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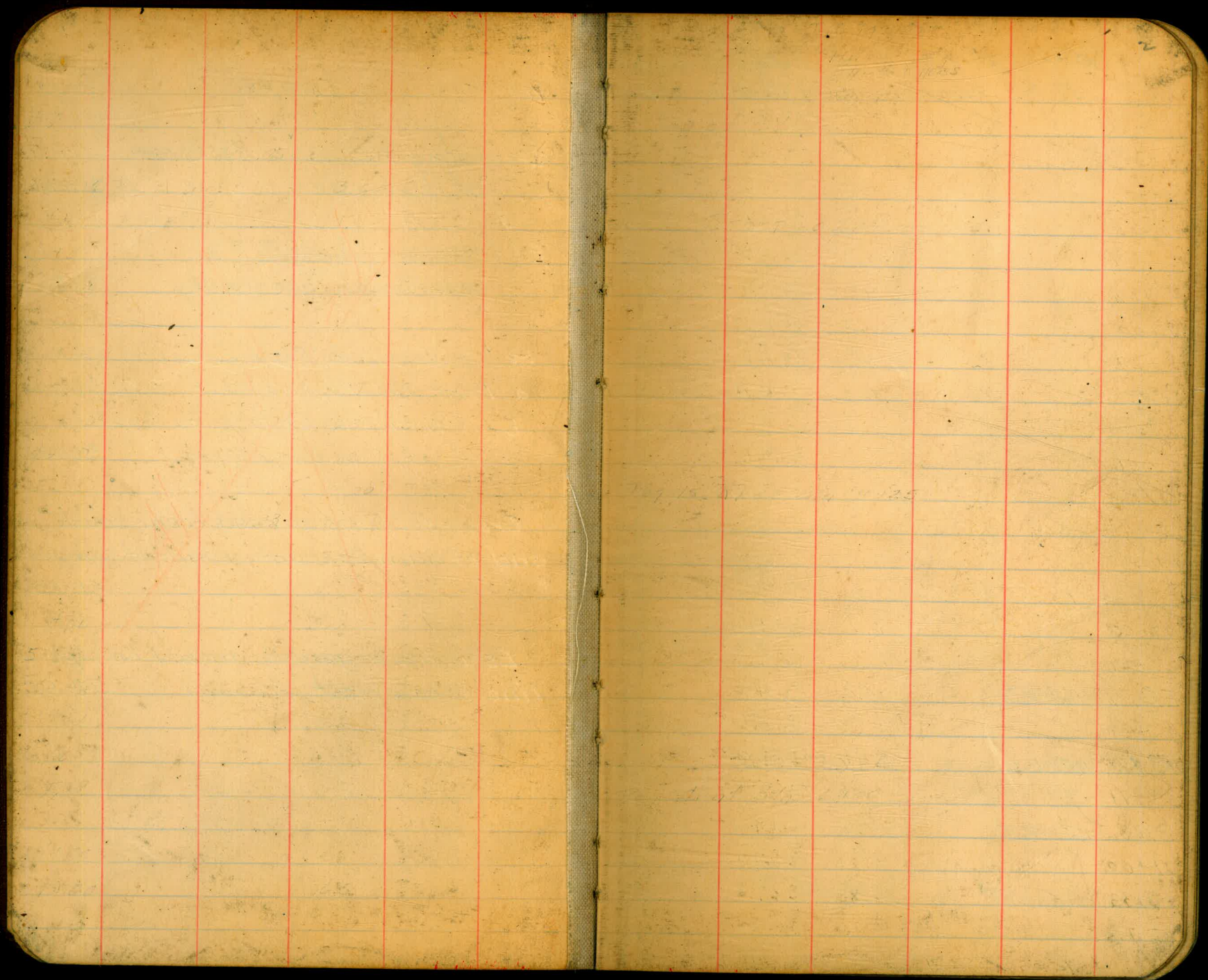
Re-locating RR across S.D. River
at Lakeside 3-8

El Capitan Damsite #2
additional topography 9-36

Profile Levels on Road Location From
a Point about $\frac{1}{2}$ Mile East of El Capitan
Dam North and Easterly to South
Fork of San Diego River 37-49

Cross-sections on road from south
end of dam to county road at camp.
51-53

Estimate of yardage moved on pipe
line bench west of tunnel 54-55



Re-locating \angle of Lakeside-Foster
P.R. across San Diego River

R. Wurster
P.O.G.
J. Salgado Raining

Nov. 31

3

467.72 to Fence cor. 23.6 east

391.42 to P1,
with Fence cor. 13.5 in line
with Fence

135.77 to Edge of West Pav.
on tang. across River

E.C. 1164+85.70

P.1 1159+13.32

$\Delta = 65^{\circ}30' L^+$

B.C. 1151+76.00

P1. 1146+54.64

$78^{\circ}22' R^+$

on tang. prod. edge of
Pav. (west) 30.78

$78^{\circ}22'$

ΔR^+

\angle Benedict Δ P1, set nail in tie
found old nail. N.W. & N.

Re-location of Foster RR. across
San Diego River

R. Wamba
P.O.C.
J. Salgado

Nov. 19. 31

4

1180+00

1177+00

1174+80

1170+75

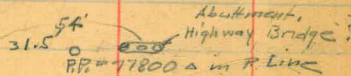
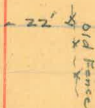
1168+90

1168+43

1168+02.2

1166+78.2 N. end

1165+77 S. end



single bent



Re-location of Foster R.R. across S. D. River

R. Wueste
P.O.G.
J. Salgado

Nov

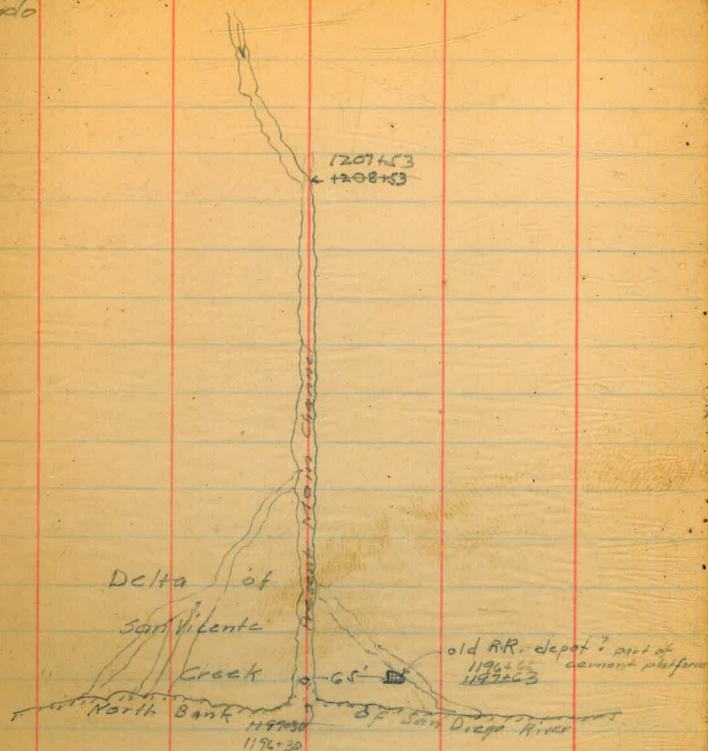
5

1208+4246
1209+4246 P.O.T

1196+00
1197+00

1187+00
1188+00 P.O.T.

Nov. 30th error in chaining no
Sta. 1183+00



1212+00.60
1213+00.60 P.I.

22°56 Lt

(Not very good)

with west edge of Pav.

1209+05.85
1210+05.85

67°06 Rt

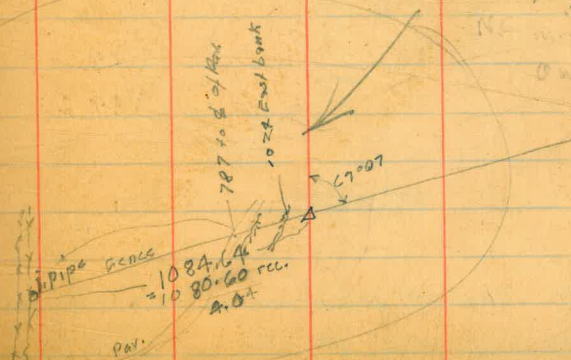
north side of road (a fence)

Fence 020.8

1211+00
1212+00

Fence 0-18.2

See page 8



Re-locating Vine Street &
to Morena Av

19+19.0

no

= 17+77.2

1+87.7

59°14'-20" ft

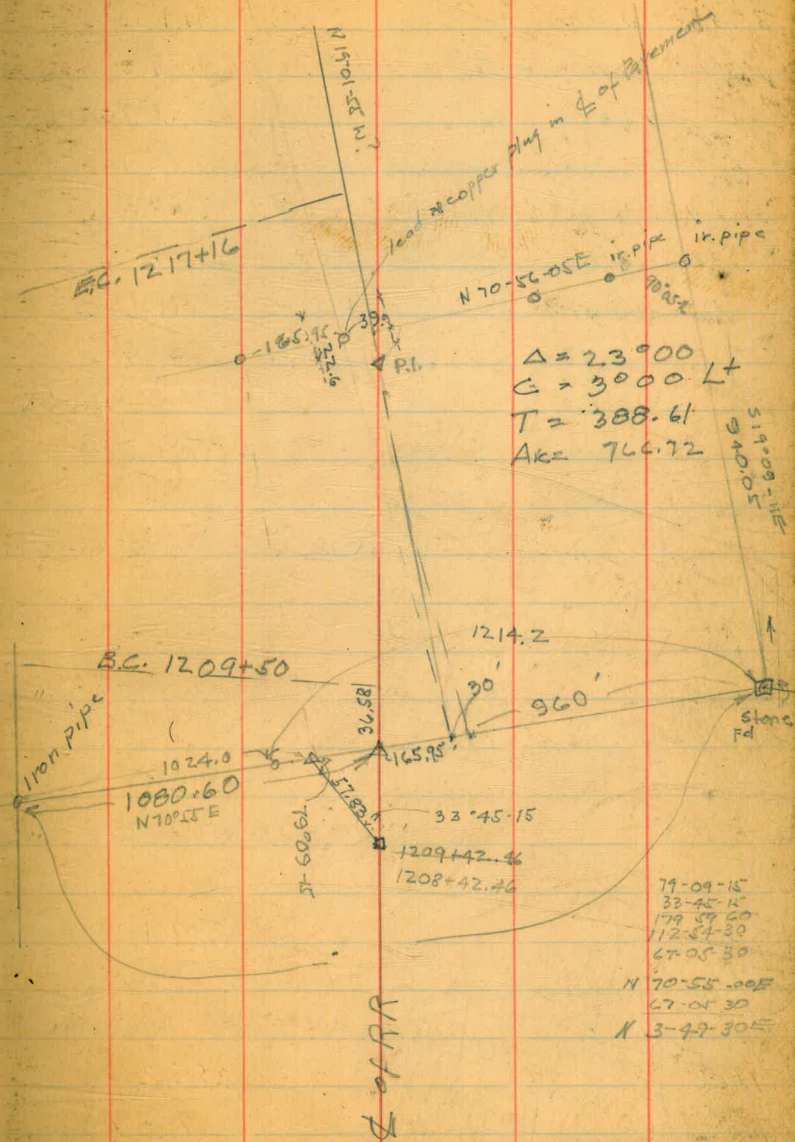
= 15+89.5

0+00 = Pl. Main & Sycamore Str. + in Pav

Backsight on Pl. Benedict & Sycamore

iron pin

Kibby record N 70° 55' E
 N 70° 07' E
 N 3° 52' E RR
 N 3° 55' E



750 Contour line Right Bank

			758.725	B17
4.900	763.625			
6.020	758.375	11.270	752.355	
8.450	755.425	11.400	746.975	
6.700	760.015	2.116	753.315	
3.800	762.235	1.580	758.435	
4.670	755.925	10.980	751.265	
4.000	755.075	4.85	751.075	
10.920	753.675	12.320	742.755	
6.78	758.01	2.44	751.23	
11.07	741.08	8.00	750.01	
5.58	755.33	11.33	749.75	
		5.60	749.73	

Jan 6-32
P.O.C

9

this point is above middle of olive without close
to sec. line E-W

Contour 600 650 700 750 800

Jan 11 - 22
P.O.C

10

At "C" Axis Sta. 7+62.31 sighting north

P.O.T 32°37' Lt 684.7 3°40+

Δ-1 0°00 600 1°15+

At Δ Sighting S-E to P.O.T

650-cont. 4°51 Lt 605 to flag 650

" 6°50 Lt 525

" 11°47 Lt 472

" 20°26 Lt 415

" 26°40 Lt 370

" 32°41 Lt 360

" 36°01 Lt 362

" 33°15 Lt 320

" 34°31 Lt 265

" 40°18 Lt 227

" 41°40 Lt 192 3°12+

" 47°46 Lt 150 4°30+

" 44°14 Lt 110 ✓ 5°30+

" 53°00 Lt 87 ✓ 5°10+

" 63°35 Lt 44 ✓ 8°30+

600 cont 105°38 Rt 187 10°20-

" 81°39 Rt 212 11°20-

" 54°24 Rt 250 9°20-

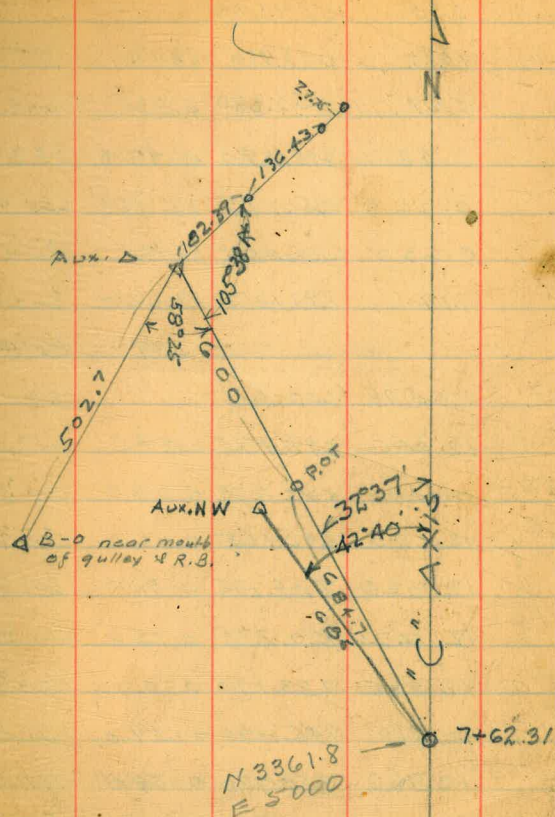
" 28°21 Rt 314 7°20-

" 8°44 Rt 375 6°00-

" 2°18 Rt 367 6°10-

P. 12 contin.

in gulley



Dam site contours cont.

			654.105	
0.55	654.655			
10.32	652.815	12.14	654.105 642.495	
5.67	652.680	5.805	647.010	
0.48	648.390	4.770	647.910	BM
0.269	635.795	12.855	635.535	
0.630	624.305	12.120	623.675	
1.19	612.875	12.620	611.685	
		5.59	607.285	BM
12.505	660.415		647.910	
12.605	672.475	0.545	659.870	
11.740	683.775	0.640	671.835	
12.650	696.105	0.260	683.515	
12.320	708.175	0.310	695.855	
12.220	720.275	0.120	698.055	
12.895	733.170	0.000	720.275	
12.810	745.390	0.590	732.580	
12.960	757.770	0.580	744.810	
		7.585	750.185	BM
12.695	770.050	0.415	757.355	
3.54	770.190	3.40	766.65	BM
3.54	770.190	12.81	757.380	
7.58	764.960	6.215	758.745	

on rock at end of 650 cont.

on rock at end of 600 cont.

on rock at end of 750 cont.

on " " " " " 766

758.745
757.225

.520

600 cont. contin

Jan 15 '32

ROC

17

At	en of	Average point		
600 cont	4°09R ^t	422 ¹⁸⁷	5°25-	
"	6°44R ^t	685	4°15-	
"	7°17R ^t	591	3°50-	
"	5°53R ^t	647	3°03-	on flag set
	105°57L ^t	to end of 700-750-766 cont.		
At 700		182.39	18°35-	sighting on Δ
"	196°30L ^t	13	0°00	
"	118°09L ^t	62		
"	116°42L ^t	101		
"	106°46L ^t	124		
"	101°38L ^t	167		
"	106°30L ^t	190		
"	100°10L ^t	265		
"	102°53L ^t	304		
"	100°35L ^t	324		
"	99°09L ^t	355		
"	100°45L ^t	380		gully
"	96°14L ^t	385		
"	94°45L ^t	408		
"	89°12L ^t	425		
"	85°49L ^t	442		
"	82°32L ^t	478		
"	78°20L ^t	515		
"	74°23L ^t	548		
"	70°36L ^t	598		
"	71°00L ^t	612		

previous

Jan 15 32

R.O.S.

13

Nat 700 sighting on Δ point750 cont. 0°00' 136.43
145.50 20°20'Nat 750 sighting on Δ point

750 50°50' Lt 14 0000

" 100°30' Lt 77 "

" 93°03' Lt 130 "

" 97°17' Lt 164 "

" 94°40' Lt 227 "

" 96°42' Lt 295 "

" 93°36' Lt 378 "

" 94°53' Lt 412 gulley

" 88°13' Lt 442 "

" 84°48' Lt 478 "

" 79°58' Lt 511 "

" 72°30' Lt 572 "

" 69°21' Lt 617 "

" 67°47' Lt 658 "

" 68°24' Lt 720 "

Nat 766 sighting on Δ point 27.75 to 750 point

766 69°00' Lt 680

" 71°00' Lt 640

" 73°05' Lt 590

" 76°36' Lt 557

" 82°47' Lt 512

" 87°02' Lt 468

" 93°32' Lt 430

766 cont.

766	93°26'N	383
"	97°39'N	280
"	95°21'N	252
"	99°40'N	158
"	96°22'N	138
"	97°30'N	93
"	97°29'N	70
"	96°53'N	47
"	0°00'	7

Jan. 15-32
P.O.C.

14

Point	Angle	Distance	Sighting	on P.O.T
to B-D	58°25' RT	512	502.7	7044-
to B-D	to Aux. Δ		577.17	
to B-1	87°12' RT	172	6.1	571.1 -11.4 565.8
B-2	205°04' RT	42	10.3	566.9 -14.6 562.6
B-3	313°42' RT	75	7.9	569.3
B-4	302°04' RT	100	11.9	11.9 565.3
B-5	292°46' RT	160	3.1	574.1
B-6	236°46' RT	137	8.2	569.0 19.4 562.8
B-7	232°55' RT	195	9.6	567.6 15.8 561.4
B-8	237°04' RT	212	6.2	571.0 17.0 560.2

to point on River bank

10 out	607.285
	0.85
24 out	608.135
	12.61
	575.524
	0.59
	596.114
	12.66
	583.455
	0.48
	583.935
	11.93
17 out	572.005
13 out	5.165
35	577.175

on hub at B-D

from 1/4 cor. between 4-9 (rock exp'd) 51°55' L^t
 from fence line to point in S-N 1/4 sec. 9

700 contour on the N.S. continue
that trend of "C" line Axis sighting on S-end

Jan. 20-22
P.O.G
going East

16

610 89°05' Lt 6°10' -

665 88°08' Lt 5°20' -

690 87°00' Lt 5°10' -

750 86°02' Lt 4°44' -

770 84°00' Lt 4°25' -

750 contour

477 104°56' Lt

this on last point taken previous

537 107°14' Lt 0-00

in gulley

563 102°06' Lt

608 102°13' Lt

615 99°36' Lt

650 99°53' Lt

677 99°49' Lt

700 93°38' Lt

730 92°45' Lt

768 90°41' Lt

766 contour

735 94°55' Lt

710 96°58' Lt

697 99°40' Lt

675 100°16' Lt

660 102°24' Lt

635 102°24' Lt

617 104°13' Lt

76c contours contin.

At N end of "C" Axis

677	103°52L
580	104°14L
540	109°11L
490	108°55L
450	113°32L
420	120°48L
314	118°52L
236	122°15L
192	129°06L
163	134°07L
100	131°31L
82	41°47R

See page 28

650	685	20°38R	5°20+
	680	28°22R	5°20+
	670	29°04R	
	670	30°34R	5°24+
	650	32°28R	5°34+
	645	36°08R	5°36+
	635	40°50R	5°40+
	638	45°30R	5°40+
	637	50°47R	5°36+

this on huge Boulder filling gulley

P.O.G
Jan 20 - 32

17

Extending level on N. side

Jan. 20-22 raining
P.O.G

18

12.660	771.385		758.725	B.M.	on East pipe
12.215	782.915	0.785	770.600		
12.325	794.715	0.1605	782.310		
11.860	806.270	0.295	794.730		
	2.420		803.870	B.M. on roof	100' West of N. end of Axis
12.980	819.270	0.000	806.270		
12.870	831.980	0.130	819.440		
12.315	844.285	0.010	831.970		
13.020	856.990	0.315	843.970		
12.435	869.925	0.500	856.479	B.M. on P.S.G.	on West end
11.770	880.360	0.235	868.590		
12.250	891.890	0.820	879.540		
12.725	904.255	0.360	891.530		
	1.135		903.120		

Axis produced north to point on Axis

87.32 h-a
93.75 0°00 21°20+

At Point on Axis sighting south on Axis

to Aux. 78.54 67°30Rt 0°00

At Aux sighting on Axis produced

800 contour

800 0.00 0°00

51 0°00

178 12°00 Lt

198 9°00 Lt

225 10°03 Lt

on Boulder cont. of ground of K-800

800 contours cont'm

P.O.G.
Jan 20-32

19

Mat Aux

800	240	7°35 Lt
	272	8°24 Lt
	295	4°14 Lt
	321	5°00 Lt
	346	1°24 Lt
	380	0°44 Lt
	447	2°20 Lt
	487	4°00 Lt
	500	0°10 Rt
	523	4°00 Rt
	562	5°14 Rt
	628	2°10 Rt
	628	5°02 Rt
	655	9°58 Rt
	710	10°16 Rt
	730	11°16 Rt
	750	10°43 Rt
	775	13°55 Rt
	800	14°02 Rt
	815	17°32 Rt
	37	72°50 Lt
	125	53°28 Lt
	208	67°16 Lt
	242	66°03 Lt
	256	69°45 Lt

game west

Jan. 20-32

P.O.C

20

Tnt. Ann

800	787	70°40L
	293	78°54L
	338	81°48L
	400	85°26L
	408	88°10L
	465	92°10L
	518	93°03L
	520	94°52L
	550	97°04L
	590	97°13L
	605	99°30L

850 contour

650	90°00L	4°10+
630	88°04L	4°15+
605	88°21L	4°20L
575	85°52L	4°40L
577	83°12L	4°40L
505	82°45L	5°20L
478	79°00L	5°10+
430	73°28L	6°20L
425	71°10L	6°14
390	69°36L	6°54
358	64°23L	7°26
352	59°05L	7°36
325	57°23L	8°14

Nat Aux

850 contours

278	49°08L	9°08
258	41°07L	10°28
288	29°03L	9°24
370	16°02L	7°16
388	13°18L	7°00
400	12°28L	6°46
455	10°38L	6°00
570	12°00L	
580	6°34L	4°50
600	4°14L	4°30
645	4°09L	4°05
654	1°35L	4°05
690	0°36L	3°55
702	2°27R	3°50
770	3°50R	3°30
815	5°36R	3°20
830	6°00R	3°16
835	8°25R	3°12
900	contour	
692	87°33L	8°04
680	79°33L	8°18
655	79°33L	8°32
627	78°00L	8°54
625	75°32L	
577	76°09L	9°44

Jan. 20-32
P.O.C.

21

Jan. 20 '32
21

900 contour continue

Lat Aux.

527	71°58' L	11°40
507	69°14' L	11°06
507	69°19' L	11°08
495	68°21' L	11°30
440	59°10' L	12°42
430	51°41' L	13°14
392	48°32' L	14°30
380	35°40' L	15°30
415	26°40' L	13°52
480	20°40' L	11°52
532	18°38' L	10°40
600	18°20' L	
630	16°02' L	9°02
667	15°16' L	8°38
660	12°38' L	8°36
680	10°46' L	8°18
715	10°34' L	7°54
727	7°22' L	7°44
760	6°37' L	7°24
775	1°54' L	7°12
815	1°51' L	
540	34°20' L	18°54
722	44°48' L	17°16
470	58°11' L	13°24

969.5 El. on

point of ridge

1009.7 at

top of slope

at Axis produced by G.C.

Jan 21-32 clear cold

P.O.E

22

Contour 590 - 580 on north side

Jan. 21 - 32
P.O.C.

23

At 7+62.81 on "C" Axis

+10.25 - towards the north - on acc. trees

near blacksmith shop

At 7+72.56 "C"

590	645	41°40L
	625	40°58L
	572	37°48L
	475	28°00L
	435	14°56L
	443	6°08L
	462	0°00
	497	8°03R
	522	12°04R
	540	16°45R
	565	21°37R
	590	24°57R
	608	25°02R
	605	28°30R
	652	29°39R
	645	31°56R
	663	36°54R
	690	41°25R
	745	42°44R
	750	47°41R
	778	50°53R
	580	60°17R
	755	50°52R

580 contours on north side

Tan 21-32
P. 06

24

At 7+62.56 on "C"

728	49°50R+
732	44°00R+
688	42°22R+
667	39°50R+
643	35°45R+
622	33°05R+
635	30°06R+
602	29°35R+
590	28°00R+
588	26°28R+
580	25°37R+
552	22°42R+
540	19°52R+
530	17°43R+
515	13°03R+
495	10°28R+
482	7°24R+
470	5°44R+
440	0°00
430	3°57L+
410	15°00L+
428	24°22L+
467	30°46L+
567	41°03L+
618	43°41L+
665	44°37L+
720	44°37L+

570 contd on northside

Jan. 22-32
P. O. G.

26

Mat 7462.52 on E

662 47°37 Lt

620 46°06 Lt

565 43°06 Lt

500 38°24 Lt

417 26°34 Lt

395 15°32 Lt

405 12°02 Lt

427 0°00

460 4°18 Rt

502 13°10 Rt

535 20°46 Rt

85°25 72 40
42-42 89°20

585 29°28 Rt

615 31°58 Rt

620 34°40 Rt

645 37°39 Rt

660 40°50 Rt

685 43°57 Rt

712 45°00 Rt

712 47°27 Rt

730 49°22 Rt

745 51°57 Rt

54003
108-08
54-04

Mat 7462.52 800 54°04 Rt to Aux. to N.E

moved further $\frac{650}{35}$ } 42°40 Lt " " to N.W

685 } 42°40 Lt " " " "

560 -70-80-90 - cont.
on Northside

N-W
At Aux 485' from Axis N-W sighting to Axis

570	75	89°15 RT		
	123	121°34 RT		
	128	134°10 RT		
	137	128°20 RT		
	215	137°14 RT		
	342	140°51 RT	near gulley to much	brush

580	445	158°24 RT	"	"
	290	152°28 RT	"	"
	185	148°28 RT	"	"
	122	158°40 RT	"	"
	155	197°06 RT	"	"
	98	163°25 RT	"	"
	47	151°00 RT	"	"

590	40	345°45 RT		
	8	305°25 RT		
	62	200°25 RT		
	145	201°20 RT		
	192	210°31 RT		
	167	192°00 RT		
	215	172°42 RT		
	285	169°07 RT		
	370	168°23 RT		
	480	169°50 RT	near gulley	

for 560 see page 29-30 for downstream extension from

previous work - note: as the contour is on sand bar may not check

Jan-22-32

P.O.G

26

former survey

only

600 on south side

Trat. Avon. 685 N-W from "C" 7+62.52

600 500 29°23R+ to old flag

505 33°27R+

542 35°58R+

525 43°00R+

530 49°26R+

547 58°53R+

550 63°06R+

593 68°40R+

603 71°02R+

625 76°35R+

590 600 77°02R+

565 71°10R+

527 63°10R+

508 49°56R+

510 39°41R+

478 36°42R+

482 31°52R+

475 26°24R+

508 21°21R+

590 13°55R+

637 9°08R+

672 4°54R+

700 2°11R+ to many trees near Axis

Jan-22-32
P.O.G.

27

South side contin.

Jan. 22-32
R.O.G.

28

for 650 see page 17

at Aux 685

580	660	20°20R+	
	612	7°05R+	
	565	13°30R+	
	490	18°24R+	
	445	25°20R+	
	447	29°56R+	
	445	42°25R+	
	475	44°38R+	
	485	49°25R+	
	488	55°00R+	
	506	62°52R+	
	518	68°02R+	
	532	71°10R+	
	555 ?	75°04R+	many trees
	662	83°14R+	
570	638	84°18R+	south of road
	510	74°12R+	north of road
?	545	63°20R+	♀ " "
	460	57°26R+	south " "
	445	53°06R+	♀ " " and gulley
	418	51°40R+	north " "
	405	44°30R+	" " "
	388	36°47R+	" " "
	407	29°00R+	" " "

570 K at Aug 685 N-W

477	22°20Rt	north side of road
440	22°40Rt	South " " "
495	14°47Rt	" " " "
550	10°39Rt	" " " "
565	6°28Rt	north " " "
605	2°54Rt	" " " "
655	2°04Lt	" " " "

560	442	15°33Rt
?	458	20°08Rt
	378	28°43Rt
	378	35°17Rt
	375	43°12Rt
	385	48°14Rt
	403	56°12Rt
	417	57°03Rt
	418	61°40Rt
	465	69°13Rt
	490	74°05Rt
	512	78°02Rt
	565	82°31Rt
	600	84°58Rt

on north side

265	59°52Rt
235	78°16Rt

Northside

560

Flat Aux. 685

255 94°11 RT overflow channel

255 79°53 RT

370 99°30 RT

608 93°37 RT to 550 on south bank

for South-East side

At Auxi on north bank east - sighting on 7+72.56 "C"

620	857	4°57' L ^t
	830	6°44' L ^t
	790	10°24' L ^t
	765	12°08' L ^t
	727	14°42' L ^t
	715	17°12' L ^t
	688	16°44' L ^t
	632	17°51' L ^t
	585	22°11' L ^t
	545	27°30' L ^t
	510	36°25' L ^t
	530	41°53' L ^t
	575	44°32' L ^t
	610	47°24' L ^t
	680	49°22' L ^t
	740	52°24' L ^t
	705	56°31' L ^t
	685	59°46' L ^t
	680	71°03' L ^t
	745	76°46' L ^t
	865	83°44' L ^t
610	850	84°38' L ^t
	775	80°52' L ^t
	700	75°55' L ^t

many huge Boulders

Jan. 22-22
P.O. G

South side Cont. contin.

Jan. 23-32
P.O.C

32

At Aux. N-E

610	650	68°44 Lt	
	652	60°08 Lt	
	660	59°13 Lt	
	700	54°26 Lt	
	677	52°50 Lt	
	662	50°42 Lt	
	598	48°45 Lt	
	560	46°40 Lt	
	500	43°32 Lt	
	485	37°20 Lt	
	510	28°46 Lt	
	555	20°34 Lt	
	637	15°05 Lt	
	705	14°16 Lt	
	710	12°12 Lt	
	765	10°08 Lt	
	790	7°21 Lt	
	810	6°02 Lt	
	842	4°02 Lt on Axis	
600	478	37°28 Lt	at flag set previous
	490	45°54 Lt	
	555	49°52 Lt	
	600	51°14 Lt	
	640	55°38 Lt	

603.09 BM
14.80
617.89
9.35
617.54
7.70
625.24
15.95
609.29
1.76
610.99
18.25
595.34
2.15
595.19
15.85
579.65
2.30
577.95

South side contours contin

Lat Auk. N-E

600	672	56°27 Lt
	655	58°15 Lt
	620	60°00 Lt
	607	66°43 Lt
	642	72°58 Lt
	712	80°00 Lt
	825	85°35 Lt

590	800	86°53 Lt
	770	85°00 Lt
	695	81°35 Lt
	642	77°45 Lt
	578	70°08 Lt
	545	64°25 Lt
	567	60°18 Lt
	605	57°24 Lt
	560	54°30 Lt
	480	49°30 Lt
	450	43°50 Lt
	440	38°17 Lt
	455	29°28 Lt
	195	21°30 Lt
	557	13°36 Lt
	607	10°38 Lt
	645	9°40 Lt

Jan. 23-32

P.O.G.

23

Southside contours contin.

Jan. 23-32

24

P.O.C

Nat Aux. N-E

590 665 10°03 Lt
 628 7°44 Lt
 707 6°40 Lt
 760 5°10 Lt
 785 3°22 Lt
 810 1°31 Lt on Axis

580 800 0°11 Lt
 720 4°28 Lt
 652 5°20 Lt
 620 7°18 Lt
 580 8°58 Lt
 525 13°06 Lt
 ? 472 8°48 Lt
 440 25°30 Lt
 425 36°06 Lt
 435 48°35 Lt
 462 57°06 Lt
 465 62°32 Lt
 475 64°05 Lt
 490 67°16 Lt
 520 72°06 Lt
 532 71°22 Lt
 575 76°12 Lt
 600 83°44 Lt

Southside contin.

Jan. 23-32

P.O.S

35

At Aux N-E.

580	730	85°22' L	
	790	87°56' L	
570	900	92°24' L	at point S.B. turns S-E
	845	90°42' L	
	760	89°05' L	
	710	88°08' L	
	610	84°52' L	
	505	78°42' L	
	430	73°40' L	
	443	72°12' L	
	415	72°12' L	
	348	54°00' L	
	350	43°22' L	
	378	29°18' L	
	407	23°30' L	
	432	16°58' L	
	482	12°25' L	
	510	9°35' L	
	530	10°45' L	Tunnel
	518	8°58' L	
	550	5°16' L	
	570	4°35' L	
	585	3°04' L	
	412	1°55' L	

South side contin.

Tal. Awx. N-E

570 640 1002 Lt

720 1005 Rt

740 1008 Rt

772 2007 Rt on Axis

Jan. 23-32

P. G.

36

Profile Levels on Road Location on
North side of Basin, From a Point about
 $\frac{1}{2}$ Mile East of The Dam to South Fork.

March-7-1935
Simpson
Soper
Remmen.

Rain

37

B.M.			664.63	on Boulder	at N. side of Dam
	7.38	672.01			
T.P.			2.01	670.00	
	8.40	678.40			
Set B.M.			9.36	669.04	Spike in N. bank of Road 1500' East of Dam.
	0.23	669.27			
T.P.			12.91	656.36	
	0.96	657.32			
T.P.			11.76	645.56	
	0.10	645.66			
T.P.			12.32	633.34	
	0.83	634.17			
Set B.M.			8.66	625.51	1" x 1" Ginnie in bank at N. side of Road, $\frac{1}{2}$ Mi. East of Dam
	0.14	625.65			
- 2+00			3.9	21.7	on ϕ of Present Road
- 1+50			5.9	19.7	" " "
- 1+00			8.9	16.7	" " "
- 0+50			11.1	14.5	" " "
T.P.			12.95	612.70	
	4.05	616.75			
0+00 A			3.4	13.4	on South edge of Road
+40			6.6	10.2	on ϕ of Road
+61			8.37	608.38	water surface (Gauge 608.33) (10:00 A.M.)
+16			11.6	05.2	Toe of Bank at south side of Road.

March - 7 - 1935.

38

	616.75 ✓		
T.P.		2.06	614.69 ✓
-12.24	626.93 ✓		
1+47		6.7	20.2 ✓ = Top of
+62.05 Δ		7.6	19.3 ✓
+92		6.8	20.1 ✓
2+30		11.1	15.8 ✓
+71.52 Δ		10.4	16.5 ✓
+87		17.0	09.9 ✓
3+06		9.1	17.8 ✓
+34		4.1	22.8 ✓
+52.74 Δ		4.8	22.1 ✓
+73		3.5	23.4 ✓
4+23		6.2	20.7 ✓
5+00.04 Δ		8.0	18.9 ✓
+30		10.7	16.2 ✓
+65		8.0	18.9 ✓
+94.14 Δ		3.5	23.4 ✓
T.P.		2.91	624.02 ✓
10.70	634.72 ✓		
6+27		15.2	19.5 ✓
+41		10.7	24.0 ✓
+96		12.6	22.1 ✓
7+20		19.1	15.6 ✓
+36		11.9	22.8 ✓

Bank at So. side of Rd.

	634.72 ✓			
7+86.44 Δ		8.2	626.5 ✓	
8+20		13.4	21.3 ✓	
+65		3.6	31.1 ✓	
T.P.		0.32	634.40 ✓	
	12.58	646.98 ✓		
9+00		12.0	35.0 ✓	
+50		9.0	38.0 ✓	
10+00		6.1	40.9 ✓	
+50		2.9	44.1 ✓	
T.P.		0.23	646.75 ✓	
	8.06	654.81 ✓		
Set B.M.		2.50	652.31 ✓	Point on Large Boulder 20' Lf. of Sta. 10+60
	5.36	657.67 ✓		
11+00		10.1	47.6 ✓	
+55.44 Δ		6.4	51.3 ✓	
12+00		6.8	50.9 ✓	
+50		9.7	48.0 ✓	
+70		10.3	47.4 ✓	
+80		20.1	37.6 ✓	
13+05.81 Δ X		6.6	51.1 ✓	
+50		5.0	52.7 ✓	
14+00		3.9	53.8 ✓	
+42.97 Δ		4.1	53.6 ✓	
T.P.		6.84	650.83 ✓	
	9.02	659.85 ✓		

March - 7 - 1935.

40

659.85

14+73	6.5	653.3
+87	14.0	45.8
15+05	6.8	53.0
+13.37 Δ	6.4	53.4
+31	8.9	50.9
+51	17.3	42.5
+91.45 Δ	7.1	52.7
16+30	4.5	55.3
+79.12 Δ	6.2	53.6
17+40	2.9	56.9
T.P.	2.39	657.46

7.65 665.11

3rd B.M.

5.32

659.79

Point on

Large Boulder 10' Rt. of sta. 17+75

9.20 668.99

March - 8 - 1935.

17+76.75 Δ	11.9	57.1
18+00	10.2	58.8
+65	9.2	59.8
+93.52 Δ	9.2	59.8
19+30	7.6	61.4
+50	11.9	57.1
+72	20.8	48.2
+85	14.1	54.9
20+24.44 Δ	6.8	62.2
+51	11.1	57.9
+80	3.8	65.2

March-1935

41

	668.99 ✓		
T.P.		0.14	668.85 ✓
11.50	680.35 ✓		
21+53.81 A		11.1	69.3 ✓
+85		8.7	71.7 ✓
22+22		9.0	71.4 ✓
+77.86 A		5.8	74.6 ✓
+94		7.3	73.1 ✓
23+27		3.4	77.0 ✓
+64		6.3	74.1 ✓
T.P.		0.42	679.93 ✓
12.16	692.09 ✓		
24+10		11.5	80.6 ✓
+60		16.8	75.3 ✓
+88.63 A		9.1	83.0 ✓
25+15		13.7	78.4 ✓
+40		7.0	85.1 ✓
+77.62 A		5.1	87.0 ✓
26+15		2.3	89.8 ✓
Set B.M.		1.97	690.12 ✓
4.26	694.38 ✓		Point on
26+71.34 A		3.9	90.5 ✓
27+05		5.9	88.5 ✓
+47		10.8	83.6 ✓
+97.53 A		8.0	86.4 ✓

Rock 25' Rt. of Sta. 26+15

March-8-1935

42

694.38 ✓

28+20		10.4	684.0 ✓
+50		15.5	78.9 ✓
+85		7.9	86.5 ✓
29+00		8.6	85.8 ✓
T.P.		10.13	684.25 ✓
	0.87	685.12 ✓	
+60		8.6	76.5 ✓
+80		5.1	80.0 ✓
30+00		8.1	77.0 ✓
+40		9.0	76.1 ✓
+60		6.2	78.9 ✓
31+00		7.4	77.7 ✓
+60		9.0	76.1 ✓
+92.00 Δ		10.5	74.6 ✓
T.P.		12.89	672.23 ✓
	5.37	677.60 ✓	
32+40		8.0	69.6 ✓
+79.25 Δ		8.2	69.4 ✓
33+36		16.2	61.4 ✓
+65		9.2	68.4 ✓
+80		12.5	65.1 ✓
34+09		15.8	61.8 ✓
+65		12.8	64.8 ✓
35+16		8.0	69.6 ✓

March-8-1935

43

677.60 ✓

35+70		5.4	672.2 ✓	
36+10.00 A		0.2	77.4 ✓	
Set B.M.		2.27	675.33 ✓	Spike in olive stump 25' bf. of sta. 35+75
	11.93	687.26 ✓		
36+50		7.7	79.6 ✓	
37+00		5.2	82.1 ✓	
+50		3.4	83.9 ✓	
38+00		1.6	85.7 ✓	
T.P.		1.02	686.24 ✓	
	7.81	694.05 ✓		
+50		6.7	87.3 ✓	
39+00		5.6	88.4 ✓	
+50		4.3	89.7 ✓	
+96.00 A		3.5	90.5 ✓	
40+50		4.4	89.6 ✓	
41+00		6.4	87.6 ✓	
+63.49 A		10.6	83.4 ✓	
T.P.		12.89	681.16 ✓	
	0.81	681.97 ✓		
42+04		5.9	76.1 ✓	
+35		3.8	78.2 ✓	
+70		5.0	77.0 ✓	
43+30		10.0	72.0 ✓	
+51.19 A		7.1	74.9 ✓	

March 8-1935.

44

	681.97 ✓			
43+81		11.7	670.3 ✓	
T.P.		12.82	669.15 ✓	
	0.69			669.84 ✓
44+16.43A		3.5	66.3 ✓	
+36		9.7	60.1 ✓	
+58.82A		13.0	56.8 ✓	
+88		17.2	52.6 ✓	
45+05		13.4	56.4 ✓	
+54.91A		10.8	59.0 ✓	
+90		12.0	57.8 ✓	
Set B.M.		12.81	657.03 ✓	Spike in
	5.84			662.87 ✓
46+19		14.1	48.8 ✓	
+46.19A		7.9	55.0 ✓	
+68		10.6	52.3 ✓	
47+14		3.3	59.6 ✓	
+47		6.5	56.4 ✓	
+98.57A		3.4	59.5 ✓	
48+43		5.3	57.6 ✓	
+80		13.7	49.2 ✓	
49+10		9.2	53.7 ✓	
+50		13.7	49.2 ✓	
T.P.		12.89	649.98 ✓	
	0.31			650.29 ✓

Oak stump 20' Rt. of sta. 45+90

March-8-1935

45

	650.29 ✓		
119+67.08 A		0.7	649.6 ✓
50+30		12.6	37.7 ✓
+80.49 A		8.3	42.0 ✓
51+25		6.9	43.4 ✓
+62.10 A		8.7	41.6 ✓
52+00		10.5	39.8 ✓
T.P.		13.06	637.23 ✓
	7.95	645.18 ✓	
+50		6.6	638.6 ✓
53+00		6.2	39.0 ✓
+50		5.4	39.8 ✓
54+00		6.8	38.4 ✓
+50		5.4	39.8 ✓
55+00		5.6	39.6 ✓
+50		5.4	39.8 ✓
+78		4.9	40.3 ✓
56+00		7.1	38.1 ✓
+45		10.1	35.1 ✓
57+20		7.7	37.5 ✓
+70		11.3	33.9 ✓
58+00		11.9	33.3 ✓
+40		10.5	34.7 ✓
+80.00 A		9.1	36.1 ✓
Set B.M.		8.35	636.83 on Rock
	8.50	645.33	

15' Lt. of Sta. 59+20

March - 8 - 1935

46

	645.33		
59+15		11.8	633.5 ✓
+50		8.3	37.0 ✓
60+00		5.8	39.5 ✓
+50		3.8	41.5 ✓
60+98.67 Δ		2.2	43.1 ✓
61+50		5.3	40.0 ✓
+90.89 Δ		8.2	37.1 ✓
62+30		11.0	34.3 ✓
T.P.		12.68	632.65 ✓
	11.87	644.52	
+58		15.7	628.8 ✓
+93.41 Δ		7.4	37.1 ✓
63+62		9.1	35.4 ✓
+97.72 Δ		4.3	40.2 ✓
64+50		6.3	38.2 ✓
65+00		9.8	34.7 ✓
+50		12.4	32.1 ✓
66+19.53 Δ		12.3	32.2 ✓
T.P.		12.27	632.25 ✓
	2.80	635.05	
+50		3.9	31.1 ✓
67+00		5.8	29.2 ✓
+50		5.3	29.7 ✓
+95		5.5	29.5 ✓

March-8-1935

47

635.05 ✓

68+04		11.0	624.0 ✓
+13		5.5	29.5 ✓
+50		5.9	29.1 ✓
69+00		7.3	27.7 ✓
+50		9.6	25.4 ✓
+90		15.4	19.6 ✓
70+50		10.9	24.1 ✓
71+25		12.4	22.6 ✓
+40		14.4	20.6 ✓
+81.41 Δ		11.2	23.8 ✓
Set B.M.		5.71	629.34 ✓ spike in
	2.87	632.21 ✓	
72+00		8.5	623.7 ✓
+50		9.9	22.3 ✓
73+00		11.9	20.3 ✓
+50		13.2	19.0 ✓
74+00		13.3	18.9 ✓
T.P.		12.59	619.62 ✓
	5.85	625.47 ✓	
+50		6.2	619.3 ✓
75+0860 Δ		6.1	19.4 ✓
+50		5.9	19.6 ✓
76+00		5.9	19.6 ✓
+50		5.5	20.0 ✓

Small oak stump 70' Lf. of sta. 72+15

March-8-1935.

48

	625.47 ✓		
77+00		4.9	620.6 ✓
+50		4.8	20.7 ✓
78+00		4.7	20.8 ✓
+50		3.6	21.9 ✓
79+00		3.2	22.3 ✓
+50		1.5	24.0 ✓
Set B.M.		2.11	623.36 ✓
	2.03		Spike in
	625.39 ✓		12" oak stump 13' Rt. of sta. 80+05
80+00		0.9	624.5 ✓
+16.37 Δ		2.8	22.6 ✓
+80		4.0	21.4 ✓
81+30		6.6	18.8 ✓
+59		3.9	21.5 ✓
+69.47 Δ		5.1	20.3 ✓
82+15		3.6	21.8 ✓
+53.80 Δ		2.6	22.8 ✓
+58		7.4	18.0 ✓
T.P.		12.18	613.21 ✓
	5.53		
	618.74 ✓		
83+00		2.2	616.5 ✓
+50		2.1	16.6 ✓
+80		7.6	11.1 ✓
84+01.89		8.5	10.2 ✓
T.P.		6.54	612.20 ✓

under water

March-8-1935.

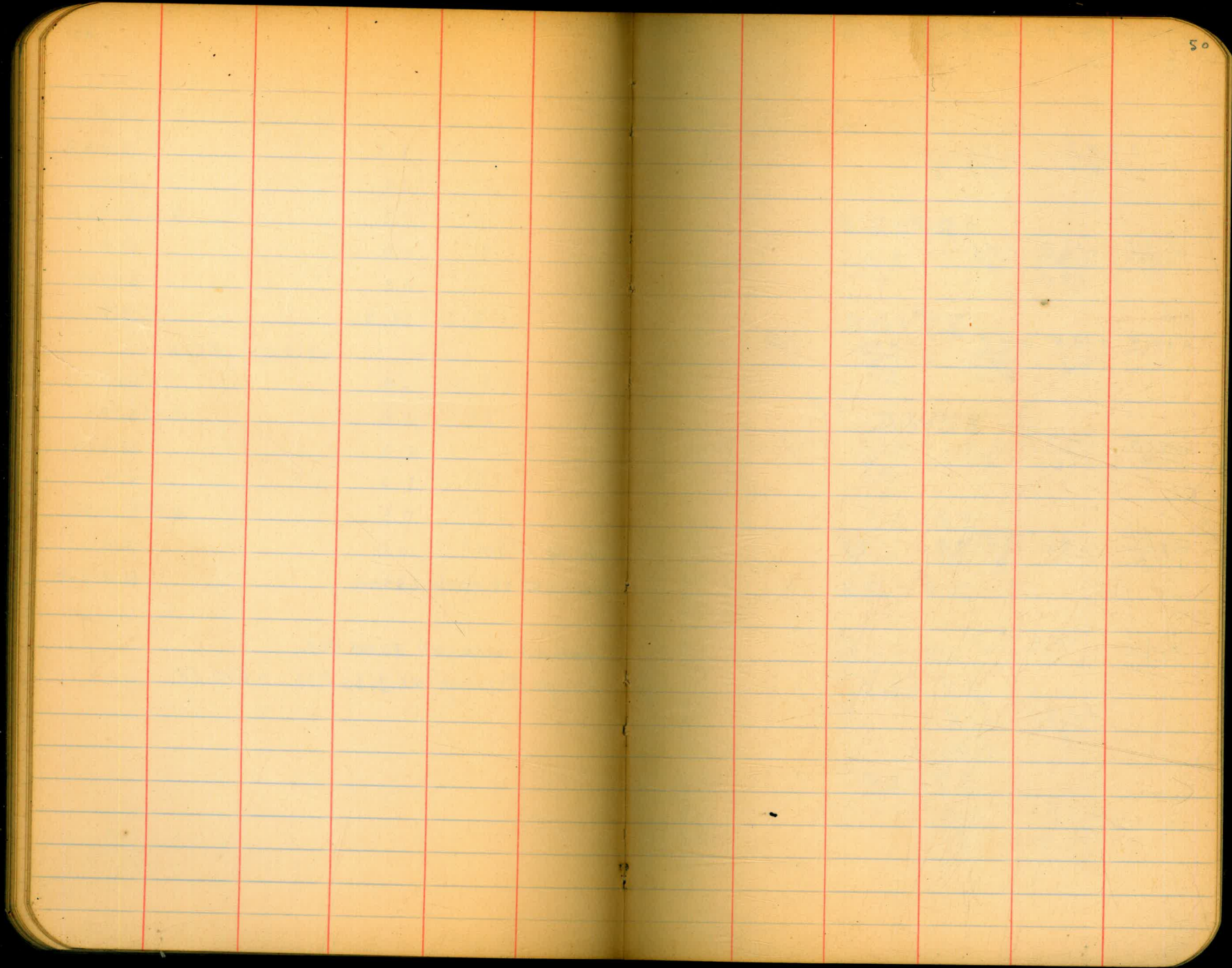
49

T.P.	8.11	620.31	612.20	✓
84+15		9.8	610.5	✓
+50		5.2	15.1	✓
85+02.00 A		5.7	14.6	✓
+50		5.0	15.3	✓
86+00		2.6	17.7	✓
T.P.		2.30	618.01	✓
	4.79	622.80		
+40		4.0	618.8	✓
+68.83 Δ		3.6	19.2	✓
87+30		5.2	17.6	✓
+60		6.9	15.9	✓
88+17.59 Δ		3.7	19.1	✓
+62		12.0	10.8	✓
Set B.M.		0.88	621.92	on barge
		12.20	610.60	= water

edge of River
Boulder 25' W. of sta. 88+40

Surface of Lake at 2:45 P.M.

Gauge Reading at 3:30 P.M. = 610.58.



X Secs on road from S end of dam to county road at camp. 51
 L Aug. 1-35 R L E R

22
 E
 $29+75$
 $\frac{+20.7}{21}$ $\frac{+18.8}{20}$ $\frac{+17.3}{15}$
 Hill
 Leaden
 Saper
 Remman.

22.6
 $29+50$
 $\frac{+19.5}{17}$ $\frac{+16.0}{16}$ $\frac{+15.4}{9}$

84
 $29+00$
 $\frac{+18.9}{17}$ $\frac{+13.3}{15}$ $\frac{+12.8}{7}$ $\frac{-1.2}{2}$ $\frac{-1.4}{10}$ $\frac{-5.6}{18}$

256 186
 $28+66^{59}$
 $\frac{+21.3}{19}$ $\frac{+12.7}{16}$ $\frac{+12.4}{5}$ $\frac{+1.0}{2}$ $\frac{+1.0}{8}$ $\frac{-6.0}{18}$

5.5
 $28+35$
 $\frac{+17.6}{17}$ $\frac{+8.0}{11}$ $\frac{+7.6}{3}$ $\frac{3.0}{1}$ $\frac{-4.8}{9}$ $\frac{-10.5}{19}$

15
 $28+04$
 $\frac{+11.6}{10}$ $\frac{+0.2}{6}$ $\frac{0.0}{3.5}$

$27+65$
 $\frac{+5.3}{4}$ $\frac{+0.5}{2}$ $\frac{0.0}{6.7}$

$27+28^{16}$
 $\frac{+7.8}{16.9}$ $\frac{0.0}{8}$ $\frac{0.0}{0.9}$

29+40 3 C.Y.
 Hill
 Leaden
 Saper
 Remman.

$27+00$
 $\frac{+10.5}{18.2}$ $\frac{+0.3}{9}$ $\frac{0.0}{3.6}$

$26+78$
 $\frac{+9.9}{18}$ $\frac{+0.6}{12}$ $\frac{0.0}{0.5}$

$26+28^{46}$
 $\frac{+6.3}{16.2}$ $\frac{0.0}{1.4}$

9.2
 $25+78^{02}$
 $\frac{+7.6}{16.8}$ $\frac{0.0}{2}$

$25+26^{42}$
 $\frac{+5.7}{15.8}$ $\frac{+0.3}{9}$ $\frac{0.0}{3.5}$

$25+00$

$\frac{+12.0}{19}$ $\frac{0.0}{18}$ $\frac{0.0}{1}$

L

E

R

L

E

R

$$\begin{array}{r}
 + \frac{8.6}{17.3} - \frac{1.0}{16} \\
 \frac{24+75}{-1.4} \\
 \frac{12}{2}
 \end{array}$$

$$\begin{array}{r}
 + \frac{4.0}{15} \frac{0.0}{14} \\
 \frac{24+31}{0.0} \\
 \frac{0.0}{54}
 \end{array}$$

$$\begin{array}{r}
 + \frac{3.7}{14} \frac{0.0}{13} \\
 \frac{24+05}{0.0} \\
 \frac{0.0}{4.3}
 \end{array}$$

$$\begin{array}{r}
 + \frac{4.2}{15} \frac{0.0}{14} \\
 \frac{23+78}{+0.7} \\
 \frac{0.0}{10}
 \end{array}$$

$$\begin{array}{r}
 + \frac{7.0}{21.6} - \frac{0.5}{21.6} \\
 \frac{23+50}{+0.3} \\
 \frac{0.0}{4} \quad \frac{+23}{6}
 \end{array}$$

$$\begin{array}{r}
 + \frac{6.0}{11.5} - \frac{0.4}{11} \\
 \frac{23+25}{-0.9} \\
 \frac{0.0}{21} \quad \frac{+0.7}{22}
 \end{array}$$

$$\begin{array}{r}
 \frac{22+50}{+1.6} \\
 \frac{0.0}{2} \quad \frac{0.0}{3.9}
 \end{array}$$

$$\begin{array}{r}
 + \frac{2.0}{14} \frac{0.0}{12.5} \frac{0.0}{6.2} \\
 \frac{22+25}{}
 \end{array}$$

$$\begin{array}{r}
 + \frac{18.0}{19.5} \frac{0.0}{11} \frac{0.0}{1.1} \\
 \frac{21+75}{}
 \end{array}$$

$$\begin{array}{r}
 + \frac{6.6}{16.3} \frac{+0.3}{12} \frac{0.0}{3.1} \\
 \frac{20+75}{}
 \end{array}$$

$$\begin{array}{r}
 + \frac{6.3}{16.2} \frac{+1.1}{14} \frac{0.0}{12.1} \\
 \frac{19+79}{2.9}
 \end{array}$$

$$\begin{array}{r}
 + \frac{4.9}{15.6} \frac{+0.3}{12.5} \frac{0.0}{2.7} \\
 \frac{18+80}{}
 \end{array}$$

$$\begin{array}{r}
 + \frac{3.7}{14.8} \frac{0.0}{12} \frac{0.0}{2.5} \\
 \frac{18+06}{7.5}
 \end{array}$$

$$\begin{array}{r}
 + \frac{7.9}{17} \frac{+1.0}{15.5} \frac{0.0}{2.6} \\
 \frac{17+33}{2.4}
 \end{array}$$

$$\begin{array}{r}
 + \frac{4.3}{20.1} \frac{+8.0}{19} \frac{+7.0}{13} \frac{+1.0}{10} \frac{0.0}{2} \\
 \frac{17+01}{}
 \end{array}$$

16 + 09
Zero Section

No excav between 15+77 & 16+09

Left from stake at grade

15+77	$\frac{+0.5}{8}$	$\frac{+1.8}{8}$	
15+41 ⁴³	$\frac{+1.0}{18}$	$\frac{+5.0}{21}$	
14+66	$\frac{+0.8}{18}$	$\frac{+5.0}{20}$	
13+50	$\frac{+0.5}{13}$	$\frac{+6.3}{15.5}$	
12+00	$\frac{+0.3}{14}$	$\frac{+6.0}{14}$	
10+80	$\frac{+1.3}{19}$	$\frac{+6.0}{21}$	

9+30	$\frac{+0.5}{8}$	$\frac{+8.3}{13}$	$\frac{+10.5}{14}$
8+00	$\frac{+0.5}{12.5}$	$\frac{+4.0}{14}$	
7+00	$\frac{0.0}{14}$	$\frac{+10.0}{17}$	
6+00	$\frac{+0.3}{11}$	$\frac{+4.5}{13}$	

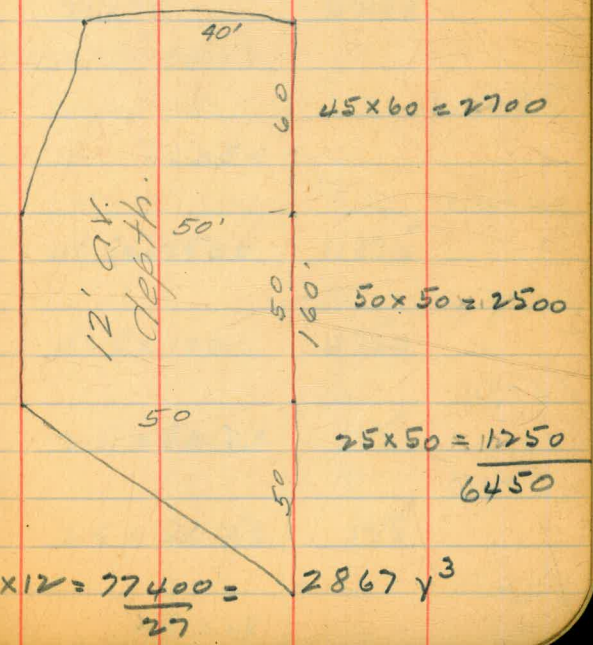
5+50 Zero Section

Total excavation = 102 105 cuft =
 $37,820 y^3 \div 130 = 37,690 y^3$

Estimate of rock which has not been moved from roadway.

Sta. 5+50 - 9+30	50	C.Y.
13+00	5	"
23+50 - 26+78	80	"

Hole Pilled below of S. toe wall



Estimate of yardage moved
on pipe line bench west of tunnel

Sta.	End ft	Area	Cu. ft.
0+00	0.0		
		36 x 25 =	900
0+25	72		
		57 x 50	2850
0+75	42		
		41 x 90	3690
1+65	40	end sec	

pipeline stationing

13+35	21	end sec	
		23 x 65	1495
14+00	25		
		12.5 x 50	625
14+50	0		
14+90	0		
		3.5 x 110	385
16+00	7		
		5 x 76	380
16+76	3		
		24 x 24	576

Area
ft²

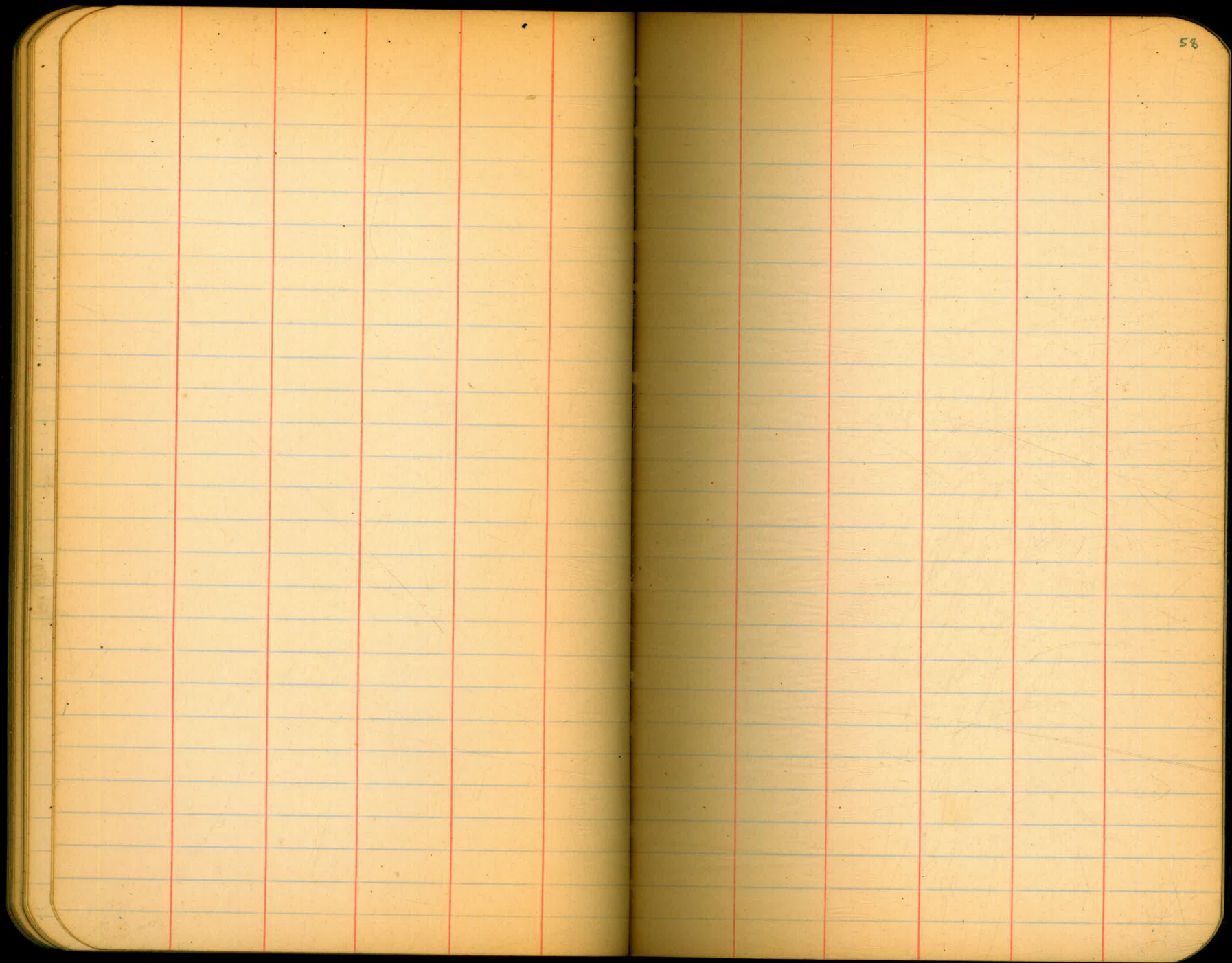
5A

Sta.	Area ft ²	Cu. ft.
17+00	45	
		30 x 50
		1500
17+50	15'	
		16.5 x 60
		990
18+10	18	end Sec.
18+40	0	end Sec.
		6 x 60
		360
19+00	12	
		36 x 75
		2700
19+75	60	
		70 x 75
		5250
20+50	80	end sec
20+75	0	end sec.
		47.5 x 25
		1187.5
21+00	95'	
		47.5 x 100
		4750
22+00	0	
		2.5 x 50
		125
22+50	5	
		2.5 x 50
		125
23+00	0	end sec.

Sta.	Area.		
23+50	12'	end Sec	
		7.5 x 50	375
24+00	3		
		1.5 x 20	30
<u>24+20</u>	0	end Sec	
25+80	0	end Sec	
		4 x 70	280
26+50	8		
		4.5 x 50	225
27+00	1		
		8 x 75	600
27+75	15		
		7.5 x 50	375
<u>28+25</u>	0	end Sec	
28+90	0	end Sec	
		2.5 x 20	50
29+10	5		
		4 x 60	240
29+70	3		
		2.5 x 105	262.5

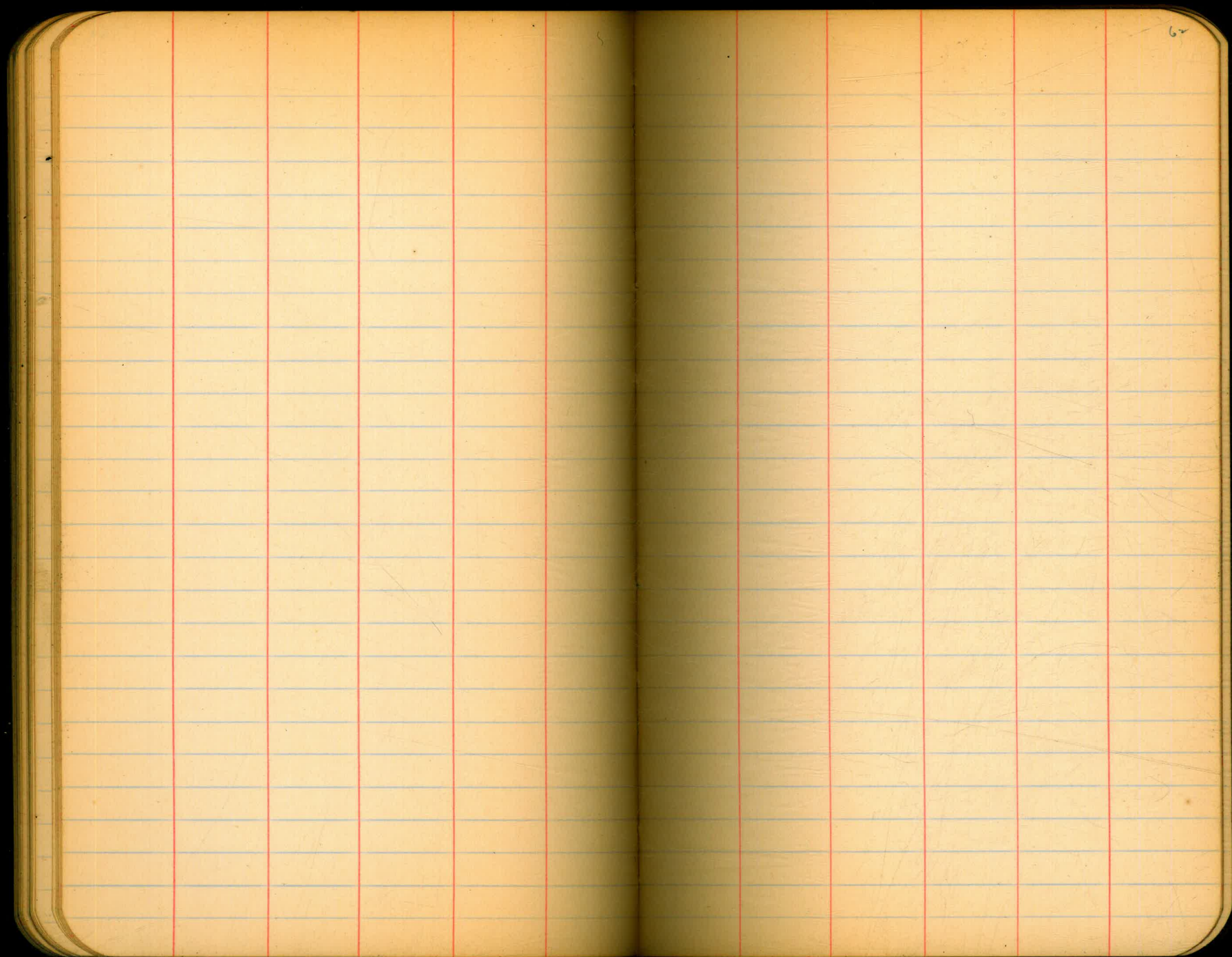
55

Sta.	end Area.		
30+75	2		
		1 x 225	225
33+00	0	end Sec	
			<u>30551 cu. ft.</u>
		1,132 cu. yd.	



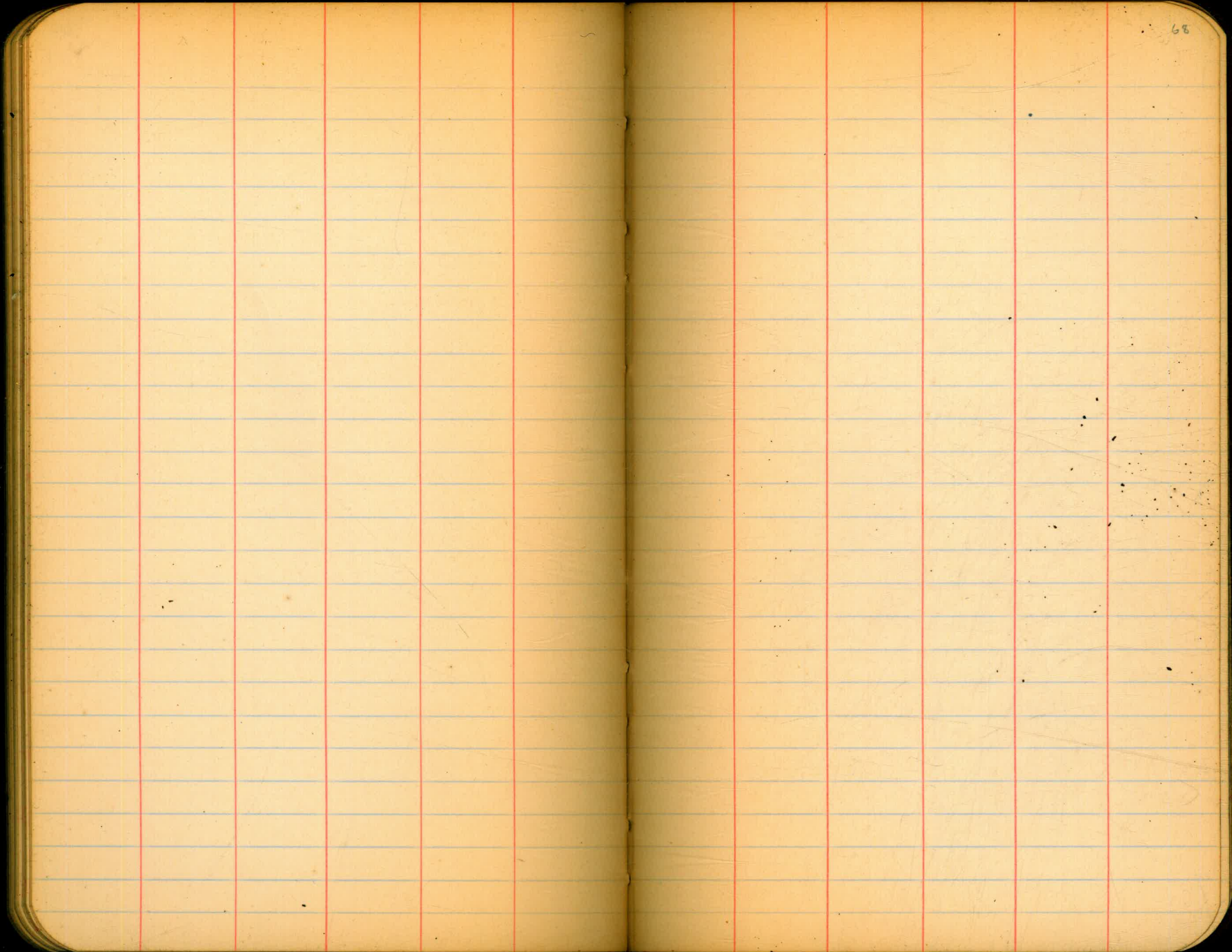
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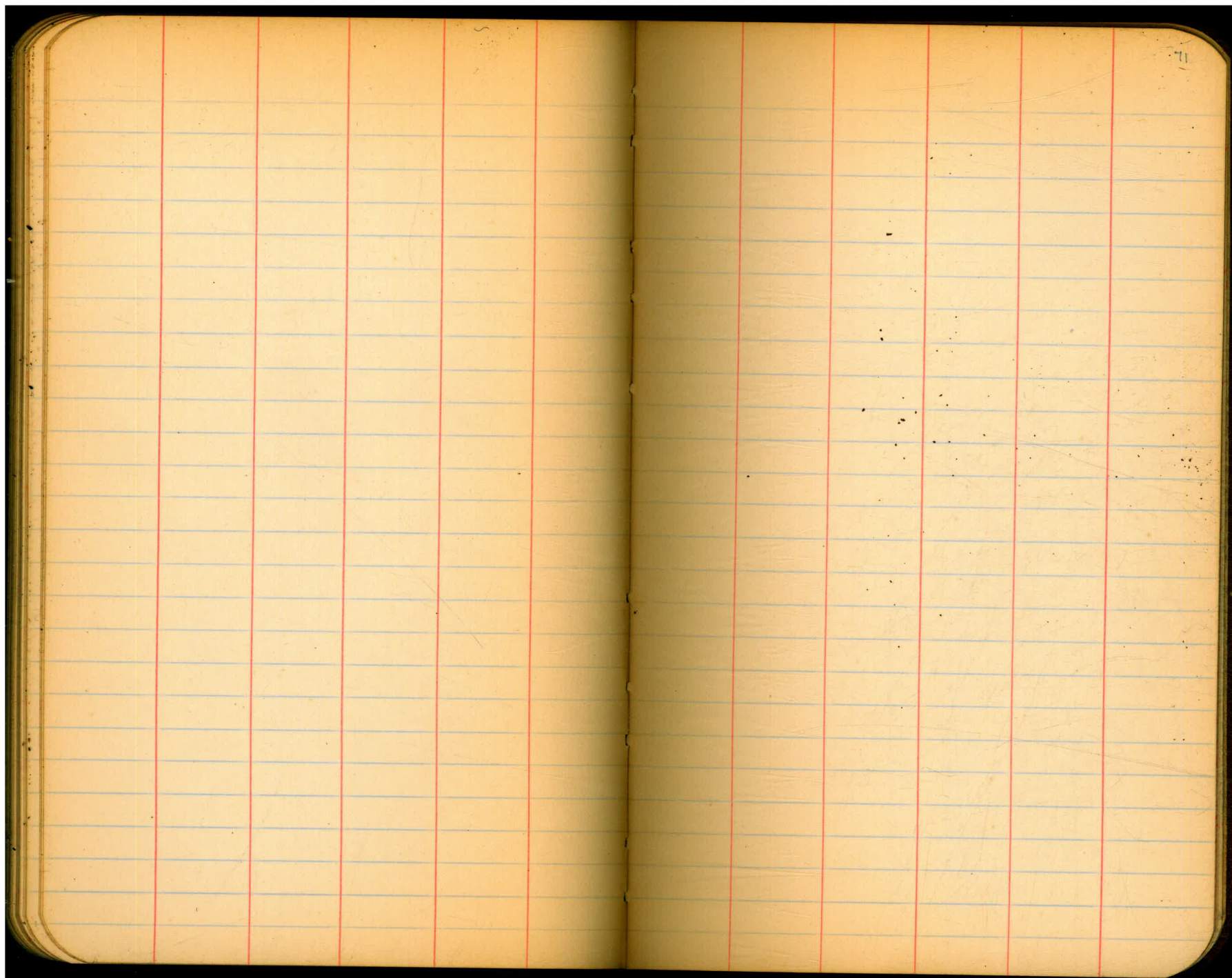
61



5

67

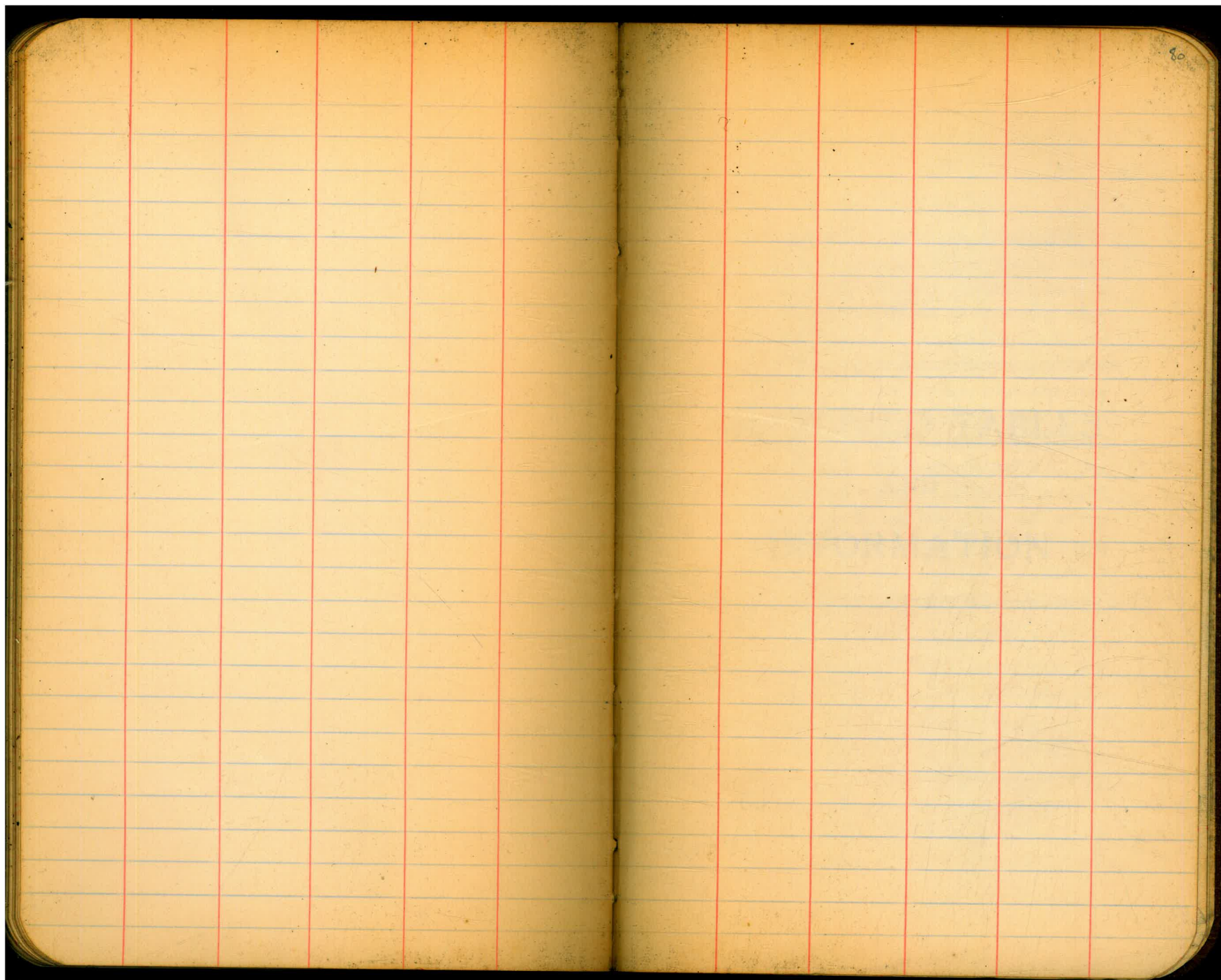




394.27

87+78.26	2.0	392.3
87+75	1.7	392.6
87+50	2.4	391.9
87+25	2.2	392.1
87+00	2.3	392.0
86+75	2.4	391.9
86+50	1.5	392.8
86+25	1.9	392.4
86+00	2.1	392.2
85+75	2.4	391.9
85+50	1.3	393.0
85+25	2.3	392.0
T.P.	5.36	388.91

Peg in $\$$ 84+50



B.M. 2	Air valve	5469	399.53
" 3	Trestle	2	341.01
" 4	Air valve	40215	402.15
" 5	Trestle	20780	293.48
" 7	"	29727	347.12
" 9	"	33436	367.22
11			267.49

DIRECTIONS FOR USE OF TABLES

TABLE No. 1.

Distance of slope stake from side or shoulder stake for any width roadway, slope 1% to 1%. If ground is nearly level, the cut or fill at side stake is located by the double entry method in left column and top row. The number in body

from side stake to slope stake. If ground is not

IMPROVED TABLES
 AND
INFORMATION

TABLE No. 2.

To find Tangent and External for curve of any other degree, divide by degree of curve and add correction found in column of corrections. Degree of curve with a given L may be found by dividing tangent (or external), opposite L by given tangent (or external). The distance from a point on the tangent to the curve is very nearly the square of the tangent length divided by twice the radius.

highest dirt fill dam in the world in N.C. USA
height 208' length 2000±

1164 + 85.7

1151 + 76

5) 130

30

30

13097

65.485

70

65.29

14031

26

5

70