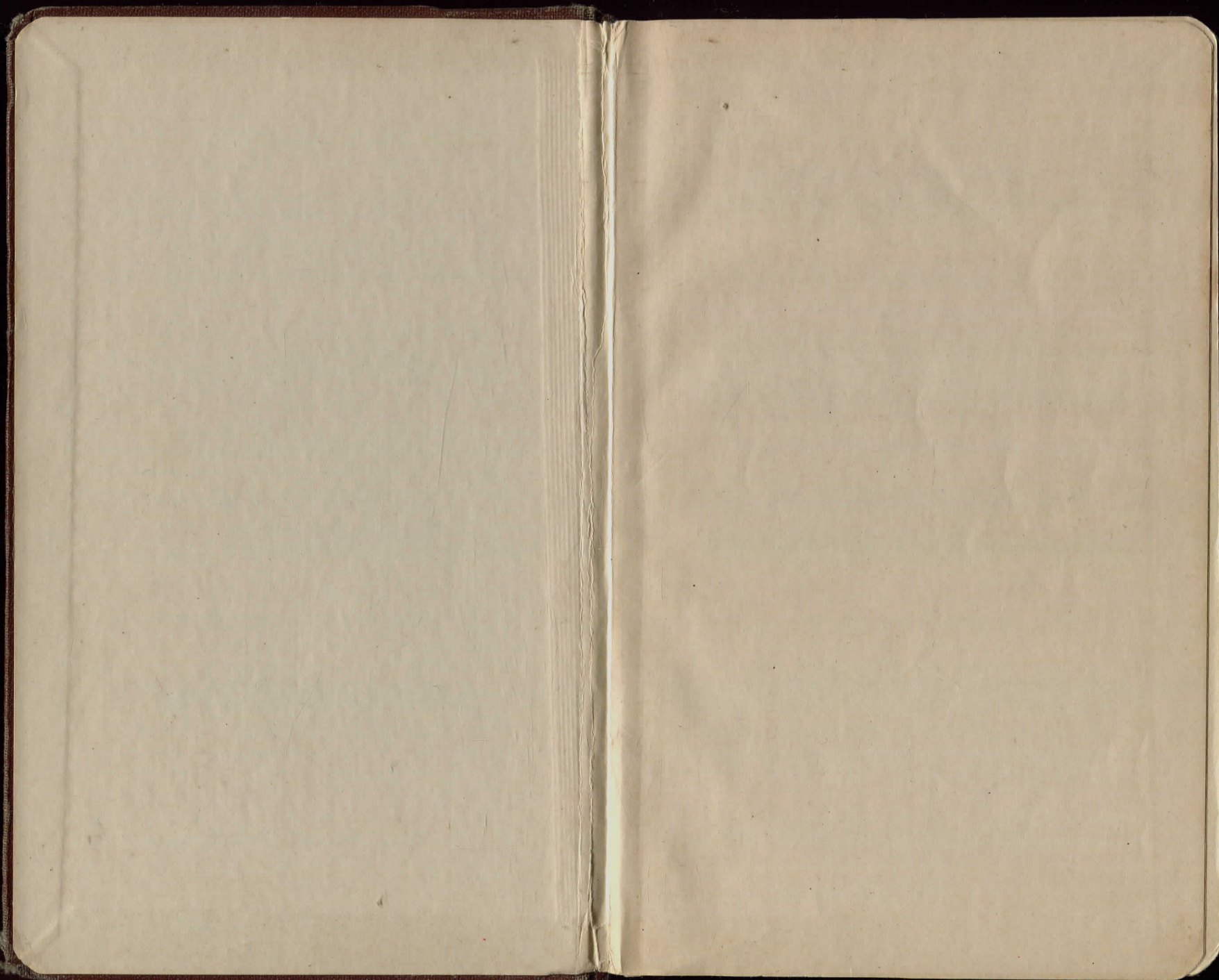


322A

TRANSIT BOOK



DIRECTIONS FOR USE OF TABLES

TABLE No. 1.

Distance of slope stake from side or shoulder
stake for any width roadway, slope $1\frac{1}{2}$ to 1.
If ground is nearly level, the cut or fill at side

IMPROVED TABLES
AND
INFORMATION

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 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.

DIRECTIONS FOR USE OF TABLES

TABLE No. 1.

Distance of slope stake from side or shoulder stake for any width roadway, slope $1\frac{1}{2}$ 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 of table in same row and column gives distance from side stake to slope stake. If ground is not level estimate the difference in elevation between the side stake and slope stake, lower target by this amount if cut, elevate if fill. Add this amount to cut or fill and find distance in table. Set up rod at this point, and line of sight should cut target. If it does not make the slight adjustment necessary.

TABLE No. 9.

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 I may be found by dividing tangent, (or external), opposite I 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.

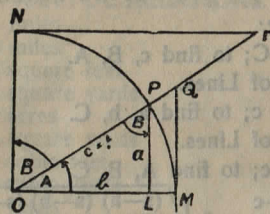


TABLE II
TRIGONOMETRIC FORMULÆ.

$$\angle A = \angle MOP \quad \angle B = \angle PON = \angle OPL$$

$$R = OB = c = 1$$

$$\sin A = \frac{a}{c} = \frac{a}{1} = a = \text{cos } B = LP$$

$$\text{cos } A = \frac{b}{c} = \frac{b}{1} = b = \text{sin } B = OL$$

$$\tan A = \frac{a}{b} = \frac{MQ}{OM} = \frac{MQ}{1} = MQ = \cot B = MQ$$

$$\cot A = \frac{NT}{ON} = \frac{NT}{1} = NT = \tan B = NT$$

$$\sec A = \frac{OQ}{OM} = \frac{OQ}{1} = OQ = \csc B = OQ$$

$$\csc A = \frac{OT}{ON} = \frac{OT}{1} = OT = \sec B = OT$$

$$\text{vers } A = \frac{LM}{OP} = LM = \text{covers } B \neq$$

$$\text{covers } A = \frac{OP-LP}{OP} = OP-LP = \text{vers } B$$

$$\text{exsec } A = PQ = \text{coexsec } B$$

$$\text{coexsec } A = PT = \text{exsec } B$$

$$\sin \frac{1}{2} A = \sqrt{\frac{1-\text{Cos } A}{2}} \quad \cos \frac{1}{2} A = \sqrt{\frac{1+\text{Cos } A}{2}}$$

$$\sin 2 A = 2 \sin A \cos A \quad \cos 2 A = \cos^2 A - \sin^2 A$$

$$\text{Law of Lines} \quad \frac{\sin A}{a} = \frac{\sin B}{B} = \frac{\sin C^1}{C}$$

$$\text{Law of Cosines} \quad c^2 = a^2 + b^2 - 2 ab \cos C$$

$$\text{Law of Tangents} \quad \frac{a+b}{a-b} = \frac{\tan \frac{1}{2} (A+B)}{\tan \frac{1}{2} (A-B)}$$

TABLE II — Continued
TRIGONOMETRIC FORMULÆ (continued)

in any triangle:

Given a, b, C; to find c, B, A.

Use Law of Lines.

Given A, B, c; to find a, b, C.

Use Law of Lines.

Given a, b, c; to find A, B, C.

$$\text{Let } \frac{a+b+c}{2} = s, \sqrt{\frac{s(s-a)(s-b)(s-c)}{s}} = r$$

$$\cos \frac{1}{2} A = \sqrt{\frac{s(s-a)}{bc}}$$

$$\tan \frac{1}{2} A = \frac{r}{s-a}$$

$$\tan \frac{1}{2} B = \frac{r}{s-b}$$

$$\tan \frac{1}{2} C = \frac{r}{s-c}$$

Area of a triangle:

$$\text{Area} = \frac{1}{2} ab \sin C$$

$$\text{Area} = \sqrt{s(s-a)(s-b)(s-c)}$$

PRISMOIDAL FORMULA.

$$\text{Vol.} = \frac{h}{6} (B+b+4M)$$

h = altitude; b, B = bases; M = midsection

TABLE III

INCHES AND FRACTIONS OF AN INCH IN DECIMALS OF A FOOT

	0	1	2	3	4	5	6	7	8	9	10	11	
1/16	.0052	.0885	.1719	.2552	.3385	.4219	.5052	.5885	.6719	.7552	.8385	.9219	1/16
1/8	.0104	.0938	.1771	.2604	.3438	.4271	.5104	.5938	.6771	.7604	.8438	.9271	1/8
3/16	.0156	.0990	.1823	.2656	.3490	.4323	.5156	.5990	.6823	.7656	.8490	.9323	3/16
1/4	.0208	.1042	.1875	.2708	.3542	.4375	.5208	.6042	.6875	.7708	.8542	.9375	1/4
5/16	.0260	.1094	.1927	.2760	.3594	.4427	.5260	.6094	.6927	.7760	.8594	.9427	5/16
3/8	.0313	.1146	.1979	.2813	.3646	.4479	.5313	.6146	.6979	.7813	.8646	.9479	3/8
7/16	.0365	.1198	.2031	.2865	.3698	.4531	.5365	.6198	.7031	.7865	.8698	.9531	7/16
1/2	.0417	.1250	.2083	.2917	.3750	.4583	.5417	.6250	.7083	.7917	.8750	.9583	1/2
9/16	.0469	.1302	.2135	.2969	.3803	.4635	.5469	.6302	.7135	.7969	.8802	.9635	9/16
5/8	.0521	.1354	.2188	.3021	.3854	.4688	.5521	.6354	.7188	.8021	.8854	.9688	5/8
11/16	.0573	.1406	.2240	.3073	.3906	.4740	.5573	.6406	.7240	.8073	.8906	.9740	11/16
3/4	.0625	.1458	.2292	.3125	.3958	.4792	.5625	.6458	.7292	.8125	.8958	.9792	3/4
13/16	.0677	.1510	.2344	.3177	.4010	.4844	.5677	.6510	.7344	.8177	.9010	.9844	13/16
7/8	.0729	.1563	.2396	.3229	.4063	.4896	.5729	.6563	.7396	.8229	.9063	.9896	7/8
15/16	.0781	.1615	.2448	.3281	.4115	.4948	.5781	.6615	.7448	.8281	.9115	.9948	15/16
1	.0833	.1667	.2500	.3333	.4167	.5000	.5833	.6667	.7500	.8333	.9167	1.000	1

TABLE IV. USEFUL RELATIONS.

Lineal feet	×	.00019	= miles
Lineal yards	×	.0006	= miles
Square inches	×	.007	= square feet
Square feet	×	.111	= square yards
Square yards	×	.0002067	= acres
Acres	×	4840	= square yards
Cubic inches	×	.00058	= cubic feet
Cubic feet	×	.03704	= cubic yards
Links	×	.22	= yards
Links	×	.66	= feet
Feet	×	1.5	= links

$$360^\circ = 21600' = 1296000''$$

$$\text{Radius} = \text{arc of } 57.2957790''$$

$$\text{Arc of } 1^\circ (\text{radius} = 1) = .017453292$$

$$\text{Arc of } 1' (\text{radius} = 1) = .000290888$$

$$\text{Arc of } 1'' (\text{radius} = 1) = .000004848$$

$$\pi = 3.141592654 \quad \sqrt{\frac{1}{4}} = 0.564190$$

$$\frac{\pi}{4} = 0.785398163 \quad \sqrt[3]{\frac{6}{\pi}} = 1.240700982$$

$$\frac{\pi}{6} = 0.523598776 \quad \pi^2 = 9.869604401$$

$$\sqrt{\frac{4}{\pi}} = 1.128379167 \quad \frac{1}{\pi^2} = 0.101321184$$

$$\frac{\pi}{6} = 0.523598776 \quad \sqrt{\pi} = 1.772453851$$

$$\frac{4\pi}{3} = 4.188790205 \quad \frac{1}{\pi} = 0.3183099$$

Curvature of Earth's surface = about 0.7 feet in 1 mile

Curvature in feet = 0.667 (Dist. in miles)²

Difference between arc and chord length, 0.05 feet in 11 1/2 miles

$$\text{Probable error of a single observation} = 0.6754 \sqrt{\frac{\sum v^2}{n-1}}$$

Error in chaining of 0.01 feet in 100 feet:

Due to—

1. Length of tape error of 0.01 feet
2. Alignment. One end 1.4 feet out of line
3. Sag of tape at centre of 0.61 feet
4. Temperature difference of 15'
5. Difference of pull of 15 lbs.

STADIA REDUCTION FORMULÆ.

$$\text{Horizontal Distance} = R - R \sin^2 a + C \cos a$$

$$\text{Vertical Distance} = R \frac{1}{2} \sin 2a + C \sin a$$

$$R = \text{Reading} \times \frac{\text{distance from Object glass to cross hairs}}{\text{distance between cross hairs}}$$

C = distance from Object glass to cross hairs + distance from Object glass to center of instrument.

a = angle of elevation for mid Reading

TABLES FOR EXCAVATIONS AND EMBANKMENTS.

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

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	0
1	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	1
2	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9	2
3	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	3
4	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9	4
5	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	5
6	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	6
7	16.0	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	7
8	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9	8
9	18.0	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	18.9	9
10	19.0	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.9	10
11	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8	20.9	11
12	21.0	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9	12
13	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.7	22.8	22.9	13
14	23.0	23.1	23.2	23.3	23.4	23.5	23.6	23.7	23.8	23.9	14
15	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8	24.9	15
16	25.0	25.1	25.2	25.3	25.4	25.5	25.6	25.7	25.8	25.9	16
17	26.0	26.1	26.2	26.3	26.4	26.5	26.6	26.7	26.8	26.9	17
18	27.0	27.1	27.2	27.3	27.4	27.5	27.6	27.7	27.8	27.9	18
19	28.0	28.1	28.2	28.3	28.4	28.5	28.6	28.7	28.8	28.9	19
20	29.0	29.1	29.2	29.3	29.4	29.5	29.6	29.7	29.8	29.9	20
21	30.0	30.1	30.2	30.3	30.4	30.5	30.6	30.7	30.8	30.9	21
22	31.0	31.1	31.2	31.3	31.4	31.5	31.6	31.7	31.8	31.9	22
23	32.0	32.1	32.2	32.3	32.4	32.5	32.6	32.7	32.8	32.9	23
24	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	24
25	34.0	34.1	34.2	34.3	34.4	34.5	34.6	34.7	34.8	34.9	25
26	35.0	35.1	35.2	35.3	35.4	35.5	35.6	35.7	35.8	35.9	26
27	36.0	36.1	36.2	36.3	36.4	36.5	36.6	36.7	36.8	36.9	27
28	37.0	37.1	37.2	37.3	37.4	37.5	37.6	37.7	37.8	37.9	28
29	38.0	38.1	38.2	38.3	38.4	38.5	38.6	38.7	38.8	38.9	29
30	39.0	39.1	39.2	39.3	39.4	39.5	39.6	39.7	39.8	39.9	30
31	40.0	40.1	40.2	40.3	40.4	40.5	40.6	40.7	40.8	40.9	31
32	41.0	41.1	41.2	41.3	41.4	41.5	41.6	41.7	41.8	41.9	32
33	42.0	42.1	42.2	42.3	42.4	42.5	42.6	42.7	42.8	42.9	33
34	43.0	43.1	43.2	43.3	43.4	43.5	43.6	43.7	43.8	43.9	34
35	44.0	44.1	44.2	44.3	44.4	44.5	44.6	44.7	44.8	44.9	35
36	45.0	45.1	45.2	45.3	45.4	45.5	45.6	45.7	45.8	45.9	36

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

ROADWAY 14 FEET WIDE. SIDE SLOPES $1\frac{1}{2}$ TO 1.
FOR SINGLE TRACK EMBANKMENT.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	7.0	7.2	7.3	7.5	7.6	7.8	7.9	8.1	8.2	8.4	0
1	8.5	8.7	8.8	9.0	9.1	9.3	9.4	9.6	9.7	9.9	1
2	10.0	10.2	10.3	10.5	10.6	10.8	10.9	11.1	11.2	11.4	2
3	11.5	11.7	11.8	12.0	12.1	12.3	12.4	12.6	12.7	12.9	3
4	13.0	13.2	13.3	13.5	13.6	13.8	13.9	14.1	14.2	14.4	4
5	14.5	14.7	14.8	15.0	15.1	15.3	15.4	15.6	15.7	15.9	5
6	16.0	16.2	16.3	16.5	16.6	16.8	16.9	17.1	17.2	17.4	6
7	17.5	17.7	17.8	18.0	18.1	18.3	18.4	18.6	18.7	18.9	7
8	19.0	19.2	19.3	19.5	19.6	19.8	19.9	20.1	20.2	20.4	8
9	20.5	20.7	20.8	21.0	21.1	21.3	21.4	21.6	21.7	21.9	9
10	22.0	22.2	22.3	22.5	22.6	22.8	22.9	23.1	23.2	23.4	10
11	23.5	23.7	23.8	24.0	24.1	24.3	24.4	24.6	24.7	24.9	11
12	25.0	25.2	25.3	25.5	25.6	25.8	25.9	26.1	26.2	26.4	12
13	26.5	26.7	26.8	27.0	27.1	27.3	27.4	27.6	27.7	27.9	13
14	28.0	28.2	28.3	28.5	28.6	28.8	28.9	29.1	29.2	29.4	14
15	29.5	29.7	29.8	30.0	30.1	30.3	30.4	30.6	30.7	30.9	15
16	31.0	31.2	31.3	31.5	31.6	31.8	31.9	32.1	32.2	32.4	16
17	32.5	32.7	32.8	33.0	33.1	33.3	33.4	33.6	33.7	33.9	17
18	34.0	34.2	34.3	34.5	34.6	34.8	34.9	35.1	35.2	35.4	18
19	35.5	35.7	35.8	36.0	36.1	36.3	36.4	36.6	36.7	36.9	19
20	37.0	37.2	37.3	37.5	37.6	37.8	37.9	38.1	38.2	38.4	20
21	38.5	38.7	38.8	39.0	39.1	39.3	39.4	39.6	39.7	39.9	21
22	40.0	40.2	40.3	40.5	40.6	40.8	40.9	41.1	41.2	41.4	22
23	41.5	41.7	41.8	42.0	42.1	42.3	42.4	42.6	42.7	42.9	23
24	43.0	43.2	43.3	43.5	43.6	43.8	43.9	44.1	44.2	44.4	24
25	44.5	44.7	44.8	45.0	45.1	45.3	45.4	45.6	45.7	45.9	25
26	46.0	46.2	46.3	46.5	46.6	46.8	46.9	47.1	47.2	47.4	26
27	47.5	47.7	47.8	48.0	48.1	48.3	48.4	48.6	48.7	48.9	27
28	49.0	49.2	49.3	49.5	49.6	49.8	49.9	50.1	50.2	50.4	28
29	50.5	50.7	50.8	51.0	51.1	51.3	51.4	51.6	51.7	51.9	29
30	52.0	52.2	52.3	52.5	52.6	52.8	52.9	53.1	53.2	53.4	30
31	53.5	53.7	53.8	54.0	54.1	54.3	54.4	54.6	54.7	54.9	31
32	55.0	55.2	55.3	55.5	55.6	55.8	55.9	56.1	56.2	56.4	32
33	56.5	56.7	56.8	57.0	57.1	57.3	57.4	57.6	57.7	57.9	33
34	58.0	58.2	58.3	58.5	58.6	58.8	58.9	59.1	59.2	59.4	34
35	59.5	59.7	59.8	60.0	60.1	60.3	60.4	60.6	60.7	60.9	35
36	61.0	61.2	61.3	61.5	61.6	61.8	61.9	62.1	62.2	62.4	36

Deflections for Sub Chords for Short Radius Curves.

Degree of Curve	Radius 50 sin. def. ang.	$\frac{1}{2}$ sub chord R = sin of def. angle				Length of arc for 100 ft.
		14.5 Ft.	15 Ft.	20 Ft.	25 Ft.	
30°	193.18	1° 51'	2° 17'	2° 58'	3° 43'	101.15
32°	181.39	1° 59'	2° 25'	3° 10'	3° 58'	101.33
34°	171.01	2° 06'	2° 33'	3° 21'	4° 12'	101.48
36°	161.80	2° 13'	2° 41'	3° 33'	4° 26'	101.66
38°	153.58	2° 20'	2° 49'	3° 44'	4° 40'	101.85
40°	146.19	2° 27'	2° 57'	3° 55'	4° 54'	102.06
42°	139.52	2° 34'	3° 05'	4° 07'	5° 08'	102.29
44°	133.47	2° 41'	3° 13'	4° 18'	5° 22'	102.53
46°	127.97	2° 48'	3° 21'	4° 29'	5° 36'	102.76
48°	122.92	2° 55'	3° 29'	4° 40'	5° 50'	103.00
50°	118.31	3° 02'	3° 38'	4° 51'	6° 04'	103.24
52°	114.06	3° 09'	3° 46'	5° 02'	6° 17'	103.54
54°	110.11	3° 16'	3° 54'	5° 13'	6° 31'	103.84
56°	106.50	3° 22'	4° 02'	5° 23'	6° 44'	104.14
58°	103.14	3° 29'	4° 10'	5° 34'	6° 57'	104.43
60°	100.00	3° 35'	4° 18'	5° 44'	7° 11'	104.72

TABLE XIII.
MINUTES IN DECIMALS OF A DEGREE.

0'30''	.00833	10'30''	.17500	20'30''	.34167	30'30''	.50833	40'30''	.67500	50'30''	.84167
1 00	.01667	11 00	.18333	21 00	.35000	31 00	.51667	41 00	.68333	51 00	.85000
30	.02500	30	.19167	30	.35833	30	.52500	30	.69167	30	.85833
2 00	.03333	12 00	.20000	22 00	.36667	32 00	.53333	42 00	.70000	52 00	.86667
30	.04167	30	.20833	30	.37500	30	.54167	30	.70833	30	.87500
3 00	.05000	13 00	.21667	23 00	.38333	33 00	.55000	43 00	.71667	53 00	.88333
30	.05833	30	.22500	30	.39167	30	.55833	30	.72500	30	.89167
4 00	.06667	14 00	.23333	24 00	.40000	34 00	.56667	44 00	.73333	54 00	.90000
30	.07500	30	.24167	30	.40833	30	.57500	30	.74167	30	.90833
5 00	.08333	15 00	.25000	25 00	.41667	35 00	.58333	45 00	.75000	55 00	.91667
30	.09167	30	.25833	30	.42500	30	.59167	30	.75833	30	.92500
6 00	.10000	16 00	.26667	26 00	.43333	36 00	.60000	46 00	.76667	56 00	.93333
30	.10833	30	.27500	30	.44167	30	.60833	30	.77500	30	.94167
7 00	.11667	17 00	.28333	27 00	.45000	37 00	.61667	47 00	.78333	57 00	.95000
30	.12500	30	.29167	30	.45833	30	.62500	30	.79167	30	.95833
8 00	.13333	18 00	.30000	28 00	.46667	38 00	.63333	48 00	.80000	58 00	.96667
30	.14167	30	.30833	30	.47500	30	.64167	30	.80833	30	.97500
9 00	.15000	19 00	.31667	29 00	.48333	39 00	.65000	49 00	.81667	59 00	.98333
30	.15833	30	.32500	30	.49167	30	.65833	30	.82500	30	.99167
10 00	.16667	20 00	.33333	30 00	.50000	40 00	.66667	50 00	.83333	60 00	1.00000

(Davis) 1970
Raven wood Ditch Survey 1-3

Gen. Co. Hospital Contour Levels 10#22

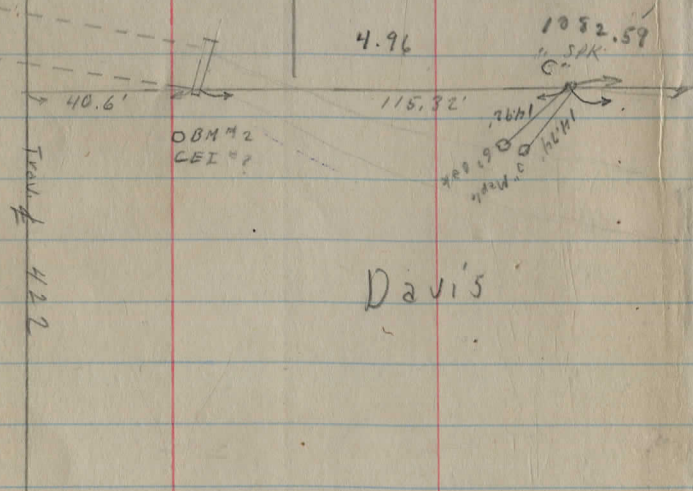
" " " Lacate Bldg's & Utilities 14

271 Kirkwood Dr. 35

184 Brewster Road (1971) 5

1970 Bainbridge Twp.
Davis Drainage Ditch

	+	HI	-	Elev.
BM #1	3.75	1097.70		1093.95
T.P.	2.91	1092.55	8.06	1089.64
T.B.M. #2	3.14	1089.16	6.53	① 1086.02
T.B.M. #2	1.90	1087.92		② 1086.02
T.P.	5.36	1086.67	6.61	1081.31
BM #3	3.80	1086.38	4.09	③ 1082.58
T.P.	5.31	1087.55	4.14	④ 1082.24
BM #3			4.96	1082.59

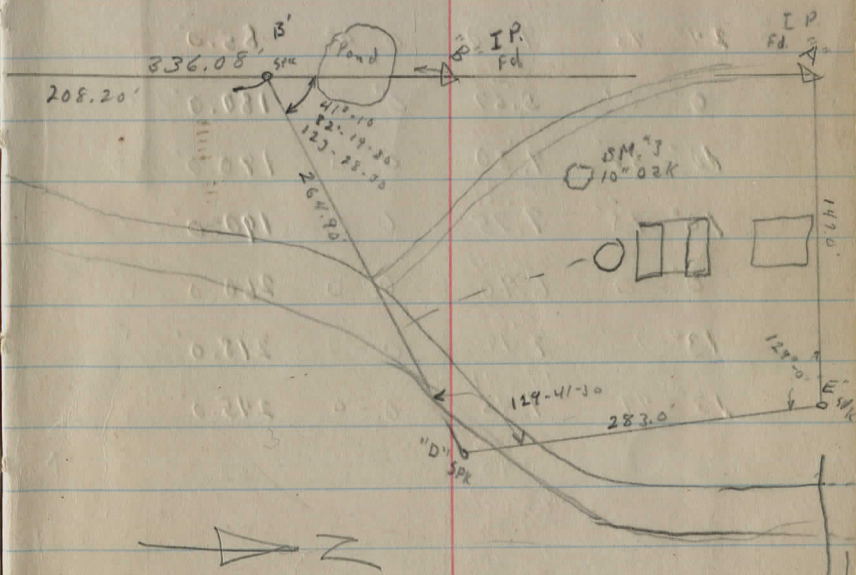


Davis

GL. BM. # 188

Spk W. side CEF, # opp Park Circle Dr.

Spk N.E. side 10" oak



129-41-30
283-23

10' Curvy Dr.

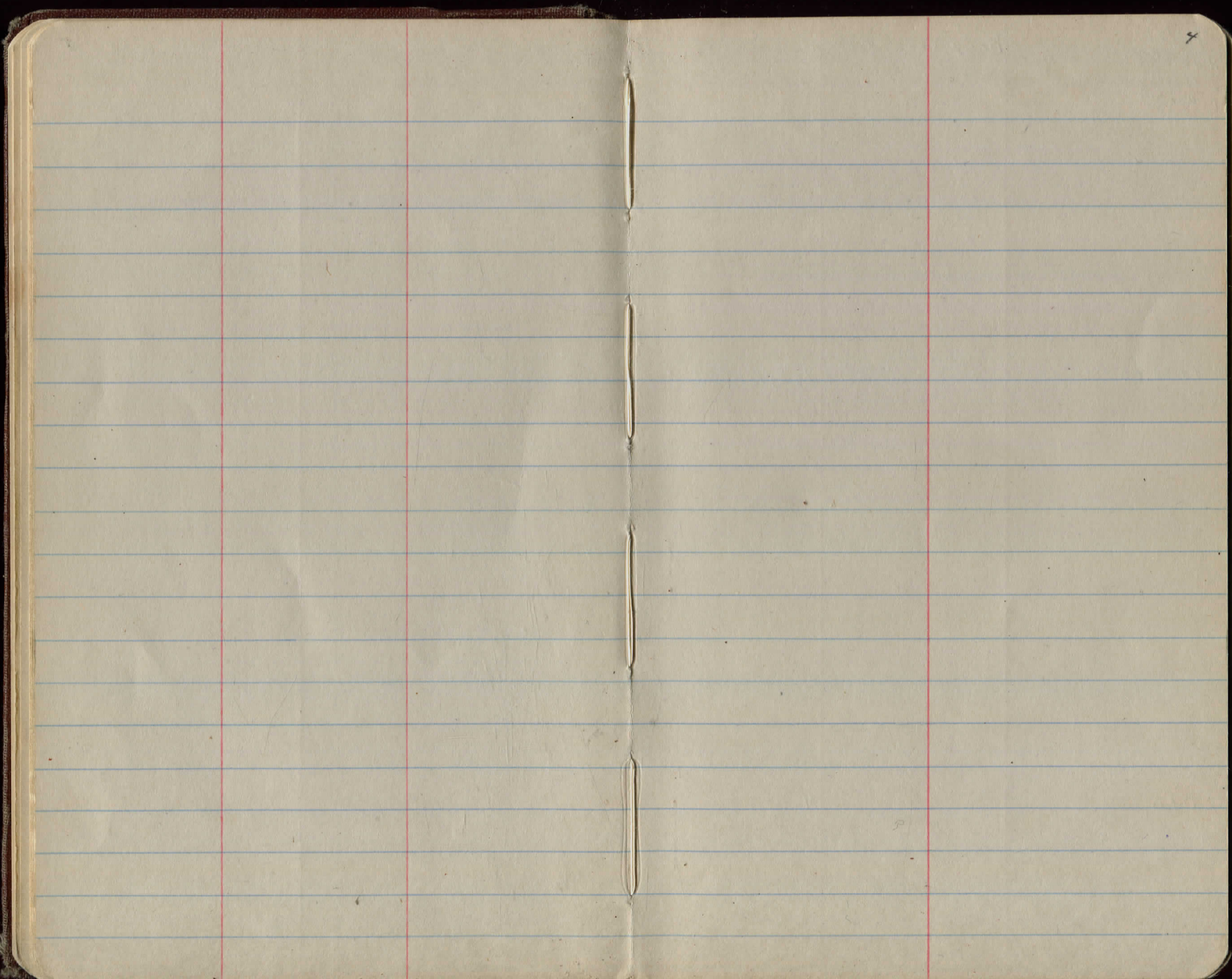
1086.02 B.M. #2
 HE 1089.16

	Hort. & Rad	Vert & Sted	Dist		
C-B. 1	R 185°-09'	75.81 13.32	0°-0'	115.0'	✓
2	R 180°-00'	83.26 5.90	0°-0'	55.0'	✓
3	R 150°-00'	85.59 5.59	0°-0'	17.0'	✓
4	R 158°-05'	83.67 5.49	0°-0'	23.0'	✓
5	R 139°-21'	79.19 9.97	0°-0'	25.0'	✓
① 6	R 0°-0'	82.10 7.06	0°-0'	67.0'	✓
7	R 22°-53'	80.51 8.65	0°-0'	82.0'	✓
8	R 24°-45'	79.26 9.70	0°-0'	85.0'	✓
9	R 0°-0'	83.09 5.67	0°-0'	180.0'	✓
10	R 10°-56'	79.36 9.80	0°-0'	190.0'	✓
11	R 10°-18'	79.21 9.75	0°-0'	190.0'	✓
12	R 0°-0'	82.26 6.90	0°-0'	260.0'	✓ X
13	R 13°-10'	80.68 8.48	0°-0'	248.0'	✓
14	R 13°-49'	79.71 9.45	0°-0'	245.0'	✓
B-B 15	0°-0'	82.02 5.90	0°-0'	52.0'	✓ X
1087.92 16	L 19°-05'	88.07 4.85	0°-0'	70.0'	✓ Pond
17	L 3°-40'	82.77 5.15	0°-0'	105.0'	✓
② 18	R 9°-10'	82.22 5.70	0°-0'	80.0'	✓
19	L 2°-6'	6.18	0°-0'	150.0'	

FL Culvert under US422

Top Bank & prop line

	Horiz +	Rad	Vert +	Dist		
D-B'	L 0°-16'	79.73 6.65	0-0	100'	✓	+ Ditch & creek
	R 15°-40	80.02 6.36	0-0	40'	✓	± Ditch
(3)	R 47-25	80.81 5.57	0-0	30'	✓	F/L 6" Tile from Plant
	R 184-02	79.98 6.40	0-0	55'	✓	Bend in creek
1086.38	R 182-05	80.33 6.00	0-0	180'	✓	" " "
	R 175-58	79.98 6.40	0-0	220'	✓	± creek
	R 171-35	79.63 6.75	0-0	250'	✓	" "
	R 164-22	79.92 6.46	0-0	310'	✓	" "
	R 101-07	-	-	92'	✓	Round Tank
	R 105-15	-	-	96'	✓	
R 108-20			109	✓	Square tanks	
R 109-37			119	✓	SE & SW	
R 105-27			124	✓	SW & SW	
R 41-25	80.44 5.94	0-0	90'	✓	± channel along w. line	
R 75-05	80.43 5.95	0-0	192'	✓		
R 96-01	80.73 5.65	0-0	231'	✓		
R 105-00	80.73 5.65	0-0	290'	✓		
E-D	R 169-04	80.72 6.83	0-0	115'	✓	
	R 124-06	80.86 6.69	0-0	121'	✓	
(4)	R 276-42	79.96 7.59	0-0	150'	✓	
	R 249-49	80.40 7.15	0-0	201'		F/L Culvert Craig Dr.



5/13/71

Brewster Road

H. Patterson
J. Skaytte
D. Wenzel

7+83.66

Hg. Spk P.O.T.

0+0

Mon. Box



59.05'

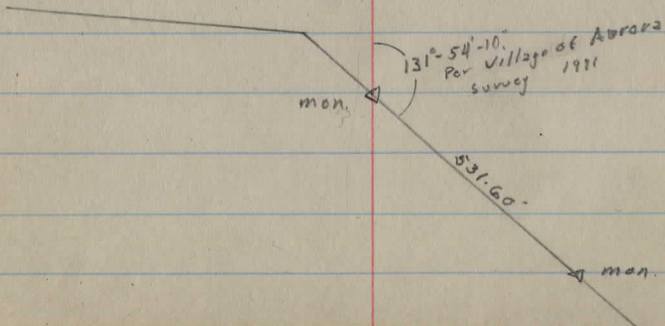
19.43'

37.57'

36.53'

48.85'

Prop Pipe



531.60'

131°-54'-10"
Per Village of Aurora
Survey 1971

22+92.35'
21+25.58'
19+28.94'

P.T.

P.I.

P.C.

53°-18' LT.

R=891.72

T=196.58

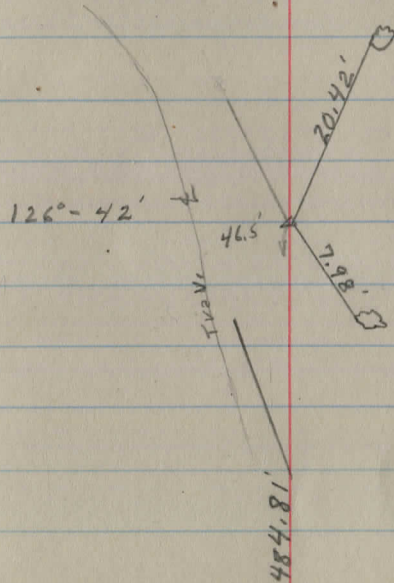
L=363.41

E=46.56

D=14°-46'

16+40.71

lg spk P.O.T.



See Pg. 8
For New
Data

Spk. N.E. side
20" Pine

29.12'

Prop.
Pipe

30.00'

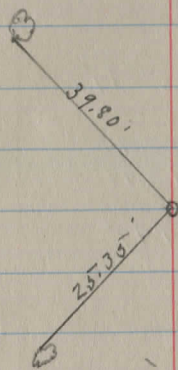
38.41'

Spk. N. side
18" Pine

25 + 25.58

Lg. Spk. P.O.T.

Spk SW side
15" Pine



Spk N.W. side
24" Maple

429.54'

23+59.58' P.T.

22+63.55' P.I.

$\Delta = 19^{\circ}-06'$

I.P.

$D = 10^{\circ}-00'$

21+69.58' P.C.

$R = 573.69'$

$T = 96.00'$

$L = 190.00'$

$E = 7398'$

21+33.48' P.T.

20+47.89' P.I.

$\Delta = 35^{\circ}-37'$

I.P.

$D = 20^{\circ}-00'$

19+55.46' P.C.

$R = 287.94'$

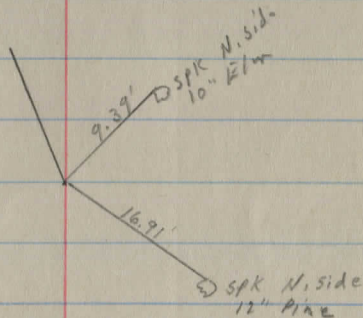
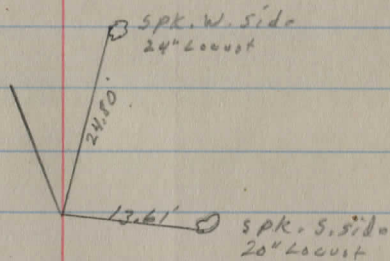
$T = 92.49'$

$L = 178.08'$

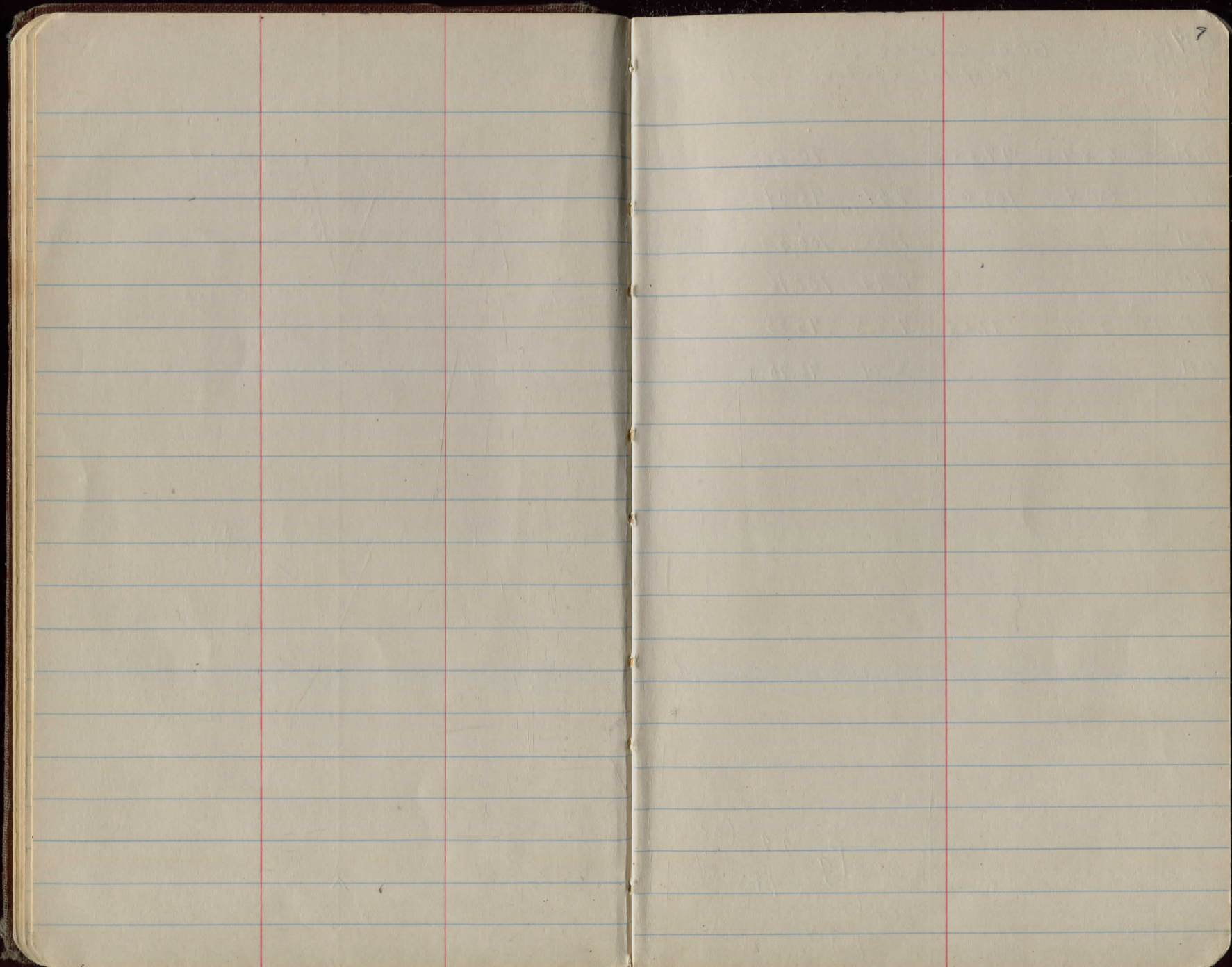
$E = 14.49'$

16+40.71

see Pg 7



from pg. 5



6/19/71

H. Patterson
D. Wenzel
M. Rhodes
P. KingGea County
Hospital Contour Levels

B.M. ¹	6.89	97.55		90.66
T.P.	8.04	103.08	2.51	95.04
B.M. ²			2.58	100.50
B.M. ³			0.92	102.16
T.P.	2.39	97.64	7.83	95.25
B.M. ⁴			6.94	90.70

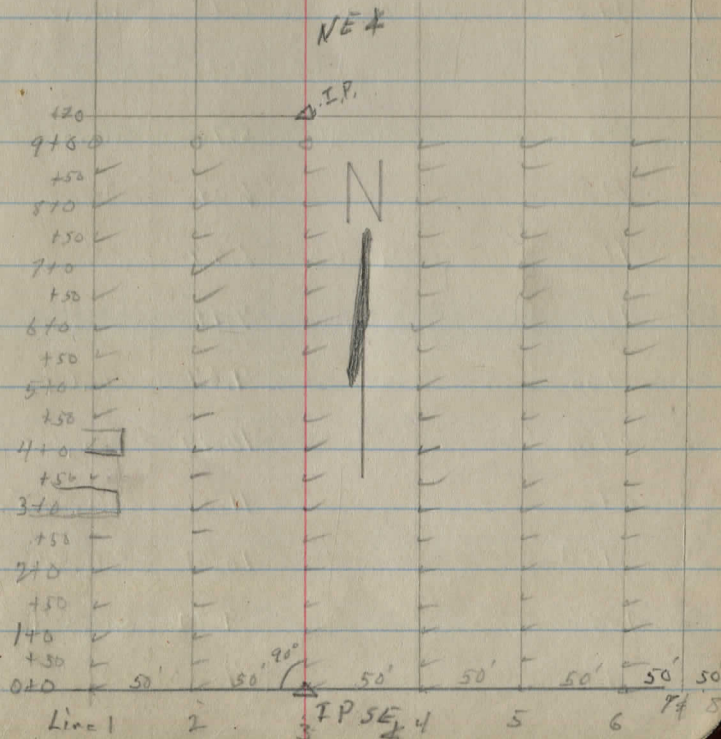
see Pg. 22 for
Levels on Lines
7 & 8

10

Floor Level SE 4 Bldg.

C.E.T. Pole 3rd Pole in line from S. end

" " 4th " " " " " "



	+	HI	-	Elev
BM.	5.70	96.36		90.66
Line sta				
1	0+0		9.56	86.80
1	750		8.23	88.13
1	1+0		7.65	88.71
1	750		6.39	89.97
1	2+0		6.18	90.18
1	750		6.01	90.35
2	2+50		5.90	90.46
2	2+0		6.04	90.32
2	1+50		6.27	90.09
2	1+0		7.91	88.45
2	750		9.67	86.69
2	0+0		10.79	85.57
3	0+0		11.01	85.35
3	750		10.01	86.35
3	1+0		9.72	86.64
3	750		7.33	89.03

		96.36		
3	2+0		5.83	90.55
3	2+50		4.65	91.71
4	2+50		5.70	90.66
4	2+0		7.47	88.87
4	1+50		8.57	87.79
4	1+0		10.10	86.26
4	750		10.66	85.70
4	0+0		11.33	85.03
5	0+0		13.37	85.99
5	1+0		10.27	86.09
5	1+50		11.47	84.89
5	2+0		9.23	88.13
5	2+50		7.81	88.85
6	2+50		10.36	86.00
6	2+0		12.14	84.22
6	1+50		12.61	83.75
6	1+0		10.48	85.88
6	0+50		10.77	85.59
6	0+0		10.20	86.16

96.36

Line Sta

6	3+0		8.63	82.73
6	3+50		9.26	82.10
6	4+0		7.74	88.62
6	4+50	✓	6.25	90.11
6	5+0	✓	3.33	93.03
5	4+50	✓	3.44	92.92
5	4+0	✓	5.83	90.53
5	3+50	✓	6.51	89.85
5	3+0	✓	6.11	90.25
4	3+0	✓	4.08	92.28
3	3+0	✓	2.40	93.96
2	3+0		2.30	94.06
<hr/>				
BM ¹			5.70	90.66
BM ²	2.80	103.30		100.50
1	3+50	✓	4.09	99.21
2	3+50	✓	5.64	92.64
3	3+50	✓	6.99	96.31

103.30

4	3+50	✓	10.78	92.52
4	4+0	✓	11.51	91.79
3	4+0	✓	5.77	97.53
2	4+0	✓	3.21	100.09
4	4+50	✓	8.48	94.82
3	4+50	✓	8.33	94.97
5	5+0	✓	7.37	95.93
4	5+0	✓	5.77	97.53
3	5+0	✓	4.60	98.70
Ditch	Sta		7.89	95.41 30' west of line 3
2	4+50	✓	3.22	100.08
1	4+50	✓	2.79	100.31
1	5+0	✓	3.58	99.72
2	5+0	✓	4.16	99.14
1	5+50	✓	2.94	100.36
2	5+50		4.03	99.27
Ditch	5+50		6.78	96.52 42' west of line 3
3	5+50	✓	3.23	100.07

103.30

4	5+50	✓		5.57	97.73
5	5+50	✓		7.93	95.37
6	5+50	✓		9.62	93.68
6	6+0	✓		5.70	97.60
5	6+0	✓		5.45	97.85
4	6+0	✓		5.24	98.06
3	6+0	✓		3.28	100.02
2	6+0	✓		4.16	99.14
Ditch	6+0	✓		6.14	10 ^{97.66} w. of line 2
1	6+0	✓		4.01 ^{3.15}	100.15
1	6+50	✓		4.31	98.99
Ditch	6+50	✓		6.04	10 ^{97.26} w. of line 2
4	6+50	✓		3.53	99.73
5	6+50	✓		2.75	100.55
6	6+50	✓		3.07	100.23
6	7+0	✓		2.76	100.54
8+2	4+4	106.64	280	2.80	100.50 100.54
3	6+50	✓		5.85	100.79
3	7+0	✓		5.32	101.32

106.64

4	7+0	✓		5.13	101.51
5	7+0	✓		4.90	101.74
6	7+50	✓		7.93	98.71
5	7+50	✓		5.10	101.54
4	7+50	✓		4.55	102.09
3	7+50	✓		3.95	102.69
2	7+50	✓		2.65	103.99
1	7+50	✓		1.10	105.54
2	8+0	✓		1.20	105.44
3	8+0	✓		2.56	104.08
4	8+0	✓		3.57	103.07
5	8+0	✓		4.95	101.69
6	8+0	✓		7.20	99.44
6	8+50	✓		8.63	98.01
5	8+50	✓		6.70	99.94
4	8+50	✓		4.44	102.20
3	8+50	✓		1.37	105.27
4	9+0	✓		3.32	103.22
5	9+0	✓		5.40	101.24

Gen. Com. Hosp.

106.64

6	9+0	✓		8.41	98.23
BM ²			9.92	112.08	102.16
2	7+0	✓		8.55	103.53
2	8+50	✓		7.36	104.72
1	7+50	✓		9.87	102.21
1	8+0	✓		6.19	105.89
1	8+50			3.74	108.54
2	8+50			4.61	107.97
BM ³	11.03		113.19	9.92	102.16
Top of Mound	7+50			3.42	109.27
					25' S. of 7+50 25' N. of Line 3
BM ³			11.03		102.16

BM ¹	5.86		96.32		90.66
			2.97	93.55	+ 8.55 =
BM ¹			5.86		90.66
BM ³	2.88		105.04		102.16
			1.51	103.53	- 2.87 =
			4.47	100.57	
#1			4.65		

see Pg. 22 Cont. for lines 7 & 8
9/15/71

Floor Level at Door
S.E. x Bldg. Most stly Wing
 $182.10 - \frac{1.62}{20} = 100.48$ Floor Level Top Floor S. wing

CEI Pole 4th Pole in Line Exam S. end
= 100.66 Floor Level at office Area
Floor Level surgery room center wing
Court #2 + Bldg

G. C. H.

105.04

# 2			4.94	
# 3			4.72	
# 4			4.57	
# 5			4.51	
# 6			4.40	
# 7			4.60	
# 8			4.61	
T.P.	5.22	105.27	4.99	100.05
# 2			8.61	
# 3			8.70	
# 4			4.83	
# 1			4.68	
T.P.			5.22	
BM # 3	7.59	109.75		102.16
# 1			8.89	
			18.85	
# 2			11.89	
			12.10	
# 3			11.67	
# 4			1.74	
			1.65	
# 5			1.64	
# 6			2.80	

2 Court

2 "

2 " * Bldg

2 "

2 "

2 "

Boiler room floor

" " "

Top of step Boiler room N.W. *

Floor level store room

* Bldg.

in * Ditch

in * Ditch

Top of slope

Parking Lot

In Drive

G.C.H.

109.75

# 7			3.73
# 8			4.56
BM [#] 3			7.59
			102.16
BM [#] 2	2.43	102.93	100.50
# 1			11.45
# 2			9.77
# 3			12.30
# 4			7.12
# 5			5.27
# 6			7.75 ^{7.79}
# 7			7.43
# 8			2.45
# 9			2.80
# 10			2.88
# 11			2.71
# 12			5.15
BM [#] 2			2.43

± 25' N.W. of Bldg.

in Drive top of slope

SE. of Bldg. S. wing

Top of step NE of S. wing

Bottom of stair well " " "

20' N. of Bldg. Edge ± 10' W. of ^{NE.} #1 Court

20' N. of Bldg. Edge ± 50' W. of NE. #1 Court

± Bldg. Court #1

Edge Bldg. Bottom of slope behind ret. wall #1 Court

± Bldg. on walk #1 Court

Top of slope of Ret. Wall #1 Court

Edge of Bldg. #1 Court

" " " #1 Court

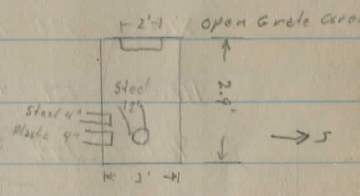
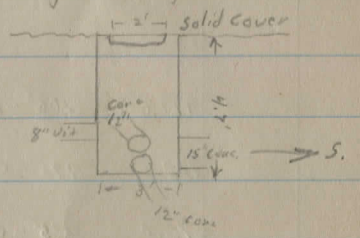
10' N. of Bldg. ± 30' W. of NE. #1 Court

7/13/71
H. Patterson
D. Wenzel
P. King

Gea. Com. Hosp.
Locate Utilities

Sta	Back St.	Dist	Bearing	Description
"C"	"B"	37'	58°-56' R	S.E. + Parking Lot ^{Front} Asphalt
		27'	302°-45' R	S.W. A " " "
		12.5'	13°-10' R	N.W. A Conc. Drive runs S.E.
		23.0'	50°-10' R	NE A " " "
		40.0'	120°-05' R	on Curve " " "
		43.0'	101°-25' R	" " " " "
		89.0'	97°-25' R	" " " " "
		96.5'	105°-30' R	" " " " "
		96.0'	109°-30' R	C.E.T. Pole
		138.0'	86°-30' R	Bag road of Drive ^{conc.}
		150.0'	77°-15' R	end road " "
		148.5'	60°-45' R	end Drive at Bldg. ^{conc.}
		180.0'	63°-10' R	conc Pad at Bldg.
		190.0'	64°-10' R	" " " "
		168.0'	64°-10' R	Bag Conc Drive
		169.0'	76°-10' R	Rad. of Conc. Dr.
		184.0'	82°-00' R	end " " " "
		189.0'	86°-20' R	" Conc. Sec. of Dr.

Sta	Back St.	Dist	Bearing	Description
"C"	"B"	222.0'	83°-15' R	C.E.T. Pole along Gravel Drive
		252.0'	72°-10' R	N. edge Parking Lot Gravel
		278.0'	78°-15' R	Manhole
			S.S. runs South	
		136.0'	78°-35' R	Manhole
			S.S. runs East	
		328.0'	99°-25' R	N.W. + sewage Plant Enclosure
		339.0'	105°-45' R	S.W. " " " "
		386.0'	104°-40' R	S.E. " " " "
		370.0'	97°-10' R	N.E. " " " "
		303.0'	79°-40' R	S. edge Gravel Drive
		310.0'	72°-40' R	beg. 4' ^{wide} conc sidewalk
		312.0'	64°-10' R	end 4' conc walk at Bldg.



Gen. Com. Hosp.
Locale Utilities

Sta.	Bk. st.	Dist.	Horiz. A	Description
"E"	"F"	135.0	217°-35'	Manhole open grate cover → W S.S. runs west ← 3' → 2.6' 12" conc.
↓		122.0	206°-15'	Electric San Sewer Manhole
↓		132.0	175°-40'	S.E. edge Gravel Drive
↓		76.0	235°-00'	NW 1/4 Gravel Parking
↓		81.0	233°-15'	By 20" wide Conc. Walk
↓		112.0	239°-40'	end 20" " " " at Aldg
↓		95.0	244°-35'	C.E.I. Pole
↓		44.0	244°-55'	C.E.I. Pole
↓		54.0	227°-00'	W. edge Rd & Parking
↓		29.0	216°-05'	E. edge Rd
↓		178.0	252°-25'	Manhole S.S. runs S. open Grate Cover 2' 12" conc. 3' → S.
↓		36.0	331°-05'	Manhole San Sewer grate 2' 8" vit 3' → S. 3' →

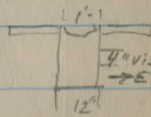
Sta.	Bk. st.	Dist.	Horiz. A	Description
"F"	"E"	148.0	06°-55'	R. E. edge Driveway (Swath)
↓		142.0	12°-05'	W. edge " " "
↓		91.0	15°-25'	C.E.I. Pole
↓		76.0	59°-25'	W. edge Drive
↓		60.0	57°-10'	E. edge " " "
↓		46.0	54°-45'	S.E. edge Parking area solid cover
↓		88.0	93°-25'	San S. Manhole 6" vit k 3' → 5.75' Flows → S
↓		126.0	143°-30'	end N.E. 1/4 Parking Area
↓		138.0	137°-30'	E. edge Drive
↓		170.0	132°-35'	N. edge Asp. Drive west
↓		141.0	123°-35'	S. edge " " "
↓		139.0	123°-50'	NE 1/4 conc. Pad Incinerator
↓		133.0	120°-00'	SE 1/4 " " "
↓		140.0	116°-55'	SW 1/4 " " "
↓		183.0	140°-55'	C.E.I. Pole

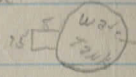
"F"	"E"	169.0	139° 55'	S.E. &	Transformer Power Sta. Enclosure
		182.0	141° - 25'	N.E. &	" "
		189.0	135° - 40'	N.W. &	" "
		178.0	133° - 55'	S.W. &	" "
		168.0	153° - 40'	E. edge	Drive (Gravel)
		171.0	149° - 00'	W. edge	" "
		203.0	153° - 40'	W. edge	" " (concrete)
		200.0	157° - 00'	E. edge	" " (" ")
		226.0	148° - 55'	S. edge	" "
		241.0	149° - 05'	N. edge	" "
		246.0	141° - 25'	S. edge	" at Parking Area
		263.0	141° - 30'	W. edge	" " " "
		228.0	138° - 25'	S.E. &	Parking Area
		343.0	145° - 50'	N.E. &	" "
		260.0	124° - 05'	S.E. &	Oxygen Storage
		266.0	128° - 30'	S.W. &	" "
		269.0	125° - 20'	N.E. &	" " SE & Conc Pad
		274.0	128° - 50'	N.W. &	" "
		275.0	127° - 03'	N.E. &	Conc. Pad
		354.0	125° - 15'	N.W. &	" "

Elect. to Boiler room
± 15 W. of NE &

2-6000 Gal Oil Tank 19

"B"	"C"	176.0	278° - 00'	Diesel oil Filler
		165.5	279° - 50'	S.S. Catch Basin 12" vit conc. Pad 5' x 5'
		182.0	286° - 40'	7 1/2' LP Gas Tank
		168.0	291° - 20'	6000 Gal Oil Tank
		176.0	289° - 20'	
		191.0	287° - 40'	3' x 4' conc. Pad 45" LP Tank
		139.0	287° - 15'	LP Gas Tank 124 Gal
		135.0	285° - 05'	" " " "
		147.0	282° - 05'	S. edge Asp. Parking & Drive
		122.0	267° - 55'	N. " " " "
		114.0	228° - 30'	steel Light Post 20' Conc Base
		107.0	279° - 10'	Five Hydrant
		104.0	280° - 30'	steel Canopy Post 15' conc Base
		90.0	206° - 40'	" " " " " "
		84.0	282° - 12'	conc. side walk & steps cinder block 3' wide
		68.0	252° - 55'	" " " "
		82.0	270° - 45'	CEI Pole
		88.0	278° - 20'	3" steel lighted sign



"B"	"C"	187.0'	330°-10'	Five Hydrant
		312.0'	237°-35'	7.5x8 concrete Manhole 
		156.0'	219°-55'	Light Post
		95.0'	189°-10'	" "
		133.0'	165°-20'	NW A Parking Area
		12.0'	189°-55'	SW A " "

Manhole Elev.s

BM #1 7.99 98.65 90.66

~~8.88 89.67~~

~~6.57 92.05~~

~~8.20 90.45~~

~~9.00 89.65~~

~~7.99 90.66~~

BM #1

BM #2 3.01 103.51 100.50

4.56 98.95

3.75

9.15

14.21 89.30

11.64 91.87

BM #2 3.01 100.50

~~Top Manhole #3 s.s. at S.E. & S. wing~~

~~Elect. Box Top Elev.~~

~~Top Manhole #4~~

~~Top Manhole #1~~

Top Manhole # San. Sewer at E. end center wing

" " " " at E. end N. wing

Top Manhole #2 s.s.

Top Manhole #3 s.s. at S.E. & S. wing

Elect. Box Top Elev.

9/14/71

Geo. Hosp.
 Contour Levels
 Line 7+8

	+	HT	-	Elev.
B.M.	0.89	101.39		100.50
Line Sta.				
7-9+0			4.68	96.71
8-9+0			5.35	96.04
8-8+50			7.00	94.06
7-8+50			5.10	96.29
7-8+0			3.85	97.54
8-8+0			5.67	96.72
8-7+50			5.32	96.07
7-7+50			3.76	97.83
7-7+0			3.05	98.34
8-7+0			4.82	96.57
8-6+50			5.10	96.29
7-6+50			3.30	98.09
7-6+0			5.10	96.29
8-6+0			7.25	94.14
8-5+50			10.24	91.15
7-5+50			8.82	92.57
7-5+0			11.74	89.65
8-5+00			12.91	88.48

$$\begin{array}{r} 10.46 \\ 2.46 \\ \hline 12.91 \end{array}$$

22

spk. E. side C.F. 3rd hole in line from S. end

(See Pg. 10 for Diagram)

	+	101.39 HT	-	Elev
T.P.	4.00	94.45	10.94	90.45
7-4+50			6.95	87.50
8-4+50			8.55	85.90
7-4+0			8.56	85.89
8-4+0			10.69	83.76
8-3+50			11.43	83.02
7-3+50			9.02	83.43
8-3+05			12.92	81.53 Ditch 1' wide
8-3+00			11.78	82.67
8-2+50			14.17	80.28
7-3+0			8.67	85.78
7-2+50			10.37	84.13
8-2+0			16.00	78.15
8-1+50			12.00	82.45
8-1+0			10.48	83.97
8-0+50			10.45	84.00
8-0+0			10.30	84.15
T.P.	9.10	93.50	10.05	84.40
7-0+0			8.25	85.25

12.30
3.73
14.03

11.75
2.42
14.17

93.50

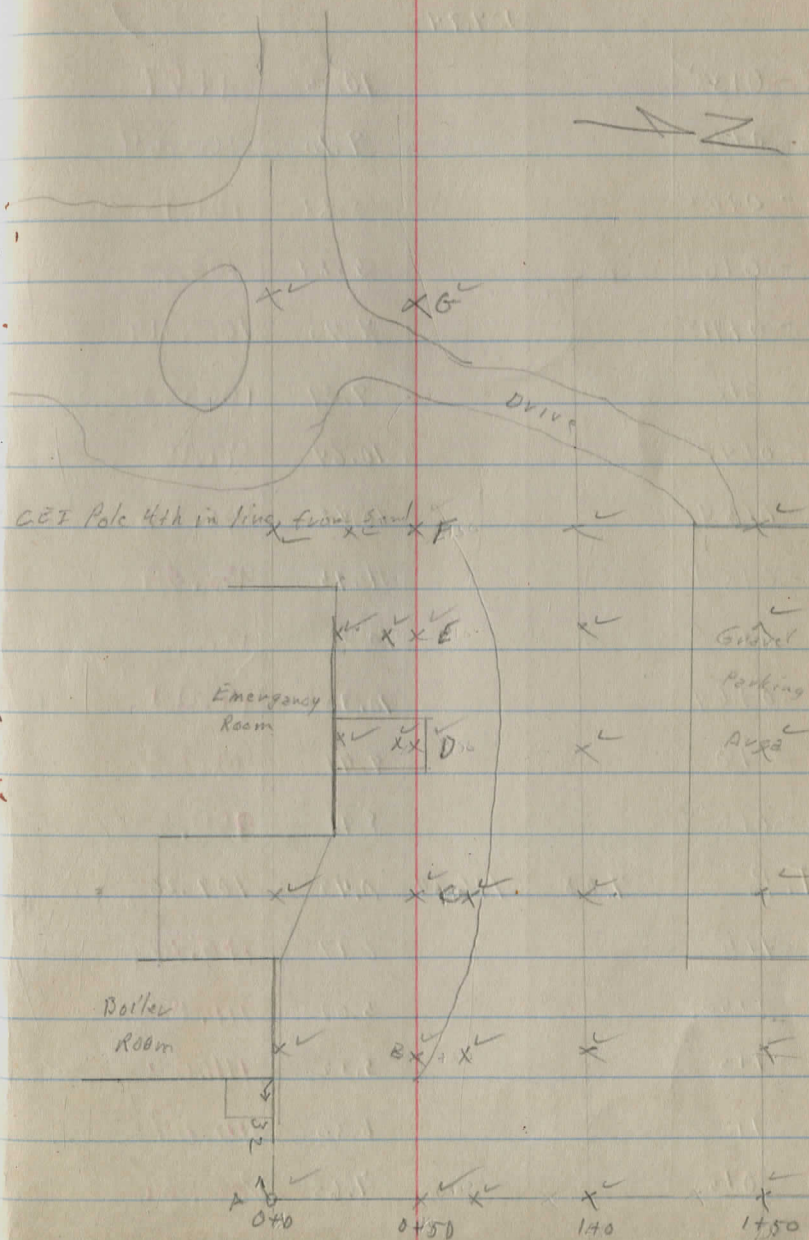
7-0450		8.57	84.93
7-140		8.38	85.12
7-1150		9.92	81.58
7-210	*	12.71	79.77
7-3133		8.70	84.80
		2.84	90.66
B.M. #3	7.58	109.74	102.16
A-440 ✓		3.85	105.89
A-1150 ✓		3.00	106.74
B-1450 ✓		1.45	108.29
B-1400 ✓		1.91	107.83
C-140 ✓		8.04	109.70
B-0450 ✓		11.11	98.63
R-0150		10.66	99.08
D-0450		8.57	101.17
E-0450		7.05	102.69
F-0450		3.02	106.72
E-0411		9.05	100.66

10.20

2.51

2.71

24



109.24

E-0138 ✓	10.05	99.69
F-0130 ✓	9.10	100.64
F-010 ✓	8.61	101.13
G-010 ✓	5.81	103.93
D-0111 ✓	9.25	100.49
C-010 ✓	9.39	100.35
D-0140 ✓	10.64	99.10
C-0159 ✓	10.48	99.26
B-0159 ✓	11.15	98.59
A-0100 ✓	10.71	99.03
A-0164 ✓	10.30	99.44
A-010 ✓	9.91	99.83
B-010 ✓	8.91	100.83
T.P.	7.08	116.34
	0.48	109.26
E-110 ✓	6.17	116.17
E-1150 ✓	5.02	111.32
F-1150 ✓	5.32	111.02
F-110 ✓	6.30	110.04
G-0150	7.65	108.69

116.34

D-110			6.57	
D-1450			5.74	
C-1450			6.62	
T.P.	2.31	110.08	8.57	107.77
B.M.#3			7.93	102.15 OK
BM#2	2.26	102.76		100.50
			9.40	93.36
			11.35	91.41
T.P.	2.74	94.86	10.64	92.12
			9.24	85.62
BM#1			4.22	90.64

invert #1 N.H. at Boiler room
 " #2 " at next wing S.
 inlet at Treatment Plant

H. Peterson
T. Brinkus
D. Wenzel
D. Mullet

Gea. Co. Hospital
Proposed sewer line
Profile Elev.

B.M.	1.20	91.86		90.66
0+0			5.63	86.23
+50			6.20	85.66
+80			6.04	85.80
1+0.0			5.81	86.05
+50			6.13	85.73
2+00			4.50	87.36
+50			7.80	84.06
3+00			11.10	80.76
T.P.	0.38	90.59	11.65	80.21
+50			2.61	77.98
4+00			9.15	71.44
+50			14.20	66.39
+70			14.60	65.99
+75			16.90	63.69
T.P.	11.70	91.91	0.38	80.21
B.M.			1.25	90.66

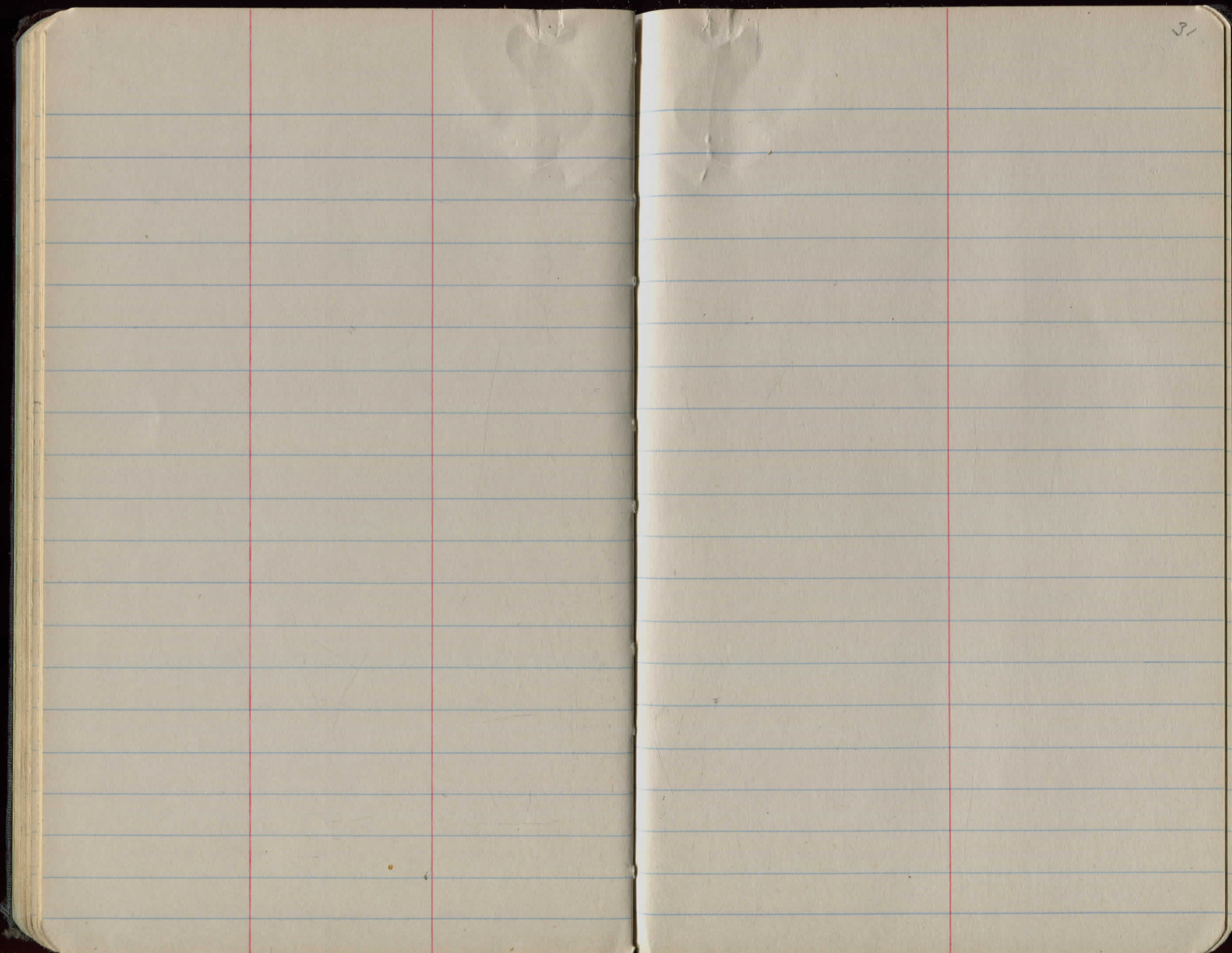
Floor Level at Door
SE 4 Bldg. Most stly. Wing
at fence E. side Plant 22' from N.E. 4

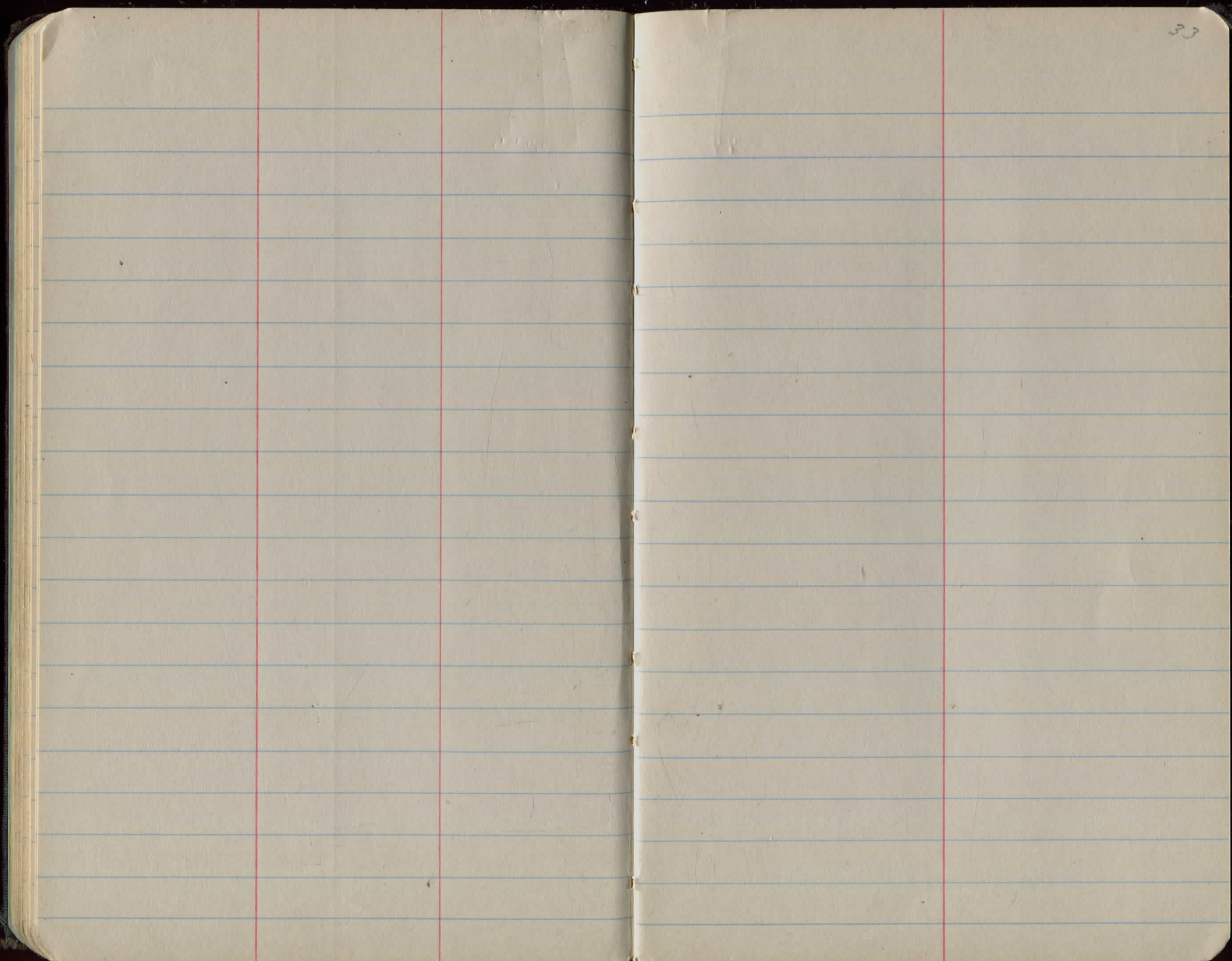
* Point in sewer line

* Point in sewer line

Top of Bank at Creek

F/L Creek





1900

1900

1900

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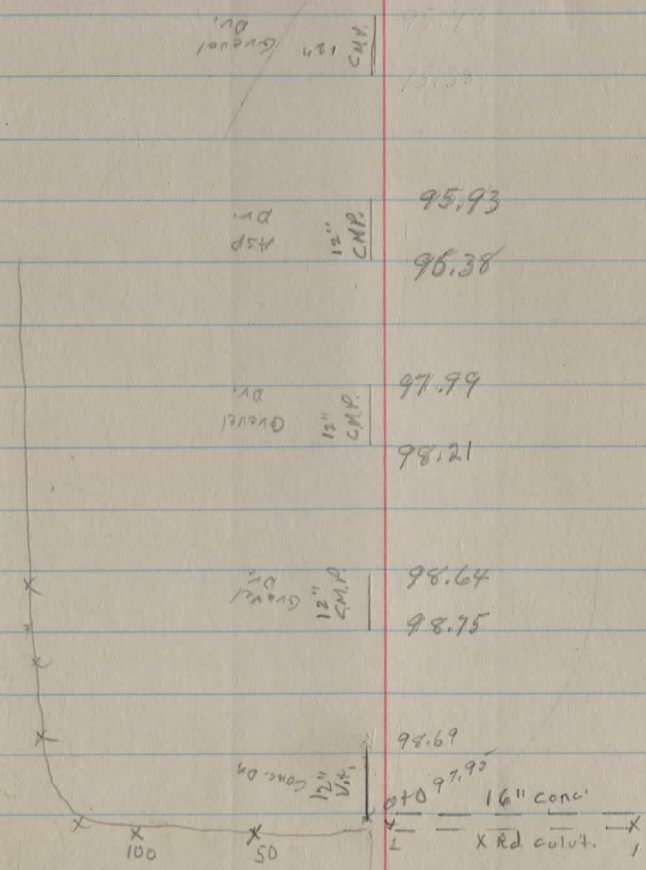
1900

1900

Kirkwood Drive

B.M.	5.57	105.57	100.00	P.K. No.
1			97.74	97.83
2			97.94	97.63
070	}		7.62	97.95
+25			6.88	98.69
1+10	}		6.82	98.75
+36			6.93	98.64
2+40	}		7.36	98.21
+56			7.58	97.99
3+60	}		9.19	95.38
+80			9.64	95.93
4+63			13.10	92.47
58			6.62	98.95
100			7.59	97.98
150			7.68	97.89
200			8.73	96.84
250			10.60	94.97
300			12.80	93.57

P.K. No. W. Side C&N #8360



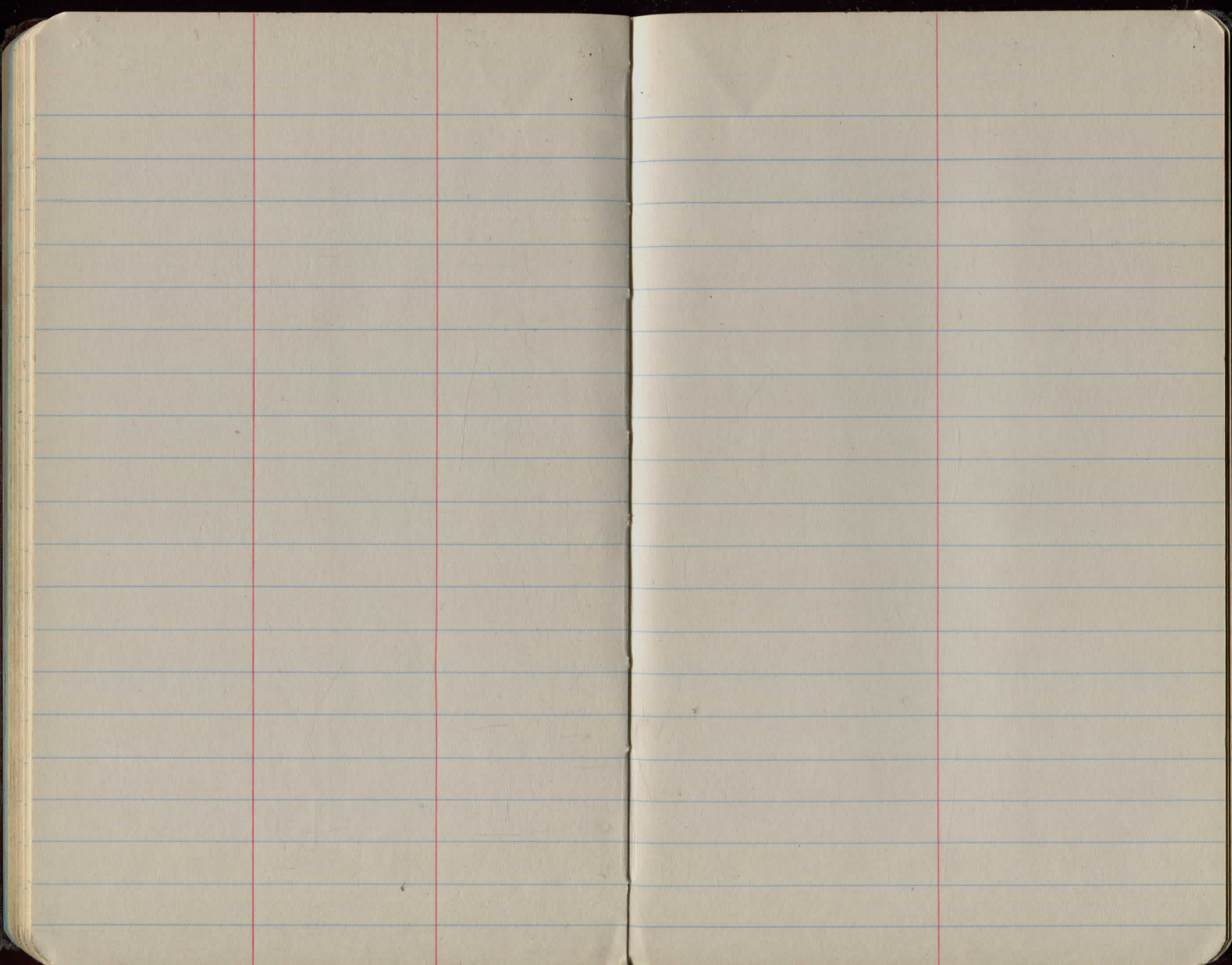
12" Gravel Dr. CMP 95.73
13.50

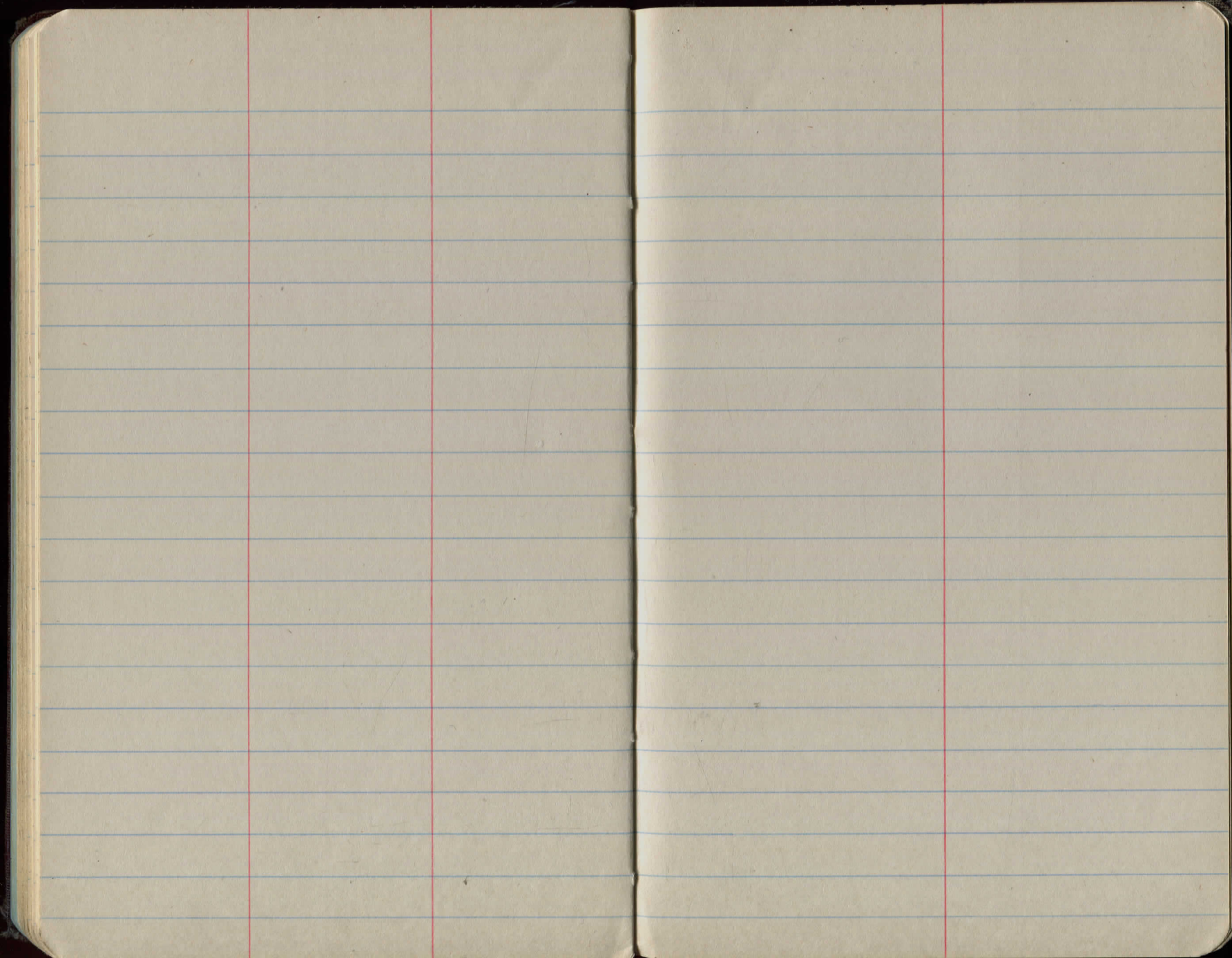
12" ASP Dr. CMP 95.93
96.38

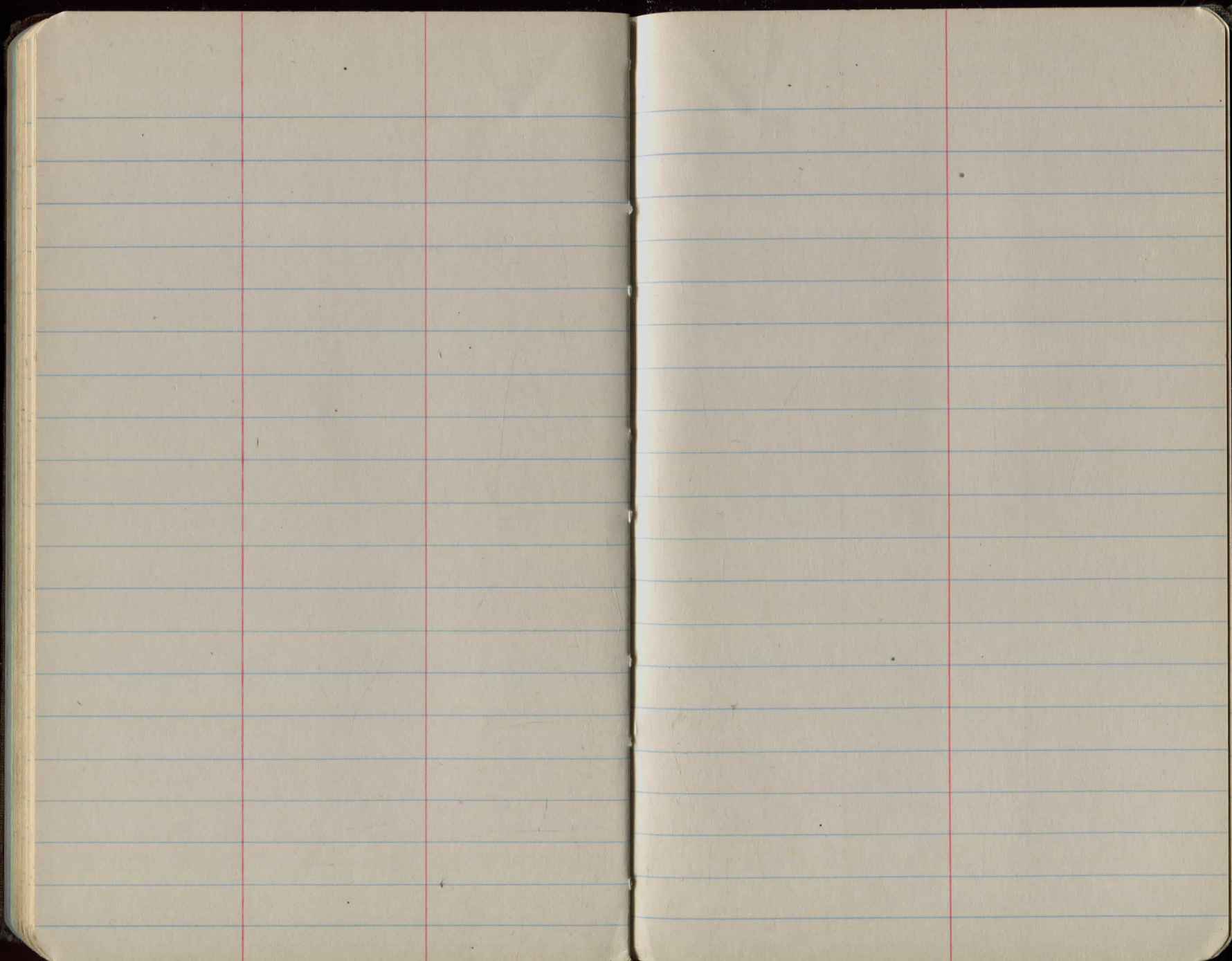
12" Gravel Dr. CMP 97.99
98.21

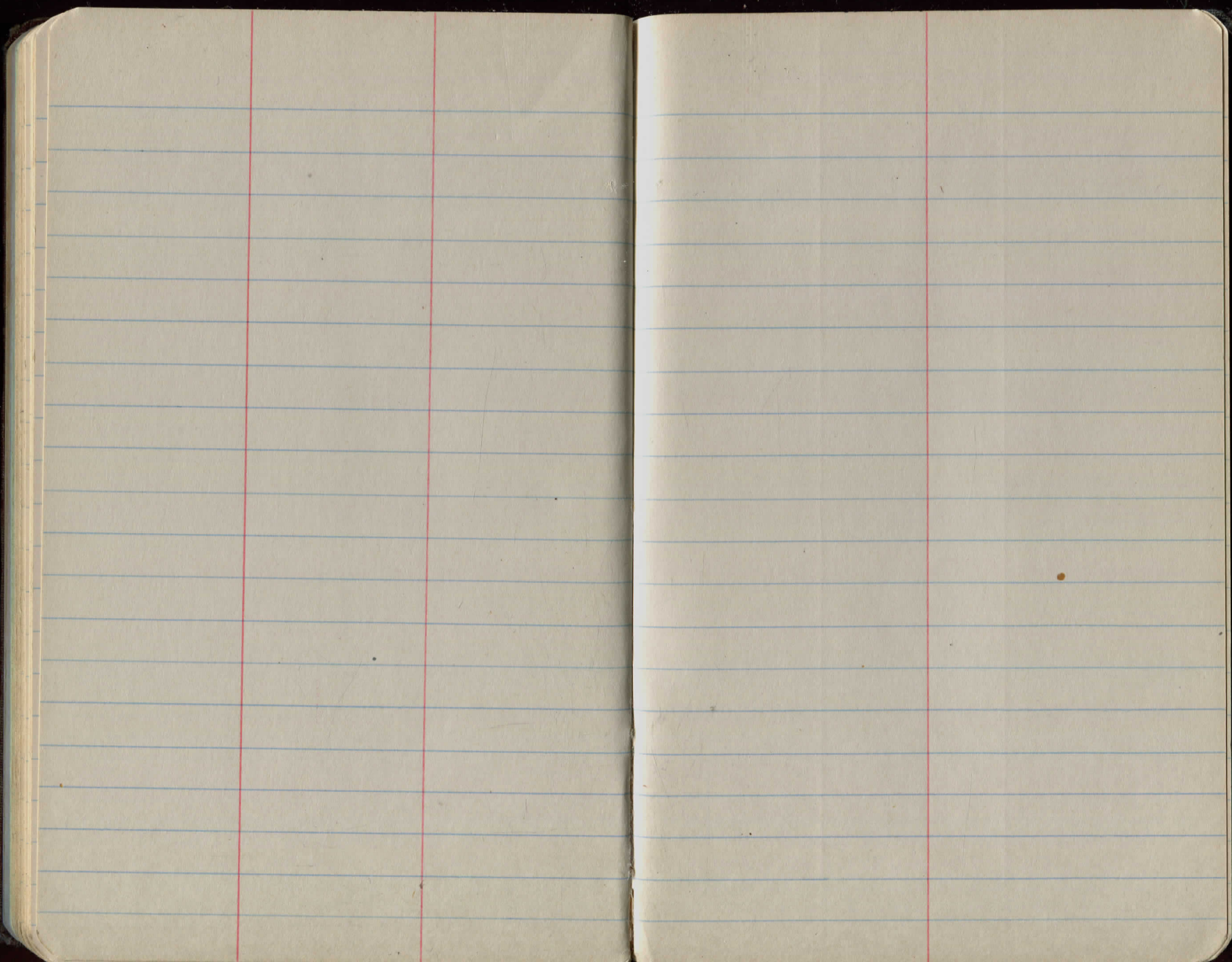
12" Gravel Dr. CMP 98.64
98.75

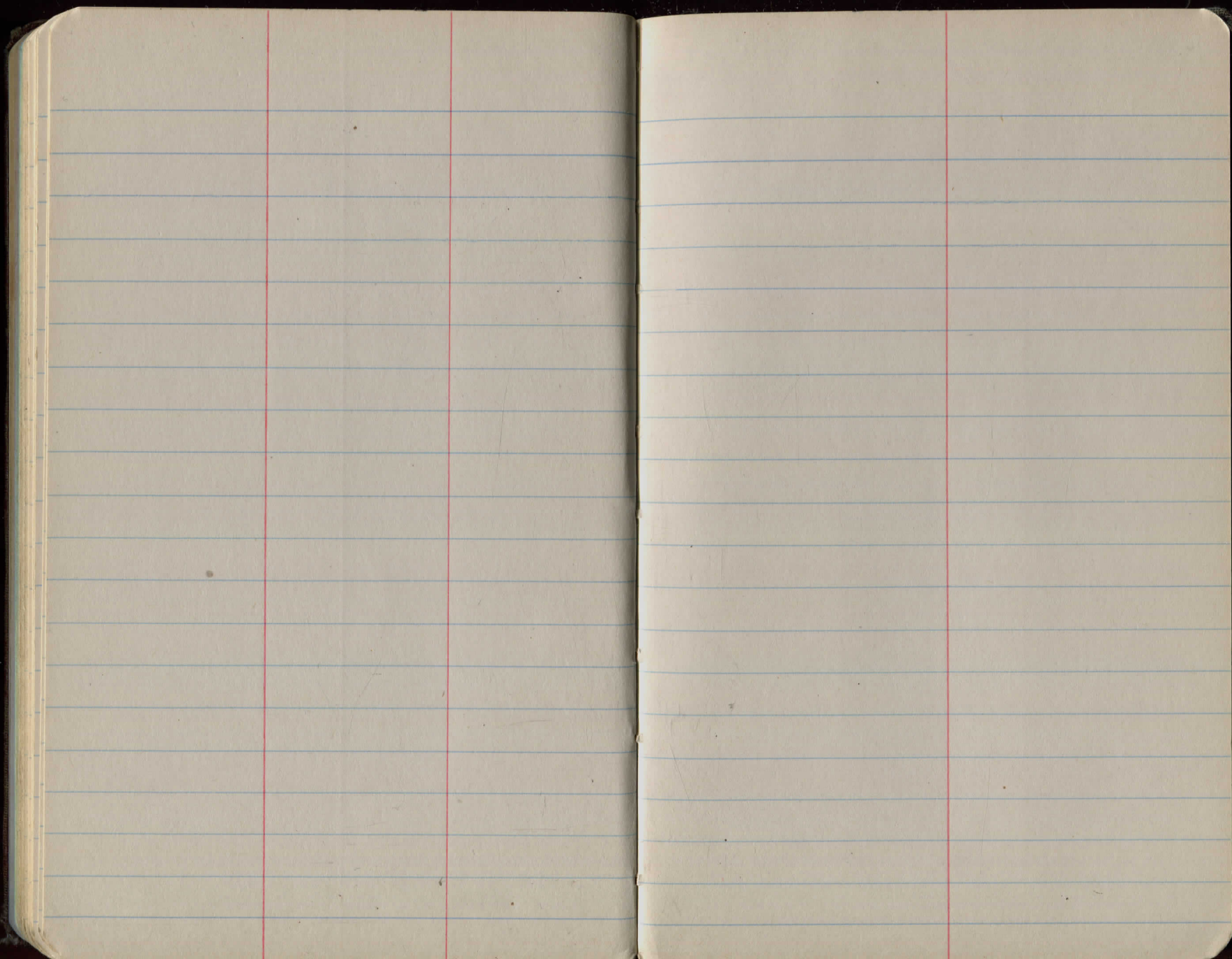
98.69
97.93
16" Conc. X Rd. cut. 1

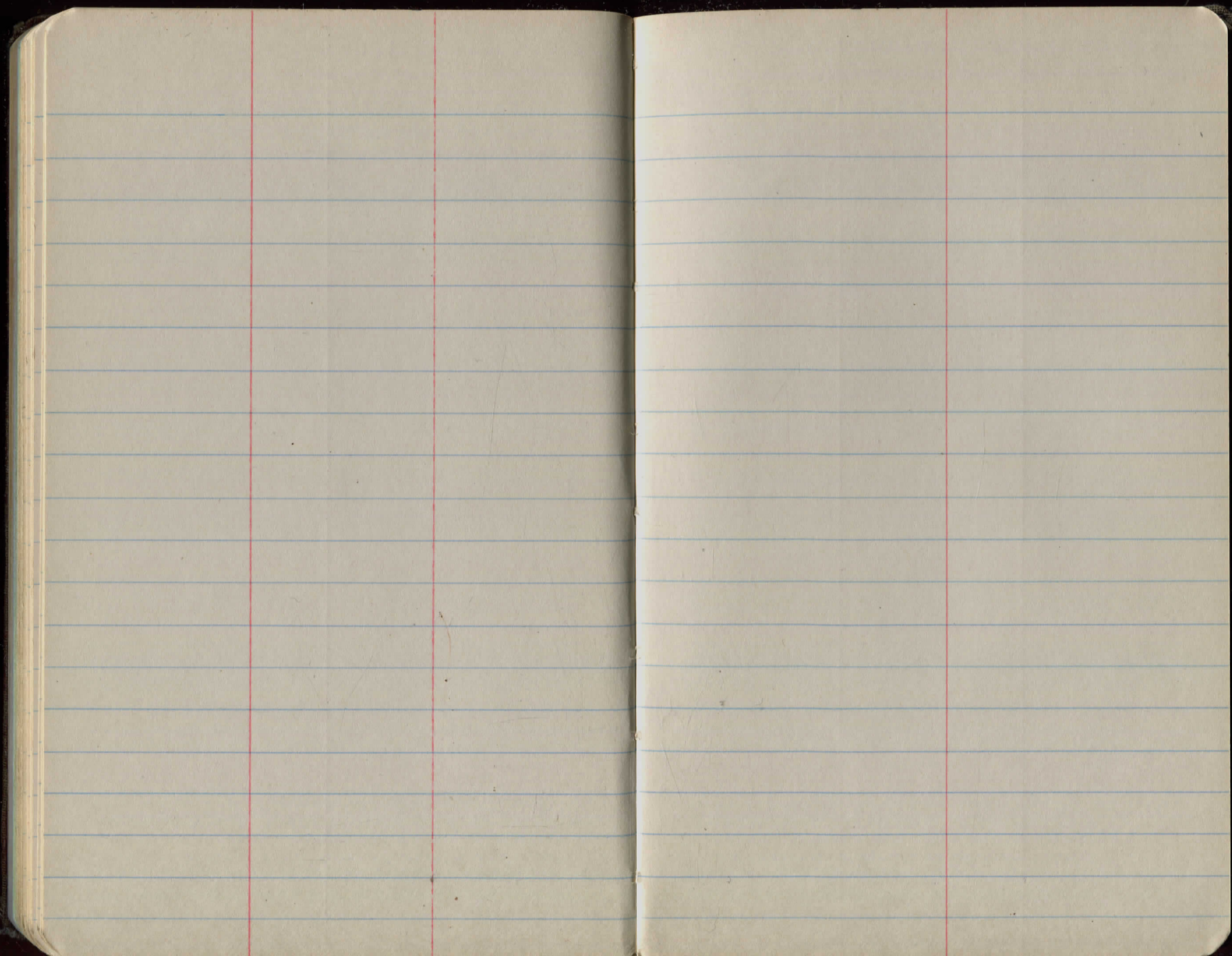


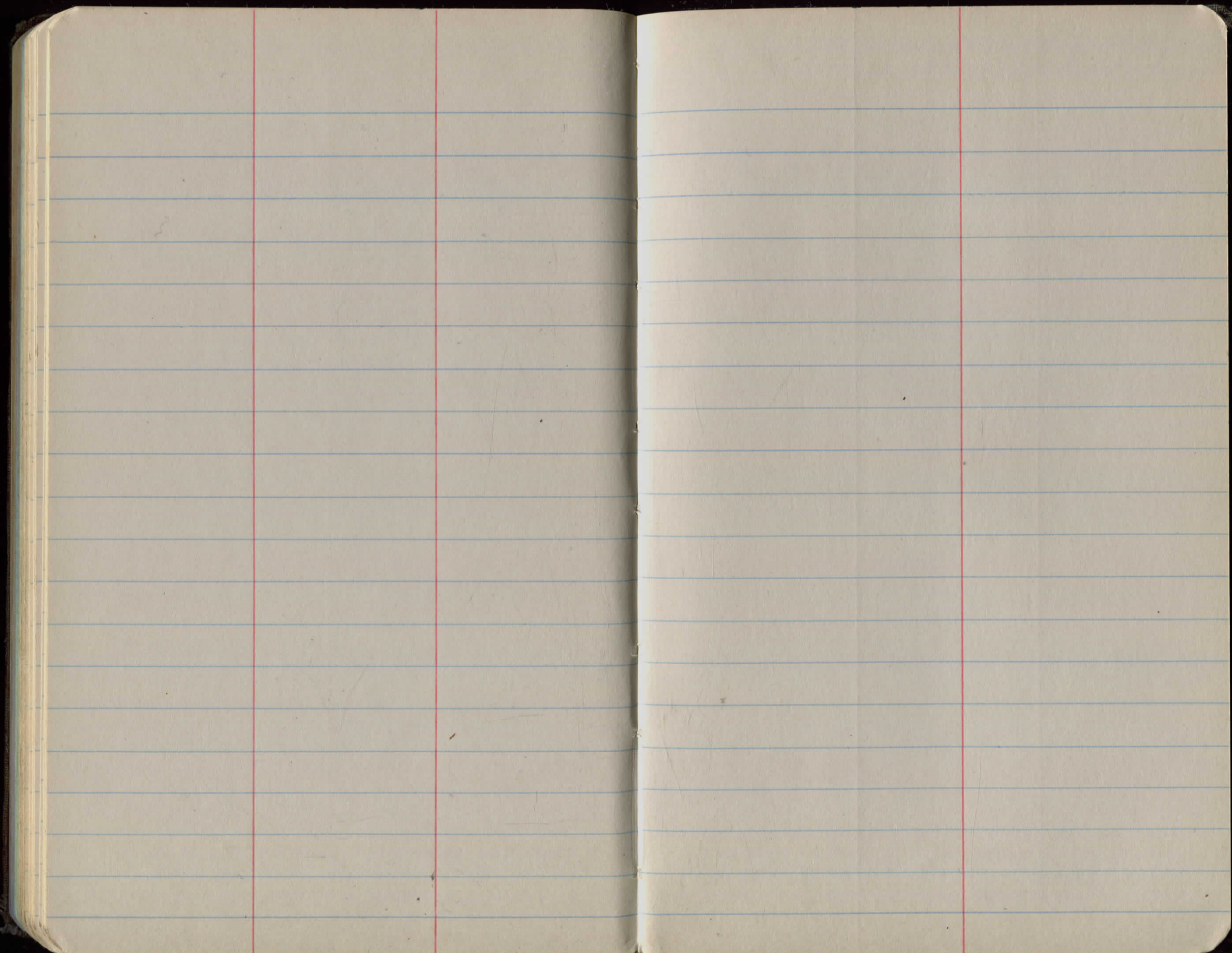


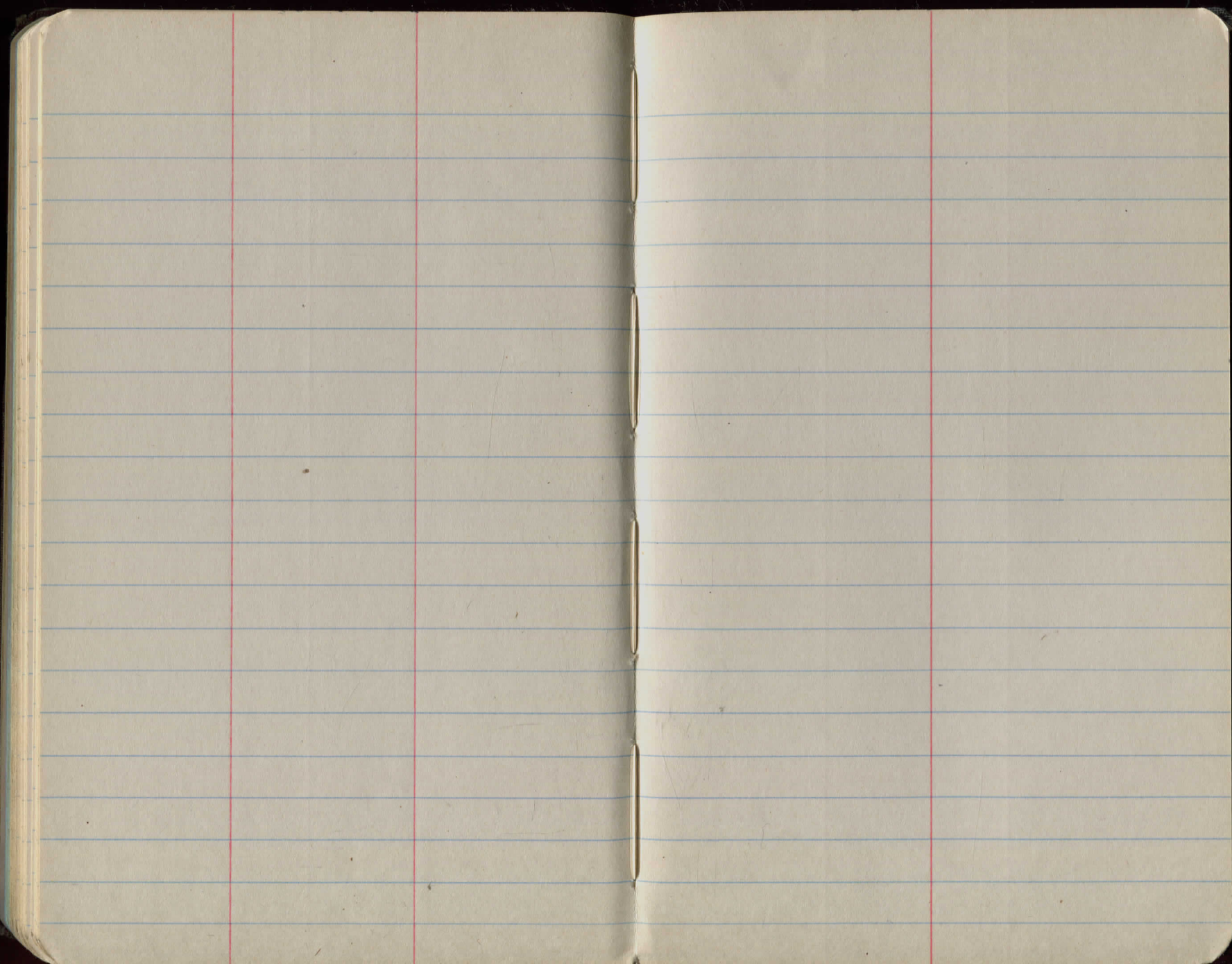


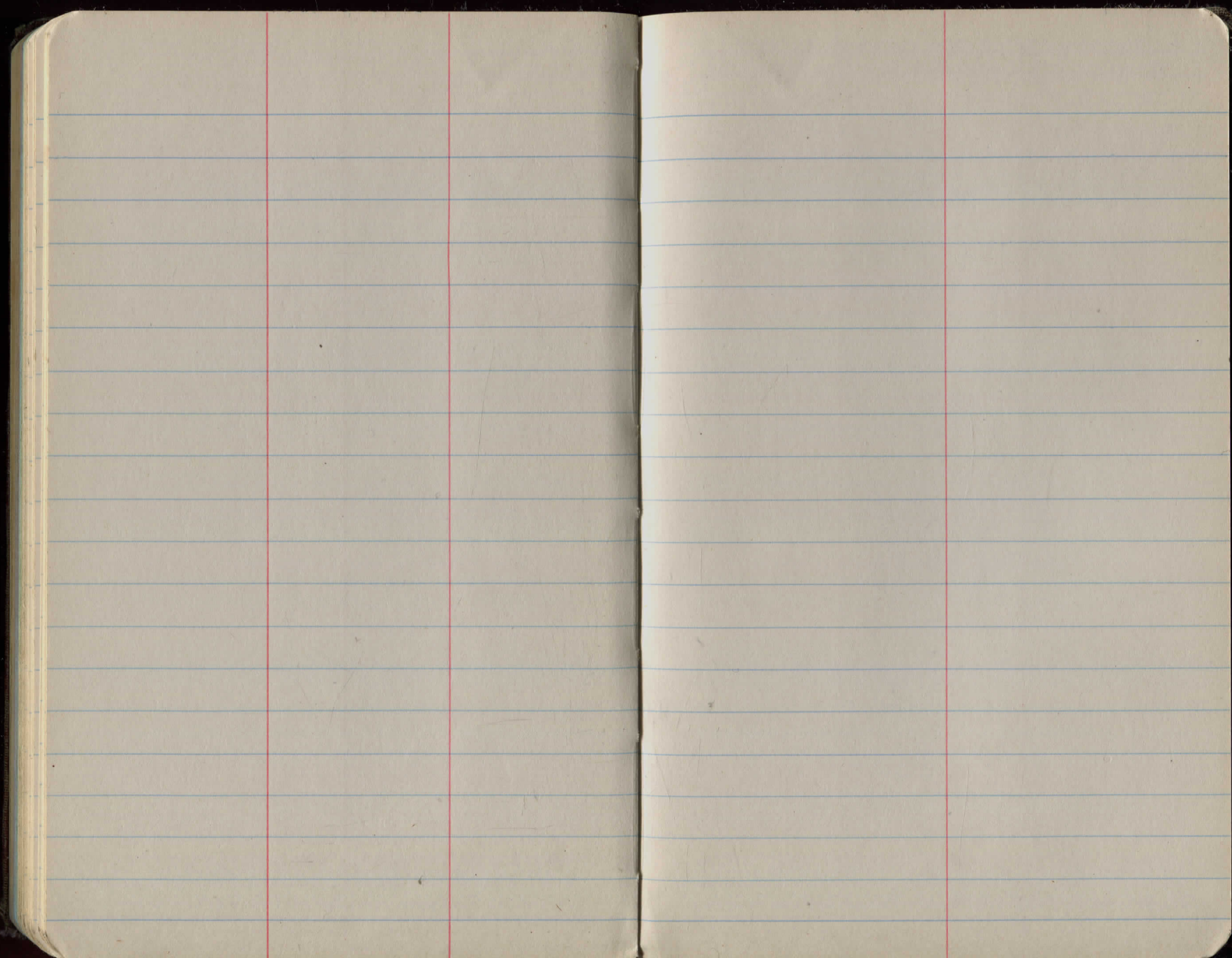


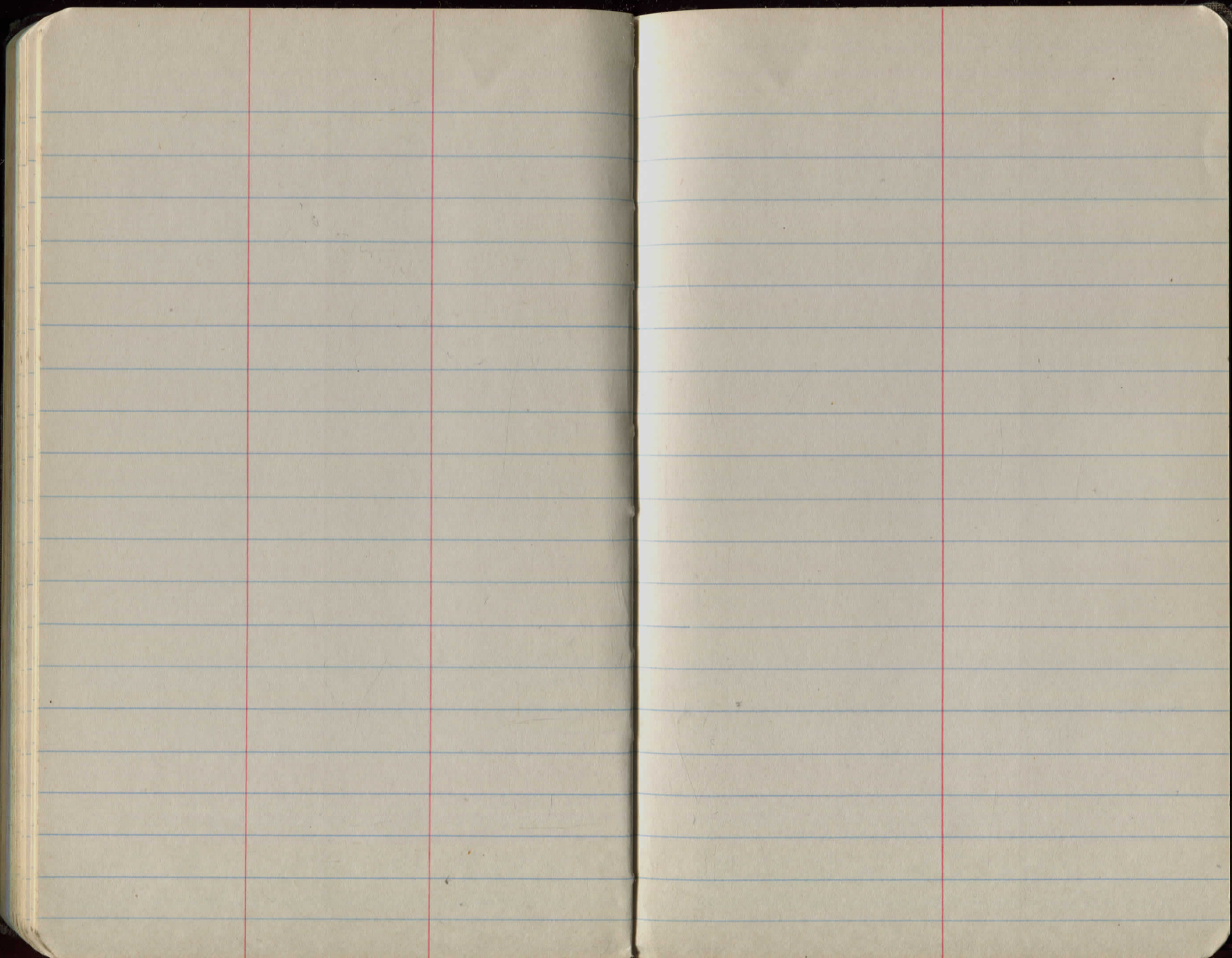


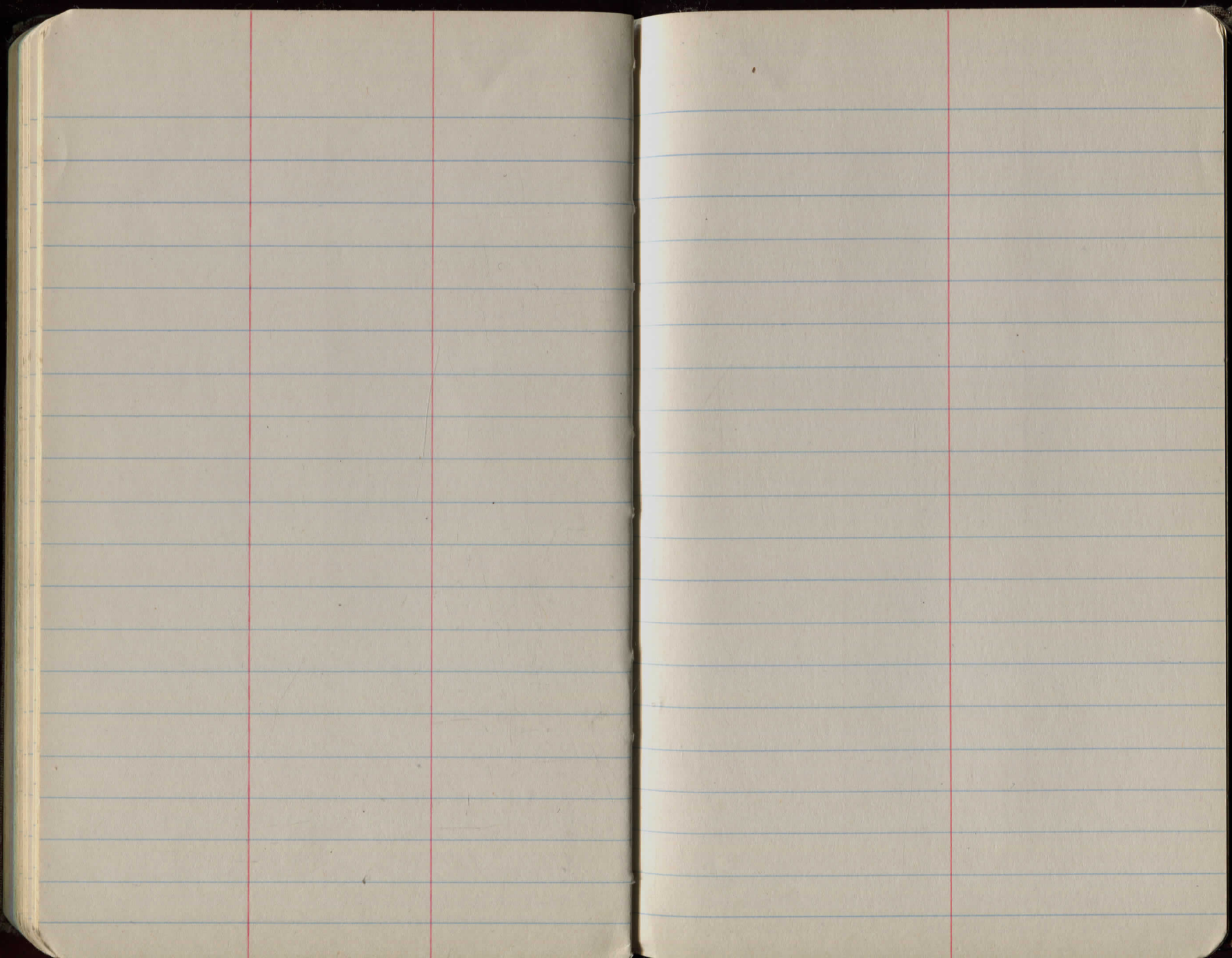


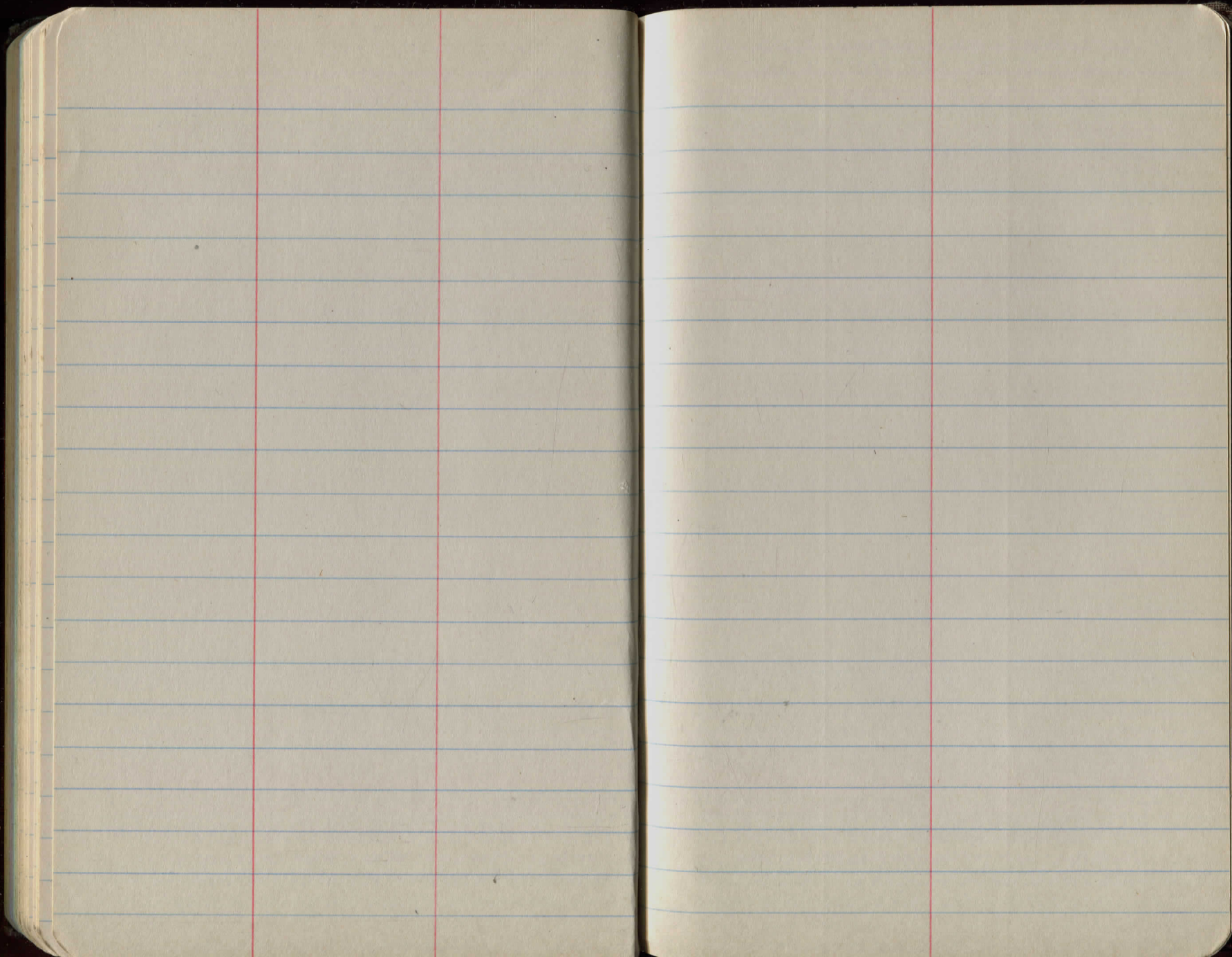


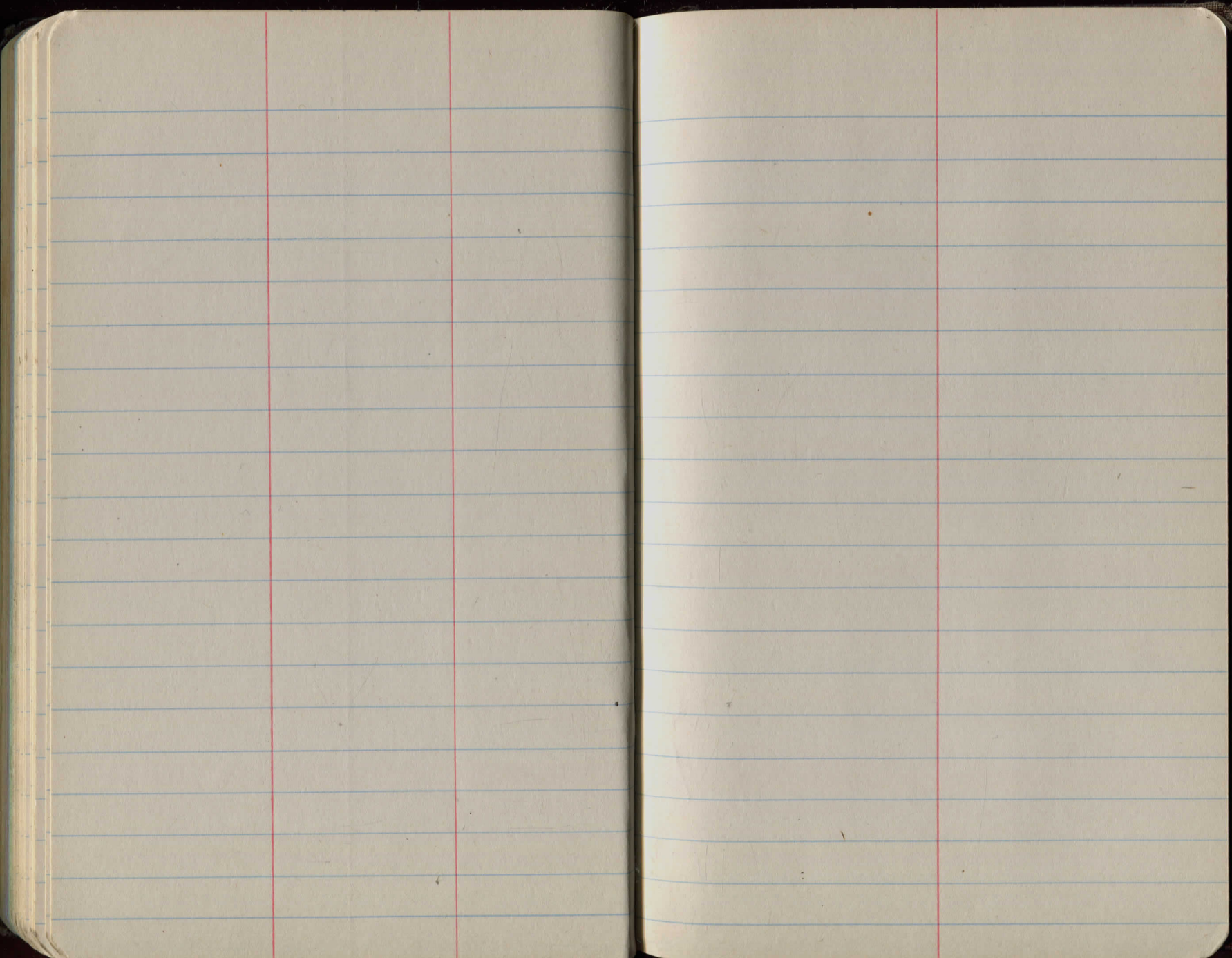


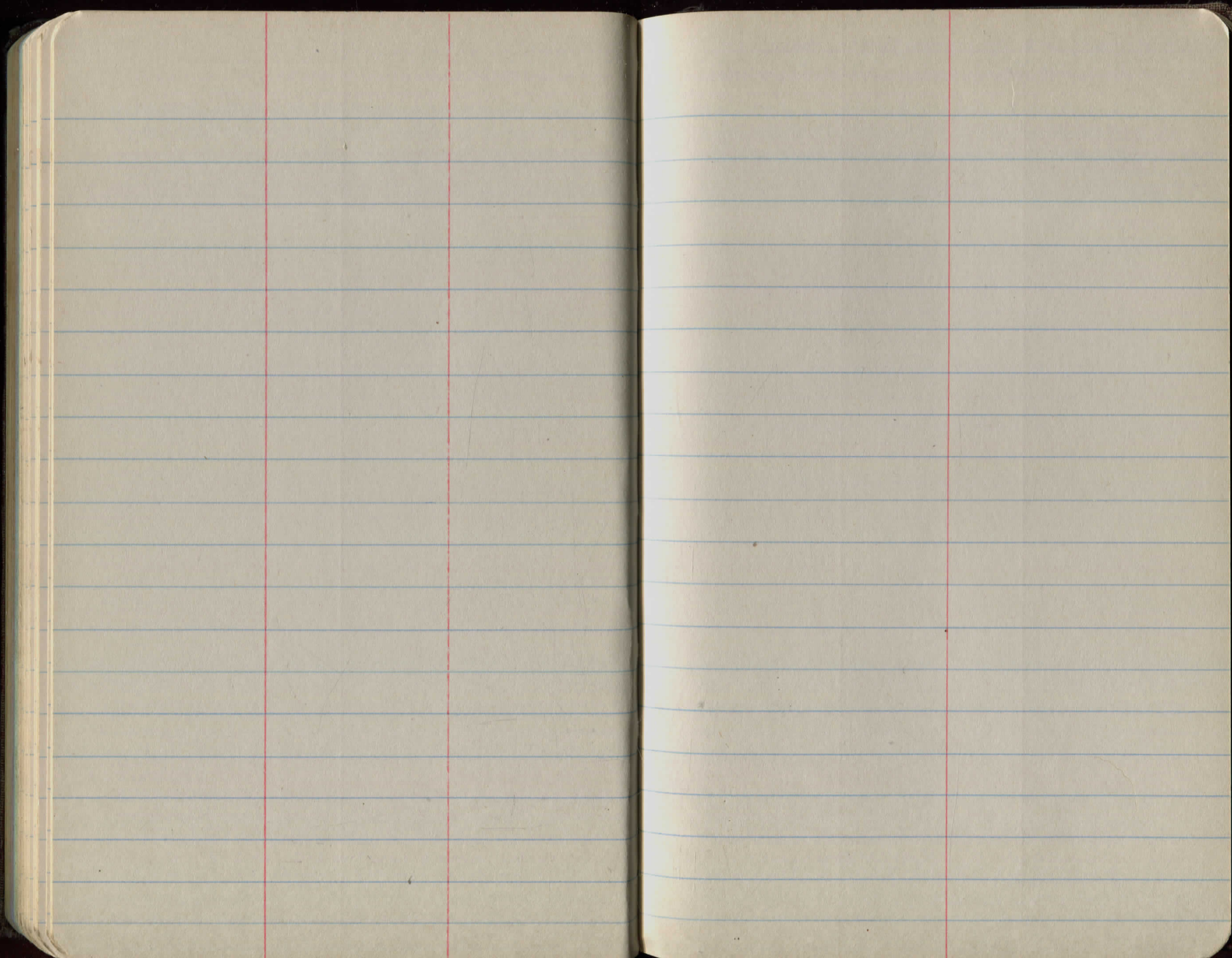


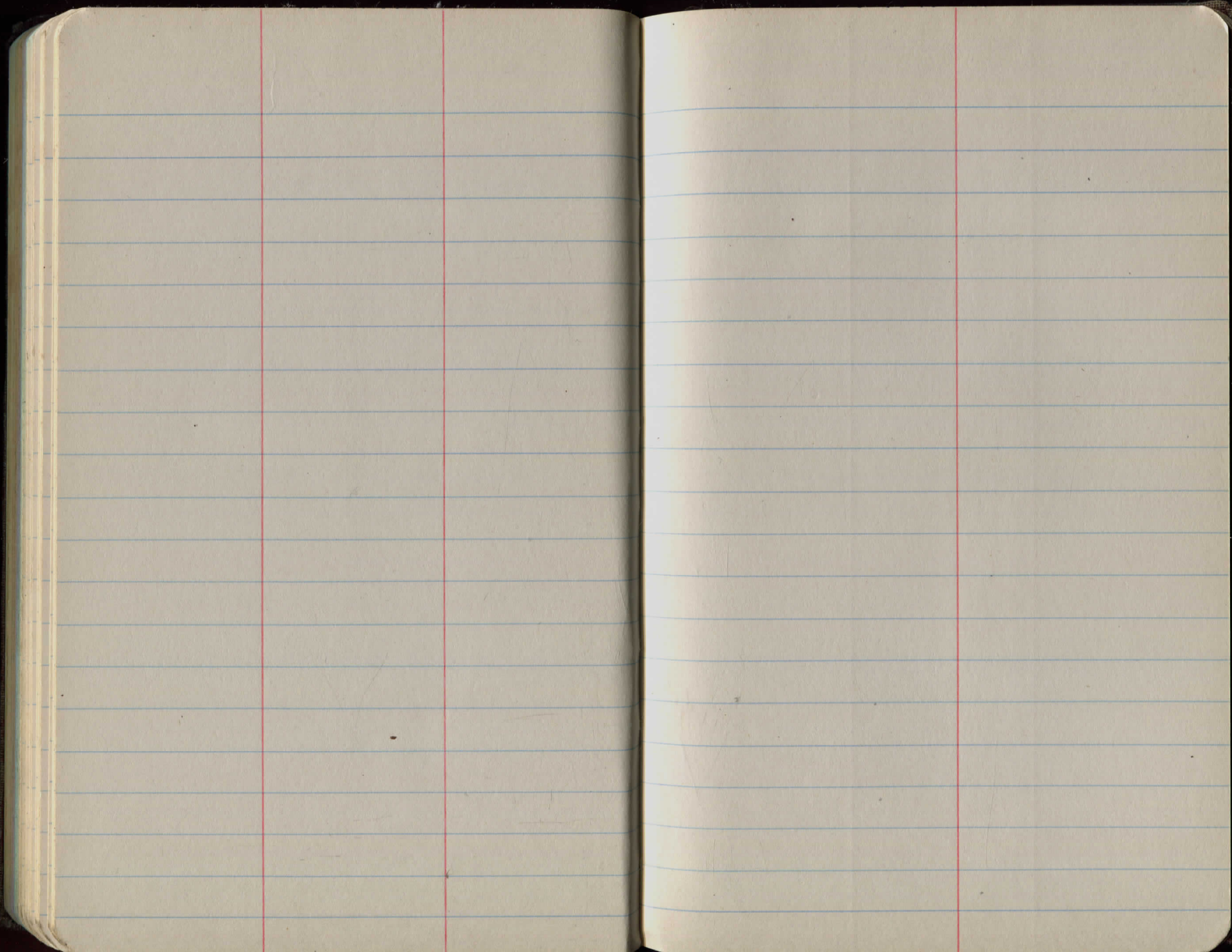


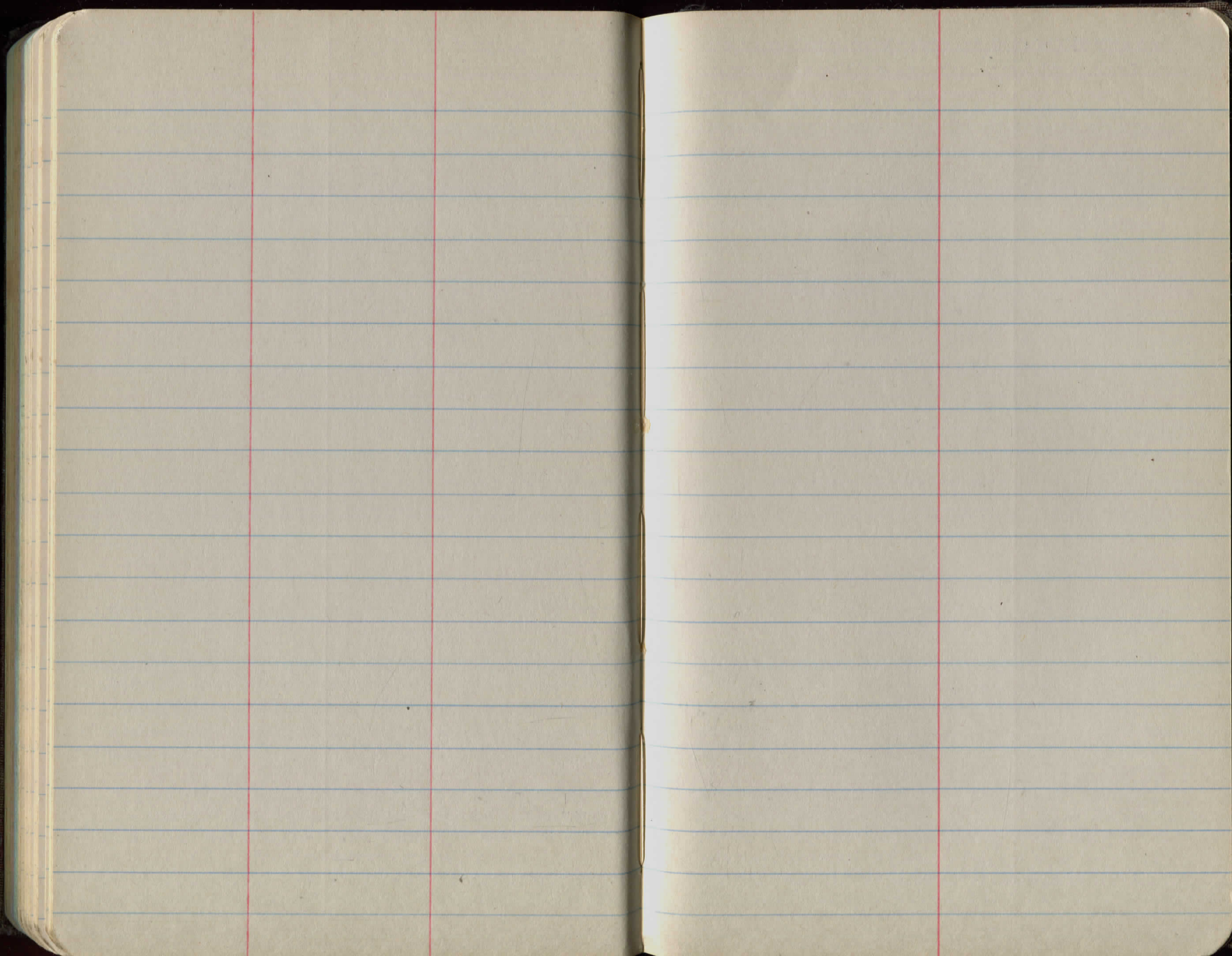


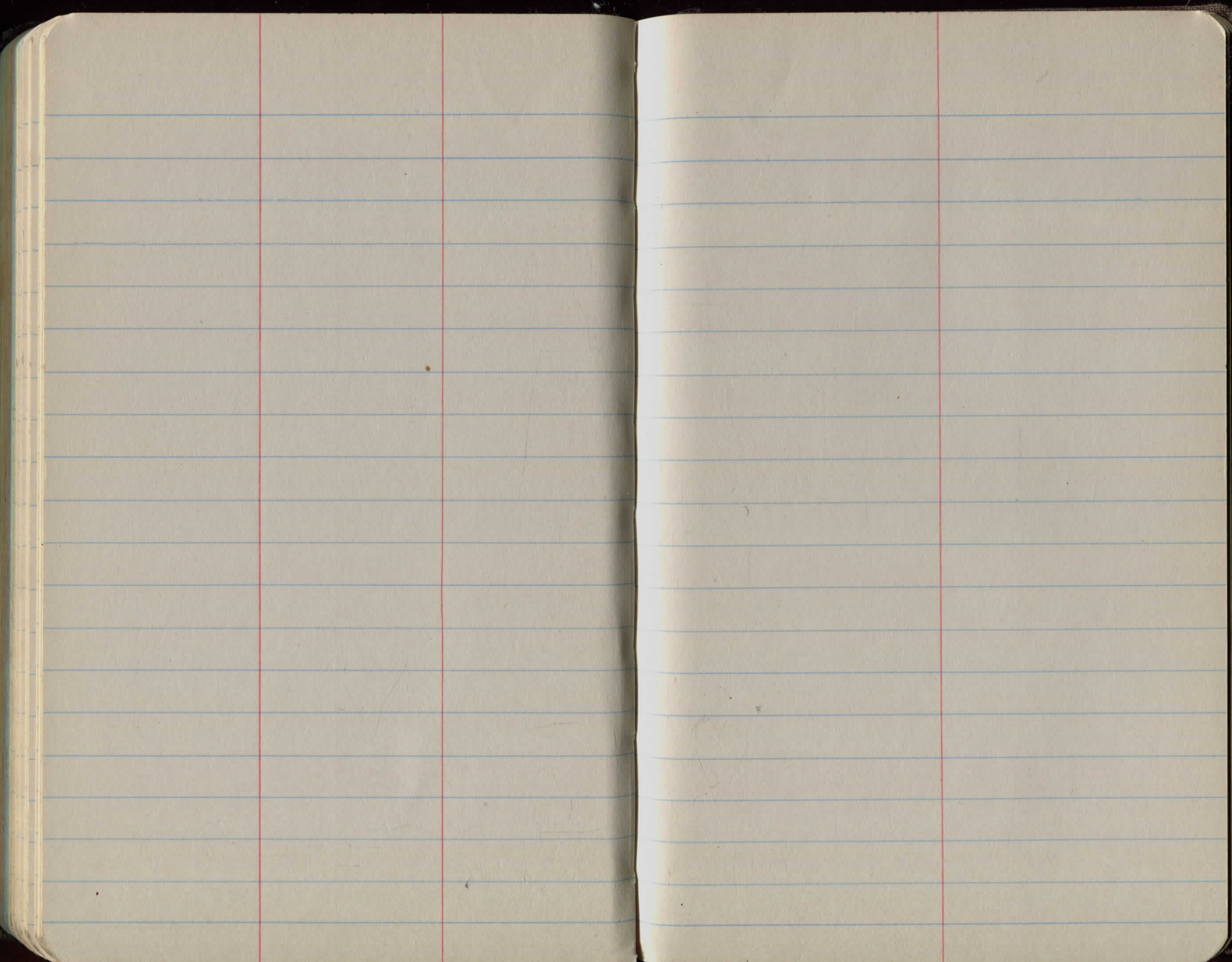


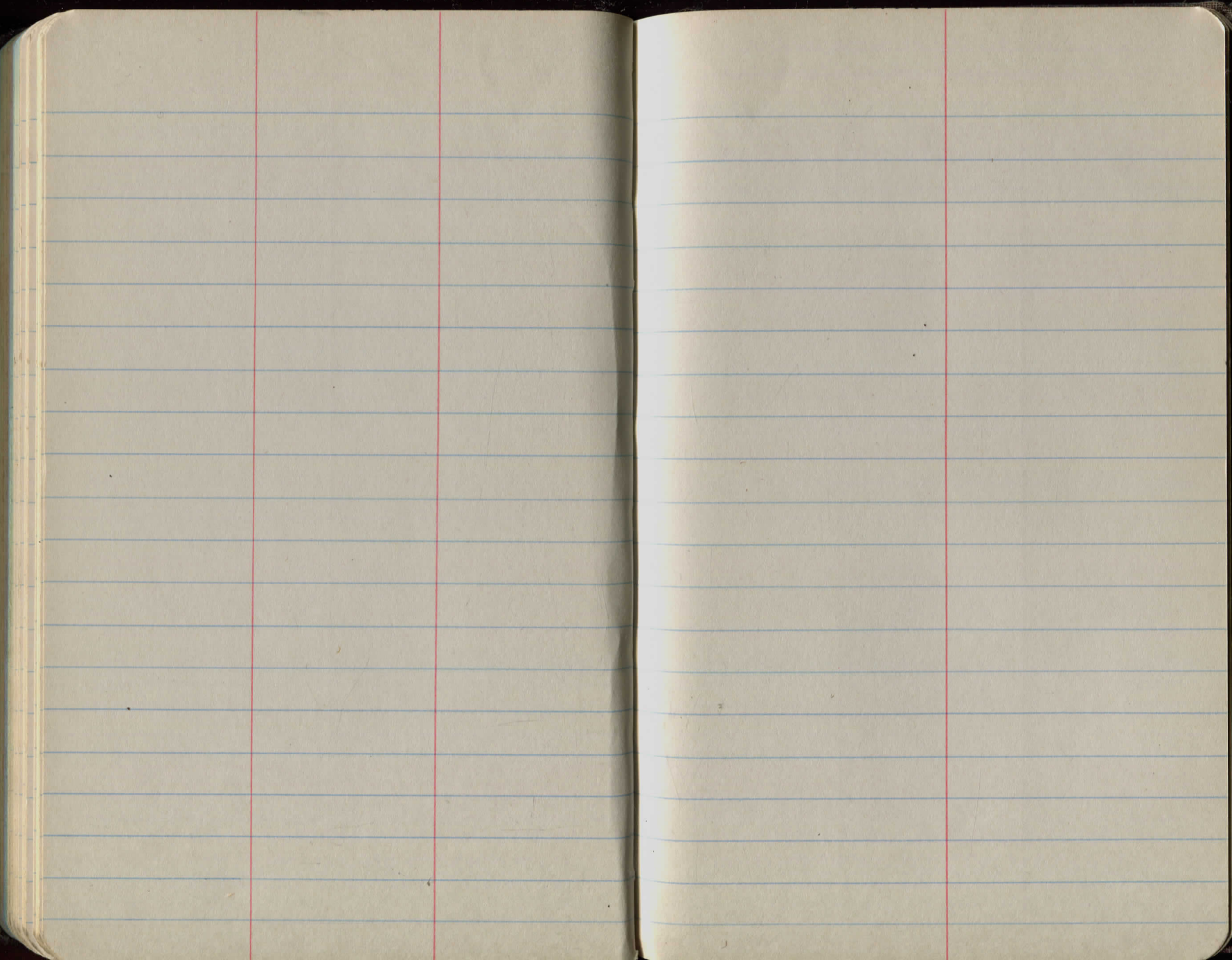


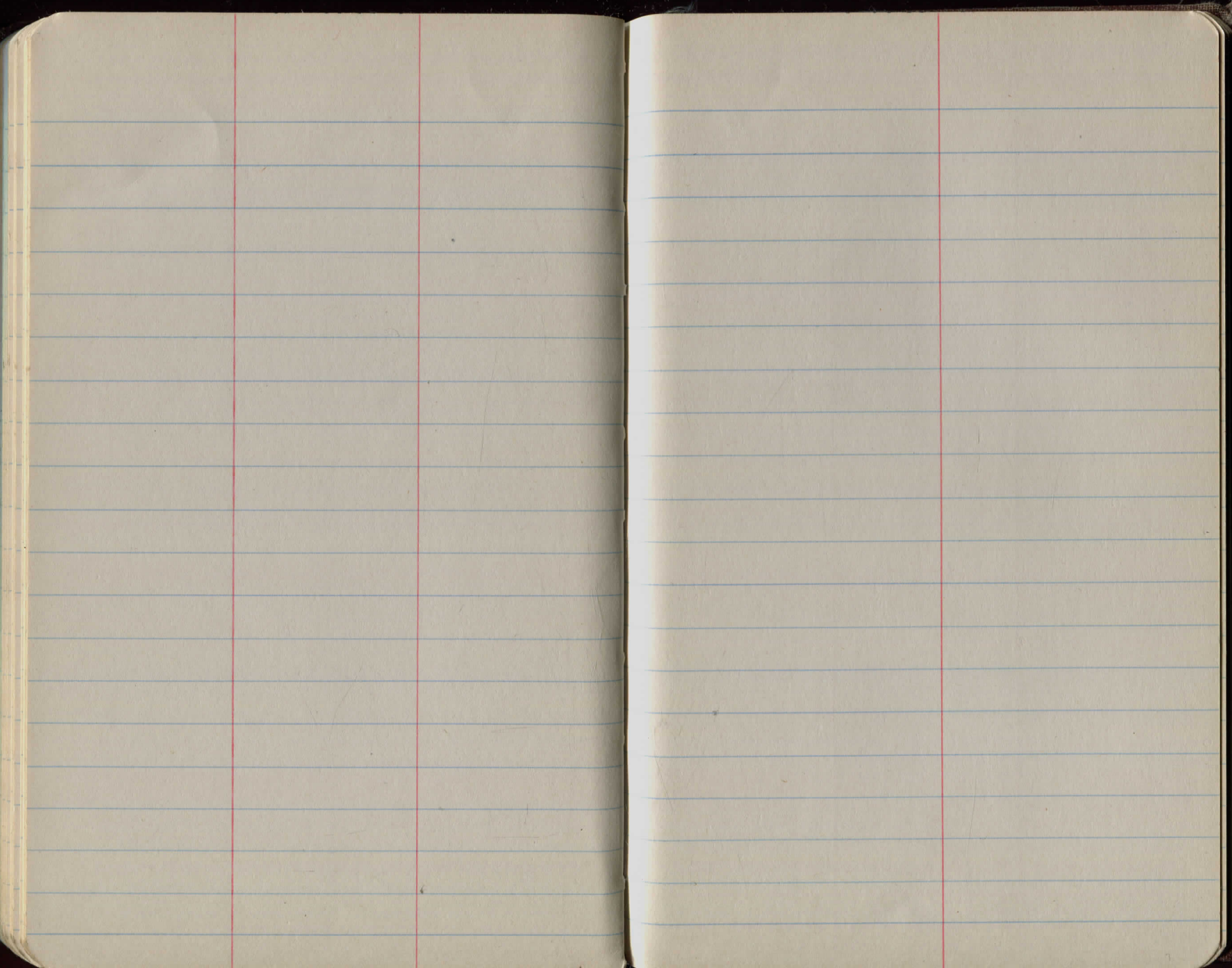


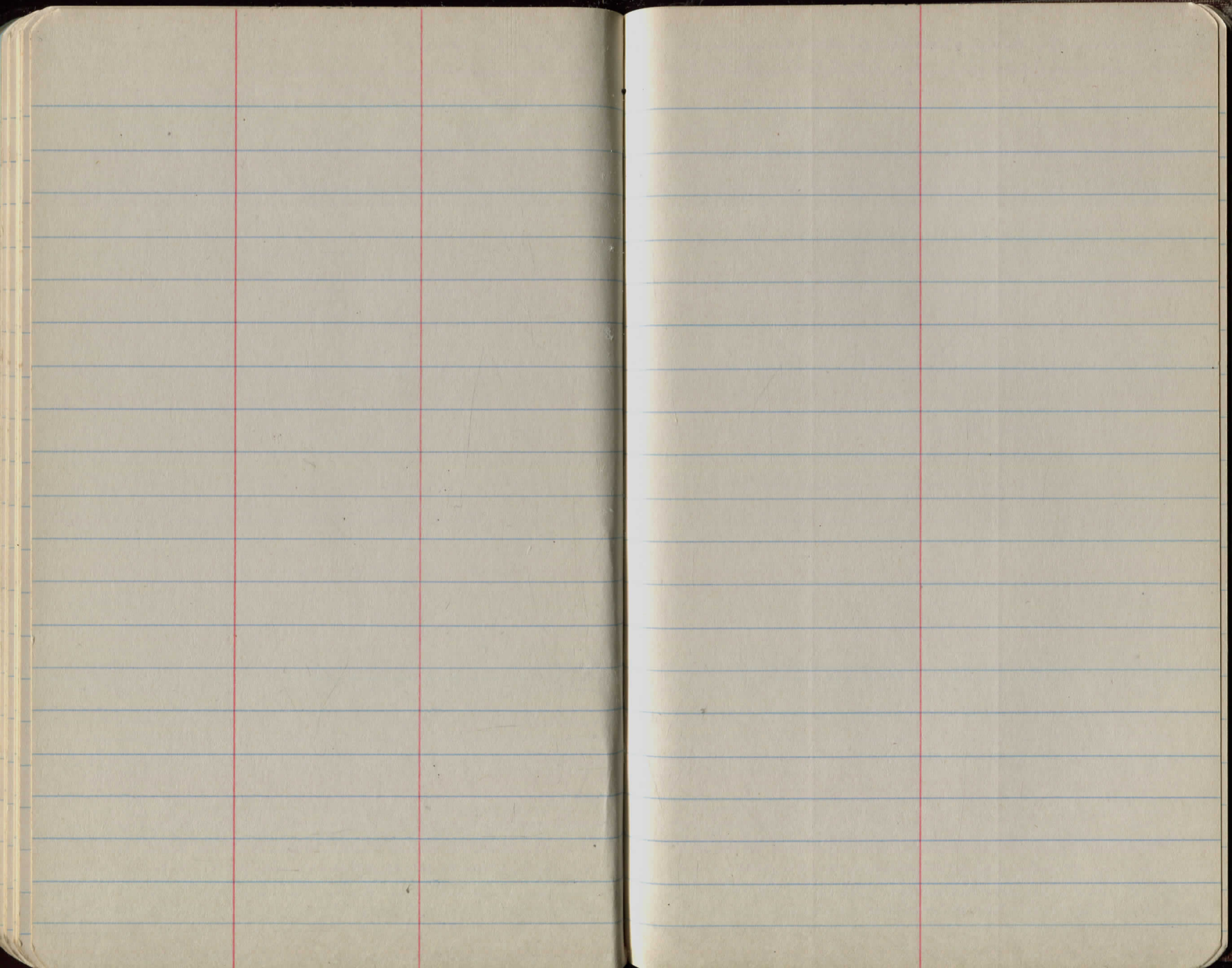


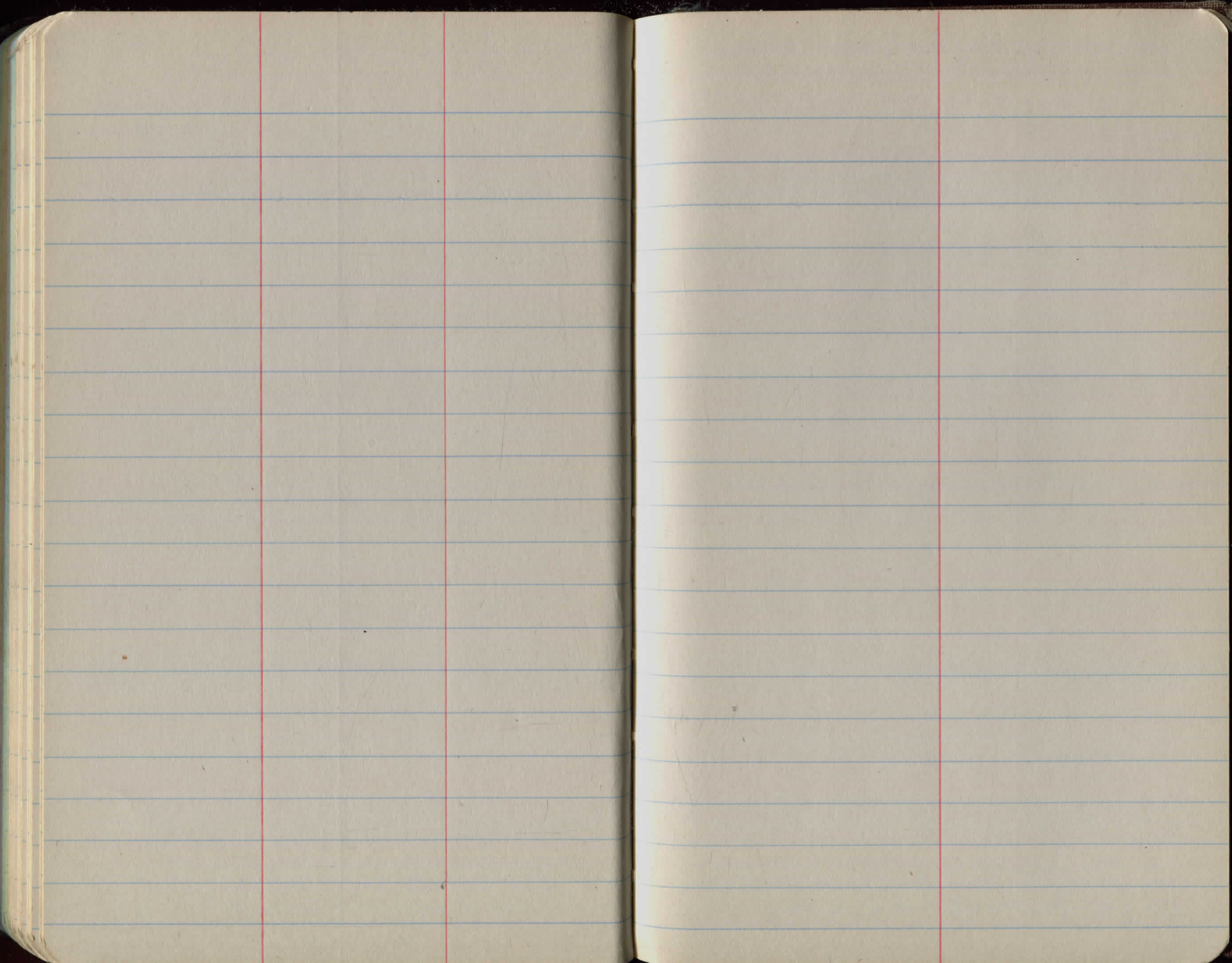


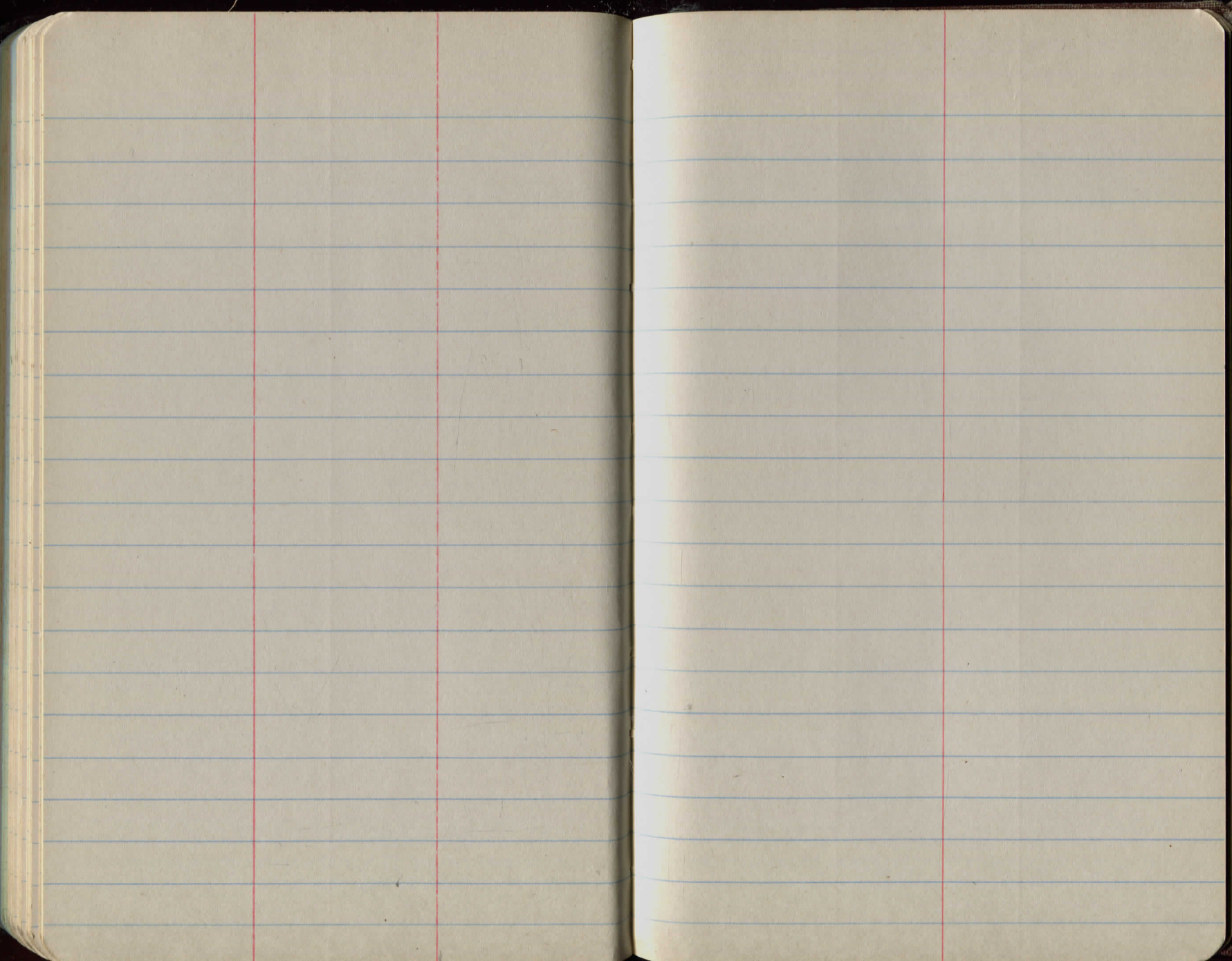


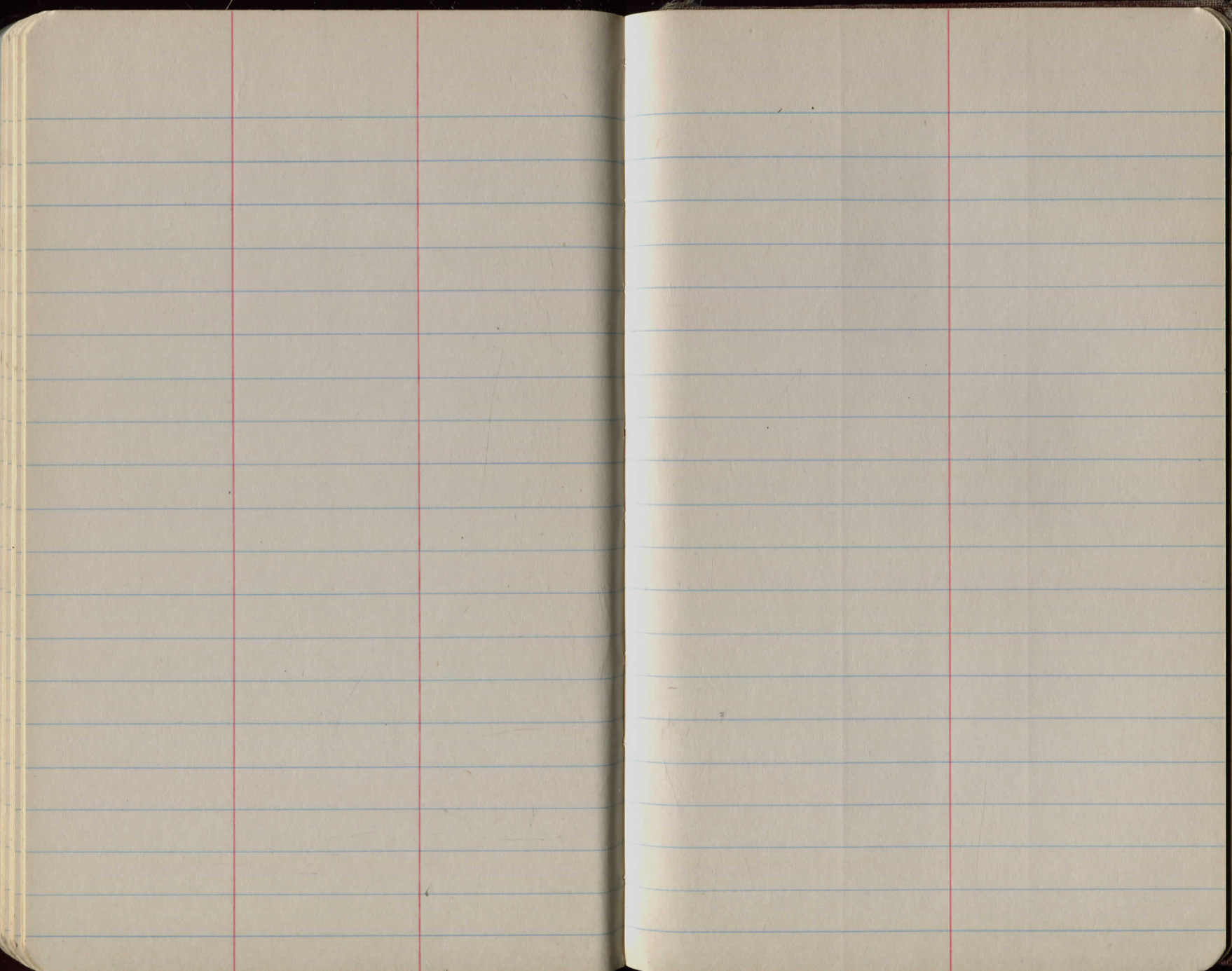


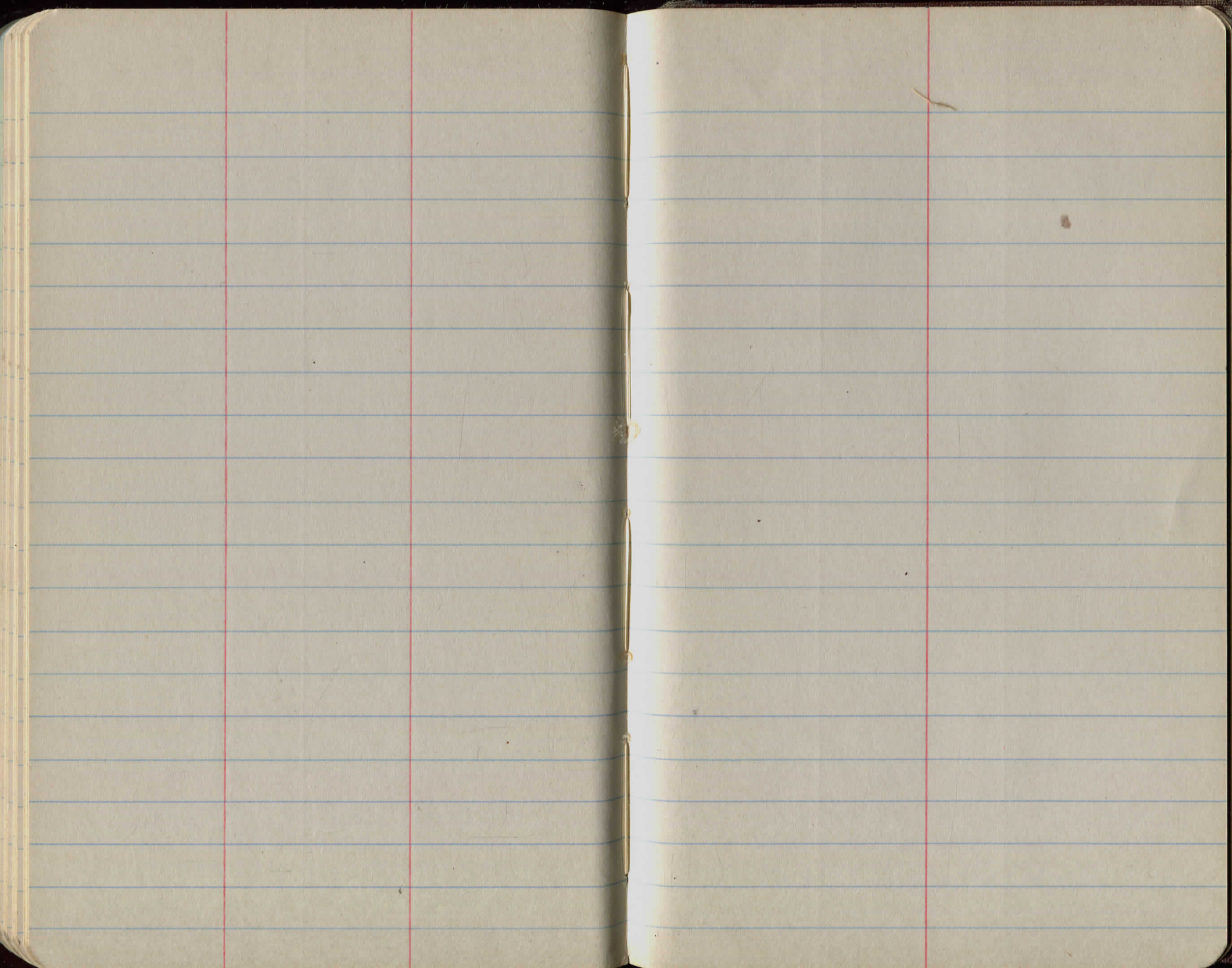


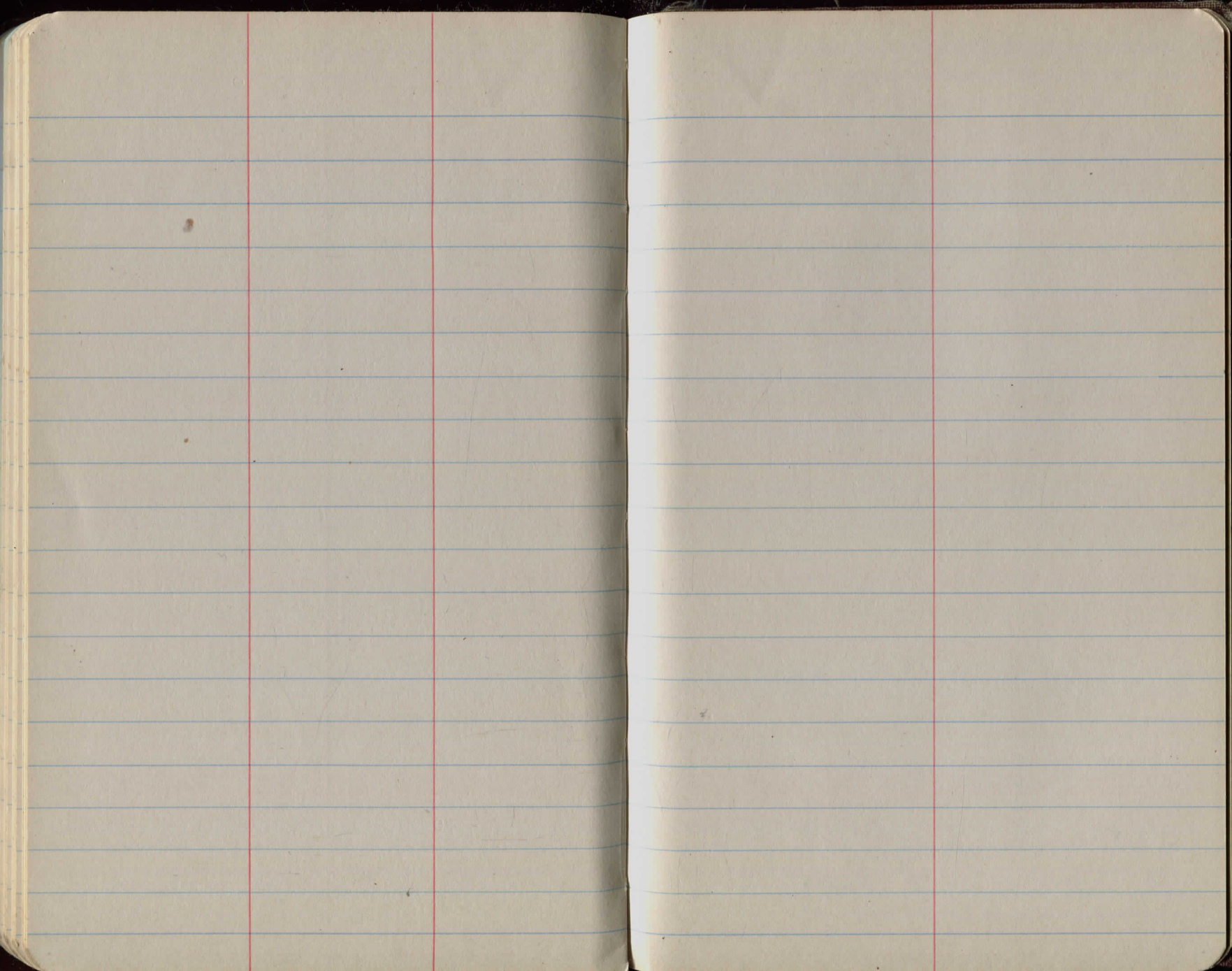


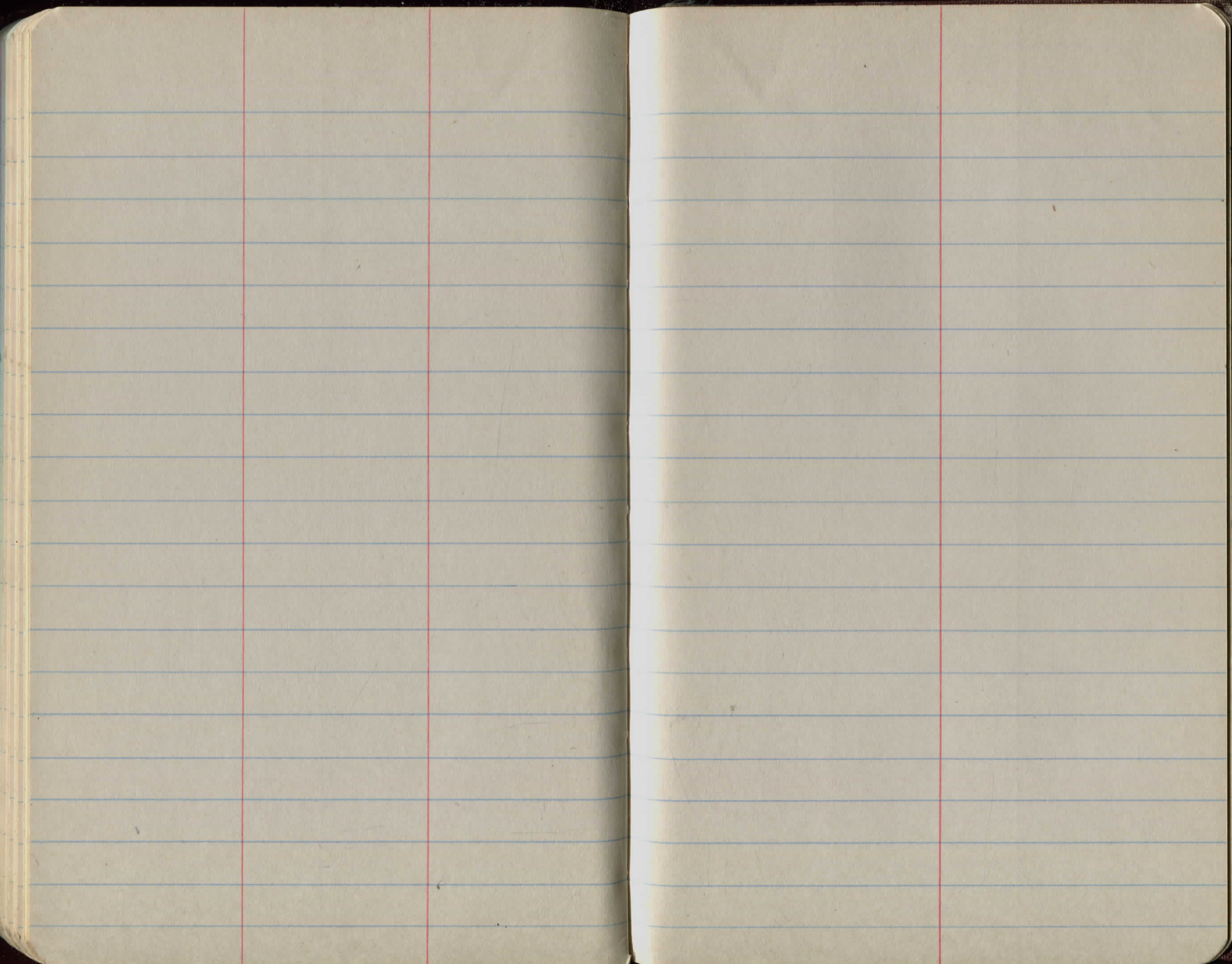


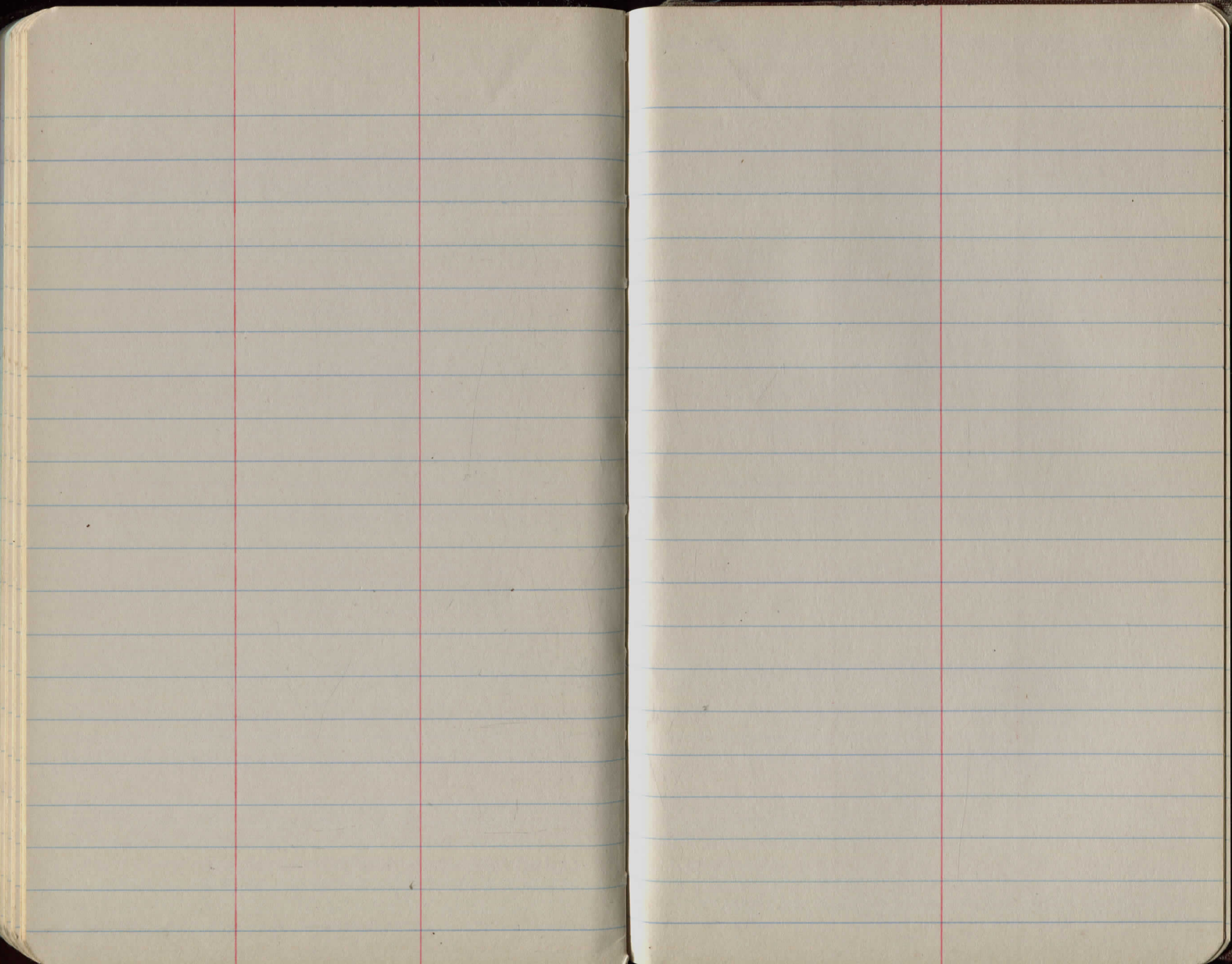


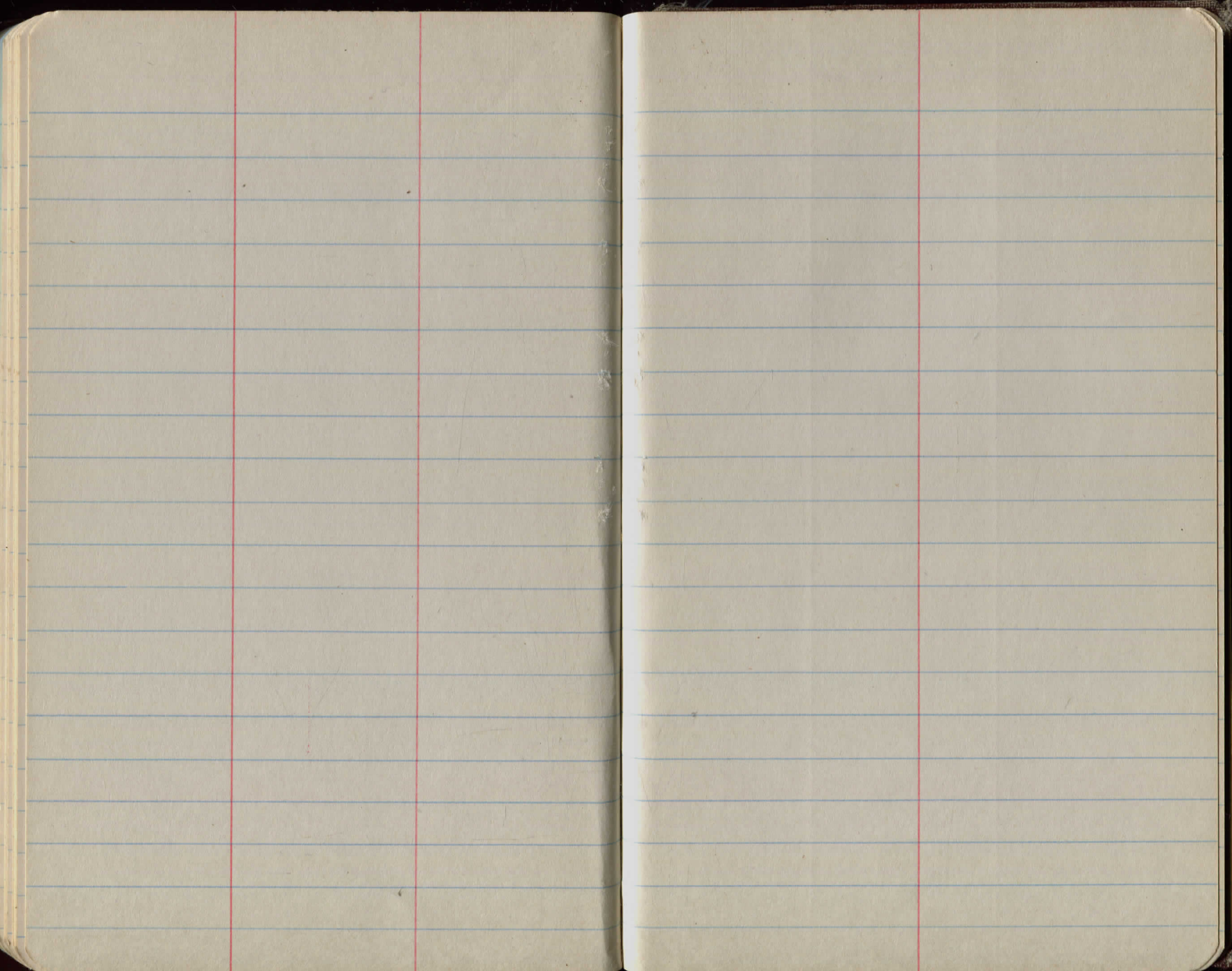


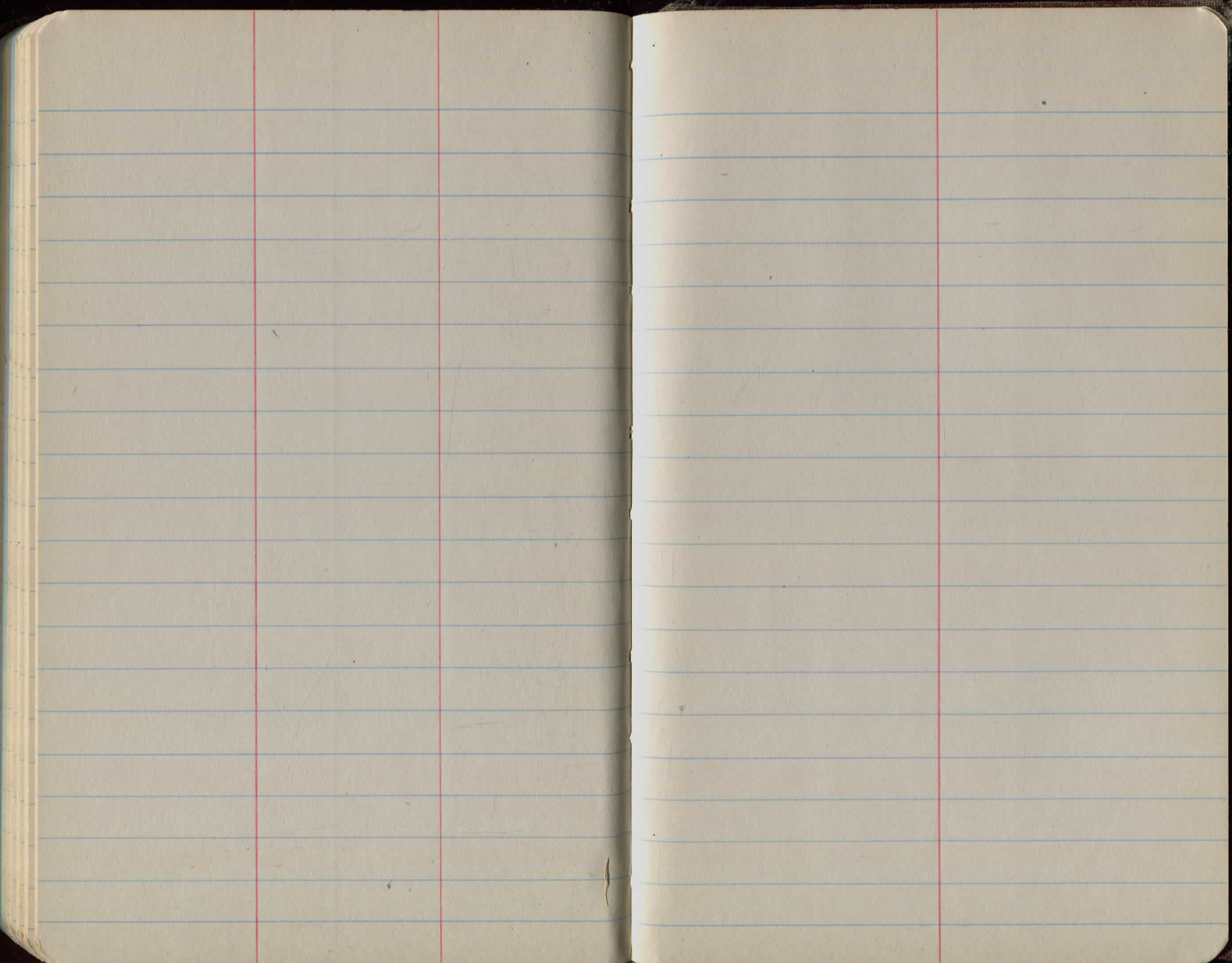


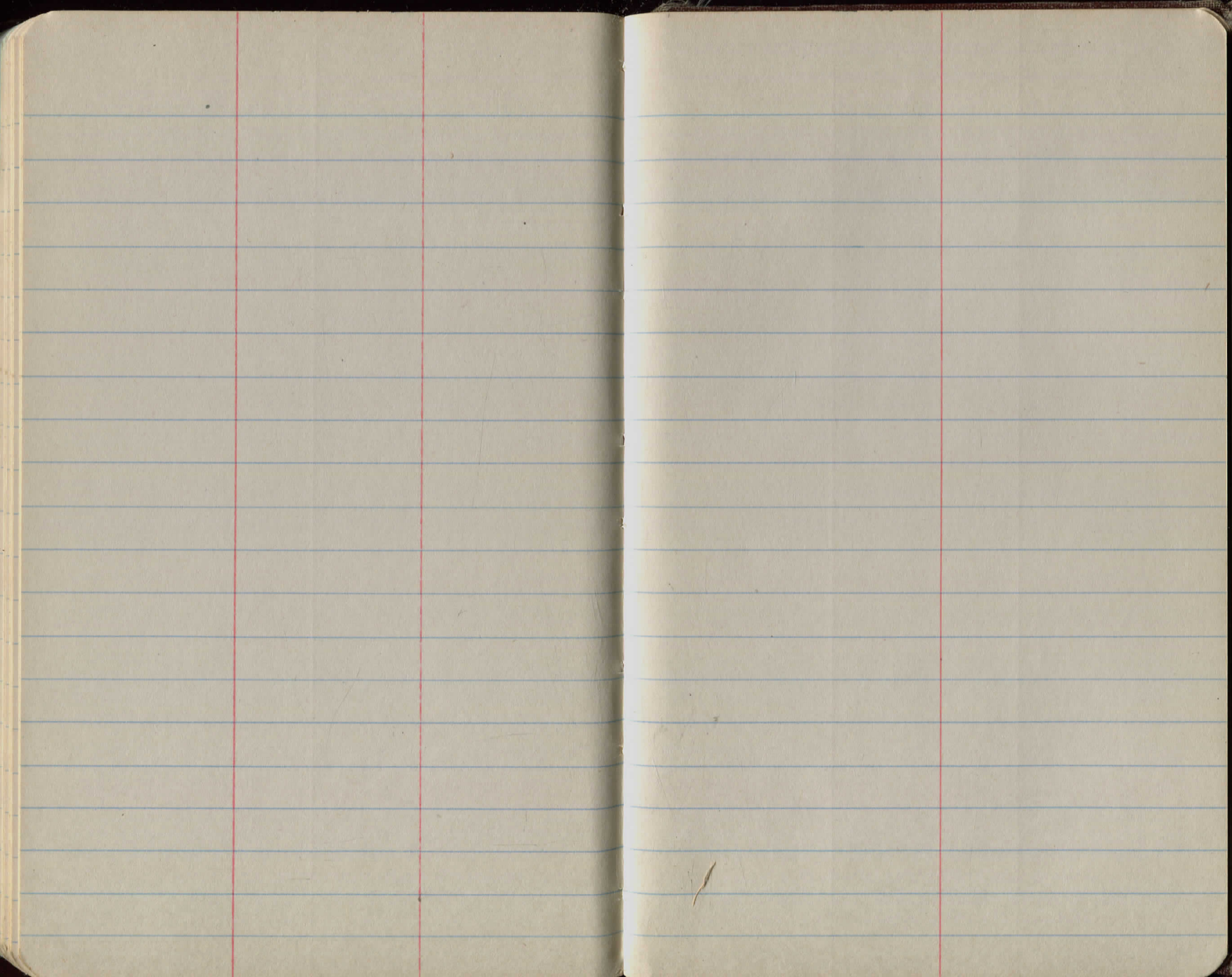


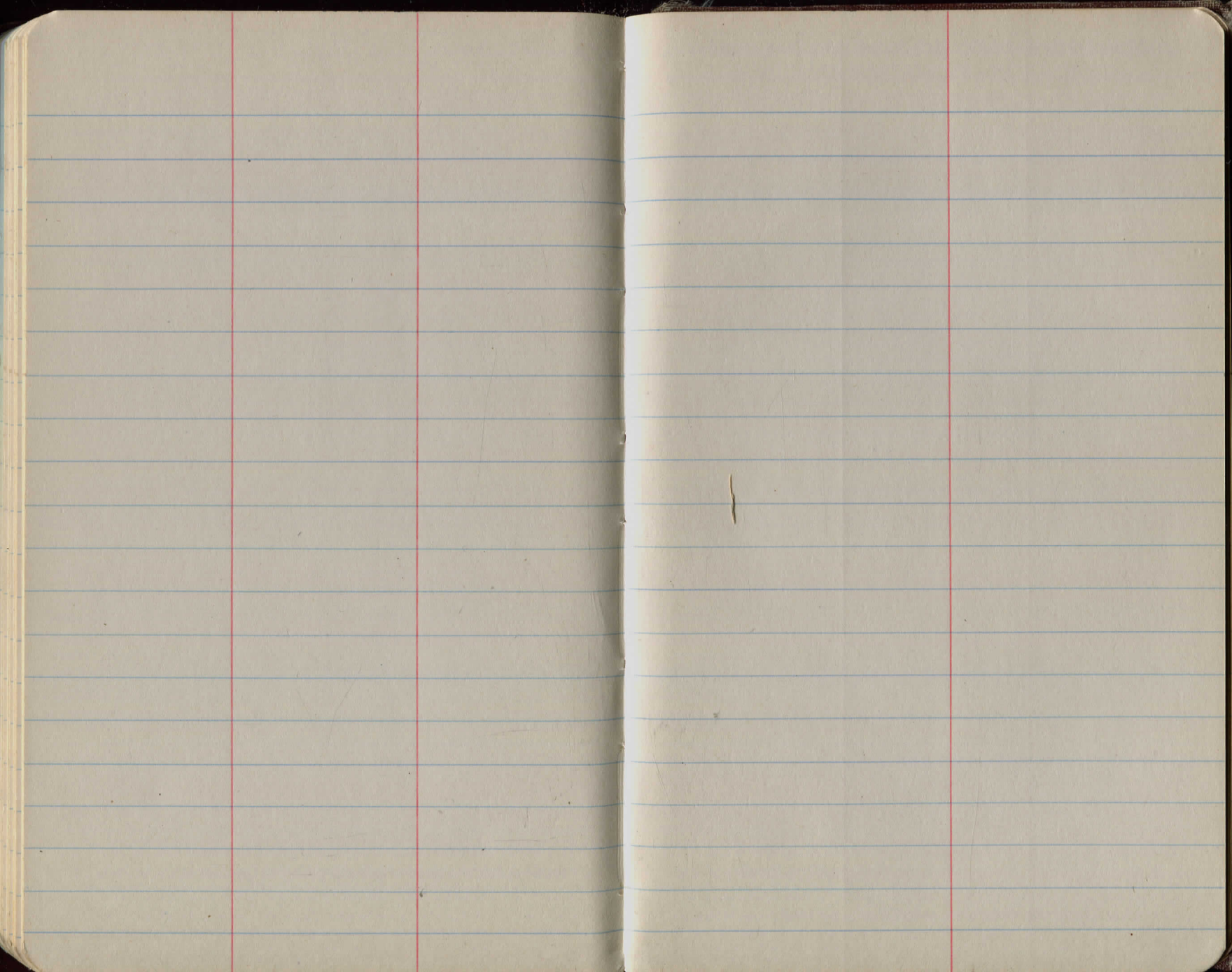


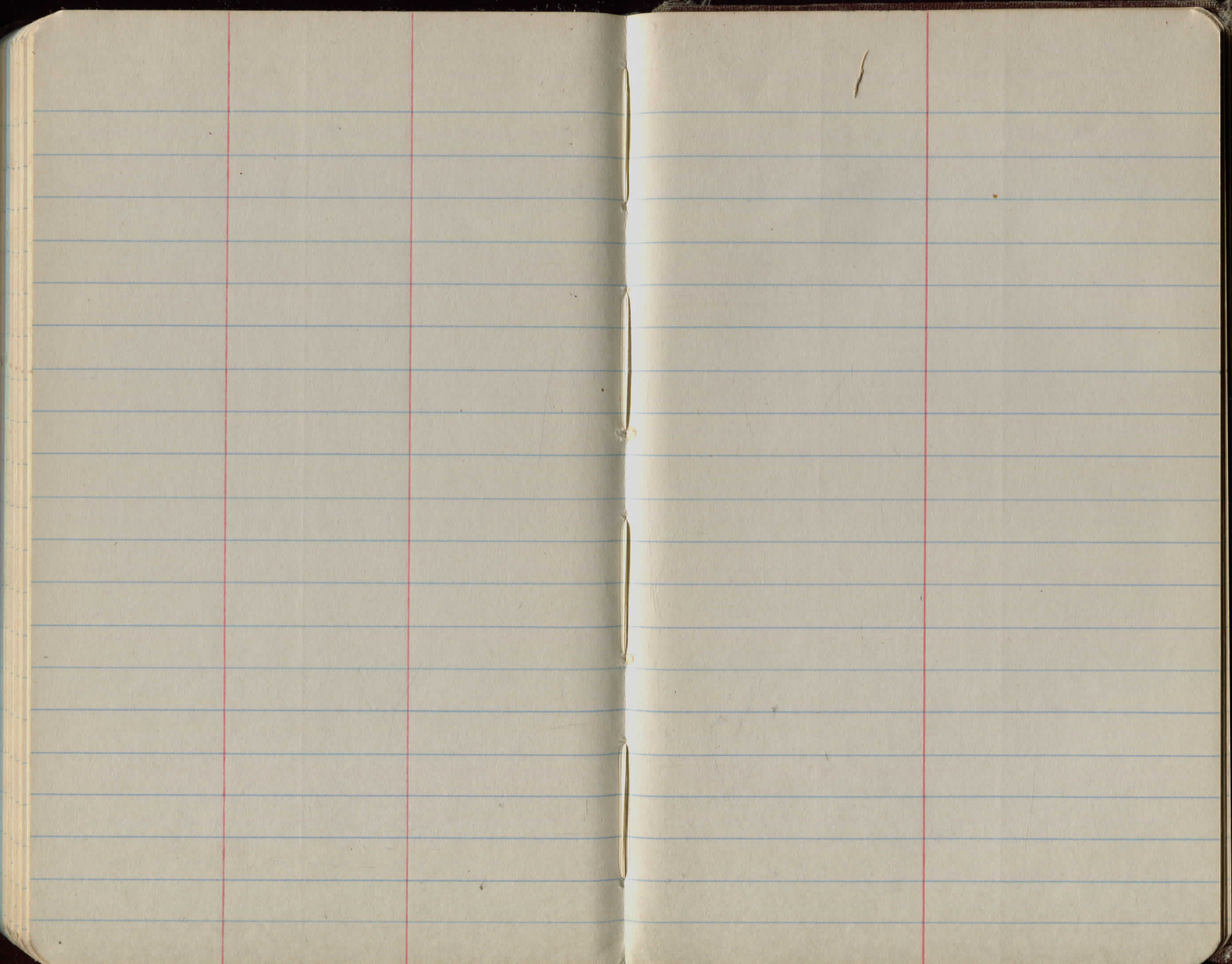


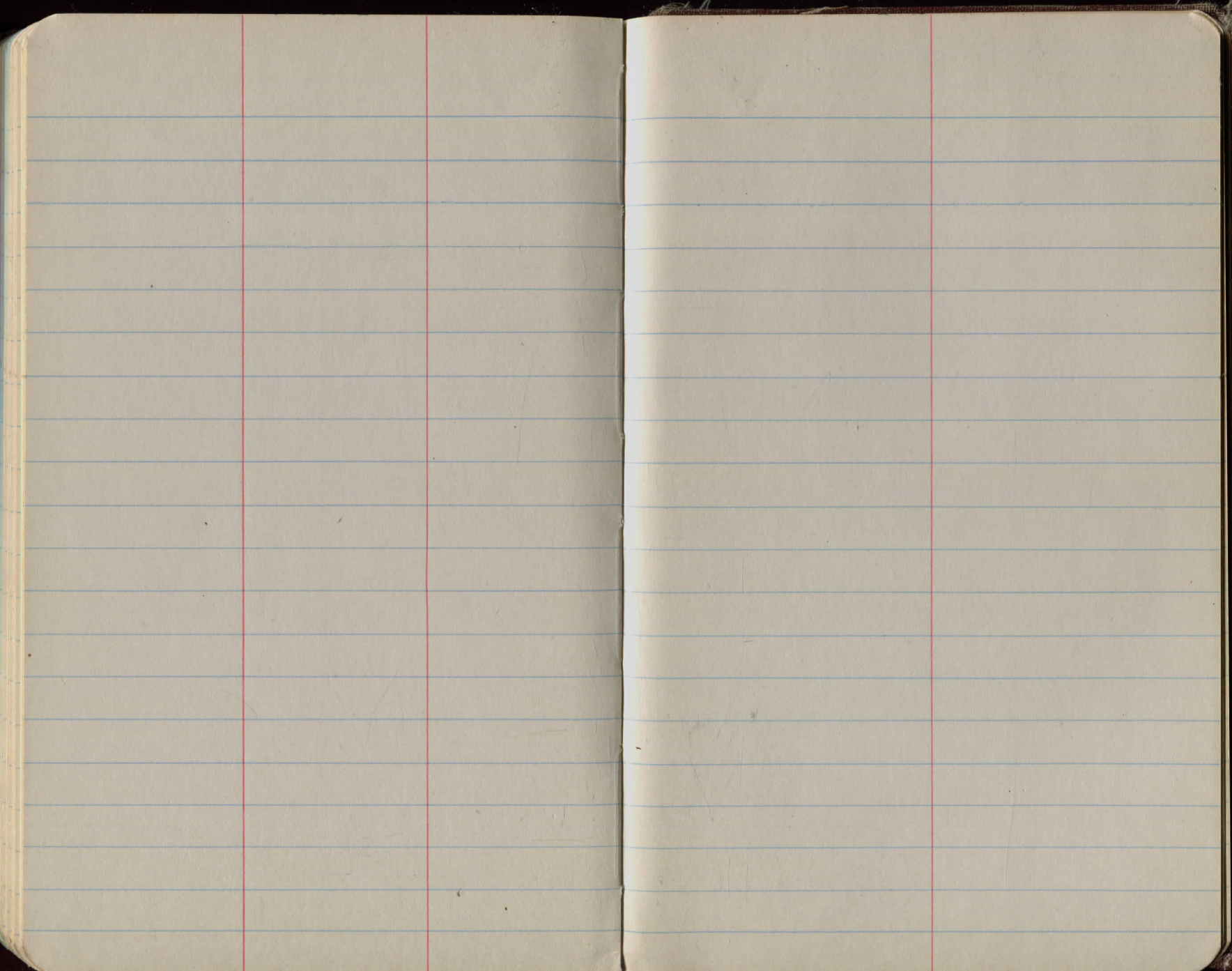


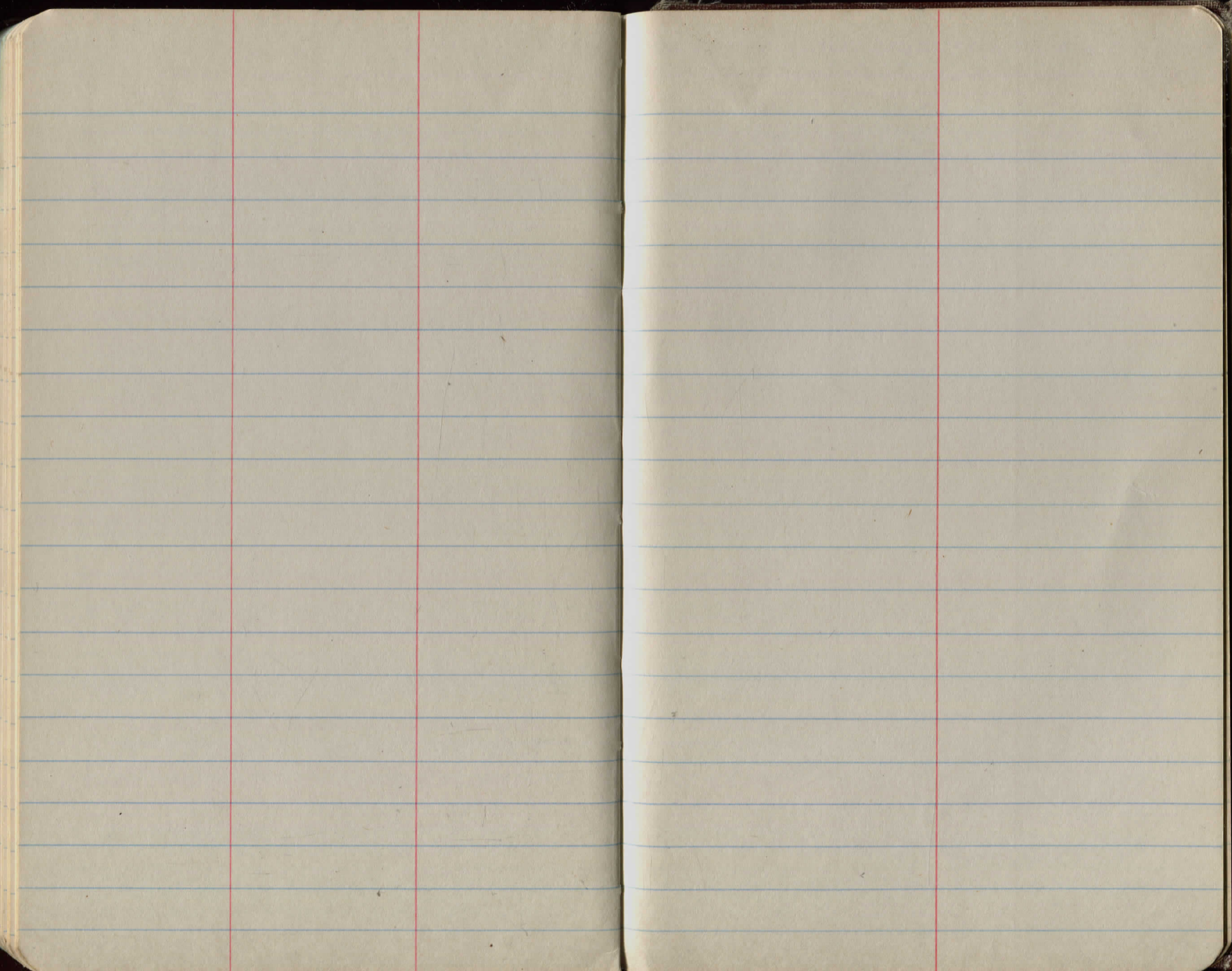


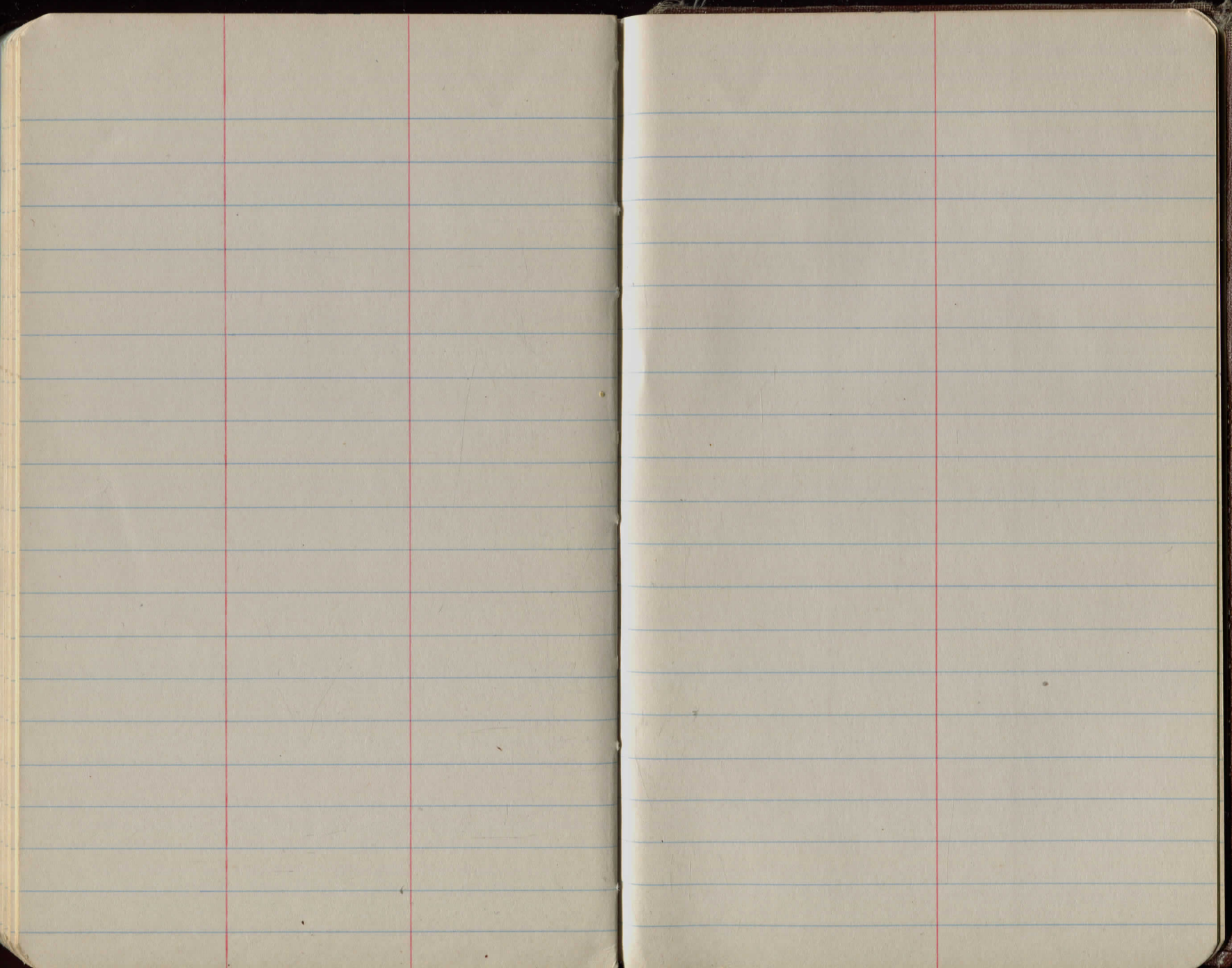


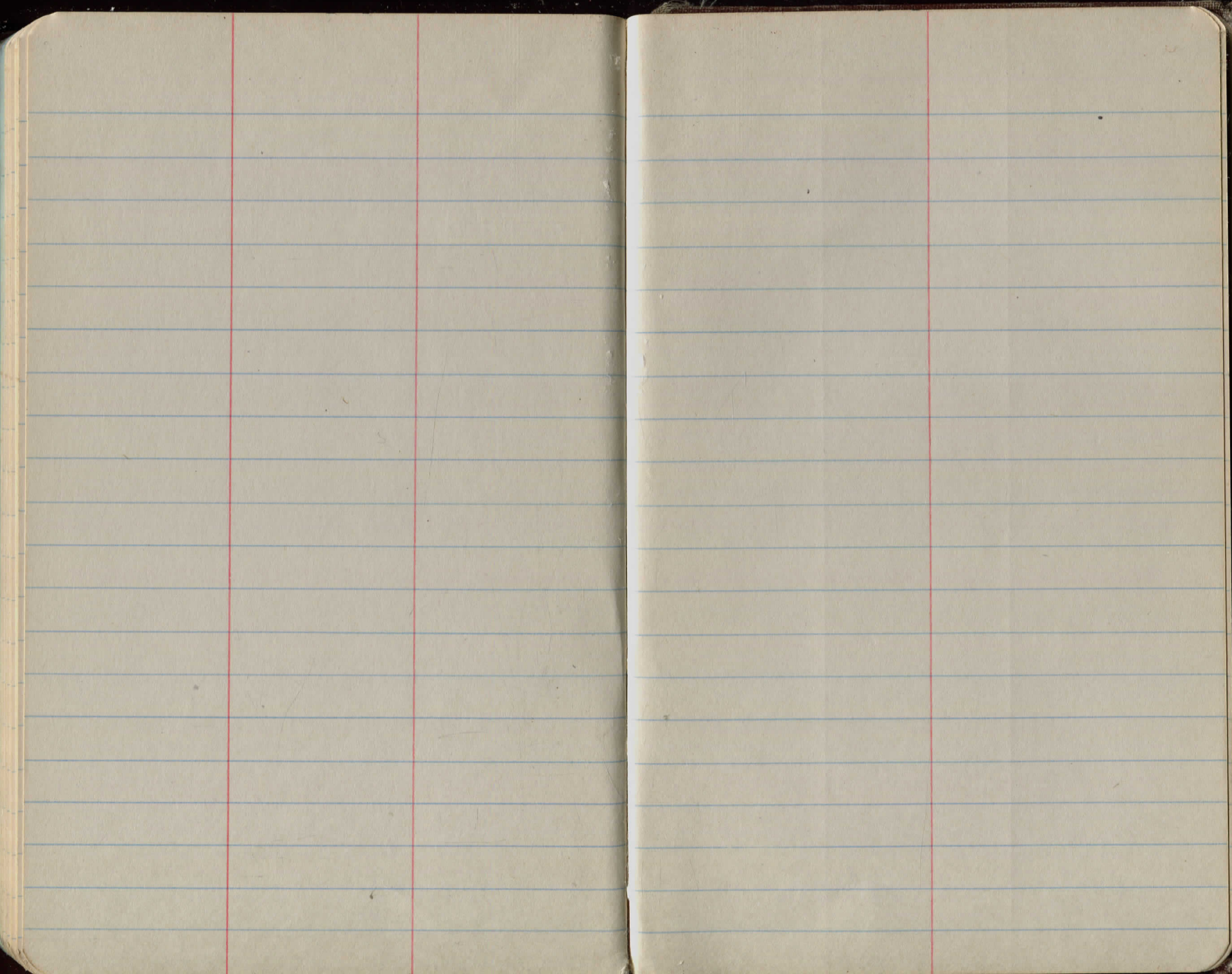


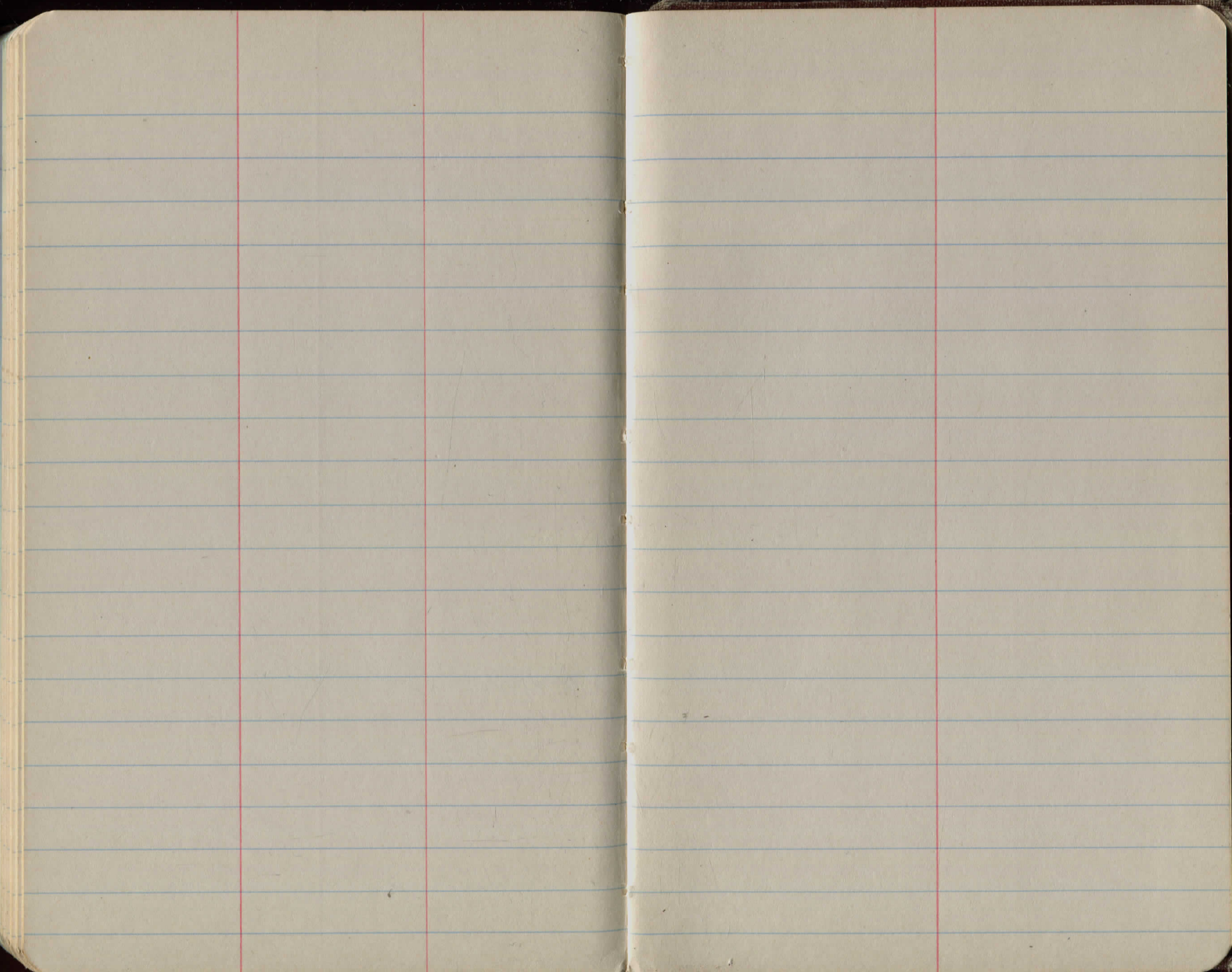


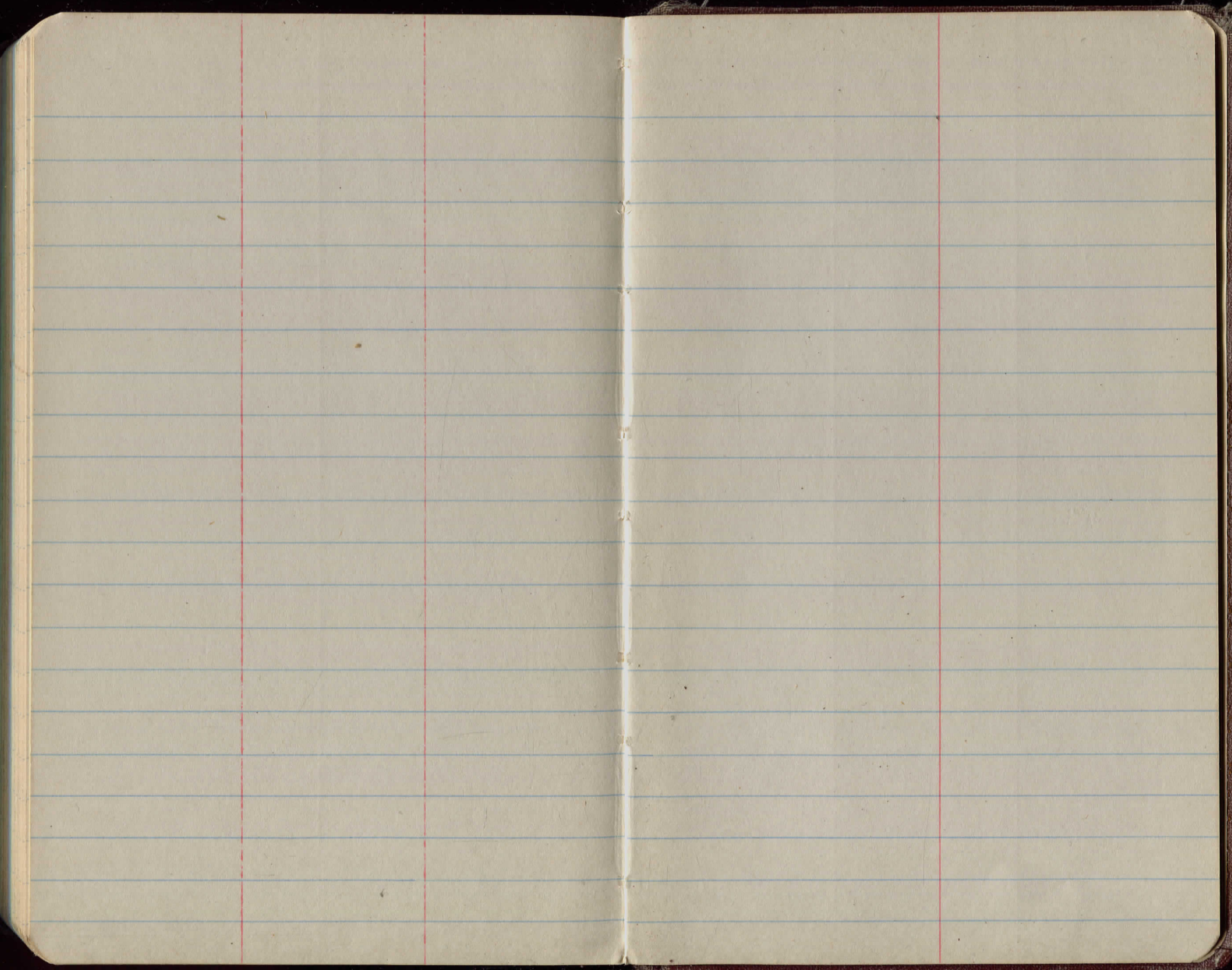


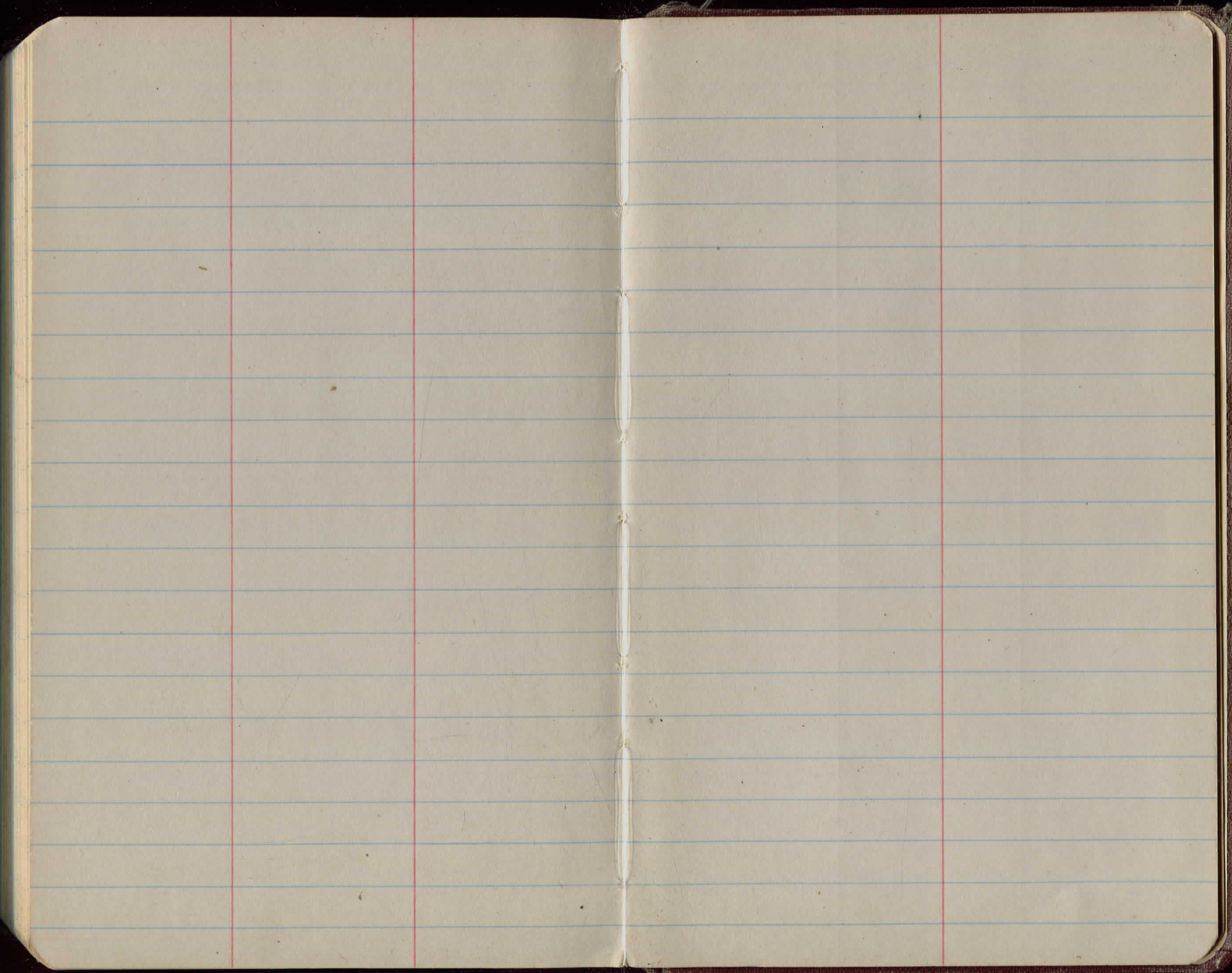


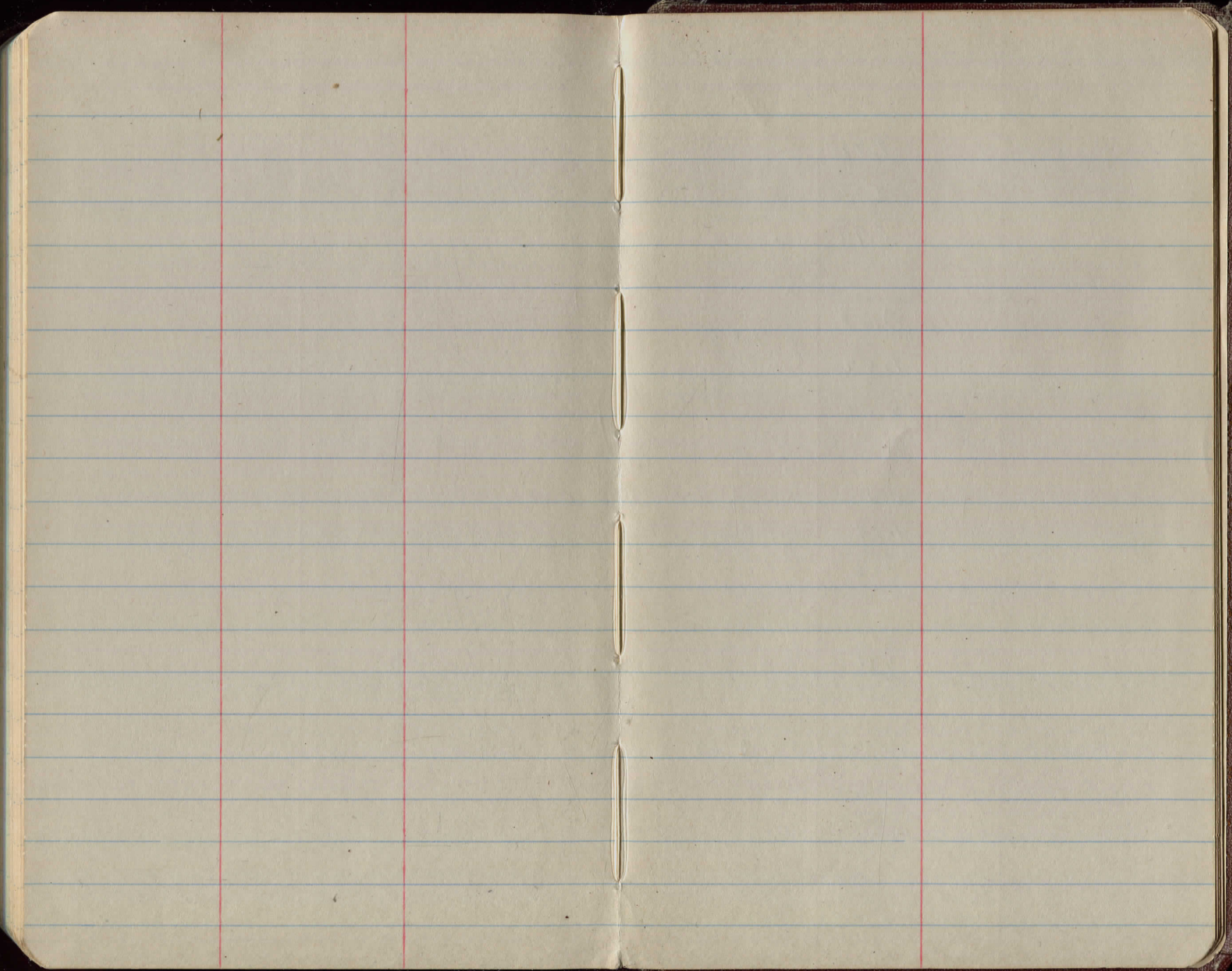












2.92

3.32

0.94

0.67

2.52

5.09

} 1.85

4.2

5.40

4.84

.56

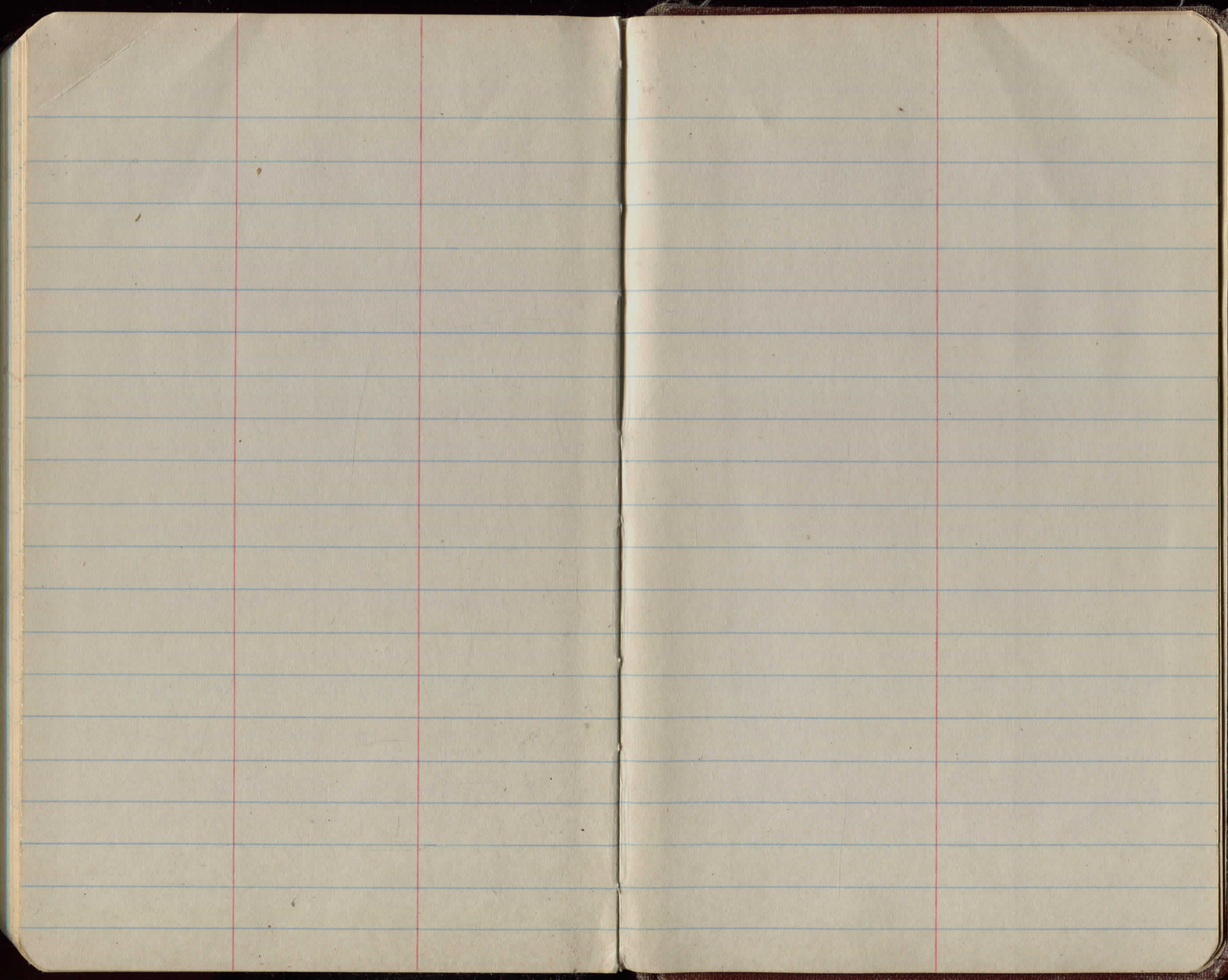
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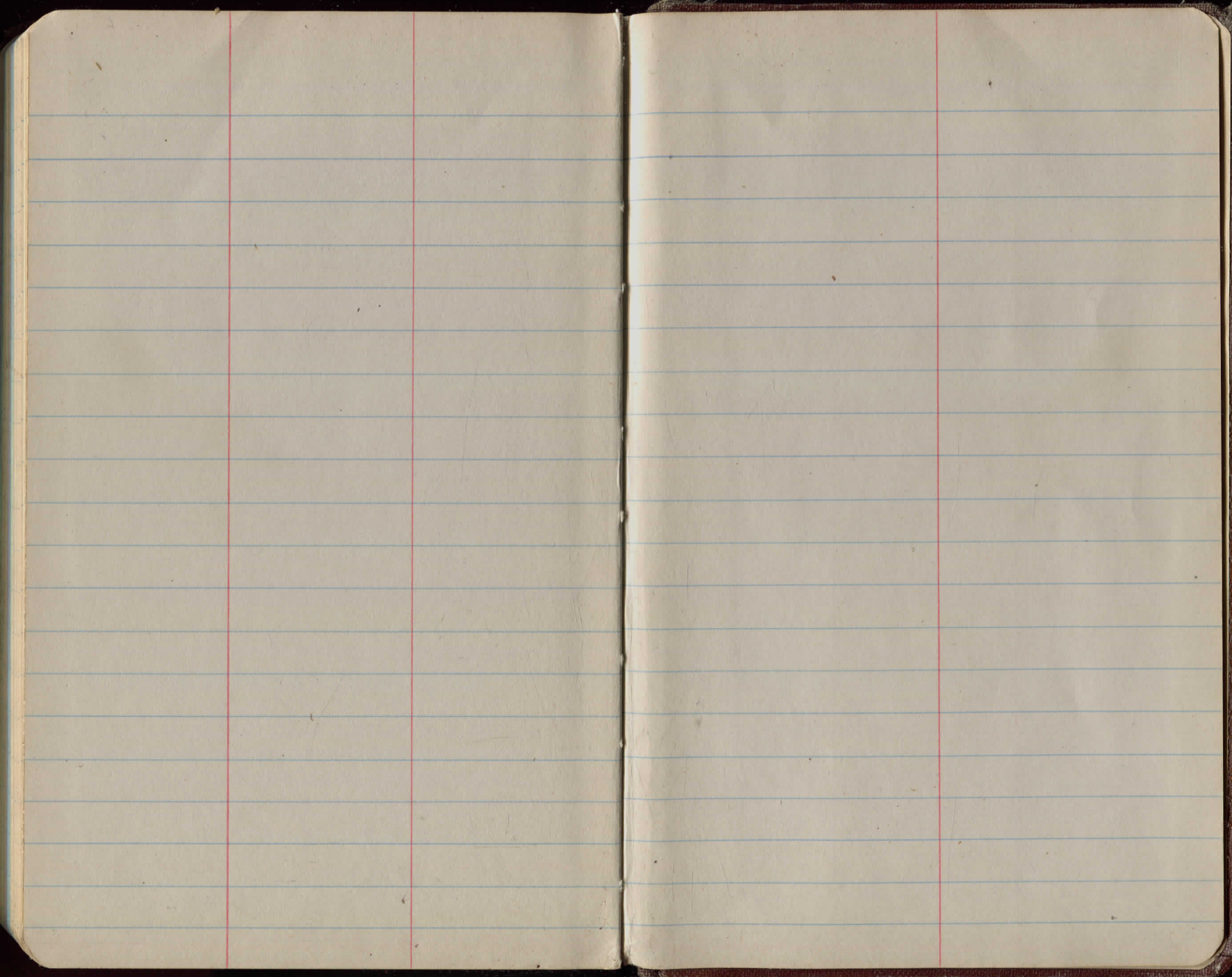
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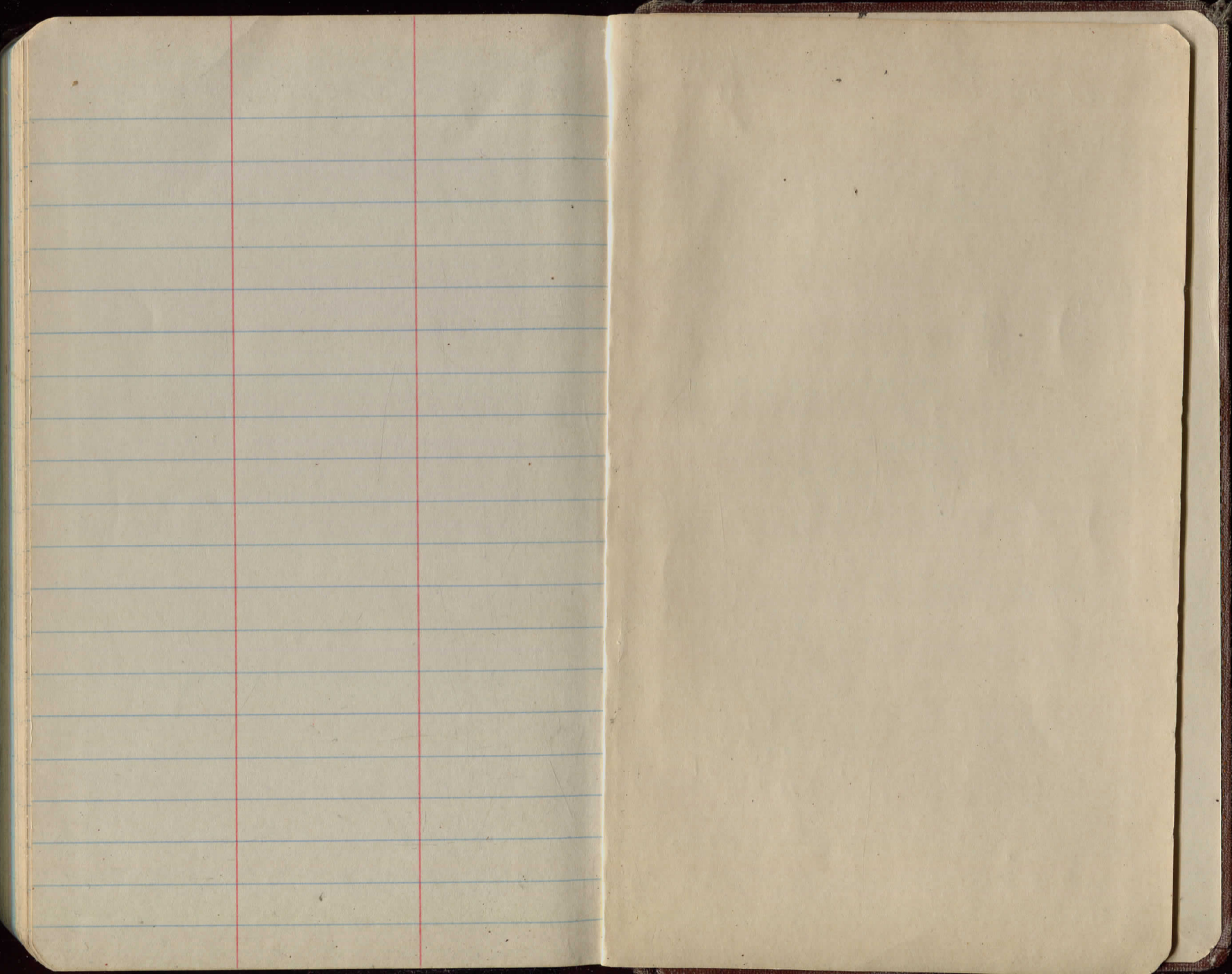
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5.40
1.5
3.9

0.68







Ted Root

285-4531

41-09-30
3/123-25-10

10.86
3.35
14.21

336.08

6.96
5.75
1.15

6.42
5.91
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80.76
2.99
88.74
336.08
115.32
40.60
492.00

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79.76 65 32
5.0
115.32

102.5
96
6

8.20
5.60
2.60

7.43
6.76
.67

9.72
7.24
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10.65
5.20
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17

2° 30
8.5

350
265
255
200
150
120
30
36.08
08.20
287.88

783.66
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1640.71

10.90
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36.0
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34.5

10.76
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2' 10 1/2"

88.74
80.54
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88.74
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5

139
278

10.78
3.4
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193
386

1.30
1.37
2.79

103.51
9.91
93.60
4.52
89.04

3.75
89.85

9.15
84.75

14.21
78.39

11.20
3.40

93.60
14.21
79.39

11.64
81.76

