

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

State: *Pa. - Md.* 55625

# SKETCHBOOK.

## ABSTRACT OF CONTENTS:

*Mason and Dixon Line  
from M.P. 58 eastward to M.P. 42*

1902

## CHIEF OF PARTY:

*W. C. Hodgkins*

Vols.

Vol. 4

590

59.05 e 20.20

17.43

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  
from M.P. 58, eastward to M.P. 42.*

1902

CHIEF OF PARTY:

*W. C. Hodgkins*

Vols.

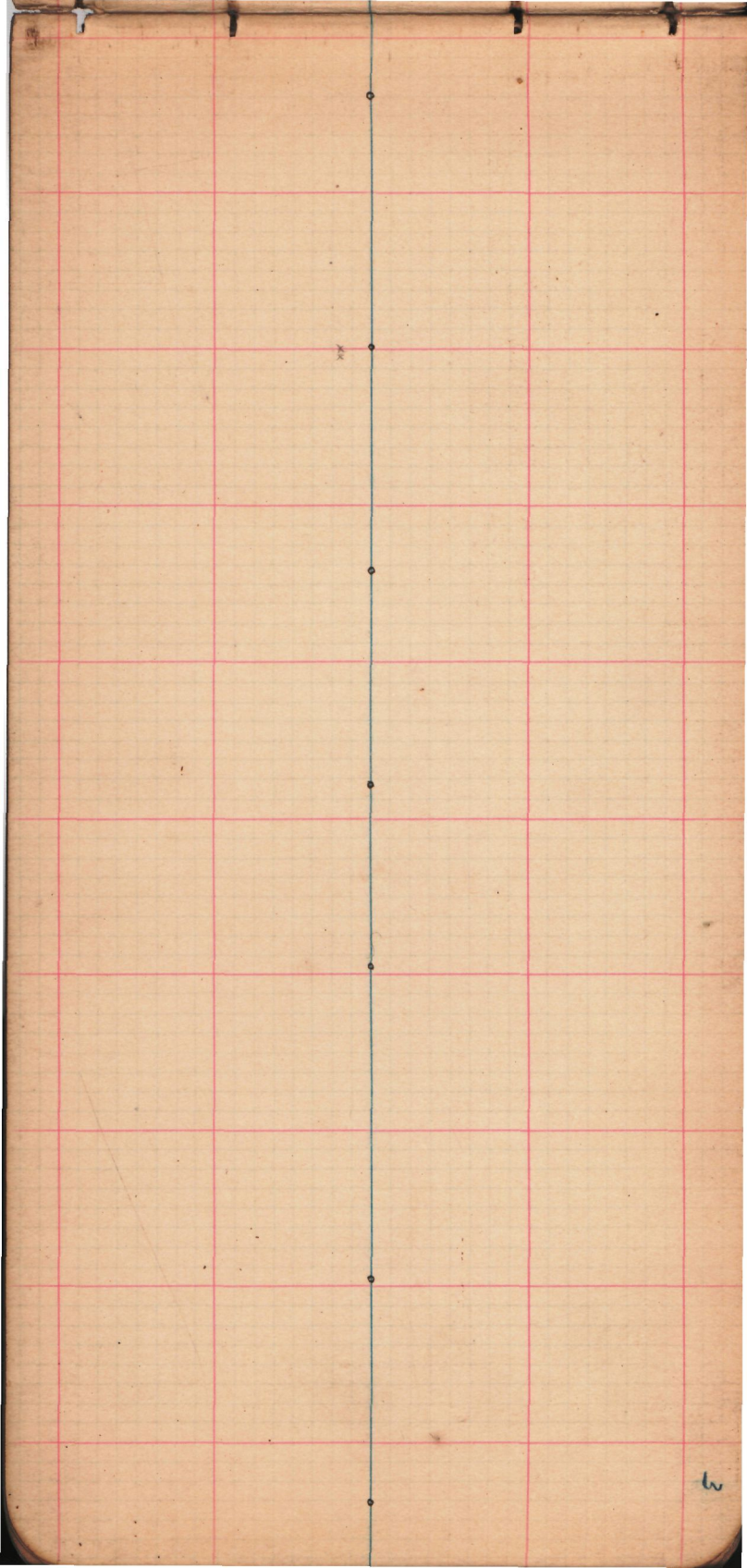
Vol.

3

B.M.P. 60

5

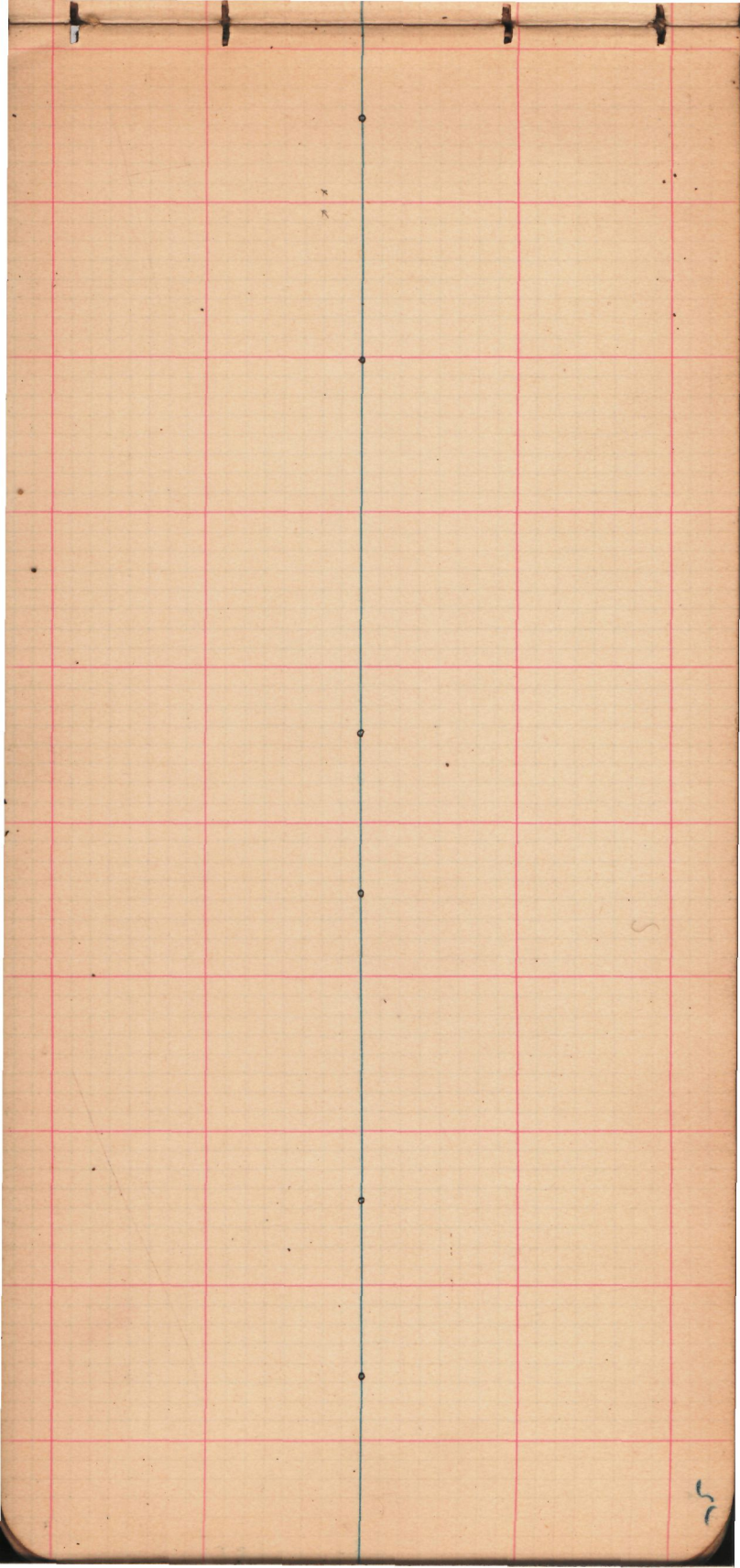




XX

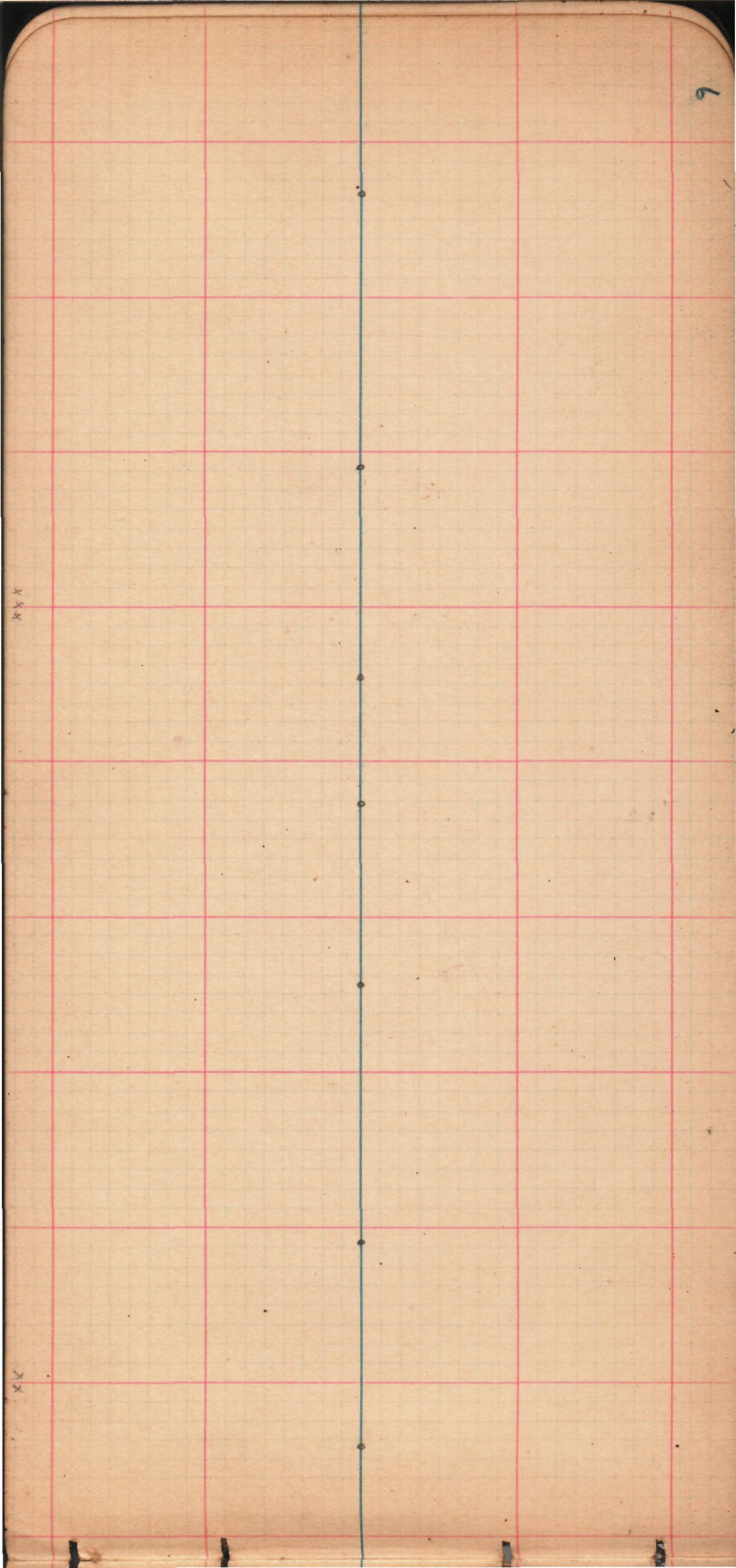
5.



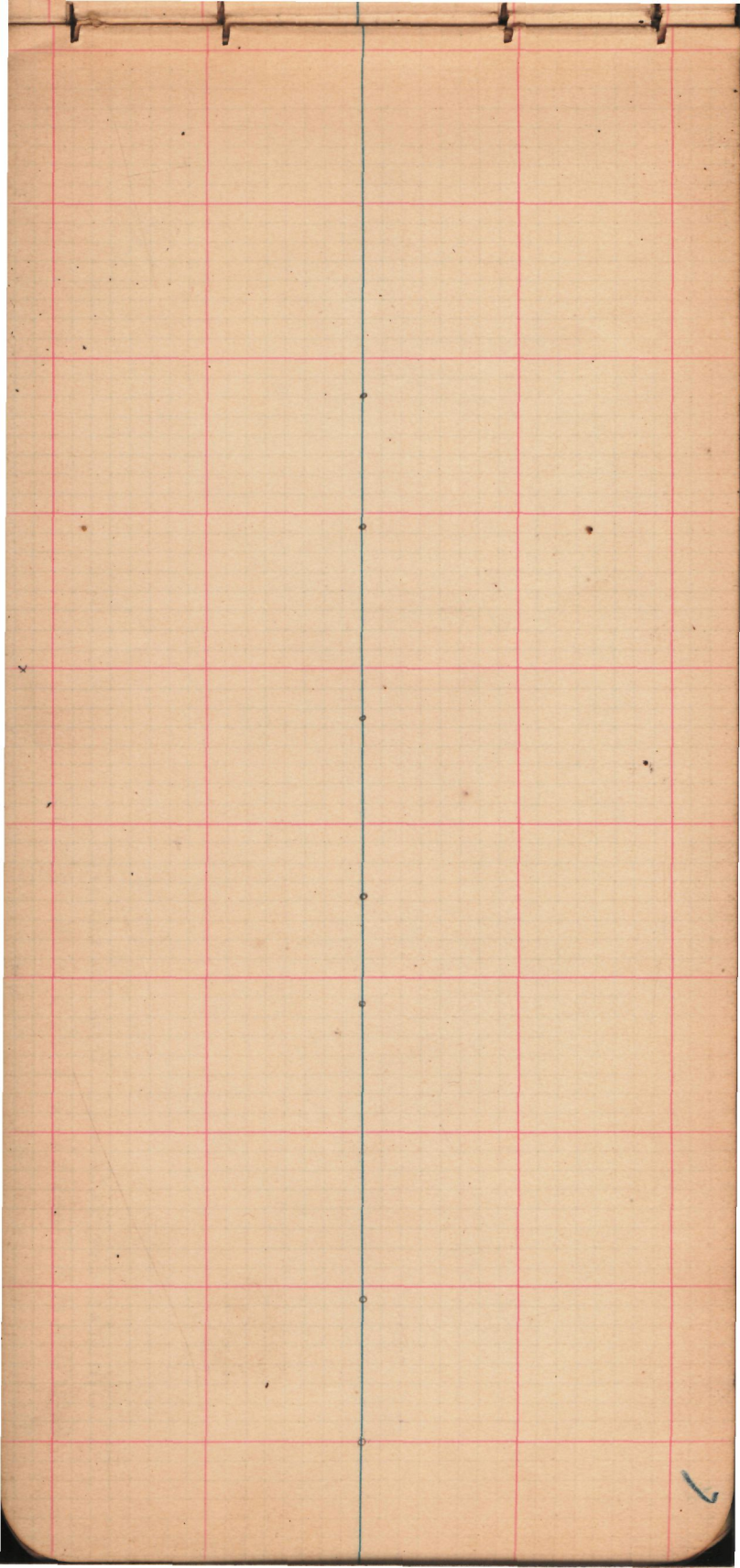


XXX

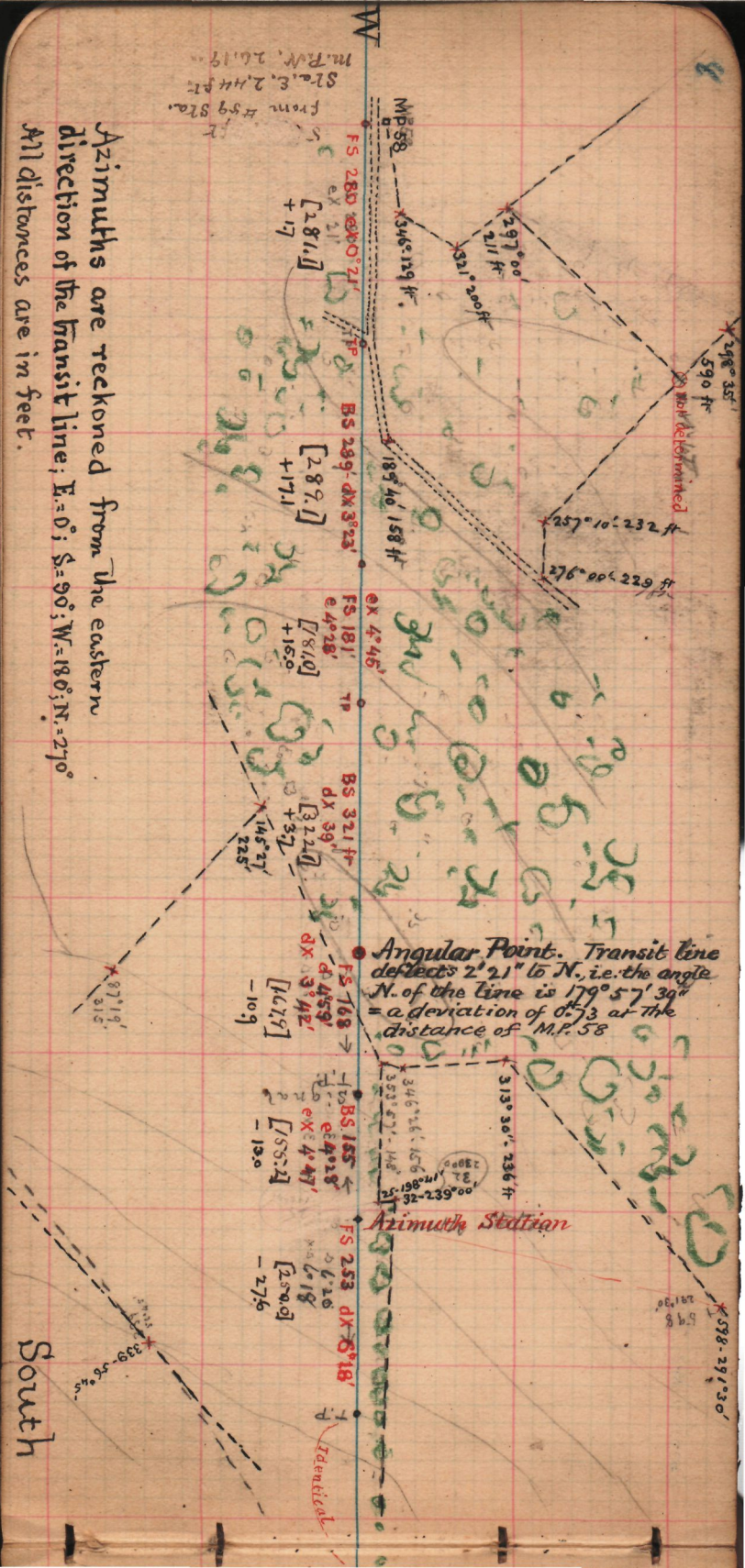
XX







Azimuths are reckoned from the eastern  
 direction of the transit line; E.=0°; S.=90°; W.=180°; N.=270°  
 All distances are in feet.



From H 59 Sta.  
 Sta. E. 2.44 ft.  
 m. R.W. 26.19...

598-291° 30'

291° 30'

32.170861

00.632-26

346.129-156

353.27-148

313° 30' 236 ft

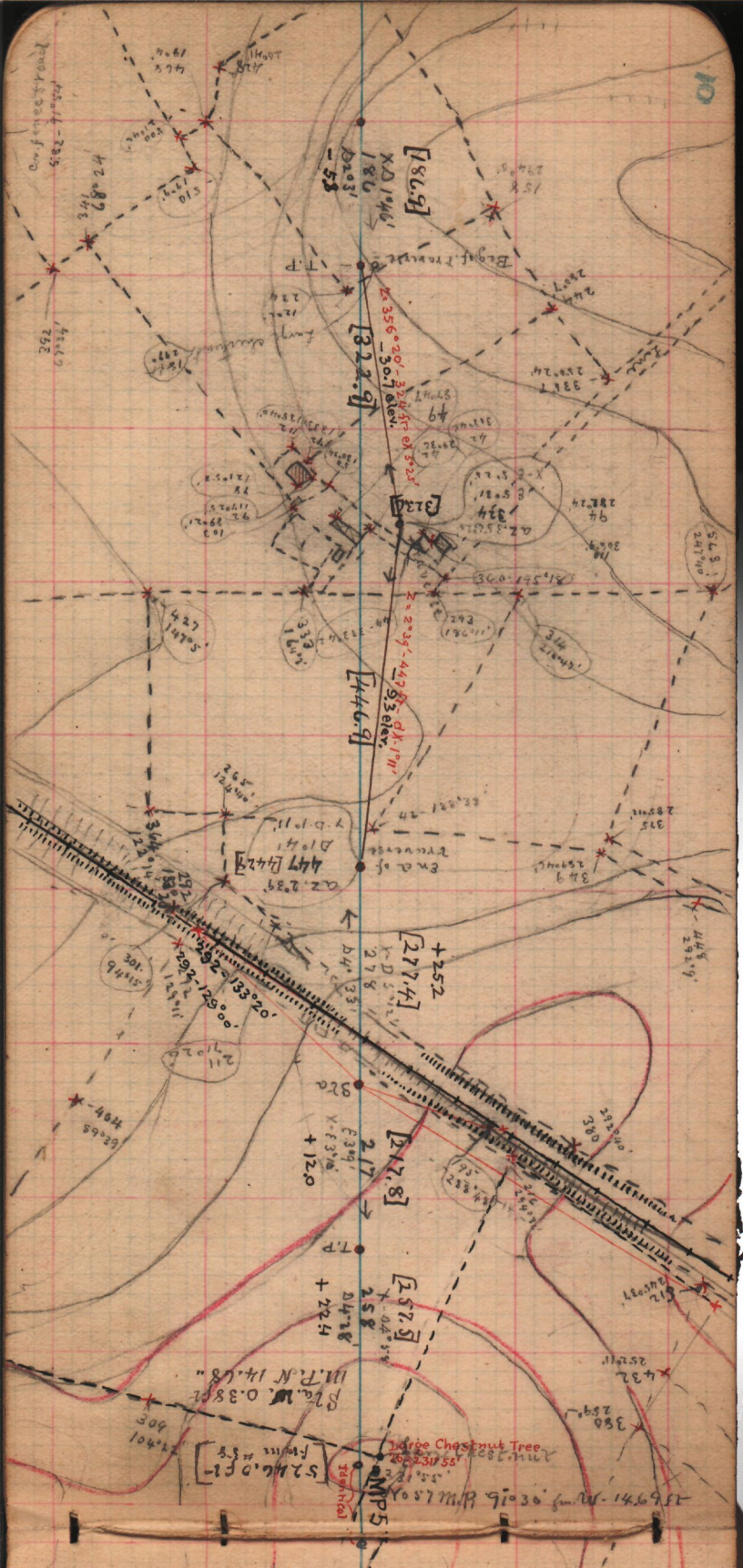
346° 26' 156

353° 27' 148

346° 26' 156

353° 27' 148





Confined Road  
5.82-7.1504

[186.5]  
XD 1440'  
D203'  
-58

[322.9]

[446.9]

+252  
[277.4]

[217.8]

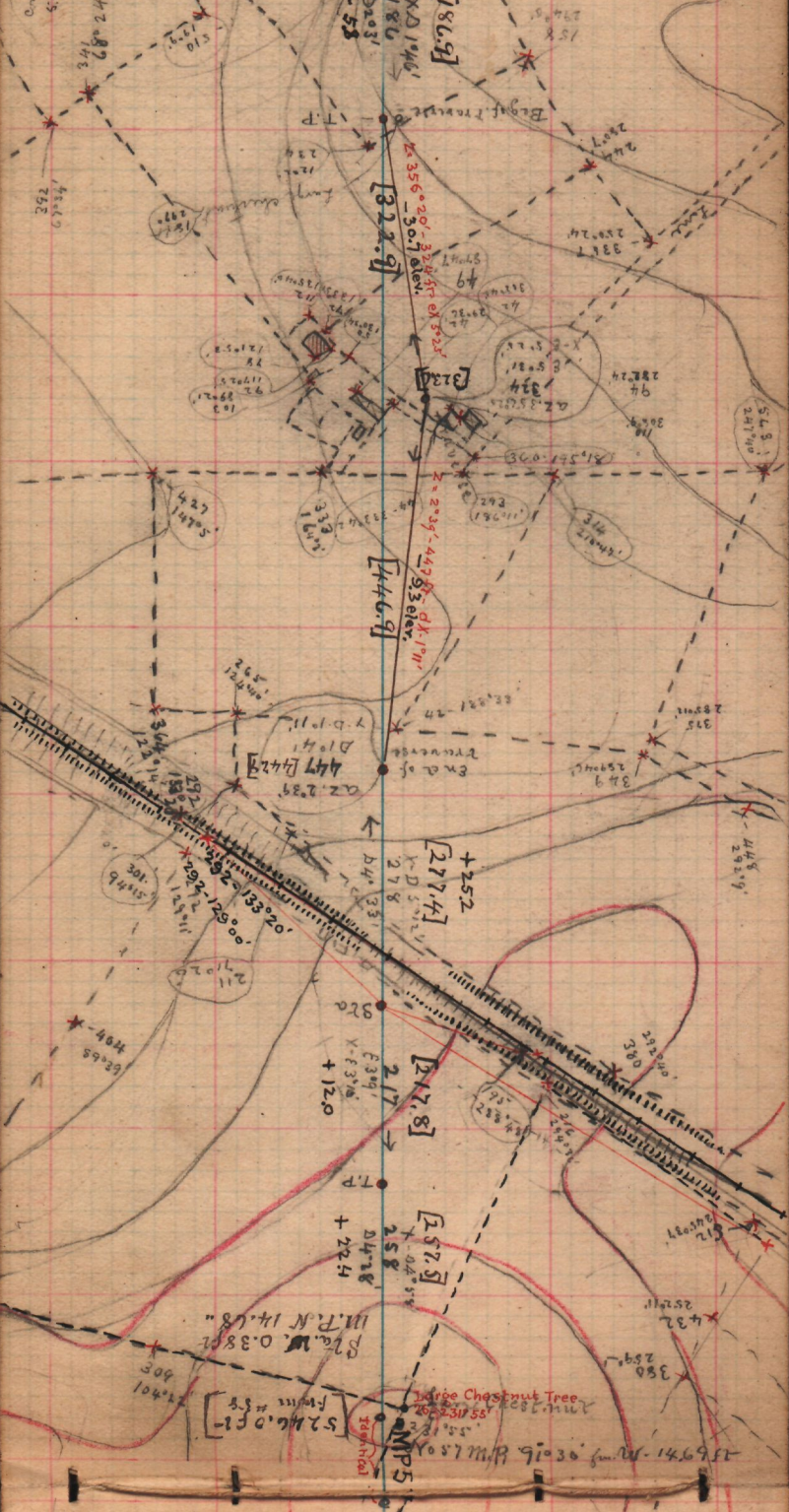
[157.5]

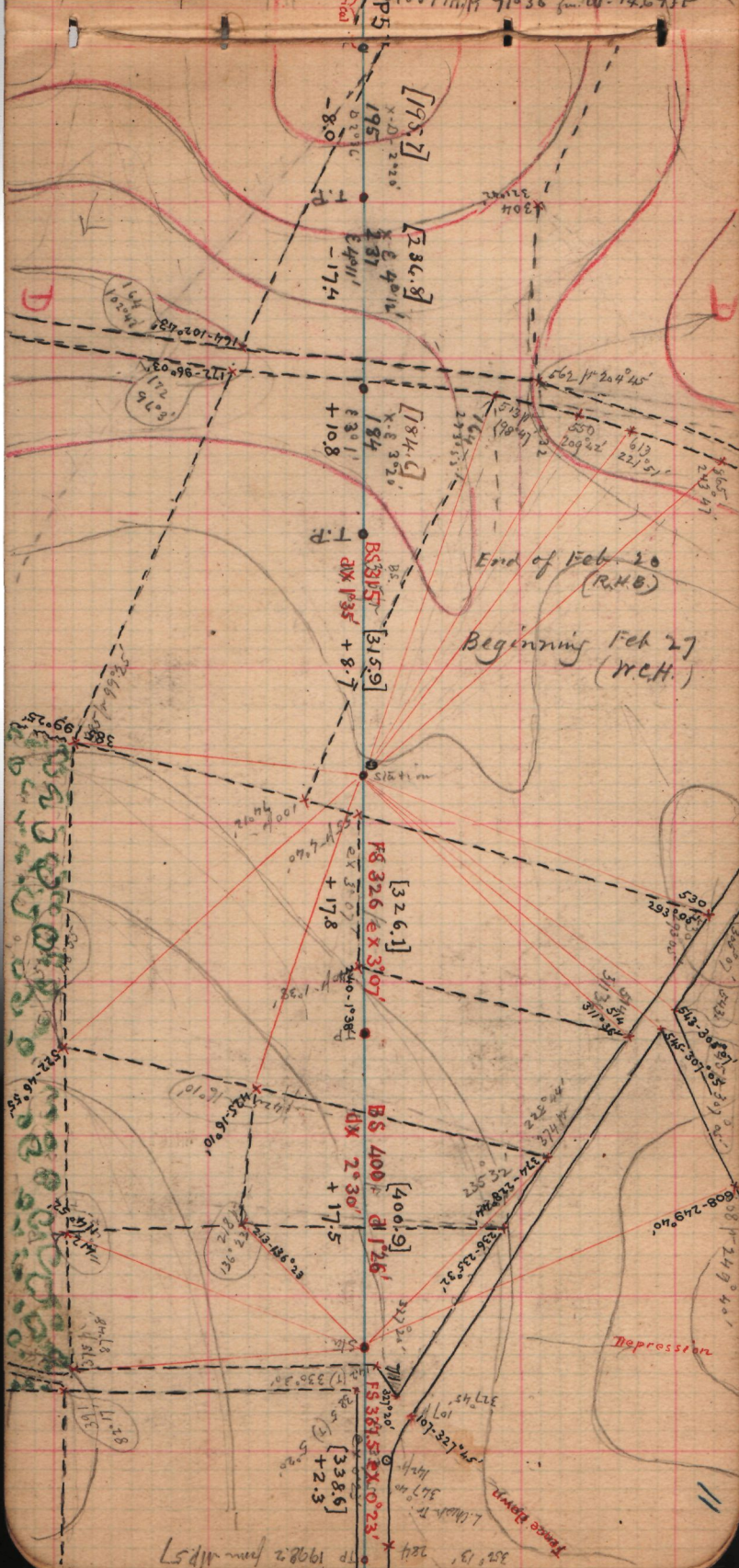
[5246.0 ft]  
M.P. 5  
M.P. 14.68

Large Chestnut Tree  
263.31755

M.P. 5

156941-M. 0.016. 9.030. W. 14.68





TP 1992.2 from 1157

[260.0]  
BS 289.0  
dx 1.00  
+ 4.5

[512.5]  
FS 512.4  
dx 2.047  
- 24.9

[288.0]  
BS 287.5  
dx 2.30  
- 12.9

[409.3]  
FS 412.5  
dx 6.222  
+ 45.6

[232.2]  
BS 231.5  
dx 4.43  
+ 19.2

[95.8]  
FS 95.4  
dx 3.27  
+ 5.8

[14]  
BS 14  
dx  
+ 2

+ 23.7 N  
+ 7.66 S

Station  
+ 26.9 - 249.9'

132.001  
108.345  
345.35  
33.55

124 ft. h.c.  
187.26'

122' 181° 13'

23.00  
390 ft  
91.00

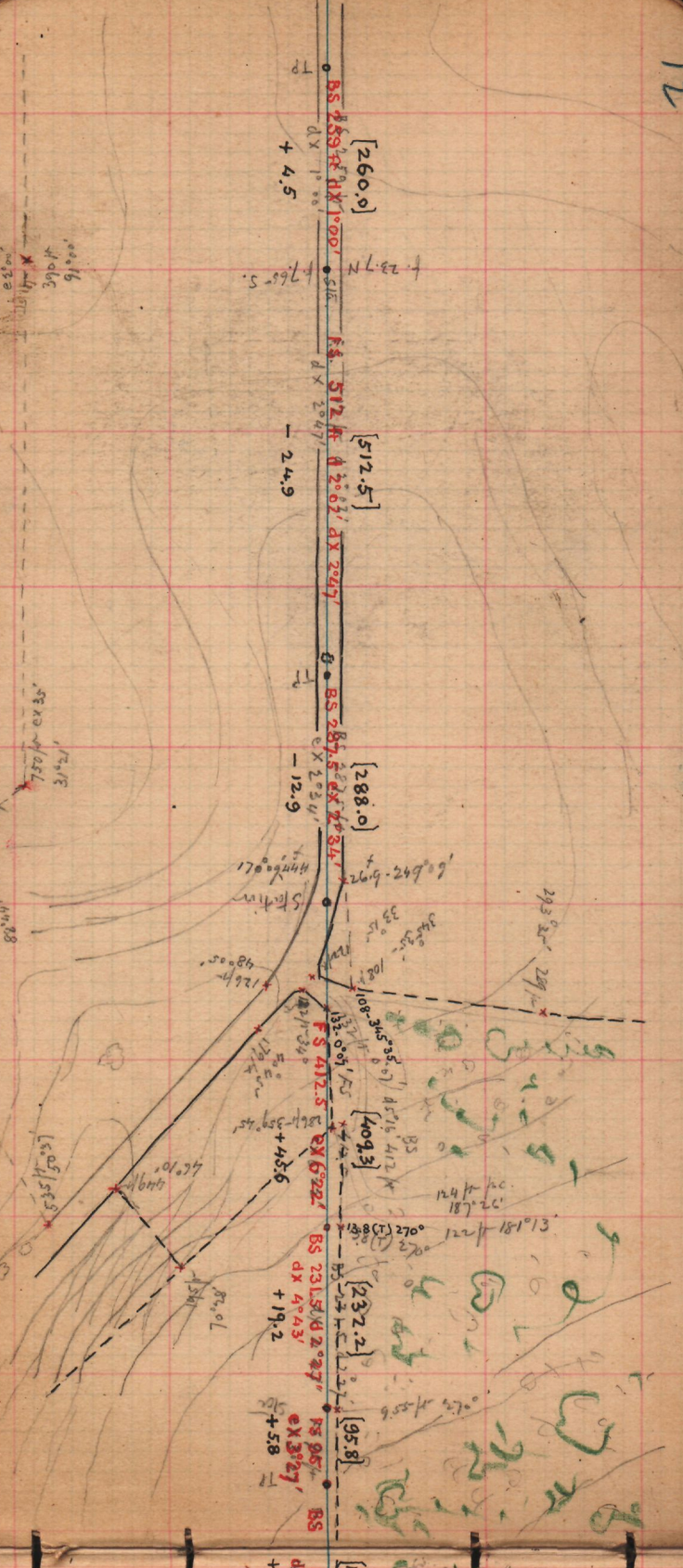
750 ft ex 35'  
172.41  
31.42

126 ft  
48.05'

44° 10'  
160.51  
156.5

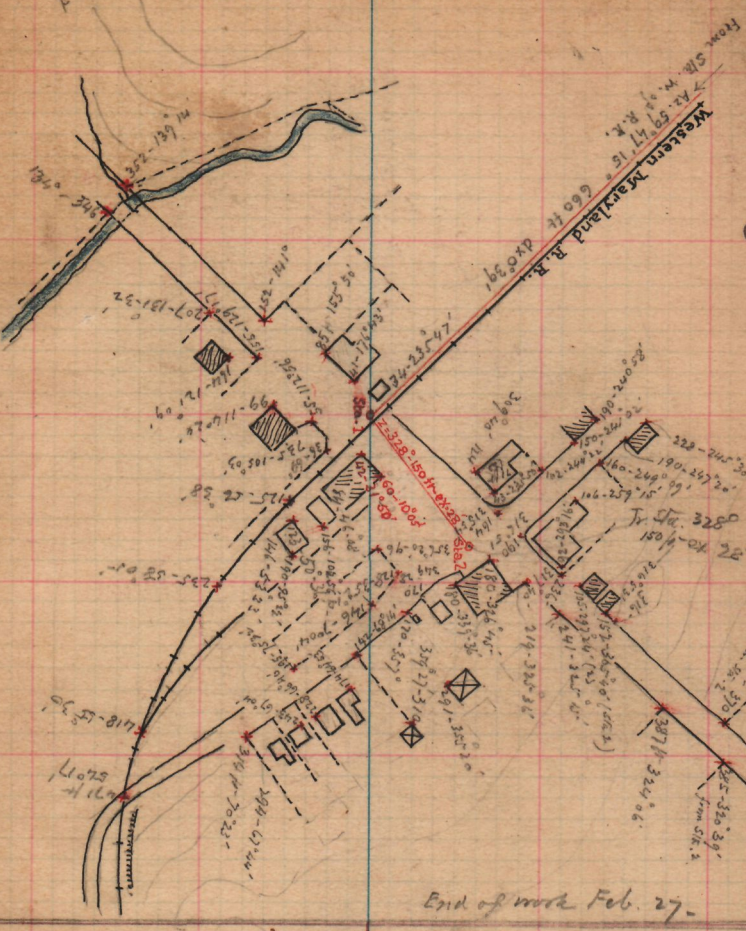
82.01  
150

14





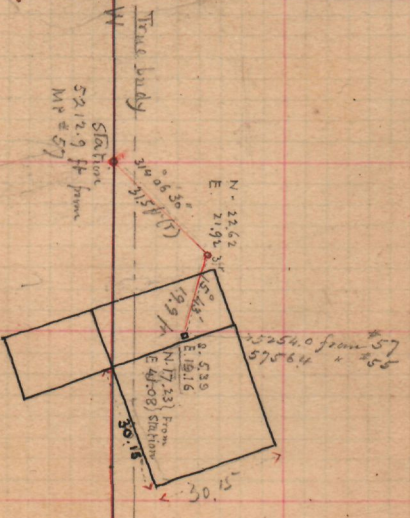
Sub sketch, showing linebore



End of work Feb. 27.

Sub-sketch on 5 times the usual scale, showing location of mile post 56 in mill at linebore.

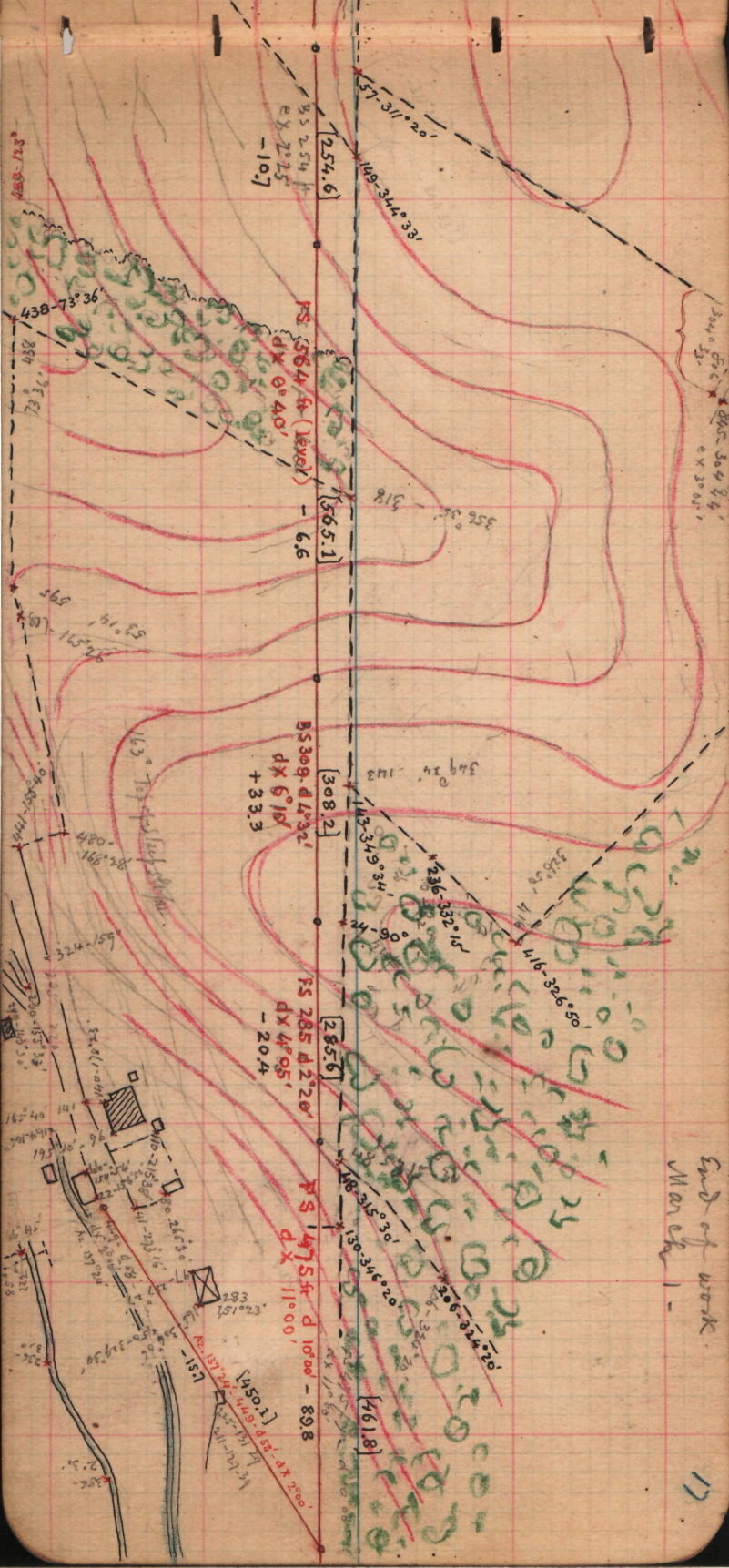
March 1, 1902











BS 254  
 ex 2.25  
 -10.7

[254.6]

57-31°20'  
 149-344°33'

438-73°36'

73°36'

FS 564 ft (level)  
 dx 0°40'

[565.1]

-6.6

565  
 50°14'  
 165-155°26'

BS 309-d 4°32'  
 dx 6°10'  
 +33.3

[308.2]

165 Top of last station  
 480  
 189°28'

324-59°

330-155°33'

141  
 165°40'

195°

151°

151°

151°

151°

FS 285 d 2°20'  
 dx 4°05'  
 -20.4

[285.6]

324-59°

141  
 165°40'

195°

151°

151°

151°

151°

FS 475 ft d 10°00' - 89.8  
 dx 11°00'

[461.8]

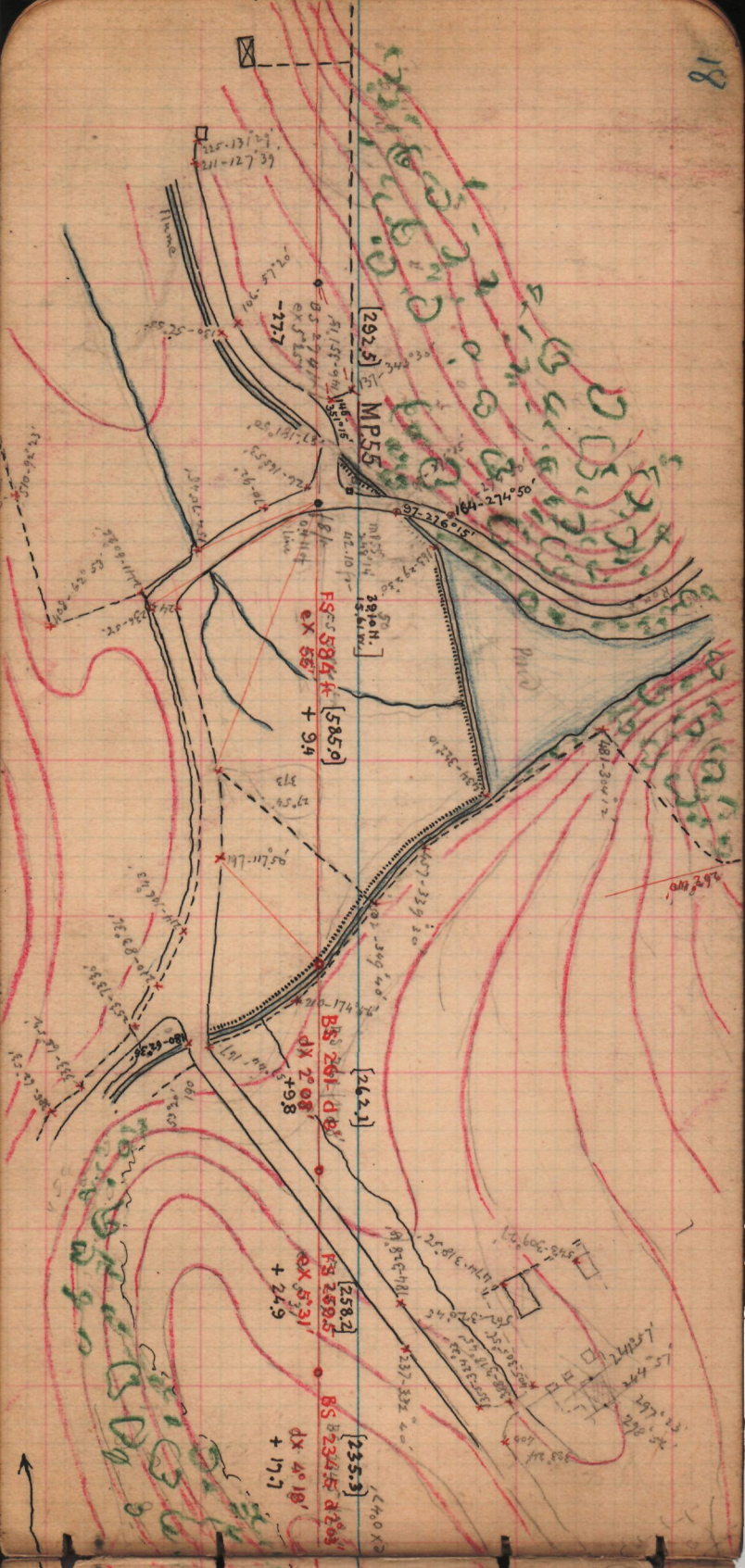
151°

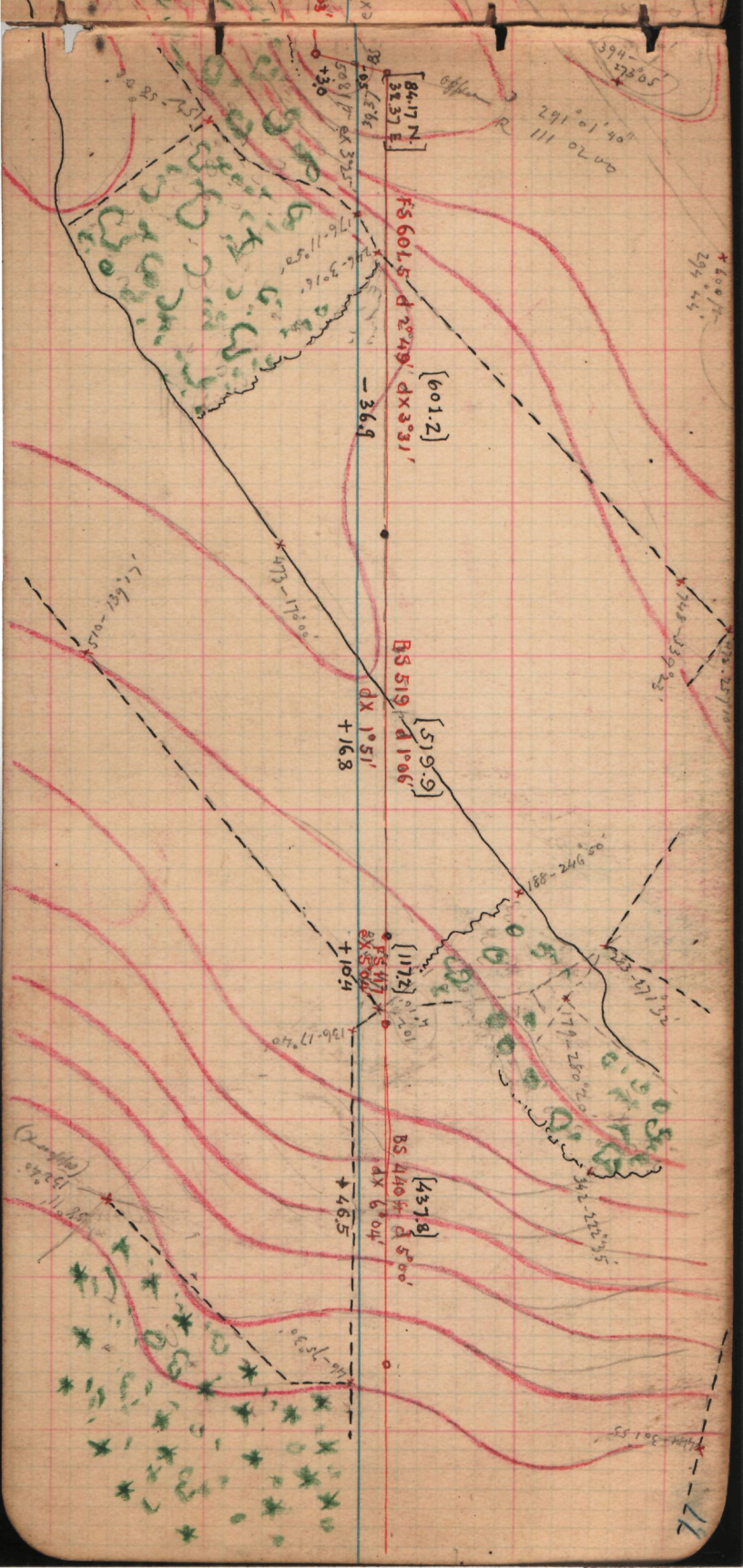
151°

151°

151°

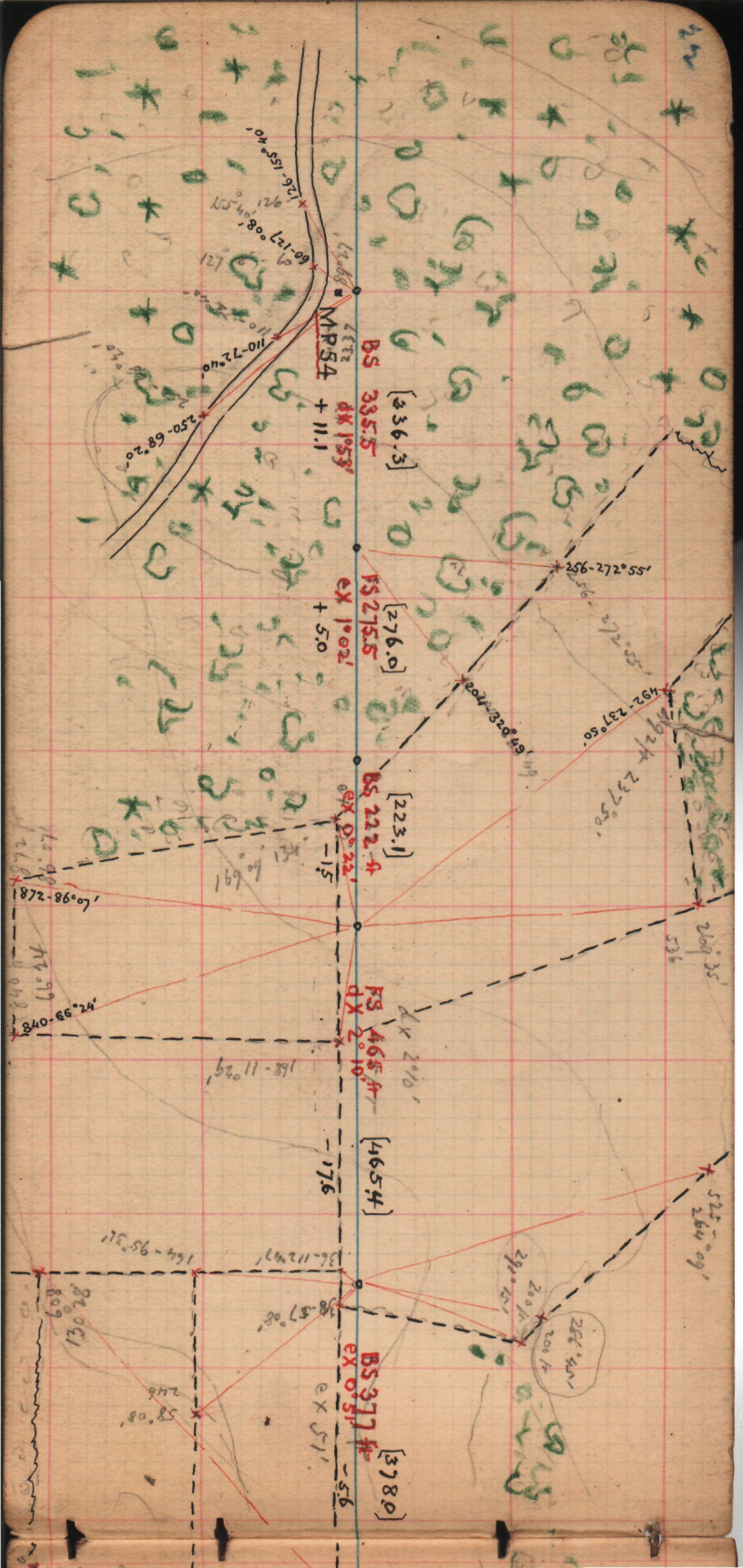
End of work  
 March 1 -











BS 335.5 [336.3]  
 dx 1953'  
 MP54 + 11.1

EX 1002' + 5.0  
 BS 276.0 [276.0]

EX 0' 23.1'  
 BS 222.4 [223.1]

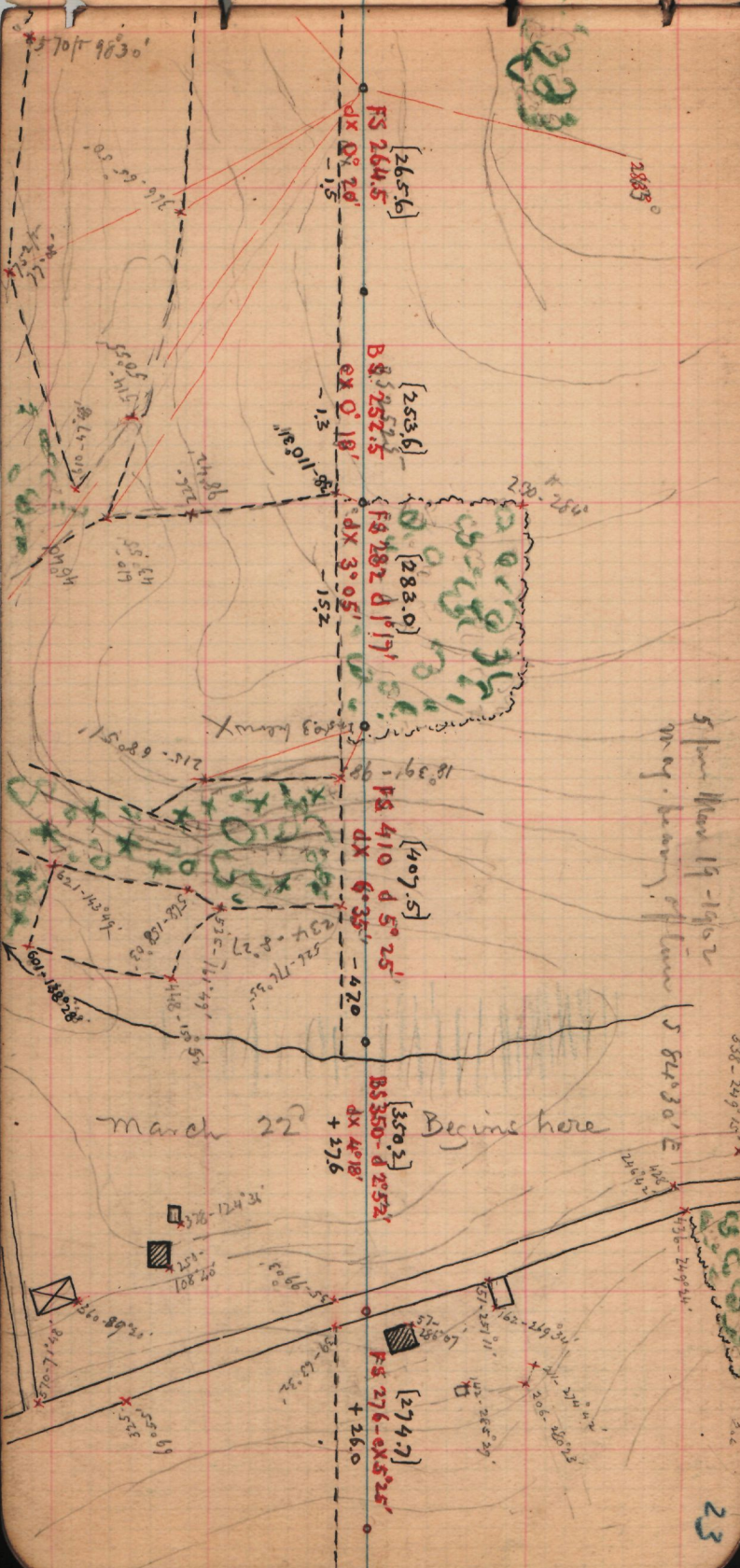
dx 2010'  
 BS 465.4 [465.4]  
 dx 2.10  
 -176

EX 51'  
 BS 377.4 [378.0]  
 -56

126-157-40'  
 66-17-80'  
 110-72-40'  
 250-68-20'  
 126-157-40'  
 66-17-80'  
 110-72-40'  
 250-68-20'  
 160-98-86'  
 47-99'  
 42-93-04'  
 158-11-29'  
 164-95-31'  
 36-11-24'  
 38-57-08'  
 291-121'  
 200 ft  
 200 ft  
 200 ft  
 525-264-09'

256-272-55'  
 492-237-50'  
 200 ft  
 200 ft  
 200 ft  
 525-264-09'





570 ft 90°30'

dx 2° 26'  
FS 264.5  
[265.6]  
-1.5

ex 0° 18'  
BS 252.5  
[253.6]  
-1.3

dx 3° 05'  
FS 282 d 1° 17'  
[283.0]  
-1.52

dx 6° 35'  
FS 410 d 5° 25'  
[407.5]  
-4.20

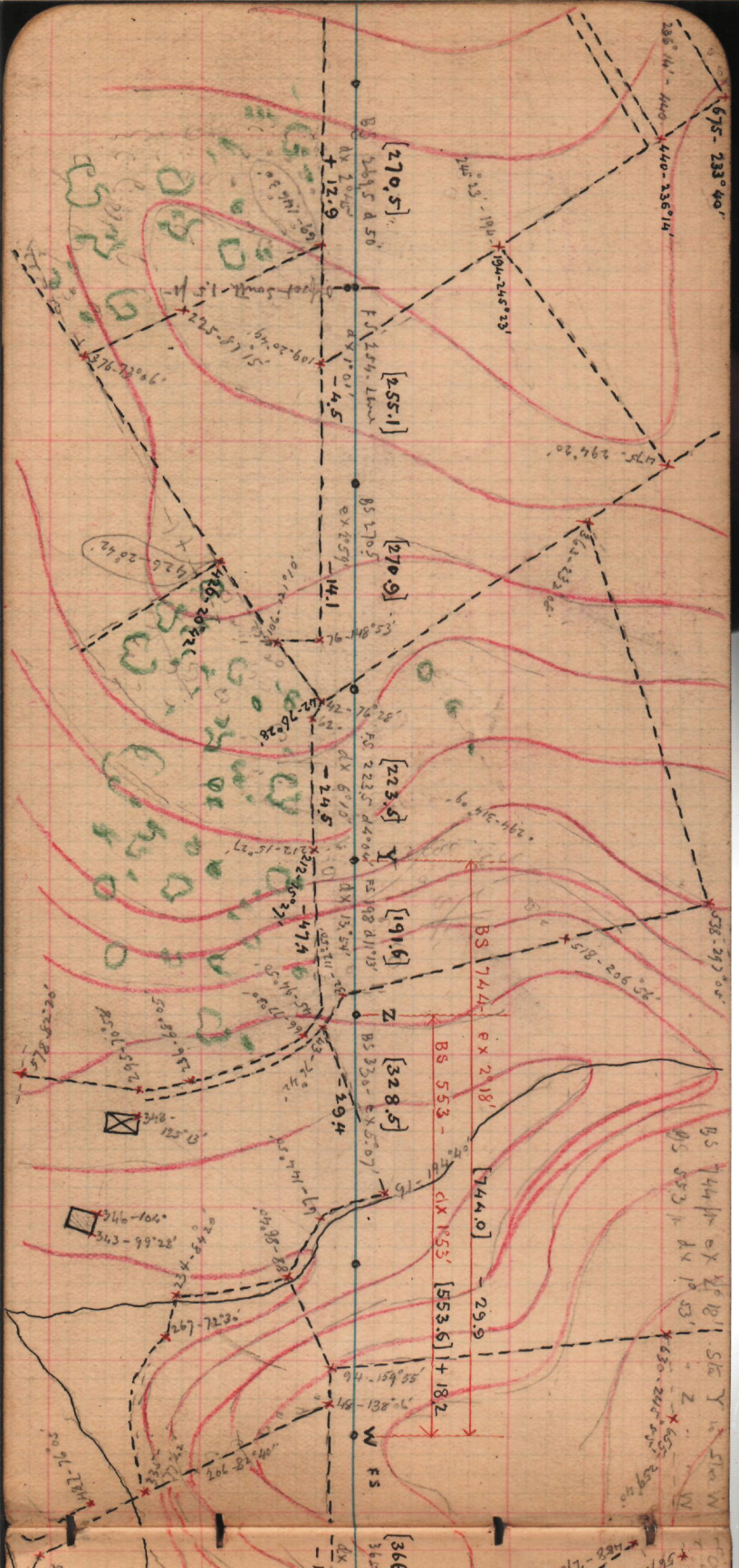
dx 4° 18'  
BS 350 - d 2° 52'  
[350.3]  
+ 27.6

dx 276 - ex 5° 25'  
[274.7]  
+ 26.0

288°

5 from March 19 - 1902  
May - heavy of June 5 84°30' E

March 22' Begins here



675 - 233° 40'

286° 14' - 440 - 440 - 236° 14'

[270.5]

BS 2685 d 50

+12.9

AV 10.4

FS 154 Lm

[255.1]

AV 1.01

-4.5

BS 1705

ex 259

[270.9]

-14.1

FS 2235 d 400

AV 6.15

[223.5]

-24.5

FS 198 d 1113

AV 15.54

[191.6]

-47.4

BS 330

ex 507

[328.5]

-39.4

BS 744

ex 218

BS 553

ex 507

DX 155

[553.6]

+182

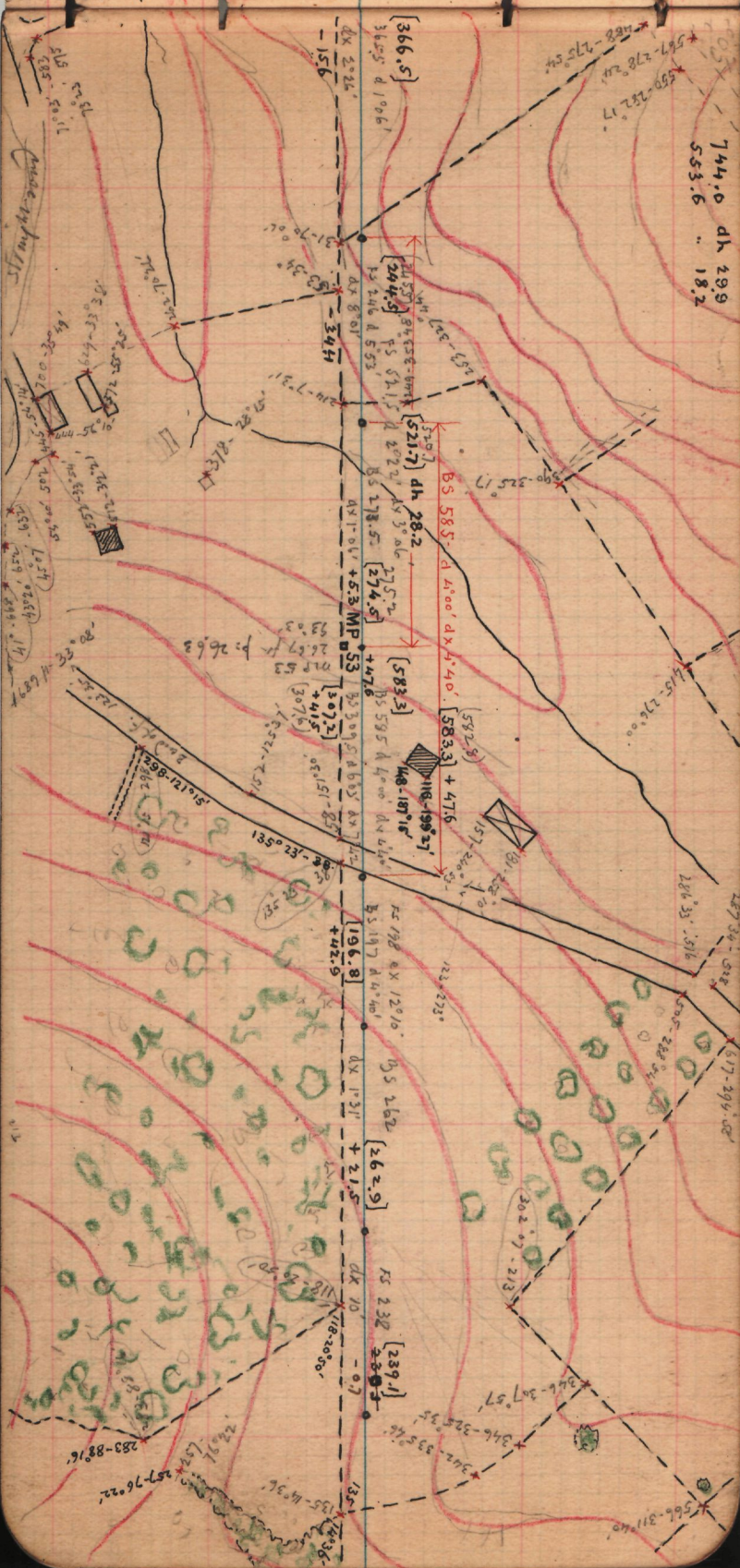
W FS

[366]

DX 365

BS 744 ex 218  
 BS 553 ex 507  
 Site Y is Site W

744.0 dh 299  
553.6 " 18.2



[366.5]  
362.5' d 1°06'

-15.6  
dx 2°22'

dx 8°01'

-34.4

dx 1°04'

+5.3 MP 53

+42.8

196.8

+42.9

dx 1°31'

+21.5

dx 10'

-0.7

fs 238

[239.1]

238.5

fs 262

[262.9]

262.5

fs 198

[196.8]

196.8

fs 147

[196.8]

196.8

[244.8]  
244.8  
fs 246 d 5°53'

[521.7] dh 28.2  
521.7  
BS 585 d 41°00' dx 4°40'

[274.5]  
274.5  
fs 278.5

[583.3]  
583.3  
BS 585 d 41°00' dx 4°40'

[118.19921]  
118.19921  
48.18716

[196.8]  
196.8  
fs 198 dx 12°10'

[262.9]  
262.9  
fs 262

[239.1]  
239.1  
fs 238

[196.8]  
196.8  
fs 198

[196.8]  
196.8  
fs 147

557-278°24'  
559-282°17'  
552-275°54'

370-815°

590-225°17'

415-276°00'

286°35' 516

57-294°02'

302°07' 213

346-207°57'

342-335°46'

566-311°40'

283-88°16'

257-76°22'

135-43°36'

134-36°

made up from 15

700-300°44'

120-23-211°14'

23°00'

291-86°

131-51-85'

82°

112-12°

118-20°00'

135-43°36'

134-36°

[551.1]  
BS 552.5 d. 4.34'

dx 5' 15"  
+50.6

[393.6]  
FS 393 ex 2' 02'

+14.0

[175.9]  
BS 175

dx 1' 46"  
+5.4

FS 288

[289.1]

+2.4

[171.0]  
BS 170 d. 5'

dx 4' 05"  
+12.3

FS 278

[278.8]

EX 1' 34"  
+4.4

670'  
256.30'

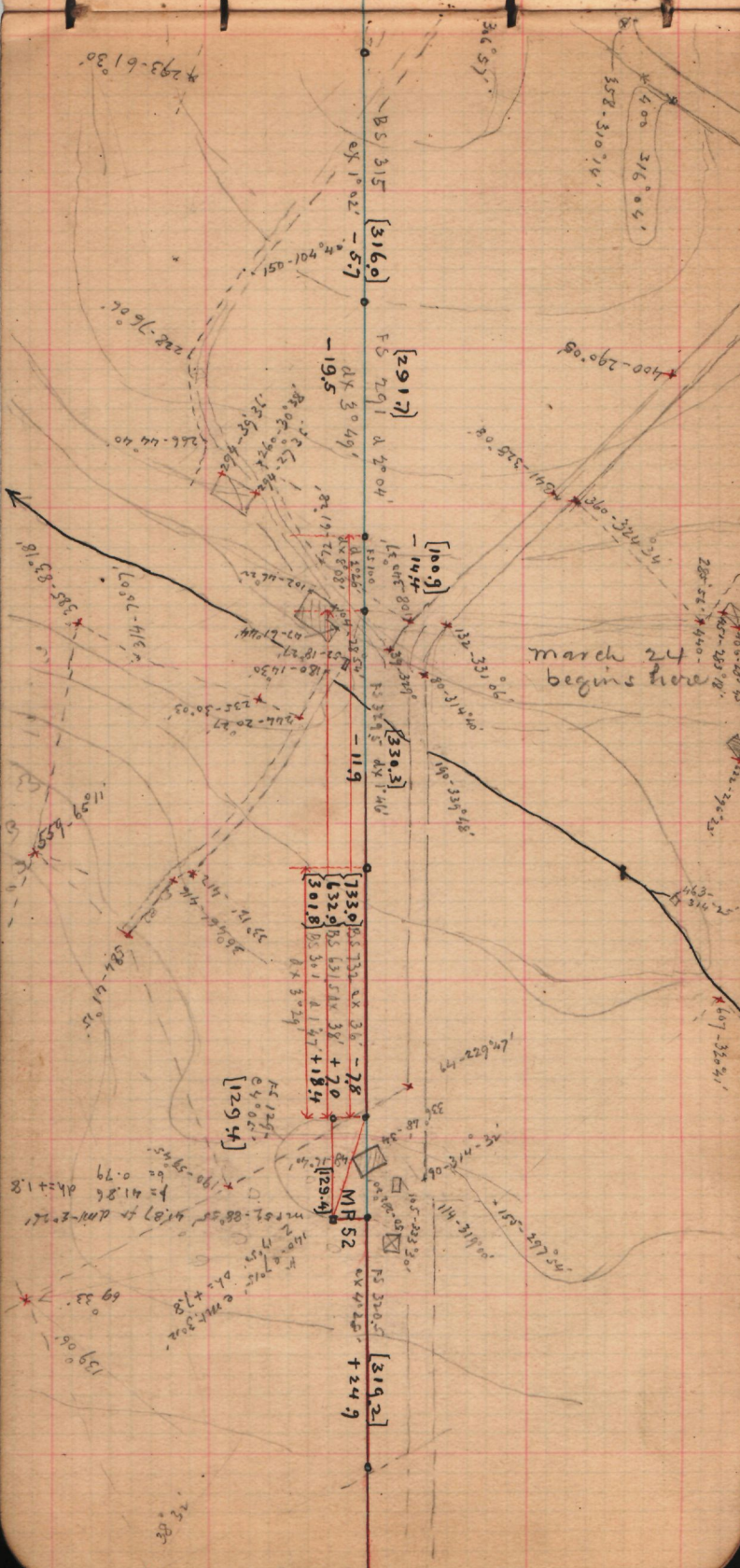
+332-301' 06"  
+332-308' 05"  
+387-325' 15"

142' 24" 536

167' 45.2" 13

151' 19" 151

164' 3" 346



\*293-6130

346°57'

400-316°04'  
352-310°14'

BS 315  
EX 1°02' - 5.7  
[316.0]

FS 291 Δ 2°04'  
-19.5  
ΔX 3°49'

400-290°08'

[100.9]

march 24 begins here

[330.3]

733.0	BS 732	EX 3.6'	-7.8
632.0	BS 631	EX 3.8'	+7.0
301.8	BS 301	Δ 1.47'	+18.4

[129.4]

MF 52

[319.2]

$f = 41.86$   
 $b = 0.79$   
 $\Delta h = +1.8$   
 $m = 0.7$   
 $\Delta h = +7.8$   
 $e = 0.3$   
 $\Delta h = +1.8$   
 $69.33$   
 $139.06$

986-285°45'  
457-289°02'

432-292°23'

463-310°2'

407-350°41'

44-229°27'

90-112°06'

165-233°30'

114-311°00'

155-297°30'

222-76°06'

266-44°40'

102-42°27'

102-42°27'

180-14°30'

236-20°27'

236-20°27'

236-20°27'

236-20°27'

236-20°27'

236-20°27'

236-20°27'

236-20°27'

236-20°27'

236-20°27'

236-20°27'

236-20°27'

236-20°27'

236-20°27'



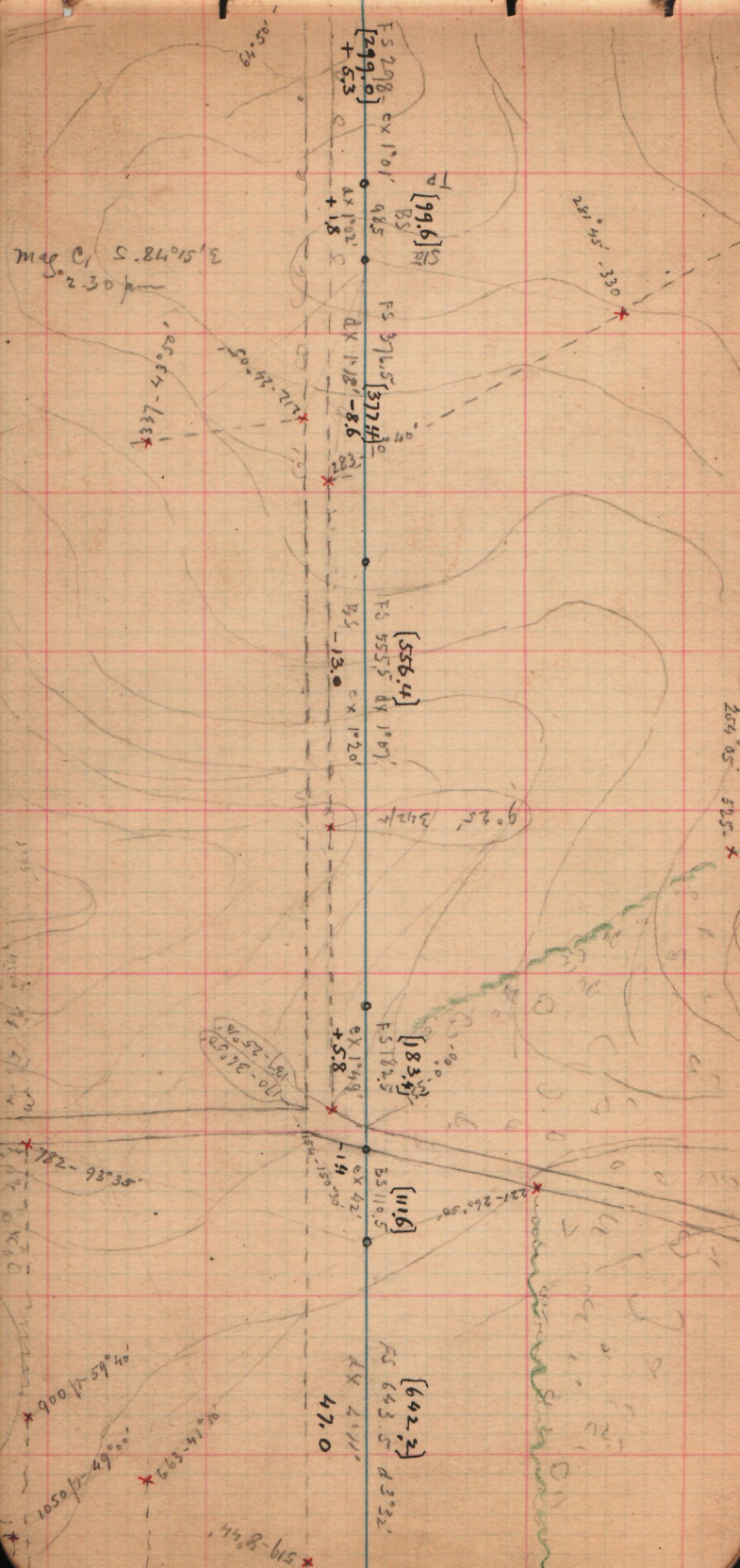






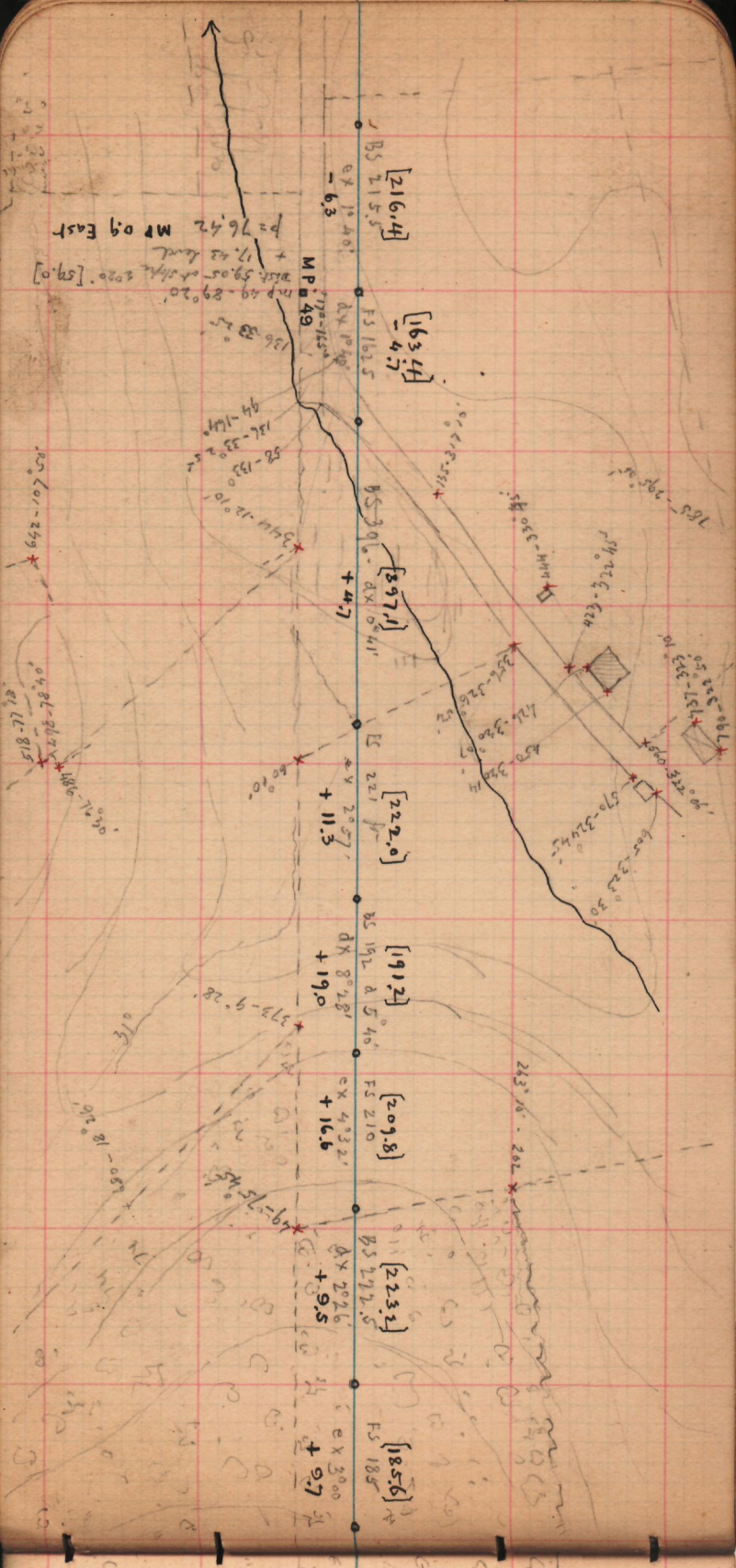














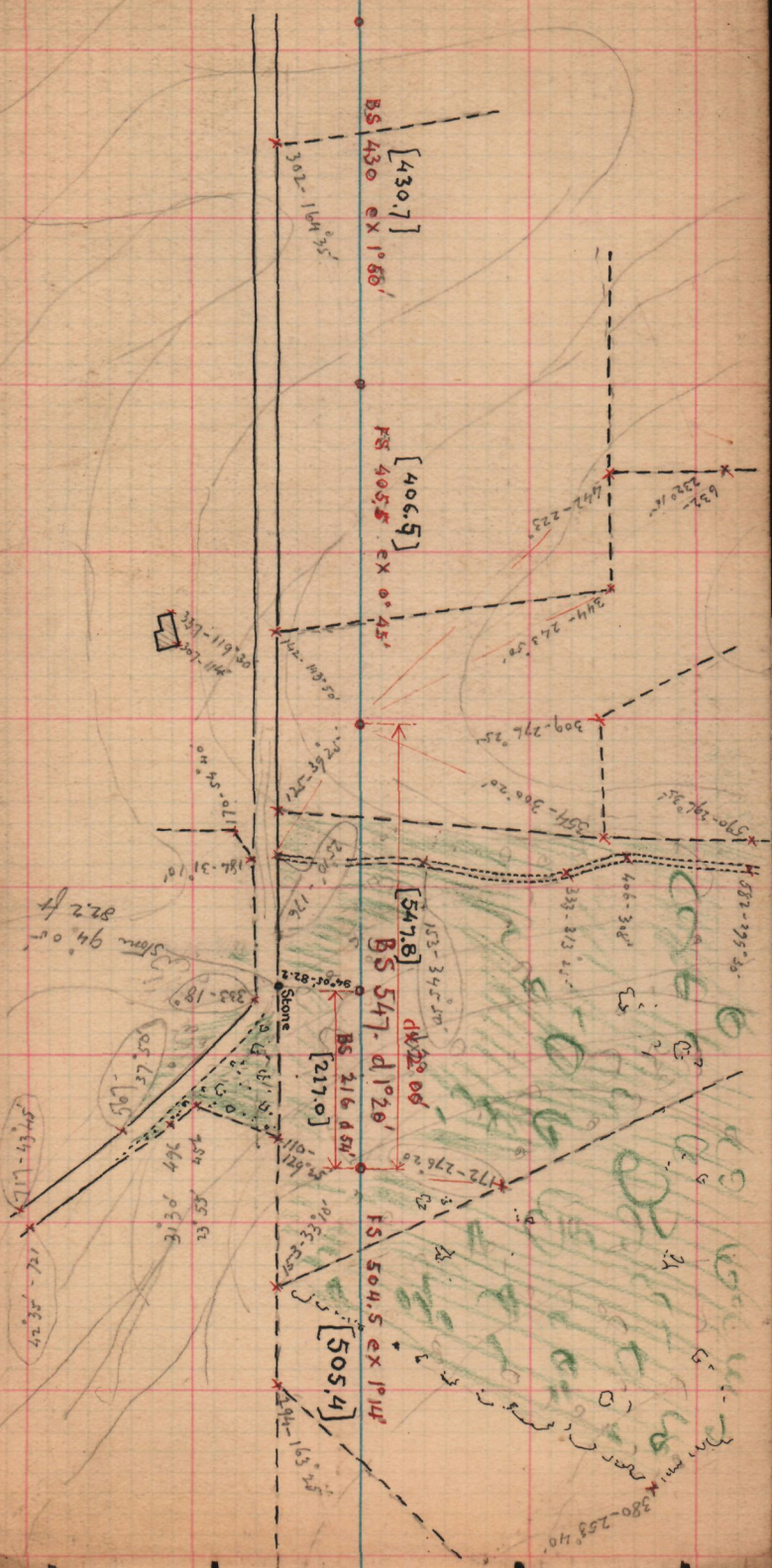












BS 430.7  
 [430.7]  
 ex 1°50'

FS 405.5  
 [406.5]  
 ex 0°45'

BS 547.8  
 [547.8]  
 d 22°00'

BS 216.4  
 [217.0]  
 d 1°20'

FS 504.5  
 [505.4]  
 ex 1°14'

302-194°35'

142-43°50'

127-66°27'

187-31°10'

96°21'-82.2

5-07'

101°55'-62'

101°55'-62'

101°55'-62'

101°55'-62'

101°55'-62'

101°55'-62'

652  
 232°16'

442-223'

344-243°50'

309-276°25'

354-306°20'

530-297°35'

406-308'

333-213°20'

172-276°20'

380-253°40'

380-253°40'

380-253°40'

380-253°40'

380-253°40'

380-253°40'

Stone  
 94.0'

333-18°

257-73°

294

313°

313°

313°

313°

313°

313°

337-119°30'

241-72°14'

241-72°14'

241-72°14'

241-72°14'

241-72°14'

241-72°14'

241-72°14'

241-72°14'

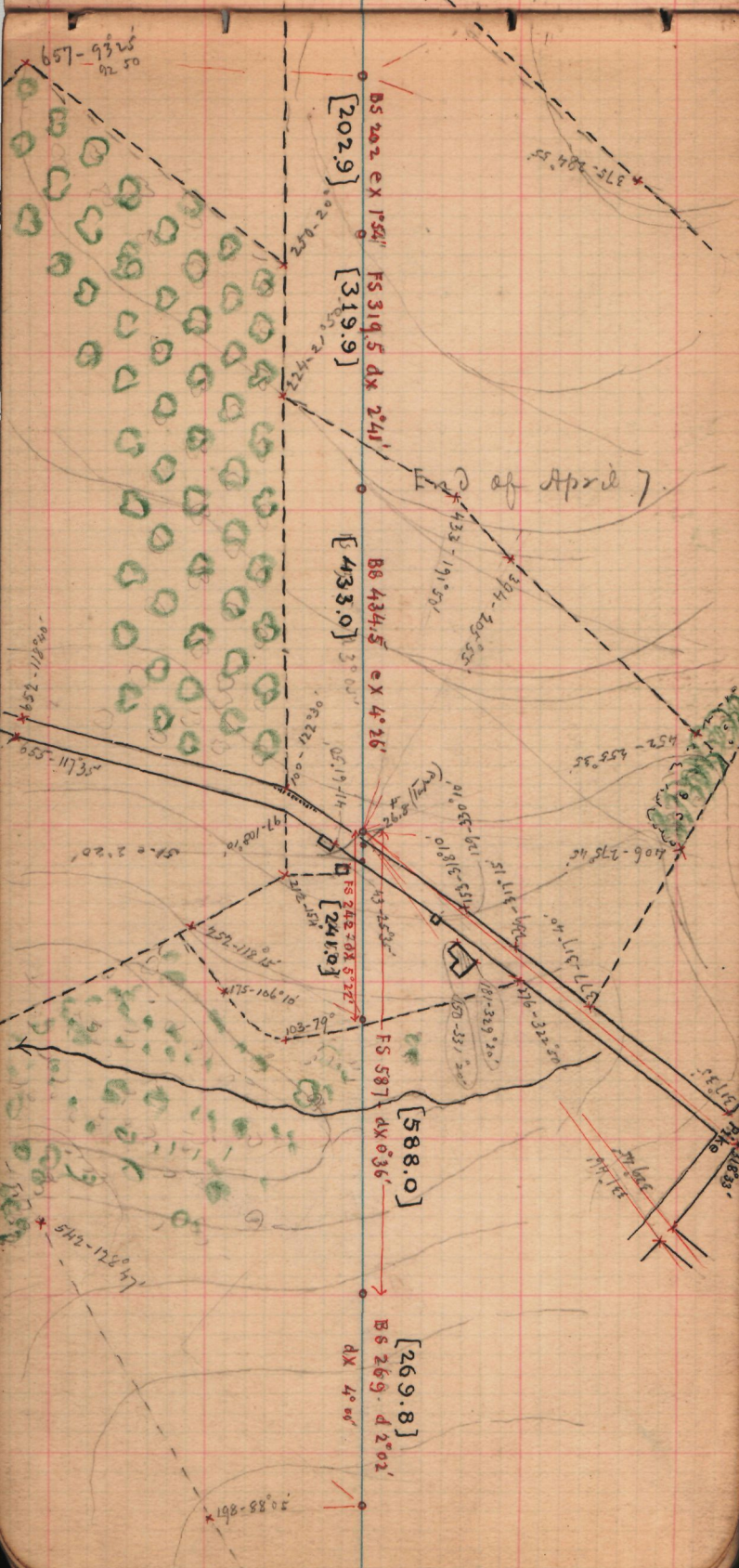
241-72°14'

241-72°14'

241-72°14'

241-72°14'

241-72°14'



BS 202 ex 1'54"  
[202.9]

FS 319.5 dx 2'41"  
[319.9]

BS 434.5 ex 4'26"  
[433.0]

FS 242.0 dx 5'22"  
[241.0]

FS 587 dx 0'36"  
[588.0]

BS 269 dx 2'02"  
[269.8]

of April 7.

Pike

657-932  
92 26

552-112200  
552-117352

542-172814

375-204'55"

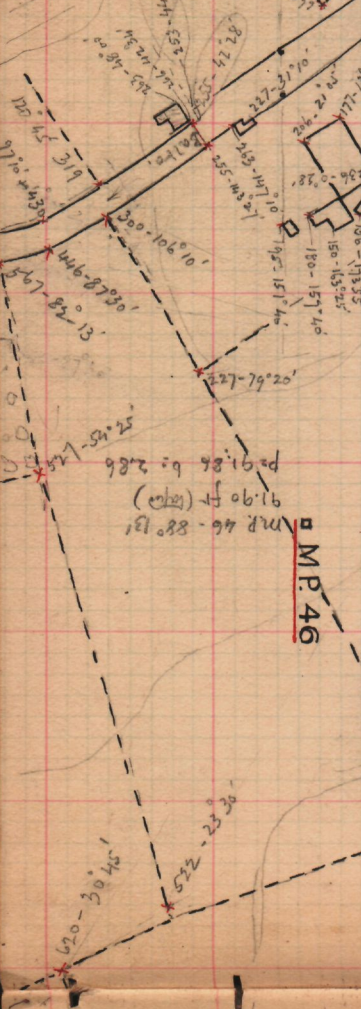
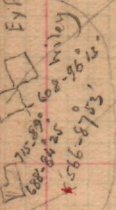
433-191'52"  
394-205'52"

452-255'25"  
406-278'45"

101.055-621.318  
181-329'20"  
150-331'200"

377-317'40"  
376-322'50"  
375-278'45"  
374-205'52"  
373-191'52"  
372-204'55"  
371-191'52"  
370-204'55"  
369-191'52"  
368-204'55"  
367-191'52"  
366-204'55"  
365-191'52"  
364-204'55"  
363-191'52"  
362-204'55"  
361-191'52"  
360-204'55"  
359-191'52"  
358-204'55"  
357-191'52"  
356-204'55"  
355-191'52"  
354-204'55"  
353-191'52"  
352-204'55"  
351-191'52"  
350-204'55"  
349-191'52"  
348-204'55"  
347-191'52"  
346-204'55"  
345-191'52"  
344-204'55"  
343-191'52"  
342-204'55"  
341-191'52"  
340-204'55"  
339-191'52"  
338-204'55"  
337-191'52"  
336-204'55"  
335-191'52"  
334-204'55"  
333-191'52"  
332-204'55"  
331-191'52"  
330-204'55"  
329-191'52"  
328-204'55"  
327-191'52"  
326-204'55"  
325-191'52"  
324-204'55"  
323-191'52"  
322-204'55"  
321-191'52"  
320-204'55"  
319-191'52"  
318-204'55"  
317-191'52"  
316-204'55"  
315-191'52"  
314-204'55"  
313-191'52"  
312-204'55"  
311-191'52"  
310-204'55"  
309-191'52"  
308-204'55"  
307-191'52"  
306-204'55"  
305-191'52"  
304-204'55"  
303-191'52"  
302-204'55"  
301-191'52"  
300-204'55"  
299-191'52"  
298-204'55"  
297-191'52"  
296-204'55"  
295-191'52"  
294-204'55"  
293-191'52"  
292-204'55"  
291-191'52"  
290-204'55"  
289-191'52"  
288-204'55"  
287-191'52"  
286-204'55"  
285-191'52"  
284-204'55"  
283-191'52"  
282-204'55"  
281-191'52"  
280-204'55"  
279-191'52"  
278-204'55"  
277-191'52"  
276-204'55"  
275-191'52"  
274-204'55"  
273-191'52"  
272-204'55"  
271-191'52"  
270-204'55"  
269-191'52"  
268-204'55"  
267-191'52"  
266-204'55"  
265-191'52"  
264-204'55"  
263-191'52"  
262-204'55"  
261-191'52"  
260-204'55"  
259-191'52"  
258-204'55"  
257-191'52"  
256-204'55"  
255-191'52"  
254-204'55"  
253-191'52"  
252-204'55"  
251-191'52"  
250-204'55"  
249-191'52"  
248-204'55"  
247-191'52"  
246-204'55"  
245-191'52"  
244-204'55"  
243-191'52"  
242-204'55"  
241-191'52"  
240-204'55"  
239-191'52"  
238-204'55"  
237-191'52"  
236-204'55"  
235-191'52"  
234-204'55"  
233-191'52"  
232-204'55"  
231-191'52"  
230-204'55"  
229-191'52"  
228-204'55"  
227-191'52"  
226-204'55"  
225-191'52"  
224-204'55"  
223-191'52"  
222-204'55"  
221-191'52"  
220-204'55"  
219-191'52"  
218-204'55"  
217-191'52"  
216-204'55"  
215-191'52"  
214-204'55"  
213-191'52"  
212-204'55"  
211-191'52"  
210-204'55"  
209-191'52"  
208-204'55"  
207-191'52"  
206-204'55"  
205-191'52"  
204-204'55"  
203-191'52"  
202-204'55"  
201-191'52"  
200-204'55"  
199-191'52"  
198-204'55"  
197-191'52"  
196-204'55"  
195-191'52"  
194-204'55"  
193-191'52"  
192-204'55"  
191-191'52"  
190-204'55"  
189-191'52"  
188-204'55"  
187-191'52"  
186-204'55"  
185-191'52"  
184-204'55"  
183-191'52"  
182-204'55"  
181-191'52"  
180-204'55"  
179-191'52"  
178-204'55"  
177-191'52"  
176-204'55"

Extra from Sta. E. of Johnsons barn



[306.1]  
FS 305.5 ex 2° 14'

[419.4]  
BS 418.5 d 1° 10' dx 2° 17'

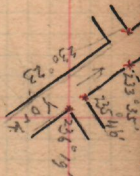
[191.1]  
dx 0° 10'  
FS 190-

[242.7]  
BS 241.5 ex 2° 05'

[221.5]  
FS 220: Level

[630.6]  
FS 631 - dx - 2° 47'

[464.2]  
BS 464 - ex 2° 05'



160 ft A  
98 ft B  
C = 160 ft  
E = 98 ft

79° 25' - 85° 25'  
308.8 - 325'  
205.89 - 60  
238.84 - 25

319  
300 - 101° 05'  
446 - 87° 30'  
83° 13'  
567 - 67° 45'  
57° 45' - 286  
91.90 ft (avg)  
MR 46 - 88° 13'

227 - 79° 20'  
180 - 157° 40'  
150 - 165° 25'  
156 - 173° 35'  
181 - 179° 34'  
195 - 157° 15'

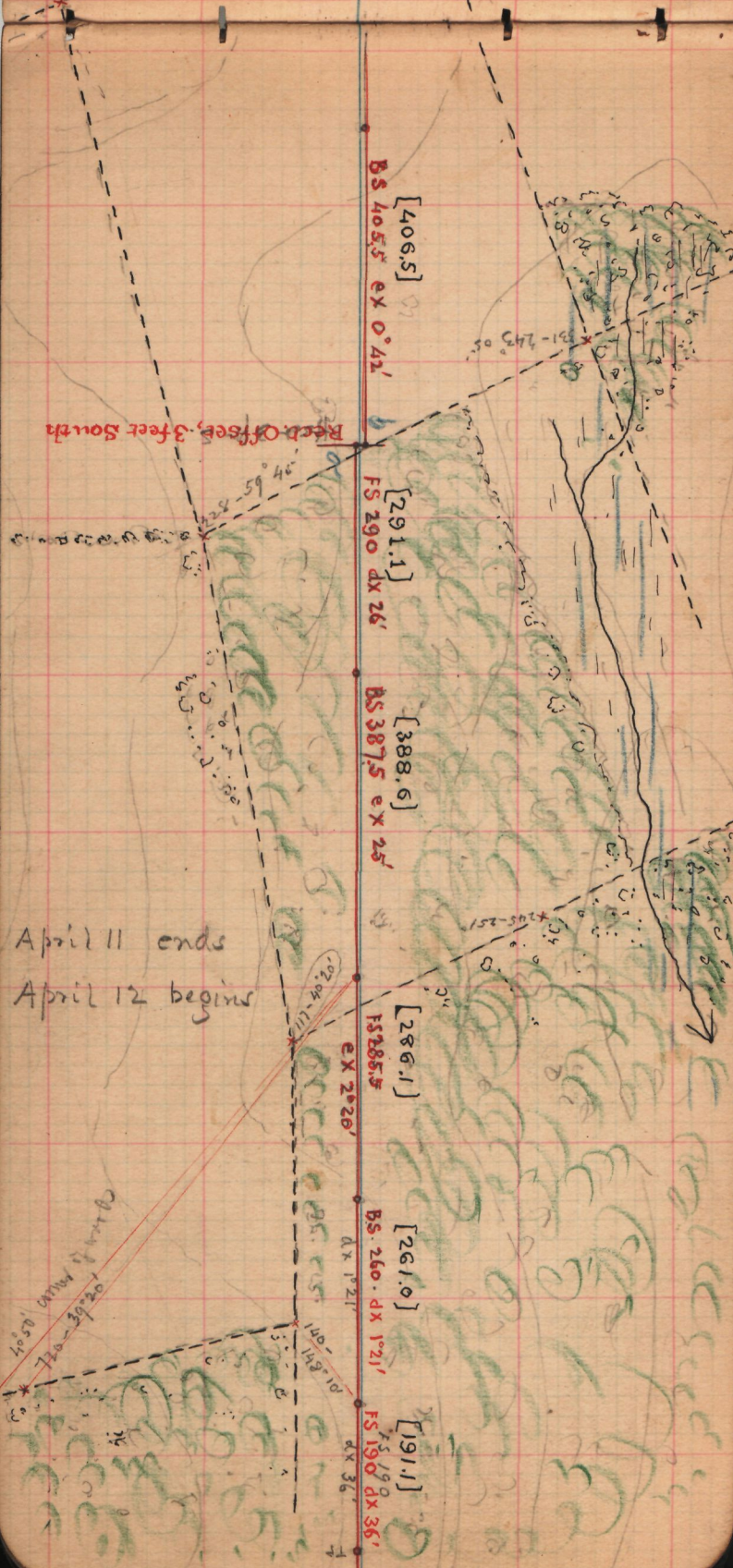
Apr 17  
Pike  
Construction  
on line and E. side of Pike

Offset N. 2.0 ft. (Rect.)

No top of foot  
of st.

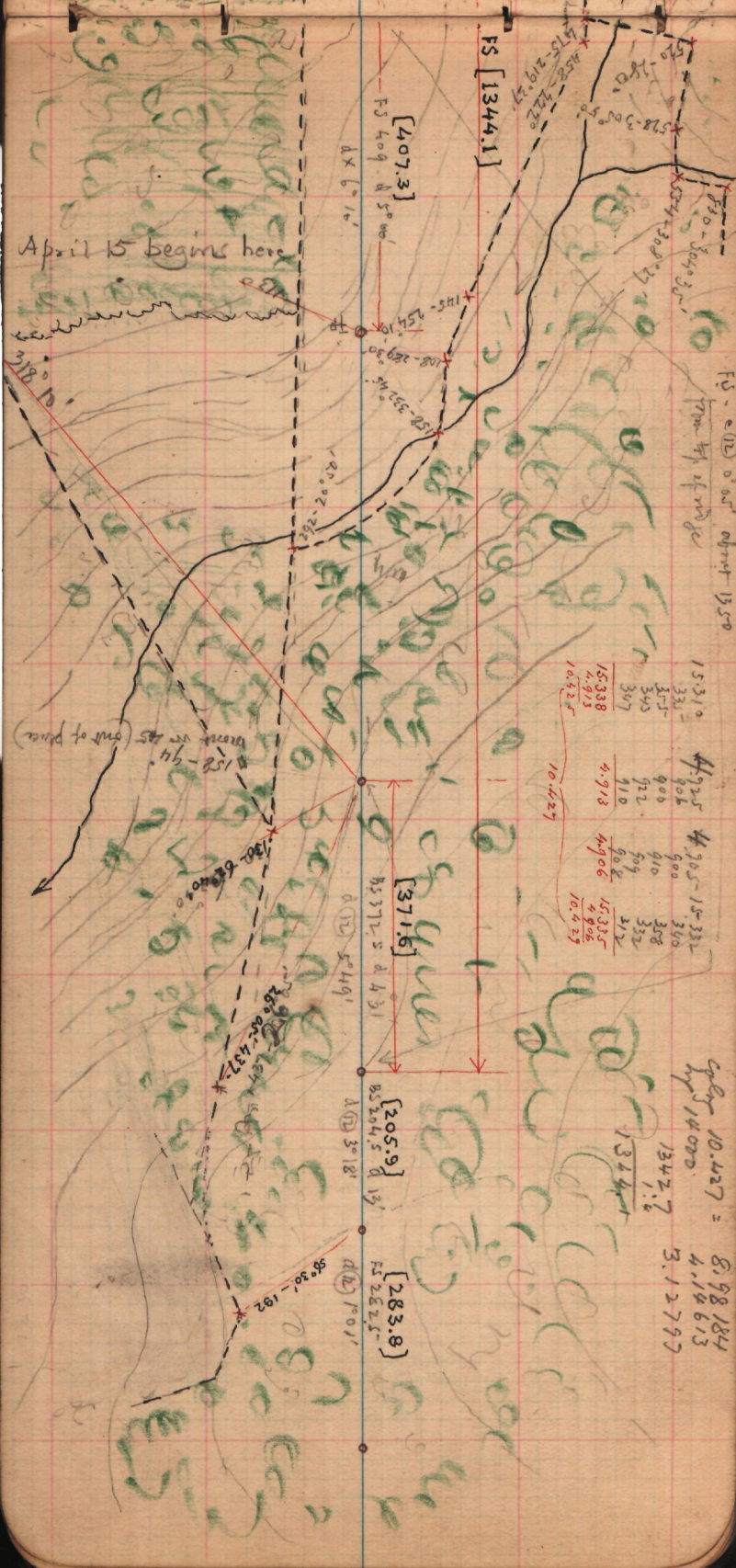
Line 2  
of line at N

le 309° 40'









April 15 begins here

FS [1344.1]

[407.3]

FS 409 d 5°00'

dX 6°14'

FS - e (N) 0°05' about 1350  
 from top of ridge

318° 10'

15.310	4.925	4.905	15.332
335	906	900	340
345	922	910	358
347	910	909	332
15.338	4.913	4.906	212
4.913		906	15.335
10.425		4.906	4.906
		10.429	10.429

[371.6]

d 15) 5°49'

[205.9]

[283.8]

Spd 10.427 = 8.98184  
 by 14000 = 4.14613  
 3.12797

158° - 94' (out of place)

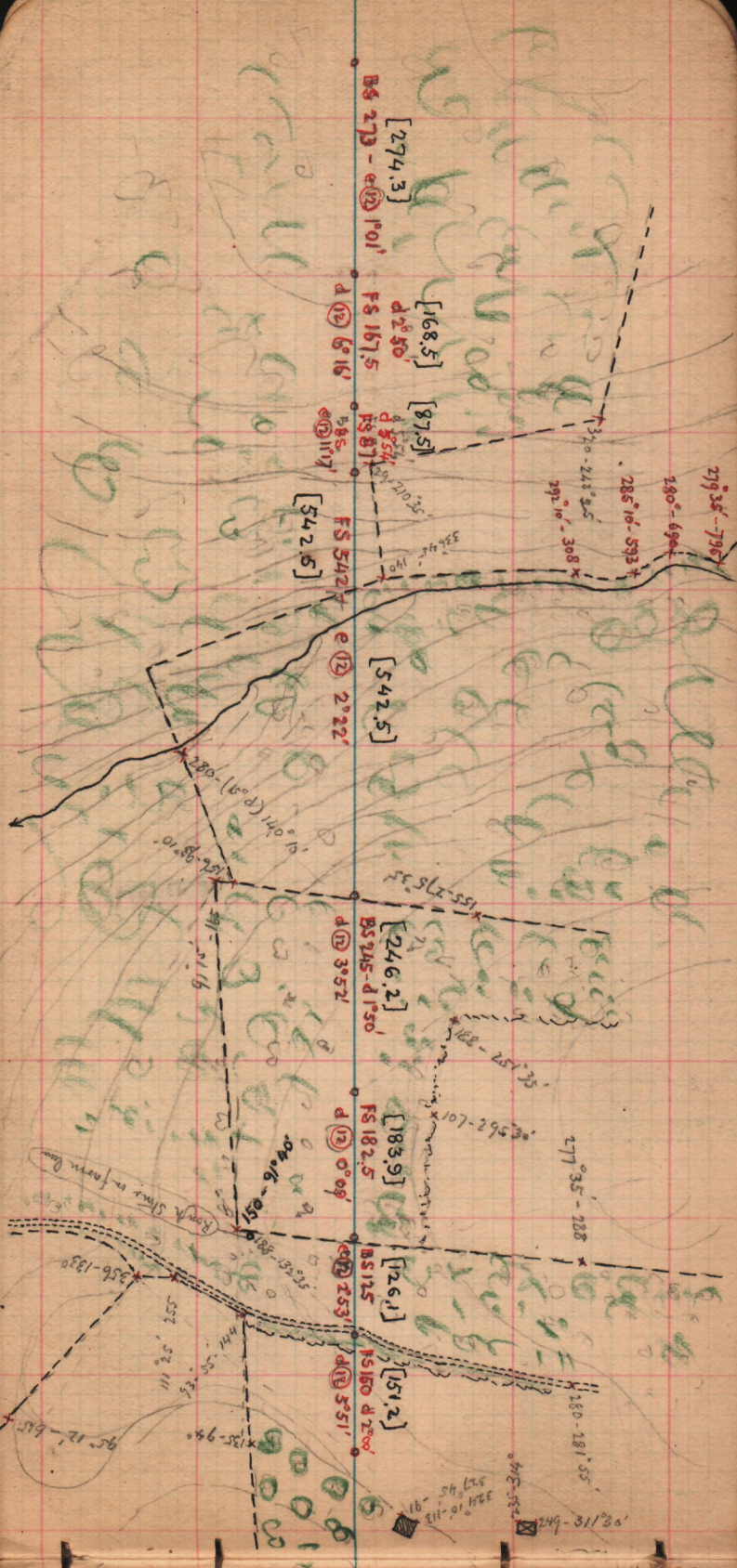
300.68400  
 26.02 - 437.7

d 17) 3°18'

d 12) 1°01'

d 5) 204.5 d 13'

FS 282.5



BS 273 - e 12° 01'

[274.3]

d 12° 6' 16"

FS 167.5

[168.5]

e 88° 11' 17"

FS 87.1

[87.5]

FS 542.5

[542.5]

e 12° 2' 22"

BS 245 - d 1° 50'

[246.2]

d 12° 3' 52"

FS 182.5

[183.9]

d 12° 0' 09"

BS 125

[26.1]

e 12° 5' 53"

FS 150 - d 2° 00'

[51.2]

d 12° 5' 51"

279° 35' - 795'

280° - 690'

285° 10' - 593'

292° 10' - 308'

310° - 241° 25'

155 - 275.55

168 - 251° 35'

e 562 - 601

277° 35' - 288

180 - 181° 55'

249 - 311° 30'

280 - (9° 8') 140° 10'

156 - 98.0

491 - 211.6

104 - 016 - 051

Korak Simer or farm line

356 - 1330

557 - 52° 111

441 - 55

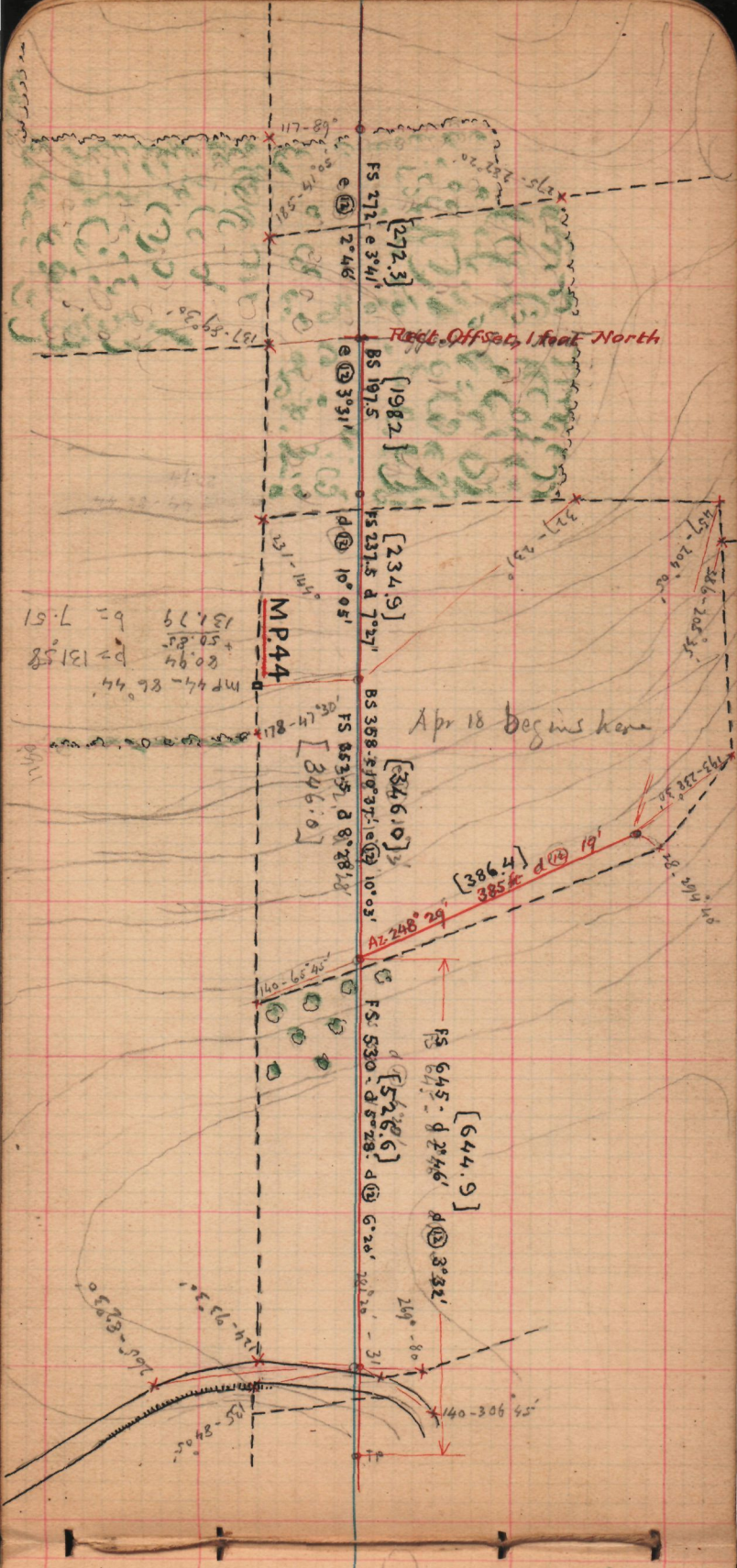
135 - 94

95° 12' - 645

111 - 01° 122

415 - 552





FS 272 e 3°41'

BS 197.5

FS 237.5 d 7°27'

BS 358.5 d 10°03'

FS 530 d 5°28'

G 20° 20' 20'

[272.3]

[1982]

[234.9]

[346.10]

[528.6]

[644.9]

MP44

Apr 18 begins here

Redl. Offset, 1 foot North

MP 44 - 86° 44'  
 80.94  
 + 50.85  
 131.79  
 b = 7.51  
 p = 131.58

PLAN

117-89°

2°46'

3°31'

10°05'

8°28'18"

6°20'

31'

e 3°41'

d 7°27'

d 10°03'

d 8°28'18"

d 5°28'

d 3°32'

d 2°46'

272-20

197.5

237.5

358.5

530

20

44

117-89°

2°46'

3°31'

10°05'

8°28'18"

6°20'

31'

2°46'

117-89°

2°46'

3°31'

10°05'

8°28'18"

6°20'

31'

2°46'

117-89°

2°46'

3°31'

10°05'

8°28'18"

6°20'

31'

2°46'

117-89°

2°46'

3°31'

10°05'

8°28'18"

6°20'

31'

2°46'

117-89°

2°46'

3°31'

10°05'

8°28'18"

6°20'

31'

2°46'

117-89°

2°46'

3°31'

10°05'

8°28'18"

6°20'

31'

2°46'

117-89°

2°46'

3°31'

10°05'

8°28'18"

6°20'

31'

2°46'

117-89°

2°46'

3°31'

10°05'

8°28'18"

6°20'

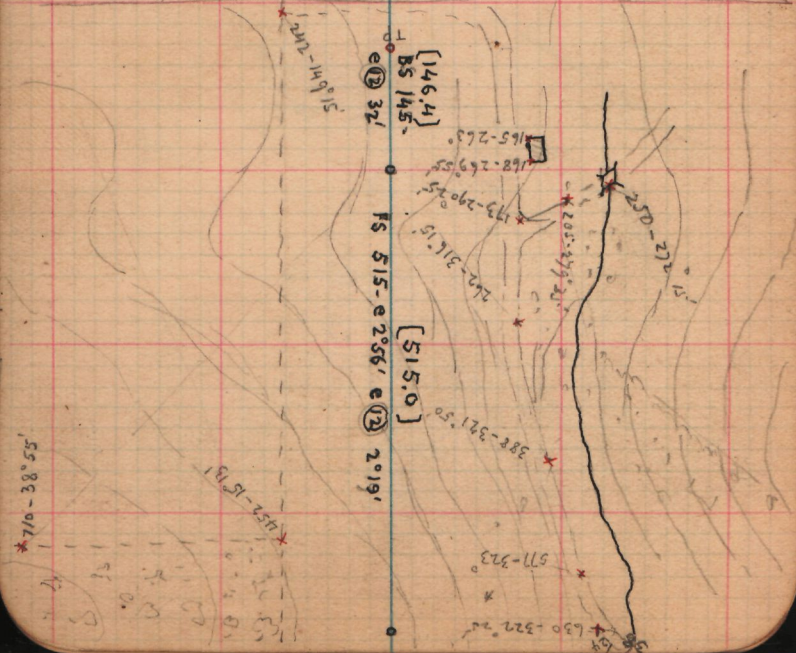
31'

2°46'

Sub-sketch of topography  
 from station N. of line  
 + S. of m. & m. Ho.



Line Resumed





Line resumed, beginning at station on 1st ridge east of Deer Creek and sighting back to ridge W. of do.

This distance is about 1460 ft. Micrometer readings follow

e (12)	1' 37'	e (reading)	1' 50'
5.699	15.380	15.328	5.741
.700	.315	15.382	.745
.716	.338	15.335	.730
.716	.326	.339	.750
.714	.330	.340	.730
.713	.330	.380	.740
<u>5.710</u>	<u>15.328</u>	<u>15.334</u>	<u>5.739</u>

W.T.

L.T.

W.D.

9.607

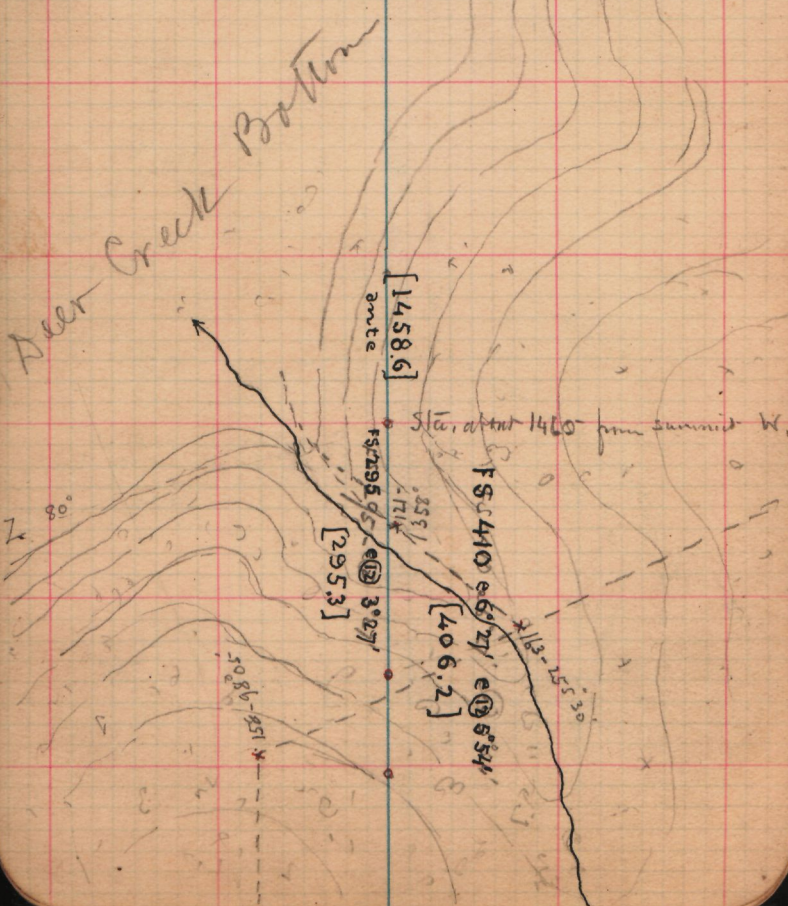
5.769	15.361	15.312	5.764
.768	.364	.315	.720
.740	.359	.320	.711
.745	.360	.318	.740
.760	.346	.311	.739
.756	.348	.315	.756
<u>5.766</u>	<u>15.356</u>	<u>15.315</u>	<u>7.20</u>

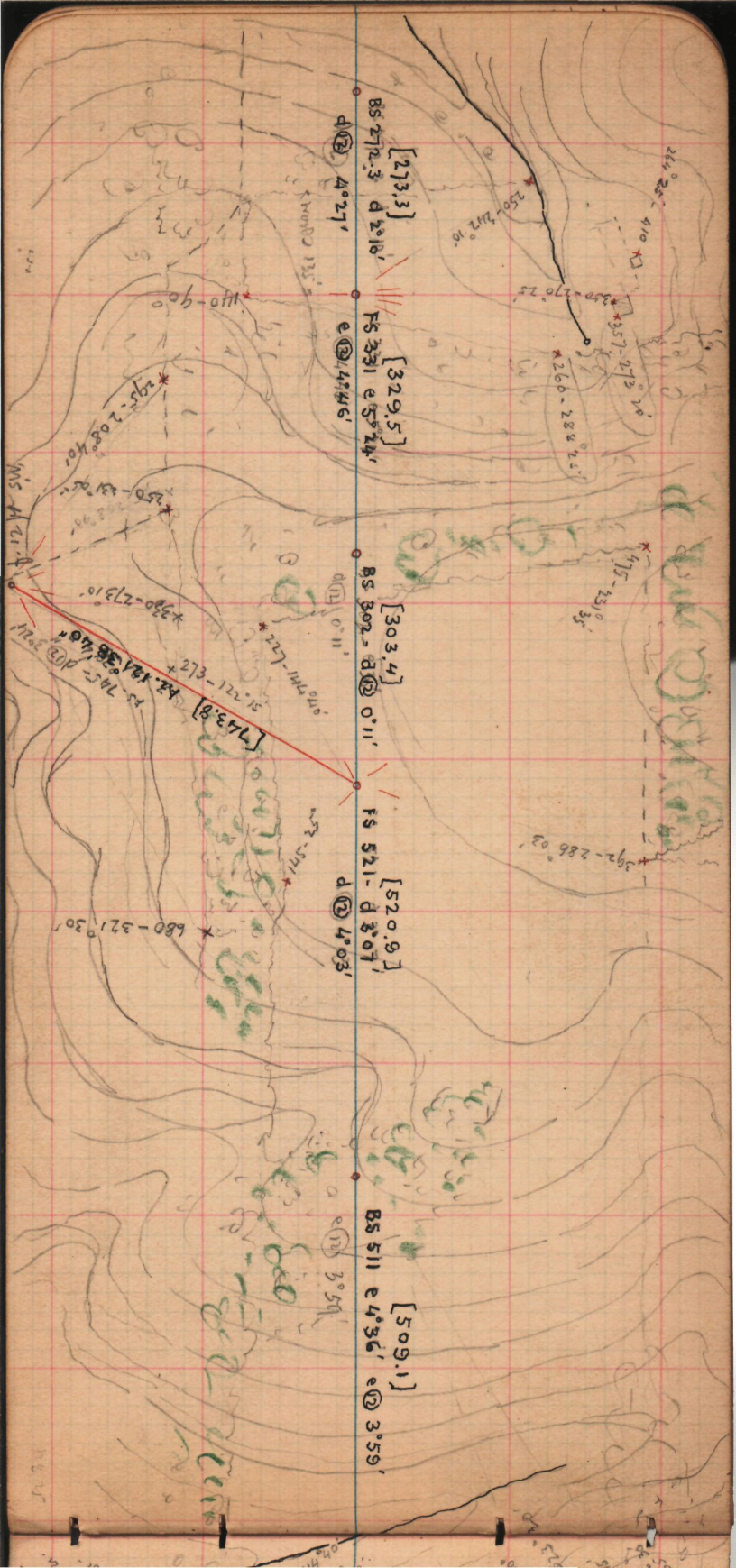
mean 9.598  
by 144000  
100' 1050'

colg 9.01782 1457.2  
4.14613 1.4  
9.99956 1458.6  
3.16351

5.727 9.589

Direct Line Resumed









[262.7]

FS 265 d 6°30' 0" 70  
d ② 8°53' 0" 70  
d ① 8°53' 0" 70

FS 901 d 1°31' d ② 2°13'

[901.5]

[242.1]

BS 257 d 14°27' d ② 16°53'

[184.1]

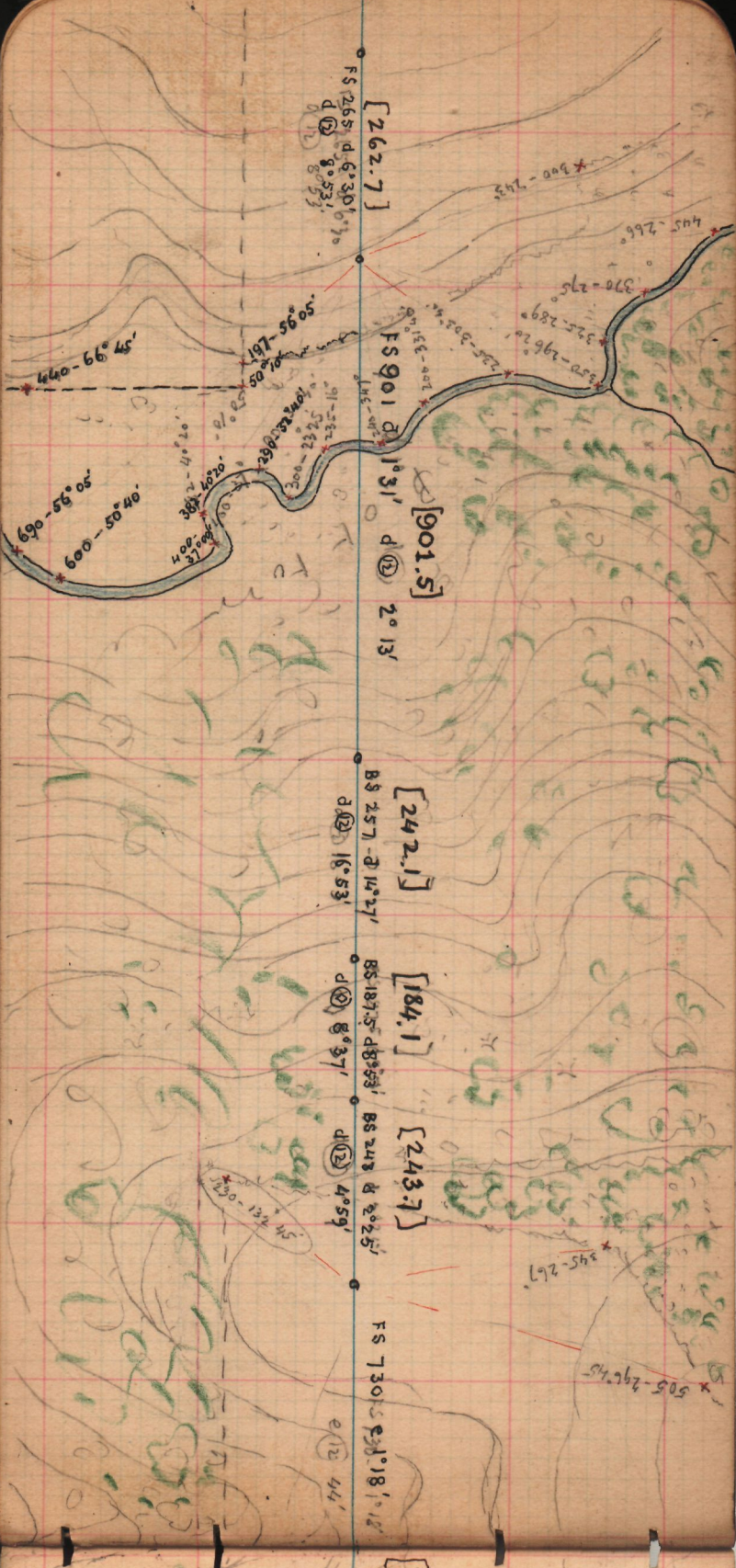
BS 187.5 d 8°53' d ② 8°37'

[243.7]

BS 243 d 2°25' d ② 4°59'

FS 730 d 18°18' 12"

d ② 44'





270 07 24 15

100 07 10 10. 26.3 ft

85 07 27 47

150 45 25 -  
139 N. 5 54  
- 5  
134

358 25.5 4.0  
258 02.0  
100.5

MP 52 41.87 ft S.  
88° 55' East zero

53  
2600 4.414 973

MP 51 59.26 ft N.

269° 45' East zero

53  
31000 1 724 276  
4.491 362  
7.215 944

MP 53 26.67 ft + 75 ft  
93° 03' East zero

At Stitz Mar. 20 Sta. S. of line

between western signal + Stitz station

41	0	00	10	00	00			
41	167	51	25					
41	143	33	40	40	40	703	23	35
						167	51	12
37	287	07	27	29	25	503	33	46
	167					167	51	16

Offset to N'd east of MP 51 32.25  
 D R 26.76  
 Cutt line 0' 00" 15" 55" 180 00 00 00 29.84  
 mark S 280 52 00 00 100 52 00 09 32.76  
 121.71

sum squares

Apr. 1 Cold & windy. No work in acct.  
Martin & Shaffer opening line. (Wagon)

Apr. 2 Cold & windy. Extended line & top<sup>c</sup> work  
across Northern Central R.R. (Wagon)

Apr. 3. Cold & windy. Camp. V. threatening  
P.M. Packed up camp

Sent Martin to E'd to engage quartermen.  
P.M. Walked out with Shaffer and extended top<sup>c</sup>  
line further to E'd. (Wagon)

M.P. No 46. East 0° = 88° 13'  
dist . 91.90 ft

M.P. No 41 East 0° = 93° 31'  
99.50  
+ 99.05  
dist = 198.55

p = 198.18      b = 12.18

92° 44' 30"

86.85 on slope 5° 11' 87.21  
86.62 " " 5° 10' 86.97  
173.47 174.18

p = 173.27      b = 8.30