MARRON VALLEY
RESERVOIR

HARRIS & CROMWELL.

CITY ENG'R # 1063

FIELD BOOK
360

W319

KEUFFEL & ESSER CO.
DRAWING MATERIALS
AND
SURVEYING INSTRUMENTS.
NEW YORK.
CHICAGO. SAN FRANCISCO. ST. LOUIS.

TABLES FOR EXCAVATIONS AND EMBANKMENTS.

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

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	0
1	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	1
2	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9	2
3	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	3
4	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9	4
5	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	5
6	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	6
7	16.0	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	7
8	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9	8
9	18.0	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	18.9	9
10	19.0	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.9	10
11	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8	20.9	11
12	21.0	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9	12
13	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.7	22.8	22.9	13
14	23.0	23.1	23.2	23.3	23.4	23.5	23.6	23.7	23.8	23.9	14
15	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8	24.9	15
16	25.0	25.1	25.2	25.3	25.4	25.5	25.6	25.7	25.8	25.9	16
17	26.0	26.1	26.2	26.3	26.4	26.5	26.6	26.7	26.8	26.9	17
18	27.0	27.1	27.2	27.3	27.4	27.5	27.6	27.7	27.8	27.9	18
19	28.0	28.1	28.2	28.3	28.4	28.5	28.6	28.7	28.8	28.9	19
20	29.0	29.1	29.2	29.3	29.4	29.5	29.6	29.7	29.8	29.9	20
21	30.0	30.1	30.2	30.3	30.4	30.5	30.6	30.7	30.8	30.9	21
22	31.0	31.1	31.2	31.3	31.4	31.5	31.6	31.7	31.8	31.9	22
23	32.0	32.1	32.2	32.3	32.4	32.5	32.6	32.7	52.8	32.9	23
24	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	24
25	34.0	34.1	34.2	34.3	34.4	34.5	34.6	34.7	34.8	34.9	25
26	35.0	35.1	35.2	35.3	35.4	35.5	35.6	35.7	35.8	35.9	26
27	36.0	36.1	36.2	36.3	36.4	36.5	36.6	36.7	36.8	36.9	27
28	37.0	37.1	37.2	37.3	37.4	37.5	37.6	37.7	37.8	37.9	28
29	38.0	38.1	38.2	38.3	38.4	38.5	38.6	38.7	38.8	38.9	29
30	39.0	39.1	39.2	39.3	39.4	39.5	39.6	39.7	39.8	39.9	30
31	40.0	40.1	40.2	40.3	40.4	40.5	40.6	40.7	40.8	40.9	31
32	41.0	41.1	41.2	41.3	41.4	41.5	41.6	41.7	41.8	41.9	32
33	42.0	42.1	42.2	42.3	42.4	42.5	42.6	42.7	42.8	42.9	33
34	43.0	43.1	43.2	43.3	43.4	43.5	43.6	43.7	43.8	43.9	34
35	44.0	44.1	44.2	44.3	44.4	44.5	44.6	44.7	44.8	44.9	35
36	45.0	45.1	45.2	45.3	45.4	45.5	45.6	45.7	45.8	45.9	36

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

For Keith's Railroad Curve Tabels see end of book.

Stadia Survey of Marron Valley Reservoir

by Harris & Cromwell.

Preliminary Levels Thayer Dam site

	11.00	11.00		0.00	
B.M.			5.8	5.20	=511.74
10			1.0	10	
⊙			1.55	9.45	
	12.37	21.82			
			11.82	10.00	
			1.82	20.0	
⊙			0.77	21.05	
	12.05	33.10			
			3.10	30.0	
⊙			0.00	33.10	
	12.46	45.56			
			5.56	40.0	
⊙			0.11	45.45	
	11.10	56.55			
			6.55	50.0	
⊙			0.02	56.53	
	12.00	68.53			
			8.53	60.0	
⊙			0.00	68.53	
	12.09	80.62			
			10.62	70.0	
			0.62	80.0	
⊙	9.78	90.40	0.00	80.62	
P	12.67	102.96	0.11	90.29	

7/24/15

2

Cottonwood Creek bridge

on rock south side of creek left guard stake

contours on south side

O = 506.54 Elev.

contour " north side

" " "

" " "

on RK

contour " "

" " "

on RK

contour " "

Sta.		102.96		
℄	12.48	115.29	0.15	102.81
℄	12.34	127.63	0.00	115.29
B.M.	13.00	140.63	0.00	127.63
℄	9.40	150.12	0.09	140.72
			0.12	150.00
	4.52	154.52		
			4.52	
B.M.	6.21	11.41		5.20
11 + 77			10.2	1.20
11 + 00			11.3	0.1
10 + 75			10.1	1.3
10 + 43 ±			4.4	7.0
10 + 00			2.1	9.3
9 + 00			0.0	11.4
0 + 00	150 Contour.			
0 + 22.6	140 ± Contour.		4 + 94 5/	30
0 + 49 5/	130	"	6 + 26 8/	20
0 + 71 5/	120	"	6 + 98 ±	10
0 + 95 8/	110	"	11 + 00	0.0
1 + 22 ±	100			
1 + 51 ±	90			
1 + 83 5/	80			
2 + 22 3/	70			
2 + 72 ±	60			
3 + 30 5/	50			
3 + 91 9/	40			

Peg sta. 0 + 55 5/

11

Hub N end E Dam.

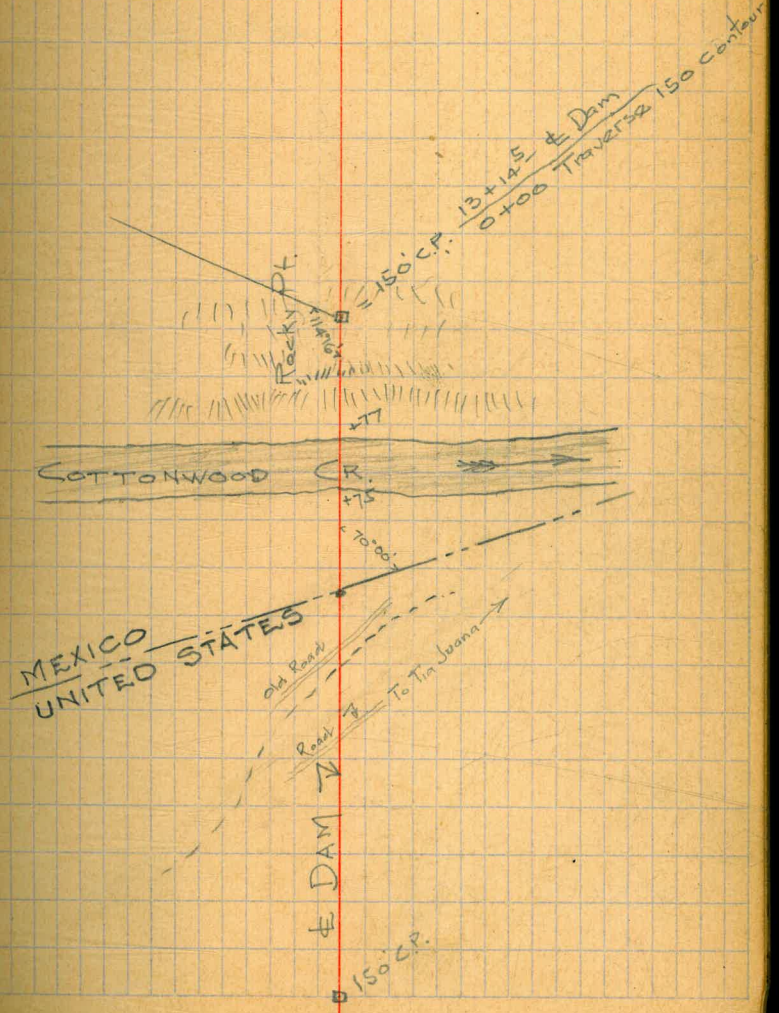
Rock on S.b. of Creek

11.5
2.2
230
230
25.30

220.0
25.3
194.7

13 +14.5	S. end Axis Dam. 150' C.P.
+38.1	
12 +02.9	
11 +77 ±	S.b. P.O.T. Nail
+75	N.b. Cottonwood Cr.
10 +43 ±	P.O.T.
9	
8 +98 ±	P.O.T.
8 +65 ±	P.O.T. 3 ft. N. of line
7 +27	Road H.W. Elev. 7 ± Approx
6 +63.4	P.O.T.
5 +50	Road
4	
3	
2	
1	
0 +00	N. end Axis Dam 150' C.P.

Sketch of Damsite 7-24-14 G.C.



Stadia S. end of ℄ DAM.

Sta - Sta.	Sta.	Rod	Vert ∠	H. dist.	Sta.
0					
" — 1	12+02.5	160	+4°25'	159^{5}	
" 2	12+38.1	220	+19°50'	194.7	
" 3	$12+82^{0}$	287	+24°14'	238.6	
" 4	$13+14^{5}$	343	+27°12'	271.1	

G.C. 7-24-14.

Sta 0 = $10+43^{4}$ ℄ Dam

1 = Pt. on line

2 " " "

3 "

4 S end ℄ Line Dam.

83.1

1043.4	8313
194.7	287
12381	58191
	66504
	16626
	238.5831

7903
343
23709
31612
23709
271.0729
1043.4
13+14.47

TRAVERSE MARRON RES.

150 FT. CONTOUR

Sta – Sta.	Angle	Rod	Vert ∠	C.C.	Needle
34+97 – △⊙	23°18' Rt	330	0°00'	N22°31'E	N21°E
33+79 – △⊙	35°33' Lt. (51)	118	0°00'	N 0°47'W	N 1°30'W
31+04 – △⊙	30°21' Lt	275	0°00'	N34°46'E	N34°E
26+21 – △⊙	5°25' Lt	483	0°00'	N65°07'E	N64°30'E
△⊙	0°44' Rt.	744	-0°30'	N70°32'E	N70°E
18+77 – ⊙	3°40' Rt	116	-2°30'		
△	30°40' Lt.	179	+1°30'	N69°48'E	N69°E
16+98 – ⊙	144°40' Rt	150	0°00'		
△⊙	12°44' Rt.	355	0°00'	S89°32'E	N89°E
13+43 – ⊙	24°10' Rt	112			
△⊙	12°12' Lt	160	-2°10'	N77°44'E	N76°E
⊙	161°05' Lt	18	-22°20'		
11+83 – ⊙	150°00' Rt	145	-1°25'		
△	9°24' Rt	322	0°00'	N89°36'E	N88°E
8+61 – ⊙	13°40' Rt	57	-6°30'		
△	52°28' Lt	640	-1°23'	N80°32'E	N79°30'E
⊙	52°58' Lt	523	-2°25'		
⊙	52°20' Lt.	345	-3°45'		
⊙	45°35' Lt	185	-7°00'		
2+21 – ⊙	0°15' Lt.	87	-11°30'		
△	4°20' Rt	90	-1°22'	S47°00'E	S47°E
1+31 – ⊙	21°05' Lt	73	-19°50'		
0+00	65°44' Lt	135 (131.3)	+9°30'	S51°20'E	S51°20'E

Party { Geo. Cromwell — Transit
Fred Bell — Head Rod
Howard Sutliff — Rear " }

7-24-44 GC

1050 — UNITED STATES / MEXICO — Mon. 240 Elev = 817.40

31+50

45°35'

130°25'
49°35'

– Note –
Elevation of 150' Contour is 656.54 ft above Sea Level.

191 +16°50' 175
888 +7°05' 976
1050

1250
362
888

16+00

– Note –
Legend ⊙ = 150 ft Contour Pt.
△ = Inst. Pt.
△⊙ = " " & " "
S.S = Side Shot.

3+00

Up 5 ft. on rod.

E. Dam

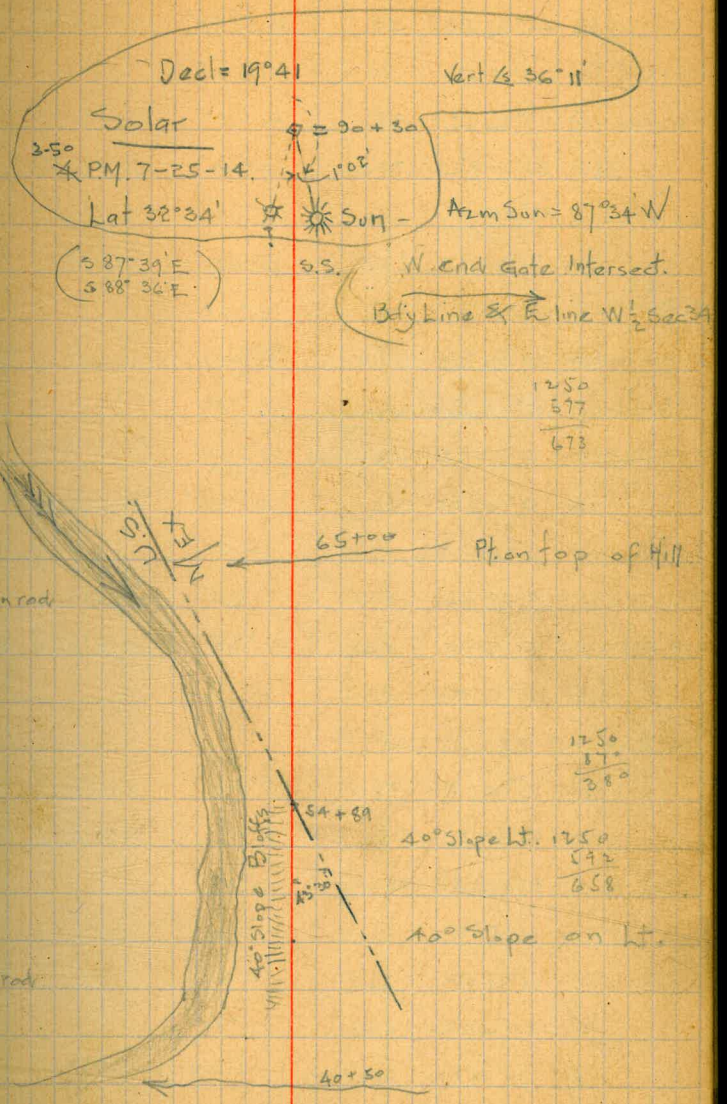
11+16

0+00 Traverse
13+14 S. E. Dam

65°44'
51°20
S 14°24'W

104+82					
95.64 △	46°27' Lt	914	0°00'	N52°38'E	N51°E
Gate only SS.	153°20' Lt				
" ⊙	20°00' Lt.	440	−1°10'		
" ⊙	16°00' Rt.	445	−1°05'		
" ⊙	38°30' Rt.	328	−1°35'		
95+68 − ⊙	85°30' Lt.	37	−15°15'		
90+30 − △	6°44' Rt.	538	+1°00'	S80°55'E	S83°E.
81+69 △⊙	18°24' Rt	861	- -	S87°39'E	S89°E.
" S.S.	71°16' Lt	?	−7°10'		
61+69 − ⊙	76°45' Lt.	29	−32°30'		
68+47 △	62°44' Lt.	1322	−1°55'	N73°57'E	N73°E.
" S.S.	46°10' Lt	700	−5°30'		
" ⊙	113°45' Lt	210	−16°40'		
68+47 − ⊙	122°30' Rt	673	−4°55'		
61+90 △	20°58' Rt	657	+2°35'	S43°19'E	S44°E
61+90 − ⊙	34°00' Lt	84	−16°15'		
△	26°55' Lt	135	+0°39'	S64°17'E	S65°30E
⊙	159°10' Lt	87	−17°40'		
60+55 − S.S.	98°45' Rt	480	−3°26'		
55+17 − △	15°14' Rt	538	+3°04'	S37°22'E	S38°E
50+02 − △⊙	16°39' Rt	515	0°00'	S52°36'E	S53°30E
△⊙	3°14' Lt.	310 (305)	−6°55'	S69°15'E	S70°E
46+97 − ⊙	73° Lt.	78	−38°40'		
△	59°41' Rt	380 (375)	+6°35'	S66°01'E	S67°30E
Pt. near hs.	95°42' Lt				
43+22 − ⊙	116°15' Rt.	658	0°00'		
38+27 − △⊙	31°47' ~~Lt~~ Rt.	495	0°00'	N54°18'E	N53°E

7-25-14 GC.



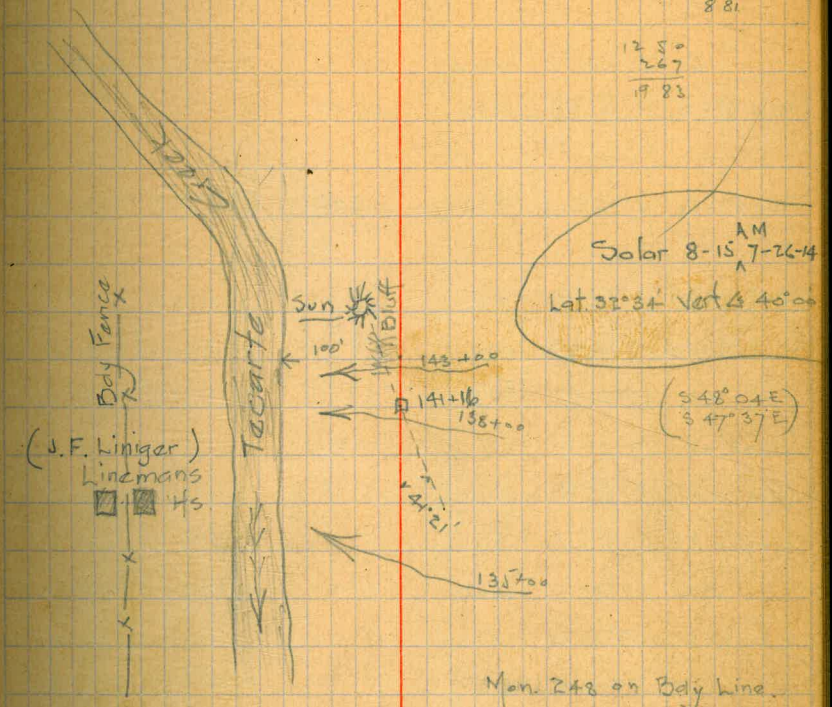
150' Contour.

189+57 — ⊙	25°30' Rt	87	— —		
△	44°08' Rt.	72	+5°50'	S50°39'E	S50°E
188+85 - ⊙	23°15' Lt.	30	-17°25'		
180+04 - △	19°25' Lt.	881	+	N85°13'E	N85°E
△⊙	31°07' Lt	1320	0°00'	S75°22'E	S76°E
166+84 - ⊙	18°40' Lt. 31°14(3)	581	0°00'		S
△⊙	30°14 Lt.	983	0°00'	S44°15'E	S44°E
157+01 - ⊙	14°00' Lt.	405	0°00'		
" △⊙	29°46' Rt	1150	0°00'	S14°05'E	S13°E
145+51 - ⊙	32°15' Rt	460	0°00'		
141+16 - △⊙	4°13' Rt.	435	0°00'	S43°51'E	S42°E
" △⊙	6°53' Rt.	460	0°00'	S48°04'E	S47°E
136+56 - ⊙	7°00' Lt	20	0°00'		
132+58 - △⊙	19°35' Rt.	398		S54°57'E	S54°E
128+98 - △⊙	19°46' Rt	360	-1°30'	S74°32'E	S76°E
⊙	4°00' Rt.	660	0°00'		
12/1/18 S.S.	1°40' Lt.				
121+18 - △	5°00' Rt	780	+0°45'	N85°42'E	N85°E
" △⊙	15°07' Rt	786	0°00'	N80°42'E	N80°E
113+32 - ⊙	28°25' Rt	450	0°00'		
" △⊙	12°57' Rt	850	-0°30'	N65°35'E	N65°E
" ⊙	14°10' Rt.	680	-0°50'		
" ⊙	20°40' Rt	480	-1°10'		
" ⊙	31°40' Rt.	300	-1°45'		
104+62 - ⊙	103°00' Lt.	34	-17°10'		

— Saturday —
7-25-14 G.C.

12.00
3.19
8.81

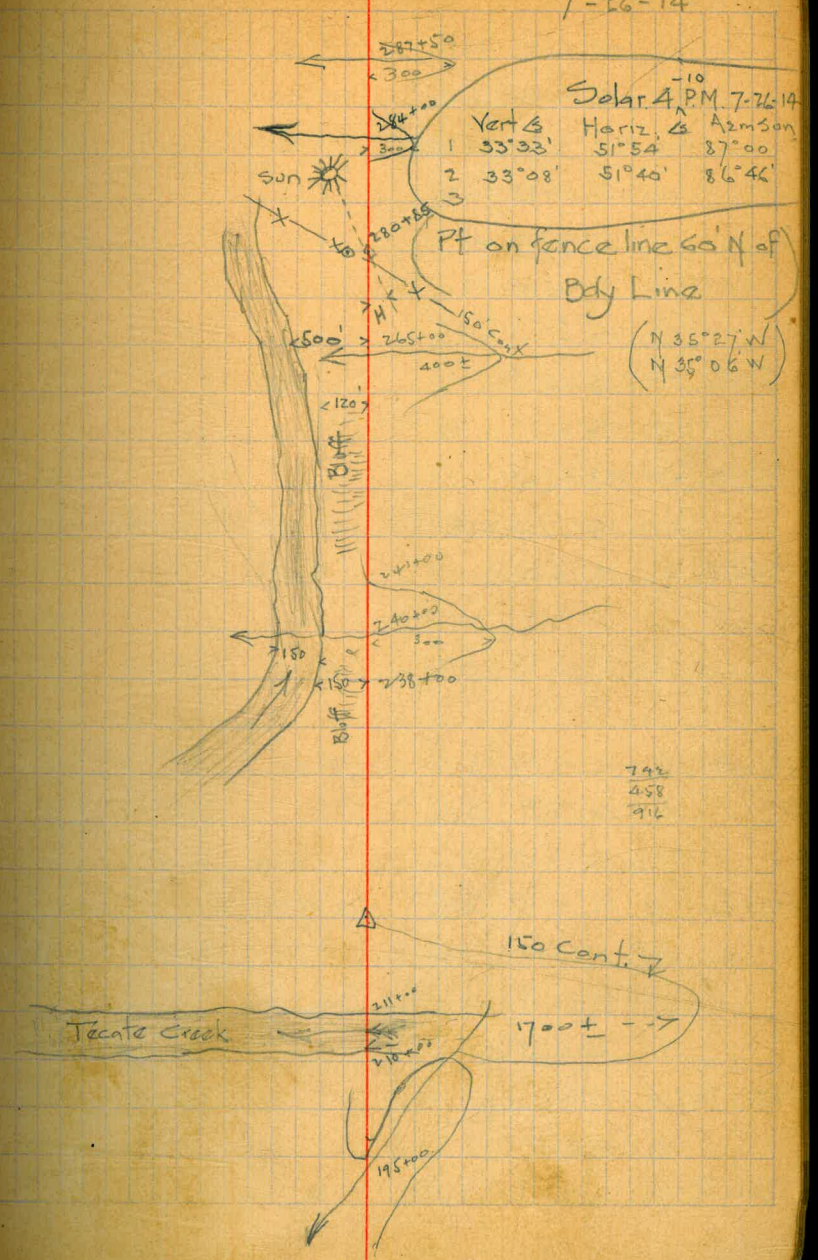
12.50
2.67
19.83



— 150' Contour —

△	64°42' Lt.	393	-0°25'	N86°45'W	W
285+79 — ⊙	170° Rt	10	-17°00'		
△	13°24' Rt.	494	+0°30'	N22°03'W	N23°W
280+85 — ⊙	14°15' Rt.	210	0°00'		
272+47 — △	0°49' Lt.	838	0°00'	N35°27'W	N36°W
263+71 — △⊙	5°06' Rt.	876	0°00'	N34°38'W	N35°W
252+93 — △⊙	9°14' Rt.	1078	0°00'	N39°44'W	N41°W
△	17°16' Rt.	243	+5°15'	N48°58'W	N50W
250+50 — ⊙	94°00' Rt	17	+33°00'		
248+00 — △	13°58' Rt.	250	-1°15'	N66°14'W	N69°W
238+84 — △⊙	42°43' Lt.	916	0°00'	N80°12'W	N82°W
△⊙	12°52' Lt	1212	0°00'	N37°29'W	N39°W
226+72 — ⊙	9°30' Lt.	410	0°00'		
△⊙	83°44' Lt.	1236	0°00'	N24°37'W	N27°W
⊙	80°20' Lt	920	0°00'		
214+36 — ⊙	61°00' Lt	435	0°00'		
" ⊙	24°45' Lt.	1266	0°00'		
⊙	13°00' Lt.	1700	0°00'		
" ⊙	11°40' Lt.	1184	0°00'		
208+25 — △⊙	75°09' Lt	611	0°00'	N59°07'E	N60°E
△⊙	36°13' Lt.	761	+0°10'	S45°44'E	S44°E
200+64 — ⊙	130° Rt	340	-0°20'		
189+57 — △	41°08' Rt	1107	-0°44'	S9°31'E	S9°E

— Sunday —
7-26-14



346+42 –

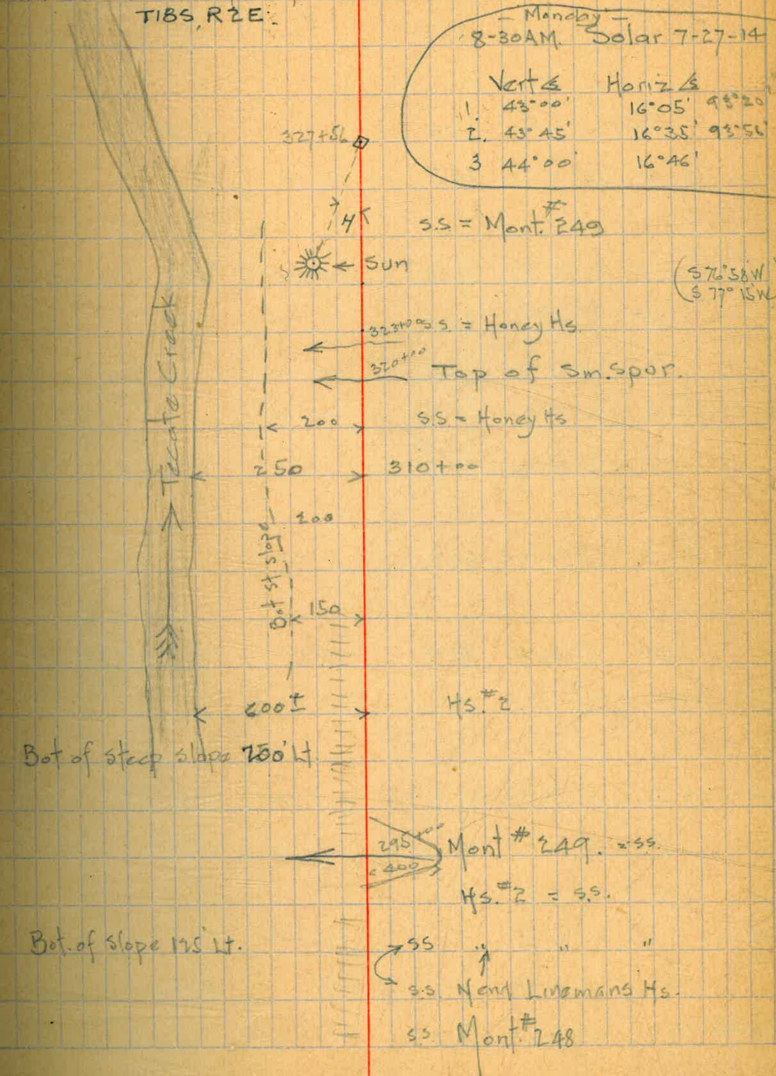
	△	109°24' Rt.	1886	–0°15'	N6°22'E	N5°E
	S.S.	115°10' Rt	831	–0°50'		
	S.S.	152°13' Rt	1886 (1336)	+10°45'		
	S.S.	158°10' Rt	635	–1°55'		
	S.S.	127°40' Rt.	400	–3°45'		
	⊙	74° 15' Rt.	120			
	⊙	15°50' Lt.	95			
327+56	S.S.	2°03' Rt.		+1°40'		
	⊙	136°40' Lt.	85			
327+56 –	S.S.	158°40' Lt.				
	△	10°57' Lt.	1278	+1°20'	S76°58'W	S74°W
314+78 –	S.S.	18°20' Lt.		–5°00'		
307+94 –	△⊙	7°05' Rt.	684	0°00'	S87°55'W	S84°W
305+84 –	△	11°02' Rt.	210	0°00'	S80°50'W	S78°W
	△⊙	34°17' Lt.	718		S69°48'W	S66°W
	S.S.	82°23' Lt.				
298+66 –	⊙	25°00' Lt.	375	0°00'		
"	△⊙	10°50' Rt.	894	0°00'	N75°55'W	N78°W
"	S.S.	11°57' Lt.				
"	S.S.	5°10' Lt.				
289+72 –	S.S.	103°30' Lt.				
	S.S.	108°30' Lt.				
285+79 –	S.S.	116°08' Rt.				

Sunday – 7-26-14 G.C.

S.W. Cor Sec 26. Md in fence line.
T1BS, R2E.

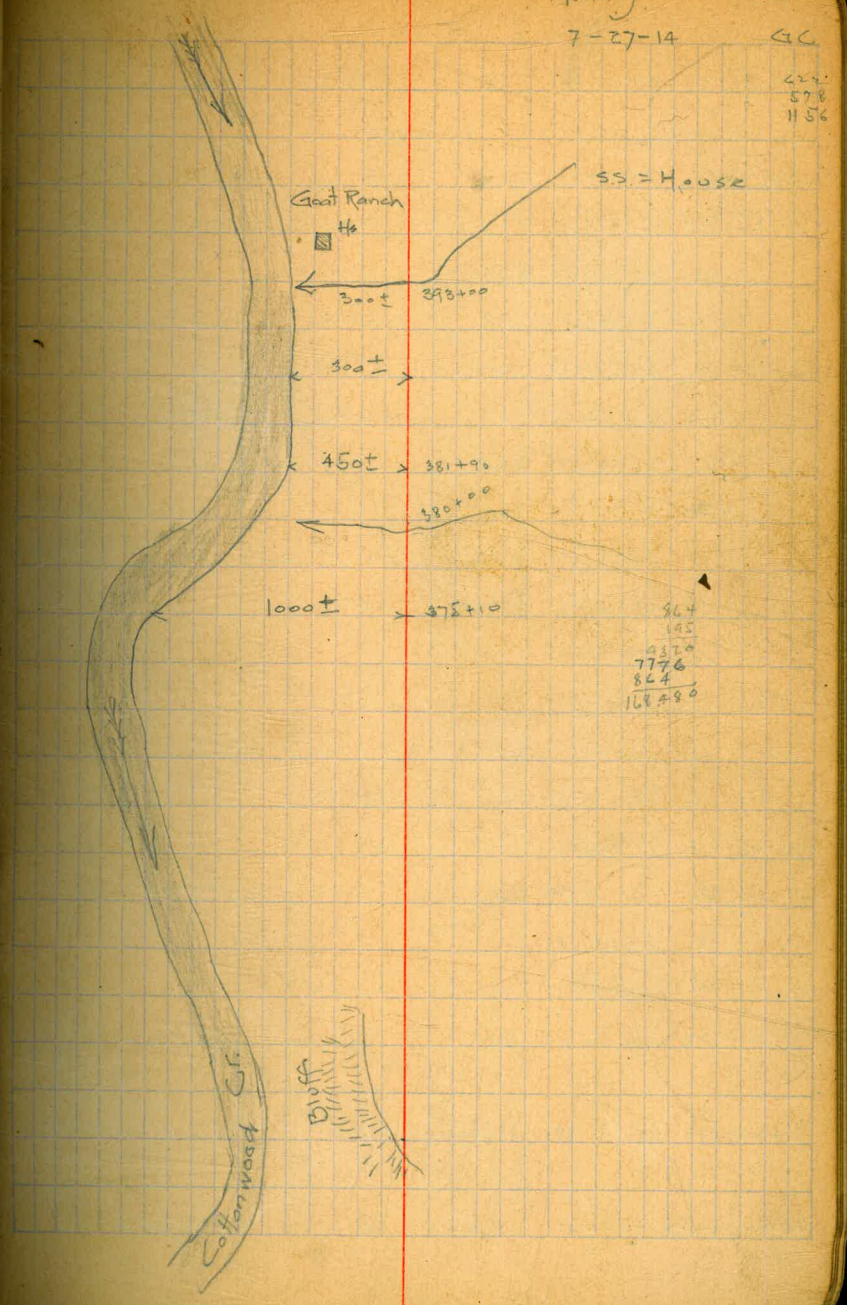
Monday – 8-30 AM. Solar 7-27-14

	Vert ∡	Horiz ∡	
1.	43°00'	16°05'	93°20
2.	43°45'	16°35'	93°56
3	44°00'	16°46'	



406+04 –					
△ ⊙	63°18 Lt.	1156	0°00'	N5°44'E	N5°E
⊙	58°25 Lt.	355	0°00'		
S.S.	115°00 Lt	300 ±	—		
394+48 – ⊙	104°30 Rt	240	0°00'		
△ ⊙	23°55 Rt.	820	0°00'	N69°02'E	N68°E
386+28 – ⊙	33°10 Rt	345	0°00'		
381+90 – △ ⊙	2°55 Rt.	438	0°00'	N45°07'E	N45°E
△ ⊙	1°07 Lt	680	0°00'	N42°12'E	N41°E
⊙	86°40 Rt	58	+4°50'		
375+10 – ⊙	140°20 Rt	420	+0°40'		
△	41°31 Lt.	1260	– 0°10'	N43°19'E	N42°E
362+50 – ⊙	15°40 Rt	807	0°00'		
△ ⊙	16°24 Lt.	534	– 3°00'	N84°50'E	N84°E
357+16 – ⊙	146°10 Lt.	188	–8°55'		
349+20 – △	4°52 Rt	800 (796)	– 5°00'	S78°46'E	S79°E
△	72°39 Rt	195 (168)	+21°41	S83°38'E	S84°E
⊙	30°10 Rt	155	–6°20'		
347+52 – ⊙	66°10 Lt.	77	–26°00'		
△	17°21 Rt	110	+4°35'	N23°43'E	N24°E
346+42 – ⊙	165°50 Lt.	210	–5°55'		

224
578
1156



864
195
4320
7776
864
16840

150' Contour.

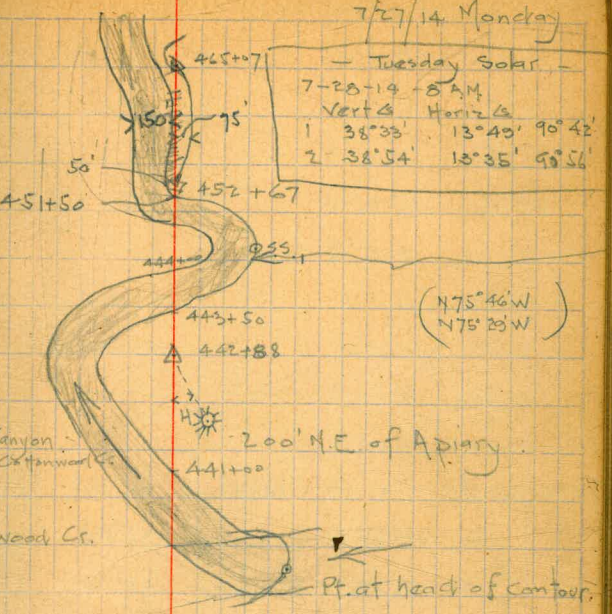
465+07 – ⊙	68°00' Lt	12	-25°00'		
452+67 – △	18°39' Lt	1240	+0°15'	S36°42'E	S37°E
" – △⊙	122°17' Lt.	979	0°00'	S18°03'E	S17°E
" ⊙	85°30 Lt.	270	0°00'		
" S.S.$_1$	83°30' Lt	198	-6°15'		
442+88 – ⊙	54°30' Lt	100	0°00'		
" △⊙	107°04' Lt	747	-0°45'	N75°46'W	N78°W
" S.S.	71°50' Lt.	650	-1°00'		
" S.S.	75°00' Lt	300			
" ⊙	26°14' Lt	450	-1°10'		
" ⊙	47°15' Rt	862	-0°20'		
" ⊙	22°30 Rt	90			
435+41 – ⊙	111°00' Lt.	175	-3°30'		
" △	66°41' Rt	465	+1°15'	N31°18'E	N30°E
" ⊙	134°40 Rt	157	-0°20'		
430+76 – ⊙	12°50' Rt	270	-0°10'		
" △	6°08' Rt.	536	+0°45'	N35°23'W	N36°W
" ⊙	7°40' Rt	330			
" ⊙	168°40' Lt	93'	-5°20'		
425+40 – S.S.	178°20' Lt.	262	-3°00'		
414+04 – △	31°42' Lt	1136	+0°31'	N41°31'W	N42°W
406+04 – △⊙	15°33' Lt	800	0°00'	N9°49'W	N10°W

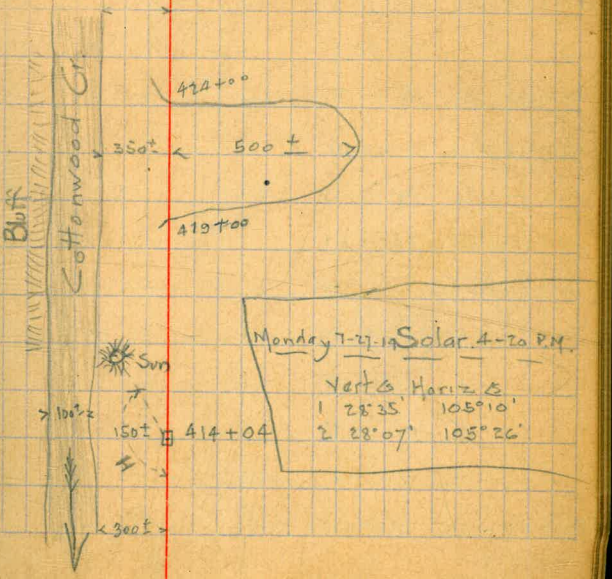
7/27/14 Monday

— Tuesday Solar —

7-28-14 - 8 A.M.

	Vert ∠	Horiz ∠	
1	38°33'	13°40'	90°42'
2	38°54'	15°35'	93°56'





(T18S R2E)

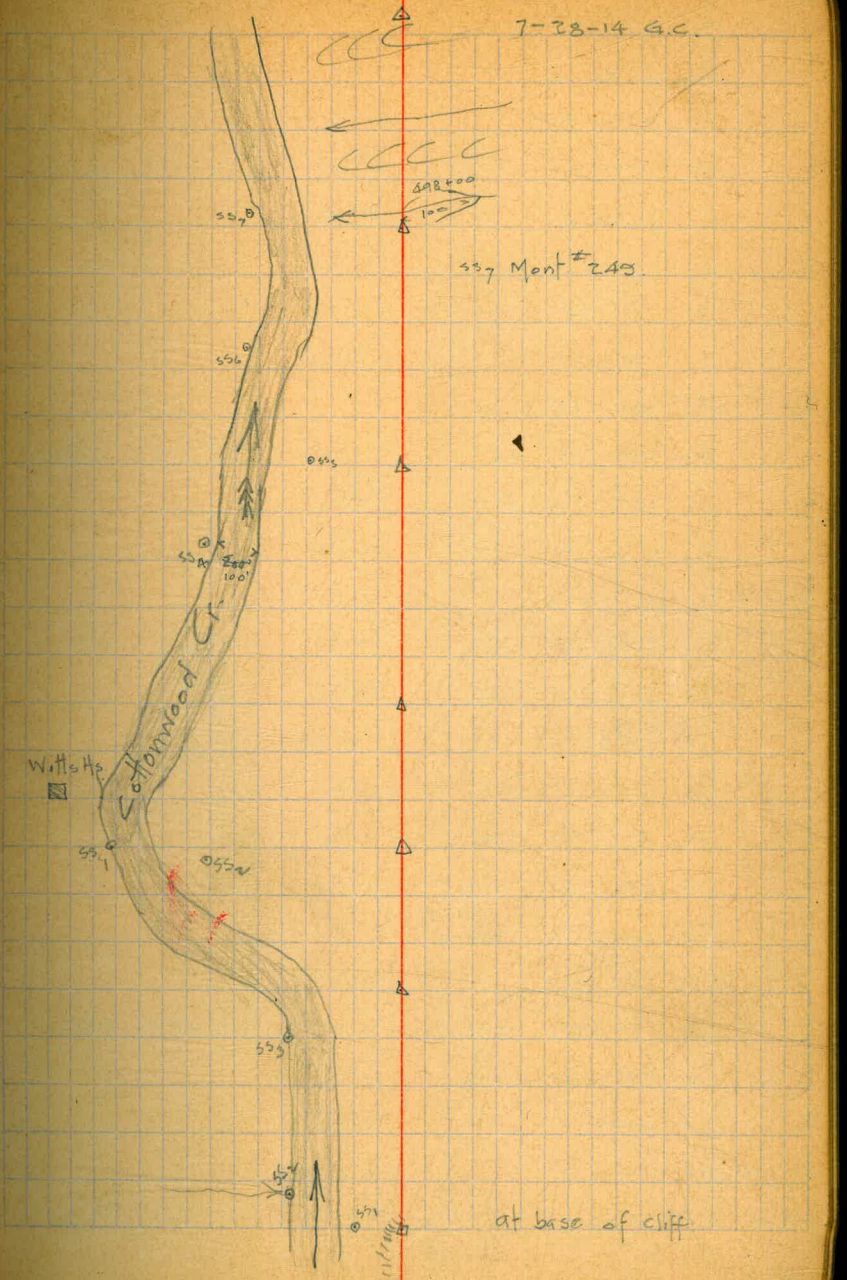
-SS = ¼ Cor bet S.23
Post in md. of rock 26

Monday 7-27-14 Solar 4-20 P.M.

	Vert ∠	Horiz ∠
1	28°35'	105°10'
2	28°07'	105°26'

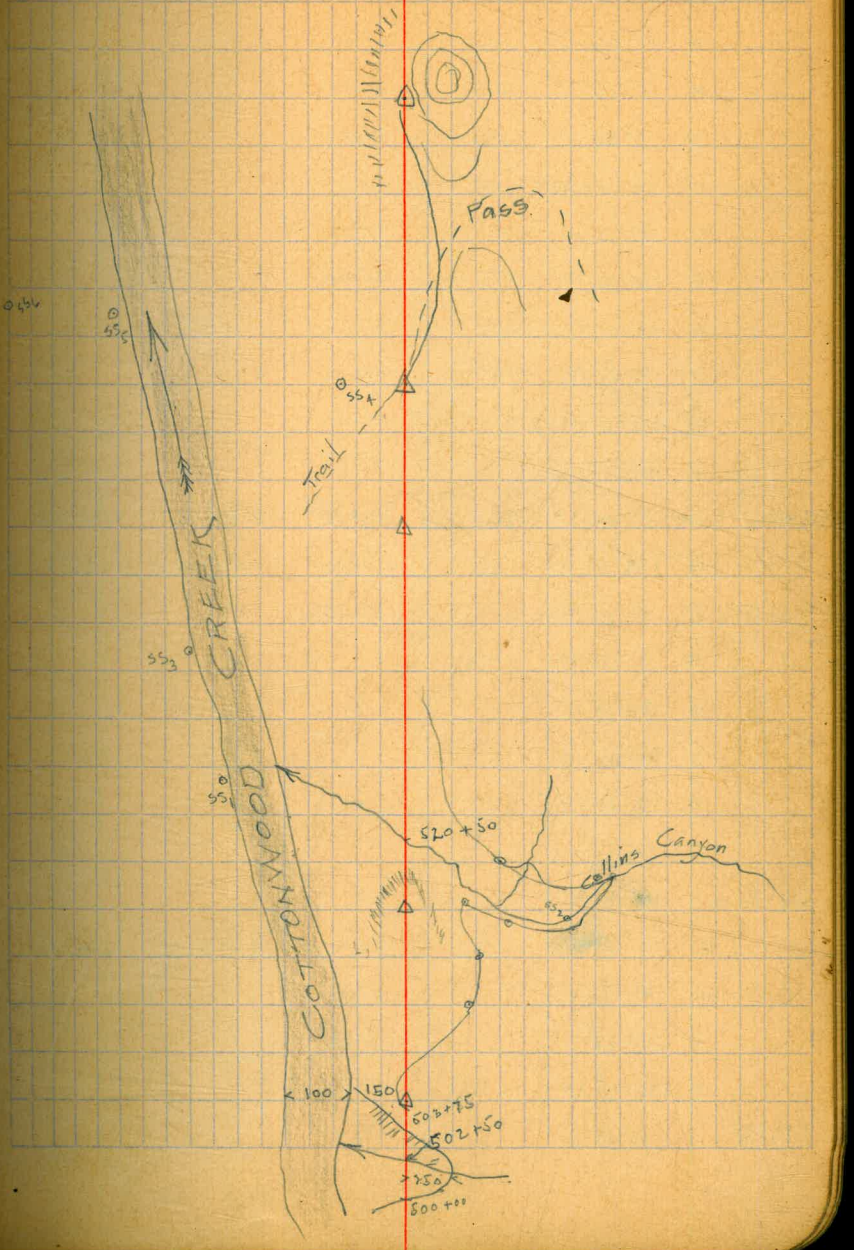
⊙	20° Rt	240	+1°20'		
⊙	85°00' Rt	10	Up 4.5 ft.		
SS7	10°15' Lt		-7°30'		
SS6	67°10' Lt.				
497+19 – SS5	146°30' Lt				
495+44 SS4	0°35' Rt				
495+44 △	4°15' Rt	175	-1°30'	S 58°48' W	S 54° W
SS2	39°30' Lt		-11°00'		
SS3	76°10' Lt		-26°00'		
495+44 – SS1	138°20' Lt.				
479+74 △⊙	3°41 Rt	1570	0°00'	S 54°33' W	S 51° W
SS4	29°55' Lt		-3°45'		
⊙	2°45'	135	-0°30'		
SS2	118°00' Lt				
479+74 – SS1	122°10' LT				
	77°40' Lt		-7°00'		
478+14 △	18°31' Rt	160	+0°20'	S 50°52' W	S 47° W
478+14 – SS1	91°20' Lt		-4°00'		
△	18°33' Rt	467	0°00'	S 32°21' W	S 30° W
SS3	72°10' Lt				
473+47 – ⊙	17°15' Rt	320	+0°05'		
△	50°30' Rt	840	-0°20'	S 13°48' W	S 13° W
⊙	50°00' Rt	786	-0°25'		
SS3	21°55' Rt		-2°50'		
SS2	39° Lt	413	-5°30'		
463+07 – SS1	22°00' Lt	139	-22°30'		

7-28-14 G.C.



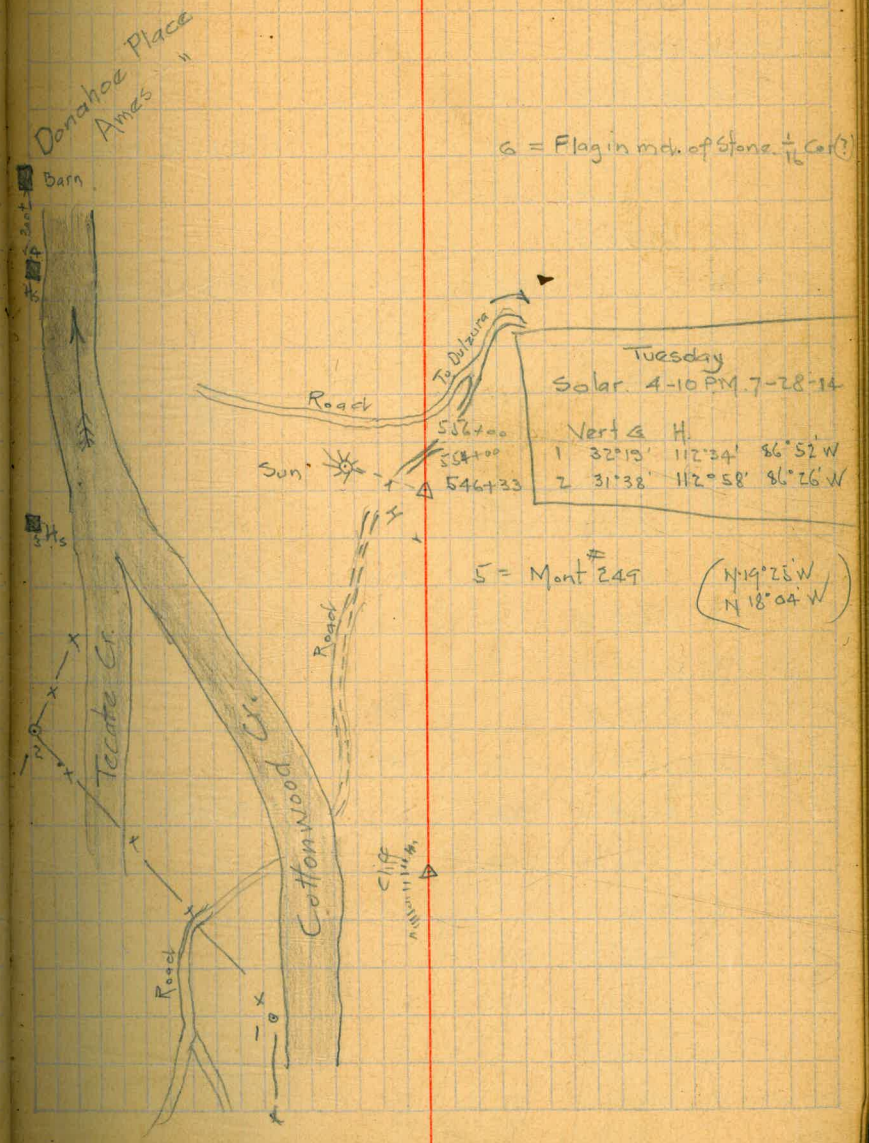
SS_6	74° 02' Lt				
SS_5	16° 45' Lt				
542+25 – SS_4	161° 43' Lt				
△	6° 09' Rt	543	0° 00'	S 34° 30' W	S 30° W
SS_2	53° 08' Lt		-2° 38'		
SS_5	3° 12' Lt		-4° 55'		
⊙	19° Rt	320	+0° 20'		
SS_4	79° 30' Lt		-25° 15'		
536+82 – SS_3	125° 40' Lt				
– △ ⊙	10° 10' Lt	665	0° 00'	S 28° 21' W	S 25° W
	100° 00' Lt	150	-29° 00'		
SS_3	91° 40' Lt		-6° 45'		
530+17 – SS_1	115° 50' Lt				
△ ⊙	57° 47' Lt	1280	+0° 20'	S 38° 31' W	S 35° W
⊙	53° 20' Lt	851	+0° 30'		
⊙	44° 20' Lt	523	+0° 30'		
⊙	50° 00' Rt	370	+0° 40'		
SS_2	85° 30' Rt	900	-0° 30'		
⊙	89° 00' Rt	450	+0° 40'		
⊙	117° 00' Rt	210	+1° 30'		
517+37 – SS_1	103° 00' Lt		-4° 05'		
△	26° 28' Rt	1356	-0° 10'	N 83° 42' W	N 87° W
⊙	29° 30' Rt	871	0° 00		
⊙	30° 25' Rt	751	0° 00'		
503+81 – SS_0	124° 30' Lt				
497+19 – △ ⊙	11° 02' Rt	662	+0° 30'	S 69° 50' W	S 66° W

7-28-14 Tuesday GC



7-28-14 G.C.

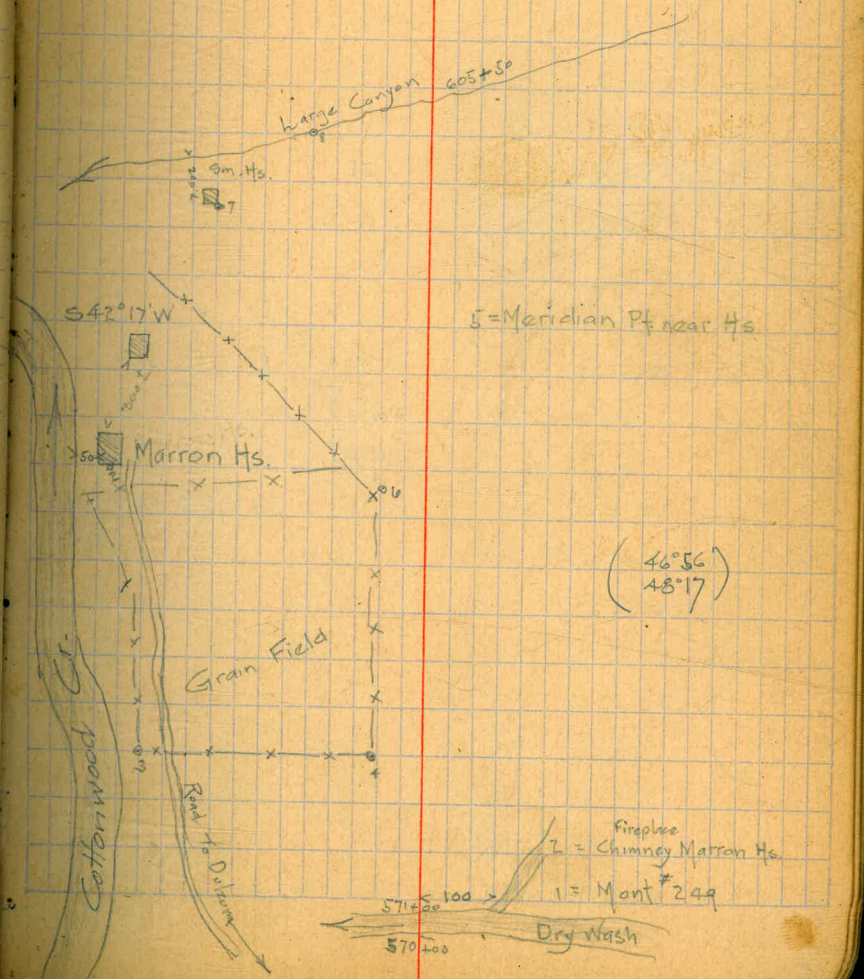
557+75 △	15°45' Lt.	1524	0°00'	N55°35'W	N58°W
⊙	5°35' Lt	1266	0°00'		
⊙	3°25' Lt.	600	0°00'		
⊙	3°40' Lt	200	0°00'		
c	5°00' Rt.	64	—		
⊙	148°10' Rt	672	0°00'		
⊙	154°35' Rt.	976	0°00'		
⊙	168°10' Rt	1002	0°00		
⊙	176°40' Rt	965	0°00'		
⊙	176°35' Lt	980	0°00'		
557+75 – 5	109°28' Lt				
546+33 – △⊙	21°46' Lt.	1142	–2°00'	N39°50'W	N43°W
△	109°27' Rt	155	+11°04'	N18°04'W	N23°W
544+78 5	0°15' Rt		+2°42'		
⊙	51°30' Rt	103			
4	23°58' Lt				
3	49°35' Lt				
⊙	38°40' Lt.	37	–17°00'		
2	59°55' Lt				
544+78 – 1	111°45' Rt Lt				
△	16°59' Rt	253	+2°20'	S51°29'W	S46°W
4	4°15' Lt		–2°25'		
3	28°05'		–2°05'		
2	36°15' Lt		–2°55'		
542+25 – 1	59°40' Lt		–13°40'		



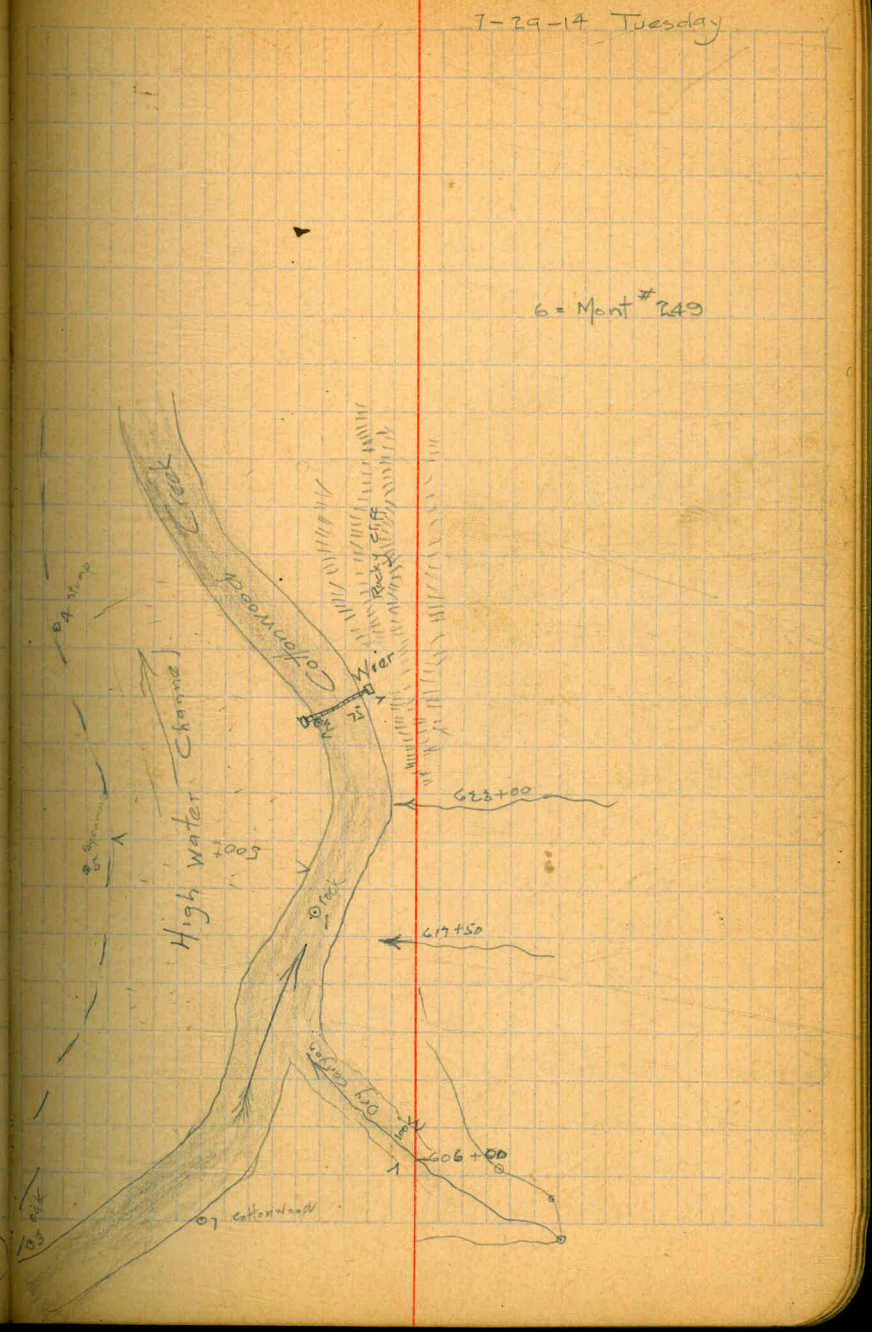
	⊙	17°40' Rt.	440	-1°15'		
	8	106°30' Lt.				
602+52 -	⊙	143°10' Lt.	29	-19°10'		
	8	55°10' Lt		-9°30'		
	△	15°33' Rt	305		N53°21'W	N58°W
	7	97°40' Lt				
599+47 -	6	155°00' Lt				
	△	18°26' Rt	152	-2°10'	N68°54'W	N73°W
	7	64°45' Lt		-9°00'		
	⊙	70°30' Lt	27	-17°00'		
	4	154°30' Lt				
597+95 -	6	131°00' Lt.		-5°44'		
	5 — 586+15	40°52' Rt.				
	5	33°51' Lt.			S42°17'W	
	△	16°32' Rt	1130	+0°30'	N87°20'W	N89°W
	4	104°30' Lt		-5°00'		
	3	81°02' Lt				
	2	35°15' Lt				
586+65 -	⊙	15°30' Rt	345	+0°20'		
	△	48°17' Lt	1366		S76°08'W	S74°W
	⊙	46°30' Lt.	1102			
	3	93°06' Lt.		-2°35'		
S76°08'W	⊙	44°25' Lt.	900			
	⊙	20°E0' Lt	470	0°00'		
	2	66°10' Lt		-2°05'		
572+99 -	1	117°00' Lt				

Wednesday 7-23-14 G.C.

40°52'
1°25'
N 42°17'E



2	150°50' Lt				
635+84 – 1	162°00' Lt				
△ ⊙	12°57' Lt	1512	0°00'	S10°15'W	S 9°W
⊙	12°30' Lt	1428	0°00'		
7	102°35' Lt.		-3°15'		
6	79°08' Lt				
5	58°05' Lt		-5°15'		
4	33°55' Lt		-4°40'		
⊙	11°00' Lt	1142	0°00'		
3	90°30' Lt		-2°55'		
⊙	8°00' Lt	838	0°00'		
⊙	0°00'	697	0°00'		
⊙	11°10' Rt.	520	0°00'		
2	22°50' Lt.		-6°40'		
⊙	48°00' Rt	240	0°00'		
620+72 – 1	77°45' Lt		-16°24'		
△ ⊙	103°27' Lt.	1820	-0°15	S23°12'W	S21°W
⊙	98°30' Lt.	1055			
⊙	81°15' Lt.	720			
⊙	60°35' Lt.	711			
⊙	46°30' Lt.	731			
⊙	13°45' Lt.	891			
⊙	6°40' Lt.	1020	-0°20'		
⊙	5°00' Rt	1142	-0°25'		
602+52 – ⊙	9°30' Rt	990	-0°30'		



	11					
0+00 Axis Dam						
C42+17	10	38°36' Lt			S14°24W	
	9	144°00' Lt				
	⊙	174°10' Lt	180	-17°40'		
	⊙	121°25' Lt	145	-23°00'		
640+67	Δ0	69°15' Lt	167 (150)	-18°50'	S53°02'W	S50°W
	Δ	102°27' Rt	250 (228)	+17°20'	N57°43W	N60°W
	9	23°40' Lt		-15°00'		
	8	38°55' Lt				
638+39	⊙	88°00' Rt	72	+14°50'		
	8	20°50' Lt		-7°15'		
	Δ	9°35' Rt	255	-4°00	S19°50W	S17°W
	⊙	15°00' Rt	145	0°00'		
	7	126°10' Lt				
	4	97°45' Lt				
	5	120°00' Lt				
635+84	3	113°40' Lt				

7-29-14 GC.

11 = Mont ≠ 250

10 = 13+14.5 Axis Dam

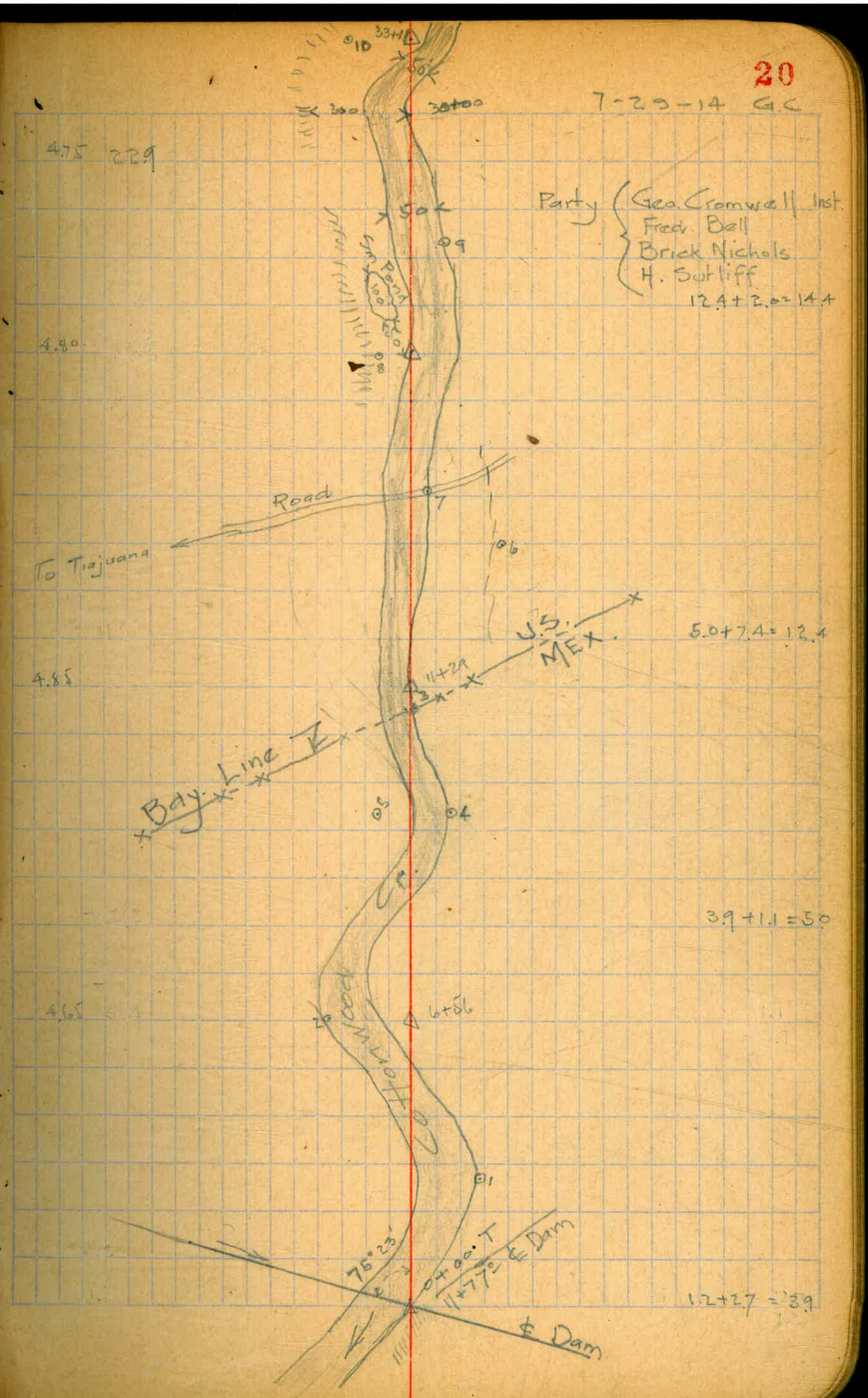
10+
167
728
624
104
1368

River Traverse (Cottonwood Creek)

33+11 –						
	10	80°00' Lt	200			
	9	39°20 Rt	242	+0°30'		
	△	27°47' Rt	690	+0°~~18~~ 10'	N29°00'E	N26°E
26+21 –	8	72°30' Lt.	50	+2°30'		
	7	28°45' Lt	403	+0°25'		
	△	36°51' Lt.	1492	+0°~~25~~ 17'	N0°47'W	N2°W
11+29 –	6	22° Rt.	145	+7°10'		
	5	75°30' Lt.	275	+1°00'		N34°E
	4	43°50' Lt	250	-0°10'		
	△	53°43' Lt	473	+~~0°16~~ 0°08'	N36°04'E	
	3	54°00' Lt	465			
6+56 –	2	112°45' Lt	88	-1°00'		
		"				
		"				
	1	94°25' Lt.	375	+0°20'		
0+00 –	△	104°37' Lt.	656	+~~0°22'~~ +0°14'	N89°47'E	N88°E

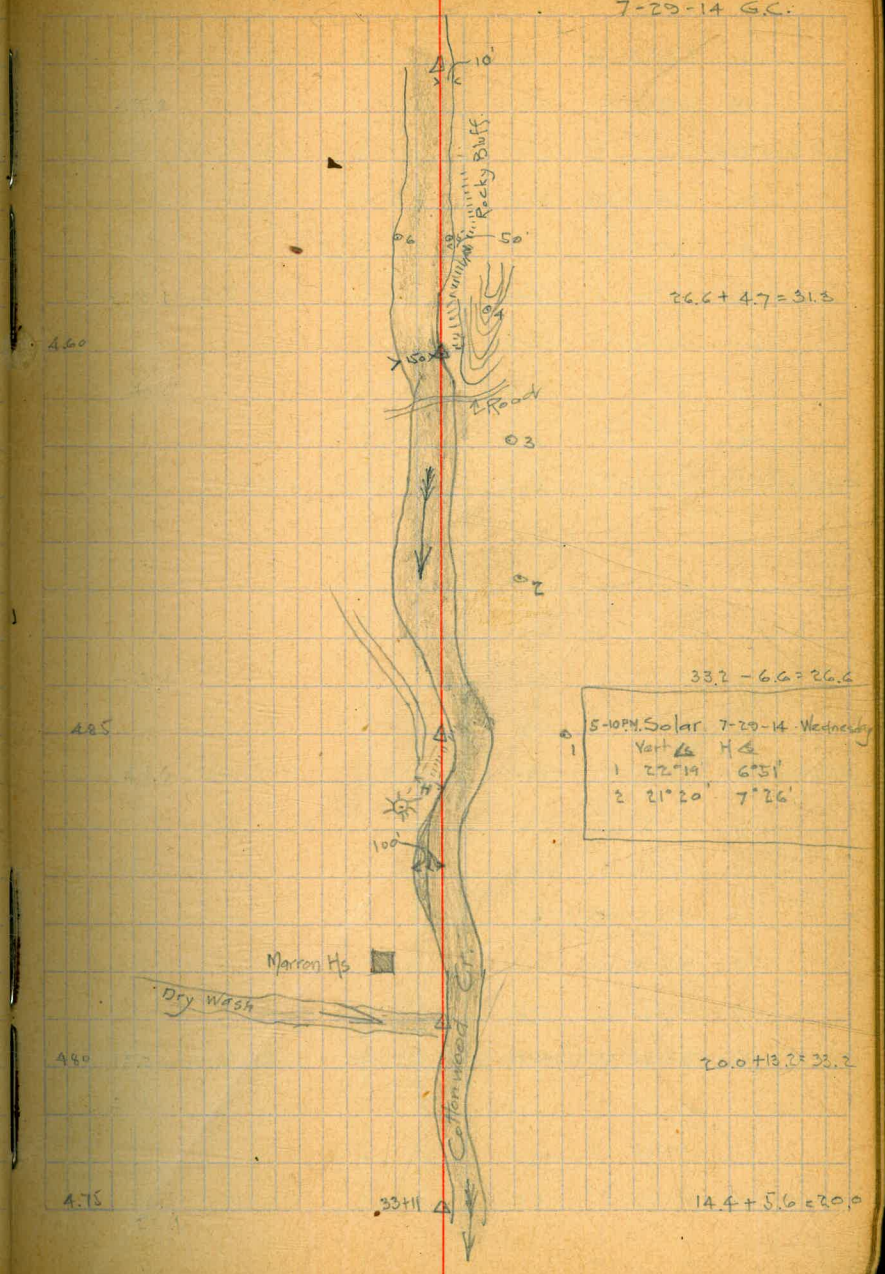
11+77 Axis Dam

7-29-14 GC



73+82 –						
	6	28° 15' Lt.	565	+0°20'		
	5	12° 00' Lt.	564	+0°20'		
	△	20°24' Lt.	1476	+0°11' / +0°19	S58°05'E	S58°E
59+06 –	4	53°20' Rt	145	+31°16'		
	3	58°10' Rt	944	+0°24'		
	2	82°40 Rt	800	−0°15'		
	△	50°19' Rt	1204	−0°19' / −0°11	S37°41'E	S37°E
47+02 –	1	100°10' Rt	872	−0°18' / −0°10		
32+31 –	△	35°34' Rt	871	+0°52 / +1°00'	S88°00'E	S89°E
33+11 –	△	29°26' Rt	520	+0°35' / +0°43	N56°26'E	N57°E

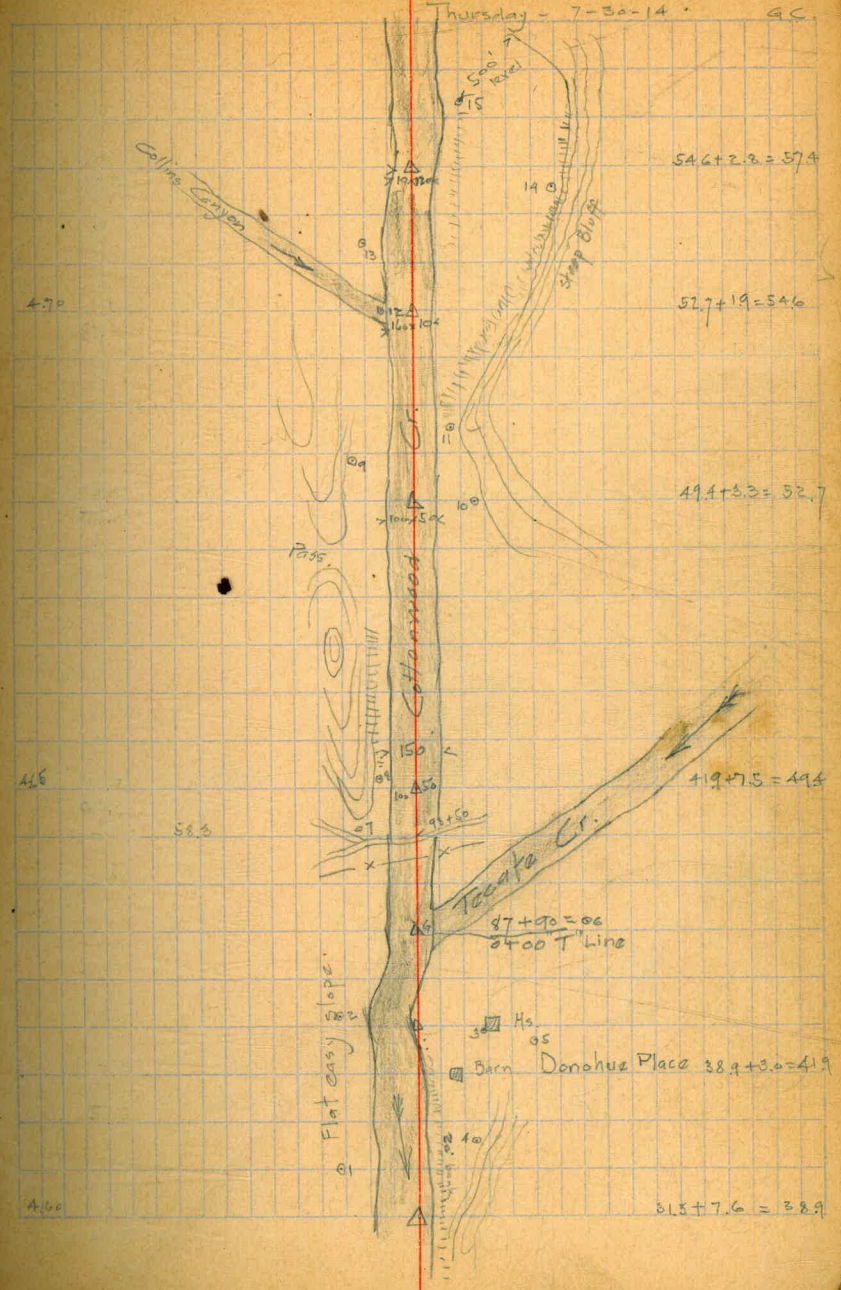
7-29-14 G.C.



Cottonwood Creek Traverse

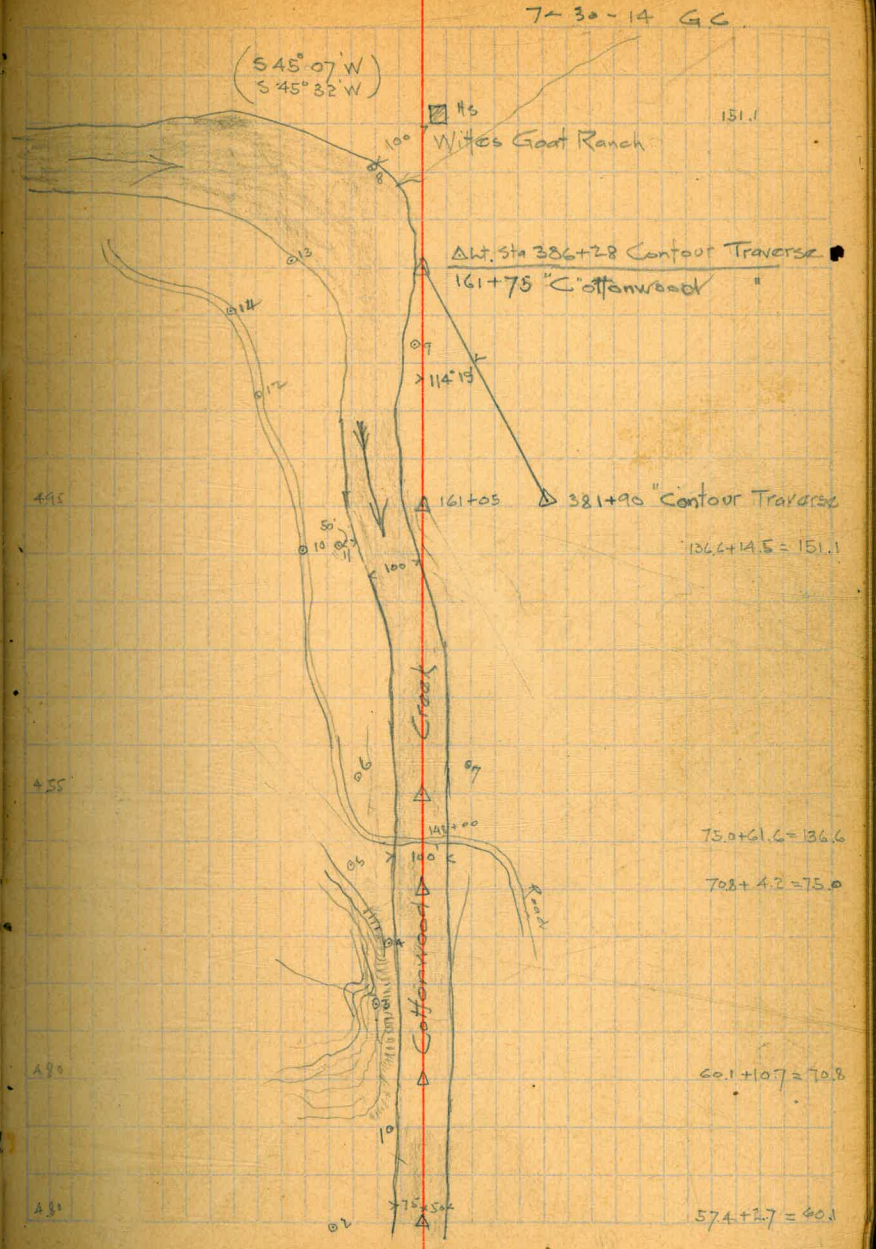
15	73°50' Rt	235	+4°35'		
14	119°00' Rt	500	Up 15'		
127+86 – △	26°34' Rt	635	+0°15' ~~+0°23'~~	N68°54'E	N68°E
13	53°10' Lt	330	+2°40'		
12	99°20' Lt	160	+0°16'		
122+42 – △	16°29' Lt	544	+0°12' ~~+0°20'~~	N42°20'E	N43°E
11	30°40' Rt	478	+4°00'		
10	88°00' Rt	622	+5°36'		
9	85° Lt.	584	+4°35'		
117+80 – △	9°54' Rt	462	+0°25' ~~+0°33'~~	N58°49'E	N60°E
8	23°10' Lt.	400	+1°12'		
7	121°30' Lt.	320	+3°25'		
99+48 – △	6°31' Rt.	1852	+0°14' ~~+0°22'~~	N48°55'E	N48°E
6	40°45' Lt	328	-0°14' ~~-0°06~~		
5	87°00' Rt	900	+3°40'		
4	158°00' Rt	789			
3	66°45' Rt	200±			
2	93°50' Lt	578	+0°50'		
84+62 – △	40°45' Lt	1486	+0°07' ~~+0°15'~~	N42°24'E	N43°E
1	100°30' Lt	400	+1°20'		
73+82 – △	38°46' Lt.	1080	0°24' ~~+0°37'~~	N83°09'E	N82°E

Thursday - 7-30-14 - GC.



161+75 – △	65°41' Rt	—	— To	381+90	S43°W	
14	61°00' Lt	950	-1°26'			
13	42°20' Lt	670	-3°34'			
12	70°00' Lt	700	-2°20'			
11	119°00'	275	-11°00'			
10	124°30' Lt	415	-5°00'			
9	19°00' Lt	370	-4°00'			
8	33°00' Lt	700	-3°24'			
			+10°57'			
161+00 – △	80°24' Rt	78 (75)	+11°05'	S20°39'E	S21°E	
						N76°E
7	93° Rt	205	+8°00'			
6	85° Lt	135	+7°10'			
			+4°42'			
153+50 – △	13°22' Rt	755 (750)	+4°50'	N79°27'E	N76°E	
5	104° Lt	250	+6°16'			
			+0°23'			
147+27 – △	16°24' Lt	623	+0°31'	N66°05'E	N64°E	
4	17°00' Rt	260	+0°30'			
3	38°20' Lt	210	+7°46'			
			+0°48'			
139+62 – △	30°10' Rt	765	+0°56'	N82°29'E	N81°E	
2	111°00' Lt	265	+8°20'			
1	48°50' Lt	168	+3°34'			
			+0°17'			
134+21 – △	16°35' Lt	541	+0°25'	N52°19'E	N53°E	

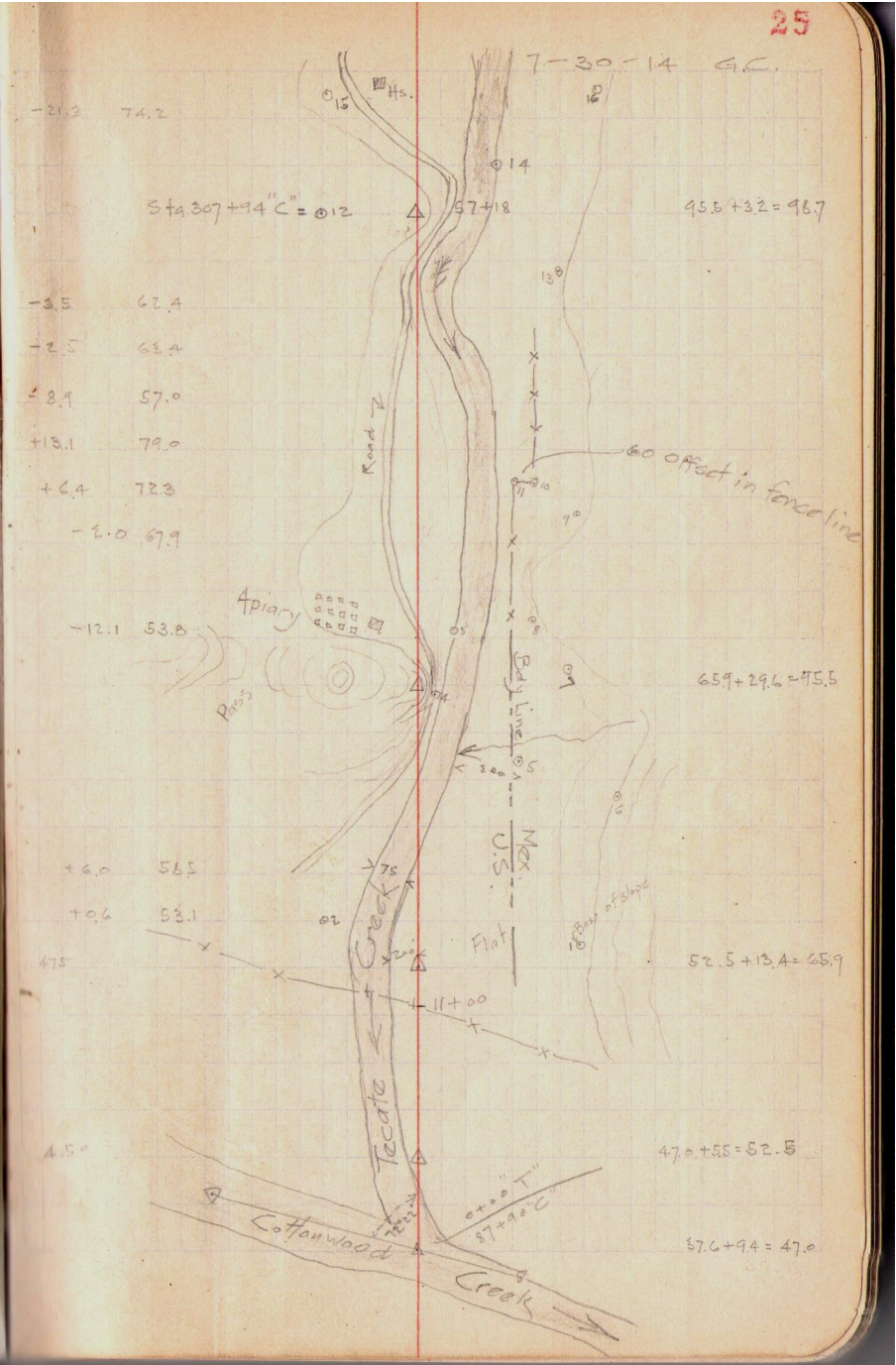
7-30-14 GC



TRAVERSE OF TECATE CREEK

				C.C.	Needle
	13	113°10' Rt	600	-2°02' ~~-1°54'~~ +35°20'	
	12	106°48' Lt	120	~~+35°28'~~ +0°06'	
47+18 -	△	15° 11' Rt	1902	~~+0°14'~~	S 86°35' E	E
	11	3°06' Rt	1019	-0°18' ~~-0°10'~~	
	10	6°20' Rt	1064	-0°18' ~~-0°10~~	
	9	24°15' Rt	1068	-0°08' ~~-0°00~~	
	8	51° Rt	530	-0°58' ~~-0°50~~	
	7	94° Rt	868	+0°52' ~~+1°00'~~	
	6	127°30' Rt.	1300	+0°17' ~~+0°25~~	
	5	118°00' Rt	862	-0°08' ~~-0°00~~	
	4	90°00' Rt.	20'	10 ft. below	
	3	21°10' Rt.	180	-3°52' ~~-3°44'~~ +0°50'	
36+78 -	△	11°01' Lt.	2040	~~+0°58'~~	N 78°14' E	N 77° E
	2	64°00' Lt.	400	+0°52 ~~+1°00'~~	
	1	99°20' Rt	995	+0°02' ~~+0°10'~~ +0°30'	
11+32 -	△	3°21' Rt	1546	~~+0°38'~~	N 29°15' E	N 28° E
3+38 -	△	28°52' Lt.	794	+0°24' ~~+0°32'~~	N 85°54' E	N 85° E
0+00 -	△	72°22' Rt.	838	+1°36' ~~+1°44'~~	S 65°14' E	S 67° E

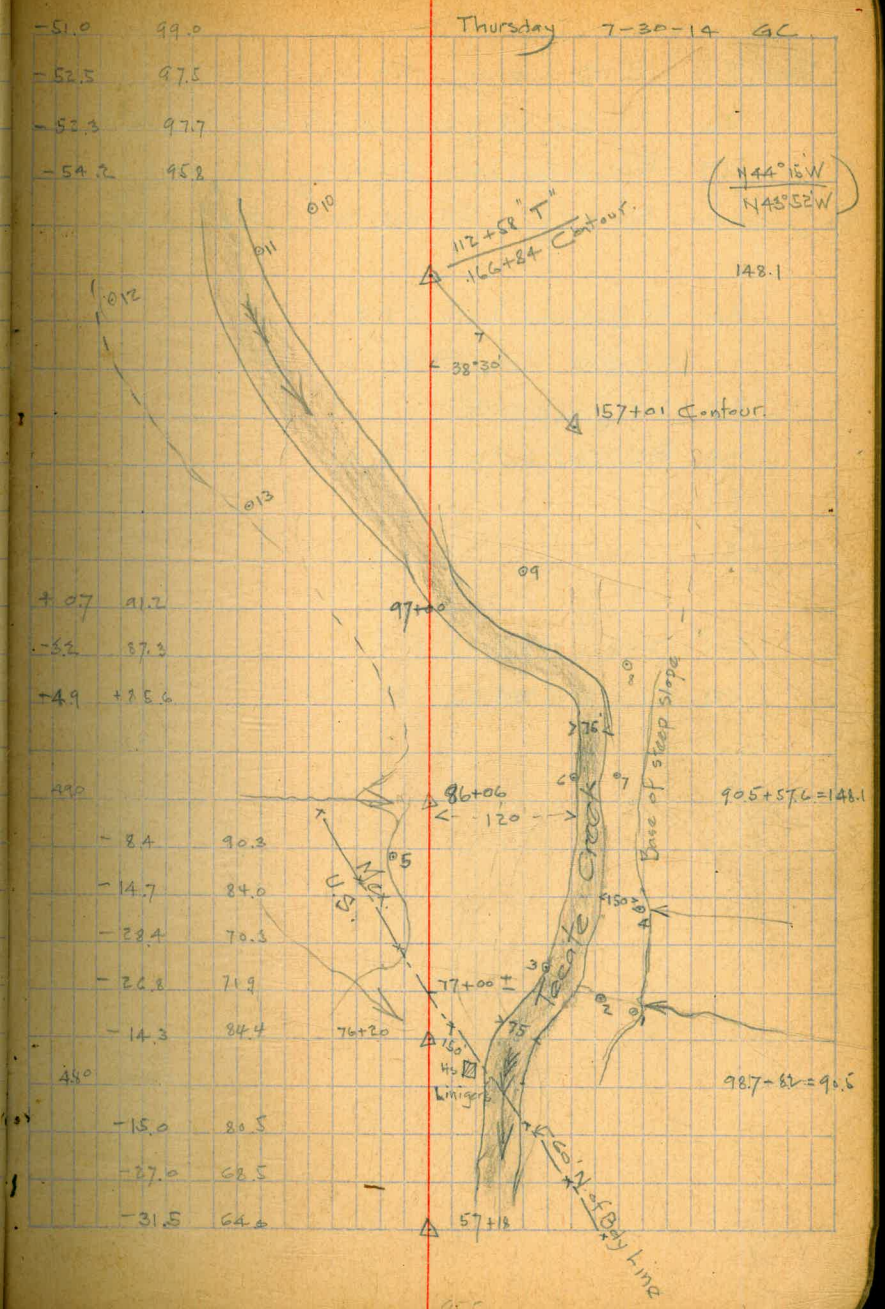
87+90 "C" Traverse



13	153° 15' Lt	1372	-2°08' / -2°00'		
12	116° 40' Lt	1188	-2°38' / -2°24'		
11	100° 30' Lt.	910	-3°18' / -3°10'		
10	91° 45' Lt	674	-4°38' / -4°30'		
166+84 Contour Traverse					
102+58 – △	141° 30' Rt.				
9	2° 30' Rt	1252	+0°02' / +0°10'		
8	25° 40' Rt	620	-0°18' / -0°10'		
7	61° 30' Rt	310	-0°54' / -0°46'		
6	61° 30' Rt	118	-4°08' / -4°00'		
86+06 – △	24° 50' Rt	1652	+2°00' / +2°08'	S 5° 22' E	S 6° 00 E
5	48° 40' Rt.	758	-0°38' / -0°30'		
4	75° 20' Rt.	1208	-0°42' / -0°34'		
3	119° 00' Rt	380	-4°18' / -4°10'		
2	119° 45' Rt.	622	-2°28' / -2°20'		
1	120° 45' Rt.	723	-1°08' / -1°00'		
66+20 – △	56° 23' Rt.	1986	-0°14' / -0°06'	S 30° 12 E	S 29° E
16	36° 20' Rt.	1068	-0°48' / -0°40'		
15	1° 30' Lt.	689	-2°14' / -2°06'		
47+18 – 14	83° 30' Lt. Rt	400	-4°32' / -4°24'		

Thursday 7-30-14 GC

-51.0	99.0	
-52.5	97.5	
-52.3	97.7	
-54.2	95.8	
+0.7	91.2	
-5.2	87.3	
+4.9	+2.5.6	
490		
-8.4	90.3	
-14.7	84.0	
-28.4	70.3	
-26.8	71.9	
-14.3	84.4	
460		
-15.0	80.5	
-27.6	68.5	
-31.5	64.6	



Ownerships Marron Valley.

Sec 23. B. McLeran N½ SW¼, NW¼

" 26 N½ SW, SE¼ SW, SE¼ NW¼, SC MW

" 27 Reda & McLeran E½ NE¼ NE¼ SE¼

SS Donohoe S½ SE¼ SC MW SW¼, NW¼ SE¼

" 34 SS Donohoe Lots 3 + 4

SC MW Lots 1 & 2

" 28 SE¼ SC MW.

" 33 SC MW Lots 1, 2, 3, 4.

" 32 " " " " "

" 31 ——— ———

255 - 256 N 84° 13' E.

221 - 252 - N 85° 00' 33" E

12/31/19

STADIA OF CANONS ETC.
off Morena Blvd Asst. map

	Az	Rd	Vert L's		
From 0+00 △	20°03' L	4.80	+ 10°40'		
△	76°47 Rt	1.835	+ 0°38'		
②	92°40 Lt	2.73	00		bottom hill
①	0°00'	1.59	+ 5°26		✓ ✓
0+00 △					

⊡ Mon W. cor PL. 386.

2/15/20 Gregory Miller Shank

CROSS SECTION OF AREA TO BE FILLED ON BAY FRONT FROM FOOT OF G ST TO UNION ST

BM.	4.3 W	7.5 W		3.20	SE ATLANTIC + MARKET
		5.8 W			
+	2.6 W	6.9 B	4.3 W	3.18	

150' W. of W.L ATLANTIC.

29' N. of S.L G ST.		3.0
21" " " " " "		5.3
S.L. G ST.		5.2
(29' E of Last reading = platform		5.2)
(26' " " " = Cannery		4.3)
50' S. of G ST.		5.7
(35' E of Last reading = Cannery		3.6)
100' S of G ST		7.3
(5' E of Last reading		4.5)
(25' " " " = Cannery.		3.8)
150' S. of G ST.		7.4
(55' E. of Last. = Cannery		6.0)
170' S of G ST		7.1
(55' E of Last = SW. cor cannery		6.3)
200' S. of G ST		6.6
(73' E of Last.		7.0)
(7' " "		2.7)
(24' " "		2.7)
250' S of G ST. = Tip of Temp. Bulk.		4.6
(50' E of Last		7.0)
(25' " "		7.2)
(25' " " = 50' W. of ATLANTIC		3.1)

Copied into Book 1074

262' S. of G ST.	11.5
300' " " "	11.8
350' " " "	12.0
370' " " "	12.2

200' W of W.L ATLANTIC

325' S. of G. ST.	12.1
300' " " "	12.1
250' " " "	12.3
232' " " "	12.1
200' " " "	4.7
192' " " "	6.9
150' " " "	6.7
100' " " "	6.3
50' " " "	6.1
S.L. of G ST.	5.9
23' N " "	4.7
29' " " "	2.6

250' W of W.L ATLANTIC

29' N. of S.L. of G ST.	2.4
21' " " " "	4.7
S.L. of G ST.	5.5
50' S. of S.L G ST	6.5
100' " " " "	6.4
126' " " " "	6.5
150' " " " "	4.7

250' W. of ATLANTIC

164' S. of S.L. G.S.T.	4.6
189' " " " " "	12.1
200' " " " " "	12.2
250' " " " " "	12.5
275' " " " " "	12.6

300' W. of W.L. ATLANTIC

225' " " " " "	12.1
200' " " " " "	11.5
142' " " " " "	10.7
125' " " " " "	4.5
100' " " " " "	4.3
50' " " " " "	4.4
S.L. of G.S.T.	4.6
15' N of S.L. G.S.T.	4.7
20' " " " " "	2.5

350' W of W.L. ATLANTIC

15' N. of S.L. G.S.T.	2.7
S.L. G.S.T.	5.5
50' S. of " " "	4.0
71' " " " " "	3.5
94' " " " " "	10.4
100' " " " " "	10.7
150' " " " " "	11.5
175' " " " " "	12.4

400' W. of W.L. ATLANTIC

125' S. of S.L. G.S.T.	11.8
100' " " " " "	11.1
50' " " " " "	10.8
29' " " " " "	10.5
9' " " " " "	4.9
S.L. of G.S.T.	4.1

450' W. of W.L. ATLANTIC

85' N. of S.L. of G.S.T.	1.9
30' " " " " "	11.3
S.L. G.S.T.	11.5
50' S. of " " "	12.1
75' " " " " "	12.6

460' W. of W.L. ATLANTIC

75' " " " " "	12.9
50' " " " " "	12.5
S.L. of G.S.T.	11.7
25' N of " " "	11.6
75' " " " " "	11.1
85' " " " " "	1.9

500' W. of W.L. ATLANTIC

140' N. of S.L. G.S.T.	6.3
130' " " " " "	6.3
108' " " " " "	12.7
75' " " " " "	12.9
S.L. G.S.T.	12.6

= Temp. Bulk.

4.90 8.10 3.20

E.L. of ATLANTIC ST.

S.L. of MARKET ST.	4.7
3' S. of S.L. of ✓	8.5
18' ✓	9.7
37' ✓	12.5
50' ✓	13.1
100' ✓	13.5
150' ✓	14.0
175' ✓	14.4

11.58 5.78 3.20 S.E. ATLANTIC ST.

75' E. of E.L. of ATLANTIC ST.

S.L. of MARKET	3.4
1' S. of ✓	6.1
26' ✓	10.1
50' ✓	10.8
100' ✓	11.5
150' ✓	12.0
200' ✓	12.3
225' ✓	12.7

E.L. of CALIFORNIA ST.

S.L. of Market	4.7
1' S. of S.L. of Market	6.2
31' ✓	9.7
50' ✓	10.1
100' ✓	11.1
200' S. of S.L. Market	12.3
300' ✓	13.1
400' ✓	13.7

N.L. ARCTIC ST.

4.77 6.17 1.40 SW Arctic

S.L. Market	4.9
31' S. of S.L. of Market	5.4
50' ✓	7.8
100' ✓	11.1
200' ✓	12.9
300' ✓	13.7
400' ✓	14.1
500' ✓	14.7
550' ✓	15.1

℄ of ARCTIC

S.L. of MARKET.	4.5
50' S. of ✓	4.6
85' ✓	4.7
100' ✓	9.5
115' ✓	11.1

E.L. of ARCTIC

S.L. of MARKET.	4.3
20' S. of ✓	5.2
30' ✓	4.4
50' ✓	5.1

E.L. Arctic (continued)

100' S. of S.L. of Market	8.2
1x3 " " " " "	11.0

25' E. of E.L. Arctic

S.L. of Market	4.2
5' S. of	6.0
50' " " " "	7.3
100' " " " "	9.0
129' " " " "	11.1

100' E. of E.L. Arctic

4.78 7.20 2.42 St. India

S.L. Market	4.7
1' S. of	6.0
20' " " "	9.0
100' " " "	9.7
136' " " "	9.7
154' " " "	11.3

150' E. of E.L. Arctic

4.24 6.66 2.42

S.L. Market	4.1
50' S. of	4.5
100' " "	4.6
120' " "	8.58
150' " " W.L. India St.	
S.L. Market	3.9
15' S. of	3.6
50' " " "	4.0

67' S. of S.L. Market	4.6
100' " " "	7.0
144' " " "	6.8
150' " " "	5.5
165' " " "	5.5
186' " " "	11.8
200' " " "	12.6
300' " " "	13.2
400' " " "	14.3
500' " " "	14.9
600' " " "	15.7
700' " " "	16.5
750' " " "	17.0

E.L. of India St.

S.L. Market	4.2
100' S. of	4.5
136' " "	4.8
188' " "	8.9
200' " "	10.9
218' " "	12.5
300' " "	13.1

E.L. of Columbia

1.40 6.31 4.91 St. Columbia

250 S. of S.L. Market	5.4
260' " "	8.0

E. L. Columbia (cont)

290' S. of SL MARKET	12.3
300' " " " "	12.7
400' " " " "	13.7
450 " " " "	14.1
500' " " " "	14.4
600' " " " "	14.8
700' " " " "	15.2
800' " " " "	16.5
900' " " " "	17.6
1000' " " " "	18.2
1050' " " " "	18.4

125' E. of E. L. Columbia

N. L. of I ST.	4.9
1' S. of N. L. of I ST	7.3
63' " " " " "	4.5
75' " " " " "	13.3
100' " " " " "	13.4

170' E. of E. L. COLUMBIA

N. L. I ST.	5.2
8' S. of " "	8.3
36' " " " "	11.4
76' " " " "	13.0
100' " " " "	13.3

# P.	3.67	5.84	4.14	2.17

E. L. STATE ST.

95' S. of N. L. of I ST.	5.2
100' " " " " "	10.5
116' " " " " "	12.0
200' " " " " "	13.2
300' " " " " "	13.7
400' " " " " "	14.5
500' " " " " "	15.1
600' " " " " "	16.4
700' " " " " "	17.1
800' " " " " "	17.5
900' " " " " "	18.1
1000' " " " " "	18.6
1100' " " " " "	19.0

127' E of E. L. STATE

155' S of N. L. of I ST.	5.0
177' " " " " "	11.6
200' " " " " "	11.9

152' E. of E. L. STATE

180' S. of N. L. of I ST	5.0
200' " " " " "	12.4
300' " " " " "	13.4

℄ of UNION ST

HD 6.34

195' S. of N.L. of I ST.	5.6
205' " " " " "	10.8
243' " " " " "	13.0
300' " " " " "	13.6
400' " " " " "	13.7
500	14.2
600	15.2
700	16.0
800	16.3
900	16.9
1000	17.8
1100	18.7

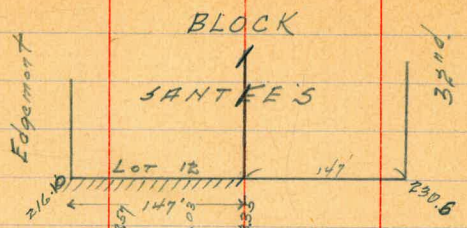
2/16/10 Gregory. CROSS-SECTION OF AREA TO BE FILLED (CONTINUED)

310 630	3.20
100' West of W.L. of ATLANTIC	
269' S. of S.L. G ST	4.6 Temp. Bok.
271 " " " " "	7.4
282 " " " " "	11.8
300 " " " " "	12.1
350 " " " " "	12.2
400 " " " " "	12.5
445 " " " " "	12.5
50' W. of W.L. of ATLANTIC	
263 S. of S.L. of G ST	6.7
287 " " " " "	5.0
340 " " " " "	8.1
300 " " " " "	9.4
350 " " " " "	8.9
25' W of Last reading	11.5
400 S. of S.L. G ST.	14.2
450 " " " " "	14.3
10' W of W.L. ATLANTIC	
480 " " " " "	14.0
450 " " " " "	13.8
400 S. of S.L. G ST	10.0
350 " " " " "	7.9
300	9.4

292' S. of S.L. G St	9.2	
290' " " " " " "	4.6	
N.L. Atlantic St.		
4.23 7.43		3.20
N.L. Market St	4.1	
S.L. " "	4.0	
15' S. of S.L. " "	4.1	
17' " " " " " "	8.8	
35' " " " " " "	11.5	
75' " " " " " "	12.8	
150' " " " " " "	13.0	
℄ of Atlantic St.		
S.L. Market	4.0	
15' S. of S.L. Market	4.3	
16' " " " " "	7.9	
40' " " " " "	11.7	
100' " " " " "	13.6	
150' " " " "	13.8	

2/18/20 Gregory. C Moore

Wall on Cedar ST
Edgemont to 147' E
LOT 12 BLK 1 SANTEES

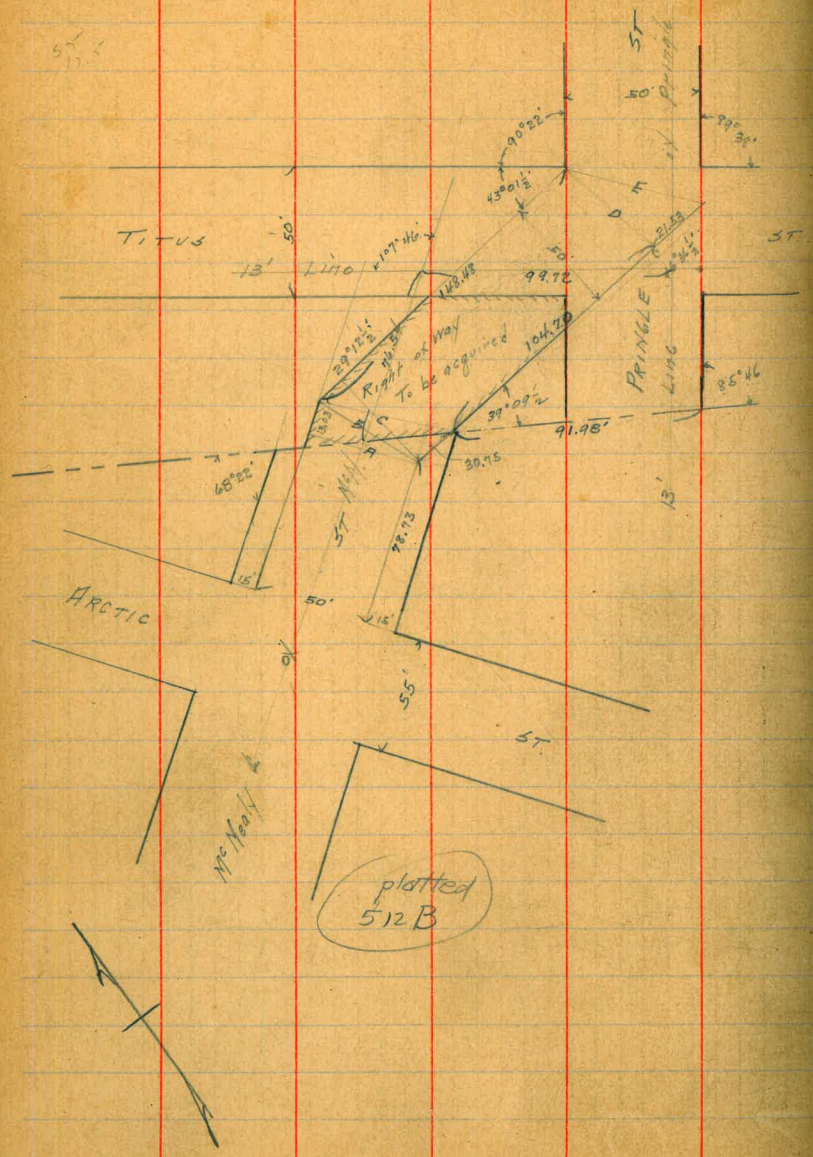


5.54	240.24		234.70	SE. 33rd & Cedar
0.57	227.96	12.85	227.39	

Stakes set 2' from face of wall = 3.67' from curb line. Top of stake = .10 above curb grade.

2/19/20 Gregory Moore

Survey for Opening
PRINGLE ST
Through BLK 11 Middletown Add



37

78.73
13 0
91.76

2/13/70 Gregory C. Moore

CROSS SECTION OF PRINGLE ST from Titus to Arctic

50' ST
10' cbs

see sketch on page 37

	12.92	73.40		60.48 Spkn pk Ca/-
	12.35	85.75	0.0	73.40
	12.54	98.09	0.20	85.55

W. L. ARCTIC 56' wide 10' cbs 3.75 1/2

N		3.9	94.1
cb		3.7	94.3
1/4		3.4	94.6
c		3.8	94.2
1/4		3.7	94.3
cb		4.0	94.0
S		3.9	94.1

W. curb

S		2.8	95.2
cb		2.6	95.4
1/4		2.3	95.7
c		2.2	95.8
1/4		1.8	96.2
cb		1.8	96.2
N		1.9	96.1

W Quarter

N		0.6	97.4
cb		0.5	97.5
1/4		0.5	97.5
c		0.8	97.2
1/4		1.2	96.8

98.09

cb		1.2	96.8
S		1.6	96.4

center ARCTIC

S		1.0	97.0
cb		0.1	97.9
T.P. 12.45	110.44	0.10	97.99
1/4		12.2	98.2
c		12.0	98.4
1/4		11.6	98.8
cb		11.2	99.2
N		11.2	99.2

E. Quarter

N		9.6	100.8
cb		9.7	100.7
1/4		10.3	100.1
c		10.5	99.9
1/4		10.9	99.5
cb		11.7	98.7
S		12.5	98.9

E. curb

S		11.6	98.8
cb		10.7	99.7
1/4		10.0	100.4
c		9.4	101.0
1/4		8.9	101.5

cb	8.6	101.8
N	8.3	102.1
E.L. ARCTIC.		
N	6.2	104.2
cb	7.1	103.3
1/4	7.6	102.8
c	7.9	102.5
1/4	8.1	102.3
cb	8.6	101.8
+2	10.1	100.3
S	10.9	99.5
3.73' E		
S	8.8	101.6
cb	8.1	102.3
1/4	7.5	102.9
c	7.1	103.3
1/4	6.9	103.5
cb	6.5	103.9
N	5.5	104.9
28.73' E		
N	2.1	108.3
cb	2.6	107.8
1/4	3.0	107.4
c	4.1	106.3
1/4	4.7	105.7
+4	5.4	105.0

cb	5.0	105.4
S	5.4	105.0
53.73' E		
S	2.5	107.9
cb	2.2	108.2
+5	2.7	107.7
1/4	2.3	108.1
c	1.5	108.9
1/4	0.8	109.6
cb	0.0	110.4
T.P. 12.89 123.14	0.19	110.25
N	12.4	110.7
78.73 E = SEC A		
N	10.0	113.1
cb	10.3	112.8
1/4	10.9	112.2
c	11.8	111.3
+2	13.3	109.8
1/4	13.3	109.8
+1	12.4	110.7
cb	12.4	110.7
S	12.0	111.1
13.03 E 00 N = SEC B		
S	12.0	111.1
cb	12.2	110.9

1/4		12.0	111.1
+1		13.0	110.1
+4		12.6	110.5
C		10.7	112.4
1/4		9.8	113.3
Cb		9.3	113.8
N		8.4	114.7
	13.03 E. on N 00 - .5 = SEC. C		
N		7.6	115.5
Cb		8.8	114.3
1/4		9.4	113.7
+7		10.7	112.4
C		11.9	111.2
+5		12.3	110.8
+6		11.3	111.8
1/4		11.5	111.6
Cb		11.9	111.2
S		12.0	111.1
	35.45' E. of "C"		
S		6.8	116.3
Cb		7.0	116.1
1/4		6.6	116.5
C		6.0	117.1
1/4		5.7	117.4
Cb		5.6	117.5
+5		6.3	116.8

N			4.8	118.3
		60.45' E		
N			1.9	121.2
Cb			1.7	121.4
1/4			2.0	121.1
C			2.5	120.6
1/4			3.3	119.8
Cb			3.3	1198
S			4.0	119.1
		85.45' E		
S			0.0	1231
T.P.	12.98	135.92	0.20	122.94
Cb			12.5	123.4
1/4			12.6	123.3
C			11.6	124.3
1/4			11.3	124.6
Cb			10.8	125.1
N			10.6	125.3
		110.45' E		
N			6.7	129.2
Cb			7.1	128.8
1/4			7.4	128.5
C			8.4	127.5
1/4			9.0	126.9
Cb			9.0	126.9

	135 N		
S		9.3	126.6
	135.45 E = SEC. D		
S		6.1	129.8
cb		5.0	130.9
1/4		4.8	131.1
C		4.4	131.5
1/4		3.8	132.1
cb		3.3	132.6
N		2.7	133.2
		2.51	133.41 on hub
	2153.03 E 00 N } = SEC E		
N		2.7	133.2
cb		2.6	133.3
1/4		2.5	133.4
C		2.9	133.0
1/4		2.3	133.6
cb		2.0	133.9
S		2.1	133.8
	2153 E 00 S 00 N = E.L. TITUS ST		
S		+1.2	137.1
cb		+0.6	136.5
1/4		0.4	135.5
C		1.2	134.7
1/4		1.3	134.6
cb		2.0	133.9
N		2.7	133.2
		6.58	on hub

SL Myrtle	327		326.5
50	327.33		326.91
100	327.66		327.33
150	328.0		327.75
200	328.33		328.16
250	328.67		328.58
300 NL Upas	329		329.0

33001 NW Upas + 31st

W	327.20 / 5.20 / +0.2	327.92 / 5.53 / +1.1	328.58 / 5.87 / +1.7	328.26 / 6.20 / +2.1	327.91 / 6.54 / +2.7	327.58 / 6.87 / +3.7
K	327.23 / 5.20 / -0.3	328.83 / 5.62 / +0.4	328.41 / 6.04 / +1.3	328 / 6.45 / +2.0	327.58 / 6.87 / +2.4	327.16 / 7.29 / +2.0

++ - 1 B/K 8/26/20 GM JS

	N cb	60' St.	S cb
E. L. Ala	256		256
5.0	259.45		
10.0	262.91		
15.0	266.36		
20.0	269.82		
25.0	273.27		
27.5 ± W.L. Miss	275.0		275.0

255.96 NE Ala & Dwight
9.07
265.03

275.47 SE Dwight & Miss
6.19
281.66

	259.45	262.91	266.36	273.27	269.82
N	5.58	2.12		8.39	11.84
	+0.5	-1.8	-1.33	+4.2	+6.2
			-3.40		
		-2.5	-3.80	+4.7	+6.5
S	-0.6				

stakes on Cb Line 8/26/20 G M S

9/18/70 Gregory/ Miller Shaw

CROSS SECTION OF J ST. E.L 25th to W.L 26th

80' wide
14' c/s
13' 1/4's

NE 101.94
SE 99.87

	3.85	103.72	99.87	B.P. SE 25th
	E.L. 25th = 0+00			
S		3.5	100.2	on cement rt
cb		3.6	100.1	
1/4		3.2	100.5	
c		2.9	100.8	
1/4		2.5	101.2	
cb		1.8	101.9	
N		1.4	102.3	
	0+6'			
N		0.6	103.1	
cb		1.7	102.0	
1/4		2.8	100.9	
c		3.5	100.2	
1/4		3.5	100.2	
cb		4.3	99.4	
S		5.5	98.2	
+7		6.6	97.1	
	0+20			
-7		7.7	96.0	
S		6.7	97.0	✓
cb		5.7	98.0	
1/4		4.7	99.0	
c		4.1	99.6	
1/4		3.4	100.3	
cb		1.6	102.1	
N		1.0	102.7	

	0+60			
N		1.4	102.3	
cb		2.5	101.2	
1/4		3.8	99.9	
c		4.9	98.8	
1/4		6.4	97.3	
cb		7.3	96.4	
S		8.3	95.4	✓
+10		8.6	95.1	
	1+00			
-10		9.8	93.9	
S		9.5	94.2	✓
cb		8.8	94.9	
1/4		7.7	96.0	
c		6.1	97.6	
1/4		5.6	98.1	
cb		4.3	99.4	
+10		3.3	100.3	
+11		2.2	101.5	
N = on lawn		2.0	101.7	
	1+20			
N = dirt floor garage		5.0	98.7	
cb		5.1	98.6	
	1+30			
N		4.3	99.4	
cb		5.8	97.9	

10377

1/4		6.6	97.1
C		8.3	95.4
1/4		9.0	94.7
cb		10.5	93.2
S		10.2	93.5
+15		11.5	92.2
	1+60		
-15 = front of House facing Monroe Pl.		11.9	91.8
S		11.6	92.1 ✓
cb		11.3	92.4
1/4		10.6	93.1
C		9.8	93.9
1/4		9.0	94.7
cb		8.6	95.1
N = on lawn.		7.6	96.1
	1+75		
N = End cement walk to house.		8.6	95.1
	1+85		
-11.5 = front of House on lawn.		8.2	95.5
N		9.8	93.9
cb		10.2	93.5
1/4		11.0	92.7
C		11.2	92.5
1/4		11.8	91.9
cb		13.1	90.6
S		13.0	90.7 ✓
+11.3 = N. side cottage		13.4	90.3

	2+25		
-15		15.0	88.7
S		14.9	88.8 ✓
cb		14.5	89.2
1/4		14.2	89.5
C		13.7	90.0
1/4		13.0	90.7
cb		12.6	91.1
N		12.2	91.5
+10 = on lawn		11.5	92.2
	2+34.6 = location of necessary 16" pipe - locate pipe at Rt Angles to ct.		
-10		9.1	94.6
-2.7 = end of present 14" c.p.		10.5	93.2
-2.7 flowline of 14" cement pipe		(13.87)	89.85
N		13.9	89.8
cb		14.0	89.7
1/4		14.4	89.3
C		14.4	89.3
1/4		14.7	89.0
cb		14.7	89.0
S		14.7	89.0 ✓
+15		14.7	89.0
	2+60		
-15		12.4	91.3
S		12.5	91.2 ✓
cb		11.9	91.8

		103.72		
1/4			11.2	92.5
C			11.3	92.4
1/4			11.8	91.9
cb			11.0	92.7
N			10.3	93.4
-4	on lawn		8.1	95.6
-10	" "		8.1	95.6
		2+90		
-9.5	= front of House on lawn		6.6	97.1
N			7.4	96.3
cb			7.4	96.3
1/4			8.1	95.6
C			8.2	95.5
1/4			8.1	95.6
cb			8.2	95.5
S			8.6	95.1 ✓
+15			8.3	95.4
		3+15		
-10			3.7	100.0
S			3.3	100.4 ✓
cb			2.3	101.4
1/4			1.2	102.5
C			1.6	102.1
1/4			1.9	101.8
cb			1.5	102.2
N			1.8	101.9

J ST

+5			0.6	103.1
T.P.	13.11	116.53	0.30	103.42
		3+37		
N			10.5	106.0
cb			10.0	106.5
		3+45		
N			7.4	1091
cb			7.8	108.7
1/4			7.6	108.9
C			7.8	108.7
1/4			8.2	108.3
cb			8.5	108.0
S			8.8	107.7 ✓
		3+65		
S			5.0	1115 ✓
cb			3.9	1126
1/4			3.4	1131
C			3.1	1134
1/4			3.7	1128
cb			3.0	1135
N			2.9	1136
TP	13.14	128.63	1.04	115.49
		3+90		
N			10.5	118.1
cb	"		10.5	118.1

		12863		
1/4			10.9	117.7
C			10.9	117.7
1/4			11.0	117.6
Cl			11.2	117.4
S			12.0	116.6
		4+05		
S			10.6	118.0
Cl			10.0	118.6
1/4			9.5	119.1
C			8.9	119.7
1/4			8.9	119.7
Cl			8.9	119.7
N			8.7	119.9
		4+33		
N			4.8	123.8
Cl			5.4	123.2
1/4			4.8	123.8
C			5.2	123.4
1/4			5.8	122.8
Cl			7.0	121.6
S			7.7	120.9
		4+65		
S			4.5	124.1
Cl			3.6	125.0
1/4			3.5	125.1
C			3.2	125.4

1/4			2.5	126.1
Cl			2.3	126.3
N			1.1	127.5
TP	12.19	140.64	01.8	128.46
		5+00		
N			9.0	1316
+3			9.9	1307
Cl			10.5	1301
1/4			11.6	1290
C			11.8	1288
1/4			12.0	1286
Cl			12.8	1278
S			14.6	1260
+10			15.5	1251
		5+25		
-15			13.7	1269
S			12.6	1280
Cl			11.6	1290
1/4			10.4	1302
C			10.2	1304
1/4			9.4	1312
Cl			7.5	1028
+14			7.2	1334
N			6.4	1342

	140.64		
	5+53		
N		3.0	137.6
+5		4.9	105.7
cb		5.1	135.5
1/4		6.0	134.6
c		6.7	133.9
1/4		8.0	132.6
cb		8.6	132.0
S		10.2	130.4
+15		11.6	129.0
	5+58		
N		2.4	138.2
+5		3.8	136.8
cb		4.9	135.7
1/4		5.5	135.1
c		5.5	135.1
	5+61.5 = W.L. 26th ST.		
S = corner of cement walk.		4.50	136.1
cb		4.7	135.9
1/4		4.5	136.1
c		5.1	135.5
1/4		2.5	138.1
cb		2.1	138.5
N		1.6	139.0
chk on cb. SW 26th & J		4.75	135.89

12/24/23 Gregory X section of Santa Monica 80' wide from E.L. De Foe to Guizot 20' cbs

	7.15	32.19		25.04	NW Newport + De Foe
		E.L. De Foe			
S			6.8	25.3	✓
cb			6.8	25.3	✓
1/4			6.7	25.4	✓
c			6.7	25.4	✓
1/4			6.5	25.6	✓
cb			6.5	25.6	✓
N			6.7	25.4	✓
		18' E			
N			4.5	27.6	✓
cb			5.0	27.1	✓
1/4			5.2	26.9	✓
c			5.6	26.5	✓
1/4			4.3	27.8	✓
cb			5.0	27.1	✓
S			5.5	26.6	✓
		50' E			
S			4.3	27.8	✓
+10			4.6	27.5	✓
cb			4.0	28.1	✓
1/4			2.7	29.4	✓
+5			2.2	29.9	✓
c			3.2	28.9	✓
1/4			3.8	28.3	✓

32.1

cb				4.0	28.1	✓
N				3.7	28.4	✓
			100' E			
N				2.8	29.3	✓
cb				3.3	28.8	✓
1/4				3.0	29.1	✓
c				2.9	29.2	✓
1/4				1.9	30.2	✓
cb				1.8	30.3	✓
+5				3.2	28.9	✓
S				2.2	29.9	✓
			150' E			
S				1.7	30.4	✓
cb				1.2	30.9	✓
1/4				1.4	30.7	✓
c				1.4	30.7	✓
1/4				1.4	30.7	✓
cb				1.6	30.5	✓
N				1.6	30.5	✓
T.P.	11.98	43.89		0.28	31.91	
			200' E			
N				12.2	31.6	✓
cb				11.7	32.1	✓
1/4				11.6	32.2	✓
c				11.6	32.2	✓

	43.89		
1/4		11.3	34.5 ✓
cb		10.0	33.8 ✓
+5		10.0	33.8 ✓
+10		11.6	34.4 ✓
S		12.3	31.5 ✓
	250' E		
S		10.5	33.3 ✓
+10		8.6	35.4 ✓
+17		9.3	34.5 ✓
cb		10.5	33.3 ✓
1/4		10.1	33.7 ✓
C		9.6	34.1 ✓
1/4		10.0	33.8 ✓
cb		9.8	34.0 ✓
N		10.5	33.3 ✓
	300 E		
N		8.4	35.4 ✓
cb		8.1	35.7 ✓
1/4		8.4	35.4 ✓
C		8.8	35.0 ✓
1/4		9.0	34.8 ✓
cb		9.4	34.4 ✓
+1		8.4	35.4 ✓
S		8.3	35.5 ✓
	350 E		
S		7.2	36.6 ✓

	43.8		
+18		7.1	36.7 ✓
cb		7.6	36.2 ✓
1/4		7.4	36.4 ✓
C		6.5	37.3 ✓
1/4		6.7	37.1 ✓
cb		6.1	37.7 ✓
+12		6.4	37.4 ✓
N		6.7	37.1 ✓
	400' E		
N		5.1	38.7 ✓
cb		4.8	39.0 ✓
1/4		4.4	39.4 ✓
C		4.3	39.5 ✓
1/4		4.9	38.9 ✓
cb		5.8	38.0 ✓
S		5.3	38.5 ✓
	435' E		
S		3.7	40.1 ✓
cb		3.7	40.1 ✓
1/4		3.2	40.6 ✓
C		3.1	40.7 ✓
1/4		3.5	40.3 ✓
cb		3.6	40.2 ✓
N		3.8	40.0

43.89

465' E

N		2.7	41.1 ✓
cb		2.6	41.2 ✓
1/4		2.7	41.1 ✓
C		1.9	41.9 ✓
1/4		2.0	41.8 ✓
cb		2.3	41.5 ✓
S		2.6	41.2 ✓

475' E

S		2.2	41.6 ✓
cb		1.9	41.9 ✓
1/4		1.6	42.2 ✓
+2		2.7	41.1 ✓
C		3.1	40.7 ✓
+5		3.6	40.2 ✓
1/4		1.6	42.2 ✓
cb		2.0	41.8 ✓
N		2.0	41.8 ✓

500' E

N		0.9	42.9 ✓
cb		1.1	42.7 ✓
1/4		1.0	42.8 ✓
+5		0.8	43.0 ✓
C		2.8	41.0 ✓
~~1/4~~ +8		0.8	43.0 ✓
1/4		0.8	43.0 ✓

43.8

cb		1.3	42.5 ✓
S		1.0	42.8 ✓

530' E

S		+0.1	44.0
cb		0.1	43.7 ✓
1/4		0.1	43.7 ✓
C		1.5	42.3 ✓
+5		+0.2	44.1
1/4		+0.3	44.2
cb		+0.2	44.1
N		+0.3	44.2
TP.	12.55	5632	0.12	43.77

560' E

563

N		10.9	45.2 ✓
cb		11.0	45.3 ✓
1/4		10.8	45.5 ✓
+3		12.6	43.7 ✓
C		13.1	43.2 ✓
+3		13.1	43.2 ✓
+5		10.7	45.6 ✓
1/4		10.8	45.5 ✓
cb		10.9	45.4 ✓
S		10.6	45.7 ✓

573' E

S		10.1	46.2 ✓

56.32

cb		10.3	46.0
1/4		10.3	46.0
+7		10.4	45.9
c		11.6	44.7
1/4		11.9	44.4
+8		12.7	43.6
cb		10.5	45.8
N		10.5	45.8
	600' E = WL Ebers	60' wide	10' cbs
N		9.2	47.1
+18		9.2	47.1
cb		10.4	45.9
+4		12.1	44.2
1/4		10.6	45.7
+5		9.4	46.9
c		9.2	47.1
1/4		9.0	47.3
cb		9.1	47.2
S		9.1	47.2
	W. Curb		
S		8.8	47.5
cb		8.7	47.6
1/4		8.6	47.7
c		8.9	47.4
+5		8.9	47.4
+8		11.5	44.8

56.3

1/4	11.5	44.8
+8	10.4	45.9
cb	8.6	47.7
N	8.6	47.7
	W. Quarter	
N	8.1	48.2
cb	8.0	48.3
+2	9.7	46.6
1/4	10.4	45.9
+5	11.2	45.1
c	8.5	47.8
1/4	8.2	48.1
cb	8.5	47.8
+10	8.0	48.3
S	8.6	47.7
	Center Ebers	
S	7.9	48.4
cb	8.1	48.2
1/2	8.0	48.3
c	10.1	46.2
+6	10.8	45.5
1/2	9.6	46.7
cb	9.1	47.2
+2	7.7	48.6
N	7.8	48.5

5632

E. Quarter

N	7.4	48.9	✓
+17	7.5	48.8	✓
cb	9.0	47.3	✓
1/4	8.1	48.2	✓
c	9.4	47.9	✓
+3	7.7	48.6	✓
1/4	8.0	48.3	✓
cb	7.8	48.5	✓
s	7.8	48.5	✓

E. Curb

s	6.8	49.5	✓
cb	7.2	49.1	✓
1/4	7.4	48.9	✓
c	7.9	48.4	✓
1/4	8.1	48.2	✓
cb	7.8	48.5	✓
N	7.4	48.9	✓

E. L. Ebers

N	6.6	49.7	✓
+10	6.5	49.8	✓
cb	7.3	49.0	✓
+5	8.5	47.8	✓
1/4	8.7	47.6	✓
c	7.3	49.0	✓
1/4	6.8	49.5	✓

51.3

cb	6.5	49.8	✓
s	6.6	49.7	✓

20' E

s	5.7	50.6	✓
cb	5.6	50.7	✓
1/4	5.7	50.6	✓
c	6.0	50.3	✓
+8	6.4	49.9	✓
1/4	7.8	48.5	✓
cb	8.4	47.9	✓
+3	8.4	47.9	✓
+5	6.1	50.2	✓
N	6.0	50.3	✓

40' E

N	5.2	51.1	✓
+5	5.2	51.1	✓
+8	7.3	49.0	✓
cb	8.1	48.2	✓
+3	5.2	51.1	✓
1/4	5.1	51.2	✓
c	5.4	50.9	✓
1/4	5.0	51.3	✓
cb	4.8	51.5	✓
s	4.6	51.7	✓

Santa Monica

	5632		
	42'E	SL.3	
S		4.5	SL.8 ✓
cb		4.7	SL.6 ✓
1/4		4.7	SL.6 ✓
C		5.6	SO.7 ✓
1/4		4.8	SL.5 ✓
+7		5.0	SL.3 ✓
cb		8.1	LS.4 ✓
N		7.3	LS.0 ✓
	50'E		
N		6.4	LS.9 ✓
+16		4.8	SL.5 ✓
cb		6.2	SO.1 ✓
+1		4.6	SL.7 ✓
1/4		4.2	SV.1 ✓
C		5.2	SL.1 ✓
1/4		4.2	SV.1 ✓
cb		4.3	SV.0 ✓
S		4.2	SV.1 ✓
	65'E		
S		3.3	SS.0 ✓
cb		3.4	SV.9 ✓
1/4		3.5	SV.9 ✓
+8		3.7	SV.7 ✓
C		4.6	SL.7 ✓
+3		4.6	SL.7 ✓

		SL.3	
+6		3.7	SV.6 ✓
1/4		3.4	SV.9 ✓
+8		3.6	SV.7 ✓
cb		4.3	SV.0 ✓
+5		3.7	SV.6 ✓
N		4.3	SV.0 ✓
	100'E		
N		1.5	SL.8 ✓
+19		1.3	SS.0 ✓
cb		2.8	SS.5 ✓
+8		2.3	SV.0 ✓
1/4		1.4	SV.9 ✓
+6		1.5	SV.8 ✓
+8		2.9	SS.4 ✓
C		2.9	SS.4 ✓
+5		2.9	SS.4 ✓
+7		1.3	SS.0 ✓
1/4		1.3	SS.0 ✓
cb		1.5	SV.8 ✓
S		1.3	SS.0 ✓
	125'E		
S		0.3	SL.0 ✓
cb		0.0	SL.3 ✓
1/4		0.0	SL.3 ✓
+4		0.0	SL.3 ✓

		56.32		
+5			2.4	53.9
c			2.4	53.9
+4			2.4	53.9
+5			0.1	56.x
1/4			0.1	56.x
+2			0.2	56.1
+3			1.5	54.6
cb			2.1	55.x
+3			0.2	56.1
N			0.3	56.0
T.P.	12.93	68.91	0.34	55.98
		150 E		
N			11.1	57.8
+16			11.3	57.6
+17			13.0	55.9
cb			13.0	55.9
+7			13.7	55.x
1/4			11.7	57.x
+5			11.4	57.5
+6			14.0	55.9
c			14.0	55.9
+3			13.2	55.7
+4			11.4	57.5
1/4			11.0	57.9
cb			11.2	57.7
5			11.2	57.7

	175 E	68.9	
5		9.6	59.3
cb		9.5	59.4
1/4		9.5	59.4
+6		10.0	58.9
c		12.8	56.1
+8		12.5	56.4
1/4		10.2	58.7
+6		10.2	58.7
+7		12.1	56.8
cb		12.1	56.8
+4		12.2	56.7
+5		10.2	58.7
N		10.4	58.5
	200 E		
N		9.2	59.7
+12		9.1	59.8
+13		11.0	57.9
cb		11.4	57.5
+2		9.0	59.9
+8		8.7	60.x
1/4		10.7	58.x
c		11.7	57.x
+4		11.3	57.6
+7		8.3	60.6
1/4		8.3	60.6

	68.91	68.9	
cb		82	60.7
5		82	60.7
	225' E		
5		65	64.6
cb		69	64.0
1/4		71	61.8
+9		71	61.8
c		91	59.8
1/4		99	59.0
+4		93	59.6
+6		73	61.6
cb		10.0	58.9
+8		98	59.1
+11		76	61.3
N		79	61.0
	250' E		
N		66	64.3
+9		64	64.5
+12		83	60.6
cb		82	60.7
+5		63	64.6
+9		61	64.8
1/4		79	61.0
+5		84	60.5
c		72	61.7
+8		57	63.4

		68.9	
1/4		57	63.4
cb		51	63.8
5		51	63.8
	275' E		
5		35	65.4
cb		36	65.3
1/4		54	63.5
c		63	64.6
1/4		55	63.6
+2		43	64.6
+6		43	64.6
+7		61	64.8
cb		66	64.3
+4		59	63.0
+6		48	64.1
N		51	63.8
	300' E		
N		33	65.6
+4		33	65.6
+16		50	63.9
cb		50	63.9
+7		48	64.1
1/4		31	65.8
c		30	65.9
+1		43	64.6

		68.91		
1/4			4.4	64.5
+6			4.3	66.6
cb			4.2	66.7
S			1.9	67.0
		325' E		
S			0.3	68.6
cb			0.7	68.2
+7			0.9	68.0
1/4			2.6	66.3
+4			1.2	67.7
C			1.7	67.2
+6			1.6	67.3
+7			3.4	65.5
1/4			3.4	65.5
+5			3.1	65.8
+7			1.6	67.3
cb			1.5	67.4
N			2.0	66.9
T.P.	12.72	81.56	0.07	68.84 nail in cor. fence
		350' E		
N			12.7	68.8
cb			13.0	68.5
+5			12.9	8.6
1/4			14.3	67.2
+6			14.3	67.2
+7			13.0	68.5

8/15

C	12.7	68.8
+4	14.3	67.2
1/4	14.0	67.5
+3	12.1	69.4
cb	11.7	69.8
S	11.4	70.1
	370' E	
S	10.1	71.4
cb	10.8	70.7
+5	11.1	70.4
+7	12.9	68.6
1/4	12.9	68.6
C	13.2	68.3
1/4	13.5	68.0
+2	11.8	69.7
cb	11.2	70.3
N	11.6	69.9
	375 E	
N	11.3	70.2
cb	11.1	70.4
+6	11.6	69.9
1/4	13.2	68.3
C	12.5	69.0
+2	11.2	70.3
+4	12.8	68.7

8156

½	12.5	69.0	✓
+2	12.5	69.0	✓
+4	11.0	70.5	✓
cb	10.5	71.0	✓
S	9.8	71.7	✓
	400' E		
S	8.5	73.0	✓
+13	8.7	72.8	✓
+15	10.7	70.8	✓
cb	11.0	70.5	✓
+4	10.6	70.9	✓
+6	9.2	72.3	✓
½	9.2	72.3	✓
C	9.4	72.1	✓
½	9.4	72.1	✓
cb	9.6	71.9	✓
N	9.8	71.7	✓
	415' E		
N	8.4	73.1	✓
cb	8.2	73.3	✓
½	8.1	73.4	✓
C	8.4	73.1	✓
½	8.2	73.3	✓
cb	8.0	73.5	✓
+5	7.9	73.6	✓
+7	8.5	73.0	✓

8155

S	8.3	73.2	✓
	425 E		
S	7.0	74.5	✓
cb	7.1	74.4	✓
½	7.2	74.3	✓
C	7.4	74.1	✓
½	7.3	74.2	✓
cb	7.3	74.2	✓
N	7.1	74.4	✓

see former notes for sections from here to 450' E of Froude.

T.P	12.62	94.09	009	81.47
TP	12.53	106.34	028	93.81
T.P	12.57	118.85	006	106.28
T.P	12.60	130.94	051	118.34
T.P	13.00	143.44	050	130.44

450' E of Froude.

	14314 / 13.0	130.4	✓
-10	12.9	130.5	✓
N	12.5	130.9	✓
+10	11.7	131.7	✓
cb	10.7	132.7	✓
½	9.7	133.7	✓
C	8.7	134.7	✓
½	7.4	136.0	✓
cb			

Santa Monica

143.44

S		4.4	134.0
	465' E		
S		5.1	138.3
cb		7.7	135.7
1/4		9.0	134.4
C		9.8	133.6
1/4		10.7	132.7
cb		11.4	132.0
N		12.0	131.4
+5		17.1	126.3
+12		17.1	126.3
+17		11.9	131.5
	475' E		
-15		11.4	132.0
-9		11.1	132.3
-5		17.0	126.4
N		17.0	126.4
+5		11.2	132.2
cb		10.8	132.6
1/4		10.3	133.1
C		9.7	133.7
1/4		9.0	134.4
cb		7.6	135.8
S		5.2	138.2
	493' E		
S		5.3	138.1

143.4

+15	7.3	136.1
cb	7.7	135.7
1/4	8.3	135.1
C	9.1	134.3
1/4	9.3	134.1
+6	9.6	133.8
cb	14.7	128.7
+2	13.6	129.8
N	15.3	128.1
+1	10.0	133.4
+10	9.3	134.1
	495' E	
-10	9.3	134.1
N	10.0	133.4
+1	14.1	129.3
+18	13.6	129.8
cb	14.7	128.7
+4	9.6	133.8
1/4	9.3	134.1
C	9.1	134.3
1/4	8.3	135.1
cb	7.7	135.7
+5	7.3	136.1
S	5.3	138.1

1434

513' E

-5	5.1	138.3	✓
S	5.6	137.8	✓
cb	6.9	136.5	✓
1/4	7.3	136.1	✓
+4	7.3	136.1	✓
C	13.0	130.4	✓
+4	13.0	130.4	✓
+5	8.0	135.4	✓
1/4	8.4	135.0	✓
cb	.85	134.9	✓
N	8.6	134.8	✓
+1	10.5	132.9	✓
+20	8.4	135.0	✓

515' E

-20	8.4	135.4	✓
N	10.5	132.9	
+5	10.2	133.2	✓
+7	8.0	135.4	✓
cb	7.9	135.5	✓
1/4	8.4	135.0	✓
+6	8.0	135.4	✓
C	13.0	130.4	✓
+4	13.0	130.4	✓
+6	7.2	136.2	✓
1/4	7.0	136.4	✓

143.4

cb	6.7	136.7	✓
S	5.5	137.9	✓
+5	5.2	138.2	✓

524' E

-5	5.0	138.4	✓
S	5.2	138.2	✓
cb	6.0	137.4	✓
1/4	6.6	136.8	✓
+3	12.4	131.0	✓
+6	12.4	131.0	✓
+7	7.0	136.4	✓
C	7.1	136.3	✓
1/4	7.0	136.4	✓
+8	7.1	136.3	✓
cb	9.6	133.8	✓
+10	9.7	133.7	✓
N	9.1	134.3	✓
+3	7.2	136.2	✓
+12	6.9	136.5	✓

535' E

-12	6.9	136.5	✓
N	7.2	136.2	✓
+5	9.5	133.9	✓
cb	9.5	133.9	✓
+2	9.5	133.9	✓

1434

+3	7.0	136.2	✓
1/4	6.8	136.6	✓
C	6.9	136.5	✓
+3	6.9	136.5	✓
+4	12.5	136.9	✓
+8	12.5	136.9	✓
1/4	6.7	136.7	✓
cb	6.0	137.4	✓
5	5.2	138.2	✓
+5	5.0	138.2	✓
	535' E		
-5	4.3	139.1	✓
5	4.5	138.9	✓
cb	5.4	138.0	✓
+9	5.9	137.5	✓
1/4	12.0	131.4	✓
+4	12.0	131.4	✓
+5	6.1	137.3	✓
C	6.1	137.3	✓
1/4	6.3	137.1	✓
+1	8.7	134.7	✓
+7	8.7	134.7	✓
cb	6.3	137.1	✓
N	6.3	137.1	✓
+12	5.7	137.7	✓

538' E 1434

-12	5.5	137.9	✓
N	6.1	137.3	✓
cb	5.8	137.6	✓
+3	5.9	137.5	✓
+6	8.2	135.2	✓
1/4	8.3	135.1	✓
C	8.9	135.5	✓
+2	5.3	138.1	✓
+7	5.7	137.7	✓
+9	11.5	131.9	✓
1/4	11.5	131.9	✓
+2	11.5	131.9	✓
+3	5.8	137.6	✓ ✓
cb	5.1	138.3	✓
5	4.3	139.1	✓
+5	3.9	139.5	✓
	553' E		
-5	2.9	140.5	✓
5	3.0	140.4	✓
+15	4.1	139.3	✓
cb	6.5	136.9	✓
+3	9.2	134.2	✓
1/4	6.8	136.6	✓
C	5.0	138.6	✓ ✓
1/4	4.4	139.0	

		143.44	143 4	
+1			8.1	135.3
cb			7.6	135.8
+1			3.9	139.5
N			4.3	139.1
+10			4.3	139.1
		573' E		
-5			1.5	141.6
N			1.7	141.7
+19			1.2	142.2
cb			5.1	138.3
+6			5.1	138.3
1/4			0.3	143.1
C			+0.9	144.3
1/4			1.0	142.3
cb			8.0	135.3
+3			7.1	141.3
5			1.4	142.0
+5			1.2	142.2
T.P.	12.08	154.92	0.60	142.84
		585 E	154.9	
-7			11.5	143.4
5			11.9	143.0
+15			12.4	142.5
+17			14.3	140.6
cb			15.3	139.6
+5			13.3	141.6

		154.9	
1/4		10.0	144.9
C		10.0	144.9
1/4		9.8	145.1
+4		10.5	144.4
cb		15.7	139.2
+4		15.7	139.2
+6		11.5	143.4
N		11.8	143.1
+5		11.8	143.1
	595' E		
-2		10.4	144.5
N		10.4	144.5
+16		10.2	144.7
cb		13.7	141.2
+5		9.6	145.3
1/4		9.8	145.1
C		10.1	144.8
1/4		9.9	145.0
+5		10.5	144.4
cb		14.6	140.3
+2		11.2	143.7
5		10.6	144.3
+5		10.4	144.5
	600 E = W.L. Guizot		
5		8.8	146.1

	154.92	NL9		
cb		9.4	145.5	✓
+2		14.2	140.7	✓
+5		9.3	145.6	✓
1/4		9.3	145.6	✓
C		10.3	144.6	✓
1/4		10.0	144.9	✓
+5		10.2	144.7	✓
+7		13.3	141.6	✓
cb		13.3	141.6	✓
+1		9.9	145.0	✓
N		9.8	145.1	✓
chk B.M.		6.60	148.3	SE Guizot + Santa Rita
	E.L. Guizot			
Scb.		6.70	148.2	✓ on Guizot
1' S.		7.4	147.5	✓
9' S.		7.1	147.8	✓
S.L.		6.5	148.4	✓
	18' E			
S.L.		5.7	149.2	✓
5' N		6.4	148.5	✓
7' ~		5.4	149.5	✓
8' ~		6.7	148.2	✓
10' ~		6.7	148.2	✓
12' ~		5.4	149.5	✓
Scb.		4.8	150.1	✓

		164.92		
	26' E	NL9		
Scb		3.9	151.0	✓
5' S		4.1	150.8	✓
7' ~		4.8	150.1	✓
8' ~		4.3	150.6	✓
10' ~		4.3	150.6	✓
12' ~		6.2	148.7	✓
16' ~		3.9	151.0	✓
20' ~		3.9	151.0	✓
	50' E			
S.L.		10.3	154.6	✓
9' N		4.4	150.5	✓
10' ~		1.5	153.4	✓
19' ~		1.5	153.4	✓
20' ~		1.3	153.6	✓
T.P.	12.84	167.31	0.45	154.47
	75' E	167.3		
Scb		11.3	156.0	✓
11' S		11.3	156.0	✓
12' ~		14.5	152.8	✓
14' ~		14.5	152.8	✓
15' ~		12.4	154.9	✓
20' ~ S.L.		10.0	157.3	✓
Curb OK from E.L. Guizot to 80' E.				
	100' E			
S.L.		7.7	159.6	✓

		167.31	1673	
2' N			8.1	159.2
5'			9.8	157.5
10'			9.9	157.4
13'			8.4	158.9
19'			8.3	159.0
20'			8.0	159.3
		135' E		
S. Cb.			4.7	162.6
4' S			7.8	159.5
13'			8.3	159.0
20' ~ S. L.			3.2	164.1
		150' E		
S. L.			1.6	165.7
5' N			7.5	159.8
9'			7.2	160.1
10'			4.6	162.7
17'			2.6	164.7
S Cb. Line			4.8	162.5
		160' E		
S Cb Line			3.0	164.3
5' S			1.9	165.4
10'			5.2	162.1
S. L.			5.6	161.7
	Curb out from 80' E of Govt to 168' E			
T.P.	6.25	171.88	0.68	166.63

		1728	
	175' E		
S. L.	4.5	168.3	
5' N	7.8	165.0	
9'	5.3	167.5	
20'	5.4	167.4	
	185' E		
S Cb	4.3	168.5	
S. L.	4.0	166.8	

Cross-Section Alley Block 46 Shermans Add
Between L+Imperial St
From 22nd to 24th St
20' Wide

B.M.	0.50	76.45		75.95	N.E. Cor. 22nd & L St
T.P.	3.31	68.12	11.64	64.81	
		0+0 = E.L. 22nd St			
S.L. Top Curb			2.91	65.21	Top Curb
℄			2.92	65.20	Top Paving
N.L. End Curb			1.80	66.32	Top
		15' E			
N.L.			1.70	66.4	
+2			2.9	65.2	
+6			3.5	64.6	
℄			3.4	64.7	
S.L.			3.7	64.4	
		55' E			
S.L.			4.9	63.2	
℄			4.3	63.8	
+5			4.1	64.0	
N.L.			3.4	64.7	
+2.3 Cen. Garage Dirt Floor			2.8	65.3	
		83' E			
N.L.			3.8	64.3	
℄			4.6	63.5	
S.L.			5.1	63.0	
+3.8 Cen. Garage Dirt Floor			5.1	63.0	
		110' E			
-3.5 " " " "			5.1	63.0	
S.L.			5.1	63.0	
℄			5.0	63.1	

Plotted on profile 8-27-25 CAT
Res.# 34077 Doc. 74

20' Wide

8-22-25
Swanson
Bliss
Northern

	68.12				
+6		4.8		63.3	
N.L.		4.5		63.6	
+11 Cen. Garage Dirt Floor		3.6		64.5	
	150' E				
N.L.		4.2		63.9	
+4		5.0		63.1	
℄		5.0		63.1	
S.L.		5.2		62.9	
	190' E				
S.L. Cen. Do Garage Dirt Floor		5.7	62.4	On Line	
+2		5.4		62.7	
℄		5.1		63.0	
N.L.		5.1		63.0	
+3 Cen. Do Garage Conc. Floor		4.6		63.5	
	235' E				
-3.5 Garage Dirt Floor		5.2		62.9	
N.L.		5.2		62.9	
℄		5.5		62.6	
S.L.		5.5		62.6	
	263' E				
S.L.		5.6		62.5	
+3		5.8		62.3	
℄		5.6		62.5	
N.L. Cen. Garage Dirt Floor		5.6		62.5	

Alley Block 46 — 6812 — 20' Wide

307' E

NL	Con Garage Dirt Floor	6.25	61.87
2		6.5	61.6
+3		6.6	61.5
SL		6.3	61.8

355' E

SL		7.0	61.1
+2	Con Garage Dirt Floor	7.05	61.07
2		7.3	60.8
NL		7.0	61.1

370' E

NL		7.0	61.1
+7		7.4	60.7
2		7.5	60.6
+5		7.5	60.6
+7		7.1	61.0
SL		7.0	61.1

390' E

SL		7.3	60.8
+2		7.3	60.8
+4		8.1	60.0
2		8.1	60.0
+5		8.0	60.1
+9		6.8	61.3
NL		6.8	61.3

404' E

NL		6.8	61.3
+1		6.8	61.3
+5		8.7	59.4
2		8.9	59.4
+4		9.1	59.0
+8		7.5	60.6
SL		9.3	60.8

408.4 = N Line 24th St

SL Top Curb		9.47	58.65
2 " Paving		9.40	58.50
NL " Curb		8.85	59.27

TP	7.02	66.38	8.85	59.27	N.E Cor 24th & L St
BM			3.41	64.88	64.89

Cross Section Alley Blk 199 Univ. Hghts
Between Louisiana + Texas
From University to Lincoln St. — 20' Wide

BM	0.70	313.63		312.93	BM NW Cor University + Texas
T.P.	9.25	315.42	7.46	306.17	
		0+0 = N Line Univ			
WL			9.17	306.25	
℄			9.40	306.02	
EL			8.19	307.23	
		5'N			
EL			6.7	308.7	
+5			7.7	307.7	
℄			7.7	307.7	
+5			8.1	307.3	
WL			6.2	309.2	
		18'N			
WL			5.7	309.7	
℄			5.6	309.8	
+6			5.4	310.0	
EL			4.8	310.6	
		50'N			
EL			5.0	310.4	
℄			5.0	310.4	
WL			5.4	310.0	
		95'N			
WL			5.4	310.0	
℄			4.9	310.3	
EL			4.8	310.6	
+3.5	Cen Garage Dirt Floor		4.85	310.57	

PLOTTED ON PROFILE 9-3-25 A.G.W.

315.42 — 20' Wide

S.W. 25 Gleason 9/1/25 Northern

		112'N		
-3	Garage Dirt		3.5	311.9
EL			4.1	311.3
+7			5.0	310.4
℄			4.9	310.5
WL			5.1	310.3
		150'N		
-7			6.0	309.4
WL			5.3	310.1
+3			4.8	310.6
℄			4.8	310.6
+3			4.7	310.7
EL			3.6	311.8
		189'N		
-4	Garage Conc Floor		3.18	312.24
-2	Conc Apron		3.56	311.86
EL			3.8	311.6
℄			4.6	310.8
WL			4.8	310.6
		205'N		
WL			5.1	310.3
℄			4.8	310.6
+4			4.7	310.7
EL			4.0	311.4
T.P.	4.92	316.04	4.30	311.12
		244'N		
-3	Cen Garage Conc Floor		4.30	311.74 on Line

Alley Blk 199 Univ Hghts

20' Wide

316.04

EL	on Conc. Apron	4.69	311.35	
℄		5.0	311.0	
INV		5.6	310.4	
	300' N			
INV.		5.2	310.8	
℄		5.0	311.0	
EL.		4.6	311.4	
	355' N			
-2.0	Con. Garage Conc. Floor	4.29	311.75	
EL.	Conc. Apron	4.78	311.26	
+6		5.7	310.3	
℄		5.7	310.3	
INV.		6.2	309.8	367' N Con Garage Dirt Floor 6' IN INV. ℄ 6.45 - 309.51
	392' N			
INV.		6.8	309.2	
℄		6.1	309.9	
+7	Conc. Apron	5.43	310.61	
EL	Con Garage Conc. Floor	4.83	311.21	404' N Con Garage Dirt Floor 4.5 IN INV. ℄ 6.9 - 309.1
	431' N			
EL	Con Garage Conc Floor	5.67	310.37	
+2.5	Conc Apron	6.07	309.97	
℄		6.3	309.7	
+7		6.7	309.3	
INV.		6.8	309.2	
				414' N Con Garage Dirt Floor 4.5 IN INV. ℄ 7.8 - 308.74

316.04

20' Wide

	451' N		
+10	Con Garage Conc Floor	7.05	308.99
INV.	Conc Apron	7.06	308.98
℄		6.6	309.4
EL		6.2	309.8
	481' N		
EL	Con Do Garage Dirt Floor	6.1	309.9
℄		6.3	309.7
INV.		6.4	309.6
	520' N		
INV.		5.9	310.1
℄		6.1	309.9
+6		6.0	310.0
EL		5.7	310.3
	542' N		
-1	Con Garage Conc Floor	5.16	310.88
EL		5.4	310.6
+0.5	Conc Apron	5.44	310.60
℄		5.5	310.5
INV.	Con Garage Dirt Floor	5.6	310.4
T.P.	1.75	317.55 5.97	310.57
	560' N		
-7	Con Garage Dirt Floor	7.9	309.7
INV.		7.1	310.2
-3		7.2	310.4
℄		7.2	310.4
EL		7.0	310.6

Alley Blk 799 Univ. Hghts
H.I. 312.55 20' Wide

590'N

E.L.		1.5	311.1
+4		2.0	310.6
℄		2.3	310.3
+6		2.3	310.3
+8		1.7	310.9
W.L.		1.7	310.9

600'N

W.L.		2.1	310.5
+2		2.3	310.3
+4		3.0	309.6
℄		3.0	309.6
+4		2.8	309.8
E.L.		2.0	310.6

604'N

E.L.		2.3	310.3
+2		2.6	310.0
+6		3.4	309.2
℄		3.4	309.2
+6		3.7	308.9
+8		2.8	309.8
W.L.		2.8	309.8

609.1'N = 10'S So. Curb Lincoln St.

W.L.	Top Curb	5.02	307.53
℄		4.4	308.2
E.L.	Top Curb	3.95	308.60

H.I. 312.56

619.1'N = Edge Conc. Gutter So. side Lincoln

E.L.			4.74	307.81
℄			5.33	307.23
W.L.			5.85	306.70
T.P.	918	36004	1.69	310.86
B.M.			3.18	316.86	B.P.S.E. Cor Texas & Lincoln

KEITH'S RAILROAD CURVE TABLES.

Published by KEUFFEL & ESSER CO., New York.

HOW TO USE KEITH'S TABLES.

EXAMPLE.

Wanted a Curve with an Ext. of about 12 ft. Angle of Intersection or I. P.=23° 20′ to the R. at Station 542+72.

Ext. in Tab. IV opposite 23° 20′=120.87
120.87÷12=10.07. Say a 10° Curve.

Tan. in Tab. IV opp. 23° 20′=1183.1
1183.1÷10=118.31.

Tab. V. correction for A. 23° 20′ for a 10° Cur.=0.16
118.31+0.16=118.47=corrected Tangent.

(If corrected Ext. is required find in same way)
Ang. 23° 20′=23.33°÷10=2.3333=L. C.

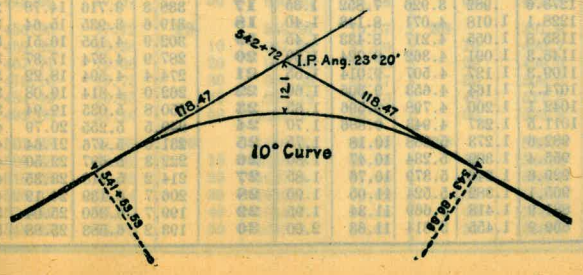
2° 19½′=def. for sta.	542	I. P.=sta.	542+72
4° 49½′= " " "	+50	Tan.=	1.18.47
7° 19½′= " " "	543	B. C.=sta.	541+53.53
9° 49½′= " " "	+50	L. C.=	2.33.33
11° 40′= " " "	543+	E. C.=sta.	543+86.86
	86.86		

100—53.53=46.47×3′(def. for 1 ft. of 10° Cur.)=139.41′=
2° 19½″=def. for sta. 542.

Def. for 50 ft.=2° 30′ for a 10° Curve.

Def. for 36.86 ft.=1° 50½′ for a 10° Curve

(These tables are published in Field Books of KEUFFEL & ESSER Co., New York, N. Y.)



DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

ROADWAY 14 FEET WIDE. SIDE SLOPES 1½ TO 1.

FOR SINGLE TRACK EMBANKMENT.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	7.0	7.2	7.3	7.5	7.6	7.8	7.9	8.1	8.2	8.4	0
1	8.5	8.7	8.8	9.0	9.1	9.3	9.4	9.6	9.7	9.9	1
2	10.0	10.2	10.3	10.5	10.6	10.8	10.9	11.1	11.2	11.4	2
3	11.5	11.7	11.8	12.0	12.1	12.3	12.4	12.6	12.7	12.9	3
4	13.0	13.2	13.3	13.5	13.6	13.8	13.9	14.1	14.2	14.4	4
5	14.5	14.7	14.8	15.0	15.1	15.3	15.4	15.6	15.7	15.9	5
6	16.0	16.2	16.3	16.5	16.6	16.8	16.9	17.1	17.2	17.4	6
7	17.5	17.7	17.8	18.0	18.1	18.3	18.4	18.6	18.7	18.9	7
8	19.0	19.2	19.3	19.5	19.6	19.8	19.9	20.1	20.2	20.4	8
9	20.5	20.7	20.8	21.0	21.1	21.3	21.4	21.6	21.7	21.9	9
10	22.0	22.2	22.3	22.5	22.6	22.8	22.9	23.1	23.2	23.4	10
11	23.5	23.7	23.8	24.0	24.1	24.3	24.4	24.6	24.7	24.9	11
12	25.0	25.2	25.3	25.5	25.6	25.8	25.9	26.1	26.2	26.4	12
13	26.5	26.7	26.8	27.0	27.1	27.3	27.4	27.6	27.7	27.9	13
14	28.0	28.2	28.3	28.5	28.6	28.8	28.9	29.1	29.2	29.4	14
15	29.5	29.7	29.8	30.0	30.1	30.3	30.4	30.6	30.7	30.9	15
16	31.0	31.2	31.3	31.5	31.6	31.8	31.9	32.1	32.2	32.4	16
17	32.5	32.7	32.8	33.0	33.1	33.3	33.4	33.6	33.7	33.9	17
18	34.0	34.2	34.3	34.5	34.6	34.8	34.9	35.1	35.2	35.4	18
19	35.5	35.7	35.8	36.0	36.1	36.3	36.4	36.6	36.7	36.9	19
20	37.0	37.2	37.3	37.5	37.6	37.8	37.9	38.1	38.2	38.4	20
21	38.5	38.7	38.8	39.0	39.1	39.3	39.4	39.6	39.7	39.9	21
22	40.0	40.2	40.3	40.5	40.6	40.8	40.9	41.1	41.2	41.4	22
23	41.5	41.7	41.8	42.0	42.1	42.3	42.4	42.6	42.7	42.9	23
24	43.0	43.2	43.3	43.5	43.6	43.8	43.9	44.1	44 2	44.4	24
25	44.5	44.7	44.8	45.0	45.1	45.3	45.4	45.6	45.7	45.9	25
26	46.0	46.2	46.3	46.5	46.6	46.8	46.9	47.1	47.2	47.4	26
27	47.5	47.7	47.8	48.0	48.1	48.3	48.4	48.6	48.7	48.9	27
28	49.0	49.2	49.3	49.5	49.6	49.8	49.9	50.1	50.2	50.4	28
29	50.5	50.7	50.8	51.0	51.1	51.3	51.4	51.6	51.7	51.9	29
30	52.0	52.2	52.3	52.5	52.6	52.8	52.9	53.1	53.2	53.4	30
31	53.5	53.7	53.8	54.0	54.1	54.3	54.4	54.6	54.7	54.9	31
32	55.0	55.2	55.3	55.5	55.6	55.8	55.9	56.1	56.2	56.4	32
33	56.5	56.7	56.8	57.0	57.1	57.3	57.4	57.6	57.7	57.9	33
34	58.0	58.2	58.3	58.5	58.6	58.8	58.9	59.1	59.2	59.4	34
35	59.5	59.7	59.8	60.0	60.1	60.3	60.4	60.6	60.7	60.9	35
36	61.0	61.2	61.3	61.5	61.6	61.8	61.9	62.1	62.2	62.4	36

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

MADE IN GERMANY.