

Dulzura Conduit Traverse
Location Cottonwood River

5

TRANSVERSE

398

~~W50~~
W50

Published by H. S. CROCKER COMPANY, Stationers, Drawing Materials, and Mathematical Instruments, San Francisco.

Table showing the difference of latitude and departure in running 80 chains at any course from 1 to 60 minutes.

MINUTES.	LKS.	MINUTES.	LKS.	MINUTES.	LKS.
1.....	2 $\frac{1}{2}$	21.....	49	41.....	95 $\frac{3}{4}$
2.....	4 $\frac{1}{2}$	22.....	51 $\frac{1}{2}$	42.....	98
3.....	7	23.....	53 $\frac{1}{2}$	43.....	100 $\frac{1}{2}$
4.....	9 $\frac{1}{2}$	24.....	56	44.....	102 $\frac{1}{2}$
5.....	11 $\frac{1}{2}$	25.....	58 $\frac{1}{2}$	45.....	105
6.....	14	26.....	60 $\frac{1}{2}$	46.....	107 $\frac{1}{2}$
7.....	16 $\frac{1}{2}$	27.....	63	47.....	109 $\frac{1}{2}$
8.....	18 $\frac{1}{2}$	28.....	65 $\frac{1}{2}$	48.....	112
9.....	21	29.....	67 $\frac{1}{2}$	49.....	114 $\frac{1}{2}$
10.....	23 $\frac{1}{2}$	30.....	70	50.....	116 $\frac{1}{2}$
11.....	25 $\frac{1}{2}$	31.....	72 $\frac{1}{2}$	51.....	119
12.....	28	32.....	74 $\frac{1}{2}$	52.....	121 $\frac{1}{2}$
13.....	30 $\frac{1}{2}$	33.....	77	53.....	123 $\frac{1}{2}$
14.....	32 $\frac{1}{2}$	34.....	79 $\frac{1}{2}$	54.....	126
15.....	35	35.....	81 $\frac{1}{2}$	55.....	128 $\frac{1}{2}$
16.....	37 $\frac{1}{2}$	36.....	84	56.....	130 $\frac{1}{2}$
17.....	39 $\frac{1}{2}$	37.....	86 $\frac{1}{2}$	57.....	133
18.....	42	38.....	88 $\frac{1}{2}$	58.....	135 $\frac{1}{2}$
19.....	44 $\frac{1}{2}$	39.....	91	59.....	137 $\frac{1}{2}$
20.....	46 $\frac{1}{2}$	40.....	93 $\frac{1}{2}$	60.....	140

TABLE FOR RUNNING ON SLOPES.

In the following table the first column shows the angle, the second the number of links to be added to a chain on the slopes, to make one chain horizontal measurement.

ANGLE	COR. IN LINKS	ANGLE	COR. IN LINKS	ANGLE	COR. IN LINKS	ANGLE	COR. IN LINKS
	0		0		0		0
1	0.24	11	1.88	18	5.14	25	10.54
2	0.38	12	2.24	19	5.76	26	11.26
3	0.55	13	2.63	20	6.42	27	12.24
4	0.76	14	3.06	21	7.11	28	13.37
5	0.98	15	3.53	22	7.85	29	14.34
6	1.24	16	4.02	23	8.64	30	15.47
7	1.55	17	4.56	24	9.47	35	22.07

FROM
Loring's Book Store

Index

Conduit Traverser

1209+86.5 to Cottonwood

Intake 1-14

Conduit Traverser

P.C. Bridge to Pine Creek

Intake 17-21

Angle & distance Conduit Traverser

25-30

Search for Sec Cor

on North Side Sec 10

17S, 3E. 35

Cottonwood River Location

bet Smith & Barber Ranches 36-37

Search for Sec Cor

NW Cor Sec 10 17S, 3E. 38

Plain Traverser Site

of Cottonwood bet SOM WGs

Property & Hanson Creek 39-40

Index

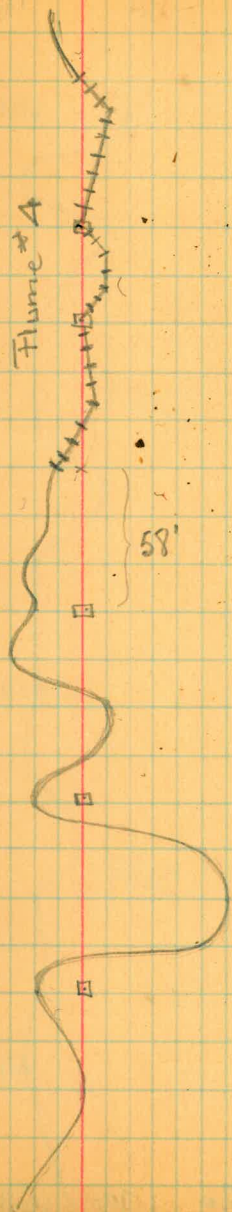
Topography of Conduis

Map by Resections 41-53

Location of Cottonwood

River from traverse line by
offsets 54-

Sta	Disr	Lt	Rt	Cal Co	Mag Co	Stair
1221						
□ +64.1	131.9	3707		S8940W	S89-W	100 281
□ +08.3	55.8	3206		N5413W	N5340W	500 555
1220						
1219						
□ +85.3	173.0		5638	N2207W	N2135W	500 623
1218						
□ +14.5	170.8	4511		N7845W	N7805W	500 670
1217						
□ +44.8	69.7	5639		N3334W	N3340W	600 669
1216						
	551.2	17103	5638 ✓			



3.

Sta	Dist	H	R	Calc	Magn to	Stadia
□ +717	2346		6505	N 445W	N 43W	300 535
1227						
1226						
□ +238	2479	3138		N 69 50 W	N 69.1 SW	120 377
1225						
1224						
□ +748	1490		4127	N 38 12 W	N 37 30 W	500 629
1223						
□ +905	843	3559		N 79 39 W	N 79 - W	500 575
1222						
□ 1221 +960	945		4740	N 43 40 W	N 43 15 W	500 594

81034 6737 15412

Bryan 1228 + 71.7

11-13-09.

West of
Salisbury
Fay.

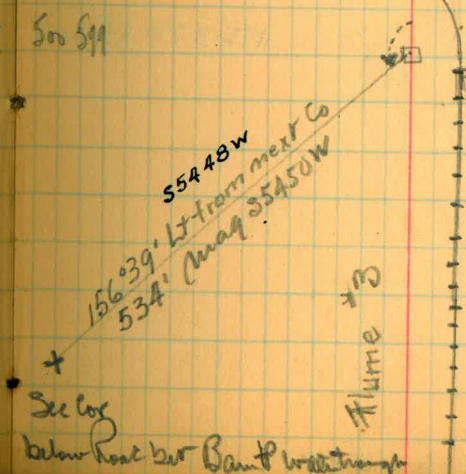
4

Sta	Dist	Ht	Rt	Calc	Mag. Co	Scara
1234	+930	2881	2742	N3248W	X3220W	101 287
1233						
1232	+951	1979	1040	X506 W	X436 W	101 246
1231	+063	1888	4641	N1546 W	X1525 W	101 288
1230	+063	1000	3540	N3055E	N3130 E	500 599
1229						
1228						

7748' 7423' 4620'

+
Sec Coy

below road but same position



5

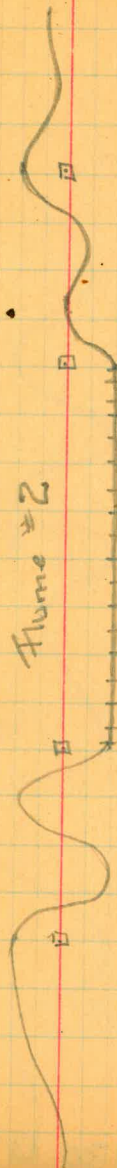
Sta	Dist	Ht	Rt	Calc	Mag	Stations
1242						
1241						
□ +567	2625	1856		N1616W	N1550W	300562
1240						
1239						
□ +669	1898		5447	N240E	N13-E	100289
1238						
□ +811	859	1919		N5207W	N5140W	500585
1237						
1236						
1235						

538.1 ✓ 3815 ✓ 5447 ✓



6

Sta	Dist	M	R	Calco	Mag. Co.	Section
1249						
□ +020	1899	6736		N1640 E	N1705 E	300 490
1248						
□ +21A	776		6224	N84 16 E	N85 15 E	500 576 E
1247						
1246						
1245						
□ +938	730.6		5914	N21 52 E	N22 55 E	300 599
1244						
□ +192	174.6	2186		N37 22 W	N37 - W	100 274
1243						
	672.7 ✓	8942	12138 ✓			



7
Sta Dist ht PR Cal Co Mag Co Station

1255

□ +182 835 5300 N145E N215E 500 583

1254

□ +585 59.7 5927 N544SE N561SE 600 659

1253

□ +120 1465 5711 S654E S6520E 500 646

1252

□ +226 894 8124 N5701E N5735E 500 589

1251

1250

□ 1249919 130.7 4103 N2423W N2355W 100 730

509.8-15330 13935 ✓



9 Sta	Dist	Ht	Rt	Calc	Mag to	Scario
1268						
□ +710	1489		3121	N3938W	N38-W	400 548
1267						
□ +156	1554	2026		N6959W	N6920W	400 555
1266						
□ +175	99.1	2026		N4933W	N49-W	500 597
1265						
1264						
1263						
□ +725	2450	1919		N7907W	N7830W	300 544
1262						

647A. 6011 3121 ✓



11 C

Sta	Dist	LT	RT	tab to mag to	Station cor.
□ + 581	2356		2339	S 8349 E S 8305 E	101 335 (35)
1282					
1281					
□ + 733	1848		3441	N 7232 E X 305 E	40 513 (35)
1280					
□ + 111	1622	2330		N 3751 E X 3835 E	30 461 (35)
1279					
1278					
□ + 997	1114	4313		N 6121 E X 6205 E	500 610 (35)
1277					
1276					

69A0v 6643 5920 ✓



12 ^c

Sta Dist Lt RF Curv Mag Co Searia cor

1290

1279 1212 735 57658E 57630E 400 521 (36)

1289

1288

1287

1286 221.8 2046 56935E 56850E 400 621 (36)

1286

1285

1284 1924 620 57951E 57930E 400 591 (36)

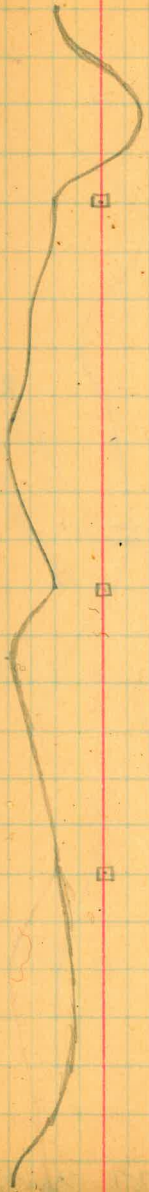
1284

1283

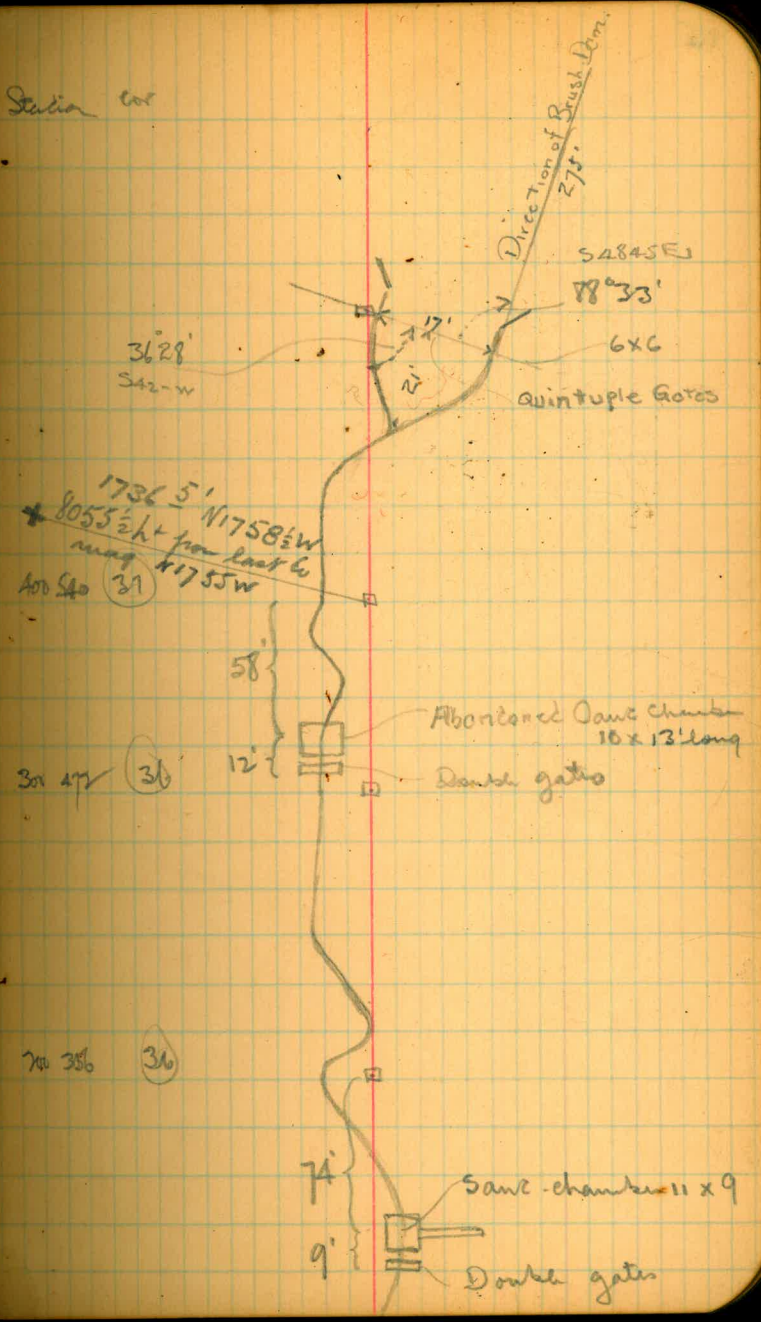
535A 1355 3046

Bigan 1285+937

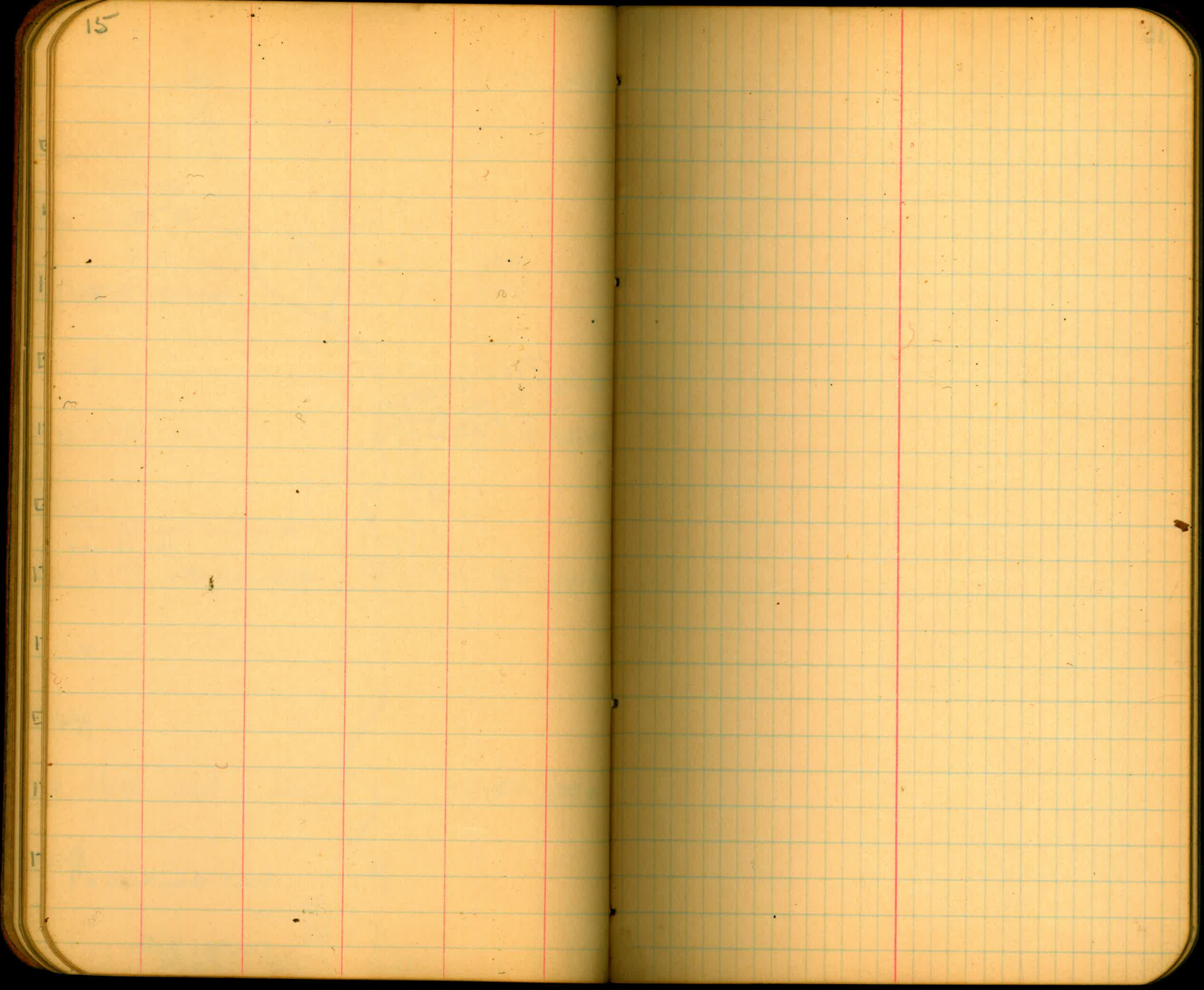
11-15-09

Wueste
Salisbury
Fey.

Sta	Dist	ht	Pr	Calcs	Mag	Stain	cor
14							
+307							
1303							
1302							
+896	141.1		1532	N77°53'E	N78°35'E	400 540	(31)
1301							
+178	171.8	1714		N62°21'E	N62°50'E	300 477	(36)
1300							
1299							
+610	156.8	1303		N74°35'E	N75°-E	700 386	(36)
1298							
469.7	55.7	1532					



15



17 P Pine Creek Branch
Sta Dist L R

Calco Maglo Stain

Commencing at Sta 1274+87.5
See page 10

11-15-09

Wueste
Salisbury
Foy

1280

+99.1 129.2 2873

N902W N80W 40 528

141.8
7039

1279

+139 185.2 3075

N1921E N20-E 30 485

60.49
30.27
18.25
29.32

1278

1277

+092 204.7

7210 N4946E N5020E 30 504

1276

1275

1274

+1273+87.5 221.7 7039

N2224W N22-W 30 530

= N End P.C. Bridge

7408 12927 7210

N815E

= Co of 1272+44.5 - 1274+87.5



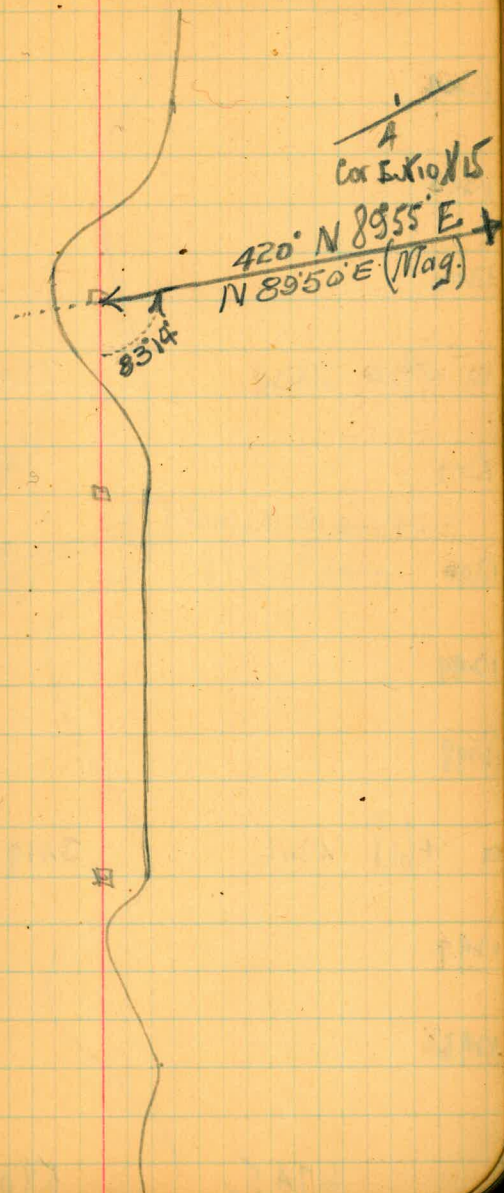
18	Sta	Dist	Lt	Rt	Calc	Mag Co	Station
1287	+964	295.0	759		N6247W	N6215N	300 985
1286	+079	1885	728		N5448W	N5410W	300 487
1285							
1284							
1283							
1282	+474	2605	4643		N4720W	N4640W	300 559
1281	+283	119.1		825	N037W	N	500 619
1280							

8631 / 6210 825



5717
 4515
 902
 1649
 820 1/2
 930
 4648
 1452
 728
 1559
 759 1/2
 374

19	Sta	Dist	N	R	Course	Mag	Stations
1295							
1294							
1293	□ +504	4114	3511		N42°39'W	N42°-W	600 512
1292							
1291	□ +349	1155		1852	N7°28'W	N65°55'W	500 645
1290							
1289	□ +914	2435		3627	N76°20'W	N65°30'W	300 544
1288							
	7704 ✓	3511		5519 ✓			



70
Sta Dist N P Calco Maglo Stalia

4739
2349

1304

1303

1302

□ +924 2439

2349 N15 29 E N16-E 300 842

1301

1300

1299

1298

□ +618 4306

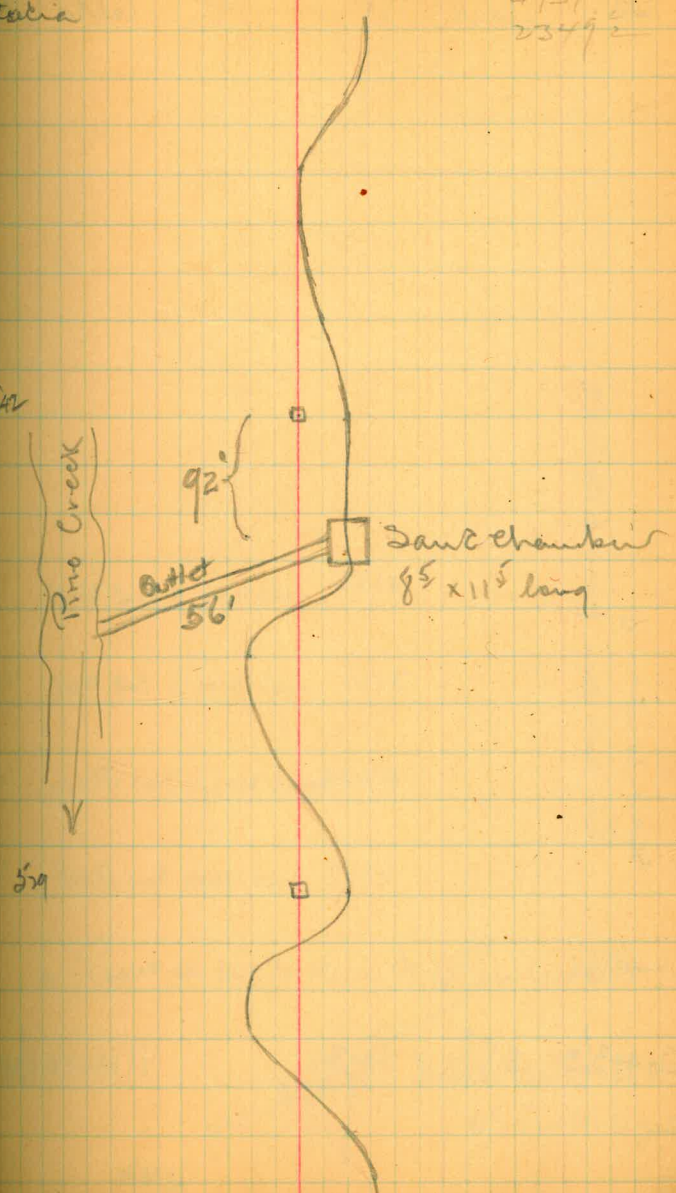
3419 N19 20 W N75 0 W 100 529

1297

1296

6745 ✓

5908 ✓



21

Sta

Dist

W

P

Calcs

Mag

Stake

X
 X
 X
 X
 □ +751

Station location of
 Pine Creek dam from □ Bost-36.3

4522
 3136
 4244
 6707

□ Bost-36.3

388

2933½

N1404W

N1445W

300338

57' West end of West dam

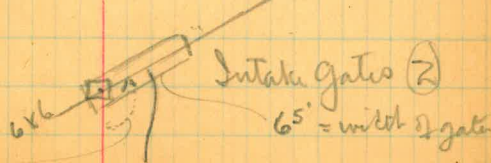
43' East end of West dam

22' North end of East dam

7' South end of East dam

= Point on big bench in ctr of Pine Creek Dam

150°26'



22

8

73

8

24

25

Angle adjustment of
Concise Traverse

Sta.	L+	R+	Cal Co	Mag Co
998+592		223	N20 36 $\frac{1}{2}$ E	N19 50E
□ 998+592	5232		N34 18 $\frac{1}{2}$ W	N36 05W
□	30 AA		N18 13 $\frac{1}{2}$ E	N17 35E
□		604 $\frac{1}{2}$	N48 57 $\frac{1}{2}$ E	N47 55E
□ 947+99		3412 $\frac{1}{2}$	N86 06E	N84 40E
□		900 $\frac{1}{2}$	N51 53 $\frac{1}{2}$ E	N50 55E
□	2407		N42 53E	N41 50E
□ 879+765	1648		N67 00E	N66 25E
□ 877+678	1838 $\frac{1}{2}$		N83 49E	N82 50E
□		1617 $\frac{1}{2}$	S77 33 $\frac{1}{2}$ E	S77 40E
	9017 $\frac{1}{2}$	2445	N76 04E	N75 05E

from Two line bet Rangos 3^d to Barnett
mining at Rangos

(Pointing to Sta 1040+935)

(Pointing to Sta 1000+07.6)

From RR above Tunnel 3 (Pointing to Sta 998+592)

Began here 12-19-09 Wueste, Salisburg, Pet Johnson

From rock above Tunnel 4 (Pointing to □ above Tunnel 3)

N76 00 E (6) (Pointing 949+738)

(Pointing to 947+899)

From RR above Tunnel 4 (Pointing to □ above Tunnel 4)

(Pointing to □ above Tunnel 4)

N83 46 E (2) (Pointing to □ 879+765)

= Old Sta 90+07 $\frac{1}{2}$ page 23 & 27 Book # 1

= Co by Peter Observation page 27

Began here 12-12-09 (1/2 day) Wueste, Salisburg, Crandall

Lr R. cal w mag6

938 N17 50E N18-E

□ W. outside edge road below
Bancroft KingPointing to □ above $\frac{1}{2}$ Tunnel

1822 N27 28 E N27 30 E

Sta 1152 + 56.7

Pointing to □ at outside edge road
below Bancroft King 250'

N2330 E (23) (25)

2157 N23 53 E N24-E

Sta 1152 + 56.7

Pointing to Sta 1155 + 08.5

Began here 12-28 09

West, Schibum, Pitt John

1438 N45 50 E N46-E

□ Above $\frac{3}{4}$ Tunnel

Pointing to Sta 1152 + 56.7

1545 N31 12 E N31 30 E

Sta 1117 + 54.9

Pointing to □ above $\frac{3}{4}$ Tunnel

□ 1117 + 54.9

010 N15 17 E N15 30 E

N1457 E (20) (22)

Pointing to Sta 1118 + 44.6

026 $\frac{1}{2}$ N15 27 E N20 55 E

□ above Tunnel #1

Pointing to □ 1117 + 54.9

□ 1088 + 82.3 36 49 $\frac{1}{2}$ N 92 8 W N6-W

N846 W (18) (20)

Pointing to Sta 1089 + 84.8

□ 1228 N28 21 $\frac{1}{2}$ E N38 50 E

Top of Tunnel

Pointing to Sta 1088 + 82.3

□ 1040 + 93.5 443 N15 5 3 $\frac{1}{2}$ E N16-E

Pointing to □ above Tunnel #1

□ 1040 + 93.5 2415 $\frac{1}{2}$ N 3 39 W N3 15 W

N349 W (10) (11)

Pointing to 1042 + 83.9

3309 $\frac{1}{2}$ 3023 ✓

L+ R+ Cal Co May 26

15021

S42°W 83°W

N42°E

(3)

Pointing to SE rd Bama Mtns

507

N124°E N125°E

□ about 1/4 Tunnel

Pointing to N mt Bama Mtns

918

N125°E N125°E

N125°E (28) (30)
Sta 1192+962

Pointing to Sta 1195+66.1

425

N32°E N22°E

□ about 1/4 Tunnel

Pointing to Sta 1192+962

15528 ✓

28

1

29 Angle Adjustment Banco Menden
at Engrs base to Dutaker.

H	R	cal to Maglo		
	4630	S39 54 E	S39 35 E	□ NW of Cottonwood Dam Pointing to Sta C 1304 + 30.7
106 03 1/2		S 82 24 E	S 87 35 E	□ above and west of P.C. Bridge Pointing to □ on flat NW of Cottonwood Dam
	331	S 19 39 1/2 W	S 17 30 W	Sta P 1302 + 92.4 Pointing to □ on Ridge high above and west of P.C. Bridge
106 03 1/2	50 01 ✓			
150 49		S 16 08 1/2 W	S 14 W	N 15 24 E 39 1/2 Sta P 1305 + 36.3 Pointing to Sta P 1302 + 92.4
238		N 13 02 1/2 W	N 13 05 W	□ above P.C. Sand Chamber Pointing to Sta P 1305 + 36.3
	104	N 10 24 1/2 E	N 10 30 W	□ on Ridge above P.C. Bridge Began here 12-28-09 Pointing to □ above P.C. Sand Chamber west of Salisbury antenna
2440		N 11 28 1/2 W	N 11 20 W	□ Behind Engrs base Pointing to □ on ridge above P.C. Bridge
2913 1/2		N 13 11 1/2 E	N 13 02 E	N End Banco Menden Pointing to □ Behind Engrs base
20720 1/2	104 ✓	N 42 25 E		Began here 12-28-09 west of Salisbury P.C. Station

L+

R+

Calleo Magto

631

S13 11½ W S13½ W

N31½ E ✓ see page 29

Behind Sugarbees

Pointing to North End Bar

1341

S19 50½ W S19 45 W

Begin here 12-30-09

Mention

□ on Ridge above Cottonwood gate Pointing to □ behind Sugarbees

4458½

S33 31½ W S33 30 W

Sta C 1302 + 196

Pointing to □ on Ridge S of Legate

N77 53 E (37)

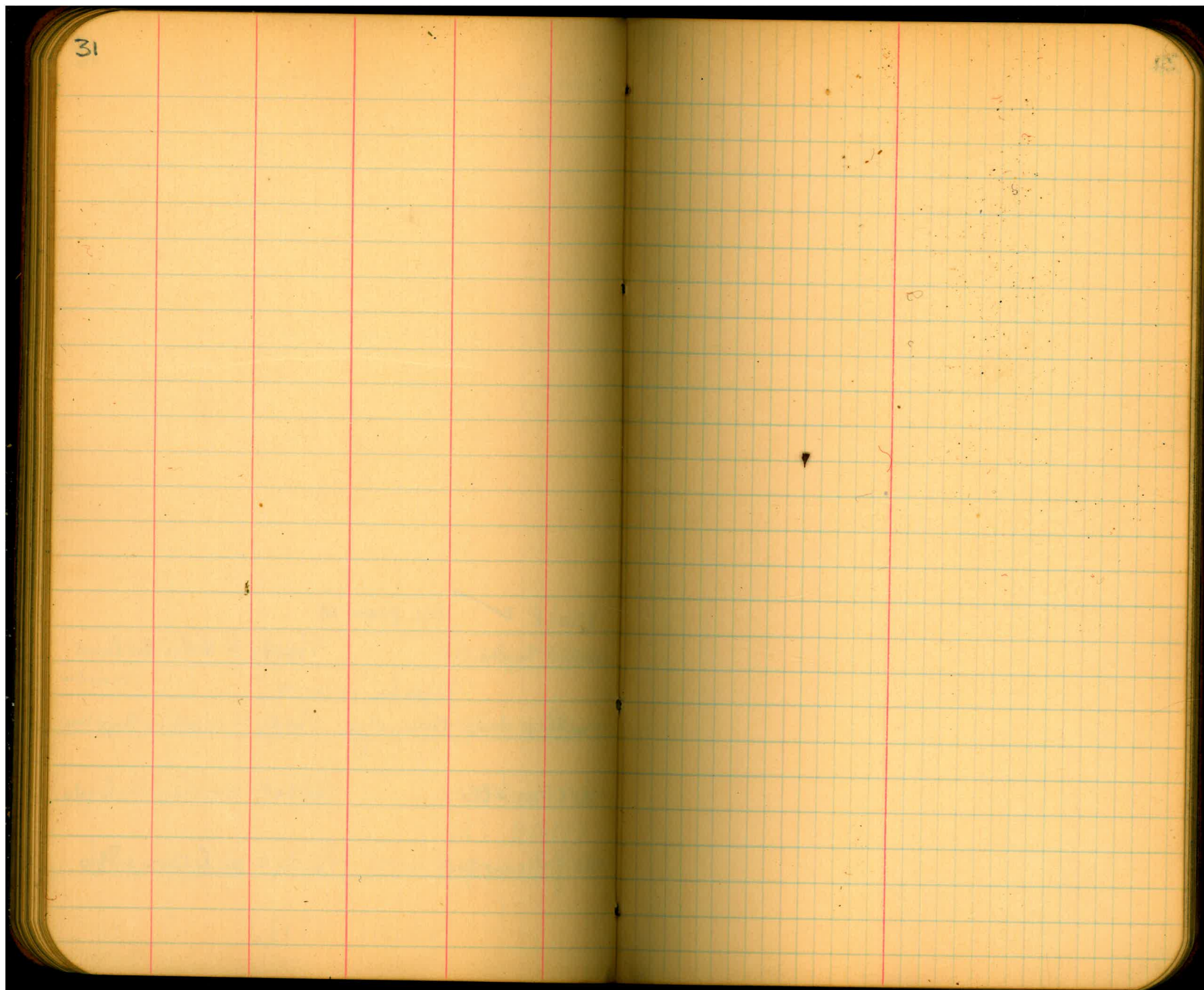
11824 S78 30 W S78 30 W

Sta C 1304 + 30.7

Pointing to Sta C 1302 + 89.6

6518½

11824 ✓



32

33

34

35

36 Rough location at Cottonwood -

Creek Smith Ranch - north to

Stake	Lt	Rt	Cal Co	Mag
Dist				

□ 3	753	2607	N85°27'E	N54°50'E
-----	-----	------	----------	----------

545	559 Rt			
-----	--------	--	--	--

375	1759 Lt			
-----	---------	--	--	--

379	704 Lt			
-----	--------	--	--	--

756	494 Lt			
-----	--------	--	--	--

145	5409 Lt			
-----	---------	--	--	--

□ 2	1848	2028	N29°20'E	N21°05'E
-----	------	------	----------	----------

□ .	1486	10°14' R	N46°48'E	N49°-E
-----	------	----------	----------	--------

1422	4721 Lt	N44°08'E	N43°20'E	
------	---------	----------	----------	--

△ G	2153	5155	N39°34'E	N38°40'E
-----	------	------	----------	----------

5890 E

7223 3621

Barb Ranch

Feb 15 1910

W. Westo.

W. B. Byrum

A. Salomon

E. A. Bernard & Hans Koning

38° 38° 38°

Pine bottom site shot

SE cor school here

SW cor school here 46' long

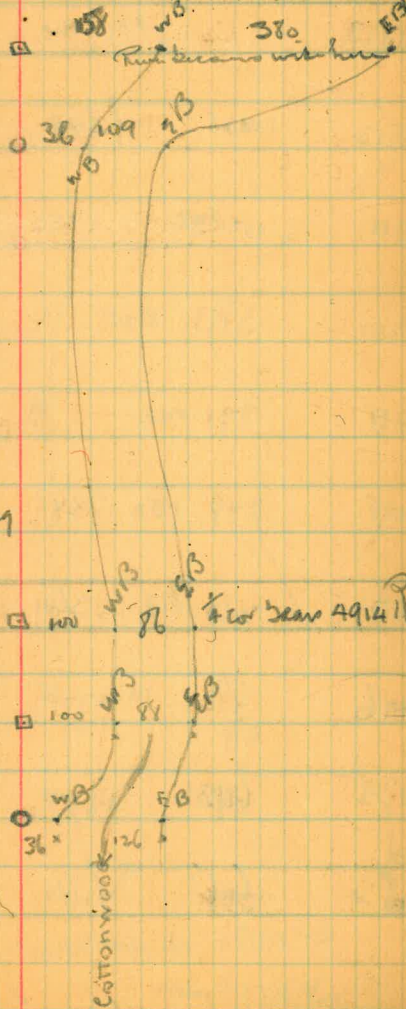
NE cor bldg here

SE cor school here 32' long

on bldg 170' east of road

on bldg 50' east of road

Pine bottom site shot

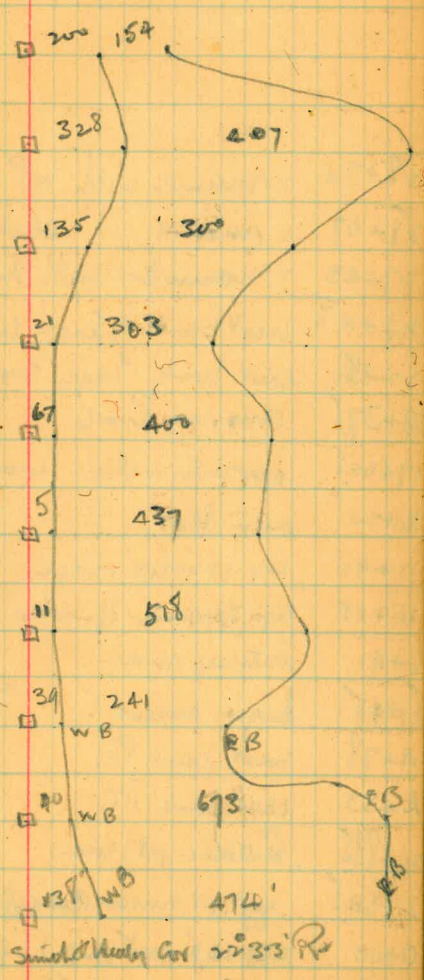


Sta Station W R Calc mag.

13					
12	425	5400	N3447E	N3470E	
11	1073	7050	N8847E	N8806E	
10	583	1951	N1757E	N1710E	
9	371	4532	N1547W	N235W	
8	399	1838	N4726W	N4815W	
7	266	1636	N2848W	N430W	
6	883	4722	N1212W	N13-W	
5	693	1807	N3510E	N3425E	
4	506	210	N5317E	N5224E	

15653 13613

Stak in field 48' east of road
 Stak 20' east of road in field
 on Rk 54' above road
 on Rk 9' above road
 Stak 38' W of road on hill side.
 Edge of road, Stak
 Edge road, Stak
 Stak edge road
 on Stak out at edge road
 in Betw 77' above road



Small Waddy Cor 2233' Rk
 mag N72SE

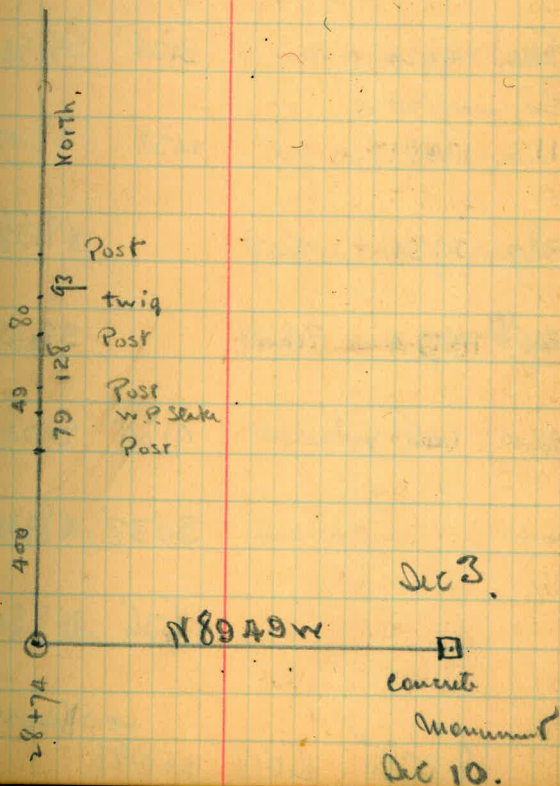
38 West between 3 & 10: 1753 E S. 1/4 Sec. 10.

Feb. 14 1910

West of Bryan, Oklahoma
Kanning.

- 28+74 = monument with W.P. Stake
- 27+07 = monument - stick in it.
- 27+43 = monument with stake in it (13' E of my line)
- 23+08 west bank of Eagle creek.
- 22+50 east bank Eagle creek
- 14+37.5 major road
- 17+60.5 opposite section monument (8' S of my line)
- 16+20 enter flat
- 11+90 top ramble ridge
- 10+05 top of cluster of rocks - an expression
- 16+91 interior mon.
- 15+45 begin ascent
- 14+78 west bank P.C.
- 14+33 east bank P.C.
- 2+88.5 interior pt. mon.
- 2+54.5 wit. pt. mon. descending
- 0+00 = 12.2' east and 1.6' south of 1/2 cor. but 3/10
96°45' N 89°49' W N 69°45' E
N 65°6' E

Rough Measurements



39.

421

574

Traverse of Cottonwood - azimuth from

Sta	Dist	Lat	R+	Calc	Mag
79+70.1	405.0		25°55'	S8728E	S8710E
75+28.9	441.2	24°00'		N6631E	N6650E
59+51.9	1577.0	19°15'		S8923E	S8910E
50+16.5	935.4	18°16'		S7008E	S7005E
40+54.4	962.1		31°35'	S5152E	S5140E
23+11.3	1743.1		14°38'	S8327E	S8325E
20+38.2	273.1	17°07'		N8155E	N8200E
6+45.8	1392.4	8°40'		S8058E	S8125E
0+00	645.8		91°09'	S042W	S020W
			30°32'	N8933E	N8930E
			16°36'	N5901E	N5910E
				N4225E	
8375.1	16018	21025			

Barrett Meridian to $\frac{13}{24} \frac{18}{19}$ Twp Cor
at East end of Barrett Reservoir.Feb 17 1910 and
Mar 30 1910Woods
Salisbury
Koning
Bennett

Hub

5' north of cor post Dalagan
west grain field

□ on RR

East end Dalagan gorge

□ on RR

West end Dalagan gorge

Hub 2' west of north gate post

Township cor (corner)

To Township cor.

Sec cor (corner)

To Section cor

Barrett Meridian

Sta	Dist	ht	Rt	cor to	Mag
40	149+36.0				
146+74.5	261.5	436'		S6952E	S6940E
144+08.0	266.5		235'	S6516E	S6506E
141+67.0	241.0	4429		S893E	S89-E
138+82.3	284.7		5331	S4444E	S4430E
131+50.8	731.5	1904'		N8145E	N8200E
129+138	237.0		6010'	S7911E	S7900E
114+01.7	1512.1	5030'		S8521E	S8505E
106+31.0	770.7	629'		S7951E	S7936E
98+64.5	766.5		7010'	S7322E	S7305E
94+47.1	417.4		554'	S8032E	S8020E
86+14.1	833.0		1221'	S8626E	S8615E
83+75.1	239.0	11019'		N8113E	N8130E

$\frac{3533}{6560.9}$ $\frac{312}{9127}$ 10903'

a Rock with six rim
 25' below trail in center

141+36.0

on RR on N. side Riv.

Stream begins to
 construct here

this south of trail from
 big bench

$\frac{21728E}{1736}$
 $\frac{1736}{6952}$

58728E	8145
819	5331
9847	3510
120	130
8713	4448
1221	4421
9334	8913
8626	2357
554	6518
9032	23
710	6952
7322	
73629	
7951	
530	
8521	
610	
7911	
1464	
9818	
150	1746

Resections on Road River to K3cp. along
 name
 13 page 37
 6900 R N7328E N7328E
 9445 R S4720E S4720E
 12854 R S4951E S4951E

Rk Zarsikha about
 8856 R S8636E S8636E
 15408 R S6011E S6011E

Rk Dant Sahi road gate
 7259 R N3840E N3840E
 5853 R N6023E N6023E

Rk Dant Sahi house
 7450 R N4031E N4031E
 5301 R N8416E N8416E

Dant Sahi dam
 7646 R N4227E N4227E
 5450 R N8605E N8605E

Cotton wood mill by Rk Rk
 8324 R N4906E N4906E
 6522 R N6652E N6652E
 9629 R S5156E S5156E

concave line 3-17-10 W. West. B. West.
 set up at 981+04.1 from 980+07.4
 " " - 1020+52.1 " 1021+67.4
 " " - 1040+93.5 " 1036+09.1

set up at 981+04.1 from 980+07.4
 set up at 998+59.2 from 1000+07.6

set up at 998+59.2 from 1000+07.6
 set up at 1013+22.4 " 1014+91.1

set up at 998+59.2 from 1000+07.6
 " " - 1040+93.5 " 1036+08.1

set up at 998+59.2 from 1000+07.6
 " " - 1020+93.5 " 1036+08.1

set up at 998+59.2 from 1000+07.6
 " " - 1013+22.4 " 1014+91.1
 " " - 1040+93.5 " 1036+08.1

name	Dist	Loc	mm	Dist	Loc	mm
Santa's back place post P.P.	844 R	N5022E	N4930E	Set up at	998+592	pointing to 1000+075
	6317 R	N6447E	N640E	" "	1013+224	" " 1014+911
	7741 R	S7104E	S710E	" "	1040+935	" " 1036+081
Rock flag also etc. P.P.	11521 R	S6309E	S640E	Set up at	1013+224	pointing to 1014+911
	13208 R	S1637E	S1638E	" "	1040+935	" " 1036+081
Dirt tree at base of Road P.P.	11658 R	S6132E	S6200E	Set up at	1013+224	pointing to 1014+911
	9902 R	S4353E	S4245E	" "	1020+521	" " 1021+674
Proa bank opp camp pr	10921 R	S6909E	S70E	Set up at	1013+224	pointing to 1014+911
	9128 R	S5037E	S5015E	Set up at	1020+521	" " 1021+674
	14200 R	S645E	S650E	" "	1040+935	" " 1036+081
Cir Santa's back outflow	5154 R	N8309E	N8310E	Set up at	1040+935	" " 1036+081
Run angle	8118 R	N8045E	N810E	Set up at	1083+534	Pointing to 1085+1316
Indian Camp	17955 R	S2504E	S2450E	" "	1120+028	" " 1120+913

3356

name	Date	Cal to	mm		
Road angle	7542R	N7509E	N7550E	Survey at 1083+53	Pointing to 1085+136
Julia Camp	15911R	S7807E	S7720E	1091+040	1093+034
	18343R	S2116E	S21E	1120+038	1122+913
Road angle	8009R	N2251E	N2235E	Survey at 1091+040	Pointing to 1093+034
	8745R	N6346E	N6405E	1120+038	1122+913
	7537R	S2308E	S2335E	1136+058	1137+04
	9747R	S642W	S635W	1142+075	1139+862
Road angle	10847R	N5129E	N515E	Survey at 1091+040	Pointing to 1093+034
Sta 100 gird	11620R	S1834E	S1850	Survey at 1120+038	1122+913
Road angle	10120R	N4402E	N4505	Survey at 1091+040	Pointing to 1093+034
Sta 100 gird					
(giving error)	10208R	S1103W	S1010W	1142+075	1139+862
Road angle	5910R	S3435E	S3420E	Survey at 1136+058	Pointing to 1137+04
in gird with tan	11457R	S2352W	S24W	1142+075	1139+862
Oak tree inside creek	5203R	S4642E	S464E	Survey at 1136+058	Pointing to 1137+04
black trunk (angle Pt)	7605R	S1500E	S1450E	1142+075	1139+862

Stacia

Pow Camp
 $\frac{3}{4}$ gully 610' -15°30' 14817R S1003W S1010W
567'

Pin angle 530' -2210' 13120R S3501E S35-E
below $\frac{1}{2}$ tunnel 455'

Pow Pt 203' +2728 5624R N4331W 14340
when turntable road branch for wa road
160

Pin angle 300' -1828 14634R S2028E S2040E
below $\frac{1}{2}$ tunnel +31'
301

Cr. Sump cam 211 -1547 2523R N3821E (38/200)
13 with 100' long ant in line with angle part of $\frac{3}{16}$ tunnel
19 at base
196

West movable tower 10401R 116540W 116540

East movable tower 6920R S7319E S7320
44

Set up at 1151+1185 Pointing to 1152+560

Set up at 1180+040 Pointing to 1173+740

Set up at sta 1192+962 Pointing to 1195+661

Set up at sta 1192+962 Pointing to 1195+661

Set up at 1195+661 Pointing to 1192+962

Set up Cr of tower Pointing to 1195+661

Set up Cr of tower Pointing to 1195+661

45

□ in front of
Sug's house

1328' +530'
1315

lat to map
336 R 116.0
K1634E

Set up at 1195+661 Painter from 1192+962

Set up at □ above following an static shot
(oriented from 1195+661)

662
660
1328

64' +17- 10856h+ S72SW

NW cor Sug's house

49' +6°52' 13158h+ S6320W

NE cor

86' +618' 13653h+ S59SW

SE

228 - 16145h+ S3230W

NW cor Blacksmith shop

229 - 16638h+ S2935W

N2 cor

16305h+ S33W

cut cor of W tower

14642h+ S17-E

cut cor of E tower

108 3403h+ N174SW

SW cor of Mechanics bank house

115 2640h+ N102SW

SE cor of

Porch 6' wide
on SE & N sides
6x7 bath w/ NW cor



50 long

16

Set up at □ following an plate old
(oriented from 1195+66!)

86	+2015	6730K	15116W	NE	200	Reservoir	} 13' wide
82	+2215	8249H	16630W	SE	"	"	
148	-	1349H	1230E	SW	"	Store	} 6' porch on west 40' long
157	-	854H	1175E	SE	"	"	
159	-	533H	1108E	SW	"	Banking house	} 30 x 50 ft 9 x 8 4 x 11 120 70' DAY S
221	-1018	7575P	14140E	SW	"	Pottery house	
234	-1038	2720P	14345E	SE	"	"	
242	-916	1820P	13440E	NW	"	"	
1160	-	2710P	11432E	Pr on road to East tower			
1033	-	5356P	11700E	Pr on road to East tower			
847	-	8309P	58030E	Pr on road to East tower			

47 Strip at 100 in front of sugar house

757

1044

559306

865

12500R

*

(oriented from 1195 + 66.1)

935

825

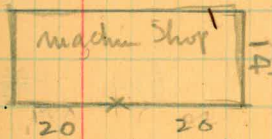
Pr on Road to East Train

Pr on Road to East town where wood road branches

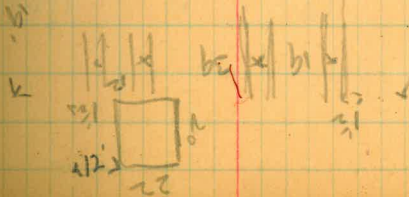
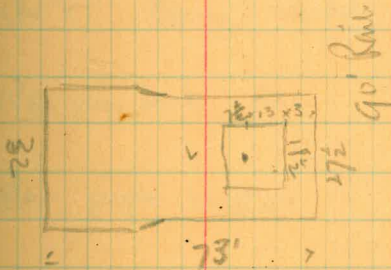
*

Sketch of Buildings etc East Bunch

S



48'



48

Perimeter \square in front of Eng's house
(oriented from 1195+66.1)

875 +724 1072 P S24E

720 - 1423 P S21SE

655 - 14110 P S22SE

598 -838 13945 P S24E

524 -1305 14055 P S22SE

582 -1246 12010 P S43NE

11+ 14216 P S2130E

149 - 15140 P S4530E

127 - 14528 P S5830E

\square in front of
Ston

138 - 1720 P 11-W

725
7
630
925
775 740
720

Paint on wood - rear

Upper Prospect Chaff

Second highest

Second lowest

Sommer chaff

Wood chaff etc. part

To 2 sur. Dennis Dam

SE - pipe rack

NE - pipe-rack

668

598

594

554

5652

582

29

Set up at □ in front of store oriented

117

6534h 166w

165

3306h 1330w

□ at little barn

287

2447h 1125w

Set up at □ at little barn oriented

89

534h 1304w

85

1319h 1382w

122

1757h 1430w

125

1238h 1376w

□ in road when little bend left to water trough

504

2504h 1150w

Pia □ in front of Eng house

Str WC 4x4 north of mechanics bunk house

Air dug-out cellar, on west side of road
between store and barn 10 x 12' into bank

Pia □ in front of store

SE cor little barn

SW cor " "

NW cor " "

NE cor " "

Outings at □ at little bar

140H N265W

320H N835W

344H N29W

605H N311W

181

1552P S47SE

937 - 936

6316P N380E

908 - 1230

9924P N740E

Out my at □ - road to these mines

240

15733H S210E

1130

2427H N750W

1389

1454H N6540W

1470

1219P N375W

circle from □ in front of store

ctr end of east section of big dam

ctr west end of above

SE cor. flat rock

SW cor. hay room

ctr WC. north of Bourne house 4x6

Junction of lower road and lower-rans
on east side

east bank river at angle point

from Starbuck

ang. - rough track

angle in road.

watering trough

ctr of power line 16x16 (incl edge road)

1007

937

764

2

694

2

1388

805

2

735

2

1470

51

Survey at \square at ridge runs to trough

1086

2127R 1030m

Ctr. Lehmatus house 10x12

1006

2822R 1123m

SW cor of hay room

973

3212R 1135m

SE cor of lean to barn



965

3220R 1135m

SW cor East barn

946

3506R 1154m

SE cor East barn

27 wire

17338R 557108

ctr of WC at little barn

opposite to Run

at 1235 + 930

90

-2144 to WB 100' wide

125

Sta 1241 + 86.7 to Run sig 133' north

from ctr plus 2

292

to WB 60' wide

at 1263 + 75

35

to WB 175' wide

junction of PC & CC 100' above ctr of
run at this Sta.

52

at 1267 + 156 PC beams
 top of beam and pass in west
 4 ft. 9 in. B. bridge

P 1277 + 092 90' to chr

P 1279 + 130' to chr 40' wide

P 1283 + 474 175 to chr

P 1290 + 914 105 to chr
 enlarge to 150' wide

P 1298 + 618 40' to chr 20' wide

CC (1283 + 581 + 102')
 was home 60 ft. Dec 9827
 (we 100' from each
 1283 + 591 + 45')

53

5551

7552

1805

S714E

3852

S8950E

808

S51-E

175+165

5457

S1920E

172+408

2757

1655

N6532E N6540E

169+479

2924

1433

N1227E N1236E

167+557

1922

1213

S1300E S8250E

162+454

5103

7430

S7047E S7030E

159+412

3042

950

S343W S350W

156+604

2808

8304

S1233W S1235W

152+658

3941

442

S6931E S6915E

149+300

3298

421

S743E S74-E

B209

8706

4423

5552

10954

5457

4450

4727

1131

818

2744

3852

$\frac{6952}{4451}$
 $\frac{11428}{10954}$
 $\frac{10954}{5457}$

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 $\frac{10954}{5457}$

$\frac{10954}{5457}$
 $\frac{10954}{5457}$

on top big bench in

$\frac{10954}{5457}$
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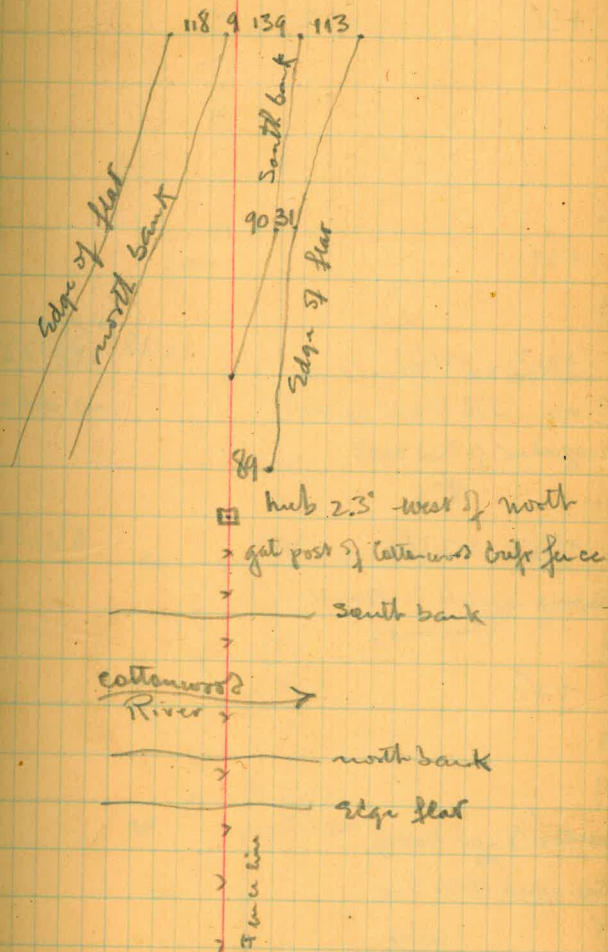
$\frac{10954}{5457}$
 $\frac{10954}{5457}$

54

Location of Cottonwood River
and gravel Banks from Town Line

	+76				
13					
12					
11					
	+74				
10					
9					
	+84				
7					
	+47				
6	+458	1392.4	8140	S1058 E	S8125 E
6					
	+71				
5					
4					
	+57				
	+22				
3					
2					
1					
	0+80				

April 8 1910. R. West, H. B. Byrne,
Hans König.

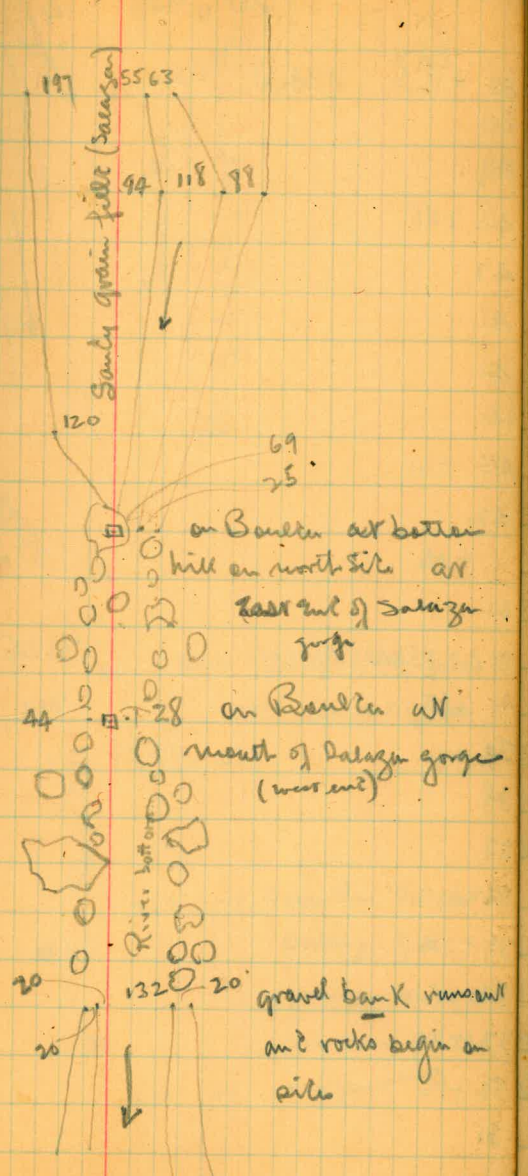


Concrete Monument at Township Cor
between Range 3 & 4 East.

30 + 11
 29
 + 513
 28
 27
 26
 25
 + 29
 24
 + 113 17431
 23
 22
 21
 + 382 2731 1707
 20
 19
 + 45
 18
 17
 + 59
 16
 15
 14

1438 S8327E S8326E
 N8155E N82-E

Valley opens out
 from here on



56

□ +16.5 9354 1816

50

49

48 +55

47

46

45

44

43 +01

42

+06

41

□ 40+544 9621

+65

39 +11

38

37

36 +11

35 +54

34

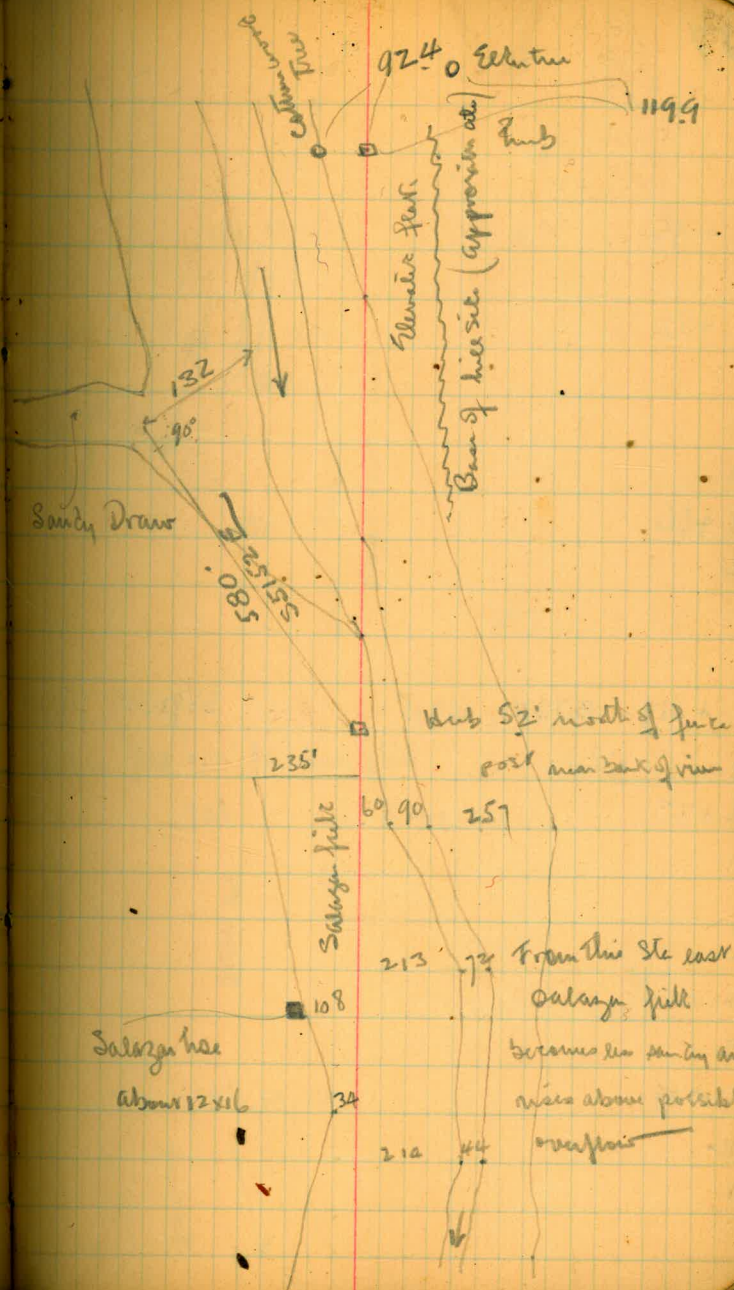
33 +94

32 +56

31

57008E 57005E

3135. S5152E S5140E



57

71

70

69 + 96

68

67 + 52

66

65

64

63 + 66

62

61

60

59 + 519 1577.0 1915

58

58 + 23

57

56

55

54

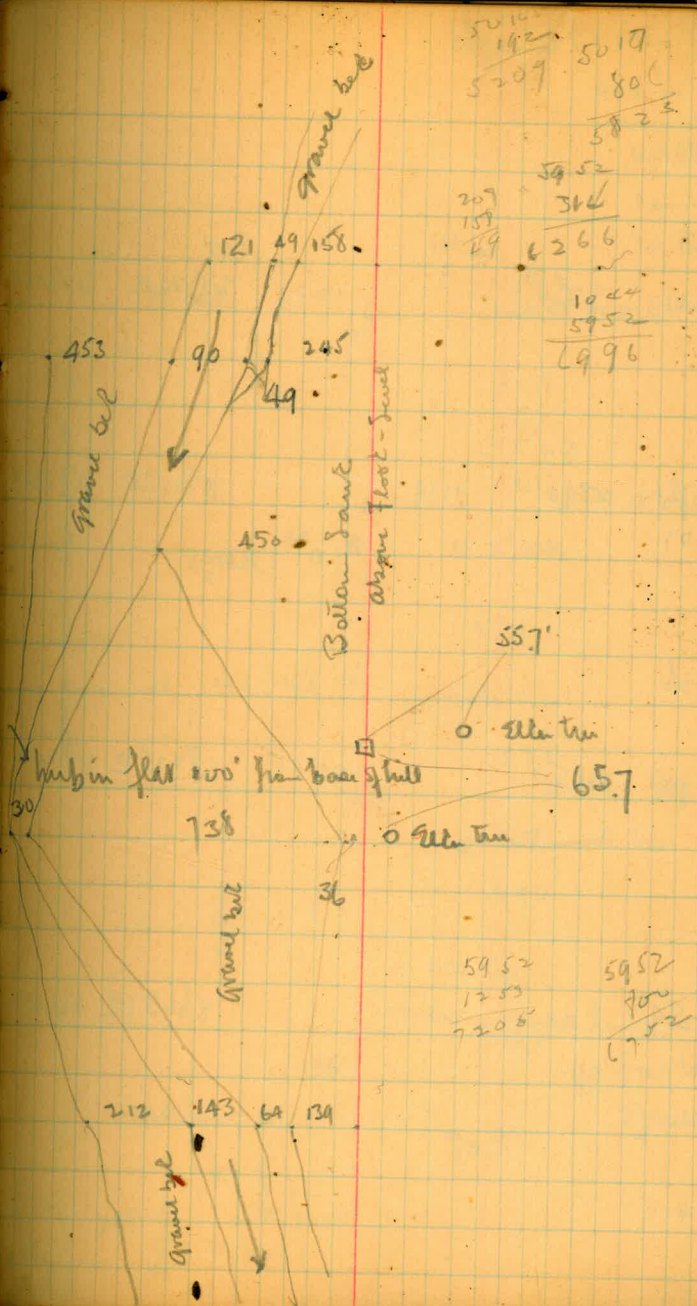
53

+ 09

52

51

S8923E S8910E



5011
192
5209

5017
80
5823

209
159
29

5952
366
6266

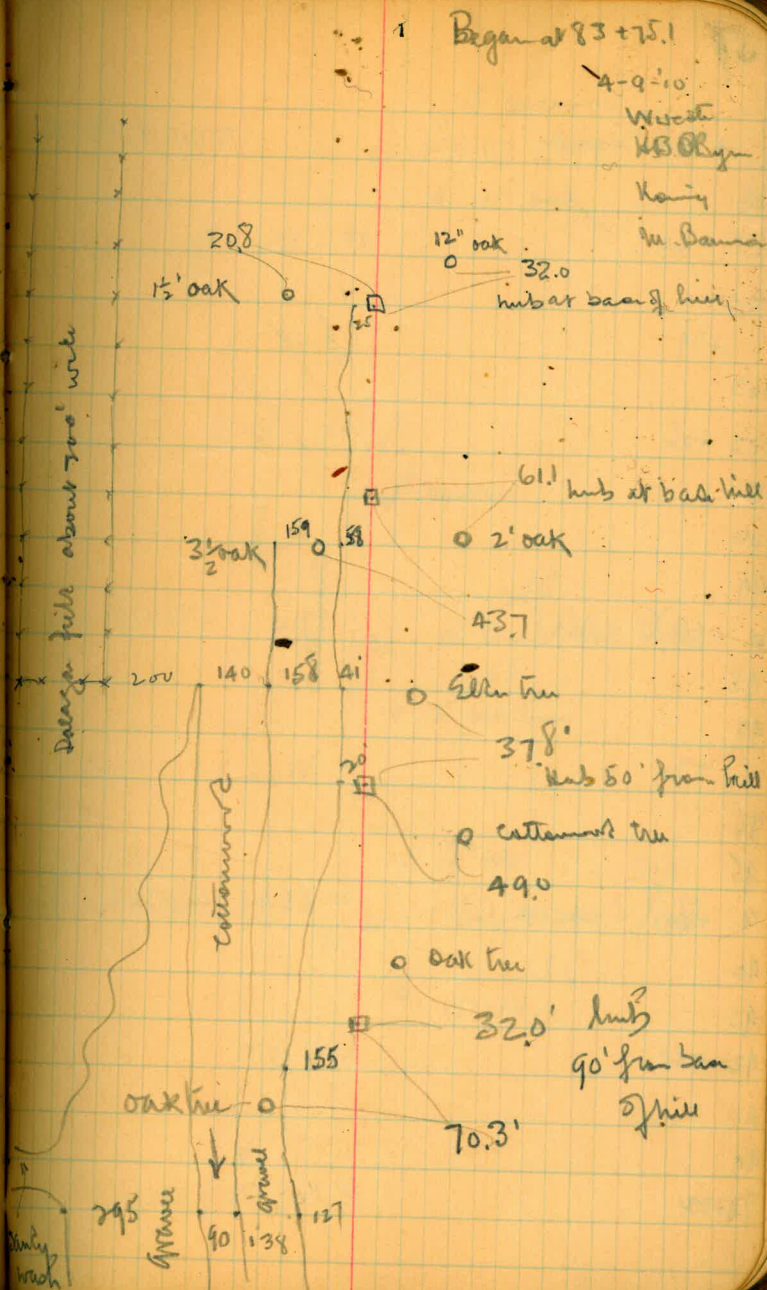
1020
5952
6976

5952
1253
7205

5952
900
6852

58

99
 98
 87
 □ +14.1 8330 1221 S8626E S8615E
 86
 85 76.1
 31.8
 84 89.32
 □ +75.1 2390 1119 N8113E N8130E
 83 +07
 82
 81 +26
 80
 □ +70.1 4050 2555 S8721E S8710E
 79
 78
 77
 76
 □ +289 4417 2400 N6637E N6650E
 75
 74
 73
 □ +05



59

□ +31.0 770.7 629 57951E 57935E

106

105 +0A

104

+29

103

102 +06

101

100

99

□ +64.5 766.5

710 57322E 57305E

98

97

+70

96

95

□ +47.1 417.4

554 58032E 58020E

94

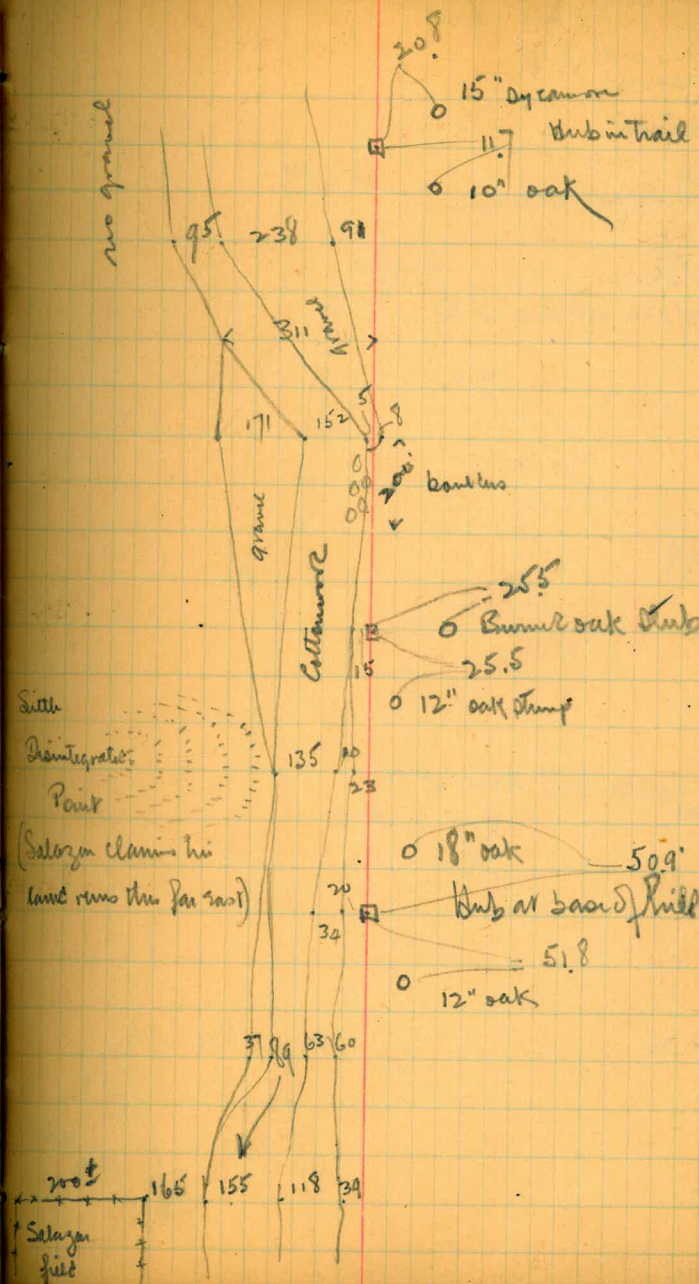
93

92 +20

91

90

94+32



60

130 + 19

129 + 13.8

125

120

119

+ 18

118

117

116

115

114 + 0.7

114

113

112

111

110 + 26

109

108

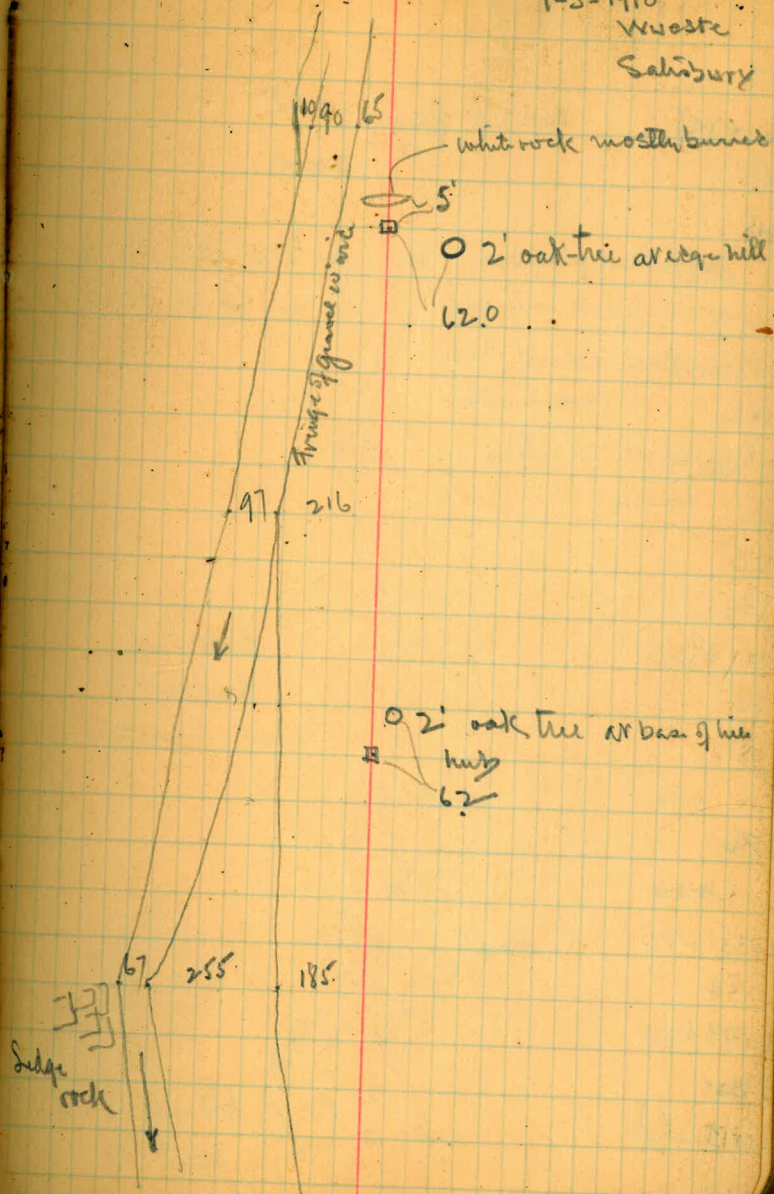
107

Began 114 + 0.7

7-5-1910

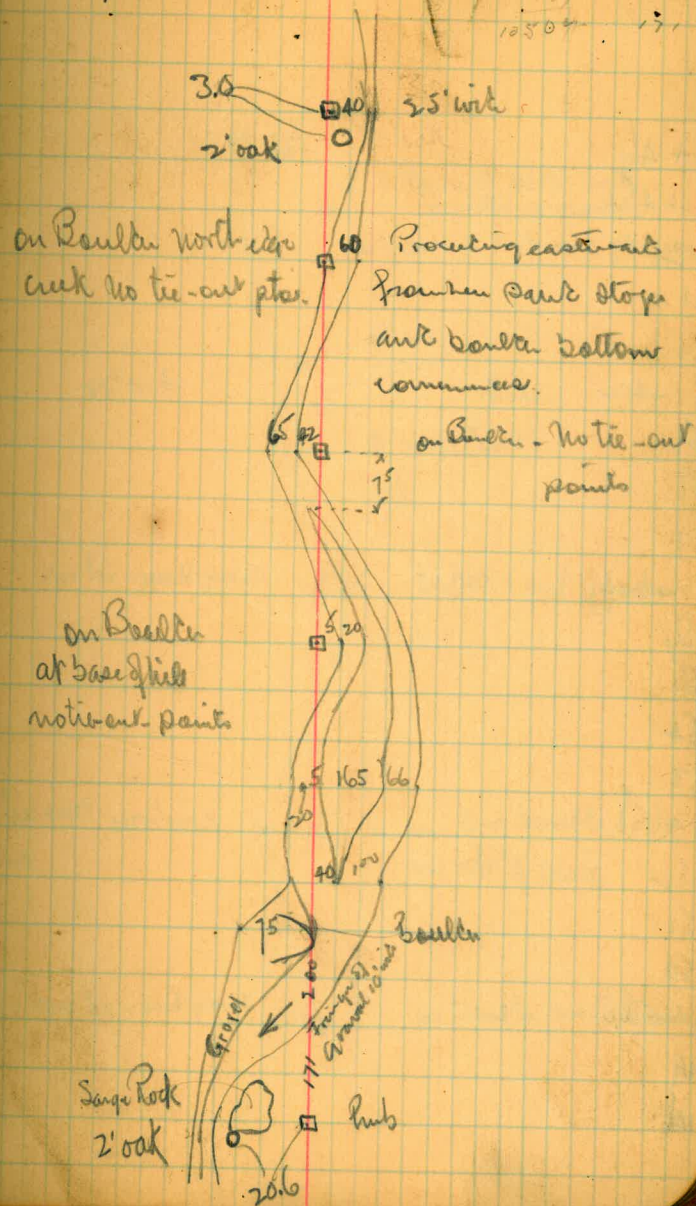
Waste

Salisbury



147
 □ +745
 146
 145.
 □ +080
 144
 143
 142
 □ +670
 141
 140
 139
 □ +823
 138.
 137
 +94
 136
 +44
 135 +22
 134
 133 +22
 132
 □ 31 + 508

1045
 137
 10504



62

+ 46

□ + 454

162

161

160

□ + 412

159

158

157

□ + 604

156

155

154

153

□ + 658

152

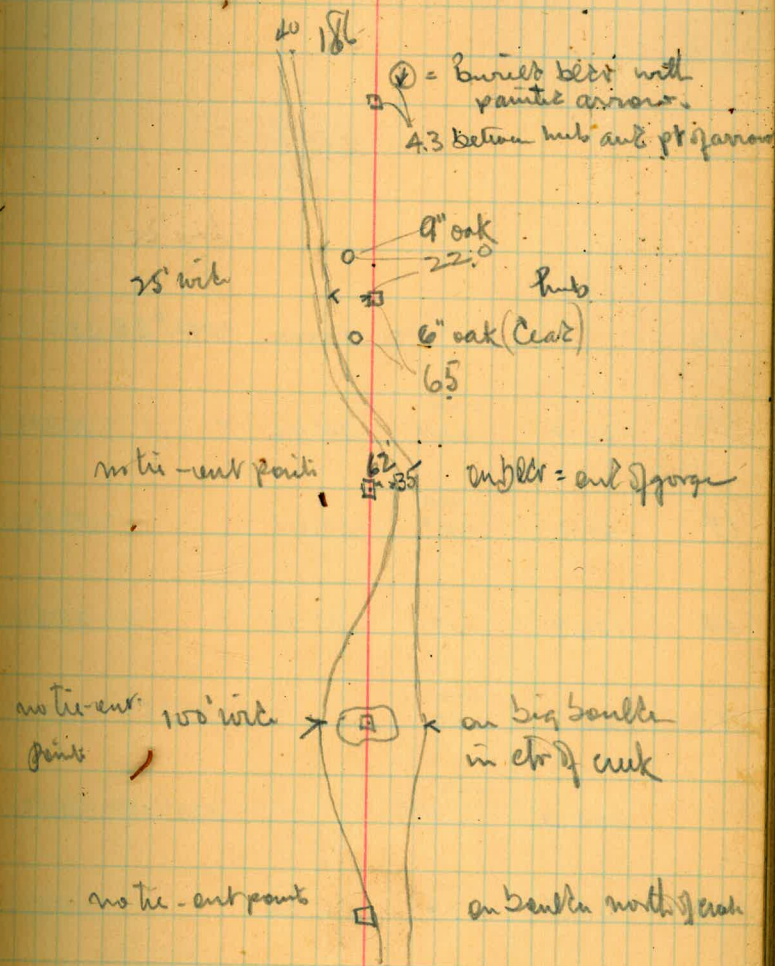
151

150

□ + 360

149

148



63

STA	DIST	STDAI	L	R	CALC	MC
16					191°20' S 32 12' E	N 32°14' E corr 0°2'
15	32.0	⁻⁰⁰ 0.315	30°46'		N 70 55' E	N 71 15' E
14	60.2	⁻⁰⁰ 0.60	20.41		S 78°22' E	S 78° E
13	116.9	⁻⁰⁰ 1.17	3°59'		S 57°41' E	S 57 30' E
12	65.1	⁻⁰⁰ 0.65		8°15'	S 53 42' E	S 53 30' E
11	243.7	⁻⁰⁰ 2.445		130°49'	S 61 57' E	S 61 30' E
10	65.8	0.66	16 12		N 12°46' E	N 12 15' W
9	105.4	^{-2°37'} 1.065	10 49 1/2		N 3°26' E	N 4° W E
			82°27 1/2	280°21'	N 14 15' E	

SEE PAGE 78

64

H^o LINE

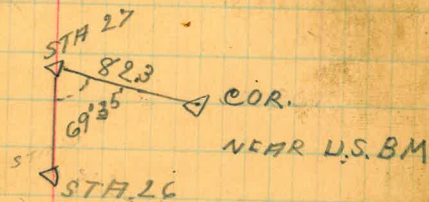
STA	DIST	STOPI	L	R	CHL
25			2°03'		N32°00'E
					N32 14 E error 0.4'
24	35.9	0.355	39°50'		N34°03'E
					N34 30 E
23	103.5	1.035		58°43'	N74°08'E
					N74 30 E
22	58.1	0.585	27°06'		N15°20'E
					N16 E
21	113.3	1.14	4°26½'		N42°26'E
					N43 E
20	95.9	0.955	20°06'		N46°52½'E
					N47 30 E
19	63.8	0.64		85°36'	N66°58½'E
					N67 30 E
18	106.1	1.06	19°50'		N18°37½'E
					N18 W
A 17	72.1	0.72	19°54½'		N1°12½'E
					N1°50 E
A14=16	27.4	0.28	11°07'		N21°07'E
					N21 45 E

144°23' 144.19

65

STA DISC STDAI L R C/F

31					
30	119.7	1.205	14°15'	N53.05	N53W
29	120.7	1.21	14.05 1/2	N38.50	N38.30W
28	314.7	3.16	13°23 1/2	N24.44	N24.30W
27	263.9	2.65		61.61 N11.21	N11W
26	112.0	1.12	19°43'	N72.22	N72W
25	70.2	0.70	84.53 146.20	61.01 N51.39	N52W
					N214 E



66

67

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71

STA DISC L R CALCO MC

28 490.5 4.15 ✓ ✓ N7233½E N72106
2943 20904½

N7648½E

28 105 02½ S7648½ S7740 TRUE COURSE N7648½E ✓

29 165.0 ✓ 76 28 ✓ S2814E S28 E

30 130.5 ✓ 61.00 ✓ N7518E N7530E

31 104.6 ✓ 62 12½ S4342E S4325E

32 245.0 ✓ 2° 00 N7405½E N7420E

6100 ✓ 24543 ✓
N7205½E

32 17'34" ✓ S7205W TRUE COURSE N7205½E error 0.2'

33 186.0 ✓ 2945½ ✓ S8937W S8950E

34 34.4 ✓ 66 22½ ✓ S5951½W S60W

35 114.7 16 08½ N5346W N5330E

N5346W

S5951½W

4324 0014

72

STA	DIST.	L	R	CHLCO	MC
17	224.2 ✓	6'01" ✓		S62°55'W	S63°W
18	232.1 ✓	3830		S68°56'W	S69°W
19	62.1		2824 ✓	N72°34'W	N72°30'W
20	136.6 ✓		30°53' ✓	S79°02'W	S79°W
21	97.4 ✓	2802 7356	7655 ✓	S48°09'W	S48°10'W
21			53.19	S76°10'W	S76°W
22	52.0 ✓		13441 ✓	S22°51'W	S22°45'W
23	134.9 ✓	14.44 1/2 ✓		N68°10'E	N68°E
24	125.7 ✓	224 ✓		N82°54'E	N83°E
25	213.4 ✓		2104 1/2	N85°18 1/2'E	N85°20'E
26	257.4 ✓	310 1/2		N64°14'E	N64°15'E
27	157.4 ✓	5.09 ✓		N67°24'E	N67°20'E
		5.08		N72°33 1/2'E	

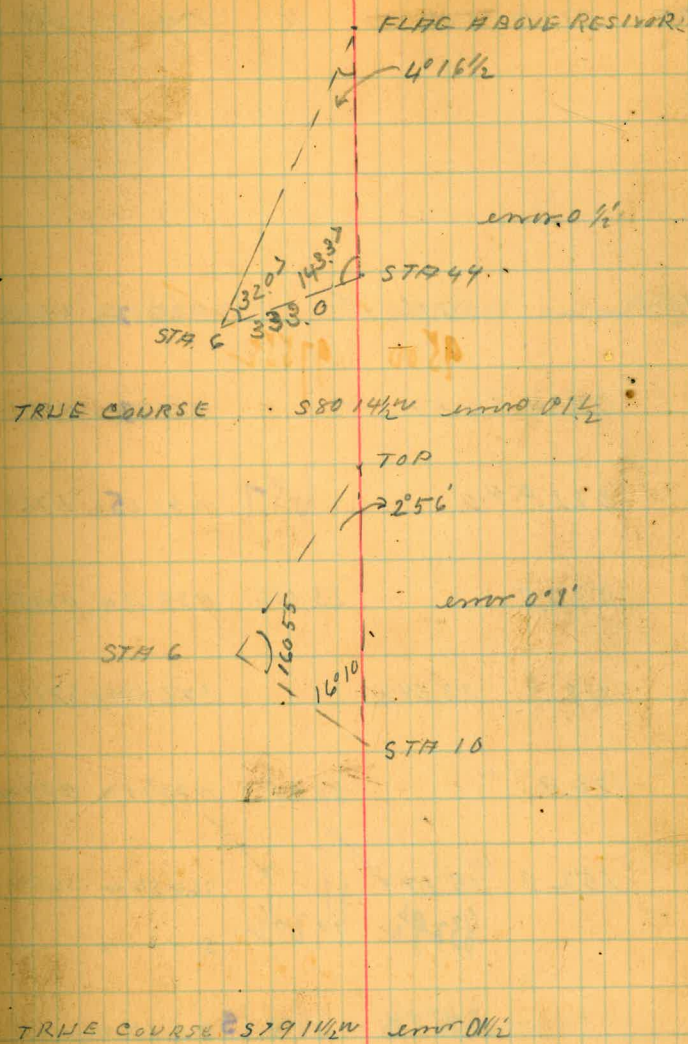
FEB 24

NIGHT

True course N76°11'E error 0°1'

73

STA	DISC	L	R	CALCO	M C
8	2490		37.42	S5656 1/2 W	S57 W
9	75.5	✓ 21.2	✓	S1914 1/2 W	S1920 W
10	101.0	✓ 39.33	✓	S404 1/2 W	S41 W
		9500	9755 1/2	S8014 1/2 W	
10		19.04		S8013 W	S8015 W
11	424.7	✓ 29.30	✓	N8043 W	N8040 W
12	81.0	✓	64.40	N5113 W	N5110 W
13	107.8	✓	141.45 1/2	S6407 W	S6410 W
14	332.6	✓ 125° 52'	✓	S7738 1/2 E	S7730 E
15	205.0	✓ 30° 58'	✓	S4813 1/2 W	S4810 W
		20524	20625 1/2	S7911 1/2 W	
15		17.22	17.38	S7910 W	S79 W
16	394.9	✓ 1° 23'		S6132 W	S6130 W
				S6255 W	



74

STA DISC L R CALCO MC

0 36.16 ✓ S6602W S6630W TRUE COURSE N6601/2E error 1/2'

1 283.4 4.57 ✓ N7742W N7730W

2 321.0 ✓ 6.57 N7245W N7230W

3 526.5 23.18 1/2 N7942W N7930W

4 42.0 23.59 1/2 S7659 1/2 W S7715W

5 176.9 ✓ 36.05 N7901W N79W

6 152.0 18.17 ✓
8329 1/2 W 6.20 1/2 W ✓
S6454W S65W
S7831W

6 34.00 S8310W TRUE COURSE N8311E error 0.1'

7 155.4 ✓ 60.13 1/2 W N6250W N6240W

75

69 295.0 32.25 S6617 1/2 W S6630

70 127.1 6134 S3352 W S3430 W

71 71.5 2740 N8933 1/2 W N840

FEB 25 - 1912

72 230.3 14.22 N5653 1/2 W N5630

73 375.0 54.15 N7215 1/2 W N6950

12929 1/2 29534

S5429 1/2 W

73 16419 S5429 W

TRUE COURSE S5429 1/2 W

74 375.0 11220 1/2 N6112 W N61 W

75 177.6 10546 S627 1/2 W S70 E

0 62.7 4612 N6746 W N6715 W

17005 15932 1/2

S6601 1/2 W

76

64

65

26.43 1/2

N4034E N4040E True course N4036E

error 0° 2'

66

253.4

10037

N6717E N67E

66

IRON PIN

O --- 70.56 ---

LINE OF DEM.

93° 17' W

70' LINE

N33° 57' W

86° 42'

89° 51'

67

67

266.5

93° 55'

N33 19 1/2 W N33 30 W

68

108.4

13° 32'

S 52 45 1/2 W S 52 W

68

77

Azimuths from Ref Point above
Upper Reservoir to hubs on 130' contour

Sta	Def Pt		Cal to	Mag to
0	1324	2448	N 12° 42' 1/2" E	N 1325 W
9	3922	7844	N 14° 15' 1/2" E	N 1435 E
16	5720 1/2	11441	N 32° 14' E	N 3230 E
20	10136	20312	N 26° 29' 1/2" E	N 7655 E
25	9229	18458	N 67° 22' 1/2" E	N 6745 E
A3	9600	19201	N 20° 54' E	N 7125 E
47	10118	20236	N 26° 11' 1/2" E	N 7640 E
49	10685	21210 1/2	N 80° 58' 1/2" E	N 8120 E
50	11014	22028	N 85° 07' 1/2" E	N 8530 E
67	10206	20412 1/2	N 26° 59' 1/2" E	N 7650 E
68	8817	17634	N 63° 10' 1/2" E	N 6330 E

Feb 27 1912 Kibbawé Paredes, Sullivan

= Sta 10 on 49' contour.

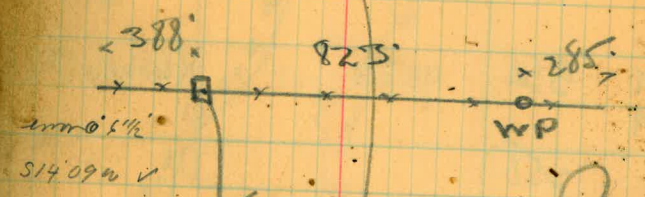
78

130' @ end

STA	DIST	STDA.	L	R	M.C.
9				140.07	S14.46W
8	49.8	-0.50 0.495	32° 00'		N54.45E
7	48.0	-0.00 0.48	9° 22'		N86.45E
6	105.0	-0.00 1.06	39° 54'		S84.20E
5	33.8	-0.00 0.34	55° 44'		S44.30E
4	37.7	-3° 26' 0.38	42° 50'		N80° E
3	72.2	-2° 18' 0.73	7° 30'		N37.30E
2	132.0	+0° 21' 1.33	5° 17'		N44.30E
1	92.1	-0° 15' 0.92	7° 18'		N49.45E
0	118.3	-3° 31' 1.19		54.55'	N43E
			9903	30034 1/2	N12 W

SEE PAGE 63

Location Salazar Drift - fence



Township corner bet Range 3 1/2

Line 1496' long and on Twp line

Cottonwood

1496' fence

1414' total 576 posts
8-30-10 to Wallace

S14.09W
N54.0LE
N86.02E
S84.36E
S44.42E
N79.33 1/2 E
N36.43 1/2 E
N44.13 1/2 E
N49.30E
N42.12 1/2 E

80

7988

10

1700 + 365

10
8

$$\begin{array}{r}
 657 \\
 337 \\
 \hline
 312 \\
 630 \\
 \hline
 535 \\
 89
 \end{array}$$

$$\begin{array}{r}
 612 \\
 12 \\
 \hline
 612 \\
 474 \\
 \hline
 138
 \end{array}$$

9

8

5

6110

TRAVERSE TABLE FOR TRANSIT BOOK.

From 1° to 90° for a distance of 100.

Degrees.	DEGREES.		½ DEGREE.		¼ DEGREE.		⅓ DEGREE.		Degrees.
	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	
0			100.00	0.44	100.00	0.87	99.99	1.31	89
1	99.98	1.75	99.98	2.18	99.97	2.62	99.95	3.05	88
2	99.94	3.49	99.92	3.93	99.91	4.36	99.88	4.80	87
3	99.86	5.23	99.84	5.67	99.81	6.10	99.79	6.54	86
4	99.76	6.98	99.73	7.41	99.69	7.85	99.66	8.28	85
5	99.62	8.72	99.58	9.15	99.54	9.58	99.50	10.02	84
6	99.45	10.45	99.41	10.89	99.36	11.32	99.31	11.75	83
7	99.25	12.19	99.20	12.62	99.14	13.05	99.09	13.49	82
8	99.03	13.92	98.97	14.35	98.90	14.78	98.84	15.21	81
9	98.77	15.64	98.70	16.07	98.63	16.50	98.56	16.93	80
10	98.48	17.36	98.40	17.79	98.33	18.22	98.25	18.65	79
11	98.16	19.08	98.08	19.51	97.99	19.94	97.90	20.36	78
12	97.81	20.79	97.72	21.22	97.63	21.64	97.53	22.07	77
13	97.44	22.50	97.34	22.92	97.24	23.34	97.13	23.77	76
14	97.03	24.19	96.92	24.62	96.81	25.04	96.70	25.46	75
15	96.59	25.88	96.48	26.30	96.36	26.72	96.25	27.14	74
16	96.13	27.56	96.00	27.98	95.88	28.40	95.76	28.82	73
17	95.63	29.24	95.50	29.65	95.37	30.07	95.24	30.49	72
18	95.11	30.90	94.97	31.32	94.83	31.73	94.69	32.14	71
19	94.55	32.56	94.41	32.97	94.26	33.38	94.12	33.79	70
20	93.97	34.20	93.82	34.61	93.67	35.02	93.51	35.43	69
21	93.36	35.84	93.20	36.24	93.04	36.65	92.88	37.06	68
22	92.72	37.46	92.55	37.86	92.39	38.27	92.22	38.67	67
23	92.05	39.07	91.88	39.47	91.71	39.87	91.53	40.27	66
24	91.35	40.67	91.18	41.07	91.00	41.47	90.81	41.87	65
25	90.63	42.26	90.45	42.66	90.26	43.05	90.07	43.44	64
26	89.88	43.84	89.69	44.23	89.49	44.62	89.30	45.01	63
27	89.10	45.40	88.90	45.79	88.70	46.17	88.50	46.56	62
28	88.29	46.95	88.09	47.33	87.88	47.72	87.67	48.10	61
29	87.46	48.48	87.25	48.86	87.04	49.24	86.82	49.62	60
30	86.60	50.00	86.38	50.38	86.16	50.75	85.94	51.13	59
31	85.72	51.50	85.49	51.88	85.26	52.25	85.04	52.62	58
32	84.80	52.99	84.57	53.36	84.34	53.73	84.10	54.10	57
33	83.87	54.46	83.63	54.83	83.39	55.19	83.15	55.56	56
34	82.90	55.92	82.66	56.28	82.41	56.64	82.16	57.00	55
35	81.92	57.36	81.66	57.71	81.41	58.07	81.16	58.42	54
36	80.90	58.78	80.64	59.13	80.39	59.48	80.13	59.83	53
37	79.86	60.18	79.60	60.53	79.34	60.88	79.07	61.22	52
38	78.80	61.57	78.53	61.91	78.26	62.25	77.99	62.59	51
39	77.71	62.93	77.44	63.27	77.16	63.61	76.88	63.94	50
40	76.60	64.28	76.32	64.61	76.04	64.94	75.76	65.28	49
41	75.47	65.61	75.18	65.93	74.90	66.26	74.61	66.59	48
42	74.31	66.91	74.02	67.24	73.73	67.56	73.43	67.88	47
43	73.14	68.20	72.84	68.52	72.54	68.84	72.24	69.15	46
44	71.93	69.47	71.63	69.78	71.33	70.09	71.02	70.40	45
45	70.71	70.71							