

Treasury Department,
U. S. COAST AND GEODETIC SURVEY,
O. H. Tittmann , Superintendent.

States: *Pa. - Md.*

SKETCHBOOK.

W. C. Hodgkins

U. S. C. & G. SURVEY.
LIBRARY AND ARCHIVES.

AUG 17 1903

Acc. No. 55825

Treasury Department,
U. S. COAST AND GEODETIC SURVEY,

O. H. Tittmann, Superintendent.

States: *Pa. - Md.*

SKETCHBOOK.

ABSTRACT OF CONTENTS:

*Mason and Dixon Line,
eastward from Tonoloway
Hill to Hearthstone Moun-
tain. (M.P. 129 to M.P. 116)*

(R. H. Blair)

1902

CHIEF OF PARTY:

W. C. Hodgkins

Vols.

Vol. *13*

27/3

27/3

27/3

No 119

$84^{\circ}22'$ from East

Slope $26^{\circ}59'$

28,75 ft.

At angular point on ridge west of M.P. 123

2^d mark W. + $0^{\circ} 00' 00'' 10'' 05''$

2^d mark W. (1) 81 17 55

(3) 243 53 15 35 25 243 53 20
81 17 46.7

(3) 127.47 58" 04" 01" 243 53 36
81 17 52 49.4

2^d mark W. + $0^{\circ} 00' 00'' 10'' 05''$

mark on Cape Mt (1) 98 35 30

(3) 295 46 15 15 15 295 46 10
98 35 23.3

(3) 231 32 05 15 10 295 45 55
98 35 18.3
98 35 20.8

Cape Mt. + $0^{\circ} 00' 00'' 10'' 05''$

2^d mark W. (1) 180 06 30

(3) 180 20 55 25 10 540 20 05
180 06 41.7

(3) 100 40 55 11 03 540 19 53
180 06 37.7
180 06 39.7 43.1
98 35 20.8 24.2
81 17 49.4 2.7
359 59 49.9 900.0

MP. 126 brass from sink N. 106° 05' 30" 73 54 30
 Japan dir. on slope 2° 52' = 37.845

MP 125 brass from sink N. 88° 57' Japan dir. (level) 31.07°

MP 124 Japan dir (level) 84° 23' 28.6°

MP 123 brass from sink N. Japan dir. (level) 91° 21' 22.20

Azimuth Sta. (a.m.)

(Sept. 2. 5 - 1902)

Azimuth Sta. (p.m.)

0-West

Pen. Woods
off west of Sta

Deflection Point
(Tondaway Hill)

FS 78 FS 122
dx 1' 41" d 5' 30"
dx 0' 44" dx 9' 39"
[79.0] [22.2]
-20.5

FS 630 d 8' 38' dx 9' 30'
[616.7] -100.8

#129 From Sidelong Hill
79°38' sm. w.
39.33 ft.
Rect. distance 38.69

79°44' sm. w.
40.43 ft.
No 129 mp.
Rect. distance 39.78
Sta. East 7.18 ft.

BS 183
EX 3' 44"
[83.7]
[46.0]
22°17' - X-D-41

BS 208 d 5' 38"
dx 8' 11"
+29.7
[207.1]

/86 = Error

Field

492-28900

1715
362
30027

57.80
310°55'

316
19' 18"
230541

443
128021

X-E on offset stake
10°40' from line struck

X-D on line stake from
offset stake
3°15'

Trail

FS 386 - d 2°00' - dx 3°15'

386.6
[386.6]

BS 325 - d 3°00' - dx 0°21'

[326.1]

[35.5]

[92.5]

[17.8]

BS 450 - d 4°27' - dx 5°29'

[448.4]

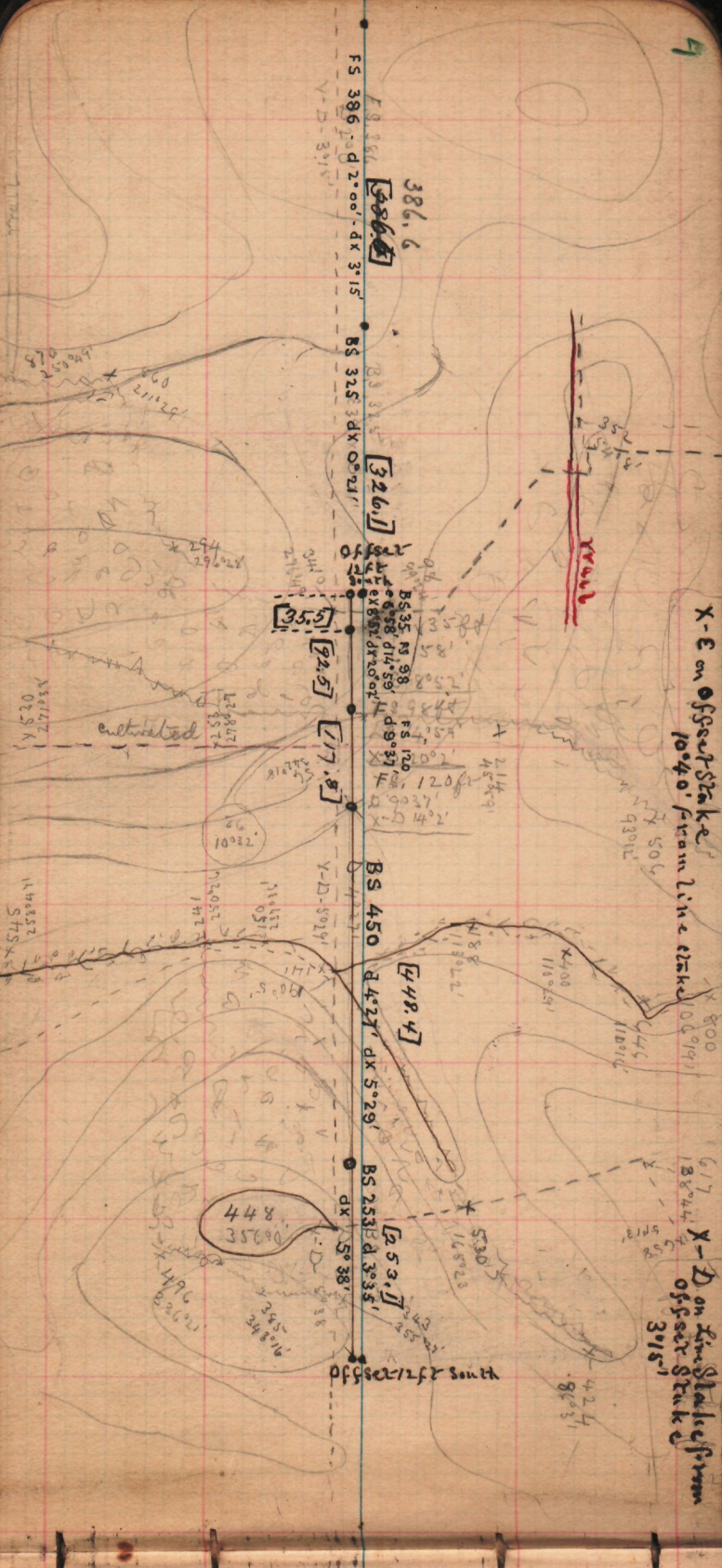
BS 253 - d 3°35' - dx 5°38'

[253.1]

offset 271/2055 ft

entrusted

448
356.0



[286.5]

[506.4]

[404.1]

[241.8]

[404.2]

[67.1]

42,35-363°24'

BS 403.13 ex 0°18'

Farm boundary monument

FS 166
E 31'
X-B 2°24'

10957
002

X 279
27100'

2020571

BS 114
B 4171
X-B 4°14'

FS 504
B 484' X-D 5040'

FS 13
B 403.13 ex 0°18'

FS 247
B 4010'

FS 196
B 520'

FS 166
E 31'
X-B 2°24'

X 495
12106'

583

217014

X 445
281023'

111012
0744'

219043

205015
40 224°3'

40 224°3'

40 224°3'

40 224°3'

40 224°3'

40 224°3'

40 224°3'

4002

4002

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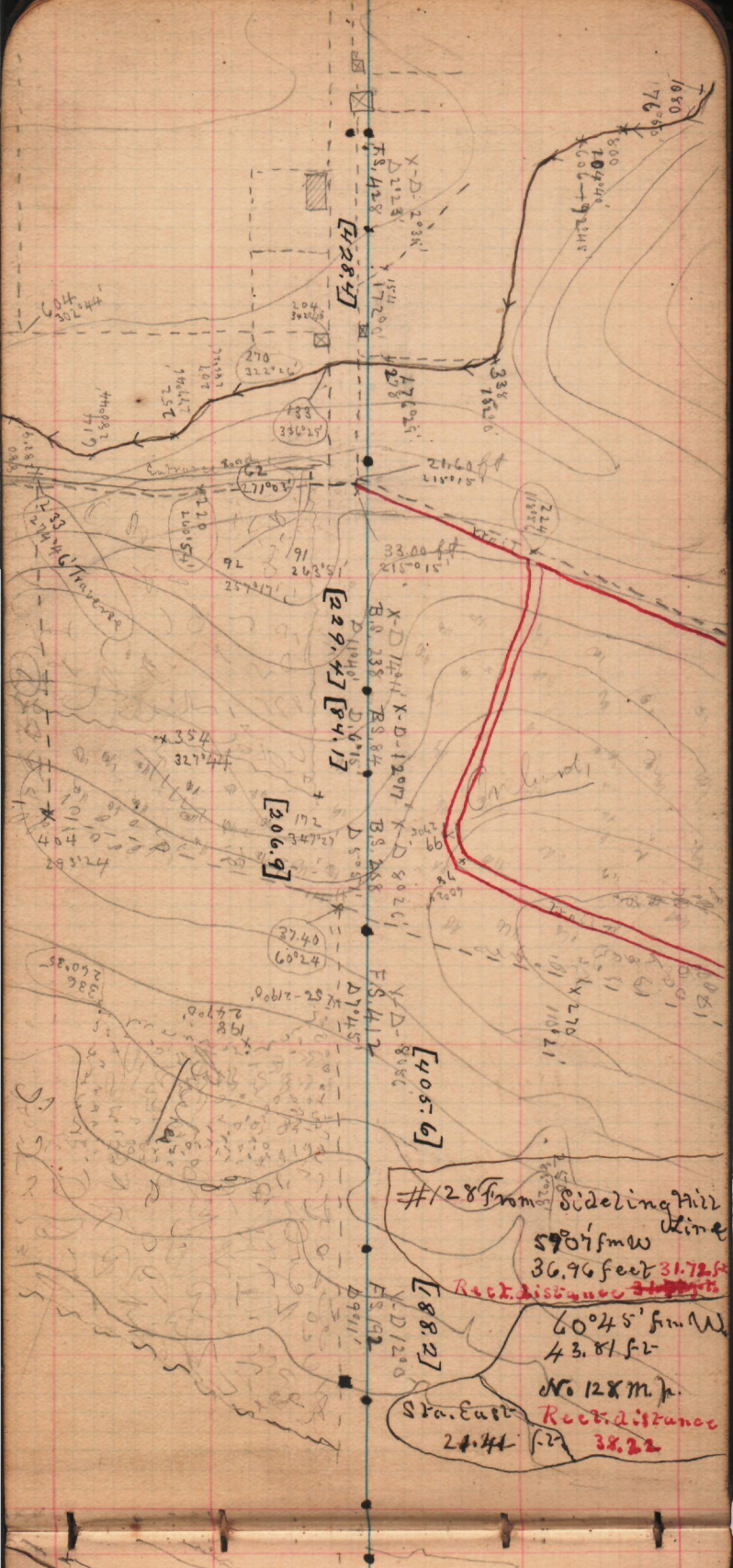
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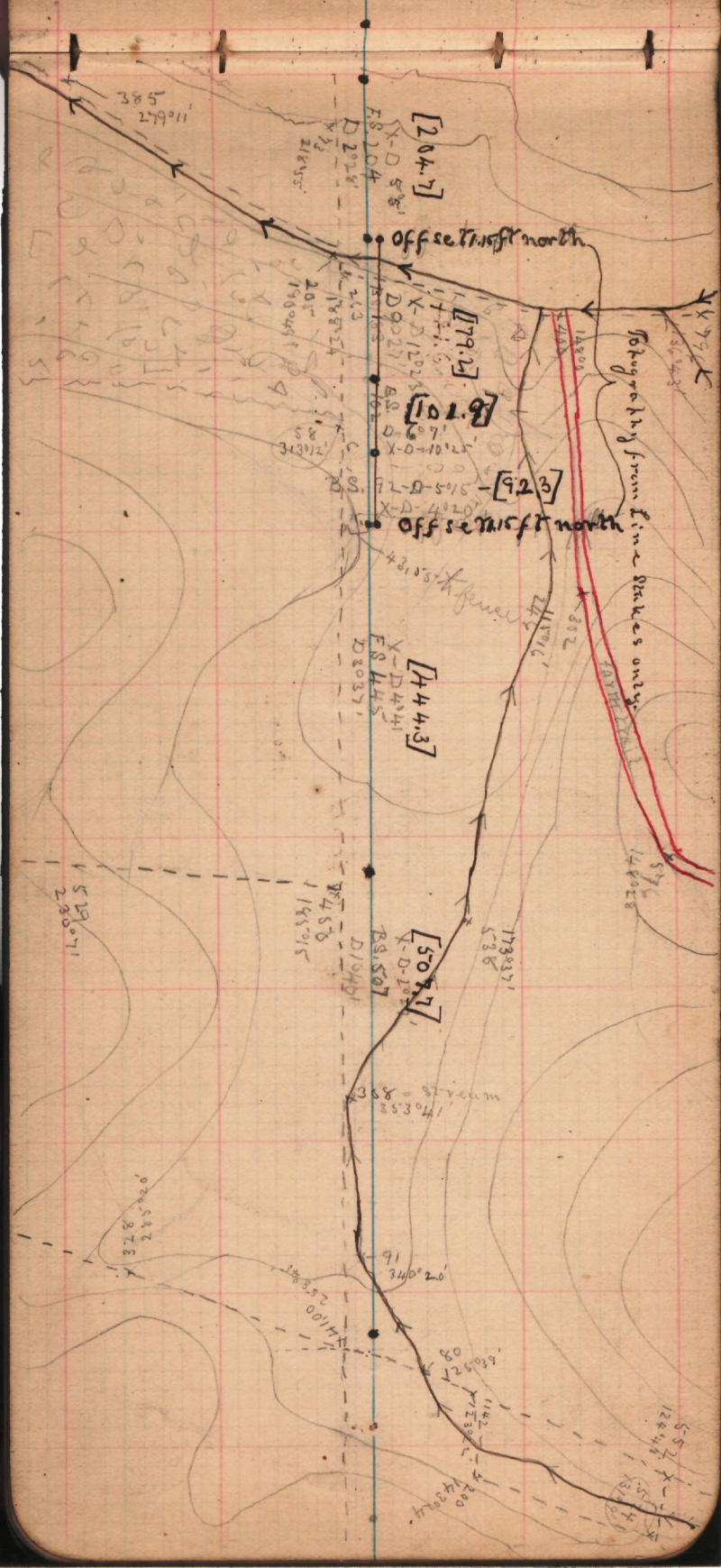
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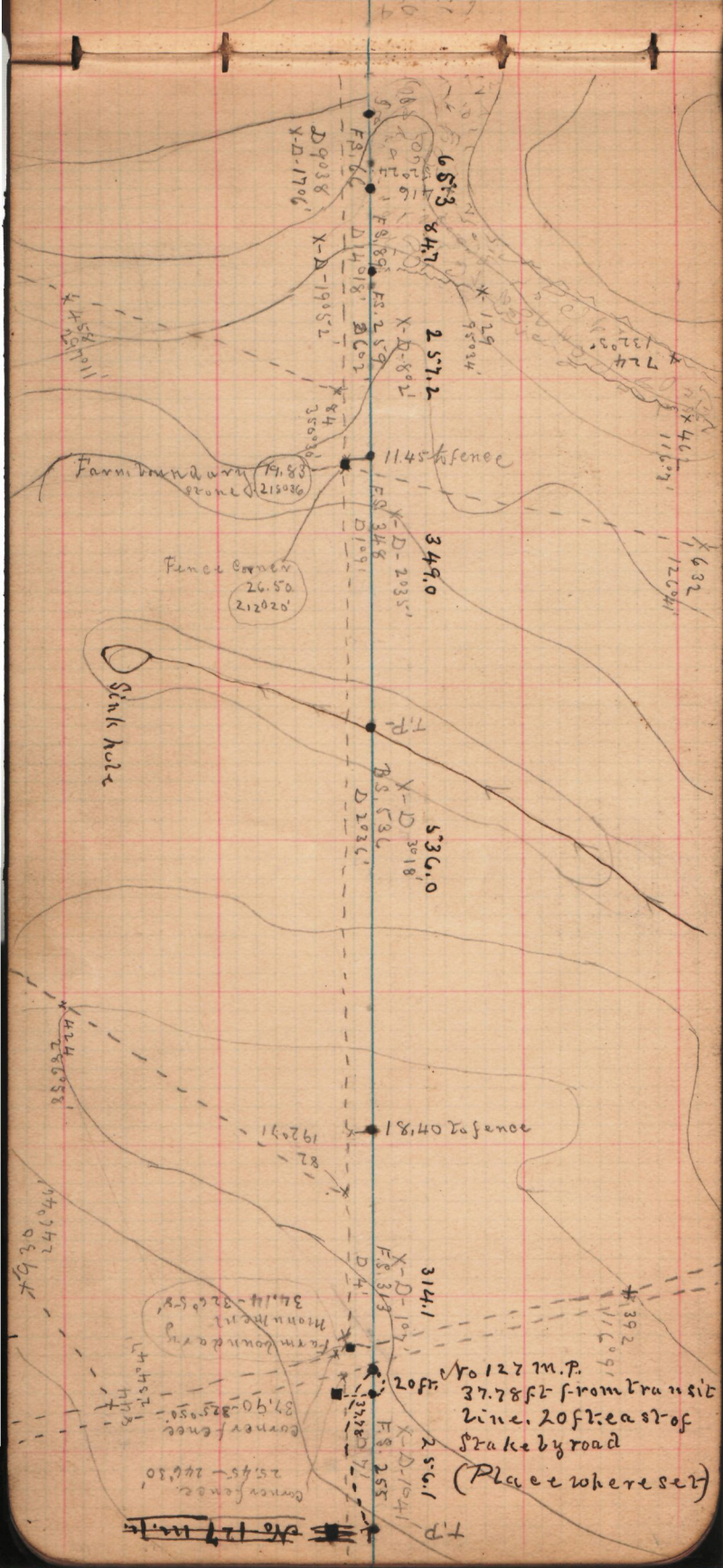
4002

4002

4002







No. 127 m. j.

No. 127 m. j.
Where Search
was made

97.1
275.1

21.352 fence

423.0
X-D-507
B.S. 424
D 491

19852 fence
B.S. 320
X-D-507

365.9
X-D-1204
B.S. 379
D 1046

242.9
X-D-1308
B.S. 251
D 1103

108.1
X-E-1014
B.S. 107
D 670

99.9
X-D-180551
B.S. 30
D 16057

32.9
X-D-24058
B.S. 43
D 16053

28.6
X-D-27059
B.S. 65
D 15059

40.2
X-D-28030
B.S. 65
D 15030

61.2

32.9

28.6

40.2

61.2

0.5 Road 100

196030

36.70

302030

42.0

42.0

42.0

42.0

42.0

42.0

42.0

42.0

42.0

42.0

42.0

42.0

42.0

42.0

96062
X 317

96062
X 317

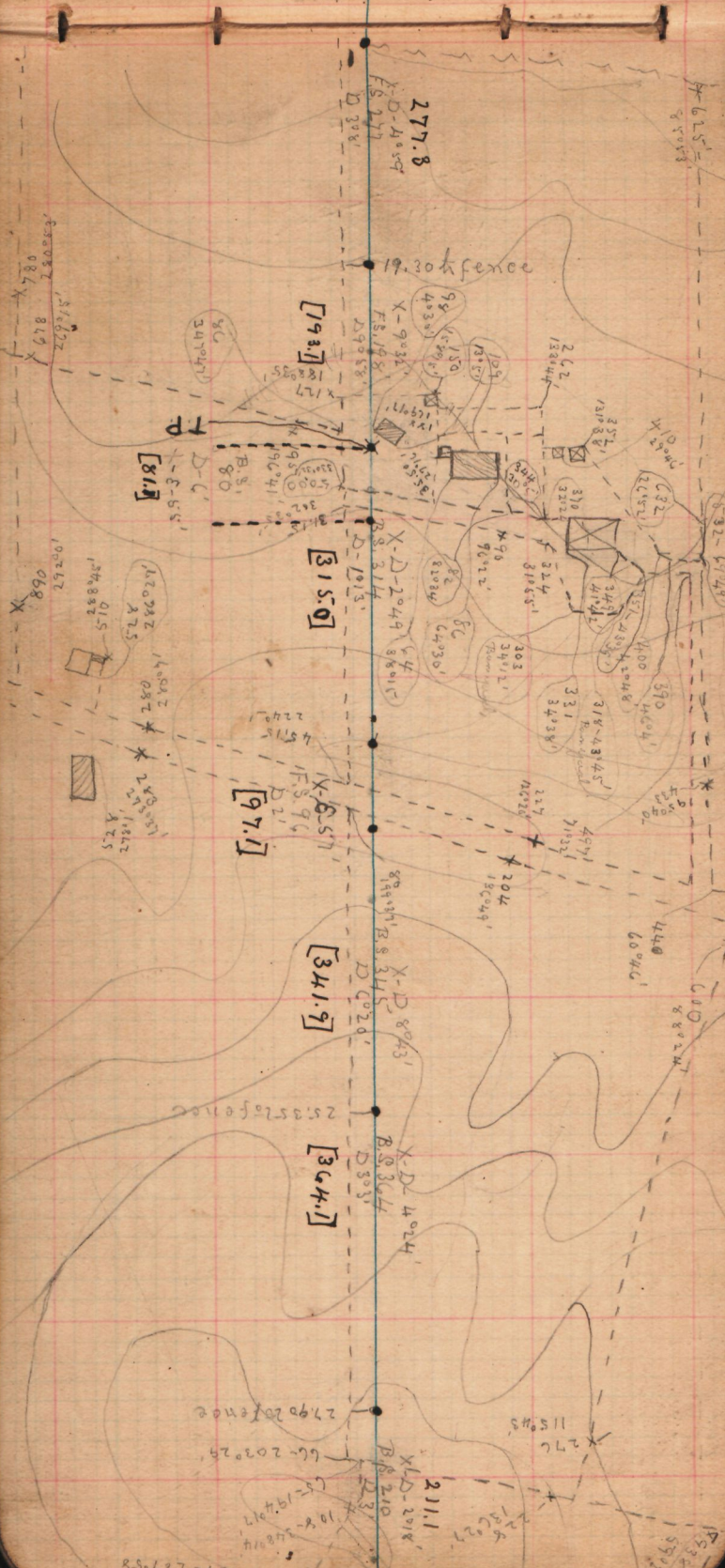
96062
X 317

96062
X 317

96062
X 317

96062
X 317

96062
X 317



277.8

X-D-4059

D 308

19.30 fence

[193.7]

[315.0]

[97.1]

[341.7]

[364.1]

211.1

X-D-2018

D 210

2790 fence

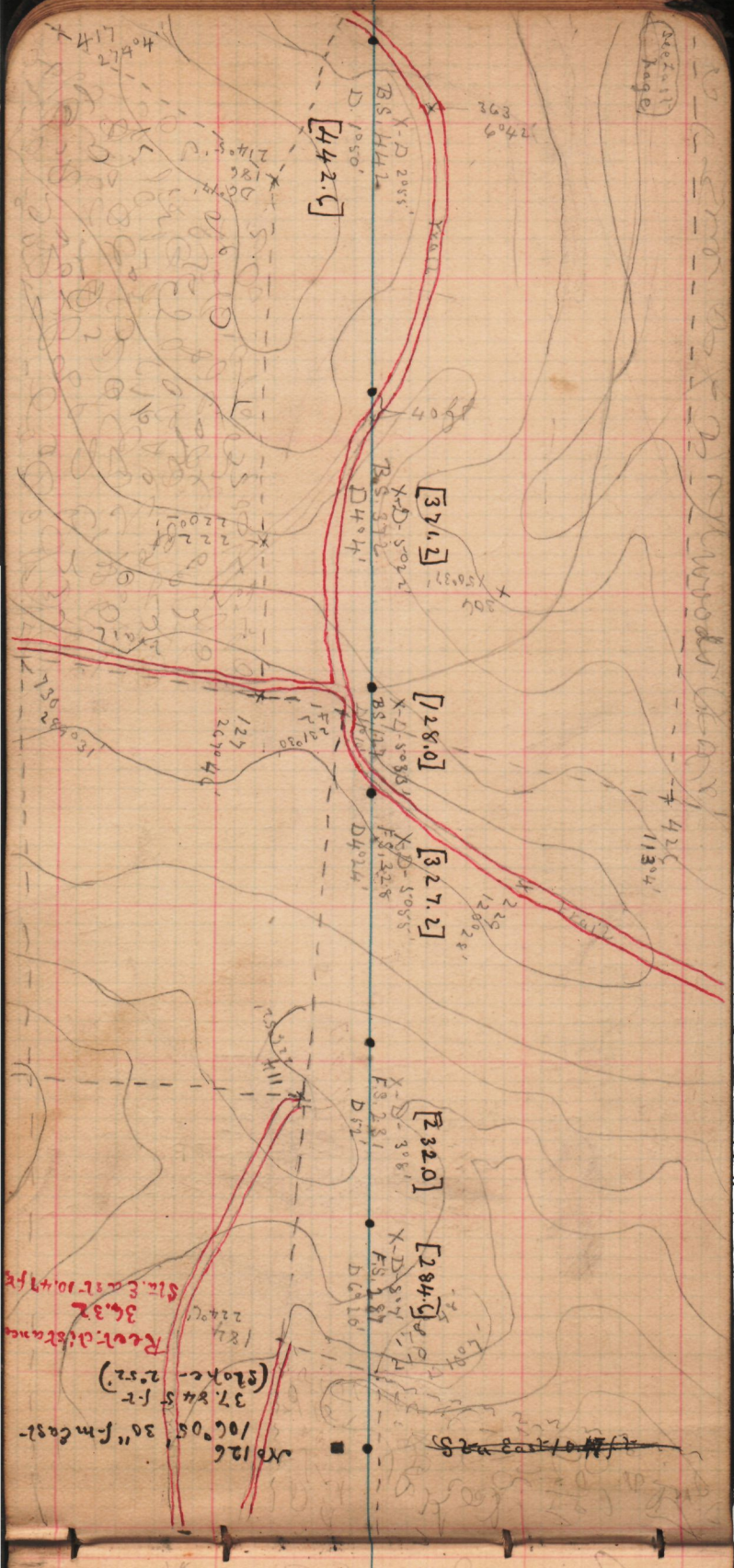
X-D-2032

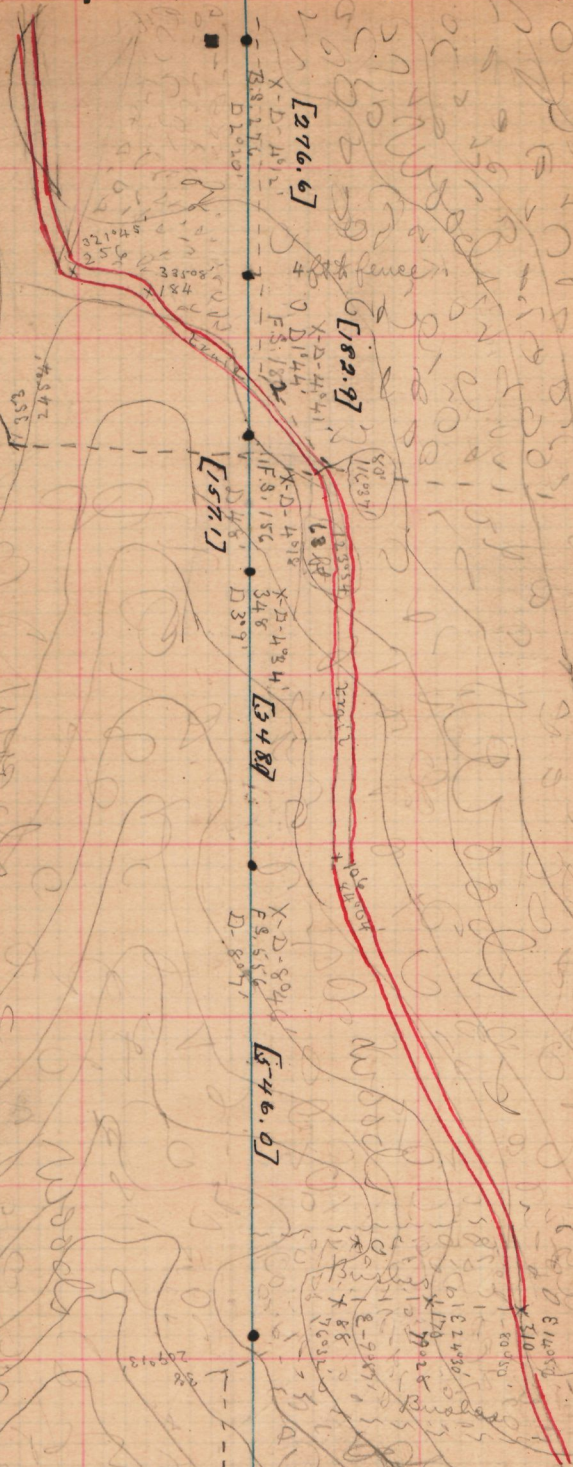
D 210

108-2404

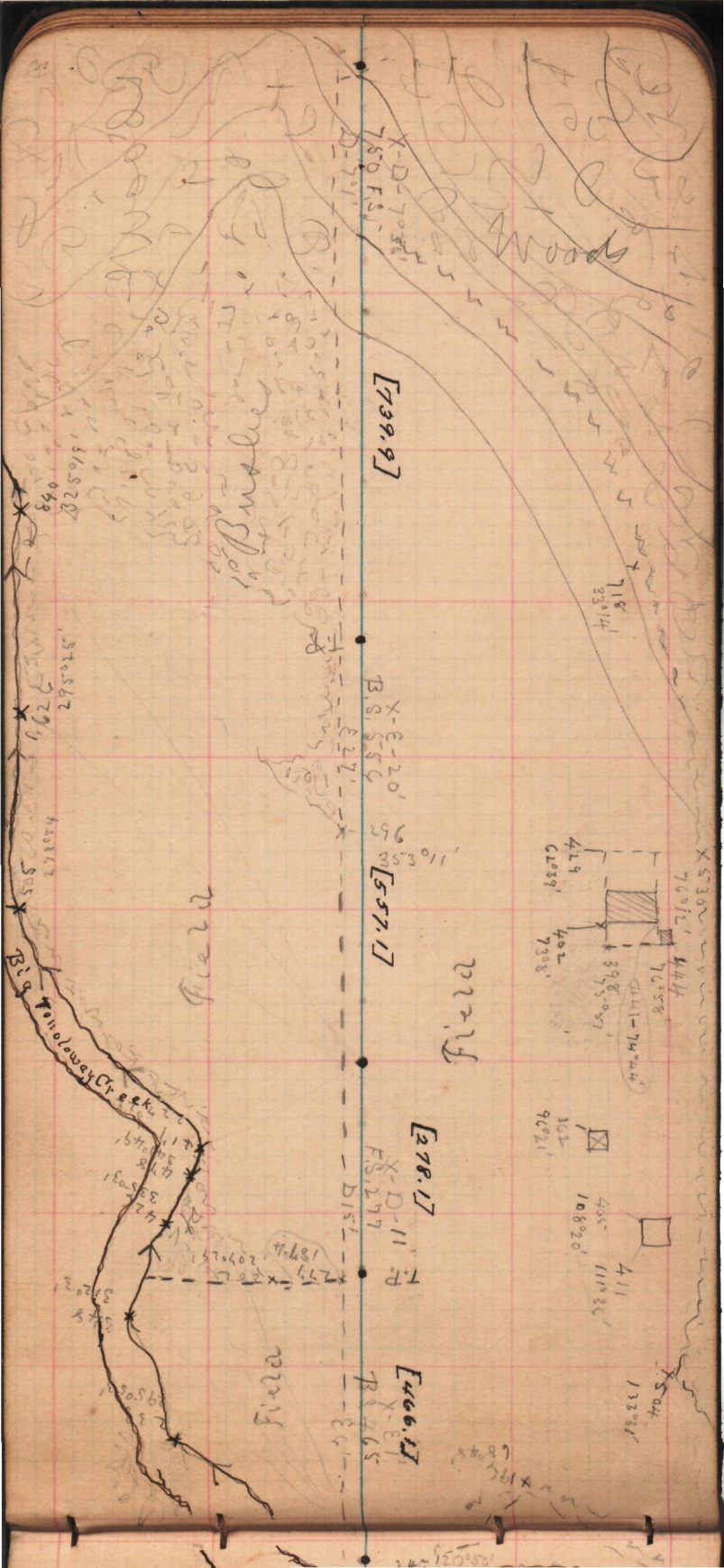
C-19497

59-227058





Woods

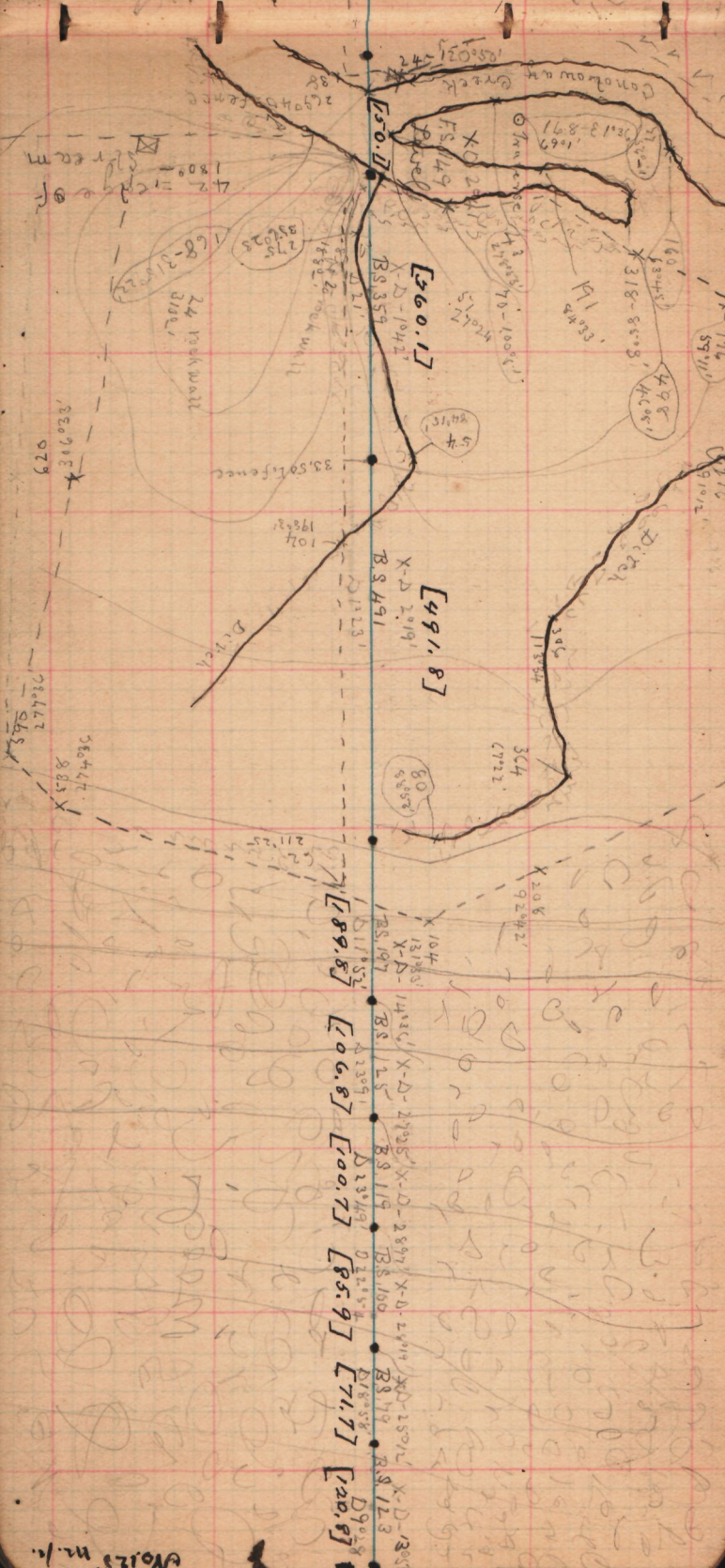


No. 125 m. l.

[120.8] [71.7] [85.9] [100.7] [106.8] [89.8]

[491.8]

[560.17]



356
284°36'

137
290°13'

242
72°48'

No. 125 m.p.
88°57' from east
31.07 ft.

[89.0]

Rect. distance
31.05

Sta. west. 57 ft.

[96.9]

[29.6]

[07.6]

[257.1]

[33.1]

[60.5]

[47.1]

[930.2]

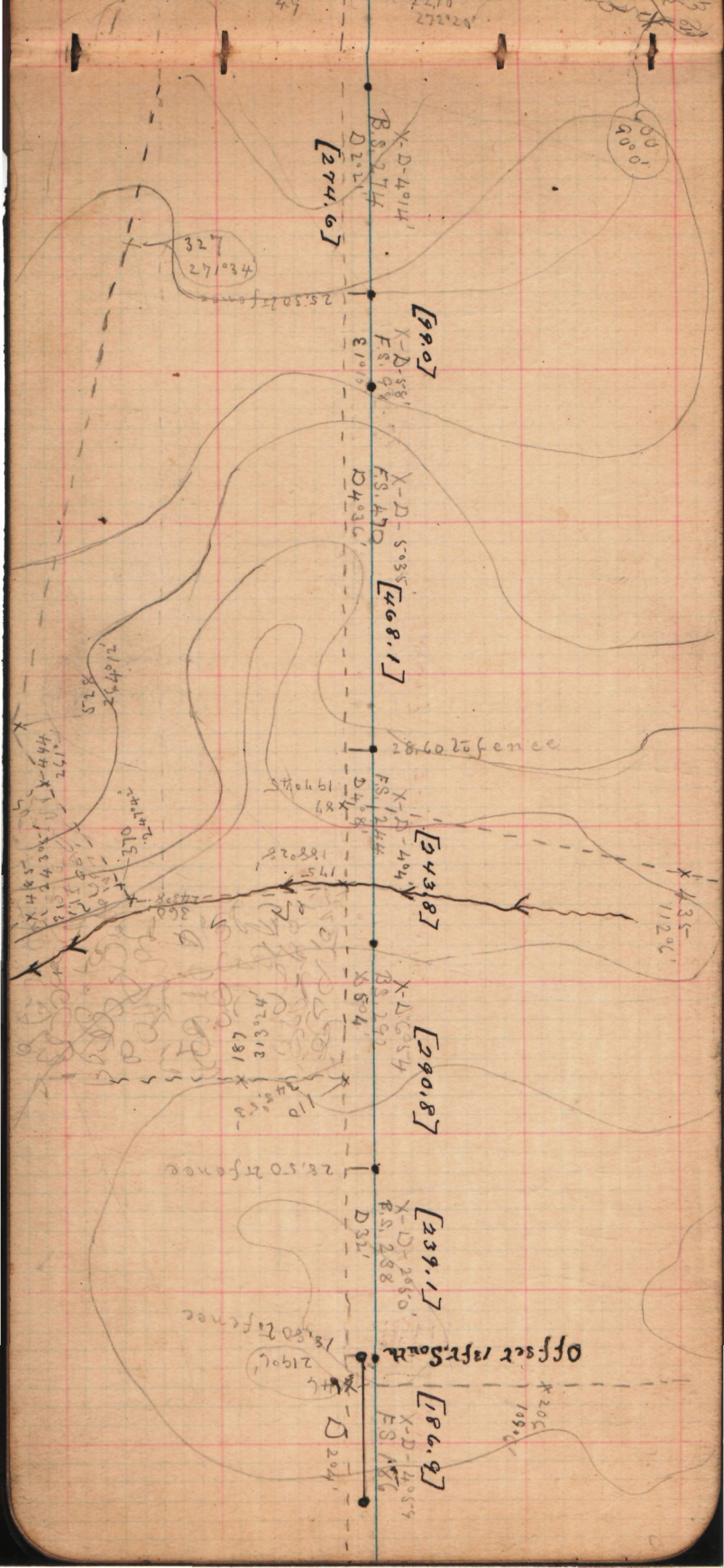
[77.1]

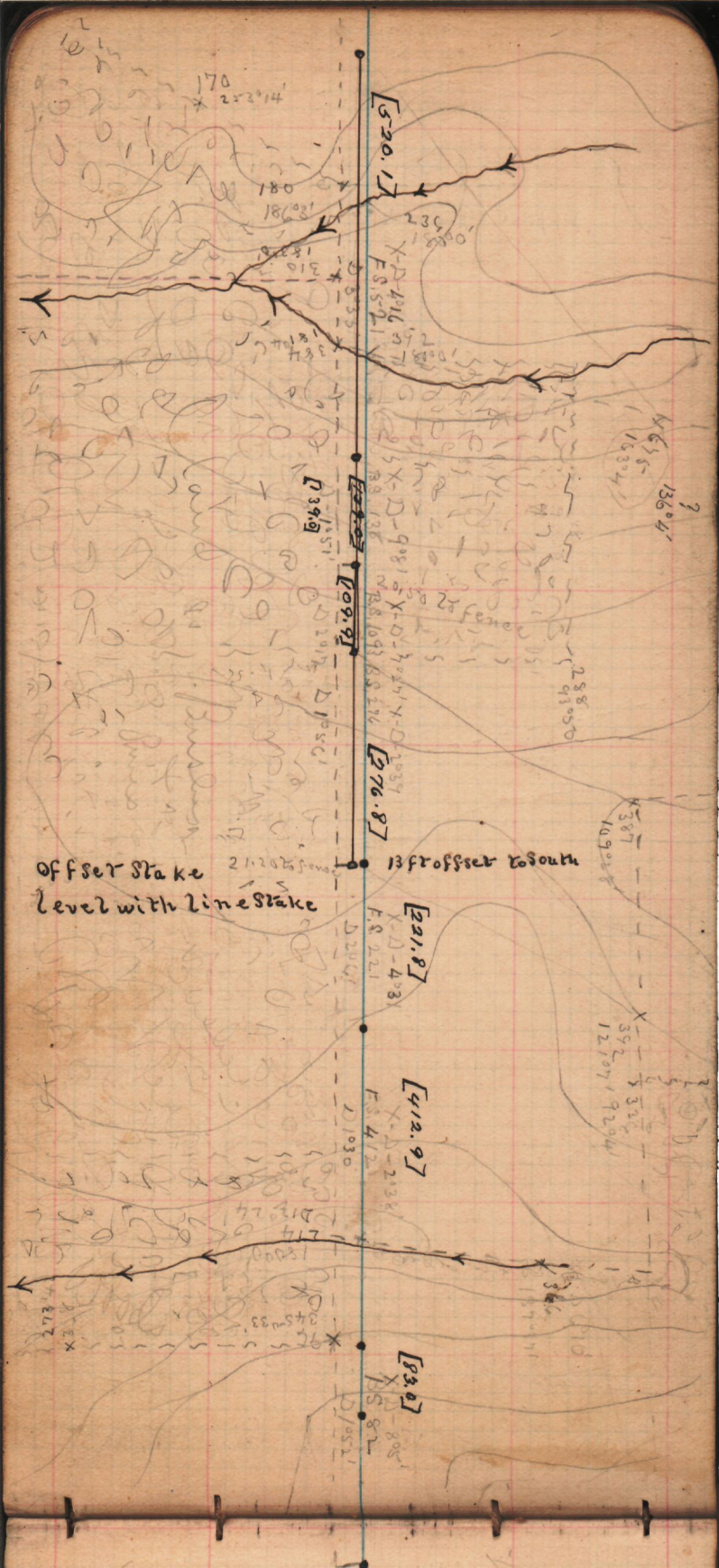
45
332°12'

140°54'

X 207

2210
272°20'





No. 124 m.p.

$84^{\circ}23'$ fm. East

28.60 ft.

Rect. distance

28.46

St. West. 2.79 ft.

32.40 to fence

offset 6 ft South

D.F.

[64.1]

X-D-2087

FS. 183

X-D-5044

FS. 480

[477.8]

X-D-2448

FS. 423

[423.7]

X-D-5144

FS. 93

[97.5]

X-D-834

FS. 197

[23.1]

X-D-1051

FS. 127

[26.4]

X-D-1051

FS. 127

[26.4]

X-D-1051

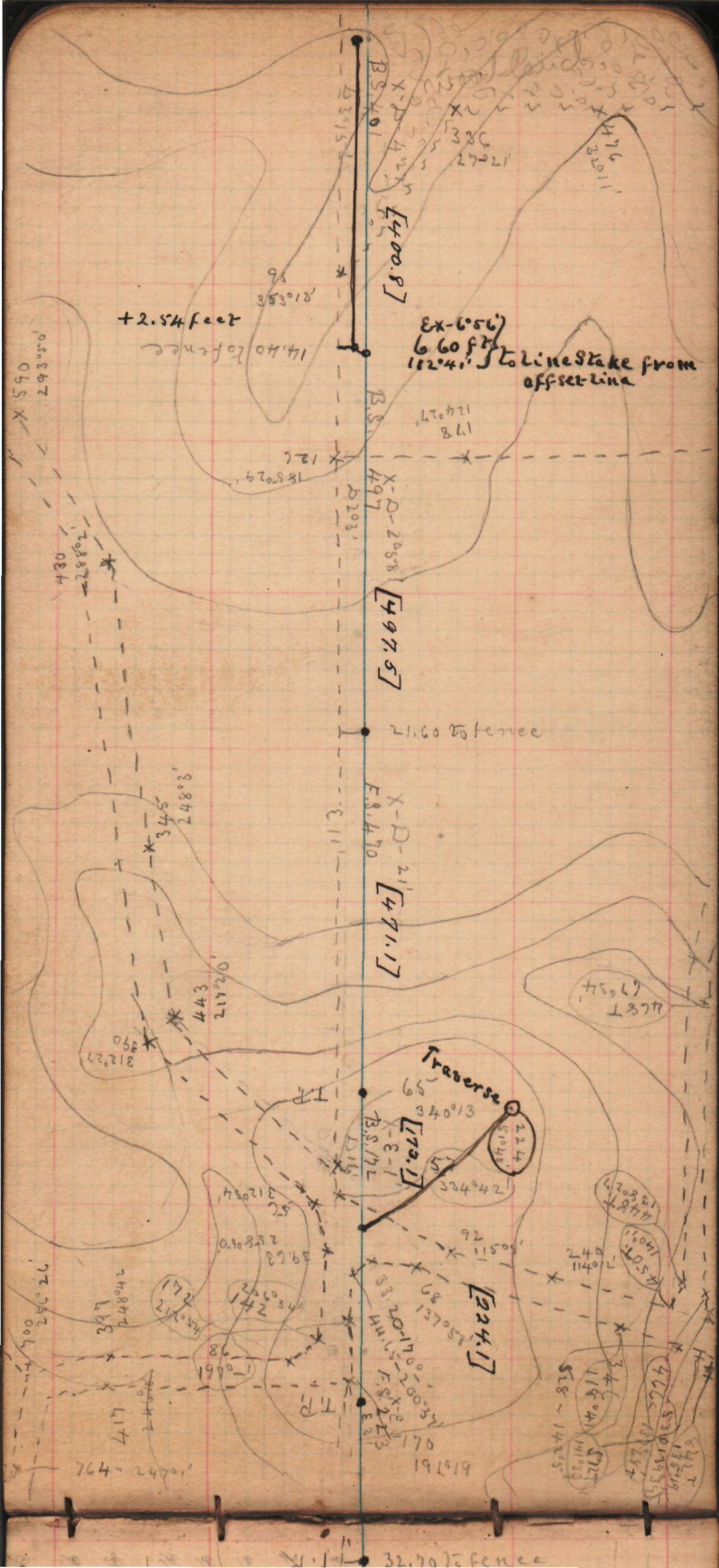
FS. 127

[26.4]

X-D-1051

FS. 127

[26.4]



32.90 to fence

[33.1]

X-D-2043
F.S. 132

(Morgan's Field)
Deflection Point
Topography east is on
a continuation of the
Morgan's Field - Fowles
way Hill line

[39.8]

X-D-4018
R.S. 392

292
3564

[307.7]

X-D-4059
R.S. 1207

13.70
2465

[317.1]

X-D-1949
R.S. 315

11.16
3516

[353.1]

X-D-201
F.S. 382

24.75 to fence

[477.1]

X-D-1023
R.S. 176

32.70 to fence



810187
405

16.187
295

Bay

271°56'

No. 123 m.p

91°38' fm East

22.78 ft from
Keeper Mountain line

Rect. distance

22.77 ft.

Sta. East - .65 ft.

91°21' fm East

22.20 ft

from Morgreth
field - Tonoloway Hill
line

Rect. distance

22.19 ft.

Sta. East .52 ft

[62.3]

[322.5]

[96.8]

[514.5]

[179.1]

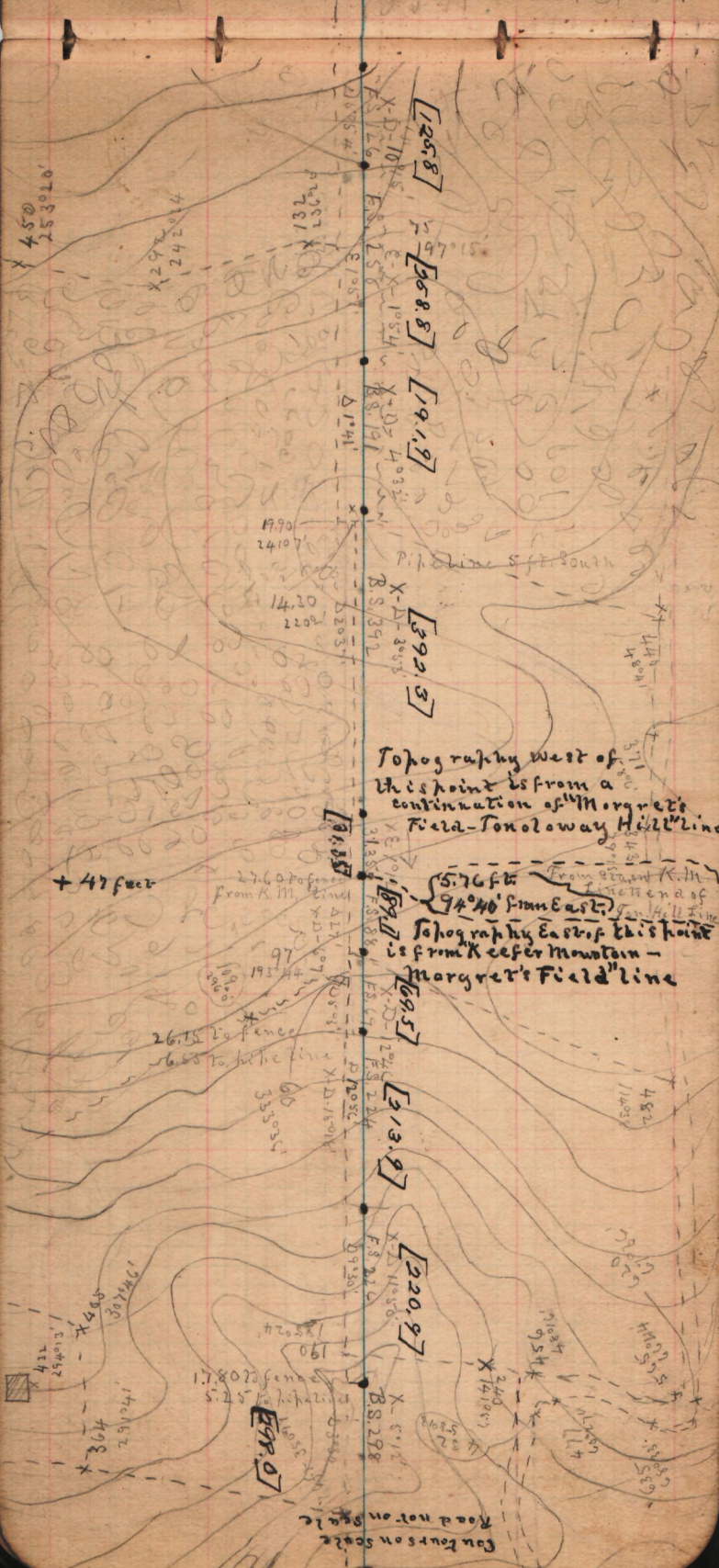
[390.17]

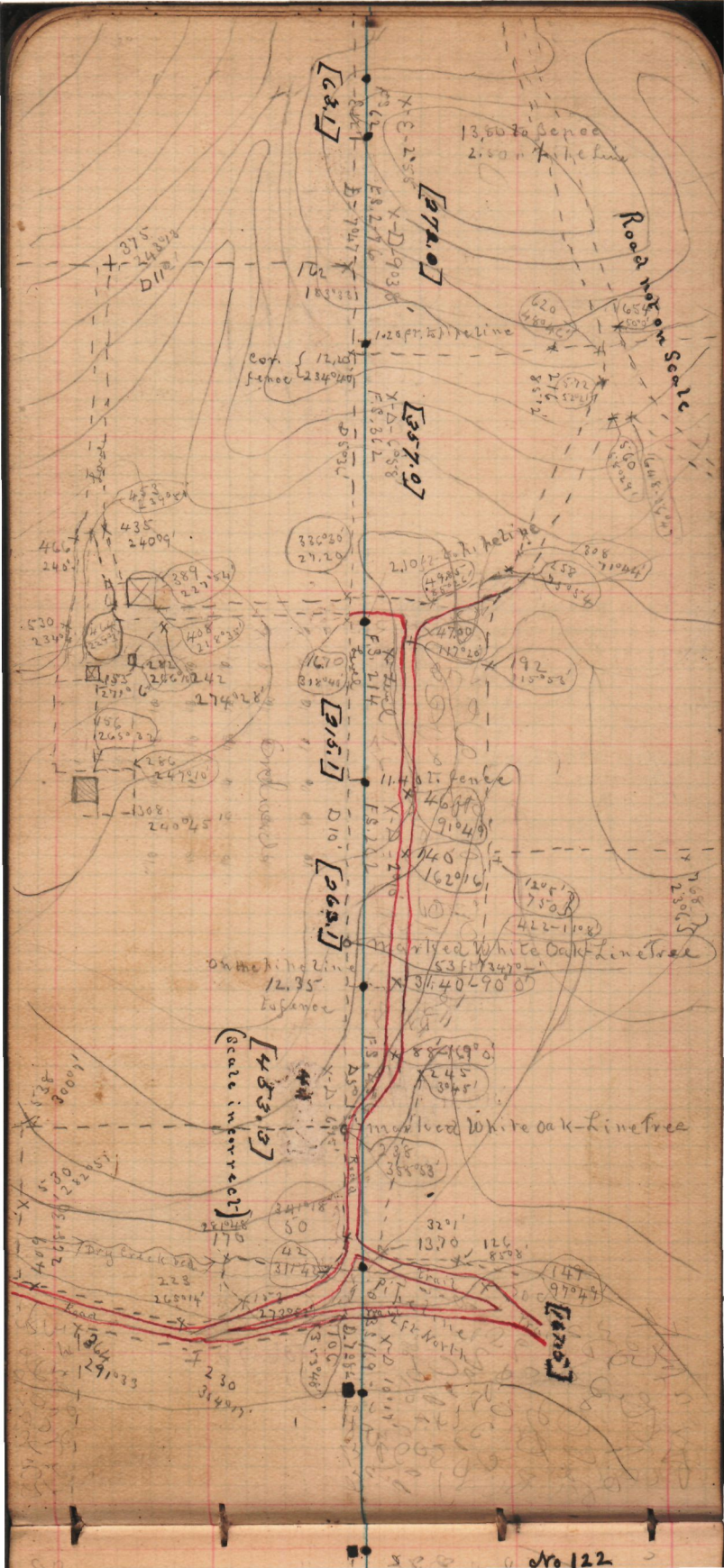
[68.1]

Traverse
all detail from this point

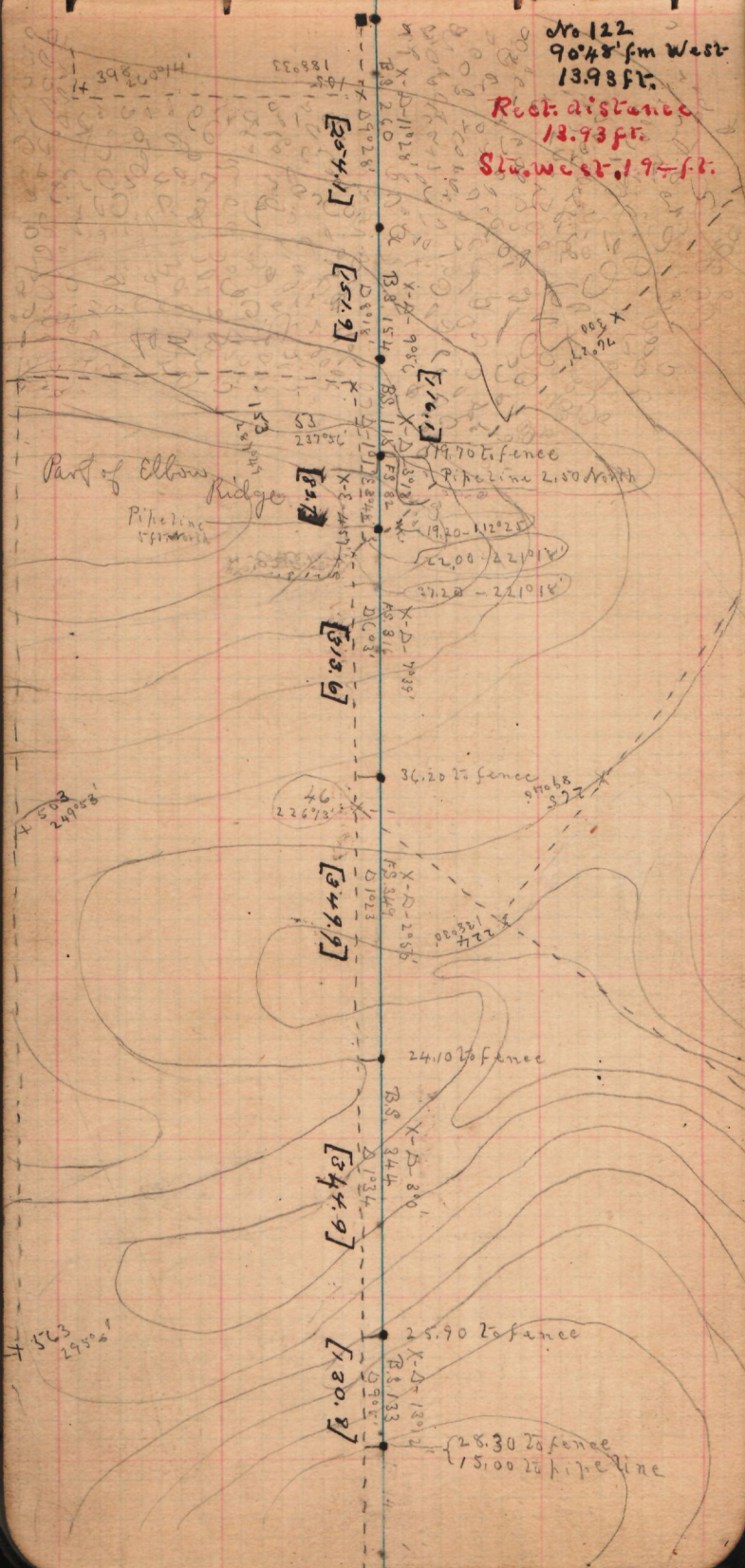
Public Road

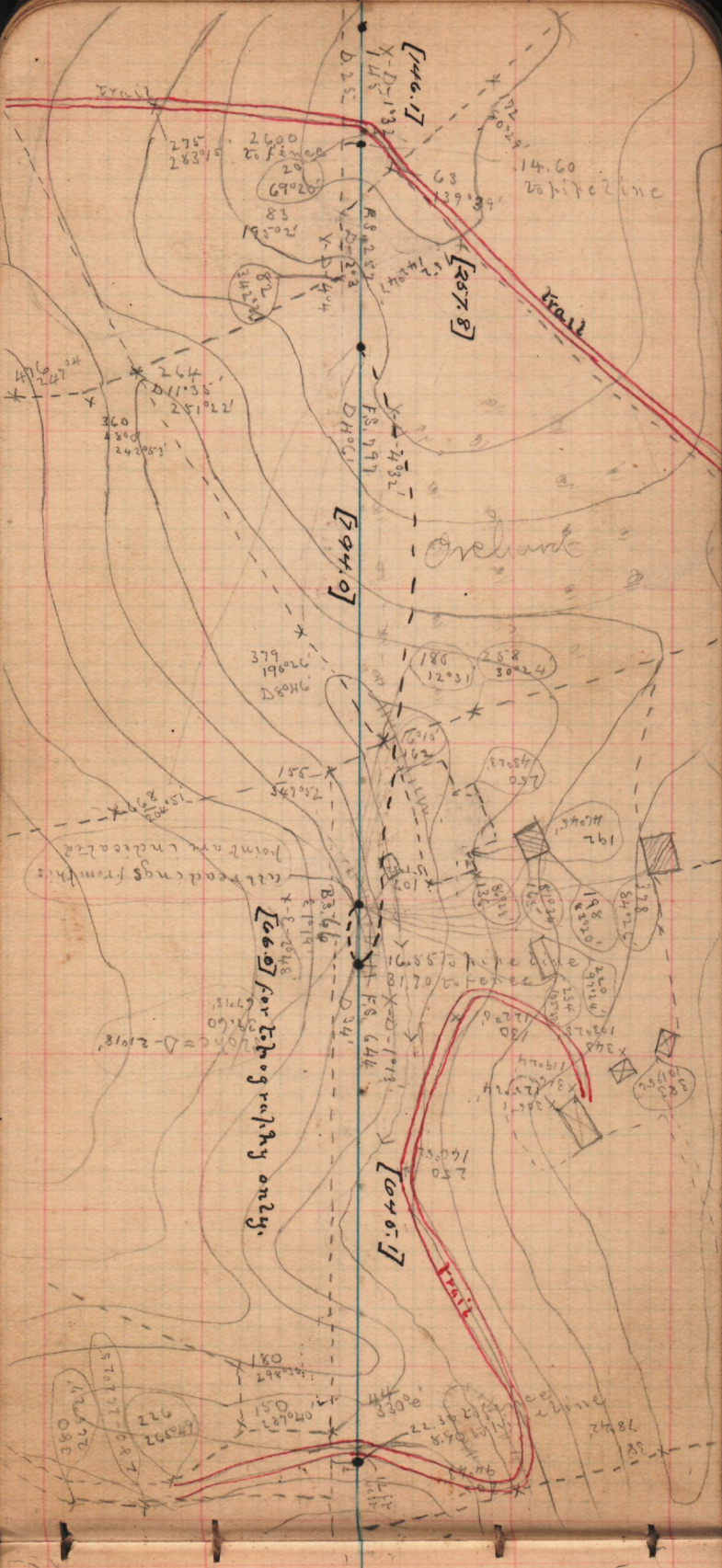






Rect. distance
12.93 ft.
Sta. west 19 ft.





[294.0]

[470.7]

for topography only

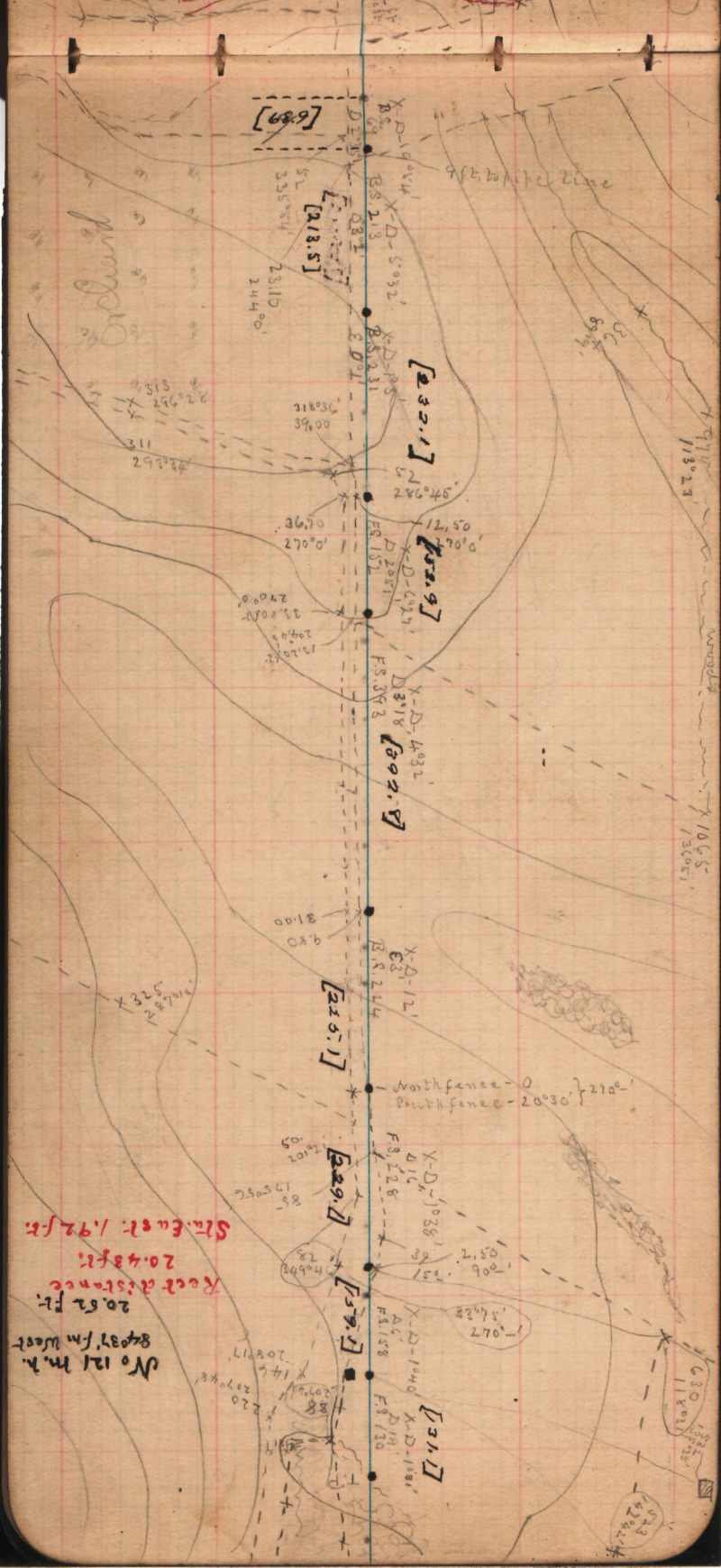
Trail

Trail

to fire line

overland

all readings from this point are indicated



see last page for house

Sta C - Reading marked
Sta D
Sta E

Sta A - fence etc

Sta B - Creek shore
west side

Bridge Path

Licking Creek

[37.15]

[32.3.4]

[37.10]

[43.1]

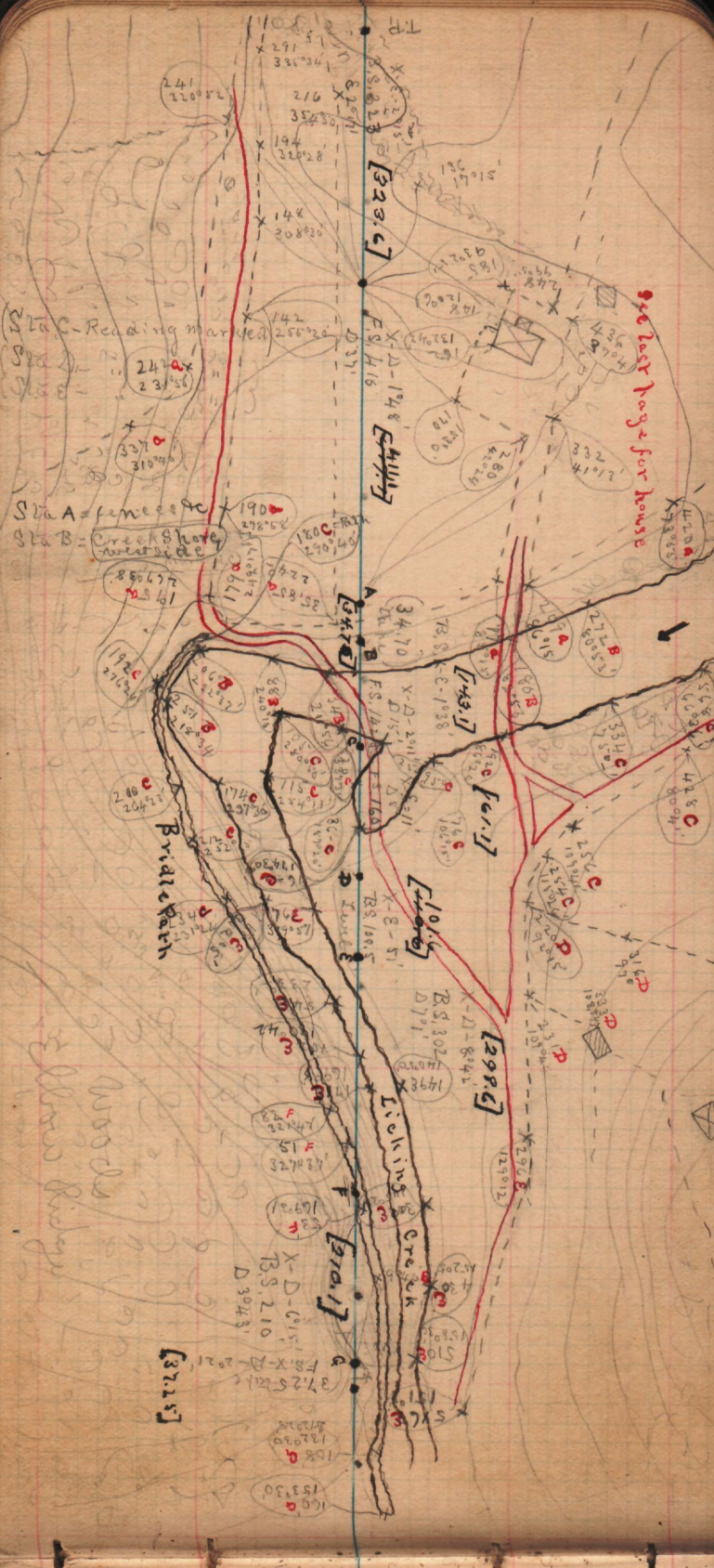
[29.6]

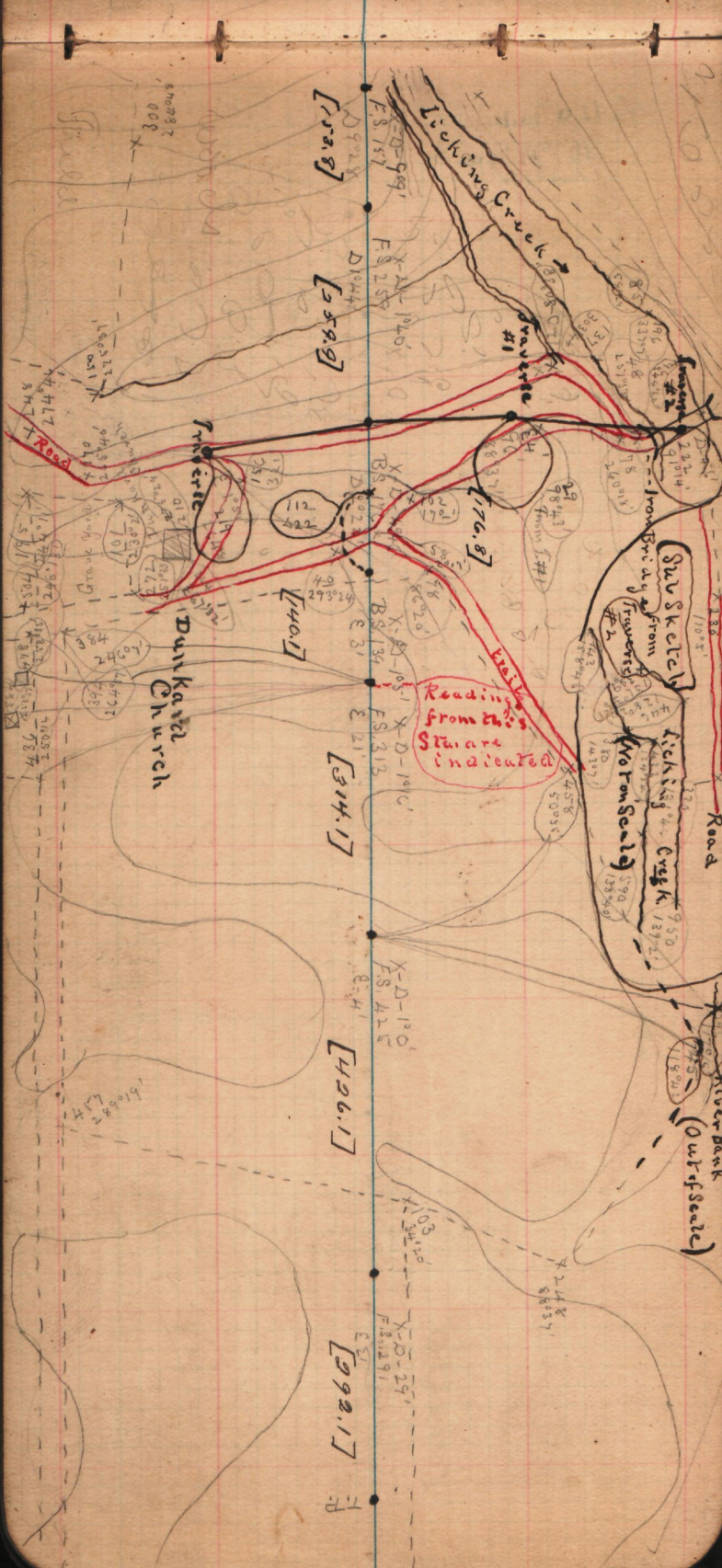
[10.4]

[29.6]

[37.15]

Wood
Licking Ridge





[133.8]

[258.9]

[176.8]

[440.1]

[314.1]

[426.1]

[992.1]

Reading from this station are indicated

Darkened Church

Sub Skeels

Licking Creek

River Bank (Out of Scale)

Licking Creek

Dike

Grave yard

[269.17]

X-D-1037
FS 268

[287.7]

X-D-421
FS 282

[48.17]

X-D-105
FS 47

[354.0]

X-D-625
BS 286

[315.8] for topography only

X-D-333
FS 316

[103.3]

X-D-104
FS 104

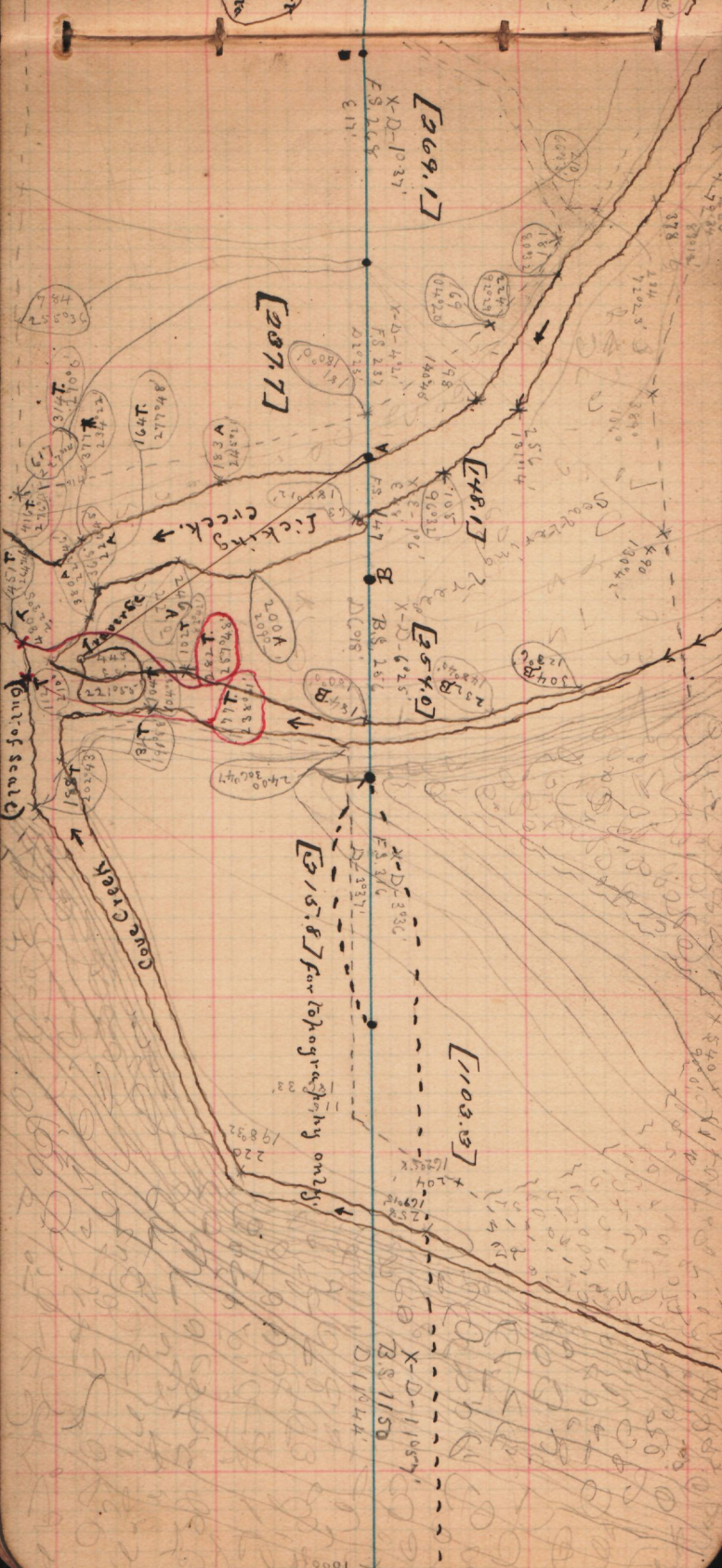
X-D-1157
BS 1150

D 1154

Licking creek. →

Cane Creek →

Out of scale



[48.8]

[51.2]

[213.1]

[308.9]

[263.0]

[64.0]

[221.1]

[372.9]

Field

Bush

50192
-842X

11692
451+

207
105856
292
18420

Stu. West 2.5-1 ft.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 840. 84

Reel: 25.50 ft.

28.75

28.75 / 1-(51.7) = 20.59,
84.02 / m. 3.82,

8422 / m. East,

[82.3] [190.9] [51.7]

[190.9]

[82.3]

[8.41]

[[12.]]

[13310]

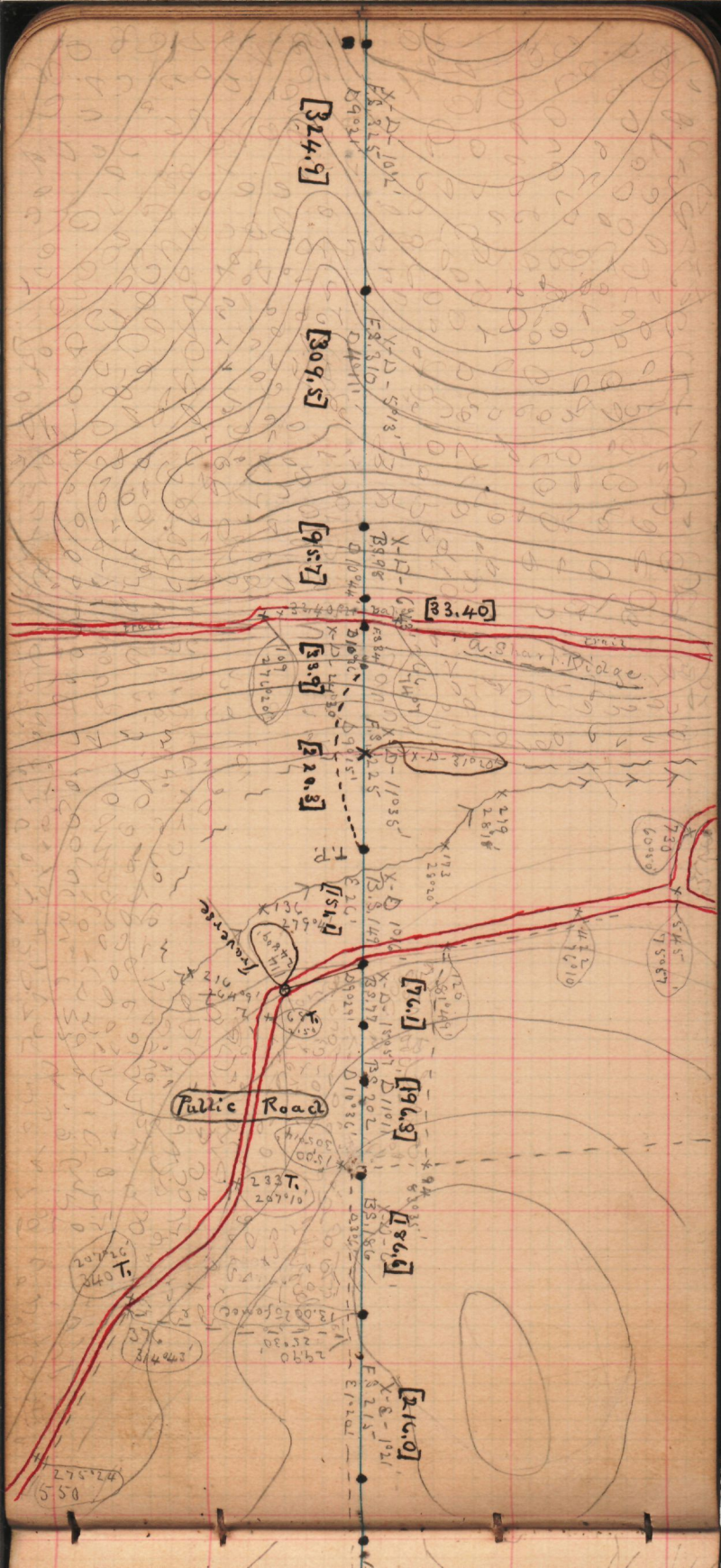
[79.0]

[256.3]

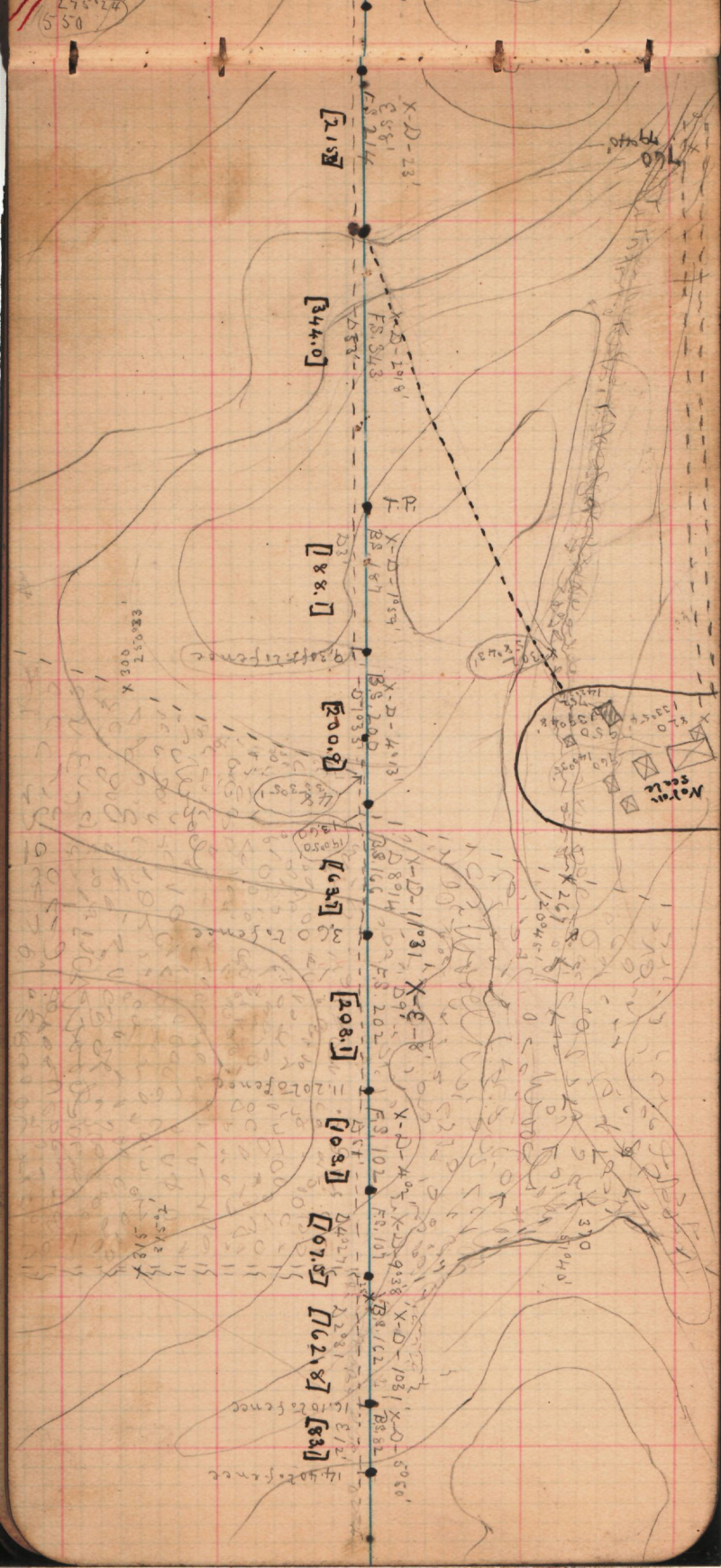
[151.9]

[159.8]

[360.87]



275.24
550



[277.7]

X-D-1059'
B.S. 276

Offset 39.22 to North
X-E on offset stake 195'

D. 2091'

F.S. 234

[34.6]
X-D-3049'

350782
430

7

[419.9]
X-D-932'
B.S. 428

[337.8]
X-D-1354'
B.S. 247

[114.0]
X-D-1634'
B.S. 118

[92.7]
X-D-1059'
B.S. 195

[91.4]
X-D-1059'
B.S. 195

[77.4]
X-D-8240'
B.S. 174

26.30 To fence

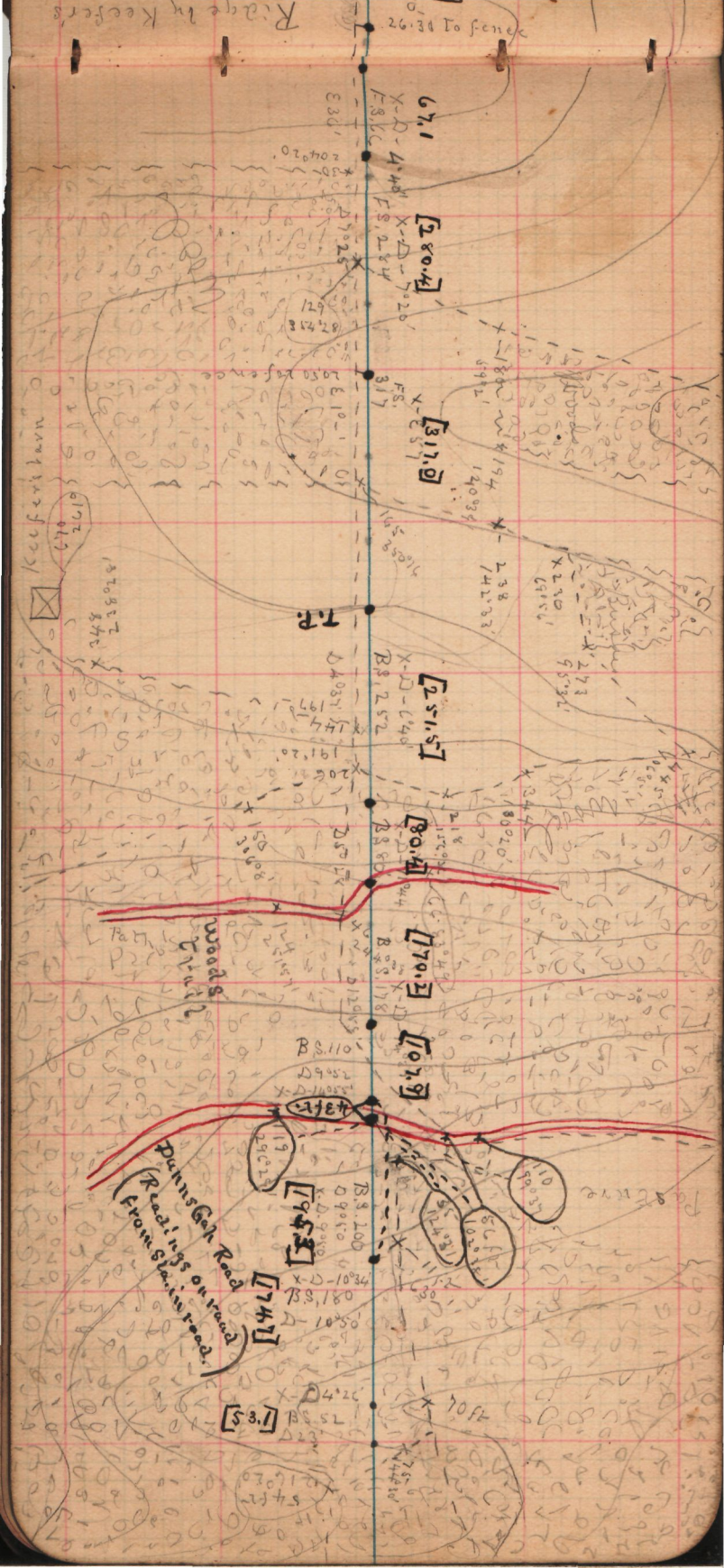
-5.49 feet.

Sta East 145 ft.
Rec'd. distance 27.08 ft.
No. 118. m. P.
27.12 ft.
93° 04' from east

Ridge by Keefe's

Line stake
Line stake from
offset line (west)
X-E 1014' on line stake
from offset stake

157
78915



[36.7] [105.4] [201.7] [60.3] [29.7] [32.7] [33.7] [55.0] [95.4] [68.4] [01.7]

[42.8]

X-D-7°13' B.S. 38
 X-D-11°36' B.S. 197
 X-D-9°58' B.S. 206
 X-D-15°40' B.S. 170
 X-D-23°01' B.S. 145
 X-D-13°46' B.S. 148
 X-D-25°52' B.S. 156
 X-D-28°41' B.S. 190
 X-D-27°40' B.S. 111
 X-D-23°48'
 X-D-23°1' B.S. 190
 X-D-24°51' B.S. 114
 X-D-24°52' B.S. 52
 X-D-24°53' B.S. 18

37°30' 39°7' 40°51' 41°37' 41°46' 42°25' 42°48' 45°05' 46°14' 48°04' 48°38'

40 ft. Tab Branch, Geneva

Clearcut 40 ft.

Wood

Wood

X 117 = 93° 36' from West

22.17 ft.

Recor. distance 22.13 ft

822. west - 1.39 ft.

[116.5]

[117.1]

[276.7]

[196.1]

[30.4]

[108.1]

[57.0]

[31.9]

[72.9]

[81.3]

[212.8]

X-D-17058
B.S. 129
D-15056

X-D-13051
B.S. 186
D-10912

X-D-10714
B.S. 72.6
D-3019

X-D-6019
B.S. 43
D-201

X-D-4011
B.S. 186
D-559

X-D-2011
B.S. 107
D-21

X-D-1018
B.S. 129
D-51

X-D-1007
B.S. 115
D-41

X-D-201
B.S. 207
D-201

X-D-1052
B.S. 166
D-181

X-D-200
B.S. 116
D-19

Stake by signal

71 ft west of 822

Permanent
Station 6.60 ft west
of
summit
back sight.

88 ft west of 822

35
205.0

Trail from the post

Keefer Mountain

- [31.0] X-D-2091 X-D-3035 F.S. 130 D-56
- [97.0] X-D-3035 F.S. 198 D-221
- [231.9] X-D-3035 F.S. 172 D-1012
- [97.0] X-D-3035 F.S. 172 D-1012
- [172.8] X-D-3035 F.S. 172 D-1012
- [422.3] X-D-3035 F.S. 172 D-1012
- [115.0] X-D-3035 F.S. 172 D-1012
- [220.0] X-D-3035 F.S. 172 D-1012
- [255.5] X-D-3035 F.S. 172 D-1012

[89.9] X-D-8°39'
 F.S. 82
 D 12°58'
 [79.9] X-D-19°30'
 F.S. 55
 D 10°33'
 [54.3] F.S. 48.5 X-D-20°28'
 D-10°23'
 [45.0]

[291.7] X-D-20°12'
 [45.7] X-D-21°19', X-D-25°41' [27]
 Rattle Run Hollow.

[79.8] X-D-20°21'
 B.S. 84
 D 14°34'
 [9.8] B.S. 71 X-D-17°18'
 D 10°16'
 [4.7] B.S. 78 X-D-14°35'
 D-7°57'

[209.9] X-D-12°11'
 B.S. 12.5
 D-9°45'
 [10.4] X-D-9°24'
 B.S. 112.5
 D 4°27'
 [908.5] X-D-9°2'
 B.S. 108
 D 4°11'

[750.3] X-D-7°55'
 B.S. 150
 D 4°16'
 [792.5] X-D-7°46'
 B.S. 197
 D 4°22'

[202.9] X-D-8°30'
 B.S. 203
 D 5°52'

Hearthstone Mountain.

Woods

Woods

[29.5] [96.7]

Summit
of
Hearnsstone

X-D-9915
B.S. 68.5
D1054
B.S. 95
E1
X-D-499

Hole 1"x2" in ledge
of rock. Lozenge
about 18" east.

Finished Aug. 5-02
Rod reg graduated after
this date.

Apr. 29-1903 visited this
point and found drill hole above mentioned 0.51 ft
south of line given by stakes and lozenge, west.
Produced the line given by the stakes and the lozenge
to the next mountain east (Two top Mt.) W.C.H.

[623.6]
1467.5

92.21 =
67
[13.45]
13.48
13.4
191 86° 191
from end

911 m

Old Wood

Slake on down lot

M. crown. 116 m
 Two top mountain
 Hor. Base $4^{\circ} 54'$ and $4^{\circ} 56'$
 30 ft Lozenges 9.3 W. of Black Lake
 N.A. S.A. N.D. S.D.

5.260
 271
 279
 248
 259
 240
 5.2595

14.351
 350
 356
 370
 342
 339
 14.351 $\frac{1}{3}$

5.215
 221
 231
 229
 219
 228
 5.223 $\frac{5}{6}$

14363
 344
 346
 340
 350
 348
 14.346 $\frac{2}{3}$

5.222
 224
 225
 223
 230
 240
 5.227 $\frac{1}{3}$

14.351
 349
 339
 355
 359
 346
 14.349 $\frac{5}{6}$

5.229
 219
 244
 232
 220
 219
 5.227 $\frac{1}{2}$

14348
 345
 352
 359
 345
 347
 14.349 $\frac{1}{3}$

N.D.

S.D.

5230
 220
 226
 225
 228
 229
 5.226 $\frac{1}{2}$

14.348
 332
 337
 342
 348
 335
 14.340 $\frac{1}{3}$

5.219
 214
 230
 218
 211
 220
 5.218 $\frac{2}{3}$

14.325
 340
 340
 341
 332
 333
 14.345 $\frac{1}{3}$

5.239
 210
 228
 221
 231
 221
 5.225

14.824
 356
 349
 340
 342
 343
 14.342 $\frac{1}{3}$

5.210
 210
 211
 230
 212
 219
 5.215 $\frac{1}{3}$

14.339
 332
 360
 341
 339
 350
 14.3435

Gen. Mean 9.120

cor $4^{\circ} 54'$

cor " 9.99682

log 14000 4.14613

colog 9.120 9.04001

3.18296

0.38049

3.56345

log ratio $\frac{30}{12.492}$

3659.7

3660.8

12

3660.8 ft

at mile in rock

d 2° 32' for 2034'

N. D. 1000

S. A.

N. A.

O. A.

6.700

13.217

6.700

13.205

710

221

699

200

694

208

695

199

704

209

692

198

698

212

699

192

699

211

693

214

6.7013

13.213

6.6963

13.2013

6.708

13.211

6.704

13.204

701

200

691

200

709

213

691

200

702

211

701

211

698

205

688

199

700

207

692

196

6.703

13.2083

6.6945

13.2013

6.758

13.270

6.761

13.267

753

272

763

271

751

268

769

268

752

275

768

266

751

270

772

264

748

271

761

265

6.7526

13.271

6.7653

13.2663

6.762

13.265

6.770

13.277

764

262

761

271

768

252

765

264

765

271

764

262

768

272

760

265

769

271

763

263

6.766

13.2655

6.7635

13.267

Sum means

6.5065

along 6.5

9.18665

by 14000

4.14613

cos 2° 32'

9.97915

az sta 29.51 ft west

5157.2

3.33193

5158.3 ft

0.38049

3.71242

40.2 4
44.3 6
 85 137
44.4 2

44.45 44.30

21.04
21.04

21.04

21.04
21.04

21.04
21.04

26.04
26.04

31.04
31.04

31.04

31.04
31.04

15.0