.5	47.2	26.3	✓	

4540	73.8	49.4	24.4	✓	
50	74.5	56.1	18.4	✓	
60	74.7	71.3	3.4	✓	1955.00
			1.7	5	8.50
65	75.1	75.1	0.0		1963.50

Hydraulic Fill

4710	68.8	68.8	0.0	✓	
20	68.3	63.2	5.1	✓	
30	68.3	59.5	8.8	✓	
40	68.3	59.3	9.0	✓	
50	69.0	59.9	9.1	✓	
60	68.8	61.7	7.1	✓	
70	63.2	56.4	6.8	✓	
80	59.7	54.5	5.2	✓	
90	57.6	56.3	1.3	✓	
4800	59.1	57.6	1.5	✓	
10	59.5	59.2	0.3	✓	
20	59.5	59.2	0.3	✓	
30	59.6	57.1	2.5	✓	

N 3460
Hydraulic Fill.

4840	59.9	56.4	3.5	✓
50	59.1	58.1	1.0	✓
60	56.9	56.9	0.0	✓
<hr/>				
4896	58.6	58.6	0.0	✓
			0.8	✓ 4 ✓
4900	58.8	57.2	0.8	✓
			1.6	✓
10	59.2	51.6	7.6	✓
20	59.8	47.4	2.4	✓
30	60.3	43.1	17.2	✓
40	60.5	40.4	20.1	✓
50	59.7	40.7	19.0	✓
60	60.4	40.8	19.6	✓
70	60.3	40.1	20.2	✓
80	60.6	40.3	20.3	✓
90	60.6	40.5	20.1	✓
5000	60.3	40.8	19.5	✓
10	59.9	41.0	18.9	✓
20	59.9	41.2	18.7	✓
30	59.0	41.5	17.5	✓

615.00 ✓

3.20 ✓

N 3460
Hyd. Fill.

33

5040	58.6	42.3	16.3	✓
50	58.9	41.8	17.1	✓
60	58.5	42.9	15.6	✓
70	57.9	46.1	11.8	✓
80	58.2	48.6	9.6	✓
90	58.2	48.8	9.4	✓
5100	58.4	49.1	9.3	✓
10	58.5	57.9	6.6	✓
20	59.2	52.8	6.4	✓
			4.2	✓
30	60.0	51.6	8.4	✓
<hr/>				
Upstream Rock Emb.				
30	60.0	51.6	8.4	✓
40	62.5	51.6	10.9	✓
50	65.1	52.7	12.4	✓
60	71.3	52.8	18.5	✓
70	71.6	56.7	14.9	✓
80	71.9	58.4	13.5	✓
90	72.1	56.6	15.5	✓
5200	72.4	57.4	15.0	✓
10	72.8	57.4	15.4	✓

3282.00 ✓

3900.20 ✓

N 3460
Upstream Rock Emb

5220	72.9	60.9	12.0	✓
30	73.9	71.4	2.5	✓
40	74.5	67.0	7.5	✓
50	75.4	65.4	10.0	✓
60	75.9	64.2	11.7	✓
70	74.9	63.5	11.4	✓
80	77.5	62.9	14.6	✓
90	77.2	61.8	15.4	✓
5300	76.6	61.9	14.7	✓
10	76.3	62.2	14.1	✓
20	76.3	62.4	13.9	✓
30	76.3	63.6	12.7	✓
40	76.2	64.8	11.4	✓
50	75.9	65.6	10.3	✓
60	75.9	66.4	9.5	✓
70	76.1	70.2	5.9	✓
80	75.8	74.0	1.8	✓
90	76.1	71.9	4.2	✓
5400	76.4	71.9	4.5	✓
10	76.6	72.9	3.7	✓

N 3460
Upstream Rock Emb. 34

5420	78.4	72.9	5.5	✓
30	76.8	71.7	5.1	✓
40	76.7	76.2	0.5	✓
50	76.1	74.2	1.9	✓
60	75.8	73.6	2.2	✓
70	75.3	73.2	2.1	✓
80	74.7	64.5	10.2	✓
90	74.5	62.1	12.4	✓
5500	74.5	60.0	14.5	✓
10	74.7	60.7	14.0	✓
20	74.7	59.8	14.9	✓
30	74.7	59.6	15.1	✓
			14.85	2 ✓
32	74.6	60.0	14.6	✓
			16.55	11 ✓
43	74.3	55.8	18.5	✓
			15.55	7 ✓
50	74.2	61.6	12.6	✓
				4029.50 ✓
				29.70 ✓
				<u>4057.20</u> ✓
				Above upstream toe wall.
				182.05 ✓
				108.85 ✓

Above N 3460
Upstream toe wall.

5550	74.2	61.6	12.6 ^{6.3} ✓
60	74.5	62.0	12.5✓
70	74.7	62.5	12.2✓
80	74.9	67.0	7.9✓
90	74.9	74.9	0.0✓

389.00

679.90✓

Below N 3470
downstream toe wall.³⁵
East Top El Bottom

4399.2	561.8	542.0	19.8 ^{10.1} ✓	
			20.0 ^{10.8} ✓	216.00✓
4410	62.2	42.0	20.2 ^{11.85} ✓	
20	61.5	42.0	19.5✓	
30	61.8	42.0	19.8✓	
40	61.9	42.0	19.9✓	
50	64.0	42.0	22.0 ^{11.85} ✓	
60	65.7	42.0	23.7✓	1031.50✓
			23.85 ⁷ ✓	166.95✓
67	66.2	42.2	24.0✓	
			25.05 ¹³ ✓	325.65✓
80	68.2	42.1	26.1✓	
			26.0 ¹⁴ ✓	<u>104.00</u>
84	68.0	42.1	25.9✓	1844.10✓
Downstream Rock Emb.				
84	68.0	42.1	25.9✓	
			25.6 ⁶ ✓	153.60✓
90	67.8	42.5	25.3 ^{12.65} ✓	
4500	70.6	44.2	26.4✓	
10	70.3	44.6	25.7✓	

N 3470
Downstream Rock Emb

4520	72.3	44.6	27.7	✓
30	71.9	44.5	27.4	✓
40	71.9	44.7	27.2	✓
50	74.0	46.6	27.4	✓
60	72.5	53.9	18.6	✓
70	74.7	74.7	0.0	✓

4690 69.5 69.5 0.0 ✓

4700 69.0 65.9 3.1 ✓

10 68.9 63.4 5.5 ✓

20 69.0 60.0 9.0 ✓

2061.50 ✓

2215.10 ✓

Hydraulic Fill

20 69.0 60.0 9.0 ✓

30 68.8 57.3 11.5 ✓

40 67.7 57.9 9.8 ✓

50 63.9 58.3 5.6 ✓

60 59.4 56.6 2.8 ✓

70 57.4 54.2 3.2 ✓

80 57.1 54.2 2.9 ✓

90 55.8 55.7 0.1 ✓

N 3470
Hyt. Fill

36

4800 59.9 57.5 2.4 ✓

10 59.7 59.2 0.5 ✓

20 59.7 59.3 0.4 ✓

435.00 ✓

0.2 ✓ 4 ✓

0.80 ✓

24 59.6 59.6 0.0 ✓

4880 60.4 60.4 0.0 ✓

90 60.8 60.8 0.0 ✓

4900 60.6 58.6 2.0 ✓

10 60.7 51.6 9.1 ✓

20 60.7 48.3 12.4 ✓

30 60.6 39.2 21.4 ✓

40 61.1 37.7 23.4 ✓

50 60.8 37.4 23.4 ✓

60 61.0 38.1 22.9 ✓

1031.50 ✓

22.95 ✓ 7 ✓

159.95 ✓

67 60.8 38.0 22.8 ✓

22.95 ✓ 13 ✓

298.35 ✓

80 61.1 38.0 23.1 ✓

N 3470
Hyd. Fill.

4980	61.1	38.0	23.1	11.55 ✓	
90	60.9	38.1	22.8	✓	
5000	60.9	38.1	22.8	✓	
10	60.7	38.1	22.6	11.35 ✓	
20	60.9	38.2	22.7	✓	
				22.65 ✓ 4 ✓	911.00 ✓
24	60.8	38.2	22.6	✓	90.60 ✓
				22.5 ✓ 6 ✓	135.00 ✓
30	60.7	38.3	22.4	11.2 ✓	
40	60.5	40.5	20.0	✓	
50	60.4	40.3	20.1	✓	
60	60.5	40.8	19.7	✓	
70	59.1	42.6	16.5	✓	
80	59.2	44.9	14.3	✓	
90	58.8	48.3	10.5	✓	
5100	59.2	49.1	10.1	✓	
10	58.9	49.7	9.2	✓	
20	59.0	50.0	9.0	11.45 ✓	
30	59.3	50.4	8.9	✓	
					<u>1450.50</u>
					4512.70 ✓

N 3470
Upstream Rock Emb 37

5130	59.3	50.4	8.9	44.5 ✓	
40	59.1	49.2	9.9	✓	
50	60.8	50.9	9.9	✓	
60	62.1	51.8	10.3	✓	
70	66.2	54.7	11.5	✓	
80	70.7	54.8	15.9	✓	
90	70.4	56.1	14.3	✓	
5200	71.2	54.4	16.8	✓	
10	68.1	55.3	12.8	✓	
20	71.6	56.5	15.1	✓	
30	72.2	61.8	10.4	✓	
40	72.5	61.6	10.9	✓	
50	72.6	59.5	13.1	✓	
60	72.4	61.1	11.3	✓	
70	72.6	62.4	10.2	✓	
80	73.3	61.1	12.2	✓	
90	73.4	60.8	12.6	✓	
5300	73.7	61.7	12.0	✓	
10	74.1	61.2	12.9	✓	
20	73.9	61.1	12.8	✓	

N 3470
Upstream Rock Emb

5330	74.1	61.8	12.3	✓	
40	75.1	62.7	12.4	✓	
50	76.1	63.1	13.0	✓	
60	75.7	62.6	13.1	✓	
70	76.0	65.4	10.6	✓	
80	75.9	66.3	9.6	✓	
90	75.9	69.4	6.5	✓	
5400	75.9	69.4	6.5	✓	
10	75.5	69.6	5.9	✓	
20	75.3	71.4	3.9	✓	
30	75.6	72.0	3.6	✓	
40	75.8	72.1	3.7	✓	
50	76.0	76.0	0.0	✓	
60	75.7	75.7	0.0	✓	
70	74.6	65.6	9.0	✓	
80	73.7	62.1	11.6	✓	
90	73.8	60.6	13.2	✓	
5500	73.5	58.7	14.8	✓	4106.00
10	73.6	59.6	14.0	✓	
20	73.7	58.6	15.1	✓	

N 3470
Upstream Rock Emb ³⁸

5520	737	58.6	15.1	✓	
			31.8	15.9	8
					127.20
28	73.9	57.2	16.7	✓	4233.20
Above upstream toe wall					
28	73.9	57.2	16.7	✓	
			37.5	18.75	12
			10.4		
40	73.6	52.8	20.8	✓	225.00
50	73.8	59.0	14.8	✓	
60	73.9	61.4	12.5	✓	
70	74.1	61.0	13.1	✓	
80	74.2	63.7	10.5	✓	
90	74.3	74.3	0.0	✓	613.00
					838.00

N 3480
Below downstream toe wall.
East. Top-El. Bottom.

4379.6	57.7	44.4	13.3	✓	
			30.1	15.05	4.4
84	58.3	41.5	16.8	✓	66.22
			34.6	17.3	6
90	59.3	41.5	17.8	✓	103.80
			8.9		
4400	60.1	41.5	18.6	✓	
10	60.5	41.5	19.0	✓	
20	59.9	41.5	18.4	✓	
30	59.2	41.5	17.7	✓	
40	61.6	41.5	20.1	✓	926.50
			20.15	3	60.45
4.3	61.7	41.5	20.2	✓	
			20.45	7	143.15
50	61.9	41.2	20.7	✓	
60			20.9	10	209.00
60	62.0	40.9	21.1	✓	
			21.15	11	232.65
71	62.4	41.2	21.2	✓	
			22.25	9	200.25
80	65.0	41.7	23.3	✓	

N 3480

39

80	65.0	41.7	23.3	✓	
			22.5	8	180.00
88	63.7	42.0	21.7	✓	2122.02

Downstream Rock Emb

88	63.7	42.0	21.7	✓	
			21.4	12	256.80
4500	64.4	43.3	21.1	✓	
			10.55		
10	65.2	44.0	21.2	✓	
20	67.4	43.8	23.6	✓	
30	68.4	43.5	24.9	✓	
40	69.1	43.8	25.3	✓	
50	69.4	44.2	25.2	✓	
60	69.4	49.2	20.2	✓	
70	70.9	70.0	0.9	✓	
80	70.4	70.4	0.0	✓	
4600	72.6	72.6	0.0	✓	
10	72.4	72.0	0.4	✓	
20	74.8	74.1	0.7	✓	
30	71.1	71.1	0.0	✓	

N 3480
Downstream Rock Emb.

N 3480
Hyd. Fill.

40

4640 70.3 59.7 10.6 ✓

50 69.0 59.3 9.7 ✓

60 70.2 67.7 2.5 ✓

70 70.8 60.9 9.9 ✓

80 69.6 65.8 3.8 ✓

90 68.6 58.4 10.2 ✓

4700 67.6 56.9 10.7 ✓

10 64.0 56.9 7.1 ✓

20 62.9 55.9 7.0 ✓

30 62.5 56.1 6.4 ✓

Hydraulic Fill.

30 62.5 56.1 6.4 ✓

40 62.4 56.1 6.3 ✓

50 57.4 55.3 2.1 ✓

60 57.1 54.0 3.1 ✓

70 56.3 54.2 2.1 ✓

80 56.2 53.8 2.4 ✓

90 54.9 54.8 0.1 ✓

4800 58.5 57.5 1.0 ✓

10 57.0 57.0 0.0 ✓

4847 60.5 60.5 0.0

50 60.9 60.2 0.7 ✓

60 61.1 59.8 1.3 ✓

70 61.1 59.9 1.2 ✓

80 61.1 60.8 0.3 ✓

90 61.1 61.1 0.0 ✓

4900 61.1 59.2 1.9 ✓

10 61.1 53.2 7.9 ✓

20 61.1 46.5 14.6 ✓

30 61.2 38.4 22.8 ✓

40 61.1 36.3 24.8 ✓

50 61.2 36.0 25.2 ✓

60 61.1 36.1 25.0 ✓

67 61.1 36.4 24.7

80 61.4 36.8 24.6 ✓

87 61.3 37.0 24.3 ✓

2276.50

2533.30

203.00

0.35 ✓ 3 ✓

1.05

24.85 ✓ 7 ✓

173.95 ✓

24.65 ✓ 13 ✓

320.45 ✓

24.45 ✓ 7 ✓

171.15 ✓

1128.50

N 3480
Hyd Fill

N 3480
Upstream Rock Emb. 41

4987.	61.3	37.9	23.4	✓	
			23.25	13 ✓	302.25
5000	61.0	37.9	23.1	✓	
			23.15	13 ✓	300.95
13	61.1	37.9	23.2	✓	
13	61.1	37.6	23.5	✓	
			23.35	13 ✓	303.55
26	61.2	38.0	23.2	✓	
			23.5	4 ✓	94.00
30	61.2	37.4	23.8	✓	
40	61.2	38.4	22.8	✓	
50	60.9	38.5	22.4	✓	
60	60.8	38.1	22.7	✓	
70	60.8	40.0	20.8	✓	
80	60.6	40.7	19.9	✓	
90	60.3	42.3	18.0	✓	
5100	60.1	47.9	12.2	✓	
10	59.7	49.4	10.3	✓	
20	59.4	49.6	9.8	✓	
30	59.3	49.9	9.4	✓	
					<u>1755.00</u>
					4753.85

5130	59.3	49.9	9.4	✓	
40	59.7	50.1	9.6	✓	
50	58.6	51.4	7.2	✓	
60	58.4	50.1	8.3	✓	
70	58.4	50.9	7.5	✓	
80	59.0	51.7	7.3	✓	
90	59.9	51.2	8.7	✓	
5200	59.6	53.6	6.0	✓	
10	61.9	57.3	10.6	✓	
20	63.2	55.9	7.3	✓	
30	66.8	59.4	7.4	✓	
40	66.9	57.1	9.8	✓	
50	67.8	62.8	5.0	✓	
60	68.0	62.5	5.5	✓	
70	65.4	62.3	3.1	✓	
80	64.6	57.3	7.3	✓	
90	67.6	61.7	5.9	✓	
5300	71.1	64.0	7.1	✓	
10	68.1	60.2	7.9	✓	
20	69.5	60.1	9.4	✓	

N 3480
Upstream Rock Emb

N 3480
Upstream Rock Emb 42

5330 70.1 60.0 10.1 ✓

40 71.7 60.5 11.2 ✓

50 72.1 61.6 10.5 ✓

60 72.5 58.8 13.7 ✓

70 72.8 60.7 12.1 ✓

80 73.0 62.2 10.8 ✓

90 73.1 63.7 9.4 ✓

5400 73.0 62.7 10.3 ✓

10 73.2 64.9 8.3 ✓

20 73.0 65.9 7.1 ✓

30 73.4 73.4 0.0 ✓

50 74.4 74.4 0.0 ✓

60 73.5 67.9 5.6 ✓

70 72.4 59.0 13.4 ✓

80 72.2 61.6 10.6 ✓

90 72.6 59.6 13.0 ✓

5500 72.9 57.6 15.3 ✓

10 72.9 56.8 16.1 ✓
8.7

20 73.2 55.4 17.8 ✓

3320.00 ✓

5520 73.2 55.4 17.8 ✓

17.7 ✓ 4 ✓ 70.80 ✓

24 73.2 55.6 17.6 ✓

3390.80 ✓

Above Upstream toe wall.

24 73.2 55.6 17.6 ✓

20.3 ✓ 13 ✓ 263.90 ✓

37 73.1 50.1 23.0 ✓

22.0 ✓ 3 ✓ 66.00 ✓

40 73.1 52.1 21.0 ✓
10.5 ✓

50 73.6 54.0 19.6 ✓

60 73.6 58.9 14.7 ✓

70 73.9 61.2 12.7 ✓

80 74.2 74.2 0.0 ✓

575.00 ✓

904.90 ✓

N 3490
Below downstream toe wall

N 3490

43

4350 52.8 52.8 0.0 ✓

60 53.4 44.4 9.0 ✓

70 54.1 44.9 9.2 ✓

8.8 ✓ 7 ✓

77 53.7 45.3 8.4

11.05 ✓ 4 ✓

81 53.7 40.0 13.7 ✓

14.7 ✓ 9 ✓

90 55.7 40.0 15.7 ✓

7.85 ✓

4400 55.7 40.0 15.7 ✓

10 55.9 40.0 15.9 ✓

20 56.6 40.0 16.6 ✓

30 57.1 40.0 17.1 ✓

40 58.7 40.4 18.3 ✓

50 59.6 40.6 19.0 ✓

60 59.7 40.7 19.0 ✓

70 59.6 40.9 18.7 ✓

19.0 ✓ 5 ✓

75 60.2 40.9 19.3 ✓

4475 60.2 40.9 19.3 ✓

4.9 20.95 17 ✓

356.15 ✓

92 61.3 38.7 22.6 ✓

2077.25 ✓

Downstream Rock Emb

92 61.3 38.7 22.6 ✓

10.9 22.2 8 ✓

177.60 ✓

4500 60.5 38.7 21.8 ✓

10 62.4 41.1 21.3 ✓

20 62.2 43.5 18.7 ✓

30 62.9 43.3 19.6 ✓

40 63.0 43.0 20.0 ✓

50 64.3 44.2 20.1 ✓

60 64.4 47.9 16.5 ✓

70 65.7 65.3 0.4 ✓

80 66.4 66.4 0.0 ✓

4620 67.7 67.7 0.0 ✓

30 66.2 57.2 9.0 ✓

40 65.8 55.3 10.5 ✓

50 65.4 55.2 10.2 ✓

60 63.5 55.4 8.1 ✓

1388.00

95.00

N 3490
Downstream Rock Emb

N 3490
Hydraulic Fill.

44

4670	63.7	56.6	7.1	✓	
80	64.0	56.2	7.8	✓	
90	62.6	55.7	6.9	✓	
4700	62.6	55.5	7.1	✓	
10	61.1	55.3	5.8	✓	
20	62.0	55.3	6.7	✓	
30	60.2	54.7	5.5	✓	
	Hydraulic Fill				
30	60.2	54.7	5.5	✓	
40	57.1	54.0	3.1	✓	
50	57.3	53.9	3.4	✓	
60	56.4	53.8	2.6	✓	
70	56.3	53.9	2.4	✓	
80	55.6	54.3	1.3	✓	
90	55.0	55.0	0.0	✓	
4830	61.1	61.1	0.0	✓	
40	61.1	60.9	0.2	✓	
50	61.2	59.9	1.3	✓	
60	61.2	59.7	1.5	✓	

199.67 ✓
2094.50

2272.16

4870	61.3	60.4	0.9	✓		
80	61.3	60.9	0.4	✓		
90	61.2	61.2	0.0	✓		
4900	61.3	59.5	1.8	✓		
10	61.4	53.5	7.9	✓		
20	61.3	49.8	11.5	✓		
30	61.3	39.1	22.2	✓		
40	61.4	36.7	24.7	✓		
50	61.3	35.8	25.5	✓		
60	61.4	35.5	25.9	✓	1264.00	
			532	26.6	7	186.20
67	61.5	34.2	27.3	✓		
			26.65	20	533.00	
87	61.4	35.4	26.0	✓		
			493	24.65	3	73.95
90	61.4	38.1	23.3	✓		
			23.25	21	488.25	
5011	61.3	38.1	23.2	✓		
			477	23.85	2	47.70
13	61.3	36.8	24.5	✓		

N 3490
Hgt. Fill.

5013	61.3	36.8	24.5 ✓		289.20
			24.1 ✓	12 ✓	
25	61.2	37.5	23.7 ✓		
			24.2 ✓	5 ✓	121.00
			^{12.35}		
30	61.3	36.6	24.7 ✓		
40	61.2	37.2	24.0 ✓		
50	61.3	37.0	24.3 ✓		
60	61.3	36.8	24.5 ✓		
70	61.2	37.2	24.0 ✓		
80	61.4	39.2	22.2 ✓		
90	60.9	39.8	21.1 ✓		
5100	60.9	43.1	17.8 ✓		
10	60.8	47.4	13.4 ✓		
20	61.0	48.8	12.2 ✓		
			^{6.0}		
30	60.9	48.9	12.0 ✓		

Upstream Rock Emb

30	60.9	48.9	12.0 ✓
40	60.3	51.4	9.9 ✓
50	59.7	47.7	12.0 ✓
60	59.8	49.5	10.3 ✓

N 3490
Upstream Rock Emb.

45.

5170	60.2	50.2	10.0 ✓
80	59.4	50.2	9.2 ✓
90	59.3	50.1	9.2 ✓
5200	60.0	49.7	10.3 ✓
10	59.1	48.9	10.2 ✓
20	59.1	50.6	8.5 ✓
30	58.8	53.9	4.9 ✓
40	60.0	50.6	9.4 ✓
50	59.9	53.8	6.1 ✓
60	64.2	54.5	9.7 ✓
70	64.2	52.7	11.5 ✓
80	64.1	52.5	11.6 ✓
90	64.4	57.4	7.0 ✓
5300	64.6	53.3	11.3 ✓
10	61.6	54.3	7.3 ✓
20	61.1	55.0	6.1 ✓
30	62.0	54.2	7.8 ✓
40	65.0	54.7	10.3 ✓
50	67.3	54.7	12.6 ✓
60	68.4	54.0	14.4 ✓

N 3490
Upstream Rock Emb.

5370	71.0	54.5	16.5	✓
80	71.1	59.8	11.3	✓
90	71.6	58.9	12.7	✓
5400	70.8	58.6	12.2	✓
10	71.0	61.7	9.3	✓
20	70.7	63.6	7.1	✓
30	71.0	62.6	8.4	✓
40	70.6	61.7	8.9	✓
50	71.1	61.5	9.6	✓
60	71.0	55.9	15.1	✓
70	71.4	54.7	16.7	✓
80	71.7	57.2	14.5	✓
90	71.9	55.1	16.8	✓
5500	72.1	53.8	18.3	✓
10	71.9	53.4	18.5	✓
			9.4	✓
20	72.3	53.5	18.8	✓

1309.00

N 3490
Above upstream toe wall. ⁴⁶

5520	72.3	53.5	18.8	✓		
			41.6	20.8	12	249.60
32	72.8	50.0	22.8	✓		
			45.7	22.95	8	183.60
40	73.1	50.0	23.1	✓		
			23.1	4		92.40
44	73.1	50.0	23.1	✓		
			21.9	6		131.40
50	73.2	52.5	^{10.35} 20.7	✓		
60	73.6	57.5	16.1	✓		
70	73.7	62.3	11.4	✓		
80	73.8	73.8	0.0	✓		
						<u>378.50</u>
						1035.50

N 3500
Below downstream toe wall

East	Top El.	Bottom	Ht	Mean	Dist	□'
4330	52.9	52.9	0.0			
40	52.8	46.3	6.5			
50	52.7	45.4	7.3			
60	52.7	45.9	6.8			
			3.35			
70	52.7	46.0	6.7			239.50
			6.8	7		47.60
77	53.0	46.1	6.9			
			10.35	4		41.40
81	53.2	39.4	13.8			
			14.1	9		126.90
90	53.8	39.4	14.4			
			2.98	14.9	10	149.00
4400	54.8	39.4	15.4			
			15.5	7		108.50
07	55.0	39.4	15.6			
			7.9	15.7	13	204.10
20	55.3	39.5	15.8			
30	55.0	39.3	15.7			
40	54.5	39.7	14.8			
50	53.9	40.0	13.9			

N 3500
BDS toe wall

47

4460	55.1	40.1	15.0				
			7.1				
70	55.9	40.1	15.8				752.00
			3.33	16.65	8		133.20
78	57.6	40.1	17.5				
			36.6	18.3	12		219.60
90	57.7	38.6	19.1				
			19.75	6			118.50
96	58.3	37.9	20.4				2140.30
Downstream Rock Emb							
96	58.3	37.9	20.4				
			10.4	20.6	4		82.40
4500	58.7	37.9	20.8				
10	59.2	37.8	21.4				
20	60.3	38.5	21.8				
30	61.4	41.1	20.3				
40	60.5	43.2	17.3				
50	60.1	44.3	15.8				
60	60.1	49.4	10.7				
70	59.3	59.3	0.0				

N 3500
Downstream Rock Emb.

4620	62.2	62.2	0.0	✓
30	61.4	55.7	5.7	✓
40	61.4	55.3	6.1	✓
50	61.0	55.3	5.7	✓
60	60.4	55.6	4.8	✓
70	60.7	55.6	5.1	✓
80	60.8	55.9	4.9	✓
90	60.1	55.9	4.2	✓
4700	59.4	55.1	4.3	✓
10	59.3	54.7	4.6	✓
20	57.3	54.7	2.6	✓
			1.25	✓
30	56.4	53.9	2.5	✓
	Hydraulic Fill		1.25	✓
30	56.4	53.9	2.5	✓
40	55.9	53.5	2.4	✓
50	55.2	53.7	1.5	✓
60	55.3	53.8	1.5	✓
70	54.5	54.5	0.0	✓
80	55.0	53.8	1.2	✓
90	59.7	54.0	5.7	✓

82.40 ✓
1669.50

1751.90 ✓

N 3500
Hyd. Fill.

4800	60.7	59.2	1.5	✓
10	61.0	59.9	1.1	✓
20	61.1	60.9	0.2	✓
30	61.1	60.8	0.3	✓
40	61.3	60.5	0.8	✓
50	61.3	59.4	1.9	✓
60	61.2	59.8	1.4	✓
70	61.2	56.9	4.3	✓
80	61.1	55.8	5.3	✓
90	61.1	57.5	3.6	✓
4900	61.4	60.0	1.4	✓
10	61.3	54.3	7.0	✓
20	61.4	49.0	12.4	✓
30	61.3	39.9	21.4	✓
40	61.4	36.7	24.7	✓
50	61.4	36.0	25.4	✓
			13.25	✓
60	61.6	35.1	26.5	✓
			5.7	✓
			27.35	8 ✓
68	61.6	33.4	28.2	✓

1395.00 ✓

218.80 ✓

N 3500
Hyd. Fill

N 3500
Hyd. Fill.

49

4968	61.6	33.4	28.2	✓		5110	61.3	42.6	18.7	✓				
					27.65	19	✓	525.35	20	61.4	49.0	12.4	✓	
87	61.5	34.4	27.1	✓		30	61.3	49.1	12.2	✓		2190.00		
					25.3	3	✓	75.90					5376.00	
90	61.5	38.0	23.5	✓										
					23.45	21	✓	492.45						
5011	61.4	38.0	23.4	✓										
					24.5	2	✓	49.00						
13	61.4	35.8	25.6	✓										
					25.3	11	✓	278.30						
24	61.4	36.4	25.0	✓										
					25.2	6	✓	151.20						
30	61.3	35.9	25.4	✓										
					12.7				5200	61.0	49.0	12.0	✓	
40	61.3	36.1	25.2	✓					10	61.6	48.6	13.0	✓	
50	61.3	35.4	25.9	✓					20	60.8	48.2	12.6	✓	
60	61.4	35.1	26.3	✓					30	61.1	48.3	12.8	✓	
70	61.3	36.4	24.7	✓					40	60.5	48.1	12.4	✓	
80	61.4	37.9	23.5	✓					50	60.8	51.4	9.4	✓	
90	61.4	39.6	21.8	✓					60	64.2	52.1	12.1	✓	
5100	61.4	39.9	21.5	✓					70	64.6	50.4	14.2	✓	
									80	64.5	49.3	15.2	✓	

U.S. Rock Emb.

N 3500
U S R E

5290	64.7	50.2	14.5	✓
5300	64.0	50.2	13.8	✓
10	61.5	53.9	7.6	✓
20	61.3	53.1	8.2	✓
30	61.5	52.7	8.8	✓
40	61.4	52.3	9.1	✓
50	61.4	52.3	9.1	✓
60	61.1	52.5	8.6	✓
70	61.6	52.5	9.1	✓
80	64.5	52.7	11.8	✓
90	65.6	53.0	12.6	✓
5400	66.3	53.3	13.0	✓
10	66.0	57.1	8.9	✓
20	67.8	58.4	9.4	✓
30	66.9	59.6	7.3	✓
40	66.9	58.3	8.6	✓
50	67.0	56.2	10.8	✓
60	67.1	52.8	14.3	✓
70	67.3	53.5	13.8	✓
80	67.4	54.2	13.2	✓

N 3500

50

5490	67.8	53.2	14.6	✓
5500	67.5	57.8	15.7	✓
			9.1	✓
10	68.2	50.0	18.2	✓
			18.15	7
				4442.00
				127.05
17	68.3	50.2	18.1	✓
				4569.05
				Above U.S. toe wall
17	68.3	50.0	18.1	✓
			18.2	28
				509.60
45	68.3	50.0	18.3	✓
			7.8	16.95
				5
				84.75
50	68.2	52.6	15.6	✓
60	68.8	57.7	11.1	✓
70	66.6	61.2	5.4	✓
80	67.4	67.4	0.0	✓
				243.00
				837.35

N 3510
D.S. Rock Emb.

4620	58.8	58.8	0.0	✓
30	60.6	56.3	4.3	✓
40	57.2	55.1	2.1	✓
50	61.5	55.1	6.4	✓
60	56.3	55.6	0.7	✓
70	57.3	56.2	1.1	✓
80	56.9	55.2	1.7	✓
90	56.6	56.6	0.0	✓

4700	58.3	54.1	4.2	✓
10	58.0	54.3	3.7	✓
20	56.3	54.2	2.1	✓
30	56.3	53.9	2.4	✓

Hyd. Fill.

30	56.3	53.9	2.4	✓
40	55.5	53.8	1.7	✓
50	54.8	53.3	1.5	✓
60	54.8	53.2	1.6	✓
70	54.0	54.0	0.0	✓
80	60.0	52.3	7.7	✓
90	61.0	52.8	8.2	✓

1116.00
1133.65

N 3510
Hyd. Fill.

4800	60.9	58.3	2.6	✓
10	61.0	59.8	1.2	✓
20	61.0	60.4	0.6	✓
30	61.1	60.7	0.4	✓
40	61.1	59.5	1.6	✓
50	61.1	59.1	2.0	✓
60	61.1	60.4	0.7	✓
70	61.1	55.9	5.2	✓

80	61.1	55.0	6.1	✓
90	61.2	55.4	5.8	✓

4900	61.4	57.2	4.2	✓
10	61.4	53.4	8.0	✓
20	61.2	47.1	14.1	✓
30	61.3	39.1	22.2	✓
40	61.4	36.4	25.0	✓
50	61.4	37.4	24.0	✓
60	61.4	36.0	25.4	✓

1583.00
179.20

67	61.5	35.7	25.8	✓
----	------	------	------	---

N 3570
Hyd. Fill.

4967	61.5	35.7	25.8 ✓	
			53.5 26.75 ✓ 3 ✓	80.25
70	61.6	33.9	27.7 ✓	
			27.5 ✓ 17 ✓	467.50
87	61.7	34.4	27.3 ✓	
			25.45 ✓ 4 ✓	101.80
91	61.7	38.1	23.6 ✓	
			23.4 ✓ 9 ✓	210.60
5000	61.3	38.1	23.2 ✓	
			23.25 ✓ 10 ✓	232.50
10	61.4	38.1	23.3 ✓	
			49.5 24.75 ✓ 3	74.25
13	61.4	35.2	26.2 ✓	
			26.1 ✓ 11 ✓	287.10
24	61.5	35.5	26.0 ✓	
			26.1 ✓ 6 ✓	156.60
30	61.5	35.3	26.2 ✓	
			13.1 ✓	
40	61.5	35.0	26.5 ✓	
50	61.4	33.9	27.5 ✓	
60	61.6	35.0	26.6 ✓	

N 3510
Hyd. Fill.

53

5070	61.5	34.3	27.2 ✓	
80	61.4	34.5	26.9 ✓	
90	61.5	35.2	26.3 ✓	
5700	61.4	38.1	23.3 ✓	
10	61.5	41.6	19.9 ✓	
20	61.4	49.1	12.3 ✓	2356.00
			6.0 ✓	
30	61.5	49.5	12.0 ✓	5728.80
			6.0 ✓	
			U.S. Rock Emb.	
30	61.5	49.5	12.0 ✓	
40	61.4	48.0	13.4 ✓	
50	61.5	48.0	13.5 ✓	
60	61.8	48.4	13.4 ✓	
70	61.8	48.8	13.0 ✓	
80	61.8	48.8	13.0 ✓	
90	61.8	48.6	13.2 ✓	
5200	61.8	48.7	13.1 ✓	
10	62.2	48.8	13.4 ✓	
20	62.3	48.9	13.4 ✓	
30	62.4	48.8	13.6 ✓	
40	61.5	48.6	12.9 ✓	

N 3510
U.S. Rock Emb

5250	62.5	49.0	13.5	✓
60	62.8	53.9	8.9	✓
70	62.8	49.4	13.4	✓
80	63.0	49.9	13.1	✓
90	62.9	49.8	13.1	✓
5300	63.0	49.8	13.2	✓
10	63.1	50.3	12.8	✓
20	63.2	51.9	11.3	✓
30	63.0	51.9	11.1	✓
40	63.0	51.7	11.3	✓
50	63.1	52.5	10.6	✓
60	62.6	52.2	10.4	✓
70	62.9	52.0	10.9	✓
80	62.2	52.1	10.1	✓
90	61.6	52.6	9.0	✓
5400	61.8	52.2	9.6	✓
10	62.0	53.7	8.3	✓
20	62.1	56.1	6.0	✓
30	62.2	56.5	5.7	✓
40	62.3	56.8	5.5	✓

N 3510
U.S. Rock Emb. 54

5450	62.6	51.5	11.1	✓
60	62.6	51.4	11.2	✓
70	62.6	52.8	9.8	✓
80	62.8	51.6	11.2	✓
90	63.1	50.0	13.1	✓
5500	63.2	50.0	13.2	✓
10	62.6	50.0	12.6	✓
14	62.6	50.0	12.6	✓
14	62.6	50.0	12.6	✓
20	62.6	50.0	12.6	✓
30	63.1	50.0	13.1	✓
40	63.8	50.0	13.8	✓
50	63.9	52.9	11.0	✓
60	63.7	59.3	4.4	✓
70	63.3	61.0	2.3	✓
80	63.7	63.7	0.0	✓

4356.00

50.40

4406.40

Above U.S. toe wall

75.60

572.00

647.60

35 20
Below D.S. toe wall

4330	53.3	51.3	2.0	✓	
40	53.5	49.4	4.1	✓	
50	53.7	47.8	5.9	✓	
60	53.5	47.5	6.0	✓	193.00
70	53.3	48.7	4.6	✓	
8			5.0	✓	8 ✓ 40.00
78	53.2	47.8	5.4	✓	
			7.65	✓	7 ✓ 53.55
85	53.1	43.2	9.9	✓	
			12.25	3	36.75
88	53.0	38.4	14.6	✓	
			14.65	✓	12 ✓ 175.80
4400	53.1	38.4	14.7	✓	
10	52.7	38.4	14.3	✓	
20	52.6	38.7	13.9	✓	
30	52.8	38.4	14.4	✓	
40	53.4	38.0	15.4	✓	
50	54.0	37.3	16.7	✓	
60	54.1	37.2	16.9	✓	
70	53.9	37.1	16.8	✓	

N 35 20
B.D.S.T.W.

55

4480	54.0	37.0	17.0	✓	
			8.5	✓	1242.50
			16.9	✓	4 ✓ 67.60
84	53.8	37.0	16.8	✓	
			16.55	✓	6 ✓ 99.30
90	53.5	37.2	16.3	✓	
			16.1	✓	12 ✓ 193.20
4502	53.9	38.0	15.9	✓	2101.70

D.S. Rock Emb

02	53.9	38.0	15.9	✓	
			15.95	✓	8 ✓ 127.60
10	54.2	38.2	16.0	✓	
			8.0	✓	
20	54.5	38.9	15.6	✓	
30	54.4	41.7	12.7	✓	
40	53.9	44.3	9.6	✓	
50	54.1	48.2	5.9	✓	
60	54.8	52.4	2.4	✓	
70	54.6	53.3	1.3	✓	
80	54.7	54.7	0.0	✓	

N 35 20
D.S.R.E

4650	54.4	54.4	0.0	✓
60	54.2	51.5	2.7	✓
70	54.6	51.9	2.7	✓
80	55.5	53.7	1.8	✓
90	54.9	54.9	0.0	✓
4700	54.5	54.5	0.0	✓
10	54.9	54.2	0.7	✓
20	55.0	54.1	0.9	✓
30	55.3	54.2	1.1	✓
Hydraulic Fill				
30	55.3	54.2	1.1	✓
40	54.7	53.7	1.0	✓
50	54.8	52.8	2.0	✓
60	55.2	52.3	2.9	✓
70	58.0	52.9	5.1	✓
80	60.7	51.7	9.0	✓
90	60.7	52.3	8.4	✓
4800	60.8	52.5	8.3	✓
10	60.8	57.4	3.4	✓
20	60.9	59.6	1.3	✓

127.60
648.50
776.10

3520
Hyd. Fill.

56

4830	60.8	60.5	0.3	✓
40	60.7	58.4	2.3	✓
50	61.0	58.6	2.4	✓
60	61.1	57.1	4.0	✓
70	61.2	55.5	5.7	✓
80	61.0	55.0	6.0	✓
90	61.2	55.4	5.8	✓
4900	61.1	55.8	5.3	✓
10	61.3	54.2	7.1	✓
20	61.4	47.6	13.8	✓
30	61.6	40.9	20.7	✓
40	61.5	37.7	23.8	✓
50	61.6	36.7	24.9	✓
60	61.3	36.5	24.8	✓
70	61.1	36.1	25.0	✓
80	61.0	35.8	25.2	✓
				2264.50
				25.5 7
				178.50
87	61.5	35.7	25.8	✓
				24.7 1/2 ✓
89	61.6	38.0	23.6	✓
				49.40

N 3520
Hyd Fill.

4989	61.6	38.0	23.6	✓		
					23.5	11 ✓
						258.50
5000	61.4	38.0	23.4	✓		
					23.55	11 ✓
						259.05
11	61.7	38.0	23.7	✓		
					25.0	2 ✓
						50.00
13	61.7	35.4	26.3	✓		
					26.35	10 ✓
						263.50
23	61.7	35.3	26.4	✓		
					26.45	7 ✓
					13.25	
30	61.6	35.1	26.5	✓		
40	61.6	35.1	26.5	✓		
50	61.6	33.5	28.1	✓		
60	61.7	33.6	27.9	✓	28.1	
70	61.5	33.6	27.9	✓		
80	61.6	33.6	28.0	✓		
90	61.7	34.4	27.3	✓		
5100	61.6	36.5	25.1	✓		
10	61.8	39.7	22.1	✓		
20	61.8	48.4	13.4	✓		

N 3520

57

						2465.00
						5973.60
5130	62.0	48.5	13.5	✓		
					6.75	✓
						U.S. Rock Emb
30	62.0	48.5	13.5	✓		
					6.75	✓
40	61.6	48.4	13.2	✓		
50	61.6	48.0	13.6	✓		
60	61.8	48.0	13.8	✓		
70	61.6	48.2	13.4	✓		
80	61.8	48.3	13.5	✓		
90	61.9	48.4	13.5	✓		
5200	62.1	48.3	13.8	✓		
10	62.2	48.6	13.6	✓		
20	62.2	48.5	13.7	✓		
30	62.7	48.3	13.9	✓		
40	62.4	48.9	13.5	✓		
50	62.6	49.2	13.4	✓		
60	62.7	51.0	11.7	✓		
70	62.7	49.8	12.9	✓		
80	62.7	49.7	13.0	✓		
90	62.8	49.8	13.0	✓		
5300	62.8	49.8	13.0	✓		

N 3520
U.S. Rock Emb

N 3520
U.S. Rock Emb.

58

5310	62.9	50.3	12.6	✓
20	63.0	50.7	12.3	✓
30	63.2	51.0	12.2	✓
40	63.2	51.5	11.7	✓
50	63.0	51.7	11.3	✓
60	63.2	51.5	11.7	✓
70	63.2	51.5	11.7	✓
80	63.2	51.2	12.0	✓
90	63.4	52.0	11.4	✓
5400	63.4	51.5	11.9	✓
10	63.5	51.2	12.3	✓
20	63.5	54.0	9.5	✓
30	63.6	52.7	10.9	✓
40	63.6	51.8	11.8	✓
50	63.7	50.5	13.2	✓
60	63.8	51.2	12.6	✓
70	63.8	50.0	13.8	✓
80	63.9	50.0	13.9	✓
90	63.7	50.0	13.7	✓
5500	63.8	50.0	13.8	✓

5510	63.7	50.0	13.7	✓
10	63.7	50.0	13.7	✓
20	63.9	50.0	13.9	✓
30	63.9	50.0	13.9	✓
40	63.4	50.0	13.4	✓
45	63.6	50.0	13.6	✓
50	63.8	51.6	12.2	✓
60	63.6	57.2	6.4	✓
70	63.7	59.1	4.6	✓
80	63.7	63.7	0.0	✓

4844.00 ✓

Above U.S. toe wall.

113.50 ✓

67.50 ✓

64.50 ✓

171.00 ✓

716.50 ✓

N 3530
Below D.S. toe wall.

4330	52.5	52.5	0.0	✓	
40	52.7	49.5	3.2	✓	
50	53.0	49.0	4.0	✓	
60	53.6	49.0	4.6	✓	
70	52.9	49.4	3.5	✓	
80	52.9	49.4	3.5	✓	170.50
				8.9 ✓ 9 ✓	80.10
89	52.7	38.4	14.3	✓	
				14.45 ✓ 11 ✓	158.95
4400	53.0	38.4	14.6	✓	
10	52.9	38.4	14.5	✓	
20	53.0	38.4	14.6	✓	
30	53.0	38.1	14.9	✓	
40	53.0	37.7	15.3	✓	
50	52.7	37.3	15.4	✓	
60	53.0	35.9	17.1	✓	
70	52.9	36.2	16.7	✓	
80	53.4	36.2	17.2	✓	1244.00
				17.25 ✓ 7 ✓	120.75
87	53.3	36.0	17.3	✓	

N 3530
D.S. RE

59

4487	53.3	36.0	17.3	✓	
				15.55 ✓ 13 ✓	202.15
4500	52.6	38.8	13.8	✓	
				13.9 ✓ 4 ✓	55.60
04	52.8	38.8	14.0	✓	2032.05
					D.S. Rock Emb.
04	52.8	38.8	14.0	✓	
				14.1 ✓ 6 ✓	84.60
10	53.0	38.8	14.2	✓	
20	53.0	39.8	13.2	✓	
30	53.8	41.1	12.7	✓	
40	54.1	40.5	13.6	✓	
50	54.6	42.1	12.7	✓	
60	54.5	45.2	9.3	✓	
70	53.5	52.1	1.4	✓	
80	53.4	53.4	0.0	✓	
90	53.4	52.1	1.3	✓	
4600	53.8	53.8	0.0	✓	
10	53.7	53.0	0.7	✓	
20	53.3	53.3	0.0	✓	

N3530
DSRE

4630	53.1	52.1	1.0	✓
40	53.4	53.0	0.4	✓
50	53.1	50.5	2.6	✓
60	52.6	46.9	5.7	✓
70	52.9	46.6	6.3	✓
80	52.9	49.2	3.7	✓
90	52.9	51.9	1.0	✓
4700	53.1	53.1	0.0	✓
10	53.9	53.9	0.0	✓
20	53.7	53.7	0.0	✓
30	53.9	53.5	0.4	✓
	Hydraulic Fill			
30	53.9	53.5	0.4	✓
40	53.8	52.9	0.9	✓
50	53.7	52.4	1.3	✓
60	54.8	51.6	3.2	✓
70	54.5	52.5	2.0	✓
80	57.1	52.4	4.7	✓
90	58.0	52.0	6.0	✓

929.00
1013.60

N3530
Hyd. Fill.

60

4800	58.8	52.3	6.5	✓
10	60.1	52.9	7.2	✓
20	60.4	55.0	5.4	✓
30	59.9	59.4	0.5	✓
40	60.5	57.4	3.1	✓
50	60.8	57.6	3.2	✓
60	60.5	56.0	4.5	✓
70	60.7	55.4	5.3	✓
80	60.7	55.7	5.0	✓
90	60.8	55.0	5.8	✓
4900	61.1	55.1	6.0	✓
10	61.4	55.1	6.3	✓
20	61.1	47.0	14.1	✓
30	61.3	40.0	21.3	✓
40	60.4	37.0	23.4	✓
50	60.4	36.0	24.4	✓
60	60.1	35.3	24.8	✓
70	59.9	35.1	24.8	✓
80	60.4	34.9	25.5	✓

2236.50

N 3530
Hyd Fill

N 3530
Hyd. Fill.

61

4980	60.4	34.9	25.5 ✓	
			26.0 ✓ 7 ✓	182.00 ✓
87	61.2	34.7	26.5 ✓	
			24.55 ✓ 4 ✓	98.20 ✓
91	61.2	38.6	22.6 ✓	
			22.8 ✓ 9 ✓	205.20 ✓
5000	61.6	38.6	23.0 ✓	
			23.05 ✓ 9 ✓	207.45 ✓
09	61.7	38.6	23.1 ✓	
			25.2 ✓ 4 ✓	100.80 ✓
13	61.7	34.4	27.3 ✓	
			27.4 ✓ 8 ✓	219.20 ✓
21	61.7	34.2	27.5 ✓	
			27.2 ✓ 9 ✓	244.80 ✓
30	61.7	34.8	^{13.45 ✓} 26.9 ✓	
40	61.8	34.8	27.0 ✓	
50	61.7	33.6	28.1 ✓	
60	61.7	33.3	28.4 ✓	
70	61.8	33.7	28.1 ✓	
80	61.8	33.8	28.0 ✓	

5090	61.8	34.4	27.4 ✓	
5700	61.7	36.7	25.0 ✓	
10	61.8	42.4	19.4 ✓	
20	61.8	49.0	12.8 ✓ _{6.45 ✓}	2441.00 ✓
30	62.0	49.1	12.9 ✓	5935.15 ✓
				U.S. Rock Emb _{6.45 ✓}
30	62.0	49.1	12.9 ✓	
40	61.7	48.7	13.0 ✓	
50	61.6	48.2	13.4 ✓	
60	61.8	48.1	13.7 ✓	
70	61.6	48.5	13.1 ✓	
80	61.8	48.7	13.1 ✓	
90	61.8	48.8	13.0 ✓	
5200	61.9	48.7	13.2 ✓	
10	62.1	48.7	13.4 ✓	
20	62.0	48.6	13.4 ✓	
30	62.2	48.7	13.5 ✓	
40	62.3	48.7	13.6 ✓	
50	62.4	48.9	13.5 ✓	
60	62.5	49.2	13.3 ✓	

N 3530
U.S.R.E.

5270	62.5	49.6	12.9	✓
80	62.6	50.0	12.6	✓
90	62.7	50.6	12.1	✓
5300	62.9	51.7	11.2	✓
10	62.7	51.7	11.0	✓
20	62.9	52.4	10.5	✓
30	62.9	51.7	11.2	✓
40	63.0	51.7	11.3	✓
50	63.1	51.6	11.5	✓
60	63.2	51.2	12.0	✓
70	63.1	51.2	11.9	✓
80	63.1	51.2	11.7	✓
90	63.2	51.1	12.1	✓
5400	63.5	50.9	12.6	✓
10	63.4	51.2	12.2	✓
20	63.4	52.9	10.5	✓
30	63.7	50.2	13.5	✓
40	63.6	50.0	13.6	✓
50	63.5	50.4	13.1	✓
60	63.5	51.1	12.4	✓

N 3530
U.S.R.E.

62

5470	63.6	50.5	13.1	✓	4261.00
				6.55 ✓	
				13.35 ✓ 5 ✓	66.75
75	63.6	50.0	13.6	✓	
				13.65 ✓ 25 ✓	341.25
5500	63.7	50.0	13.7	✓	
				13.75 ✓ 8 ✓	110.00
08	63.8	50.0	13.8	✓	4779.00
				Above U.S. toe wall	
08	63.8	50.0	13.8	✓	
				13.8 ✓ 22 ✓	303.60
30	63.8	50.0	13.8	✓	
				13.85 ✓ 20 ✓	277.00
50	63.9	50.0	13.9	✓	
				6.95 ✓	
60	64.0	58.2	5.8	✓	
70	63.7	59.5	4.2	✓	
80	63.9	63.9	0.0	✓	169.50
					750.10

N 3540
Below D.S. toe wall.

4340	51.4	51.4	0.0	✓	
50	51.5	44.7	6.8	✓	
60	51.5	41.4	10.1	✓	
70	51.2	41.1	10.1	✓	
80	51.6	41.4	10.2	✓	
			4.85	✓	
90	51.7	42.0	9.7	✓	420.50
			6.95	✓	
90	51.7	37.8	13.9	✓	
4400	51.8	37.8	14.0	✓	
10	51.9	37.8	14.1	✓	
20	52.1	37.9	14.2	✓	
30	52.4	37.8	14.6	✓	
40	52.6	37.8	14.8	✓	
50	52.2	35.1	17.1	✓	
60	52.6	35.4	17.2	✓	
70	52.3	35.6	16.7	✓	
			8.25	✓	
80	52.4	35.9	16.5	✓	1379.00
			16.45	✓	1480.5
89	52.3	35.9	16.4	✓	
			15.7	✓	172.70
4500	52.0	37.0	15.0	✓	

N 3540
Below D.S. toe wall 63

4500	52.0	37.0	15.0	✓	
			14.6	✓	102.20
07	52.1	37.9	14.2	✓	2222.45
D.S. Rock Emb					
07	52.1	37.9	14.2	✓	
			14.25	✓	42.75
			7.15	✓	
10	52.2	37.9	14.3	✓	
20	52.4	39.2	13.2	✓	
30	52.5	39.1	13.4	✓	
40	52.5	38.8	13.7	✓	
50	52.5	39.5	13.0	✓	
60	52.6	40.2	12.4	✓	
70	52.7	41.0	11.7	✓	
80	52.7	42.2	10.5	✓	
90	52.8	42.1	10.7	✓	
4600	53.2	43.2	10.0	✓	
10	52.5	45.0	7.5	✓	
20	52.8	45.8	7.0	✓	
30	52.3	46.4	5.9	✓	
40	52.7	47.7	5.0	✓	

N 3540
D5. RE

4650	52.5	44.4	8.1 ✓
60	52.9	45.6	7.3 ✓
70	52.8	43.3	9.5 ✓
80	52.8	47.2	5.6 ✓
90	52.9	47.3	5.6 ✓
4700	52.9	51.0	1.9 ✓
10	52.6	50.5	2.1 ✓
20	53.1	51.4	1.7 ✓
30	53.1	51.1	2.0 ✓

Hydraulic Fill

30	53.1	51.1	2.0 ✓
40	53.6	51.5	2.1 ✓
50	53.8	51.2	2.6 ✓
60	53.8	51.0	2.8 ✓
70	53.9	51.6	2.3 ✓
80	54.3	52.5	1.8 ✓
90	54.8	52.3	2.5 ✓
4800	55.4	52.5	2.9 ✓
10	56.3	53.1	3.2 ✓
20	57.4	54.1	3.3 ✓

N 3540
Hyd. Fill

54

4830	58.8	57.3	1.5 ✓
40	60.3	56.5	3.8 ✓
50	59.8	56.8	3.0 ✓
60	59.8	55.4	4.4 ✓
70	60.5	55.3	5.2 ✓
80	60.4	54.7	5.7 ✓
90	60.6	55.2	5.4 ✓
4900	60.8	54.7	6.1 ✓
10	60.6	56.0	4.6 ✓
20	59.8	48.6	11.2 ✓
30	59.7	39.8	19.9 ✓
40	59.5	36.2	23.3 ✓
50	59.0	35.6	23.4 ✓
60	58.8	34.5	24.3 ✓
70	59.7	34.6	25.1 ✓
80	59.8	34.7	25.1 ✓

42.75 ✓
1839.50
1882.25 ✓

25.15 ✓ 7 ✓

2039.50 ✓

176.05 ✓

97 60.0 34.8 25.2 ✓

23.2 ✓ 4 ✓

92.80 ✓

91 60.1 38.9 21.2 ✓

N3540
Hyd. Fill.

65

2364.50

5622.55

4991 60.1 38.9 21.2

21.9 9

197.10

5000 61.5 38.9 22.6

22.7 9

204.30

09 61.7 38.9 22.8

24.65 4

98.60

13 61.7 35.2 26.5

26.4 11

290.40

24 61.6 35.3 26.3

26.55 6

159.30

30 61.6 34.8 26.8

13.4

40 61.7 35.0 26.7

50 61.8 34.2 27.6

60 61.8 34.3 27.5

70 61.9 34.3 27.6

80 61.8 34.9 26.9

90 61.6 35.5 26.1

5100 61.7 37.4 24.3

10 61.7 44.2 17.5

20 61.6 49.1 12.5

5130 61.8 49.1 12.7

6.35

U.S. Rock Emb.

6.35

30 61.8 49.1 12.7

40 61.6 49.1 12.5

50 61.7 48.8 12.9

60 61.9 48.2 13.7

70 61.7 48.0 13.7

80 62.1 48.0 14.1

90 62.0 48.3 13.7

5200 61.9 48.7 13.2

10 61.9 48.7 13.2

20 62.2 48.8 13.4

30 62.1 48.9 13.2

40 62.2 48.8 13.4

50 62.3 49.3 13.0

60 62.5 49.8 12.7

70 62.5 50.0 12.5

80 62.5 50.2 12.3

90 62.5 50.5 12.0

5300 62.5 51.5 11.0

N3540
U.S. R E

3540
U.S. R E

66

5310 62.6 51.5 11.1 ✓

20 62.8 51.7 11.1 ✓

30 62.8 52.1 10.7 ✓

40 63.0 51.4 11.6 ✓

50 63.1 51.3 11.8 ✓

60 62.9 51.1 11.8 ✓

70 63.1 50.6 12.5 ✓

80 63.2 50.7 12.5 ✓

90 63.1 50.4 12.7 ✓

5400 63.2 50.4 12.8 ✓

10 63.2 49.7 13.5 ✓

20 63.5 49.7 13.8 ✓

30 63.5 49.8 13.7 ✓

40 63.6 49.8 13.8 ✓

50 63.7 50.0 13.7 ✓

60 63.9 50.4 13.5 ✓

70 63.7 50.6 13.1 ✓

13.4 ✓ 1 ✓

71 63.7 50.0 13.7 ✓

4340.00

13.40

71 63.7 50.0 13.7 ✓

6.75 ✓

80 63.5 50.0 13.5 ✓

90 63.6 50.0 13.6 ✓

6.75 ✓

5500 63.5 50.0 13.5 ✓

13.45 ✓ 5 ✓

05 63.4 50.0 13.4 ✓

Above U.S. toe wall

05 63.4 50.0 13.4 ✓

13.4 ✓ 5 ✓

10 63.4 50.0 13.4 ✓

6.7 ✓

20 63.8 50.0 13.8 ✓

30 63.8 50.0 13.8 ✓

40 63.8 50.0 13.8 ✓

50 63.9 50.0 13.9 ✓

60 63.8 57.8 6.0 ✓

70 64.0 59.8 4.2 ✓

80 63.7 63.7 0.0 ✓

13.6 ✓ 9 ✓

122.40 ✓

271.00 ✓

67.25 ✓

4814.05 ✓

67.00 ✓

722.00 ✓

789.00 ✓

N 3310 is most south
 Section of Item 11 Cut
 assumed vertical so that
 Item 3 has this same end
 section

N 3310 67
 U S Rock Emb.

5290'	631.1	26.4	4.7 ^{2.55}	
5300'	31.1	25.4	5.7 ^{2.1}	
10'	31.8	27.6	4.2	101.50 ^x
			2.1	14.70 ^x
17'	32.7	32.7	0.0	116.20 ^x

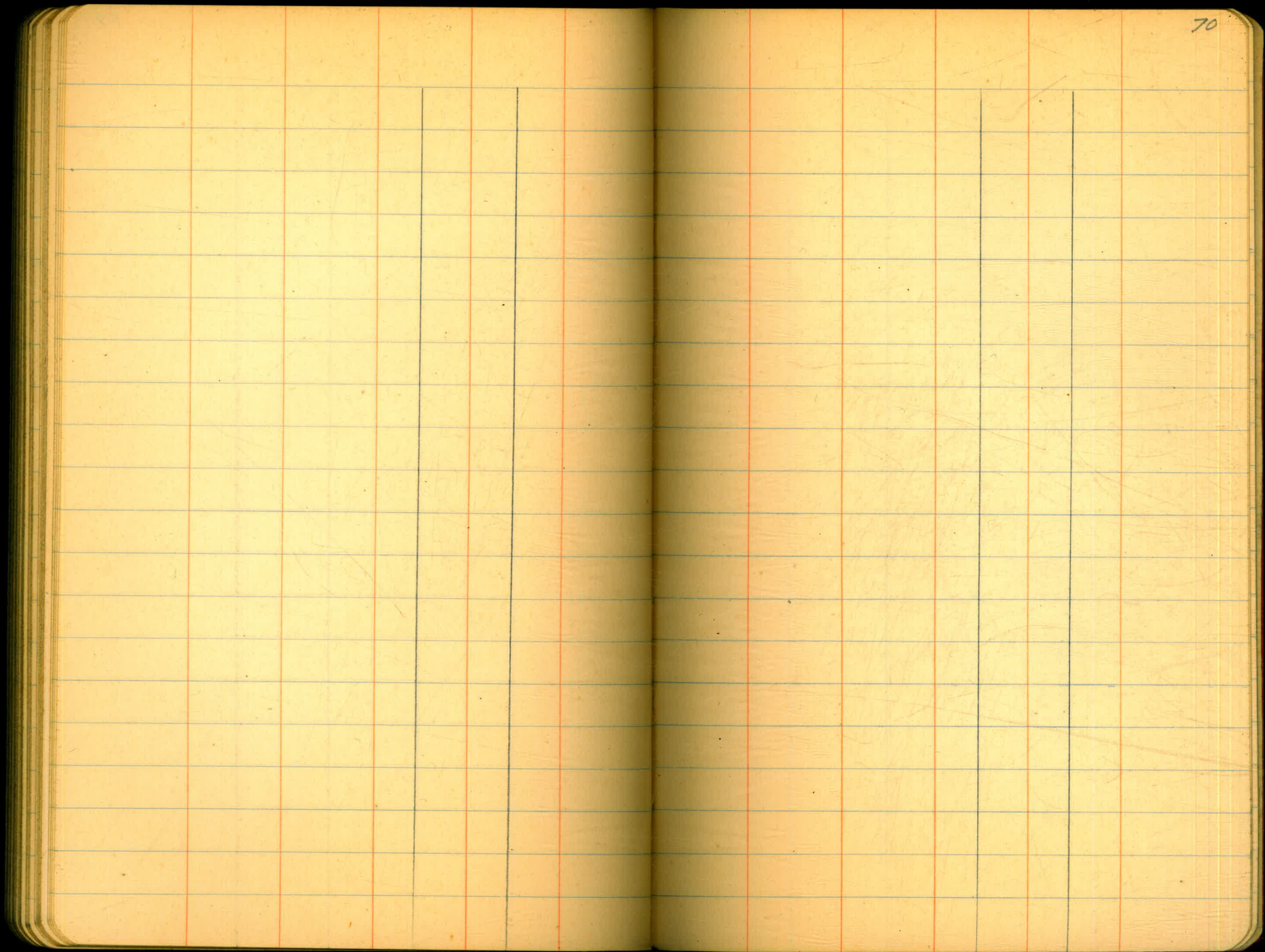
This Area N 3320 is to be
 used for Vol. between
 N 3310 & N 3320 →

N 3320 U S Rock Emb

5280'	28.4	28.4	0.0	
90'	27.7	22.8	4.9	
5300'	28.2	20.4	7.8	
10'	28.6	20.9	7.7	
20'	29.9	23.2	6.7 ^{3.35}	237.50 ^x
			7.25	29.00 ^x
24'	30.1	22.3	7.8	
			3.9	27.30 ^x
31'	30.5	30.5	0.0	293.80 ^x

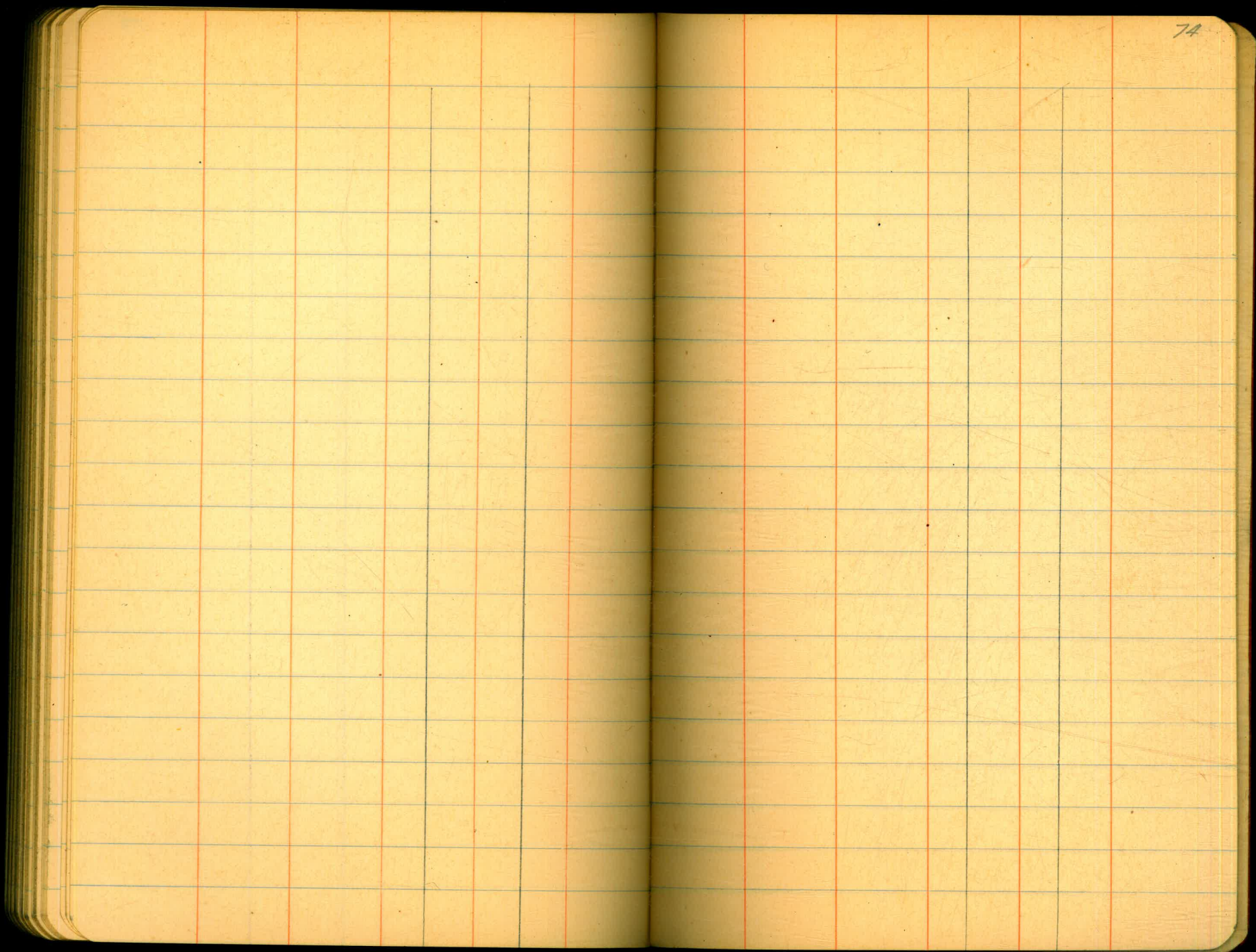
The image shows an open notebook with two facing pages. The pages are cream-colored and feature light blue horizontal ruling. Each page is divided into columns by vertical lines: a red margin line on the left and a blue margin line on the right. The pages are otherwise blank, with no text or drawings. The number '68' is printed in the top right corner of the right-hand page.

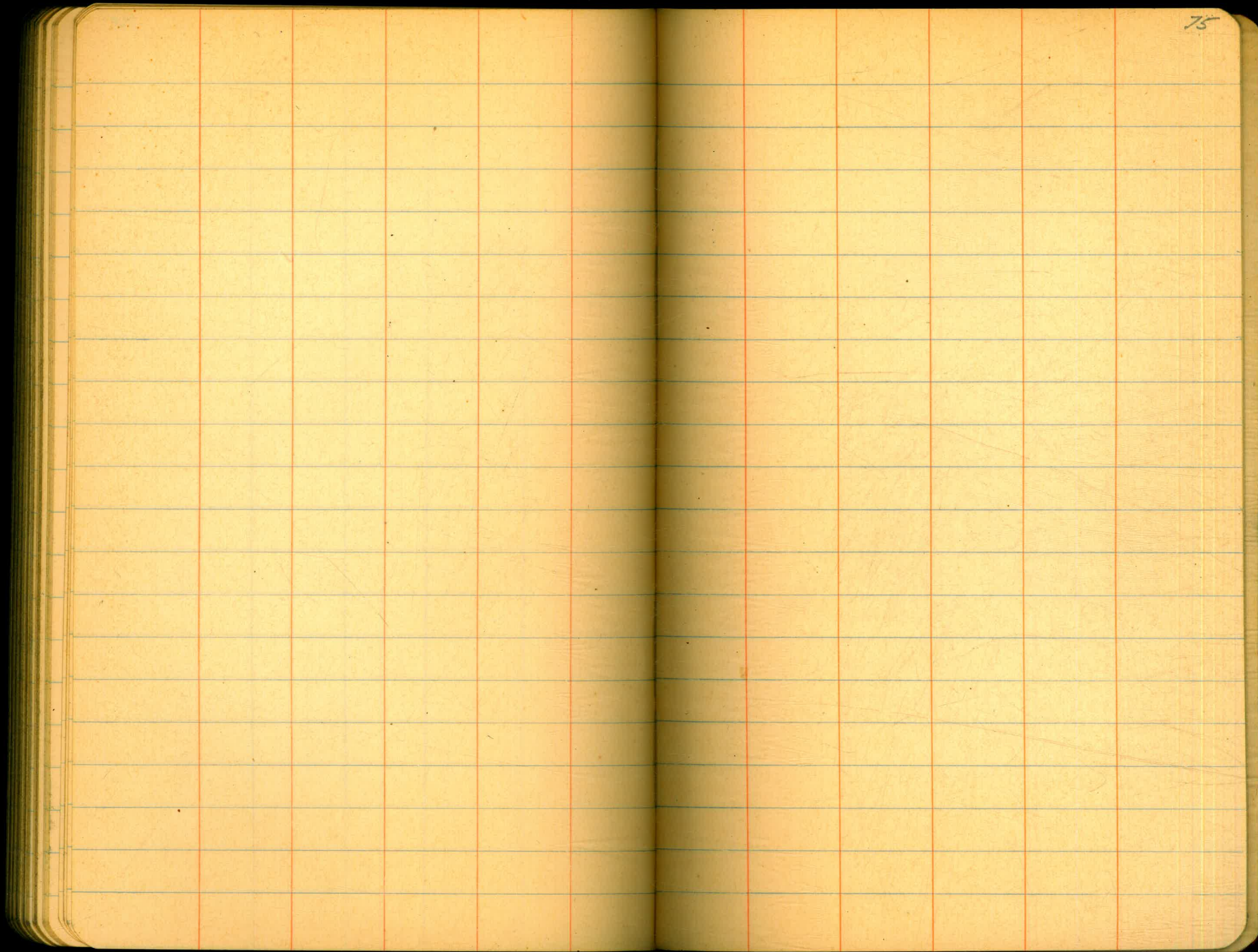
The image shows an open notebook with two facing pages. The pages are cream-colored and feature light blue horizontal ruling. Vertical red lines create margins on both pages. The right page is numbered '69' in the top right corner. The notebook is bound in the center, and the pages are otherwise blank.



The image shows an open notebook with two facing pages. The pages are cream-colored and feature light blue horizontal ruling. The right page is numbered '72' in the top right corner. The notebook has rounded corners and a visible binding edge on the left. The pages are blank, with no writing or markings other than the printed lines and the page number.

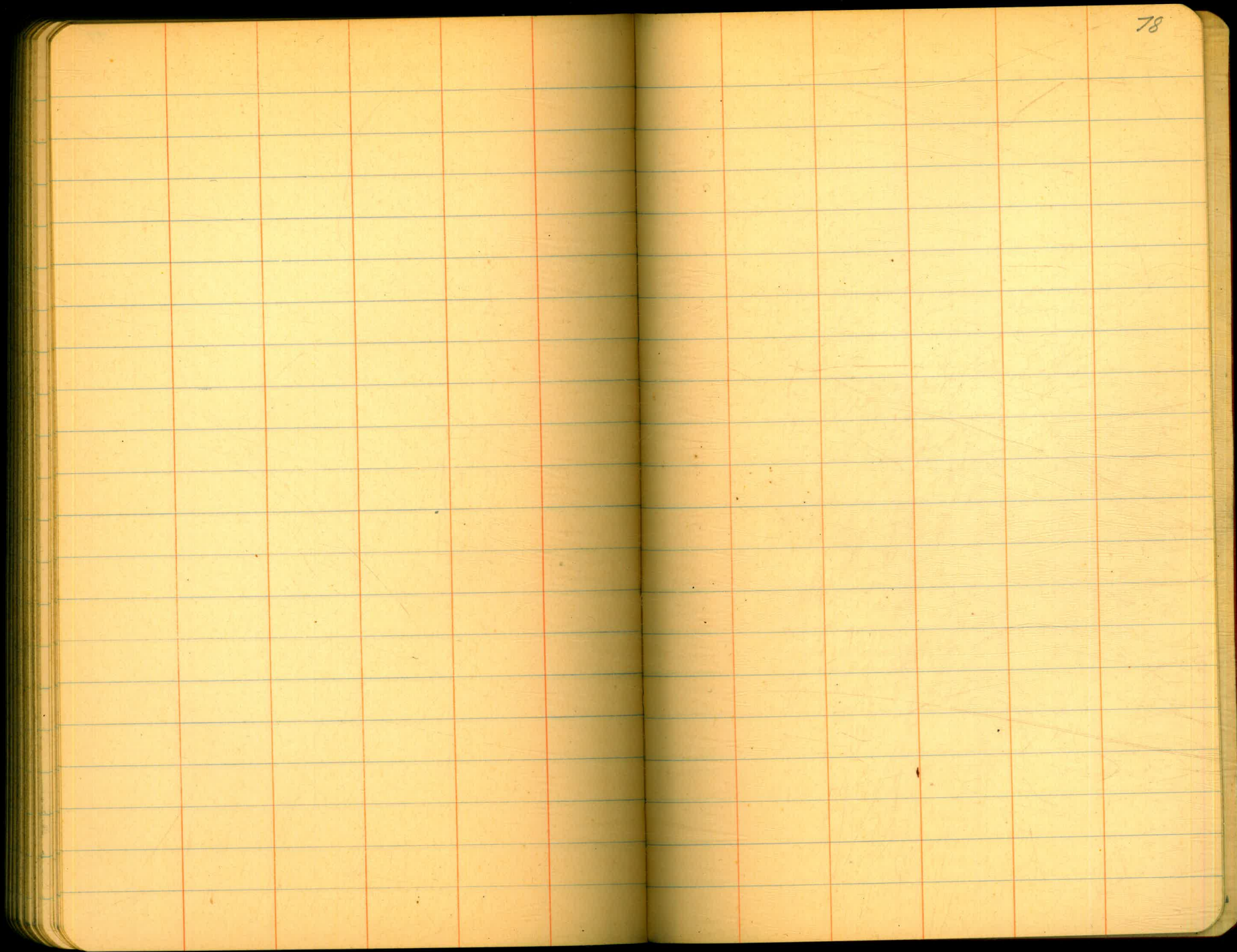
The image shows an open notebook with two facing pages. The pages are cream-colored and feature light blue horizontal ruling. The right page is numbered '73' in the top right corner. The notebook has a dark cover visible around the edges. The pages are blank, with no writing or markings other than the printed lines and the page number.





The image shows an open notebook with two facing pages. The pages are cream-colored and feature light blue horizontal ruling. Vertical red lines create margins on both sides of each page. The notebook is bound in the center, with the binding visible as a dark vertical line. The number '76' is handwritten in the top right corner of the right page. The pages are otherwise blank.

The image shows an open notebook with two facing pages. The pages are cream-colored and feature a grid of light blue horizontal lines and vertical red margin lines. The right page is numbered '77' in the top right corner. The notebook is bound in the center, and the pages appear slightly aged with some minor discoloration and faint smudges.



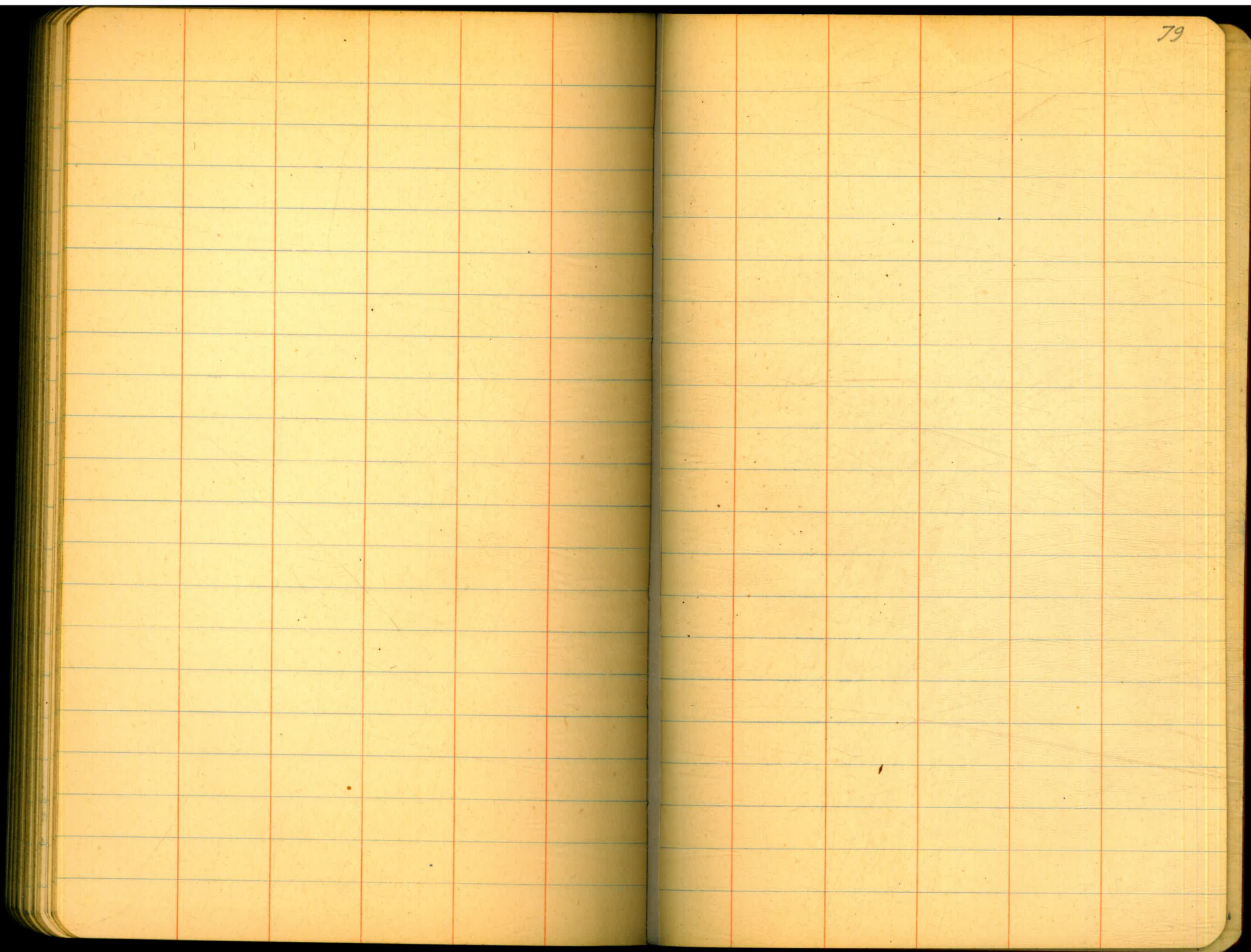


TABLE IX.—CALCULATION OF EARTHWORK.

Width	HEIGHT														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	.02	.04	.06	.07	.09	.11	.13	.15	.17	.18	.20	.22	.24	.26	.28
2	.04	.07	.11	.15	.18	.22	.26	.30	.33	.37	.41	.44	.48	.52	.56
3	.06	.11	.17	.22	.28	.33	.39	.44	.50	.56	.61	.67	.72	.78	.83
4	.07	.15	.22	.30	.37	.44	.52	.59	.67	.74	.81	.89	.96	1.04	1.11
5	.09	.19	.28	.37	.46	.56	.65	.74	.83	.93	1.02	1.11	1.20	1.30	1.39
6	.11	.22	.33	.44	.56	.67	.78	.89	1.00	1.11	1.22	1.33	1.44	1.55	1.67
7	.13	.26	.39	.52	.65	.78	.91	1.04	1.16	1.30	1.42	1.55	1.68	1.81	1.94
8	.15	.30	.44	.59	.74	.89	1.04	1.19	1.33	1.48	1.63	1.78	1.92	2.08	2.22
9	.17	.33	.50	.67	.83	1.00	1.17	1.33	1.50	1.67	1.83	2.00	2.17	2.33	2.50
10	.18	.37	.56	.74	.93	1.11	1.30	1.48	1.67	1.85	2.04	2.22	2.41	2.59	2.78
11	.20	.41	.61	.82	1.02	1.22	1.43	1.63	1.83	2.04	2.24	2.44	2.65	2.85	3.06
12	.22	.44	.67	.89	1.11	1.33	1.56	1.78	2.00	2.22	2.44	2.67	2.89	3.11	3.33
13	.24	.48	.72	.96	1.20	1.44	1.68	1.92	2.16	2.41	2.65	2.89	3.13	3.37	3.61
14	.26	.52	.78	1.04	1.30	1.55	1.81	2.08	2.33	2.59	2.85	3.11	3.37	3.63	3.89
15	.28	.56	.83	1.11	1.39	1.67	1.94	2.22	2.50	2.78	3.06	3.33	3.61	3.89	4.17
16	.30	.59	.89	1.18	1.48	1.78	2.07	2.37	2.67	2.96	3.26	3.56	3.85	4.15	4.44
17	.31	.63	.94	1.26	1.57	1.89	2.20	2.52	2.83	3.15	3.46	3.78	4.09	4.41	4.72
18	.33	.67	1.00	1.33	1.67	2.00	2.33	2.67	3.00	3.33	3.67	4.00	4.33	4.67	5.00
19	.35	.70	1.06	1.41	1.76	2.11	2.46	2.82	3.17	3.52	3.87	4.22	4.57	4.92	5.28
20	.37	.74	1.11	1.48	1.85	2.22	2.59	2.96	3.33	3.70	4.07	4.44	4.81	5.18	5.56
21	.39	.78	1.17	1.55	1.94	2.33	2.72	3.11	3.50	3.89	4.28	4.67	5.06	5.44	5.83
22	.41	.81	1.22	1.63	2.04	2.44	2.85	3.26	3.67	4.07	4.48	4.89	5.29	5.70	6.11
23	.43	.85	1.28	1.70	2.13	2.56	2.98	3.41	3.83	4.26	4.68	5.11	5.54	5.96	6.39
24	.44	.89	1.33	1.78	2.22	2.67	3.11	3.56	4.00	4.44	4.89	5.33	5.78	6.22	6.67
25	.46	.92	1.39	1.85	2.31	2.78	3.24	3.70	4.17	4.63	5.09	5.56	6.02	6.48	6.94
26	.48	.96	1.44	1.92	2.41	2.89	3.37	3.85	4.33	4.82	5.30	5.78	6.26	6.74	7.24
27	.50	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
28	.52	1.04	1.55	2.07	2.59	3.11	3.63	4.15	4.67	5.18	5.70	6.22	6.74	7.26	7.78
29	.54	1.07	1.61	2.15	2.68	3.22	3.76	4.30	4.83	5.37	5.91	6.44	6.98	7.52	8.06
30	.56	1.11	1.67	2.22	2.78	3.33	3.89	4.44	5.00	5.55	6.11	6.67	7.22	7.78	8.33
31	.57	1.15	1.72	2.30	2.87	3.44	4.02	4.59	5.17	5.74	6.32	6.89	7.46	8.04	8.61
32	.59	1.18	1.78	2.37	2.96	3.56	4.15	4.74	5.33	5.92	6.52	7.11	7.70	8.30	8.89
33	.61	1.22	1.83	2.44	3.05	3.67	4.28	4.89	5.50	6.11	6.72	7.33	7.94	8.55	9.17
34	.63	1.26	1.89	2.52	3.15	3.78	4.40	5.04	5.67	6.29	6.93	7.56	8.18	8.81	9.44
35	.65	1.30	1.94	2.59	3.24	3.89	4.53	5.18	5.83	6.48	7.13	7.78	8.42	9.08	9.72
36	.67	1.33	2.00	2.67	3.33	4.00	4.66	5.33	6.00	6.67	7.33	8.00	8.67	9.33	10.00
37	.68	1.37	2.06	2.74	3.42	4.11	4.79	5.48	6.17	6.85	7.54	8.22	8.91	9.59	10.28
38	.70	1.41	2.11	2.82	3.52	4.22	4.92	5.63	6.33	7.03	7.74	8.44	9.15	9.85	10.56
39	.72	1.44	2.17	2.89	3.61	4.33	5.05	5.78	6.50	7.22	7.95	8.67	9.39	10.11	10.83
40	.74	1.48	2.22	2.96	3.70	4.44	5.18	5.92	6.67	7.41	8.15	8.89	9.63	10.37	11.11

Table gives cu. yds. in 1 ft. of a triangle of given width and height. Corrections for tenths of width are one tenth the values found under each height considering the widths from 1 to 9 as tenths and similarly the corrections for tenths of height are one tenth the figures opposite width considering the heights from 1 to 9 as tenths. Thus if w = 16.2 and h = 5.3, cu. yds. = 1.48 + .028 + .089 = 1.597 cu. yds. or practically 160 cu. yds. per 100 ft. If w exceeds 40 ft., use one half and multiply result by 2, if both w and h are large use one half of each and multiply result by 4. Any cross-section may be divided into triangles by the following rule. To the triangle of the sum of the outside cuts (or fills) = h, and 1/2 the roadbed = w, add the triangles formed by taking the distance out to each break in turn (=w's) by the difference between the cuts (or fills) on each side of it (=h's) always subtracting the outer from the inner.

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

Roadway 16 feet wide. Side Slopes 1 on 1 1/2. For Single Track Embankment.

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

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 41.9. For same slopes but other widths of roadbed correct above figures by one-half difference in width of roadbed; thus in example above for 20 ft. roadbed distance will be 41.9 + (20 - 16) * 2 or 2 ft. added to 41.9 = 43.9. For slopes of 1 on 1 see inside of front cover.

Made in Germany.

Buy American