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TO

MAPS ^{AND} DRAWINGS

CROSS SECTION BOOK

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W58



Juliana Cordant

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Barrett Building Dimensions
September 2-1913:

	<u>width</u>	<u>Depth</u>	<u>Ht</u>	<u>Cu. Ft.</u>	<u>Unit Cost</u>	<u>Total Cost</u>
Blacksmith Shop	(a) 19'9"	16'3"	10'3"	3290	.03	98.70
	(b) 18'9"	13'0"	10'9"	2620	.03	78.60
Scrap Iron Shed	26'6"	7'4"	8'8"	1684	.03	50.52
Engineer's House	24'4"	36'6"	13'9"	12212	.14	1709.68
Bath Room	6'4"	8'3"	8'6"	444	.14	62.16
Reservoir Covered					.08	
Foreman's House (Mendoza House)	35'6"	14'4"	13'3"	6742	.03	202.26
Store House (2 story) (Keepers House)	40'4"	16'4"	20'4"	13617	.08	1089.36

	Width	Depth	Ht	Cu Ft	Unit Cost	Total Cost		Width	Depth	Ht	Cu Ft	Unit Cost	Total Cost
Boarding House	30'3"	50'3"	14'0"	21281	.03	638.43	Barn (a)	50'6"	30'3"	11'0"	16804	.03	504.12
Kitchen or Bakery	18'6"	10'8"	11'6"	2269	.03	68.07							
Bunk House	50'6"	16'4"	13'9"	11341	.03	340.23	Barn (b)	50'0"	17'0"	9'0"	7650	.03	229.50
Small Powder House					.03		Shack (near Mendocino)	9'0"	9'0"	7'6"	608	.03	18.24
Barn (near house)	40'4"	12'0"	9'6"	4598	.03	137.94	Portable House					.03	
Tramster's Cabin	12'0"	10'3"	8'9"	1076	.03	32.28	Portable Cook Wagon						each
Large Powder House	18'0"	15'0"	11'0"	2970	.03	89.10	Take down House						each
Feed House	24'3"	26'3"	11'9"	7490	.03	224.40							

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411	o	Weir Frames for Barrett & Lower Otay	446	x	Gurley Water Stage Registers	Photos
412	o	S.C.M.W.Co. Plan of Filtration Plant & Connecting Pipes	447	o	Staple & Wrenches	Sketch
413	o	Map of Coronado Wye	448	o	Small Gear Wheels	Sketch
414	x	Location of Fittings - Bonita Pipe Line	449	o	Section of Conduit showing Cap	Sketch
415	o	Layout of Booster Pump - Chollas Hats	450	x	Saddle for Chollas connection	Sketch
416	x	Chollas Hats. Contour Map.	451	x	Profile of Otay - S.D. Pipeline	Blue print
417	x	Census Map	452	o	Hook for Morena Gates	Detail
418	out	Tunnel Timbering, Otay S.D. Pipeline	453	o	Layout of Movable Head Tower Morena	Sketch
419	x	Septic Tank for Lower Otay Filter Plant	454	o	Main Cable Anchorage Head Tower	Sketch
420	x	National City - Map	455	o	House over Pump & Motor	Sketch
			456	o	Water Side Slopes - Morena Dam	Sketch

527 out Map of Encanto.

528 out Detail. Hauzer Road

529 out " L.O. Dam Contours

530 X Portion of 150' L.O. contour in Janal Ranch

531 X Filter Plant Details B.P.

532 X " " " B.P.

533 X " " " B.P.

~~496 X Reservoir Intake~~

~~497 X L.O. outlet Lower Hauzer Pave.~~

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- C -

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-D-

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- E -

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- H -

Healy Ranch survey-Cottonwood Creek #1

21 A • Hydraulics Discharge Curve 3' Weir.

- H -

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- I -

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- J -

- J -

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-K-

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- M -

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-P-

Prospect Shaft - East side Upper Barrett. (Sketch) # 2

62 ft o Pearson Property.

-P-

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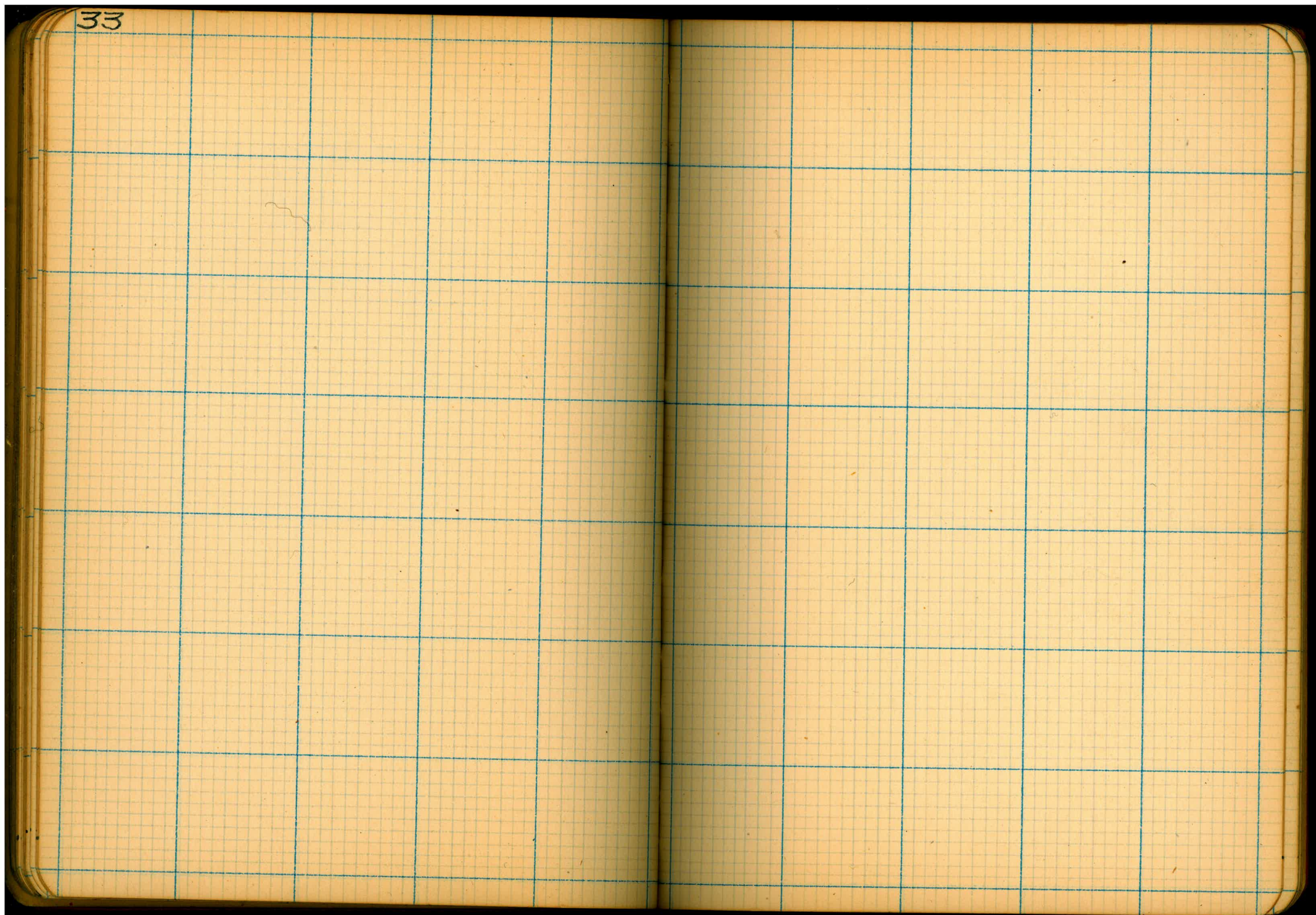
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21	U.S.G.S.	Sheet # 2. So. Calif.	
22	"	Salton Sink.	
23	"	Sheet #1. So. Calif.	
25	"	" #2. " "	
22 A.	"	San Diego. Quad.	
23 A.	"	La Jolla " "	
28 A	"	Ramona " "	
15	"	Cuyamaca " "	
17	"	" " Showing Fire Stations.	
19	"	San Diego " "	
20	"	Sheet #2. So. Calif.	



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MORENACIVIL and PHYSICAL Maps and DRAWINGS.

3. Map showing lands near Morena Dam.
 7. Tracing - Morena Ownerships.
 30. Sketch fences etc near Powder House - Morena (Cattle trespass)
 52. Harris Contour Map - Morena Reservoir.
 66. Grubbing Contracts and fence, Morena.
 81. Resurvey, Morena.
 82. " " "
 83. " " "
 84. " " "
 87. Section Corners in Morena Reservoir
 88. Ownerships and fences near Powder House - Morena
 92. 150 ft. Contour, Morena.
 108. Contours, Morena.
 109. 150 ft. Contour " "
 110. Morena Res. site and Dam Site.
 145. 130 ft. contour, Morena
 149. Contours, Morena Dam Site.
 150. Profile of filling, Morena.
 151. Contours, Morena Dam Site.
 152. " " " "
 153. " " " "
 154. " " " "
 155. Wood cutting Contracts, Morena.
 162. Contours, vicinity of Mass Shot, Morena.
 219. Contours, Morena Res.
 226. Lands near Morena.
 238. Lands of S. C. M. W. Co., Morena.
 63A. Houses - Morena Road.
 64A. Morena-Dewey " "
 101A } Details Proposed Keepers House.
 109A }

294. Curves for Areas and Discharge 24" Pipe. Outlet Tower.
 295. Passage Chart.
 302. Map of Reservoir.
 312. Profile of Daily Depths and Table of Capacities.
 317. Morena-Dewey Road.
 323. " " "
 257. Profile. Cottonwood Creek. Barrett - Morena.
 270. Passage Curve.
 271. Sketch. Ward Flat.
 410. Hydrograph.
 423. Barn.
 439. Cover for Launch.
 443. Locking Device for Outlet Tower.
 444. Steadying Rod for Spillway Gates.
 452. Hook for Gates.
 453. Layout of Movable Head Tower.
 454. Cable Anchorage " "
 456. Water Side Slopes.

37

MORENA.MECHANICAL and CONSTRUCTION DRAWINGS.

- | | | | | |
|------|---|--|--|--|
| 6 | Detail Morena Outlet Tower. | | | |
| 26 | Progress Profile Morena Dam. | | | |
| 29 | Construction Camp, Morena. | | | |
| 35 | Top of Tower, Morena Dam. | | | |
| 36 | " " " " " | | | |
| 37 | Outlet Tower, " " | | | |
| 38 | Ladder and Grating " Tower. | | | |
| 39 | Reinforcement, " " | | | |
| 40 | Hoisting Tower for Conc. distribution - Morena | | | |
| 42 | Hor. Section of Outlet Tower, Morena. | | | |
| 44 | 36" Valve and Elbow - Inlet Tower - Morena. | | | |
| 45 | Valves and fittings - Drain Tunnel - " | | | |
| 46 | Outlet Tower, Morena. | | | |
| 47 | Ladder and Grating - Outlet Tower - Morena. | | | |
| 49 | Outlet Tower - Morena Dam. | | | |
| 50 | " " " " " | | | |
| 51 | Old Studies, Morena Tower and facing. | | | |
| 96 | Studies for Morena Tower | | | |
| 97 | " " " " " | | | |
| 98 | " " " " " | | | |
| 99 | " " " " " | | | |
| 100 | " " " " " | | | |
| 111 | " " " " " | | | |
| 113 | " " " " " | | | |
| 114 | Detail - Solid web car wheel | | | |
| 115 | " " " " " | | | |
| 116 | Rock skip plan | | | |
| 117 | 6 Button Line Sheave - Plan - Morena. | | | |
| 118 | " " " " " | | | |
| 119 | " " " " " | | | |
| 120 | Sketch showing method mounting Button Stop. | | | |
| 121 | " " Rock cars - Morena | | | |
| 122 | Rock cars for Tunnels. | | | |
| 147 | Projection - Masonry face - Morena. | | | |
| 148 | " " " " " | | | |
| 156 | Mass shot - Morena. | | | |
| 157 | Cold Storage Room - Morena. | | | |
| 158 | Foundation 4"x6" C.R. Compressor | | | |
| 159 | Profiles - Mass shot - Morena. | | | |
| 163 | Piping and connections - Refrig Plant - Morena. | | | |
| 164 | Refrig. Plant - Morena. | | | |
| 165 | Insulation - Cold Stor. Room - Morena. | | | |
| 168 | Morena Dam Spillway - Tracing. | | | |
| 169 | " " " " " | | | |
| 170 | " " " " " | | | |
| 171 | Iron Work - Spillway Gates - Morena. | | | |
| 172 | Gates and " Details " | | | |
| 173 | Details of Dam " " | | | |
| 174 | Studies - Spillway " " | | | |
| 175 | Reinforced Conc. facing - Morena Dam | | | |
| 176 | " " " " " | | | |
| 177 | " " " " " | | | |
| 178 | Details - Gates and Spillway " " | | | |
| 179 | Suggested " " " " " | | | |
| 215 | Details of spillway Gates " " | | | |
| 220 | Details " N. Abutment " " | | | |
| 221 | Details - Top of Tower - " " | | | |
| 222 | " of facing " " | | | |
| 248 | " of coping " " | | | |
| 2 A. | Iron Work for Outlet Tower " " | | | |

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BARRETTCIVIL and PHYSICAL MAPS and DRAWINGS.

- 1 Survey of Wm. Healy Ranch - Cottonwood Creek.
 71. Pine Creek Intake.
 72 " " "
 73 " " "
 74 Old Reservoir Contours - Barrett.
 76 Contours - Barrett Dam Site.
 77 Smith's Ranch - Cottonwood.
 78 Contours - Barrett Dam Site
 79 " " " "
 80 " " " "
 89 Drift fence across Pine Cr. ^{3rd} cut-off road - Barrett.
 90 Salazar ownership in Cottonwood Creek.
 91 Meander Line - Cottonwood Creek - above Barrett
 93 Reconstruction of U.S. Land survey E. of "
 187 Location - Dultzura Cond. and Barrett Res.
 210 Map showing " " " " "
 212 1st rough draft " " line.
 218 Profiles of test holes at upper site - Barrett
 225 Dultzura Cond. and Barrett Res.
 227 Bear Canyon Reservoir - "
 239 Lands of S.C.M.W. Co. - Barrett.
 240 Plat of Barrett Reservoir Site.
 260 Barrett Dam Site - Contour Map
 261 Barrett Dam Site - Contour Map
 24A. S.C.M.W. Co Property. Barrett.

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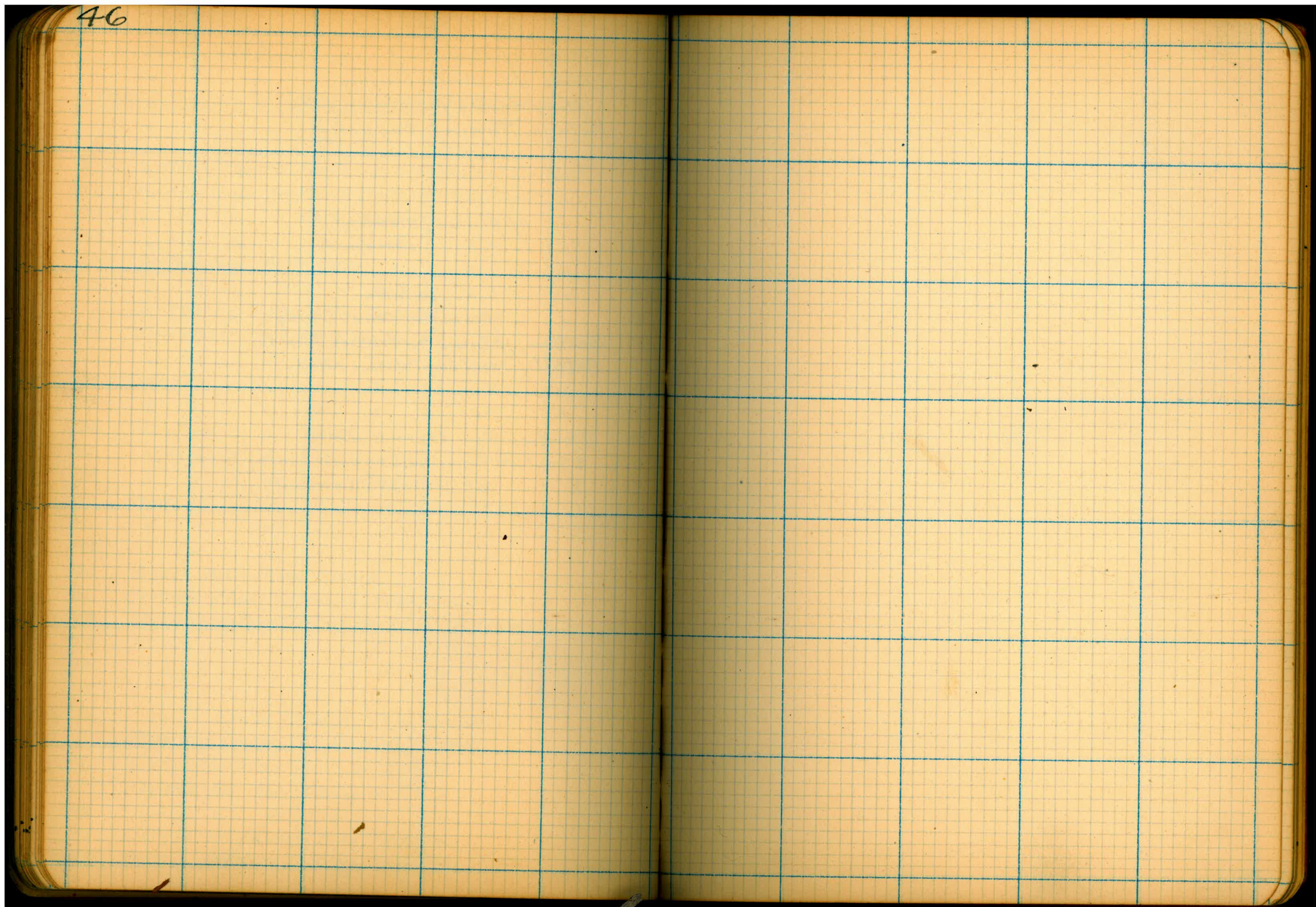
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BARRETTMECHANICAL AND CONSTRUCTION DRAWINGS.

2	Sketch of Prospect Shaft - E. side - Upper Barrett
101	Radial Gate for Waste Tunnell - Barrett.
102	" " " Exit Chamber "
103	" " " " " "
104	Section Conc. Arch Dam.
105	" " " " " "
112	2 Sluice Gates - Pine Cr. Dam.
128	Head Tower - Trav. Cable No. 2
129	" " " " " "
130	Car for " " " "
131	" " " " " "
132	Tail Tower - " " " "
133	" " " " " "
139	" " " " No. 1.
140	Head " " " " "
141	" " " " " "
142	" " " " " "
180	Bridge over Pine Creek.
181	Section - flume and trusses, Pine Creek
182	Details - Junction of canal with flume
183	" " " " "
184	" " " " "
185	" " " " "
186	" Truss Bridge, Pine Creek.
189	Plan of lagging, Dulzura Cond.
190	6' x 10' flume " "
191	Forms for Conc. Lining " "
192	" " " " " "
193	Detail of flume trestle. " "
194	Forms for Conc. Lining " "

195	Details of flume -	Dulzura Conduit.
196	Forms for Conc. Lining,	" "
197	Lifting device for sluice gates	" "
198	Details, Tunnel Lagging	" "
199	" " " "	" "
200	" " " "	" "
201	" " " "	" "
202	" of flume, standard,	" "
203	" " " , abandoned,	" "
204	" " " "	" "
205	" " " intake	" "
206	" " form for conc. lining,	" "
207	Section, flume and trusses, Pine Cr.	" "
208	Details, sand trap and scour outlet.	" "
209	" " " " " "	" "
211	" " " " " "	" "
231	Studies for Barret Dam	
25A.	X Section Finished Concrete Lining Tunnel #2	
27A.	X " of Dulzura Conduit.	

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OTAYCIVIL and PHYSICAL MAPS and DRAWINGS.

- 24 Harvey Ranch
 67 Lower Otag Reservoir.
 75 " " "
 213 Agricultural map - Harvey Ranch.
 223 Lower Otag Reservoir, Green 1894, Harris 1907
 224 Upper Otag "
 229 S.P. County Highway - near Harvey Ranch
 233 Timbering of Otag - San Diego Pipe Line Tunnels
 234 " " " " " "
 235 " " " " " "
 236 Agricultural Map, Harvey Ranch.
 237 " " " "

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OTAYMECHANICAL^{and} CONSTRUCTION DRAWINGS.

8. General Plan, Intake of Outlet Tower, Lower Otoy.
 9. Plan^{and} Section of wasteway, " "
 27. Profile, water table. " "
 214. Daily capacities, " "
 233. Timbering of Otoy-San Diego Pipe Line Tunnels.
 234. " " " " " " "
 235. " " " " " " "
 3 A. Preliminary Survey. L.O. Auxiliary Dam.
 26A. Profile. Pipe Line. Bonita to S.D. S.C.M. W. Co.
 497. Details New Outlet Tower.

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CHOLLAS HEIGHTSCIVIL and PHYSICAL MAPS and DRAWINGS.

- 28 Chollas Dam and Reservoir
228 Contours, Chollas "
242 Lands adjacent to Chollas Reservoir
1 A. Details. Booster Pump.

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CHOLLAS HEIGHTS

MECHANICAL and CONSTRUCTION DRAWINGS

- 4 Sketch Profile, filter plant tramway
 59 Screen for 30" Intake, Chollas Valve Tower
 60 Reinforcement for foundation and wing walls, Chollas Intake.
 61 Valve Tower, Chollas Reservoir
 62 " " " " floor plan
 63 " " " " top with floor removed.
 64 Filter Plant catch Reservoir " Plan
 85
 106 Filtration Plant Tramway.
 246 " " " , sketch profile.
 255 Layout of Booster Pump.

MISCELLANEOUS.CIVIL and PHYSICAL MAPS and DRAWINGS.
CHARTS, ETC.

- 10 Plat showing relative positions of Township Cors.
 11 Lower Calif. and N.W. Mexico.
 12 San Diego County.
 13 " " "
 14 National Forest Boundaries in S.D. County
 15 Cuyamaca Quadrangle.
 16 Forest Service Fire Protection Map.
 17 Cuyamaca Quadrangle
 18 " "
 19 San Diego "
 20 Sheet 2. So. Calif. U.S.G.S.
 21 " 2 " " "
 22 Salton Sink, "
 23 Sheet 1. So. Calif. "
 25 " 2 " " "
 31 S.C.M.W. Co's System.
 32 Maintenance District, Telephone Line
 33 " " " "
 34 " " " "
 53 T. 17 S., R. 4 E. S. B. M. No. 2
 54 " " " No. 1
 55 " " " No. 1
 56 T. 18 S. " "
 57 " " " "
 58 " R. 5 E. "
 68 Telephone System.
 94 S. D. and A. Line, vicinity of Campo.
 95 Misc. Land Lines N. of Stokes Valley.
 107 Dennison ownership. Deerhorn flat
 146 Triangulation, E. See 23.

- 166 Profiles. Morena daily rainfall, 1912
 167. " " " " , 1909
 216 Jacumba Telephone line, Morena to Dewey.
 217 Organization of the S.D. Department of Water.
 230 Isohyetose Lines, San Diego County.
 241 Watershed Map, Capps.
 243 Capacity curves, Morena, Barrett and L. Otag.
 244 Route 13, Div. 3, Sheet 7, S.D. County Highway.
 245 " " " " " 8, " " "
 247 Traverse, Ward flat.
 256 Map of City Hqts, Teratta, Fairmount and City Hqts Annex 182
 257 Ice Plant.

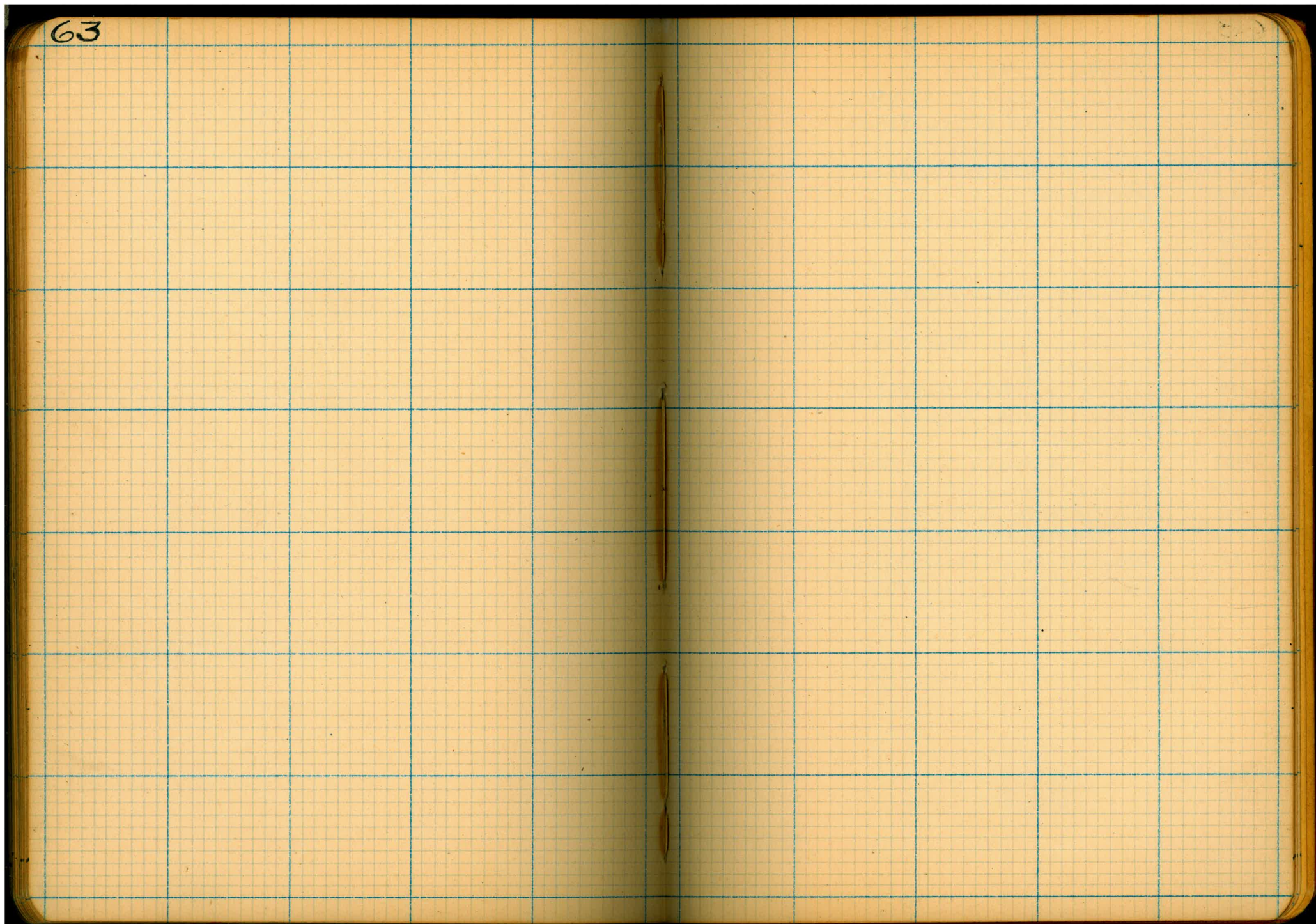
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Pipe Lines.

- 26A. Profile Bonita to S.D. S.C.M.W. Co.
 88A. Otay-S.D. thru National Rancho.
 89A " " " Otay "
 90A " " " Tunnels & Gate Valves.
 93A Bonita Line.
 233 Otay-S.D. Timbering in Tunnels.
 234 " " " " "
 235 " " " " "
 332 Location of Lucy B Long Meter.
 398 Taps on Bonita Line.
 409 Quartering Blocks. Otay & Bonita Lines.
 413 Coronado Wye.
 414 Location of Fittings Bonita Line.
 418 Tunnel Timbering Otay-S.D.
 451 Profile Otay-S.D.
 457 " L.O. Pump to Outlet Tower.
 458 Revised Location. U.O. to L.O. Sta 136-142.
 461 Detail of Trestle 36" W.S. Pipe.
 466 Pile Protection Sweetwater Valley.
 501 Otay-S.D. Tunnel Timbering & Car.
 502 Cross at E. end Effluent Manifold.

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Conduits.

25 A.	Finished Sec. Concrete Tunnel 2. Dulzura.
27 A.	X Sec. Dulzura.
42 A	Rough Detail Dulzura Flume.
43 A	Surrey thru Sec 10 & 11 R. 18 S 2 E.
44 A	Silt Chamber. Pine Creek Bridge.
71	Pine Creek Intake.
72	" "
73	" "
86	Regulating outfit for flume.
83 A	Drops. Dulz. Cond. Ext. Sec. 3.
91 A	" " " " " 3. Plan.
289	Template. Tunnel #1.
296	Frames for Concrete & Comparative Sections of Ditch.
180	Bridge over Pine Creek.
181	Section Flume & Trusses Pine Creek.
182	Details. June. of Canal with Flume Dulz. Cond.
183	" " " " " " " "
184	" " " " " " " "
185	" " " " " " " "
186	" Truss Bridge Pine Creek.
187	Location. Dulzura Conduit & Barrett Res.
189	Plan of Lagging Dulz. Con.
190	6' X 10' Flume " "
191	Forms For Concrete Lining Dulz. Cond.
192	" " " " " " "
193	Detail of Flume Trestle " "
194	Forms For Concrete Lining " "
195	Details of Flume " "
196	Forms For Concrete Lining " "
197	Lifting Device For Sluice Gates " "
198	Details. Tunnel Lagging " "
199	" " " " " "
200	" " " " " "
320	Concrete Lining

321	Detail of Form Work. Tunnel #1.
322	" " " " " " #1.
201	" Tunnel Lagging. Dulz. Cond.
202	" Flume. Standard " " "
203	" " Abandoned " " "
204	" " " " " " "
205	" " Intake " " "
206	" Form For Concrete Lining " " "
207	Section. Flume & Trusses. Pine Creek Bridge.
208	Details. Sand Trap & Scour Outlet. Dulz. Cond.
209	" " " " " " "
210	Map. Dulz. Cond & Barrett Reservoir.
211	Details Sand Trap & Scour Outlet " "
212	1st Rough Draft of Line " "
225	Dulz. Cond & Barrett Reservoir.
278	Flume details Dulz. Cond. Ext.
279	Concrete Intake & Exit. " " "
280	Detail of Flume " " "
338	Diversion Flume Pine Creek Dam.
343	Detail of Syphon Dulz. Cond Ext.
344	Settling Basin Plan #2 " " "
345	Syphon Plan " " "
346	Detail Plan Flume #1 " " "
347	" " " " #2 " " "
348	" " " " #3 " " "
349	" " Drop #3 " " "
350	Box Sect on Crossings " " "
351	" " " " " " "
352	Culvert under Flume " " "
354	X Sect. Settling Basin & Yardage " " "
355	Syphon Details " " "
356	Plan of Settling Basin #1 " " "
358	Trestle Plan on Curve Sec 3 " " "
359	Box Sections " " "
360	Trestle Plan. Long Flume #3 " " "

Conduits. (cont.)

361	Long Flume. E. end.	Dulz. Cond. Ext.
362	" " Details	" " "
363	X Sec Flume & Conduit. Sec 3	" " "
364	Conduit Section	" " "
365	Flume #1 Detail. Sta. 20	" " "
366	" #2 " " 39	" " "
367	Conduit. Typical Sec.	" " "
368	Plan of Connection. Flume & Ditch	" " "
369	" " Hauser Dam Weir	" " "
370	Profile. Sec 3. B.P.	" " "
373	" Syphon #2	" " "
374	" Long Flume Sta. 153 to 160 + 70	" " "
375	"	" " "
376	Connection. Flume & Concrete	" " "
377	Profile. Prelim lines. A-B. C-D.	" " "
378	" " " L.	" " "
380	Jones Profile Sec 2 & 3	" " "
381	Profile Syphon #1	" " "
382	Box Culvert on Ditch	" " "
383	Profiles E ² & B.	" " "
384	Settling Basin Plan #2	" " "
385	Profile Prelim. Line. Lower Sec	" " "
386	" Drops 2:3 & 4	" " "
388	" Flume 1 & 2	" " "
389	Miscellaneous	" " "
390	"	" " "
400	Definite Location.	" " "
433	Slabbing.	Dulz. Cond.
435	Location & Road	" " Ext.
440	Concrete Data. Tunnel 2	" " "
460	Method of Repair Apr. 4-16.	" " "
463	Truss Bridge. Pine Creek	" " "
500	Hydraulic Elements "O" Sec.	" " Ext.
496	Details Pine Creek Intake # 794-L-9-18.	

✓ 381+12	4x6 on side metal
✓ 379+77	4x6
✓ +73	4x6
✓ +69	4x6
✓ +99	4x6
✓ 381+06	4x6
✓ 380+29	4x6 corbel 6x12 stringer
376+97	3 corb 8x8 stringer
+89	1 corb 8x8 stringer
+65	5 corb 8x8 stringer
+57	2 corb 8x8 do
+29	4x6

Flume 13

Sta 337+82

Bridge stringer.

+87 pull ~~some~~ up 4x4 to place

+88 concrete footings + 8x8 sill

Flume 14

Sta 3470+65

Briar stringer

+85 8x8 ^{8x8} cap + ^{8x8} lag brass

+86 cap + lag brass

+88 3rd 4x6 sill with 4x6

339 + 65 Short post on concrete pier

+64 cap 4x6 sill ~~above~~ on pier

+35 Patch concrete footing with hoop & rebar

340+57 Slip ~~2x8~~ 1 6x12 stringer

up stream from here to catch

5 4x6 sills.

1 8x8 posts

Flume 12 1/2

Sta 307+10

4x6 sill

14

do

38

do

+93 3x carrier 8 ft under left

with special pulley + make secure with tie braces

— Tie brace to foot of previous post. ^{14' side}

Replace right post with 8x8

Tie brace to foot of following post right side

and 8x8 stringer to catch that and 3

following 4x6 sills resting far end of stringer on main sill

Footing - Build light footing - new post. mountain ground better throws excavated material against bottom of flume. Check with last

1 light no 2 tub for stinson

Hay hooks \$1.00

162 $\overline{) 6000}$ 36
4968
1032
972
25
160 $\overline{) 7000}$
320
800