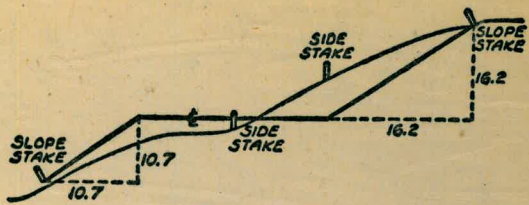




805



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

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

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

LOG OF CORE  
DRILLINGS  
SUTHERLAND DAM

Dr + Thomas  
Inspr.

MICROFILMED

JAN 16 1965

Please Return to  
City of San Diego Water Dept.  
Room 903 Civic Center  
Telephone F-7511 Ext. 313

TABLE XIII—CORRECTIONS FOR TANGENTS AND EXTERNALS

These corrections are to be added to the approximate values, found by dividing the tangent, or external, for a 1° curve (Table VIII) by the degree of curve, in order to obtain the true tangents, or externals. Intermediate values may be obtained by interpolation.

FOR TANGENTS ADD

Central Angle	DEGREE OF CURVE													
	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°
10°	.03	.06	.09	.13	.16	.19	.22	.25	.28	.31	.34	.38	.42	.46
15°	.04	.10	.14	.19	.24	.29	.34	.39	.45	.51	.58	.65	.72	.79
20°	.06	.13	.19	.26	.32	.39	.45	.51	.58	.65	.72	.79	.84	.90
25°	.08	.16	.24	.33	.40	.49	.58	.67	.75	.83	.90	.99	1.06	1.14
30°	.10	.19	.29	.39	.49	.59	.69	.79	.89	.99	1.09	1.20	1.29	1.39
35°	.11	.22	.34	.47	.58	.69	.79	.89	1.04	1.29	1.42	1.54	1.66	
40°	.13	.26	.40	.53	.67	.80	.93	1.06	1.20	1.34	1.49	1.64	1.79	1.94
45°	.15	.30	.44	.60	.76	.91	1.06	1.21	1.37	1.52	1.70	1.87	2.04	2.21
50°	.17	.34	.51	.68	.85	1.02	1.19	1.36	1.54	1.72	1.91	2.10	2.29	2.48
55°	.19	.38	.57	.76	.95	1.14	1.32	1.52	1.72	1.92	2.14	2.35	2.56	2.77
60°	.21	.42	.63	.84	1.05	1.27	1.49	1.71	1.94	2.17	2.38	2.60	2.83	3.07
65°	.23	.46	.69	.93	1.16	1.40	1.64	1.88	2.13	2.38	2.63	2.88	3.13	3.39
70°	.25	.51	.76	1.02	1.28	1.54	1.80	2.06	2.33	2.60	2.88	3.16	3.44	3.72
75°	.27	.56	.83	1.12	1.40	1.69	1.98	2.27	2.57	2.87	3.16	3.47	3.78	4.09
80°	.30	.61	.91	1.22	1.53	1.84	2.15	2.46	2.78	3.10	3.44	3.78	4.12	4.46
85°	.33	.66	1.00	1.33	1.68	2.02	2.36	2.70	3.05	3.40	3.77	4.14	4.55	4.89
90°	.36	.72	1.09	1.45	1.83	2.20	2.57	2.94	3.32	3.70	4.10	4.50	4.91	5.32
95°	.39	.79	1.19	1.55	2.00	2.40	2.80	3.20	3.61	4.02	4.40	4.98	5.38	5.83
100°	.43	.86	1.30	1.74	2.18	2.62	3.06	3.50	3.95	4.40	4.88	5.37	5.85	6.34
110°	.51	1.03	1.56	2.08	2.61	3.14	3.67	4.21	4.76	5.31	5.86	6.43	7.01	7.60
120°	.62	1.25	1.93	2.52	3.16	3.81	4.45	5.11	5.77	6.44	7.12	7.80	8.50	9.22

FOR EXTERNALS ADD

Central Angle	DEGREE OF CURVE													
	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°
10°	.001	.003	.004	.006	.007	.008	.009	.011	.012	.014	.015	.017	.018	.020
15°	.003	.007	.010	.014	.018	.023	.027	.032	.035	.039	.043	.047	.051	
20°	.006	.011	.017	.022	.028	.034	.038	.045	.051	.057	.063	.070	.076	.083
25°	.009	.018	.027	.036	.046	.056	.065	.074	.083	.093	.106	.120	.127	.135
30°	.013	.025	.038	.051	.065	.078	.090	.103	.116	.129	.149	.170	.179	.188
35°	.018	.035	.054	.072	.086	.109	.131	.153	.175	.197	.213	.230	.247	.264
40°	.023	.046	.070	.093	.117	.141	.172	.203	.234	.265	.277	.290	.315	.341
45°	.030	.060	.093	.119	.153	.184	.216	.254	.289	.325	.351	.378	.411	.445
50°	.037	.075	.116	.151	.189	.227	.266	.305	.345	.384	.425	.467	.508	.550
55°	.046	.093	.142	.188	.236	.283	.332	.381	.420	.479	.530	.582	.641	.700
60°	.056	.112	.168	.225	.283	.340	.398	.457	.516	.575	.636	.697	.774	.851
65°	.067	.135	.204	.273	.343	.412	.483	.554	.625	.697	.771	.845	.922	1.01
70°	.080	.159	.240	.321	.403	.485	.568	.652	.735	.819	.906	.994	1.08	1.17
75°	.095	.182	.266	.353	.440	.528	.617	.707	.797	.887	1.07	1.18	1.29	1.39
80°	.110	.220	.332	.445	.558	.671	.787	.903	1.02	1.13	1.25	1.38	1.50	1.62
85°	.128	.259	.391	.524	.657	.790	.926	1.06	1.20	1.34	1.47	1.62	1.76	1.91
90°	.149	.299	.450	.603	.756	.910	1.07	1.22	1.38	1.54	1.70	1.87	2.03	2.20
95°	.174	.350	.522	.706	.885	1.06	1.25	1.43	1.62	1.80	1.99	2.18	2.38	2.58
100°	.200	.401	.604	.809	1.01	1.22	1.43	1.64	1.85	2.06	2.28	2.50	2.73	2.96
110°	.268	.536	.806	1.08	1.35	1.63	1.91	2.20	2.48	2.76	3.05	3.35	3.66	3.96
120°	.360	.721	1.08	1.45	1.82	2.19	2.57	2.95	3.33	3.72	4.11	4.50	4.91	5.32

10-2-50 to 11-1-50

Field Book #

Page #

Sutherland Core Drill - 805 ✓ 1-6  
 Sutherland Summary of  
 Core Boxes. 805 ✓ 70-72  
 → See also — alicia ✓ 74-75

# SUTHERLAND DAM

# CORE DRILL

1.

		EQUIPMENT
OCT 2-1950	FRED CANNON CONTRACTOR RUN JACKHAMMER STARTER OR NO OF BUTTRESS #15-14- PLACED PIPE + GROUT IN 15-14 TWO MAN CREW	MAVED IN AT 10 A.M. 1-315- INGER, RAND. HOLES IN DOWN STREAM 3- DODGE TRUCKS 13412 IN THAT ORDER 2-CORE MACHINES HOLES 18 IN DEEP 1 JACK HAMMER 1 PUMP
OCT 3-1950	DRILLED CORE #15 MADE 10	FT + PUMP DOWN 11 A.M. NO MORE TO DAY.
OCT 4-1950	THROUGH CONCRETE ON #15 AT 18.5	AND INTO GOOD ROCK STOP AT
OCT 5-1950	DRILLED TO 33.5 #15 ONE START #14 NORTH AT 10 A.M.	263 TO 273 BROKEN ROCK WATER LOSS MADE 24 FT.
	DN SR #14 CONG. TO 18 FT. DRILLED TO	33 FT AT 10 AM NO WATER LOSS
OCT 6	DN SR #13 CONG TO 24 FT. FILLED	THANK 450 GAL GAUSE 0.5 NO LOSS
OCT 9-1950	DN SR #13 TO 39 FT STARTED #2 MR. ARNOLD, BIRMAN BROWN CANNON FOR 2 DRILLS	DRAT 2 PM. 8 FT IN CONG. 4 STATE ENGR OUT REQUEST

- Oct 10 <sup>DN. STR.</sup> DRILL #12 TO 38.5 FT AT 2 P.M. CONC. TO 23.6 FT BETWEEN 27.4 + 29.4 IN ROCK HIT A ONE FOOT CAVITY. SAME LOSS OF WATER PUMPED WATER TO TANK DOWN TO 0.5 FT. FOUR BOXES FROM CHOLLAS  
 CORE LOSS 0.2@9
- Oct. 11-1950 DRILL #12 UP STR. TO 33.5 CONC. TO 18.5 LOST SOME WATER IN CONC. & ROCK  
 " #14 " " WITH JACK HAMMER TO 2.5  
 CORE LOSS 0.2@9. 0.2@11.5. 0.2@4.5 + 0.4@25.9
- Oct 12-1950 DRILL #13 UP STR. TO 31 FT NO CORE LOSS OR WATER CONC. TO 16 FT. PUMP ON FRITZ HAUL WATER  
 LOST SOME WATER
- FRIDAY.  
 Oct 13. DRILL #14 UP STR. TO 28.6 FT. FOUNDATION AT 27.5 STARTER HOLE IN #11 UP STR. NEW PUMP FROM CHOLLAS
- MONDAY.  
 Oct 16-1950 DRILL #14 UP STR. TO 42.5 ROCK GOOD. NO LOSS OF WATER  
 START #11 " " AT 2 P.M. DRILLED 11 FT. - ROCK AT 9.7  
 MR BIERMAN MOORE & 2 STATE MEN.
- Oct 17 DRILLED #11 TO 24.9 START #10 AT 12:30 ROCK AT 10 FT.  
 UP STR.

- WED.  
 OCT. 18-1950 COMPLETE #10 UPSTREAM TO 25.2 FT NO WATER LOSS GOOD ROCK.  
 STARTED #10 DOWN STR. ROCK AT 8 FT. DRILLED TO 15 FT NO LOSS WATER  
 PUMPED 500 GAL WATER 14 Line Log to Chollar
- OCT. 19-1950 #10 DN. STREAM TO 23.0 LOSS CORE 0.2 AT 2 FT + 0.2 AT 12.2 SOFT SPOT NO WATER LOSS  
 #11 " " CORE LOSS 0.5 AT 5 FT + 0.4 AT 9 FT LOSS WATER AT 6' Rock @ 8'
- OCT. 20- #11 DN. STR. DRILLED TO 28' LOST THE LAST 0.5 FT CONCRETE TO 13.5' LOST  
 A LITTLE WATER AT 7 FT. - LOST CORE - 0.5 @ 5' + 0.2 @ 9.3  
 #9 UP STR. TO 10.1' ROCK AT 9.1' DRILLED STARTER HOLES #8 UP + DN.  
 MOVED COMPRESSOR TO STREAM BED
- OCT. 23-1950 #9 DN STR. LOSS WATER AT 10' LOST CORE 0.3 @ 6' - 0.2 @ 9.5'  
 WATER LOSS OF 3 GALS. PER MIN. DOWN TO 19.3  
 START #8 DN STR. AT 2 P.M. LOSS CORE @ 6.7
- OCT. 24-1950 #8 DN. STR. LOST WATER AT 12.9 @ 5 GAL PER MIN ROCK AT 12.4  
 DOWN TO 25.4' START #9 UP STR AT 12:30 CONG. TO 9.1 LOSS  
 OF WATER @ 7' DOWN TO 16.2

No 8 DN 577 25'

- Oct. 25. #9 UP STR. TO 20.3 GOOD ROCK,  
#8 " " AT 10 AM. ROCK @ 8.1 DOWN TO 19.2 NO  
WATER LOSS.
- Oct. 26 #7 VERT HOLE <sup>FIRST</sup> 30 FT AT 16 LOSS 1.5 CORE ROCK AT 7.9 LOST NO WATER  
(SHOULD BE HOLE UP STR. MOVE TO #6 DOWN TO 20')
- Oct. 27 #6 @ DG. 1.6' GOOD ROCK UP TO 20 FT. (4.6 STARTER) D.G.
- Oct. 30 START HOLE #7 <sup>23.4'</sup> 2/3 WAY UP STR 23.4 DEEP CONS. TO 8.9
- Oct. 31 3 FT MORE FIRST #7 <sup>23.4'</sup> MOVED BET. 344 DRILL AT 12.1 HIT  
ROCK AT 11 GOOD LOST NO WATER
- Nov 1 344-16.8 LOSS MATERIAL PER MIN - 14 UP 0.1 LOSS DN. NO.  
13 UP. 5.5 LOSS DN. NO. 12 DN 7.6 GAL. 344 D.G. TO 10.7
- Nov. 2 STARTER HOLE 4 PIPE IN #7-10' DN STR. FROM FIRST HOLE  
WATER LOSS NEXT TWO PAGES DRILL #7 TOMORROW

Nov 1-1950

Loss #15	3x4	14 DN STR	14 UP STR.	#11 DN STR
30 LBS.	20 LBS.	30 LBS.	40 LBS. Loss	30 LBS. WATER LOSS
FIRST MIN 1.5	1 - 14	0	0.1	1 - 0.9
SECOND " 1.4	2 - 13.5	0	0.1	2 - 0.8
THIRD " 1.5	3 - 14.0	0	0.05	3 - 0.8
FOURTH " 1.5	4 - 14.0	0	0.0	4 - 0.8
FIFTH " 1.5	5 - 13.5	0	0.05	5 - 0.8
13 DN STR.	#13 UP STR.	#12 DN STR.	#12 UP STR.	11 UP STR.
40 LBS	@ 30 LBS	30 LBS	30 LBS.	NO LOSS AT
MADE 10 MIN	1 - 5.8	1 - 7.1	1 - 8.1	30 OR 40 LBS
TEST NO LOSS	2 - 5.1	2 - 7.0	2 - 7.9	
WATER	3 - 4.9	3 - 7.1	3 - 8.0	
	4 - 4.8	4 - 6.9	4 - 7.9	
	5 - 4.8	5 - 7.0	5 - 8.0	
#10 DN STR	#10 UP STR	#9 DN STR	#8 DN STR.	8 UP STR.
40 LBS	NO LOSS	30 LBS.	20 LBS	30 LBS
1 - 8.2	AT 40 LBS.	1 - 10.0	1 - 11.2	1 - 6.2
2 - 8.4		2 - 10.0	2 - 11.2	2 - 6.3
3 - 8.4		3 - 9.9	3 - 11.0	3 - 6.3
4 - 8.4		4 - 9.8	4 - 11.1	4 - 6.2
5 - 8.4		5 - 9.8	5 - 11.0	5 - 6.2



Nov 1 - 1950

#7 FIRST

7 CENTER

#6

#9 UP STR

Nov. 3

#7 DN. STR.

6.

20 LBS.

30 LBS

20 LBS

30 LBS

0 LBS.

1 - 11.3

1 - 5.6

1 - 13.4

1 - 9.4

6 MIN. 18 GALS. M.

2 - 11.0

2 - 5.4

2 - 13.3

2 - 9.4

3 - 11.1

3 - 5.3

3 - 13.6

3 - 7.3

4 - 11.0

4 - 5.4

4 - 13.5

4 - 9.4

5 - 11.0

5 - 5.4

5 - 13.4

5 - 9.3

Nov. 3 - 1950

#7 DN. STR. CONTACT @ 7.3

LOST CORE @ 6.5 - 0.5 LOST. WATER LOSS @ 12.3

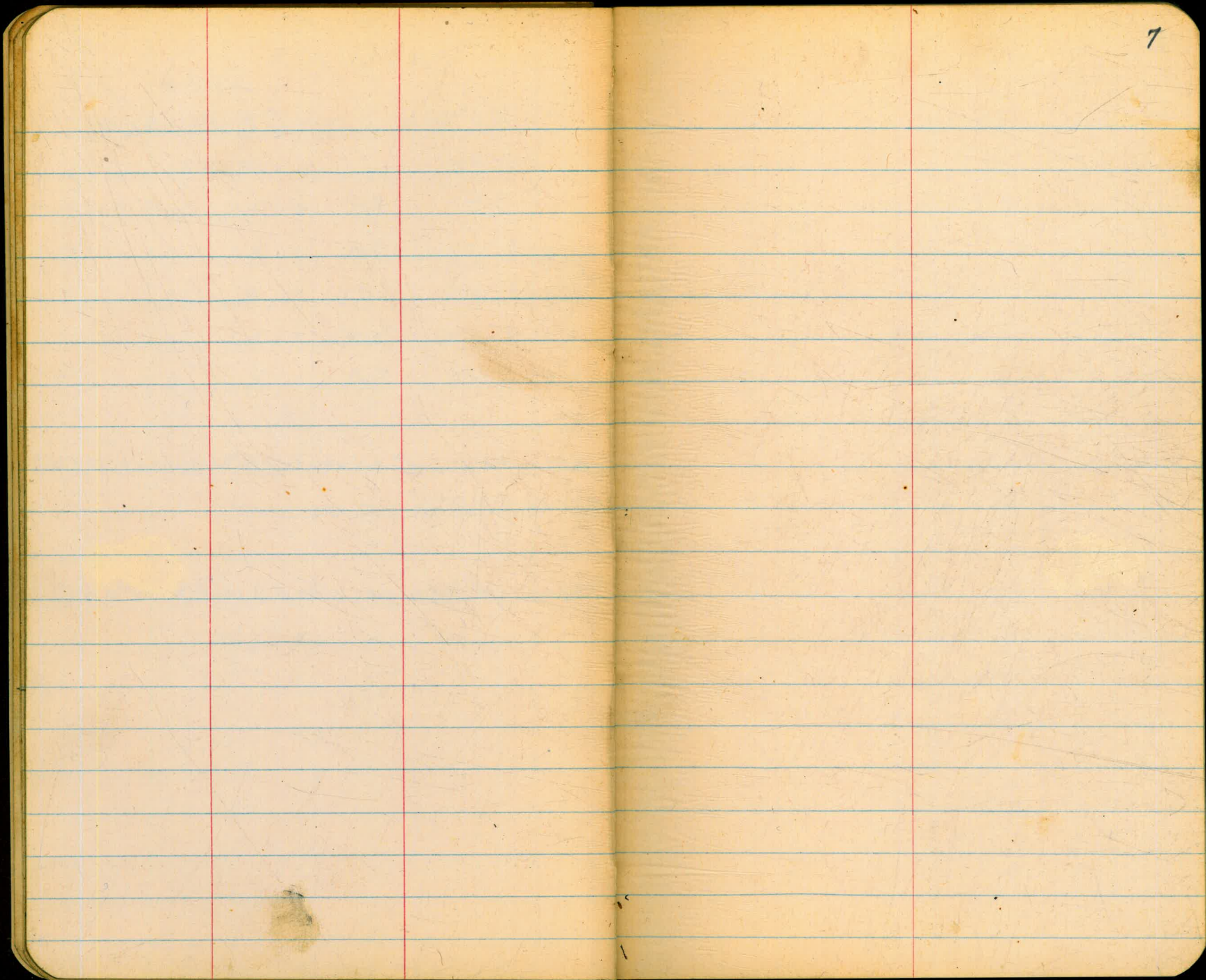
DOWN TO 17' GOOD ROCK

AFTER 12.5

Nov 6 - 1950 NO DRILLING SURVEY

CREW MEASURE HOLES DRIVER

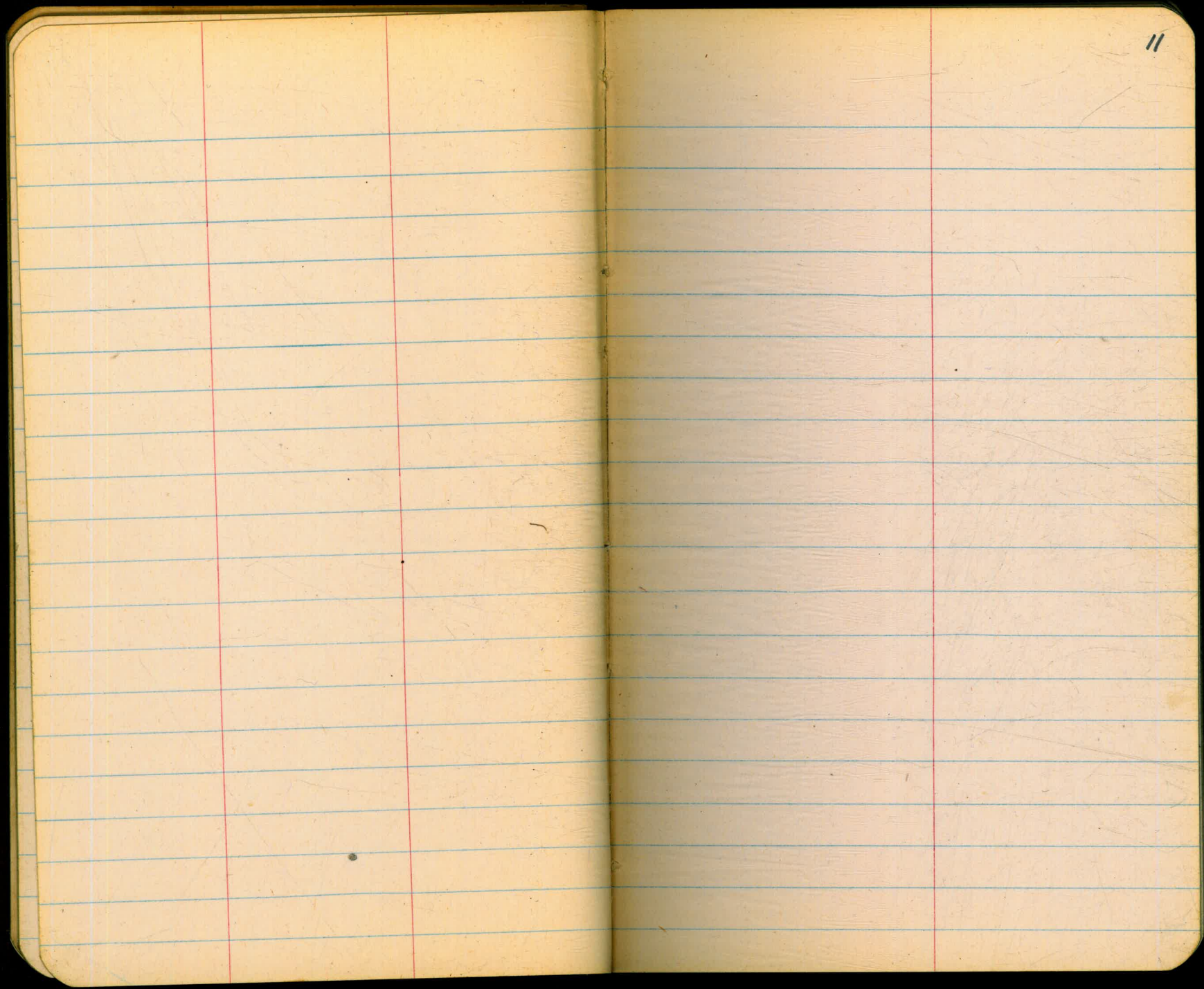
CORE 3 & 4 TO CHOLLAS





































































































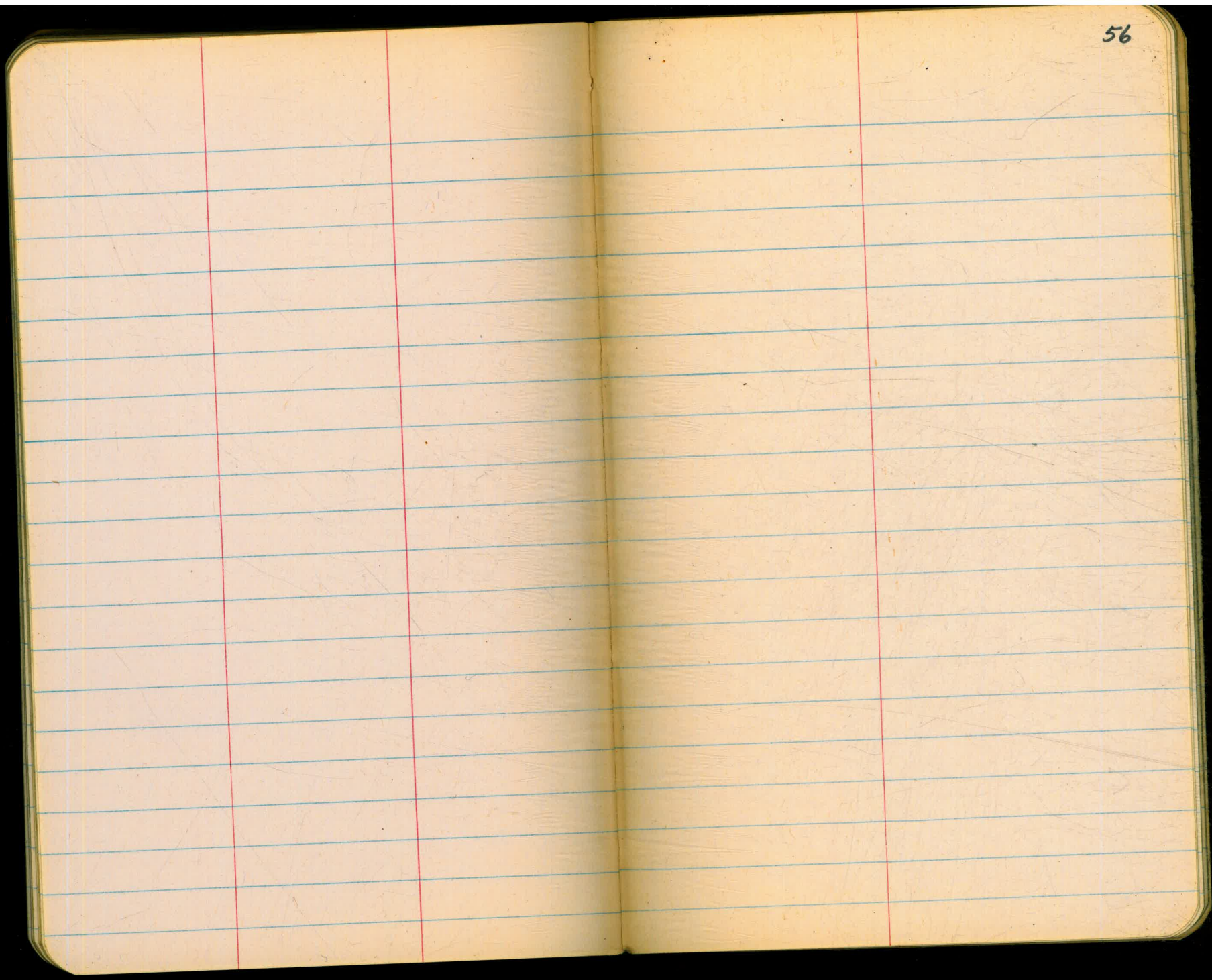










































# Sutherland Dam Summary of Core Boxes

1951 By Frank Welker

#9	TOP 1 DNSTR	START	LOSS	ROCK	LOSS	10.1, 12.7, 16.8, 19.3	BOTT.	✓
#9	TOP 1 UPSTR	2.0, 5.1, 0.2	LOSS	ROCK	9.1, 16.7		BOTT. 20.3	✓
#8	TOP 4* DNSTR	2.5, 3.6, 5.9	LOSS	ROCK	0.7, 8.1, 12.1	12.4, 15.5, 20.4	(SEE BOX MKD #8 DNSTR #10 #11)	BOTT. 23.5, 25.4
#8	TOP 1 UPSTR	2.5, 6.9	ROCK	8.1, 9.5, 14.4		19.3	BOTT.	✓
#7	BOX 1 OF 2* CENTER	2.5, 6.0, 7.9, 11.8, 14.9, 16.5	LOSS	18.1, 0.8, 20.0			(SEE BOX MKD #7 UPSTR #7 CENTER)	BOTT. 23.4
#7	BOX 1 OF 2* UPSTR	1.6, 6.1, 8.9, 11.0, 16.0	ROCK	20.8			(SEE BOX MKD #7 UPSTR #7 CENTER)	BOTT. 23.4
#7	TOP 1 DNSTR	1.5, 6.5, 0.4	LOSS	ROCK	6.9, 9.2	11.3, 12.3	(WATER LOSS) BOTT.	17.0
#6	DNSTR	4.6, 1.6	SOFT ROCK LOSS	8.1, 10.7, 14.4		18.1	BOTT. 20.0	✓
#3-4	UPSTR (BETWEEN)	DECOMPOSED ROCK 0.0 TO 10.7	WATER LOSS	16.8			BOTT.	✓

FB 798 p3-16

at dam

Elev. top casing

11/3/50

#14 Box #1 of 1 START 2.5, 7.5, 9.0, 12.5, 16.8, 19.6, 22.8

#15 Box #1 of 1 ROCK STARTS 23.6, 27.4 ← ONE FT CAVITY → 29.4, 33.5, 38.5 BOTT.

#12 Box #1 of 1 START LOSS 2.5, 0.2, 5.8, 10.6, 0.2, 15.1, 0.2, 18.5, 0.2, 19.5

#17 Box #1 of 1 START LOSS 20.8, 25.9, 0.4, 29.7, 32.0 BOTT. 33.5

#11 Box #1 of 2 START LOSS 2.5, 0.5, 6.5, 9.0, 0.4, 13.5, 14.0, 18.2, 20.8

#11 Box #1 of 1 START BOTT. 20.8, 22.3, 27.3, 28.0

#11 Box #1 of 1 START LOSS ROCK 2.0, 4.0, 0.4, 6.7, 9.7, 10.1, 11.5, 16.5, 20.9 (SEE BOX #8) → BOTT. 24.9

#10 Box #1 of 1 START LOSS ROCK 2.5, 0.2, 5.5, 8.0, 10.4, 10.2, 15.5, 20.0 (SEE BOX #10) → BOTT. 23.0

#10 Box #1 of 1 START ROCK 2.5, 4.6, 9.6, 10.1, 15.3, 20.3 (SEE BOX #8) → BOTT. 25.7

72

Record of depth stations as marked on notes  
containing core samples - Sutherland Dam.

Box # 1 OFF (START) END  
 # 15 DNSTR. 1.5, 6.6, 10.1, 15.2, 16.6, <sup>ROCK STARTS</sup> 18.5, 20.0, 21.0 ✓

Box # 2 OFF - CONT. - END BOTT.  
 # 15 DNSTR. 21.0, 25.0, 27.0, 28.2, 33.5 ✓

Box # 1 OFF START - LOSS END END END <sup>ROCK STARTS</sup> LOSS END.  
 # 14 DNSTR. 1.2, 0.2, 7.0, 12.0, 17.0, 18.5, 0.1, 21.7 ✓

Box # 2 OFF - CONT. - LOSS BOTT.  
 # 14 DNSTR. 24.9, 0.3, 28.6, 32.9 ✓

Box # 1 OFF START  
 # 14 UPSTR. 2.5, 5.9, 8.5, 13.0, 16.3, 20.3, 24.7 ✓

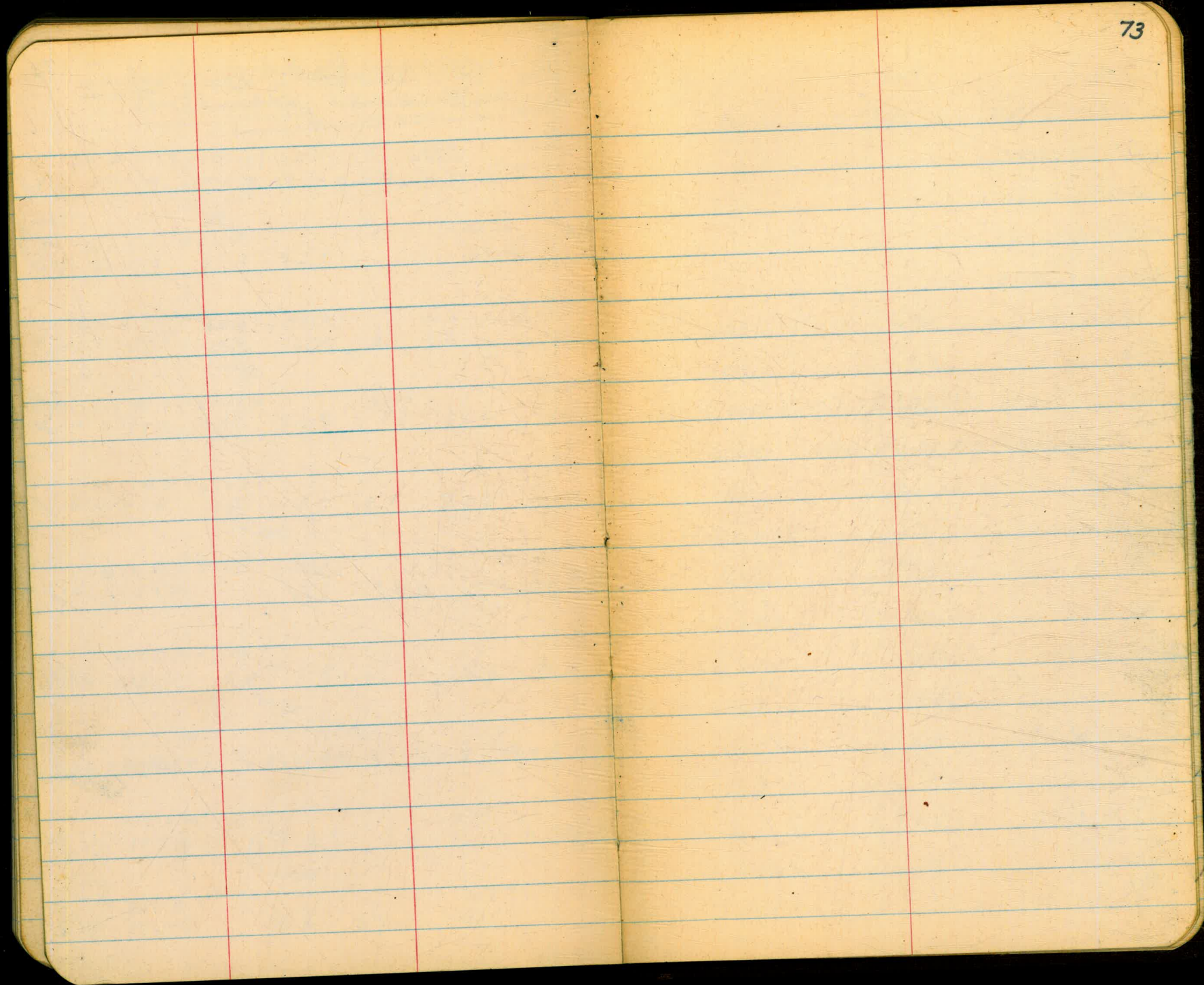
Box # 2 OFF - CONT. - <sup>ROCK STARTS</sup> BOTT.  
 # 14 UPSTR. 27.5, 28.6, 32.5, 37.5, 42.5 ✓

Box # 1 OFF START  
 # 13 DNSTR. 2.0, 5.5, 10.3, 15.0, 19.7, 22.0 ✓

Box # 2 OFF <sup>ROCK STARTS</sup> BOTT.  
 # 13 DNSTR. 22.0, 24.0, 29.5, 34.4, 37.1, 39.0 - 100% RECOVERY NO WATER LOSS ✓

Box # 1 OFF START <sup>ROCK STARTS</sup>  
 # 13 UPSTR. 2.5, 4.7, 11.4, 16.0, 20.0, 22.0 ✓

Box # 2 OFF BOTT.  
 # 13 UPSTR. 22.8, 27.1, 31.0 ✓



VERTICAL HOLE #	CONC. ✓	DEPTH. ✓	
18.5 CONCRETE	18.5	33.5	
26.5 TO 27.5 BROKEN			
33.5 DEEP			
WATER LOSS			
30 LBS. 1.5 GAL PER M.			
#14 DN. STR.	18.5	33.0 (32.9)	NO WATER LOSS.
#13 " "	24.0	39.0 ✓	" " "
#12	23.6	38.5 ✓	LOST SOME WATER AT 28 FT. CAVITY
#12 UP. STR.	18.5	33.5 ✓	LOST WATER IN CONCRETE & ROCK.
#13 " "	16.0	31.0 ✓	
#14 " "	27.5	42.5 ✓	NO LOSS WATER.
#11 " "	9.7	24.9 ✓	" " "
#10 " "	10.0	25.2 ✓	" " "
#10 DN. STR.	8.0	23.0 ✓ 324.1	" " "
#11 " "	13.5	28.0 ✓	
#9 UP. STR.	9.1	20.3 ✓	
#8 " "	8.1	19.2 (19.3)	
#8 DN STR	12.4	25.4 ✓	
#7 FIRST	7.9	18.0	
#7 CENTER	8.9	23.4	

	CONC.	DEPTH.
#1 DN STR.	7.3	17' ✓
#6	NONE	20' ✓
344	NONE	16.8 ✓

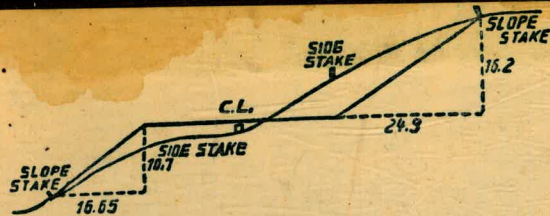
512.2

185  
15  
33.5

275  
15  
42.5

39  
209  
24.8

Please Return to  
City of San Diego Water Dept.  
Room 903 Civic Center  
Telephone F-7511 Ext. 313



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

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

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