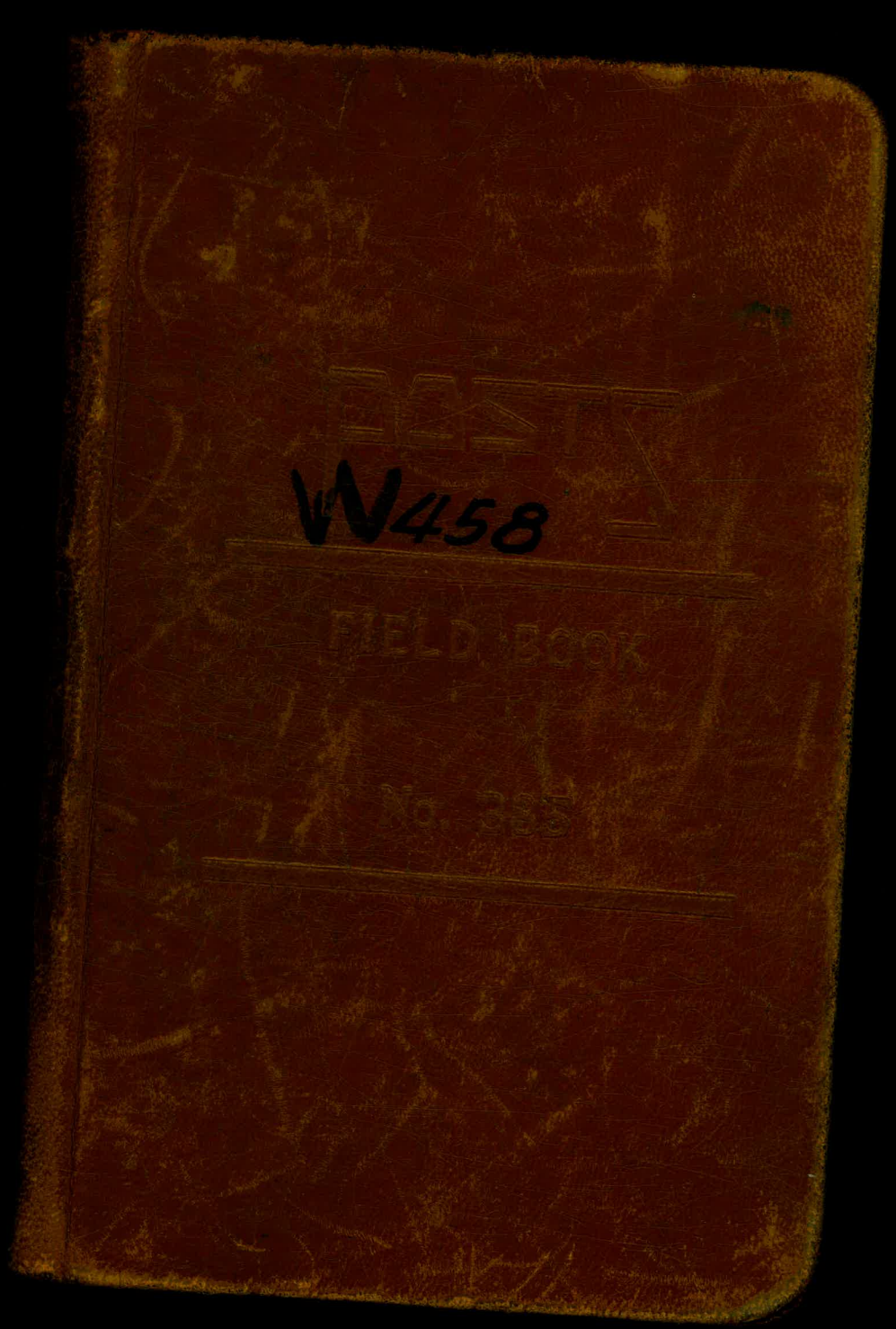
W458
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P. 36 deleted 10/1/46 mbg
p 38 " 4/1/47 mbg
p 48 " 12/18/47 mbg
49 " 1/13/48 mbg

Warning
There are Two
F.B.'s numbered
458

SAN DIEGUITO DAM FINAL CROSS-SECTIONS
UPSTREAM FACE AFTER BACKFILL 84 - 91
Indexed 3/24/48

HODGES DAM April-1-1936

C.B. Hough

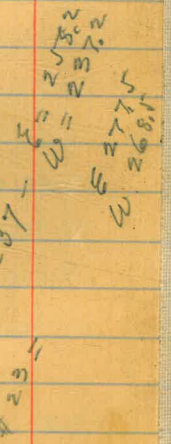
Ground elev's at diagonals - 1-18
X sec's. for diagonal excav. - 19-24
" April est. vert. reinf excav. - 25-28
Elev's in vert. reinf. footings - 29-31
Trench width - diagonal excav. 32
City steel inventory 33
Equip. inventory 34
Transit points set on dam 35
Level Notes Flagging 395 & 375' Contours vicinity
Lake Hodges Recreational Area 36 ✓
Levels For Water Tank - to Contour 395' - Bernardo Bridge 38
Profiles & alignment of ditch 43-45
& Pipelines at Dieguito Reservoir
X Section of upstream side of
San Dieguito Reservoir (BEFORE EXC). 46-49 & 83

DEFLECTION OF BASE LINE L & T's - SAN DIEGUITO DAM - 43
X-SECTIONS UPST. SIDE SAN DIEGUITO DAM (12½' stations) (AFTER EXC) - 50-54
PROFILE OF TOP OF FOOTING (CUTOFF) SAN DEGUITO DAM - 55-65
X-SECTIONS UPST. SIDE SAN DIEGUITO DAM,
AFTER EXC (6.25' STATIONS) 66 & 68 - 78 & 82
ELEV OF BASE LINE L & T's - SAN DIEGUITO DAM - 67, 92 & 93
SAN DIEGUITO DAM SPILLWAY ELEV. 79
SAN DIEGUITO DAM COUNTERFORTS - GROUND
SURFACE & BOTTOM ELEVATIONS 80 & 81

#1

April - 13 - 36

	Diag. Ht. arch	Elc. -	Elev. Measured Down from Walkway 6'-6" Ht. angle to Arch	
#9 W	247.0	233		
E	232.8	--		
#10 W	230.1	223		
E	222.5	-	209.93	
#11 W	217.9	215		
E	214.5		216.91	
#12 W	212.1	212		
E	212.5			
#13 W	212.3	209	Marked 214.00 213.97	
E	208.8			
#14 W	208.8	207	212.09	
E	206.7			
#15 W	204.3	204	209.16	
E	201.6			
#16 W	203.1	208	Stack 207.00 207.13	
E	208.2			
#17 W	208.2	208	206.17	
E	202.2			
#18 W	200.9	204		
E	205.0			
#19 W	205.0	205	211.12	
E	209.4			
#20 W	209.4	209	Black 220.00 221.15	
E	212.3	-	225.17	
#21 W	221.3	221		
E	232.7			



April - 14 - 1936 #2

W #10	Elc. over Arch Walkway		238.00
	236.22		- 1.78
E #10		5.29	230.93
E #11		5.31	230.91
W #13		5.25	230.97
W #14		5.13	231.09
W #15		5.06	231.16
W #16		5.09	231.13
W #17		5.05	231.17
W #18	Red - water	5.05	231.17
W #19		5.10	231.12
W #20		5.07	231.15
E #20		5.10	231.12
E #19	Red T. P	5.10	231.12

H.I. 208.68 - 6' 6" Ht. angles 2.68 = 206.00

#17 W = 208.0 ground = 202.2 To Wall 5.4 (4 Valves)

#16 E = 208.0 Stairway = 202.2 To Wall 5.5

#16 W = 208.0 = 203.9 water 204.8

H.I. 209.47

#15 E = 204.0 = 203.8 Loose Rock

#15 W = 204.0 = 203.0 loose R. Water 205.5

H.I. 212.85

#14 E 207.0 = 206.5 loose Rock

#17 E 208.0 water 202.45

#18 W (208.8) 202.

#18 E 204. 209.1 L Rock 204.5 water

H.I. 213.25

#19 W 205. 209.5 L Rock 204.5 wat

#3

April - 14 - 36

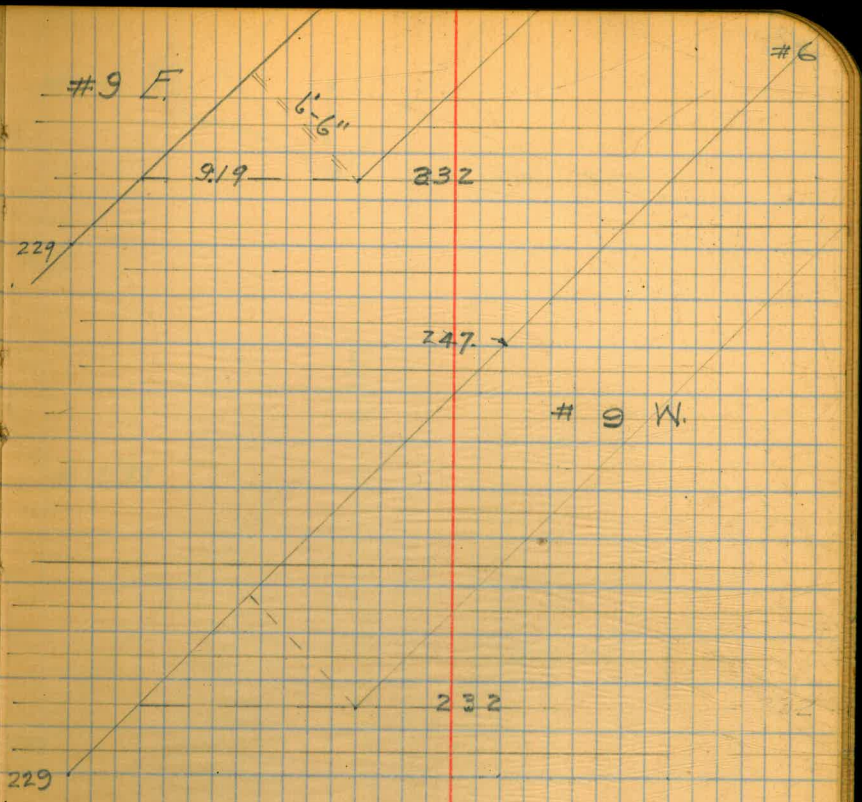
Cont. from Page -2-

#19 E HI 221.25	205	210.0 LR.	Water 209.1
#20 W	209.	209.6 LRock	209.08 Water
#20 E	209	LR 210.0 Appr.	Water 221.6
#21 W 232.84	221	LR 224.2	Water 221.6
#14 W	207	LR 203.0	208.9
#13 E	209	LR 208.2	208.9
#13 W	209.	LR 211.8	
#12 E HI 220.31	212.	LR 212.7	
#12 W	212.	LR 213.1	Water 212.2
#11 E HI 220.54	215.	LR 213.0	
#11 W	215.		
#10 E	223		
#10 W	223		

#4

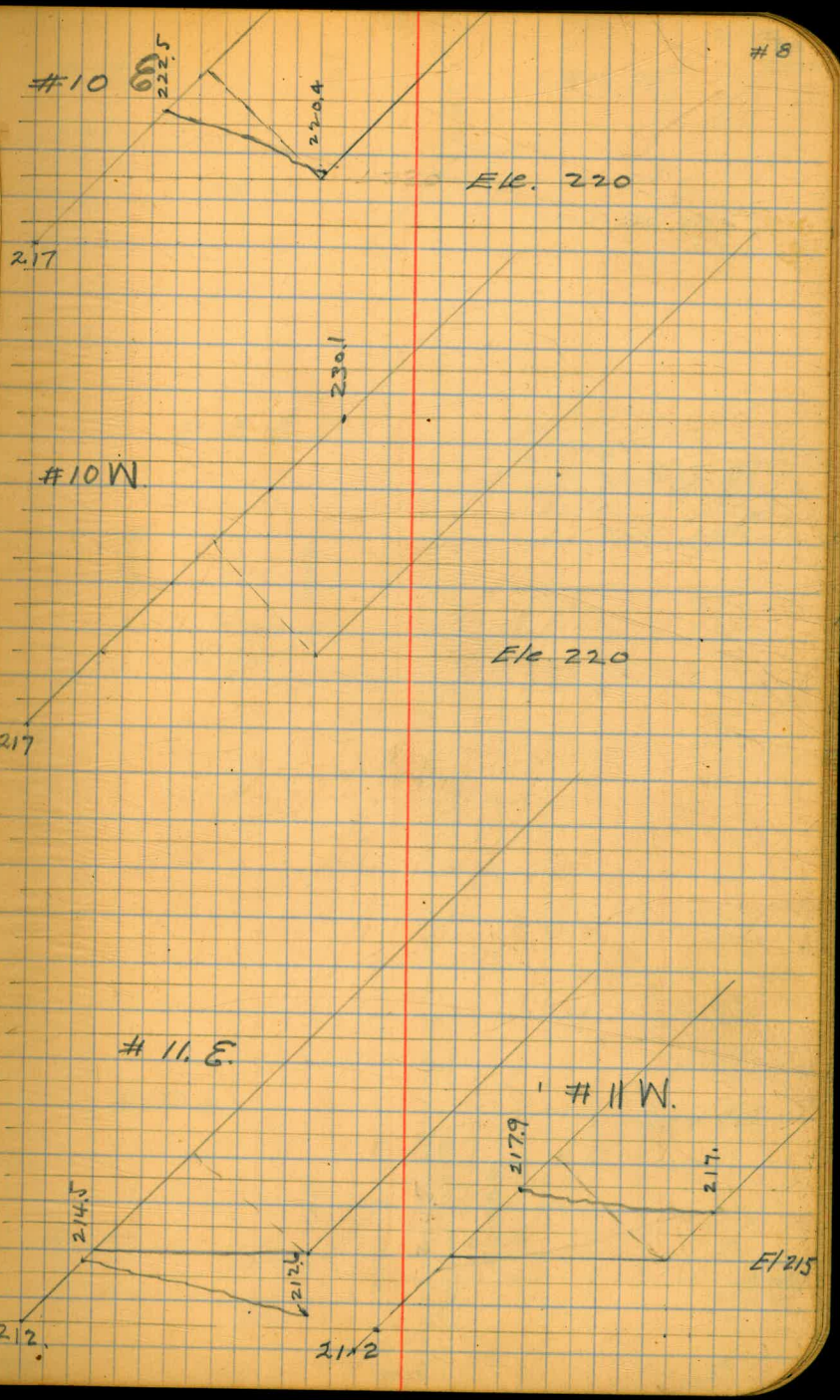
#5

#6

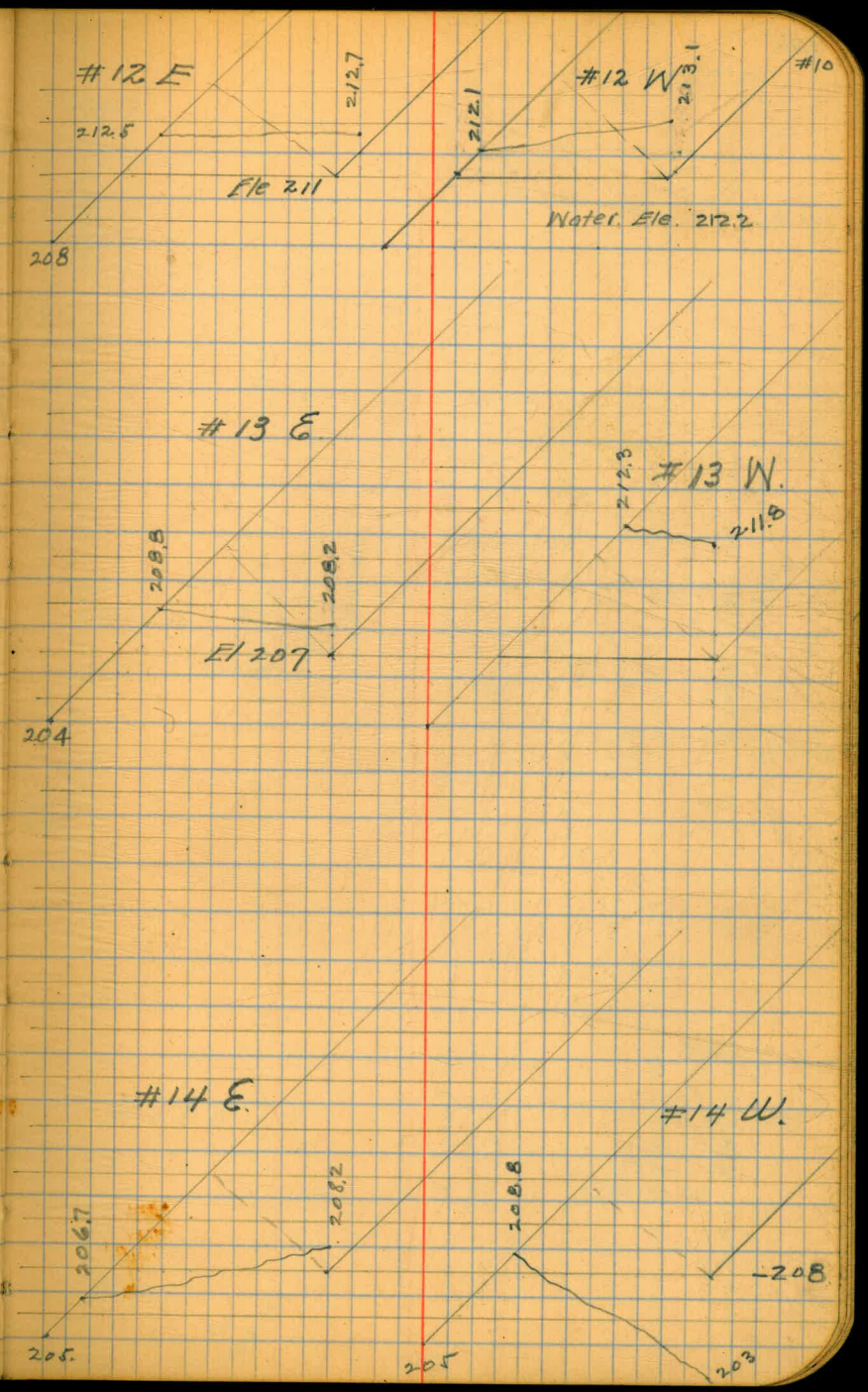


#7

#8


#10
222.5
220.4
Ele. 220
217
230.1
#10W.
Ele 220
217
#11 E.
#11W.
217.9
217.
214.5
212.4
El 215
212
212

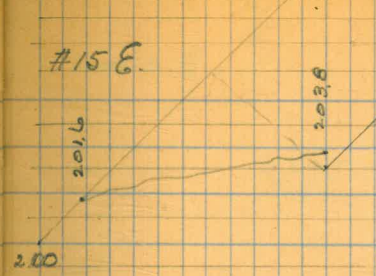
#9


#12 E
212.5
212.7
Ele 211
208
#12 W
212.1
213.1
Water Ele. 212.2
#10
#13 E.
208.8
209.2
El 207
204
#13 W.
212.3
211.9
#14 E.
206.7
208.2
205.
#14 W.
208.8
208
205
203

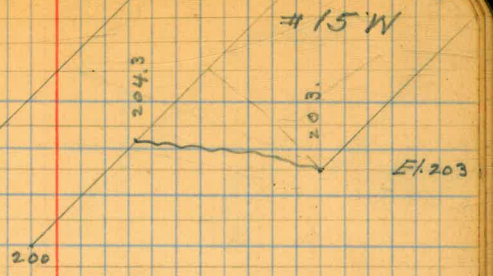
#11

#12

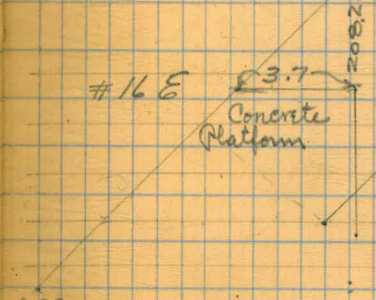
#15 E.



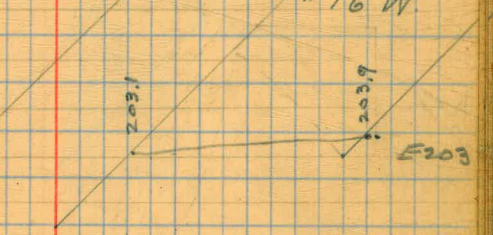
#15 W



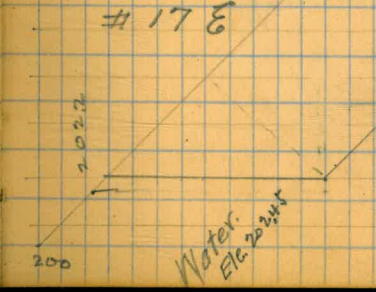
#16 E



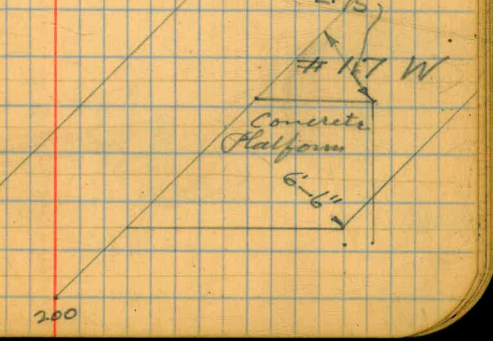
#16 W.



#17 E



#17 W



#13

#14

#18 E

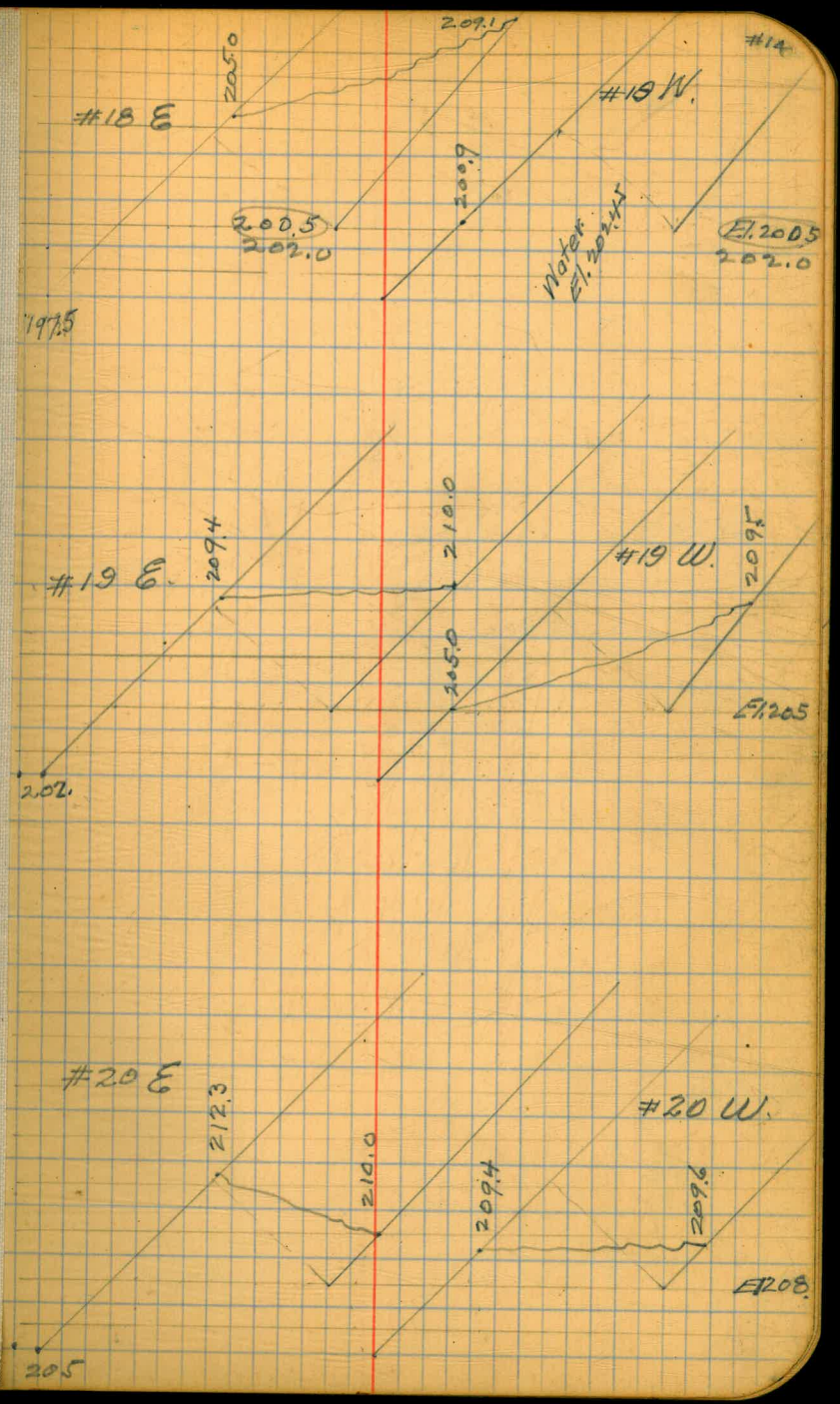
#18 W.

#19 E.

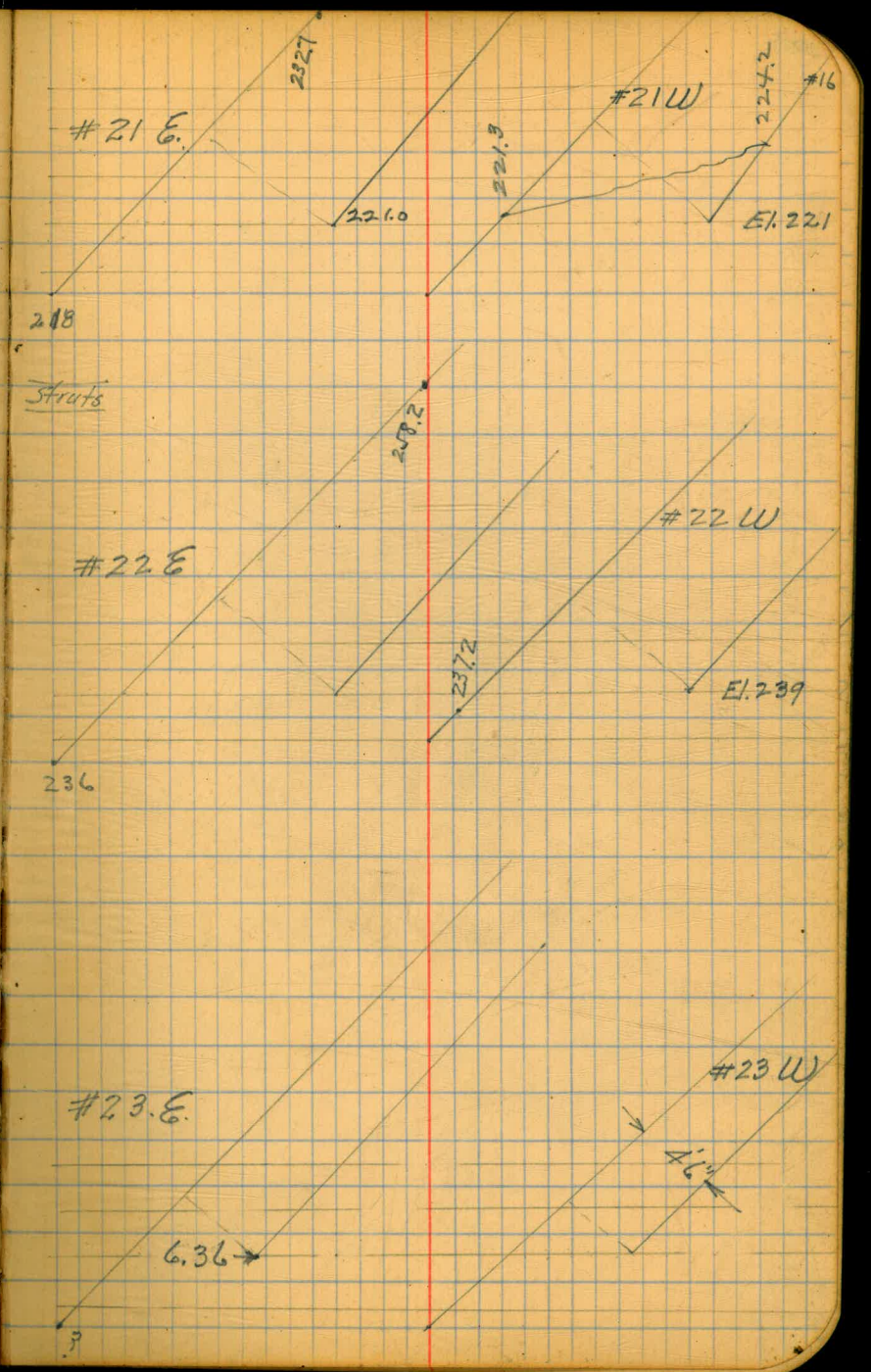
#19 W.

#20 E

#20 W.



#15

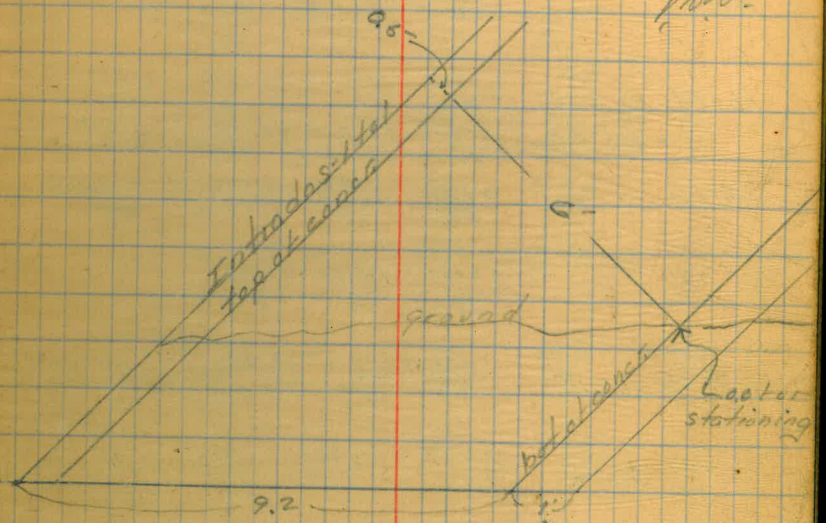

#21 E.
232.7
221.0
#21 W
221.9
224.2
#16
El. 221
218
Struts
258.2
#22 E
#22 W
237.2
El. 239
236
#23 E.
#23 W
4'-6"
6.36
3

#17

#18

Sketch showing o.o for sections on following page.

1/1946.



#19

X. Sec. for Diagonal Exc. 4/25-36

9 - E.	El. 232.0	232.0	232.0	232.2	235.0	235.5	235.5
		00	1.5	4.0	4.0	6.0	8.0
Arch		232.8	232.8	232.9	233.8	234.9	234.7
see page 23 for 9W		00	2.0	3.0	4.0	6.0	8.0
10 - W	El. 220.0	232.1	232.0	235.6	235.5		
water 224.3		00	1.5	7.0	8.0		
Arch		222.8	223.0	223.3	223.8	225.9	229.0
		00	1.5	2.0	3	5.0	8.0
	C - 1.0						
10 - E.	El. 220	220.4	221.0	221.8	222.8	223.2	
		0.0	1.5	2.0	4.5	6.0	
Arch		222.5	222.4	222.5	223.2	223.5	
		00	1.5	3.0	6.0	8.0	
	C - 3.0						
11 - W.	El. 215	217.0	217.2	218.6	219.4	220.4	
		00	1.5	2.6	4.0	6.0	
→ + 5.5 Break		218.1	218.0	219.0	219.4	221.0	
		00	1.5	3.0	4.0	6.0	
Arch		217.9	218.6	218.8	219.3	219.3	
		00	1.5	3.0	4.0	4.8	
		221.4	221.7	222.5			
		50	6	8			
11 - E	El. 215	212.4	212.4	214.5	214.7	215.5	215.9
		00	1.0	1.5	4.0	6.0	8.0
→ 5' Break		215.5	216.0	217.5	219.1		
		00	1.5	3.0	6.0		
Arch		214.5	215.0	217.1	217.9		
		00	1.5	3.0	6.0		
12 W.	Ele. 211.0	213.2	213.0	214.0	214.3	317.7	318.0
		00	1.5	3	4.6	6.5	8.0
↓ +8.0 Break		214.6	214.1	216.5	217.5		
		00	1.5	6.5	8.0		
Arch		212.1	212.1	213.9	215.9	216.7	
		00	1.5	4.0	6	8.	

Hough. Brickman

X Sec. Diagonal Exc. 4/-27-36

#20

12 E.	Ele = 211.0	212.7	213.8	215.4	216.2		
		00	1.5	6.0	9.0		
↑ +40 Break		214.1	214.3	214.3	216.1	216.7	
		00	1.5	3.5	6.0	9.0	
Arch		212.5	212.5	213.3	215.3	216.3	216.5
		0.0	1.5	3.0	4.0	6.0	8.0
13 W	El. 207.0	211.0	211.0	212.0	215.0	215.2	215.5
		00	1.5	2.8	3.0	6	8
↑ +6.5' Break		213.0	213.6		216.0		
		00	1.5		8.0		
Arch		211.2	212.6		213.9		
		00	1.5		8.0		
13 E.	Ele. 207.0	208.2	208.5	208.9	210.0	210.0	212.2	213.1	213.3
		00	1.5	2.6	3.6	4.0	5.0	7.0	8.0
↑ +8.0 Break		207.4	207.4	212.4		212.9			
		00	2.0	3.0		8.0			
Arch		207.9	208.7	208.9	209.5	210.7	211.1	211.3	
		00	1.5	2.0	2.0	4	6	8	
14 W	El. 208.0	208.4	208.4	208.9	211.1	211.9	213.4		
		00	1.5	2.0	2.6	5.0	8.0		
Arch		208.4	208.9	210.9	211.7	212.2	211.9		
		00	1.5	4	5	7	8		
14 E.	Ele. 208.0	206.7	208.0	208.0	209.6				
		00	1.5	2.0	5				
Arch		206.2	206.7	208.3	210.5				
		00	1.5	4.0	7				
15 W	El. 203.0	202.6	203.5	203.5	207.3	208.0	208.5	209.0	
		00	1.5	3.0	4.0	4.8	8	7.0	
Arch		202.1	204.6	205.5	206.4	209.3	209.7		
		00	1.5	3.0	3.0	6.6	8.5		

#2.1

4-27-36

15 E. Ele. 203.0 — 203.7 (0.0) 203.8 (1.5) 204.0 (3.5) 208.8 (5.0) 209.4 (7.0)

Arch — 201.9 (0) 201.9 (1.5) 200.8 (2.0) 203.8 (2.6) 204.1 (6.0) 207.6 (7.0)

16 W. El. 203 — 203.4 (0.0) 203.4 (1.0) 203.8 (1.5) 205.0 (2.0) 206.0 (6.0) 206.7 (8.0)

Arch — 204.4 (0.0) 204.4 (2.0) 205.9 (2.6) 205.5 (6.0) 205.7 (8.0)

16 E. 203.0

17 W. 203.0

17 E. 203.00

18 W 207.0 ~~208.8~~ change. 207.0 208.5

18 E. 207.0 208.5 — 208.7 (0.0) 209.5 (1.5) 209.5 (2.0) 209.7 (4.0) 209.8 (6.0) 210.1 (8.0)

+5' Break — 209.0 (0.0) 209.5 (1.5) 209.8 (3.0) 210.8 (6.0) 212.8 (8.0)

IN

Arch — 203.7 (0.0) 203.9 (1.5) 204.2 (2.0) 204.6 (4.0) 209.4 (4.0) 209.3 (8.0)

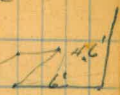
IN

for

#2.2

19 W. Ele. 205.0 — 209.0 (0.0) 208.8 (1.5) 208.8 (2.0) 209.0 (8.0) Large Rock

+6' Break — 208.0 (0) 208.0 (6.0) 212.7 (4.6) 212.7 (5.0) 212.4 (8)



Arch — 203.9 (0) 204.0 (1.5) 203.9 (2.0) 206.5 (6.8) 208.7 (6.8) 209.0 (8.0)

19 E Ele. 205.0 — 211.3 (0) 211.5 (4.0) 211.8 (6.0) 211.7 (8.0)

+4 Break — 211.2 (0) 211.5 (2.0) 212.0 (4.0) 212.5 (6.0) 213.7 (8.0)

Arch. — 208.1 (0.0) 208.3 (2.0) 208.7 (3.0) 209.3 (4.0) 212.3 (6.0) 212.9 (8.0)

20 W Ele. 208.0 — 210.0 (0.0) 211.7 (1.5) 214.8 (7.5)

Arch — 208.1 (0.0) 208.1 (2.0) 210.7 (2.5) 213.1 (8.0)

20 E. Ele. 208.0 — approx - 11' water Ele. 221.6 — 210.0 (0.0) 210.0 (6.0)

Arch — 212.3 (0.0) 212.5 (7)

21 W Ele. 221.0 — 224.0 (0.0) 224.0 (3.0) 223.4 (6.0) 223.4 (8.0)

Arch. — 221.1 (0.0) 221.8 (2.0) 222.0 (4.0) 222.1 (5.0) 221.8 (7.0)

21 E Ele. 221.0 Water Ele. 240.75) — 239.2 (0.0) 240.0 (6)

Arch. — 237.9 (0) 240.0 (7)

#23

								Water.
22 W.	239.0	236.8 00	368 1.5	40.7 1.5	42.6 3.0	42.1 5.0	42.0 6.0	240.7 9.0
Arch.		236.0 00	236.5 1.5	240.5 6.0	239.0 8			
22 E-	239.0	Water 261.8 Arch same			258.0 00	258.0 5	258.5 8	
23 W.	272.0 277.0	270.5 00	270.5 1.2	272.5 1.5	272.9 3.0	270.5 5.0		
Arch		268.5 00	268.5 1.2	270.5 1.5	270.9 3.0	268.5 5.0	Cont Slope to Ele. 261.8	
9 W.	232	247.2 00	247.4 1.5	248.0 8.0				
+7.5 to Break Arch		Sewer in a hole.						
23 E	272.0	294.0 0.0	294.6 5	1/4/36				
+3.5 top of slope Arch +6.4		293.0 0.0	293.4 5					

Note:- all +'s from Buttress No. are Level Dist.

See page 32 for excav. widths.

#24

Brackman Keough

4/-27-36

Set B

Buttresses #5 to #6

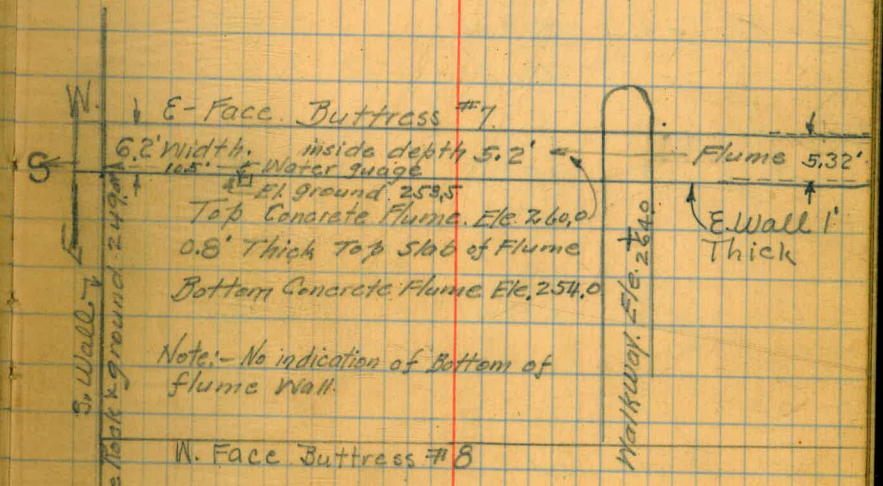
Ele 264.00 + 36.8 = 300.7 = Top Walk

#5 East Ele 12.0 = 288.7

#6 W- 17.0 = Ele. 283.7

Looking across Stream ℄ ↑ upstream / Down Stream

0+00 = E-Face #5	= Ele.	287.2	285.5 4	286.4 2	287.0 2' Stair Steps
+06	~	285.0	286.4	285.7	284.1
+13±	~	281.3	284.9	283.1	280.5
+16.5±	~	279.3	284.0	281.3	278.8
+22.4 W. Face #6	~	277.2	281.4	279.6	275.3



#25

Xsec. Vert. reinf. footings for April estimate

B.M.	0.00	219.00	219.00
		But 19-20	
Set A			
Set B			
Set C	5 C. Yds.		
Set D	0.0	219.00	219.00
		But 15-16	
A	1.3	208.3	207.0
B	2.3	209.3	207.0
C	2 "		
D	3 "		

Hill
Brachmann
4/30/56

#26

215.0 / 4.0 / 20 — 210.4 / 8.6 / 15 — 210.5 / 8.5 / 5 — 207.0 / 12.0 / 0

212.5 / 6.5 / 20 — 211.0 / 8.0 / 14 — 210.4 / 8.6 / 5 — 210.4 / 8.6 / 0

211.0 / 8.0 / across

202.6 / 5.7 / 0 — 202.7 / 5.6 / 10 — 202.4 / 5.9 / 20

202.8 / 6.5 / 20 — 202.3 / 7.0 / 10 — 203.0 / 6.3 / 0

April estimate xsec's (cont.)

But. 13-14

Set A 4'x1.3x20

Set B 4'x1'x20

" C 4'x2.2'x20

" D 4'x1.5'x20

Diag. W. side of 14 - 1 C.Yd.

But. 11-12

A 4'x3'x20'

B 4'x3.5x20'

C 4'x2.5x20'

D 3 C.Y.

Diag. E side " 11 1 C.Y.

" W " " 1 "

But. 9-10

A 4'x3'x20'

B 4'x2'x20'

C 4'x2.5'x20

D 4'x5'x20

Diag. 1 Cu. Yd. E side 9

#29

Hough

Ele for Rock May-7-1936
Struts Taken with Handlevel

9 T 10	Set A	E Face.	231. +04	228. & 227. W.F	220.
	B		232.	229.	225
	C		230.	228.5	225
	D		232. +03	230.	230. 227.5
11 T 12	A		209.	208.5	209.5
	B		211.	210.5	212.
	C		212	211	210.5
	D		210	209.	210.
13 T 14	A		206	204.5	205
	B		208.5	207.	207.5
	C		207.	208.	208.
	D		207.5	207	207.5
15 T 16	A		200.	201	200.
	B		200.5	200.5	201.
	C		202.	202.	202
	D		202.	200	202.
17 T 18	A		1985 +6 = 199.5	201.	200
	B		198	199	199
	C		199	199.5	199.3
	D		original		
19 T 20	A		209.5	210	212.5
	B		209.5	209	214.
	C		211.5	Original Rock	213.0
	D		orig.	210.4	210.8

#30

Buttress #7.

← 23.5 →

Ele. 264.0

Buttress #8

El. 250.5

May-7-1936

#31

Finall Cross Sections

Excavation Struts Original Sections F.B. 535. #32

Width of trench at diagonal Excav.

~~T.B.K.~~ T.E.B. 10/2/30

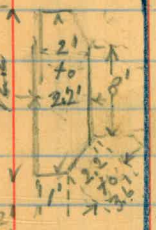
Buttress	width W. side	E. side	
9	6.0	6.7	Allow 1' hor. under diagonal add. excav. on west
10	4.0	7.2	" 1' " " " " " " " "
11	4.0	7.3	
12	4.0	7.5	
13	3.0	7.7	
14	4.0	7.7	
15	4.0	7.7	
16	4.0	—	
17	—	—	
18	—	2.5	
19	7.7	4.0	
20	6.0	9.0	
21	5.0	4.0	Allow 1' hor. under diagonal add. excav.
22	5.0	4.0	" 1' " " " " " "
23	—	4.0	" 1' " " " " " "

12-28-36.

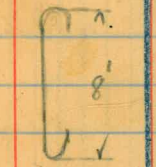
Sutherland Steel left at Hodges Dam

1) Near Engineer's Office

13 - 1" □
26 - 1" □
36 - 1" □
38 - 1" □ 12.2'
45 - 1" □
49 - 1" □
207 - 1" □ 32' to 34'



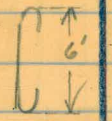
32 - 3/4 □ 31.2'



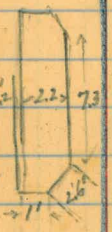
163 - 1" □ 8'
147 - 1" □ 8'
310

271 - 5/8 □ 8'
26
297

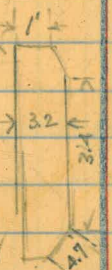
5 - 1" □ 6'



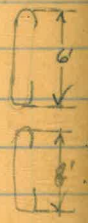
55 - 3/4 □ 31.4'
40 - 3/4 □ 31.4'
95



48 - 3/4" □ 31.3'
35 - 3/4 □ 31.3'
83

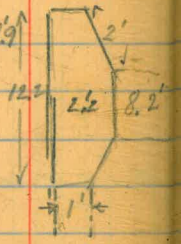


5 - 1" □ 6'



2 - 1" □ 8'
2 - 1 1/8 □ 40'
7 - 1" □ 40'

31 - 1" □ 31.9'



2) Below the Dam

13 - 1" - 8'

8 - 1" □ 8'
2 - 1" □ 5'
1 - 3/4 □ 4'
1 - 3/4 □ 6.5'

6 - 3/4 □ 4.5'
1 - 1" □ 6'

1 - 3/4 - 18' +

1 - 1 1/8 □ 6'
13 - 1 1/4 □ 4'
1 - 1 1/8 □ 8'

30 - 1 1/4 ⌀ 16' [illegible] 1/2/36

This record is only approximately correct. B.
See yellow sheets for weight records. B.

3) 500 ft south of Spillway

26 - 1" □ 12.2'

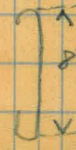
1 - 1' □ 22
3 - 3/4 □ 20
2 - 7/8 □ 20
2 - 3/4 □ 16
1 - 1" □ 8
1 - 1" □ 5'
10 - 3/4 □ 8'
4 - 5/8 □ 5'
1 - 5/8 □ 18'
5 - 1 1/8 □ 8'
11 - 1 1/8 □ 20'

straight Bars

32 - 1" - 31.5'

66 - 3/4 □ 31'

273 - 3/4 □ 8'
1 1" □ 6'



12-29-36

Inventory: Engineers Office Lake Hodges Dam

Scale (box) 3 Weights
Set of Sand-Screens (6)
Set of Rock Screens (10) & pan with 5 screens
2 Pans for drying Materials
1 Woodstove & 6 Sections of Stovepipe
Matespatts: 2
1 Cylinder for stumpdest
15 yds ± 36" Detail Paper
1 Floodlight
12± yds Cross-Section Paper
1 Coal oil stove
1 Hoosier
1 Tube of paste
25 yds Plumb-Bob cord
Carbon-paper.
1 Roll white Cloth
1 Roll red Cloth
3 Columbia Files.
1 Broom
1 Wire-Letter-Basket
1 Padlock & 2 Keys
2 Loose L.P. Leaf Ring-Binder
1000± Daily Report Forms
1 Straight-Edge
1 Tablebroom
1 Kodak Tripod
1 100 ft Steel Tape

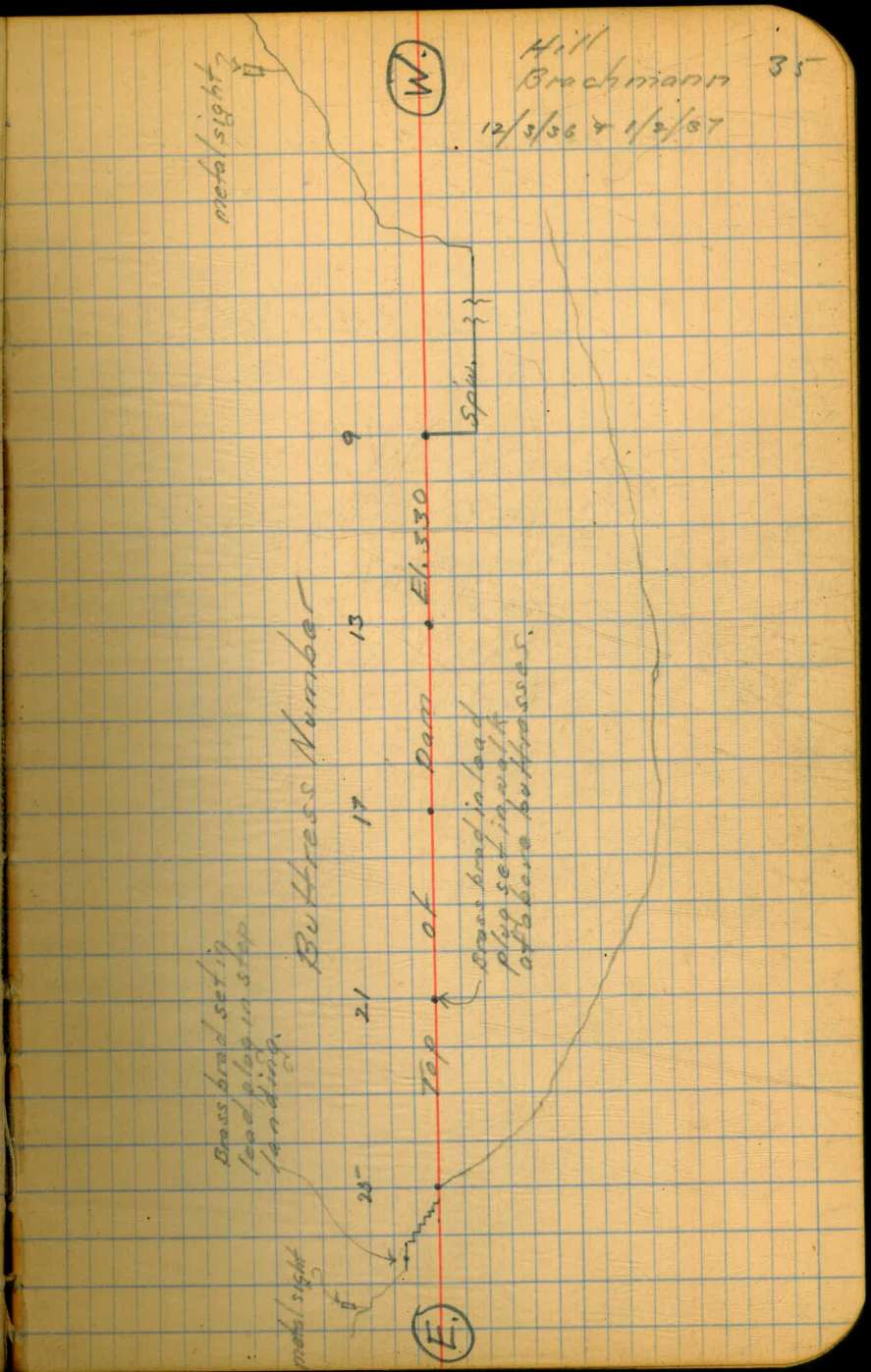
1 Level A. Lietz (10279) Tripods
1 Transit A. Lietz (10268)
3 Punched, crosslined yellow Pads
3 Chairs
2 Stools
2 drafting tables with horses
1 Remington Standard Typewriter
2 Level rods
2 50 ft Cloth tapes
1 50 ft Steel tape
3 6 ft Rulers
2 new Plumb-Bob.
1 old Plumb-Bob.
3 new Pencils.
1 First-Aide-Cabinet. (Bauer-Black)
5 new Field Books 537-538, 539 543, 544.
1 Marvel-Puncher
1 (Bostich) Clipping Machine.
1 Canvas Book-Sack
1 Stake-Bag
6 (No 12) Lockard Transfer Cases
1 Pencil sharpener
2 Sandpaper Pencil-sharpener
3 Pieces blue } Crayons.
3 " red }
5 { Field (Inspectors Report) Books 458, 535 518, 519, 536
3 Diary-Books.
S.D. G-A Telefone Directory.
1 Set of Hodges Dam Plans.
1 200 ft Steel Tape

Points set on Dam to check any possible deflection when reservoir fills.

Control points set with water surface of reservoir at elev. 287.

Intermediate points set with water surface at elev. 297.

No deflection was observed when final points were set.



Hill
Brachmann
12/3/36 & 1/2/37

Levels for the Flagging of the 395 & 375 Contours in the vicinity of Bernardo Bridge Lake Hodges

Bliss Notes #T 36
Davis
Phillips Sept 23/46

B.M.	8.70	336.30		327.60	Brass cap. Set in South End of the Bernardo Bridge U.S.G.S.
T.P.	14.02	350.05	0.27	336.03	
T.P.	13.94	363.29	0.~~68~~ 70	349.35	
T.P.	13.20	375.86	6.63	362.66	
T.P.	12.88	388.73	0.01	375.85	
T.P.	13.56	401.24	1.05	387.68	
T.P.	12.08	409.88	3.44	397.80	
T.P.	1.55	403.63	7.80	402.08	
T.P.	4.27	398.82	9.08	394.55	
T.P.	10.15	402.42	6.55	392.27	
T.P.	7.50	400.49	9.43	392.99	
T.P.	0.94	389.08	12.35	388.14	
T.P.	2.55	381.05	10.58	378.50	
T.P.	6.03	379.36	7.72	373.33	
T.P.	4.38	383.95	9.79	374.57	
T.P.	6.66	385.32	5.29	378.66	
T.P.	13.00	385.52	12.80	372.52	
T.P.	3.77	383.17	6.12	379.40	
T.P.	9.54	387.38	5.33	377.84	
Set B.M.	7.74	383.30	11.82	375.56	
T.P.	2.14	382.22	3.22	380.08	
T.P.	7.80	383.69	6.33	375.89	
T.P.	5.23	382.62	6.30	377.39	
T.P.	9.35	379.42	12.55	370.07	
T.P.	10.86	385.31	4.97	374.45	

		↑ 395.31			
T.P.	7.70	382.58	10.43	374.88	
T.P.	7.67	387.19	3.06	379.52	
T.P.	7.38	385.82	8.75	378.44	
T.P.	2.78	379.73	8.87	376.95	✓
T.P.	11.40	379.98	11.15	368.58	
T.P.	12.10	387.37	4.71	375.27	Top of Boulder
T.P.	11.95	387.62	11.70	375.67	
T.P.	0.66	385.91	2.37	385.25	✓
T.P.	12.90	398.15	0.66	385.25	on
T.P.	11.37	409.40	0.12	398.03	
T.P.	5.20	414.18	0.42	408.98	
T.P.	1.76	403.64	12.30	401.88	
Check out			8.5	395.14	on 395 contour

Near End of line

Corrugated iron culvert on Daley Road South of Lake Hodges Recreation Area.

3-31-47
King
Leonard
Nelnow

38

Levels to 395' Contour for Water Tank-Bernardo Store

			327.60
6.61	334.21		
12.46	345.06	1.61	332.60
12.60	357.28	370.38	344.68
12.81	369.99	0.10	357.18
12.24	381.81	0.42	369.57
11.64	392.86	0.59	381.22
9.19	400.03	2.02	390.84
Set 395' Contour		5.03	395.00
0.21	389.75	10.49	389.54
0.11	376.84	13.02	376.73
0.61	365.52	11.93	364.91
0.06	352.67	12.91	352.61
0.50	340.37	12.80	339.87
2.39	333.04	9.72	330.65
		5.43	327.61

U.S.C.&G.S. B.M. So. End/ Bernardo Bridge

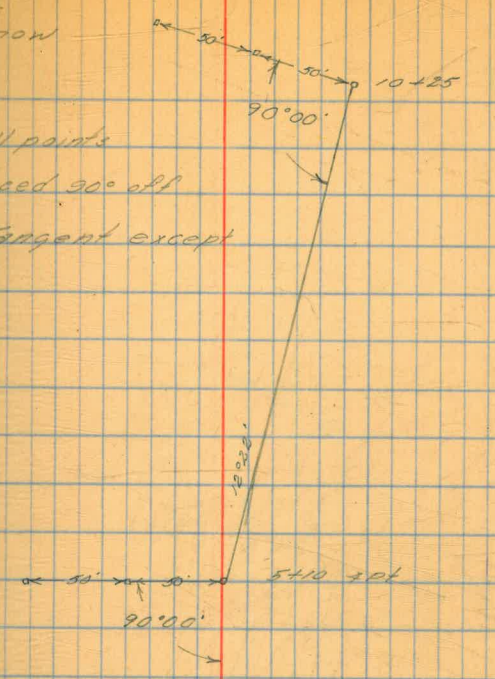
San Dieguito Ditch
Realignment + Referencing
Cont. from F.B. 561 P 28,29,30

10+25 16°53' Lt.

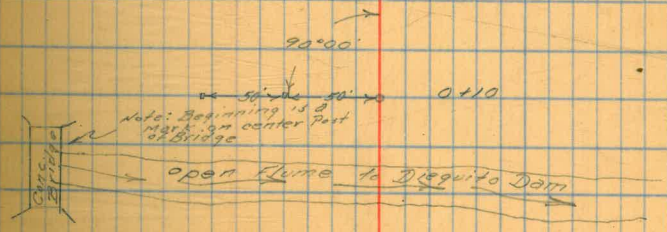
5+10 12°22' Rt.

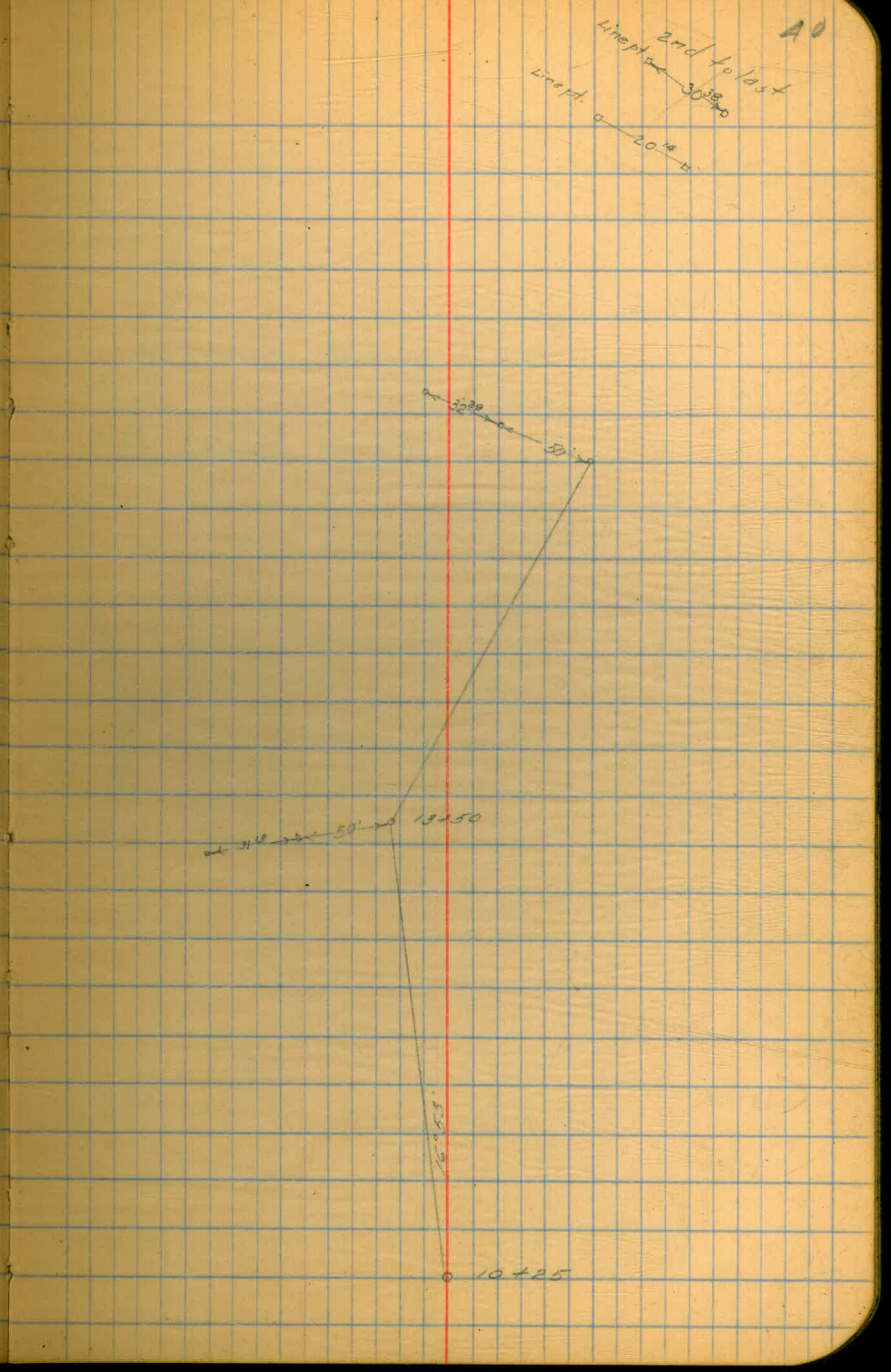
0+10

Rainey Dec. 15, 1947
King
Nienow



Note: All points
Referenced 30° off
back tangent except
0+10

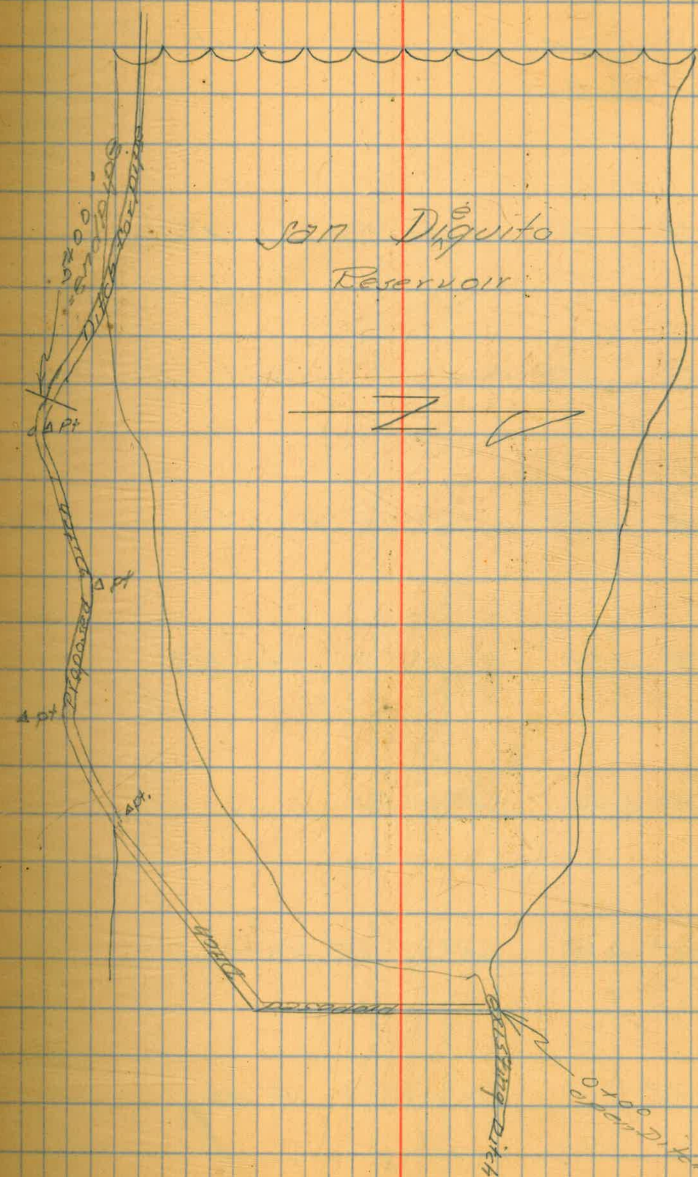



2nd to last
Line pt.
Line pt.
10450
10425

11.34 241.1 10.9 247.4 248.8 247.2

S.W. Abut. Conc. Bridge				253.26
	3.80	257.06		
			10.13	246.93
	4.18	251.11		
			2.64	248.47
	3.87	252.34		
			4.95	247.39
	4.50	251.89		

Dec. 22, 1947 Rainey Niemon 253.44



8' offset line to Ext. S.
for open Ditch

0+00 open Ditch on Bank of exist. Ditch

5+53 1/2 ℄ Pt. 17°51' Rt. Ex. = 4'

6+97 1/2 ℄ Pt. 6°00' Lt No Ex.

10+82 1/2 ℄ Pt 23°47' Lt. Ex. = 6'

13+95 1/2 ℄ Pt 92°32' Rt Ex = 12'

17+60 1/2 ℄ Pt 04°11' Rt. No ex

19+41 1/2 ℄ Pt. 04°37' Rt. No Ex.

21+57 1/2 08°04' Lt No ex

23+27 1/2

DEFLECTION OF BASE LINE L & T's
SAN DIEGUITO DAM

Dec. 22, 1947

WATER EL 241.8

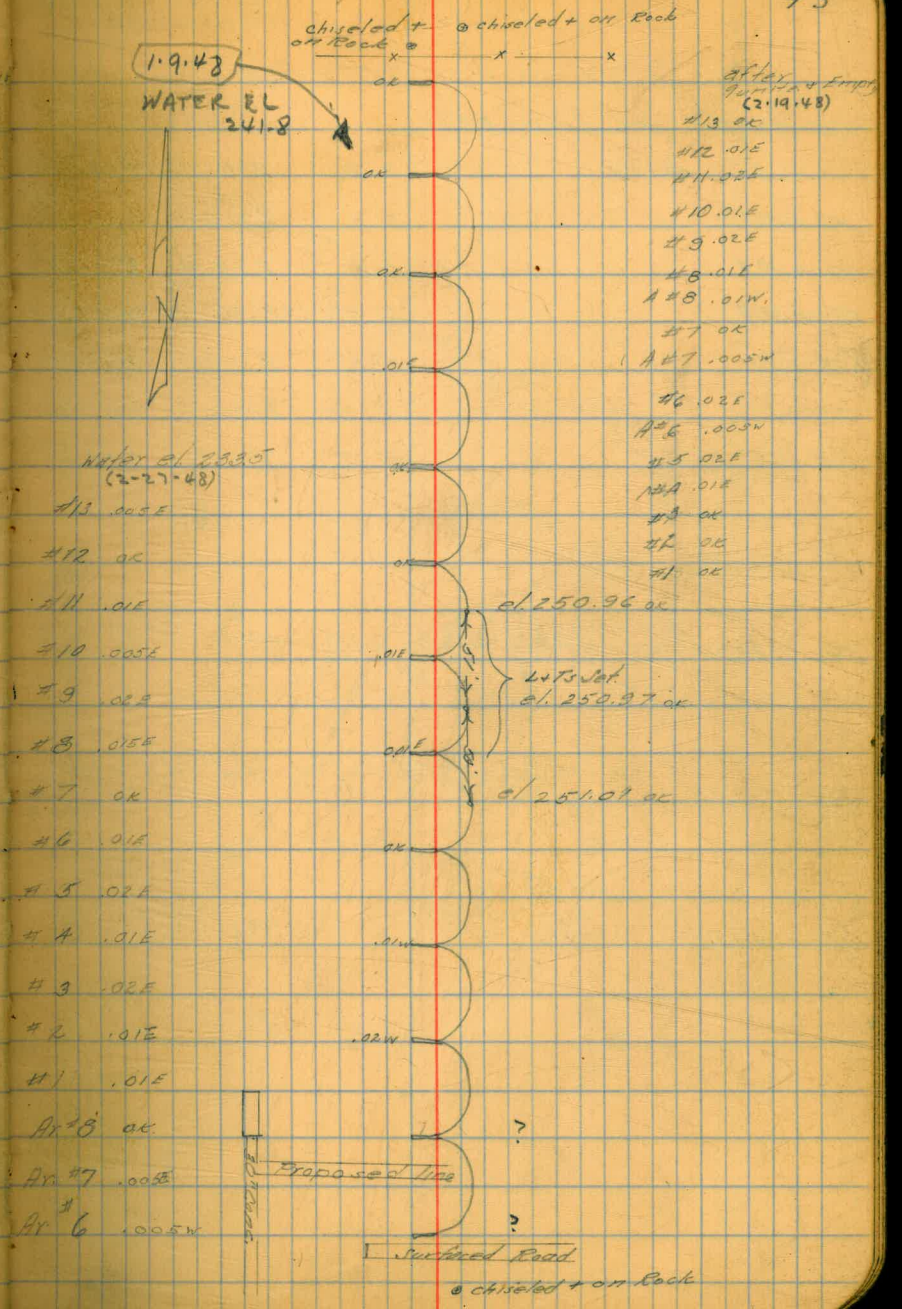
Grades on Dieguito Reservoir

B.M. Foot of Buttress #12			242.00
	L 20	R 13.20	
on Top 30" Conc. Pipe		5.80	237.40
		8.2	535.0
		Water el. ~~239.0~~	238.8

(3-5-48)

Bt # 13	OK
" #12	OK
" #11	.01W
" #10	OK
" #9	OK
" #8	.01E
" #7	.01W
" #6	.005W
" #5	.01E
" #4	OK
" #3	.015E
" #2	.01E
" #1	.005E
Arch #8	O.K.
" #7	O.K.
" #6	.01W

San Dieguito Reservoir



Rainey
King
Nichols 12/17/47

Profile for 30" Line

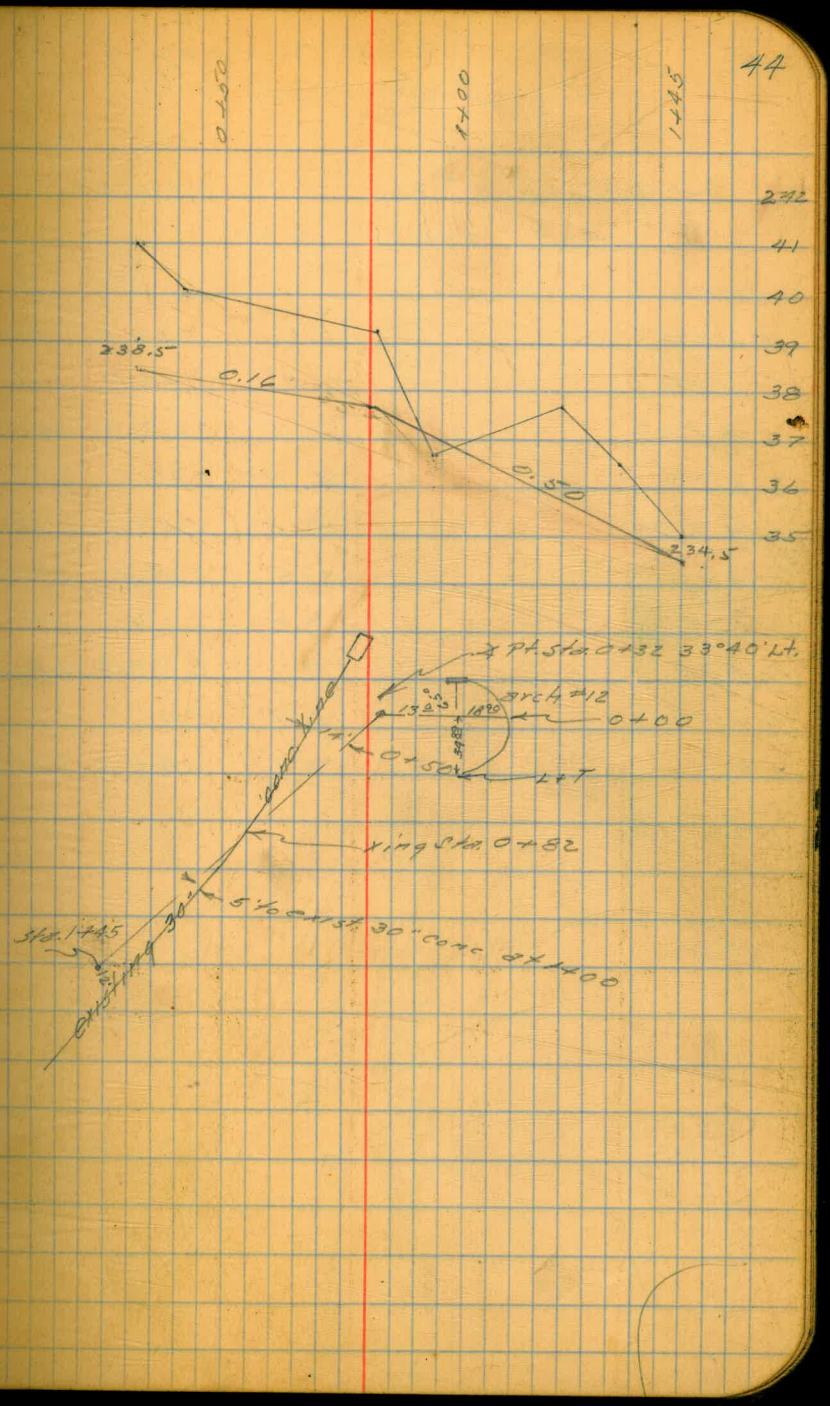
0+00	at Dam 243.2				
0+32	℄ Pt.	2.2	241.0	238.5	2.5
0+41		3.1	240.1	238.4	1.7
0+82		3.8	239.4	237.7	1.7
0+94		6.5	236.7	237.1	-0.4
1+20		5.5	237.7	235.8	1.9
1+32		6.7	236.5	235.2	1.3
1+45 end		8.2	235.0	234.5	0.5

H.I. 243.2 ℄ Pt.

Sec. 0+32 $\frac{+17.7}{75'}$ $\frac{+12.7}{65'}$ $\frac{+8.8}{64'}$ $\frac{+7.8}{50'}$ −2.2 $\frac{-4.5}{11'}$ $\frac{-5.9}{32'}$

Sec. 0+82 $\frac{+16.3}{75'}$ $\frac{+7.5}{46'}$ $\frac{+5.0}{43}$ $\frac{+1.1}{20'}$ $\frac{-1.7}{13'}$ -3.8 $\frac{-4.3}{6'}$ $\frac{-10.2}{17'}$

Sec. 1+45 $\frac{+13.5}{75'}$ $\frac{+5.0}{44'}$ $\frac{-0.9}{21}$ $\frac{-4.7}{9'}$ $\frac{-6.9}{7'}$ -8.2 $\frac{-14.1}{17}$ $\frac{18.3}{27'}$



Profile on Guineas E
for Dieguito Ditch

						Cuts
B.M. Butteress #13				250.00		
	4.35	254.35				
0+00						
0+50			5.6	248.8	240.12	8.7
1+00			6.2	248.2	240.3	7.9
1+50			5.4	249.0	240.4	8.6
2+00			4.5	249.9	240.5	9.4
2+50			4.5	249.9	240.6	9.3
3+00			5.0	249.4	240.8	8.6
3+50			7.3	247.1	240.9	6.2
4+00			7.1	247.3	241.0	6.3
4+50			6.7	247.7	241.0	6.7
5+00			7.9	246.5	241.0	5.5

from Butt #12 el. 240
400' el 241
Cont. 241

SAN DIEGUITO DAM

B.M. Lt Arch #6				250.26
	1.27	252.73		
0+00	Lt on Buttress #1			
0+25				
0+50				
0+75				
1+00				
TP #1			12.94	239.79
	0.76	240.55		
1+25				
1+50				
1+62.50				
1+75				
TP #2			12.18	228.37
	0.38	228.75		

Jan. 9, 1948 X Sections Ramey
King
Nielsen 46

CROSS-SECTIONS PRIOR TO EXCAVATION
P. 46 - 49 incl.
do p. 83

Baseline 5'SE of & ⊥ to Buttresses

252.7

	250.2	50.2		
249.6	2.5	2.5		
3.1	28'	49'		
46.9	47.5	48.2	47.9	
5.8	5.2	4.5	4.8	
	24'	30'	35'	
	45.1	45.0		
44.6	7.6	7.7		
8.1	37	49'		
	42.7			
42.2	10.0			
10.5	35'			
40.3	39.8	40.7	40.7	39.7	39.7
12.1	12.1	11.0	12.0	13.0	13.0
	28'	32'	36	40	45

240.4

236.8	36.6					
3.8	4.0					
	35'					
32.4	32.8	33.7	33.5	34.4	34.0	
8.2	7.8	6.9	7.1	6.2	6.6	
	28	34	37	46	50	
30.3	30.9	29.8	29.7			
10.3	9.7	10.8	10.9			
	26	30	36			
28.2	27.6	29.0	27.9	27.8		
12.1	13.0	11.6	12.7	12.8		
	17	24	27	33		

	228.73		
1+87.5			
2+00			
2+21			
2+25			
2+29			
T.P.		8.73	219.02
	0.21	219.23	
2+32			
	Return Set BM.	5.70	214.13
2+39			
2+44			
2+50			

228.8
26.3 26.3 24.7 25.8 25.3 25.3
2.5 2.0 4.1 3.0 3.5 3.5
6. 15 24 29 35

23.5 22.3 23.6 22.8 25.8
5.3 6.5 5.2 6.0 3.0
19 27 37 47.5

220.8 19.4 17.5 18.8
8.0 9.4 11.3 10.0
14 22 27

20.0 18.4 16.5 17.8
8.8 10.4 12.3 11.0
14 22 26

18.8 17.2 14.3 16.7
10.0 11.6 14.5 12.1
14 21 26

219.7
15.5 16.1 12.9 11.3 14.7
3.7 3.1 6.3 7.9 2.7
3 17 18 27

St. Cor. Hardwood Stake Drain

14.8 12.9 11.5 11.5 13.7 12.4
4.4 6.3 7.7 7.7 5.5
15 17 20 23

16.2 14.2 11.2 11.2 13.0 19.2
2.8 5.0 8.0 8.0 6.2 0.0
12 16 19 22 35

14.7 12.9 11.0 11.0 11.9 22.2
4.5 6.3 8.2 8.2 7.3 +3.0
14 16 19 21 4.7

B.M. L+T Buttress #13			-	250.00
	1.63	251.63		
TP #1			11.22	240.41
	1.57	241.98		
TP #2			12.15	229.83
	0.96	230.79		
			11.16	219.63
	2.68	222.31		
3+25				
3+37.5				
3+52				
3+62.5				
3+75				
T.P.			0.58	221.73
	10.37	232.10		
3+87.5				

Note! From 2+64 to 3+25 sections same as 3+25 except at Buttress or arch where it is same as ground. distance out practically same as section 3+25 and other additions

222.3

12.1	12.3	15.3
10.2	10.0	7.0
	16	25

13.7	15.5	16.7	16.7	18.3
8.9	6.8	5.6	5.6	4.0
	14	19	25	30

17.3	20.0	19.1	19.0	23.3
5.0	2.3	5.2	2.3	+1.8
	25	30	28	47

17.4	18.6	19.5	20.7
4.9	3.7	2.6	1.6
	17	24	33

19.4	23.3
29	41.0
	30

222.1

21.5	(22.8) 22.9	23.8	23.3	25.0
10.6	8.3	8.3	8.8	7.1
	16	21	28	34

		232.10			
4+00					
4+12.5					
4+25					
4+50					
4+75					
T.P.			0.27	231.83	
	11.23	243.06			
5+00					
5+12.5					
5+25					
T.P			0.80	242.26	
	9.76	252.02			
			2.03	249.99	250
		251.0			
5+67					

232.10

22.6	24.0	26.5	25.7	24.7	27.8
9.5	8.1	5.6	6.4	7.4	5.3
	17	23	28	42	49
23.6	24.8	26.1	25.8	24.9	26.9
8.5	7.3	6.0	6.3	7.2	5.2
	19	24	33	39	38
24.8		25.2	26.9	27.0	27.3
7.3		6.7	5.2	5.1	4.8
		17	22	34	33
27.3	27.5	29.6	28.3	28.4	232.1
4.8	4.6	2.5	3.8	3.7	0.0
	22	33	37	44	51
29.1		29.7	232.1	30.5	28.8
3.0		2.4	0.0	1.6	2.3
		15	25	30	54

243.1

31.5		33.5	34.8	32.9	33.0
11.6		9.1	8.3	10.2	10.1
		29	35	40	51
33.0	33.4	35.0	35.5		
10.1	9.7	8.1	7.6		
	8	18	39		
34.4		35.6	35.8	37.0	
8.7		7.5	7.3	6.1	
		10	32	36	

REDUCED GPS 1/16/48

251.0

45.4	49.7	49.2	47.7	47.8
5.6	1.3	1.8	3.3	3.2
	14	22	35	40

CHECKED OK 3.22.48

Sections of
San Diequito Reservoir
Prior to Grading (AFTER EXC). (12½' stations) p.50 & 54 title

BM LAT Arch #6			250.29
	3.05	253.01	
TP #1			242.65
		11.36	
	4.62	247.27	
0+37.5			
0+50			
0+62.5			
0+75			
0+87.5			
TP #2			236.80
		10.47	
	3.04	239.84	
1+00			
1+12.5			
1+25			

Jan 20, 1948 Rainey, King, Vernon

From 0+00 to 0+25 Excavation

REDUCED 4/24/48 1/27/48

247.3

45.7 46.0 44.7 44.1 44.1 44.5 (footing) 44.7
1.6 1.8 2.6 3.2 3.2 2.8 2.6
35 38 383 387 39.7 39.2

44.6 44.3 44.7 41.7
2.7 3.0 2.6 5.6
20 36 46

39.6 39.6 40.3
43.9 43.6 41.3 39.8 40.0 40.4
3.7 3.7 6.0 7.5 7.3 7.7 7.2 7.0 6.2
30 25 29 378 378 385 388 392

41.9 41.4 39.6 38.3 36.2 36.3 36.7 38.1 39.2
5.4 5.9 7.7 7.0 4.6 6.2 6.1
20 22 26 28 358 362 378 384

41.7 39.6 37.5 37.7 37.3 37.3 38.1 38.1
3.6 7.7 9.3 9.6 10.0 9.2 9.2
19 24 398 409 403 413 418

239.8

40.4
39.2 37.8 37.1 36.0 38.3 35.5 35.5 36.5 36.5
40.6 2.0 2.7 3.8 4.5 4.3 4.3 3.3 3.3
19 21 34 41 42 [illegible] 30 [illegible]

38.2 36.0 34.3 33.7 33.7 33.7 34.2
1.6 3.8 5.3 6.1 6.1 6.1 5.6
31 36 38 382 392 393

35.2 34.7 33.1 33.1 33.3 33.4
1.6 5.1 6.7 6.7 6.5 6.4
26 30 353 357 360

	+		−	
		239.84		
1+37.5				
1+50				
T.P.#3			10.88	228.96
	2.78	231.74		
1+67.5				
1+62.5				
1+75				
1+87.5				
2+00				
T.P.#4			12.05	219.69
	3.62	223.31		
			9.15	214.16
	4.77	218.93		
2+12.5				
2+25				

239.8

32.8	32.7	31.6	31.0	31.5	31.0	30.6	30.6	30.0	31.0
7.0	7.1	8.2	8.8	8.3	8.8	9.2	9.2	8.8	8.8
	22	29	33	35	38	38	37	34	37

30.1	30.8	30.1	29.3	28.3	28.3	28.8	28.8	
9.7	9.0	9.7	10.5	11.5	11.5	11.0	11.0	
	20	40	45.5	44	47	47	49.5	

231.7

27.7	28.7	28.3	26.2	26.2	26.8	26.8	
4.0	3.0	3.4	6.5	5.5	4.9	4.9	
	17	22	24	36	35	36.7	

24.9	23.5	25.0	25.0	24.1	24.7	24.7
7.3	8.2	6.7	6.7	7.6	7.0	7.0
	19	21	26	30	30	30.5

22.3	21.5	22.4	23.1	23.1	
9.4	10.2	9.3	8.6	8.6	
	19	32	32	38.5	

19.5	22.1	22.3	20.8	20.9	21.4	21.4
12.2	9.6	9.4	10.9	10.8	10.3	10.3
	9	24	29	41	41	41

218.9

16.7	17.4	15.9	16.1	14.6	14.2	
2.2	1.5	3.0	2.8	4.3	4.7	Not reading
	12	17	21	25	25.5	

15.6	15.9	12.9	12.1	12.6	13.1
3.3	3.0	6.0	6.8	6.3	5.8
	9	16	22	22	22.3

	H.I.		
	218.93		
2+37.5			
2+50			
2+62.5			
2+75			
2+87.5			
3+00			
3+12.5			
3+25			
3+37.5			
3+50		221.43	
	2.15	223.58	
3+50			

218.9

14.8	14.6	9.4	8.8	9.3	9.6	
4.1	4.3	9.5	10.1	9.0	9.3	
	10	17	23	23	24	
14.2	14.5	10.1	6.2	6.1	6.8	6.8
4.7	4.4	8.2	12.7	12.8	13.1	12.1
	5	18	20	32	32	35
12.4	7.8	5.5	5.2	5.5	5.9	
6.5	11.1	13.4	13.7	13.4	13.0	
	11.5	13.5	20	20	20.7	
10.4	5.3	4.9	5.6	5.8		
8.0	13.6	14.0	13.8	13.1		
	11	16.5	16.5	17.3		
9.5	6.0	4.5	5.5	5.5		
9.4	12.9	14.4	13.4	13.4		
	8	19.5	19.5	20.2		
7.3	7.0	5.1	4.9	6.2	6.3	
11.6	11.8	13.8	14.0	13.7	13.4	
	9	11	32	32	32.8	
8.8				8.7	10.0	10.0
12.1				10.2	8.5	8.9
				23.5	23.5	25
11.9	12.8	11.1	10.9	12.0	12.1	
7.0	6.1	7.8	8.0	6.9	6.8	
	11	15	20.5	20.5	22	
13.3	14.2	15.0	15.1			
5.6	4.7	3.9	3.8			
	27	27	28.5			
5.2	5.7	7.9				
	3					

223.6

15.1	15.0	16.0	18.1	16.6	17.1	17.1
8.5	8.6	7.6	5.5	7.0	6.5	6.5
	?	20	36	39	39	43

		223.58		
3+62.5				
3+75				
3+87.5				
4+00				
4+12.5				
T.P.			1.64	221.94
	9.36	231.30		
4+25				
4+37.5				
4+50				
4+62.5				

223.6

16.2	16.1	18.1	17.7	18.3	18.5
2.4	7.5	5.5	5.9	5.3	5.1
	16	16	29	29	30.2
18.2	17.9	19.3	18.5	19.1	19.3
5.9	5.7	4.3	5.1	4.5	4.3
	15	16	26	26	27
19.6	20.9	20.0	20.4	20.5	
~~4.0~~	2.7	3.6	3.2	3.1	
	31	29.7	29.7	30.5	
21.2	22.4	21.2	21.6	21.6	
2.4	1.2	2.4	2.0	2.0	
	18	41.5	41.5	44.5	
22.4	23.5	21.6	22.1	22.2	
1.2	0.1	2.0	1.5	1.4	
	27	33.5	33.5	34.2	

231.3

23.5	25.0	22.5	22.6	23.1	23.2
7.8	6.3	8.8	8.7	8.2	8.1
	21	25	28.5	28.5	29.3
25.2	25.6	23.7	23.5	23.9	24.0
6.1	5.7	7.6	7.8	7.4	7.3
	23	27	32	32	33.2
26.1	27.7	24.8	25.4	25.4	
5.2	3.6	6.5	5.9	5.9	
	24	44.5	44.5	47.5	
27.2	27.5	29.6	26.4	25.8	26.4	26.5
1.1	3.8	1.7	1.9	5.5	4.9	4.8
	18	24	30	34.5	34.5	35.4

		231.30		
4+75				
T.P.			1.99	229.31
	11.05	230.36		
4+87.5				
5+00				
5+12.5				
5+25				
5+37.5				
5+50				
T.P.			1.65	238.71
	12.86	251.57		
L+T Butt #13			1.57	250.00

231.3

28.3	28.8	30.5	27.5	24.7	~~27.2~~	27.2	~~27.2~~
3.0	2.3	0.8	3.8	4.6	4.1		4.1
	17	20	27	32.5	32.5		32.9

240.4

29.5	29.7	32.1	29.4	27.6	28.2	28.3	
10.9	10.7	8.3	11.0	12.8	12.2	12.1	
	14	19	24	37	37	37.5	
31.0	31.8	34.3	30.8	28.8	28.6	29.1	29.3
9.4	8.6	6.1	9.6	11.6	11.8	11.3	11.1
	15	20	28	45	50	50	50.3
32.0	32.9	36.1	32.8	31.6	31.5	32.1	
8.4	7.5	4.3	7.6	8.8	8.9	8.3	
	13	25	30	38	39	39	
33.4	34.1	36.5	33.9	33.9	March		
7.0	6.3	3.9	6.5	6.5	manufacturing		
	14	22	25	36.5			
35.6	37.2	35.1	35.3	36.0	36.0		
4.8	3.2	5.3	5.1	4.4	4.4		
	26	38	40	40	40.4		
37.5	43.6	36.2	36.7	37.3	37.3		
2.9	+9.2	4.2	3.7	3.1	3.1		
	31	45	49	50	52		
			50				

Checked JK 3.18.48

Profile of Top of Footings (CUTOFF)
San Diequito Reservoir
Note: chained on curve

				250.96
	2.18	253.14		
BM. Set	Arch #1		2.13	251.02
			12.99	240.15
	0.82	240.97		
			11.59	229.38
	3.92	233.30		
0+00	But #4			
0+05				
0+10				
0+15				
0+20				
0+25				
0+30				
0+35				
0+40				

P. 55 & 65 each.

June 28, 1948. Rainey King Nieron 55

Start Buttress #4 Start of arch #4

233.3

ground		back
28.8	28.9	29.1
4.5	4.4	4.2
		2.6
28.3	28.6	28.6
5.0	4.7	4.7
		1.0
27.3	27.7	27.7
6.0	5.6	5.6
		0.5
26.6	27.2	27.2
6.7	6.1	6.1
		0.7
25.8	26.4	26.4
7.5	6.9	6.9
		1.0
25.2	25.6	25.6
8.1	7.7	7.7
		0.8
24.5	25.1	25.1
8.8	8.2	8.2
		0.7
23.6	24.6	24.6
9.7	8.7	8.7
		0.7
23.3	23.8	23.8
10.0	9.5	9.5
		0.7

0+45		233.30		
			10.96	222.34
	1.70	224.04		
0+50				
0+55				
0+60				
0+65		Grain		
Set T.B.M. on Rock			2.61	221.43
	0.60	222.03		
0+00		At Grain		

233.3

Grnd. Back

22.5 23.1 23.1
10.8 10.2 10.2
1.1

224.0

22.1 22.6 22.6
1.9 1.4 1.4
1.4

21.4 21.9 21.9
2.6 2.1 2.1
1.5

20.8 21.4 21.4
3.2 2.6 2.6
1.5

20.8 21.5 21.7
3.2 2.5 2.3
3.0

Start Both ways #8 Arch #8

222.0

16.5 17.2 17.3
5.5 4.8 4.7
3.5

16.6 17.2 17.2
5.4 4.8 4.8
1.1

16.9 17.3 17.3
5.1 4.7 4.7
0.7

17.3 18.0 18.0
4.7 4.0 4.0
0.7

17.7 18.4 18.4
4.3 3.6 3.6
0.7

222.03

221.43

1.00 222.43

0+00

from 0+05 to 0+35
Gunited

0+05

0+10

Grnd. Foot Back

222.0

18.0 18.6 18.6
4.0 3.4 3.4
0.7

18.5 19.1 19.1
3.5 2.9 2.9
0.6

19.0 19.5 19.5
3.0 2.5 2.5
0.5

19.6 20.1 20.1
2.4 1.9 1.9
1.0

20.1 20.6 20.6
1.9 1.4 1.4
1.0

20.7 21.1 21.1
1.3 0.9 0.9
0.6

21.0 21.5 21.5
1.0 0.5 0.5
1.0

Start Arch #5 Buttress #5

222.4

20.6 21.4 21.4
1.8 1.0 1.0
3.0

20.0 20.8 20.8
2.4 1.6 1.6
1.5

19.2
3.2 Gunited

		222.43		
0+35				
0+40				
0+45 blow off				
0+50				
T.P.			10.55	211.88
	4.98	216.86		
0+55				
0+60				
0+65				
0+67.0	Grain			
0+05				
0+10				
0+15				

Grnd. foot Back

222.4

12.6 13.2
2.8 9.2 no foot

11.9 12.0 12.4
11.2 10.9 10.4
0.8

8.7 9.1 19.3
13.7 13.3 13.1 8.3 Jump in footing
0.9

216.9

7.5 8.1 9.9 9.9
9.4 8.8 7.0 7.0
0.5

6.4 8.3 8.3
10.5 8.6 8.6
0.5

6.1 6.7 6.7
10.8 10.2 10.2
0.5

6.2
10.7

Start Arch #6

5.7 6.1 6.1
11.2 10.8 10.8
0.3

5.8 5.8 5.8
11.1 11.1 11.1
0.3

5.1 5.2 6.2
11.8 11.7 11.7
0.3

216.86

0+20

0+25

0+30

0+35

0+40

0+45

0+50

0+55

0+60

0+65

0+67

Grnd	Post	Back
216.9		
5.0	6.3	6.3
11.9	10.6	10.6
		0.4
4.9	5.3	5.3
12.0	11.6	11.6
		1.2
4.9	5.2	5.4
12.0	11.7	11.5
		1.2
4.9	5.3	5.5
12.0	11.6	11.4
		1.3
4.8	5.3	5.4
12.1	11.6	11.5
		1.0
4.9	5.5	5.7
12.0	11.4	11.2
		4.8
4.8	5.6	5.7
12.1	11.3	11.2
		0.3
4.9	5.6	5.7
12.0	11.3	11.2
		0.3
4.9	5.6	5.7
12.0	11.3	11.2
		0.4
5.6	6.3	6.4
11.3	10.6	10.5
		0.7
5.8	6.3	6.5
11.1	10.6	10.4
		3.0

216.86

	Grid	Top	Bottom
	Start Arch #1		
	216.9		
0+05	5.8	7.0	7.2
	11.1	9.9	9.7
			0.6
0+10	6.7	8.3	8.4
	10.2	8.6	8.5
			0.8
0+15	8.7	9.6	9.8
	8.2	7.3	7.1
			0.8
0+20	9.4	10.7	10.8
	7.5	6.2	6.1
			1.0
0+25	10.2	11.1	11.3
	6.7	5.8	5.6
			1.0
0+30	11.0	11.8	11.9
	5.9	5.1	5.0
			1.1
0+35	12.1	12.9	13.0
	4.8	4.0	3.9
			1.0
0+40	13.4	13.9	14.1
	3.5	3.0	2.8
			1.1
0+45	14.2	14.9	15.1
	2.7	2.0	1.8
			1.0
0+50	14.6	15.1	15.2
	2.3	1.8	1.7
			1.0
0+55	15.2	15.7	15.7
	1.7	1.2	1.2
			1.0

		216.86		
0+60				
0+65				
0+67 = Butt #8 See Arch #8				
T.P.			3.25	213.61
	9.93	223.54		
T.P.			1.92	221.62
	6.24	222.86		
0+00 = 0+64 Arch #8				
0+05				
0+10				
0+15				
0+20				
0+25				

Grnd 216.9 — foot — back

15.8	16.3	16.3
1.1	0.6	0.6
		0.8
16.3	16.9	16.9
0.6	0.0	0.0
		0.9

Start Arch #9
227.9

21.2	21.8	21.8
6.7	6.1	6.1
		3.0
21.3	21.8	21.8
6.6	6.1	6.1
		1.0
21.5	22.1	22.1
6.4	5.8	5.8
		0.8
21.7	22.3	22.1
6.2	5.6	5.8
		0.8
21.8	22.5	22.4
6.1	5.4	5.4
		0.6
22.2	22.7	22.7
5.7	5.2	5.2
		0.7

		227.86		
0+30				
0+35				
0+40				
0+45				
0+50				
0+55				
0+60				
0+00 = 0+64	Arch #5			
T.P.			1.27	226.59
	6.16	232.75		
0+05				
0+10				

Grnd	Floor	Back
227.9		
22.6	23.0	23.0
5.3	4.9	4.9
		0.6
23.0	23.6	23.6
4.9	4.3	4.3
		0.8
23.5	24.0	24.0
4.4	3.9	3.9
		0.7
24.0	24.5	24.5
3.9	3.4	3.4
		1.0
24.2	24.8	24.8
3.7	3.1	3.1
		1.0
24.4	25.1	25.1
3.5	2.8	2.8
		0.7
24.9	25.3	25.3
3.0	2.6	2.6
		1.1
Start Arch #10		
24.9	25.3	25.3
3.0	2.6	2.6
		3.0
232.8		
25.1	25.8	25.8
7.7	7.0	7.0
		1.1
25.5	26.0	26.0
7.3	6.8	6.8
		1.0

232.75

0+15

0+20

0+25

0+30

0+35

0+40

0+45

0+50

0+55

0+60

0+63 Grain = 0+00

Grid	Left	Back
232.8		
25.6	26.1	26.1
7.2	6.7	6.7
		1.0
25.8	26.4	26.4
7.0	6.4	6.4
		0.9
26.1	26.6	26.6
6.7	6.2	6.2
		0.4
26.7	27.1	27.1
6.1	5.7	5.7
		0.5
27.0	27.5	27.5
5.8	5.3	5.3
		0.5
27.3	27.7	27.7
5.5	5.1	5.1
		0.5
27.7	28.3	28.3
5.1	4.5	4.5
		0.6
28.1	28.7	28.7
4.7	4.1	4.1
		0.5
28.3	28.8	28.8
4.5	4.0	4.0
		0.6
28.5	29.0	29.0
4.3	3.8	3.8
		0.4
28.7	29.2	29.2
4.1	3.6	3.6
		0.1

Start Arch #11

		232.75		
0+00				
TP			0.67	232.08
	8.94	241.02		
0+10				
0+15				
0+20				
0+25				
0+30				
0+35				
0+40				
0+45				
0+50				
0+55				

Grid	Box	back
232.8		
29.8	30.7	30.7
3.0	2.1	2.1
		0.3
241.0		
30.4	31.1	31.1
10.6	9.9	9.9
		0.6
31.3	31.6	31.6
9.7	9.4	9.4
		0.4
31.8	32.3	32.3
9.2	8.7	8.7
		0.5
32.4	33.0	33.0
8.6	8.0	8.0
		0.6
33.9	33.9	33.9
7.1	7.1	7.1
33.9	34.5	34.5
7.1	6.5	6.5
		0.4
34.4	35.2	35.2
6.6	5.8	5.8
		0.5
35.2	35.9	35.1
5.8	5.1	5.1
		0.4
35.5	36.3	36.3
5.5	4.7	4.7
		0.4
36.1	36.8	36.8
4.9	4.2	4.2
		0.3

241.02

0+60

0+62 But #12

5+37.5 5.5 2305.6

241.0

36.8	37.1	37.1
4.2	3.9	3.9
		0.4
36.7	37.3	37.5
4.3	3.7	3.5
		2.0

REDUCED
JHG 1/27/48

X Sections of San Diequito Dam

(AFTER EXCAVATION)
(6.25' stations)

p. 66 to 78 incl. except p. 67 also p. 87

Arch #5
55' from L+T's on Buttresses

From L+T Buttress #1 to Start of Gunite 34.95'

H.I.

221.43

0.17 221.60

0+25

0+31.25

0+T.P. 9.29 212.31

2.42 214.73

0+50

HI 221.60

Length of Slope

Footing

212.78 0.7
8.82
22.07

25.10

211.49
10.11
23.08

24.81

HI 214.73

206.52 Gunited
8.21
33.18

33.1

Jan 29, 1948

ELEV OF BASE LINE L & T's

Elev L+Ts
Lake Drained
Surveying in Progress

L+T Butt #13			250.00
	5.15	255.15	
Butt #12		5.07	250.08
" "		5.00	250.15
" #10		5.02	250.13
" 9		5.08	250.07
Arch #8		4.15	251.00
Butt #8		5.13	250.02
Arch #7		4.18	250.97
Butt #7		5.10	250.05
Arch #6		4.20	250.95
Butt #6		5.08	250.07
" 5		5.13	250.02
" 4		5.05	250.10
" 3		4.98	250.17
" 2		5.02	250.13
" 1		5.00	250.15

Arch #6 — Raney-King-Moran — Jan. 31, 1948

		214.73		
0+6.25				
			214.13	
	1.04	215.17		
0+12.50				
0+18.75				
0+25				
0+31.25				
0+37.50				
0+43.75				
0+50				

Length of Slope

HI 214.73

206.11 Gunited — 8.62 — 24.79 — Gunited at Toe 33.70

HI 215.17

Gunited 205.68 — 9.49 — 20.75 — 33.60

205.62 Gunited — 9.55 — 17.55 — 33.50

205.65 Gunited — 9.52 — 17.05 — 33.85

205.63 — 9.54 — 17.81 — 33.75

209.60 — 10.57 — 19.70 — 34.65

209.94 — 10.23 — 24.40 — 34.33

205.71 — 9.46 — 34.12 — 32.90

Arch #7

		215.17		
0+6 2.5				
0+12.5				
0+18 2.5				
0+25				
0+31 2.5				
0+37 3.0				
T.P #1			0.16	215.01
	8.47	223.48		
0+43.75				
0+50				

Length of slope

HI 215.17
Gunited at toe
207.46
7.71
25.23 — 31.45

Gunited 2.5' below footing
211.08
4.09
23.48 — 26.68

211.78 Gunited 2' below toe of footing
3.99
21.34 — 24.41

Gunited 1.5 below footing
213.23
4.94
22.48 — 24.27

Gunited at toe
214.07
1.10
24.10 — 23.22

214.90
0.27
28.40 — 21.46

HI 223.48
215.81
7.67
33.35 — 20.35

217.19
6.29
42.39 — 18.75

Arch #8

		223.48		
0+06 25				
0+12 50				
0+18 75				
0+25				
0+31 25				
0+37 50				
0+37 50				
0+43 75				
0+50				
TP		2.08	221.40	
	9.16	230.56		

HI 223.48

Length of Slope

217.58		
5.90		
34.52		18.20
218.16		
5.32		
30.00		18.00
218.59		
4.89		
27.72		17.38
219.07		
4.41		
27.06		17.10
219.62		
3.86		
27.97		16.50
220.43		
3.05		
31.18		15.55
221.19		
2.29		
34.30		14.65
~~222.72~~ 221.72		
1.76		
45.00		14.60

Arch #9

		Length of Slope
	230.56	
0+12.50		
	222.26	
	5.30	
	32.48	12.79
0+18.75	~~222.69~~ 222.59	
	7.97	
	30.23	12.79
0+25	222.93	
	7.63	
	29.60	12.36
0+31.25	223.48	
	7.08	
	31.03	11.36
0+37.50	224.16	
	6.40	
	34.54	10.27
0+43.75	224.63	
	5.93	
	40.03	9.75
0+50	225.35	
	5.21	
	47.64	9.52

Arch #10

				Length of Slope	
		230.56			
0+06.35					
0+12.50					
0+18.75					
0+25					
T.P.			1.44	229.12	
	7.05	236.17			
0+31.25					
0+37.50					
0+43.75					
5+00					
0+50					

HI 230.56

225.91
4.65
39.54 — 8.72

226.38
4.18
35.87 — 7.80

226.47
4.09
33.24 — 7.85

227.09
3.47
32.64 — 7.24

HI 236.17

227.46
8.71
33.78 — 6.72

228.01
8.16
37.35 — 5.80

228.63
7.54
42.42 — 4.90

229.24
6.93
50.52 — 4.80

		236.17 ✓		
0+06.25				
0+12.50				
0+18.75				
T.P. #1		(a)	0.92	235.25 ✓
	6.05	241.30		
		± 41.30		
0+25				
0+31.25				
0+37.50				
0+43.75				
0+50				

Arch #1

HI 236.17

231.14 ✓
5.03
44.00

232.08 ✓
4.09
39.03

232.85 ✓
3.32
37.37

HI 241.30

233.80 ✓
7.50
34.72

234.64 ✓
6.66
37.48

235.73 ✓
5.57
40.00

236.35 ✓
4.95
44.43

237.45 ✓
3.85
33.28

out of Arch area (No. 1)

ARCH 12
P. 82

REDUCED
U.H.A. 2/2/48

Checked JK 2.26.48

B.M. Arch #1			251.02
	0.49	251.51	
0+34			
0+37.5			
0+43.75			
0+50			

Arch #1

HI 251.51

Gunited
246.22
5.29
38.15

Gunited
245.18
6.33
38.72

244.40
7.11
42.38

241.94
9.57
46.48

JK

		251.51		
0+06 25				
0+12 50				
T.P #1			11.67	239.84
	4.44	244.28		
0+18 75				
0+25				
0+31 25				
0+37 50				
0+43 75				
0+50				

Arch #2

75

HI 251.51

241.30

10.21

43.24

240.04

11.47

38.82

All Guyhited

HI 244.28

238.91

5.37

34.50

237.17

7.11

35.74

236.28

8.00

34.40

~~237.41~~ 237.50

6.78

38.74

237.73

6.53

42.71

236.44 Guyhited at toe

7.84

33.10

JK

	244.28		
0+06 25			
0+12 50			
0+18 75			
0+25			
0+31 25			
0+37 50			
T.P.		11.11	233.17
0+43 75	1.36	234.53	
0+50			

Arch #3

HI 249.28

235.77
8.57
43.33

235.36
5.92
38.80

233.81
10.47
36.55

233.47
10.81
33.57 Grnd.

232.91
11.37
33.07

230.98
13.30
38.51

HI 234.53

230.08
4.45
42.78

228.67
5.86
53.12
Guided at face

All Guided

on structure
9.28
35.66
face of arch

on struct
9.21
36.44
face of arch

10'
2.15'

Arch #4

		234.53		
			0+06.25	
	234.53			
			0+12.50	
			0+18.75	
			0+25	
			0+31.25	
			0+37.50	
			0+43.75	
			0+50	
TP		12.11	222.42	
	0.13	222.55		

HI

Length of Pipe

228.10
6.43
34.95

227.27
7.26
34.99

226.03
8.50
31.40

224.92
9.61
30.09

224.07
10.46
30.63

223.55
10.98
33

222.74
11.79

222.23
12.30
40.93

6.75

All Garnited

7.25

5.75

10.00

11.00

12.10

12.50

13.70

Garnited at Top

JK

	222.55				
0+06.85					
0+12.50					
0+18.20					
T.B.M. on Rock		1.18	221.37 ✓	Corr. 221.43	

Arch #5
Cont.
Length of Slope

HI	222.55		
	219.07 ✓		
	3.48		17.27
	34.10		
	216.79 ✓		
	5.76		20.00
	28.01		
	214.90 ✓		
	7.65		24.62
	23.92		

JK

Spillway elevs.

SAN DIRGUITO DAM

		HI		ELEV.
BM. Lat. Bolt.	#13			250.00
	Sag	255.06		
			-4.05	251.01
	-2.83	248.18		
S Lip (Hood)			+1.86	250.04
S Spillway Invert			+1.79	249.97
T.P.			+1.86	250.04
	-1.89	248.15		
Middle Spillway			+1.83	249.98
" Lip (Hood)			+1.88	250.03
N Spillway			+1.85	250.00
" Lip (Hood)			+1.90	250.05

Checked JK 3-24-48

Counterforts (SAN DIEGUITO DAM)

Feb. 13, 1948
Rainey
Baker
Chipman

GROUND SURFACE & BOTTOM ELEVATIONS

	244.5
Butt #12S	
	242.0
Butt #12N	
	240.0
Butt #11S	
	235.0
Butt #11N	
	232.0
Butt #10S	
	231.0
Butt #10N	
	231.0
Butt #9S	
	228.0
Butt #9N	
	228.0
Butt #8S	
	222.0
Butt #8N	
	222.0
Butt #7S	
	213.0
Butt #7N	
	213.0
Butt #6S	

Surface		MEAN BOTTOM OF EXC. (FIELD BK 3, 1948)
242.7 ✓	242.8 ✓	
1.8	1.7	—
	10'	
239.2 ✓	238.1 ✓	
2.8	3.9	—
	10'	
233.8 ✓	232.6 ✓	229
6.2	7.4	
	9'	
232.1 ✓	231.3 ✓	230
2.9	3.7	
	10'	
228.3	228.4 ✓	224
3.5	3.6	
	10	
227.9 ✓	227.1 ✓	223
3.1	3.9	
	12	
224.6 ✓	224.8 ✓	219.5
6.4	6.2	
	12'	
224.0 ✓	223.5 ✓	218
4.0	4.5	
	12	
219.2 ✓	219.3 ✓	215.5
8.8	8.7	
	12	
218.1 ✓	216.1 ✓	214.5
3.9	5.9	
	15'	
209.3 ✓	211.7 ✓	206
12.7	10.3	
	15'	
208.4 ✓	207.0 ✓	204
4.6	6.0	
	15'	
207.9 ✓	206.4 ✓	200.5
5.1	6.6	
	15	

Counterforts cont.

Butt	Elev.	jt face				MEAN BOTTOM OF EXC. (ELEV.) JL 3·15·48
Butt #6N	215.0	209.5 ✓	212.0 ✓		5.5 / 3.0 / 14'	204
Butt #5S	222.0	221.2 ✓	220.8 ✓	217.3 ✓	0.8 / 1.2 / 4.7 / 7 / 15	217
Butt #5N	225.0	222.0 ✓	~~224.3~~ 23.3		7.0 / 5.7 / 12	217.5
Butt #4S	232.0	231.0 ✓	230.3 ✓		1.0 / 1.7 / 11	227
Butt #4N	236.0	232.~~5~~ 3	233.3 ✓		3.7 / 2.7 / 10	228
Butt #3S	242.0	239.3 ✓	238.5 ✓		2.7 / 3.5 / 9'	233
Butt #3N	243.0	239.8 ✓	239.9 ✓		3.2 / 3.1 / 10	234
Butt #2S	247.0	244.0 ✓	243.2 ✓		3.0 / 3.8 / 10	—
Butt #2N	247.0	244.3 ✓	244.6 ✓		2.7 / 2.4 / 8	—

REDUCED J.H.A. 2/16/48

Checked JL 3·23·48

Ramey
Baker
Shipman

2.17.48

B+T Butt #13 — 250.00

1.25 — 251.25

0+00 25

0+12 50

0+18 75

0+25 (= 5+75)

See p. 66

Arch #13 (AFTER EXCAVATION)

82

	Face of Arch	edge of footing	Grade
HI	251.25		
	240.33	240.33	237.59
	10.92	10.92	11.66
	44.00	43.21	43.20
	241.83	241.83	240.80
	9.42	9.42	10.43
	39.72	39.10	39.05
	243.11	243.11	241.75
	8.14	8.14	9.50
	37.38	36.72	36.68
	244.38	244.38	244.38
	6.87	6.87	6.87
	36.72	35.60	35.60

REDUCED J.N.O. 2/17/48

checked JK 3-23-48

KEYSOR
ANDREWS

2-17-98

249

0+06.25

0+12.50

0+18.75

0+25 (= 5+75)

ARCH # 12 (BEFORE EXCAVATION)

see p. 46.

83

249.

242.0
7.0
44.0

243.5
5.5
39.72

245.0
4.0
37.38

244.5
4.5
36.72

Final (?) X Sections
San Diequito DAM
(after backfill)

BM. Arch #2			251.02
	0.27	251.29	
T.P #1		12.71	238.58
	1.60	240.18	239.51 12.34 227.17
T.P. #2		12.41	227.77
	1.12	228.89	
T.P. #3		11.93	216.96
	3.13	220.09	

2+25

2+50

2+75

3+00

3+25

3+91.25

3+37.50

3+43.75

p. 84 to 91 incl.

228.32

231.25

Feb 19, 1948

Rainey
Baker
Chipman

84

Face of arch

220.1	
215.9 4.2	212.8 7.3 21.7
211.1 9.0	210.6 8.5
211.1 9.0	211.8 8.3
210.1 10.0	212.7 7.4
212.6 7.5	214.6 5.5 25.0
213.6 6.5	216.4 3.7 27.1
215.9 4.2	217.1 3.0 30.3
216.5 3.6	218.6 1.5 36.6

		220.09		
3+50				
3+56.25				
2+18.25				
2+12.50				
2+06.25				
2+00				
T.P.			0.08	220.01
	11.41	231.42		
1+93.75				
1+87.50				
1+81.25				
1+75				

face of torch

220.1	
216.9	219.0
3.2	1.1
	39.3
217.4	18.6
2.7	1.5
	31.95
216.8	16.5
3.3	3.6
	25.9
17.6	219.0
2.5	1.1
	29.7
218.4	221.4
1.7	+1.3
	36.2
219.6	223.1
0.5	+3.0
	41.9
231.4	
220.7	223.5
10.7	7.9
	37.4
222.0	224.0
9.4	7.4
	32.5
23.2	
~~222.5~~	224.8
8.2	6.6
	31.10
224.7	225.7
6.7	5.7
	30.80

		231.42		
1+68.75				
1+62.50				
1+56.25				
1+50				
T.P. #5			0.89	230.53
	11.57	242.10		
1+43.75				
1+37.50				
1+31.25				
1+25				
1+18.75				
1+12.50				

239.34

231.4

26.3

~~22.53~~

5.1

227.4

4.0

228.7

2.7

229.8

1.6

242.1

231.1

11.0

232.2

9.9

233.4

8.7

234.3

7.8

234.2

6.9

236.2

5.9

228.1

3.3

34.1

229.9

1.5

37.9

230.9

0.5

41.9

231.4

0.0

43.5

232.6

9.5

41.2

233.3

8.8

38.25

234.5

7.6

36.1

235.4

6.7

35.5

236.2

5.9

36.2

237.4

4.7

39.4

		242.10 ✓		
1+06.25				
1+00				
T.P. #6			1.43	240.67 ✓
	10.21	250.88 ✓		
0+93.75				
0+87.50				
0+81.25				
0+75.00				
0+67.75				
0+62.50				
0+56.25				
0+50				

R

face dark

242.1

237.2 ✓	238.8 ✓
4.9	3.3
	43.4
238.1 ✓	239.3 ✓
4.0	2.8
	48.9

250.9

239.1 ✓	239.8 ✓
11.8	11.1
	43.0
240.2 ✓	240.4 ✓
10.7	10.5
	39.4
241.0 ✓	241.0 ✓
9.9	9.9
	36.2
241.8 ✓	241.9 ✓
9.1	9.0
	35.5
242.5 ✓	242.5 ✓
8.4	8.4
	36.0
243.3 ✓	243.4 ✓
7.6	7.5
	38.9
243.7 ✓	244.2 ✓
7.2	6.7
	43.0
244.4 ✓	244.4 ✓
6.5	6.5
	46.6

		250.88 ✓		
0+43.25				
0+37.50				
0+31.25				
0+25				
0+00				
on Paper Turned to	226.02			
T.P. #7			4.75	221.27 ✓
	8.63	229.90 ✓		
3+62.50				
3+68.75				
3+75				
3+81.25				
3+87.50				
3+93.75				

250.9 ✓

245.1 ✓	245.4 ✓
5.8	5.5
	42.9
245.6 ✓	246.3 ✓
5.3	4.6
	38.5
246.1 ✓	246.8 ✓
4.8	4.1
	38.3
246.7 ✓	247.8 ✓
4.3	3.1
	36.4
249.6 ✓	250.5 ✓
1.3	0.4
	57

229.9

218.0 ✓	19.1 ✓
11.9	10.8
	28.6
218.8 ✓	220.1 ✓
11.1	9.8
	27.9
219.2 ✓	221.5 ✓
10.7	8.4
	27.8
220.2 ✓	222.8 ✓
9.7	7.1
	29.7
220.8 ✓	223.6 ✓
9.1	6.3
	32.9
221.4 ✓	224.3 ✓
8.5	5.6
	30.2

		229.90 ✓		
4+00				
4+06 25				
4+12 50				
4+18 75				
4+25				
4+31 25				
4+37 50				
4+43 75				
4+50				
T.P.			1.77	228.13 ✓
	8.77	236.90 ✓		
4+56 25				
4+62 50				
4+68 75				

		229.9		
		222.0 ✓		225.1 ✓
		7.9		4.8
				43.1
		222.6 ✓		224.8 ✓
		7.3		5.1
				36.50
		223.3 ✓		229.9 ✓
		6.6		5.0
				33.3
		223.7 ✓		225.2 ✓
		6.2		4.7
				39.0
		224.3 ✓		225.7 ✓
		5.6		4.2
				30.1
		225.1 ✓		226.7 ✓
		4.8		3.2
				32.9
		225.6 ✓		227.2 ✓
		4.3		2.7
				37.0
		226.2 ✓		227.8 ✓
		3.7		2.1
				40.80
		226.8 ✓		228.1 ✓
		3.1		1.8
				45.0
		236.9		
		227.4 ✓		228.4 ✓
		9.5		8.5
				38.2 ✓
		227.9 ✓		228.6
		9.0		8.3
				36.2
		228.5 ✓		229.0 ✓
		8.4		7.9
				33.7

		236.90		
4+75				
4+81.25				
4+87.50				
4+93.75				
5+00				
T.P.			1.62	235.28 ✓
	8.89	244.17 ✓		
5+06.25				
5+12.50				
5+18.75				
5+25				
5+31.25				
5+37.50				
5+43.75				

236.9

229.0 ✓	229.7 ✓
7.9	7.2
	33.7
229.6 ✓	230.2 ✓
7.3	6.7
	35.0
230.1 ✓	231.7 ✓
6.8	5.2
	39.4
230.8 ✓	232.4 ✓
6.1	4.5
	43.2
231.5 ✓	233.2 ✓
5.4	3.7
	46.3

244.2

232.3 ✓	233.2 ✓
11.9	11.0
	43.2
233.1 ✓	233.9 ✓
11.2	10.3
	39.2
233.9 ✓	234.4 ✓
10.3	9.8
	36.6
234.9 ✓	234.8 ✓
9.3	9.4
	35.9
235.9 ✓	236.7 ✓
8.3	7.5
	36.9
236.8 ✓	238.7 ✓
7.4	5.5
	39.7
237.7 ✓	240.0 ✓
6.5	4.2
	44.0

244.17 ✓

57.50

J.P. 2.20 241.97 ✓

8.84 250.81 ✓

5756.25

5762.50

5768.75

5775

244.2

238.4 ✓ 240.9 ✓

5.8 3.3

45.8

250.8

239.6 ✓ 242.2 ✓

11.2 8.6

42.

241.9 ✓ 245.2 ✓ 243.5 ✓ 243.1 ✓

8.9 5.7 7.3 7.7

13.1 17.2 39.2

243.8 ✓ 248.3 ✓ 244.9 ✓ 244.5 ✓

7.0 2.5 5.9 6.3

12.3 18.3 37.2

246.7 ✓ 248.6 ✓ 246.1 ✓ 245.7 ✓

4.1 2.2 4.7 5.1

7.7 16.4 37.2

REDUCED — ANDREWS

checked JK 3-24-48

ELEV BASE LINE L & T's – SAN DIEGUITO DAM

Check elev. Guniting of face comp.

W.S. 216±

L+T Butt #13			250.00
	5.00	255.00	
Butt #12		4.91	250.09
Butt #11		4.86	250.14
Butt #10		4.88	250.12
Butt #9		4.92	250.08
Arch #8		3.99	251.01
Butt #8		4.97	250.03
Arch #7		4.02	250.98
Butt #7		4.95	250.05
Arch #6		4.05	250.95
Butt #6		4.92	250.08
" #5		4.98	250.02
" #4		4.90	250.10
" #3		4.84	250.16
" #2		4.86	250.14
" #1		4.84	250.16

Feb. 19, 1948

92

3.5.48

Plus the water Elev. – 238.8

L+T Butt #13		250.00
+ 5.09 – 255.09		
Butt #12	5.01	250.08
Butt #11	4.95	250.14
Butt #10	4.98	250.11
Butt #9	5.02	250.07
Arch #8	4.09	251.00
Butt #8	5.07	250.02
Arch #7	4.12	250.97
Butt #7	5.06	250.03
Arch #6	4.15	250.94
Butt #6	5.03	250.06
" #5	5.08	250.01
" #4	4.99	250.10
" #3	4.94	250.15
" #2	4.96	250.13
" #1	4.94	250.15

ELEV BASE LINE L & T's - SAN DIEGUITO DAM

Check elev.
Water level 233.5

Butt #13	L & T			250.00
	5.02	255.02		
Butt #12			4.94	250.08
" #11			4.88	250.14
" #10			4.91	250.11
" #9			4.96	250.06
" #8			5.01	250.01
" #7			4.99	250.03
" #6			4.99	250.03
" #5			5.02	250.00
" #4			4.94	250.08
#3			4.88	250.14
#2			4.90	250.12
#1			4.88	250.14
Arch #8			4.02	251.00
#7			4.06	250.96
#6			4.09	250.93

Feb. 27, 1948 Ramey Baker Shipman

93

0.33

250.38

12.39 237.99

Elev. Top Weir Crest 237.99

255.08

5.19 249.89

Struts May-6-36

Ele. of Buttress bottom openings

9-10	240 225.	240 229	240 229	229.
11-12	240 215	240 216.	240 216.	240 216.
13-14	220 209	220 -	220 -	220 -
15-16	220 203	220 204	220 —	220 —
17-18	220 202	220 202	220 202	220 202
19-20	240 213	240 213	240 213	240 213
21-22	242	260 242	260 242	

Hough
Brackman

#9 E.	Set.	✓	4-18-36
10 W.	C 12.5		
16 E	C 1.0		
17 W.	C 1.0		Constant Diagonals
19 W	C 4.0		Diff. Elk. X 1.414 = ∴ Dist
18 E.	C 9.0		
19 E.	C 7.0		
20 W.	C 4.0		
20 E		C 13.6 from Water	4-25-36
21. W.	C 3.0		
16 W.	C 1.0	is .8 above water	
15 E.	C 1.0	- - -	
15 W	C 3.7	below water	
14 E.	(O.K. Set.)	Fred raise 7, 1.0' to 00 Red Blue center is 206.8	6-6"
14 W	C 1.0	0.1 above water	
13 E	C 2.0	0.1 ✓ ✓	
13 W	C 6.0		
12 E	C 2.0		
12 W	C 3.0	water 212.7	
11 E	Set.		
11 W.	C 3.0		
10 E.	C 1.0		
21 E.		water Elk. 24.0.75	C @ Water 19.75
22 W		✓ ✓ ✓	C @ 0.8
22 E.			

2.5 60 1500 — 48.1 30 — 27/14 52.0 — 54 10

211.1 2005 10.6 9.6 9.0 — 211.12 — 210.9 — 2200 8.3 211.7 8 3.7

IMPROVED TABLES
AND
INFORMATION

A. LIETZ Co.
San Francisco U.S.A. 10268
Level - City # VV - 5247 -

A. LIETZ Co
San Francisco U.S.A. 10278
Transit - City # VV - 6867

13.
75
205
.67
2:17

20.5
47
21.19

202
135
67

401 24
395.
6.2

403.63
95
8.6

3988
95
3.8

402 42
95
7.4

3810 5
75
6.0

379 4
75
44

383 95
75
9.00

385.32
76
10.3

3855 2
75
10.5

383.17
75
8 2

387.88
75
12.4

38.4

Water 21.07 Below Starting BM

246.78

246.78
11.82
234.96

50
3.14.
200
50
150.
15700

72.00