

F.B.
976

FIELD BOOK

976

Return to City Engineers Office

73
80
5760

KEUFFEL & ESSER CO.

DRAWING MATERIALS

AND

SURVEYING INSTRUMENTS.

NEW YORK.

CHICAGO.

SAN FRANCISCO.

ST. LOUIS.

TABLES FOR EXCAVATIONS AND EMBANKMENTS.

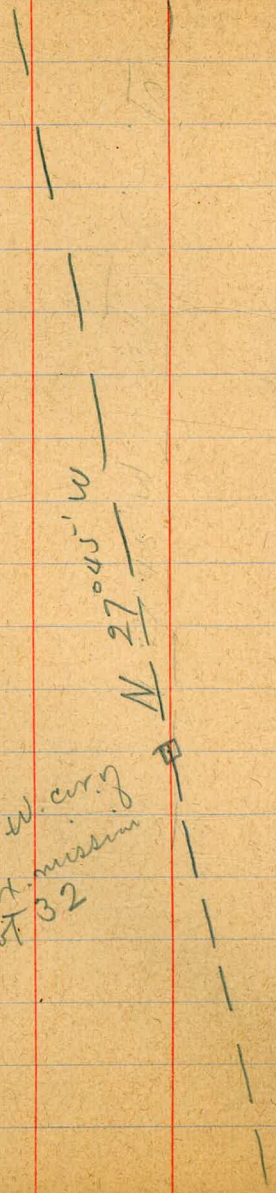
DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.
ROADWAY 18 FEET WIDE. SIDE SLOPES 1 TO 1.
FOR SINGLE TRACK EXCAVATION.

"Copyright, 1895, by Keuffel & Esser Co."

	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

Calculated by Julien A. Hall, M. Am. Soc. C. E.

NW cor. of
Ex. mission
lot 32



N 27° 45' W

6-2-15
Childs
Huston
Evans
Shaw

1

3

Δ 1 N.W. cor. Missine lot. 32.

No. shot description point azimuth distance

1	Well no. 11	231° 30'	440'	✓
2	" "	12 242° 50'	760'	✓
3	W. end foot bridge	232° 40'	400'	✓
4	E. " "	" " 213° 15'	100'	✓
5	Line sumpt. 1109	188° 15'	410'	✓
6	Slingsby's well	159° 02'	630'	✓
7		141° 49'	470'	✓
8		107° 28'	74'	✓
9		88° 55'	522'	✓
10		349° 21'	373'	✓
11		68° 32'	—	✓
12		13° 42'	735'	✓
13		337° 03'	—	✓
Δ 1 - Δ 2		66° 14'	1020'	✓
Δ 2 - 13		207° 43'	74'	✓
14		178° 33'	826'	✓
15		323° 06'	363'	✓

fore-sight North along City Limits

Bend in RIVER south bank 100'

Keepers Bungelow

Well #10

" 9

to RIVER Bend south bank 125'

Well #8

Bend in RIVER south bank width 100'

Ohre's well

Pt. on board walk East of Well #8

Well #8

Ricards Windmill

Line Fence - E-Line OHRE

	Azm	Rod
Δ2-16	166°53'	389 ✓
17	323°27'	650 ✓
18	80°50'	535 ✓
19	2°24'	281 ✓
20	106°03'	1028 ✓
21	49°00'	437 ✓
22	37°05'	385 ✓
23	287°47'	✓
Δ2-Δ3	62°27'	1083'
Δ3-23	312°39'	153' ✓
24	164°39'	592' ✓
25	26°32'	165' ✓
26	32°25'	300' ✓
27	23°55'	270' ✓
Δ3-Δ4	37°12'	265' ✓
Δ4-Δ5	67°00'	395' ✓
Δ5-28	7°11'	57' ✓

Fence Cor. E. line P. Ricard Propy.

Bend in RIVER S-BANK A 65'

#2 - SUMP

Bend in RIVER S-BANK A 80

Fearrie's well

Well #7

Bend in RIVER S-BANK

obias well

Hub Southeastly cor. of CITY PROP. in Lot 32.
westerly line of Lot 38

" " " " " RIVER S-BANK A 130'

McDermott Well

well #6

PUMP & SUMP in RIVER CITY'S

Bend in RIVER

Hub SOUTH OF RIVER PUMP

Hub " " STAYS TO CABLE

SOUTH END OF CABLE - KING RIVER A 100

	AZIM	R.D.
Δ5-29	87°54'	840 ✓
30	100°50'	810 ✓
31	330°22'	275 ✓
32	346°27'	239 ✓
33	9°45'	435 ✓
Δ5-Δ6	20°52'	638 ✓
Δ6-34	172°46'	530 ✓
35	146°56'	552 ✓
36	132°40'	✓
37	110°02'	745 ✓
38	100°52'	540 ✓
39	36°49'	365 ✓
40	308°57'	726 ✓
Δ6-Δ7	39°11'	795 ✓
Δ7-41	337°05'	760 ✓
42	128°52'	654 ✓
43	34°16'	174 ✓

Gibsons SUMP & PUMP

" Well & Wind mill

LINE SUMP #4

NORTH END OF CABLE

Well #5

POINT ON WALK 200' E. OF #6 WELL

S BANK OF RIVER 372' TO NORTH BANK

S " " " 350' " " "

Gibsons SUMP & PUMP

S BANK OF RIVER 445' S BANK

N " " "

Well #4

Chino Wells 675' to N-3 30750

N/S Fence bet Chino & Gottisborn

N BANK RIVER #125' wide

Well #3

	AZIM.	ROD
Δ7-Δ8	39°11'	726'
Δ8-44	20°36'	45'
45	345°19'	818'
46	353°25'	1017'
47	340°21'	975'
48	334°46'	1190'
49	37°33'	590'
50	191°49'	
Δ8-Δ9	71°43'	637'
Δ9-51	185°05'	615'
52	162°10'	450'
53	26°08'	406'
54	126°33'	540'
55	116°40'	698'
56	87°45'	740'
57	112°38'	816'

6-2-15

5

726
174
552
45
597

Well #2

Fence line

Angle northerly line 10+35

Gottisburn sump + well

G " windmill

Well #1

Gibson's sump pump

Point in field

N. Bank River H. 100'

" " " H. 150'

Line fence Allen's NW

N. Bank River H. 200 wide

" " " " "

Line fence Allen's SW

N. Bank River H. 200'

AZM, ROD

Δ9-Δ10 53°39' 800' ✓

Δ10-58 311°08' 272' ✓

59 347°16' 453' ✓

Δ10-Δ11 94°26' 420'

Δ11-60 104°30' 365'

Δ3-Δ12 258°39' 365' ✓

Δ12-61 316°46' 330'

Point in Allens Field

Allens Well

" Pump

Point in Gugliemetti Cow Lot

" Well-Pump

Point on Walk Line Lot 152 Lot 32

Wells on Emma Hoff

Boundary Line from Point 17
Mission Valley N 21° E

18+639

18+56 RIVER BANK NORTH

14+30 RIVER BANK

16+00

13+13 Fence

12+40.8 monument

5+08.5 Fence

3+42 Fence

1+66 Fence

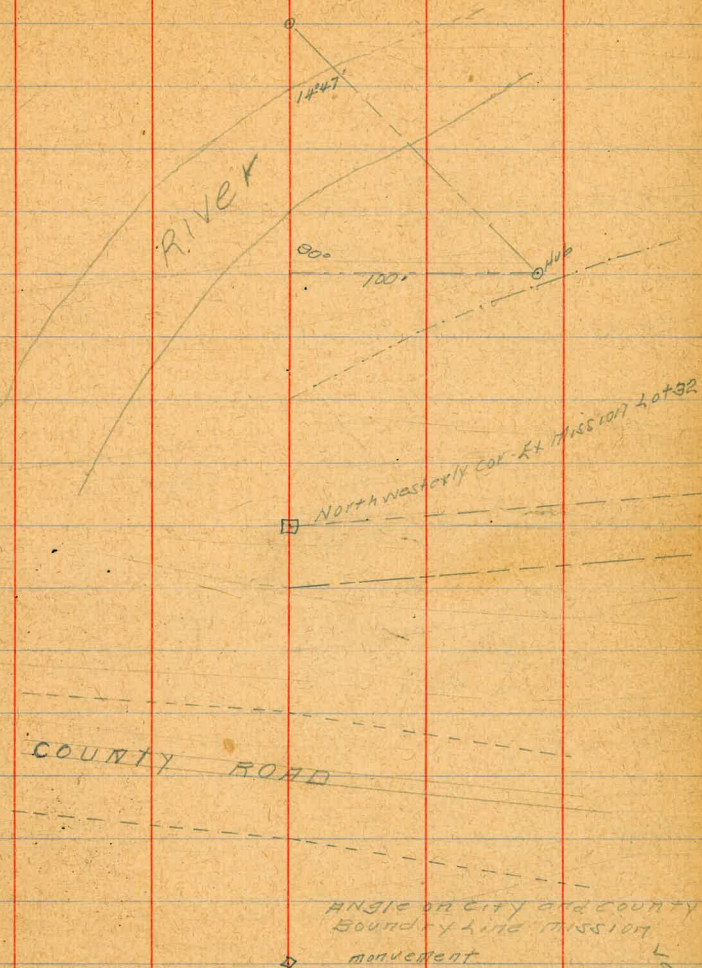
1+23.5 Fence

0+00 $\angle 11^{\circ}03'$

67-N

Huston
Shaw
Bunker

7



31729

32463 Fence

30437.94 Monument PL 1109

28413 Road-center

26450

25489 Fence

24480

6-8-15

6-8-15
HUSTON
SHOW
BUNKER



0
62+9987

M.C

0
51+50

6-9-15
N42°25'W 6-8-15

0
48+012

HUB 1029
C-466
Hatch survey

0
42+25

□
40+05

moment NW 5x7 153
247
□ 4x4 old cor.

0
37+50 NOON

6-9-15
HUSTON
CAILES
EVANS
SHOW

9

12+822⁰

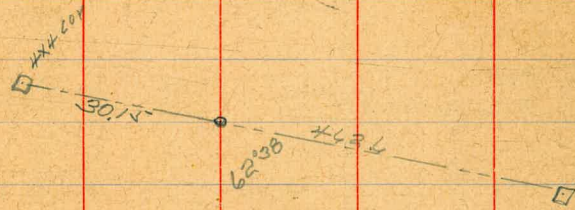
10+75⁰

4X4
11+626

462.6

East
0+00⁰
69+16⁰ 62'38"

67+40⁰



HUB 98
C. H. H. 40
Hatch 4

2225

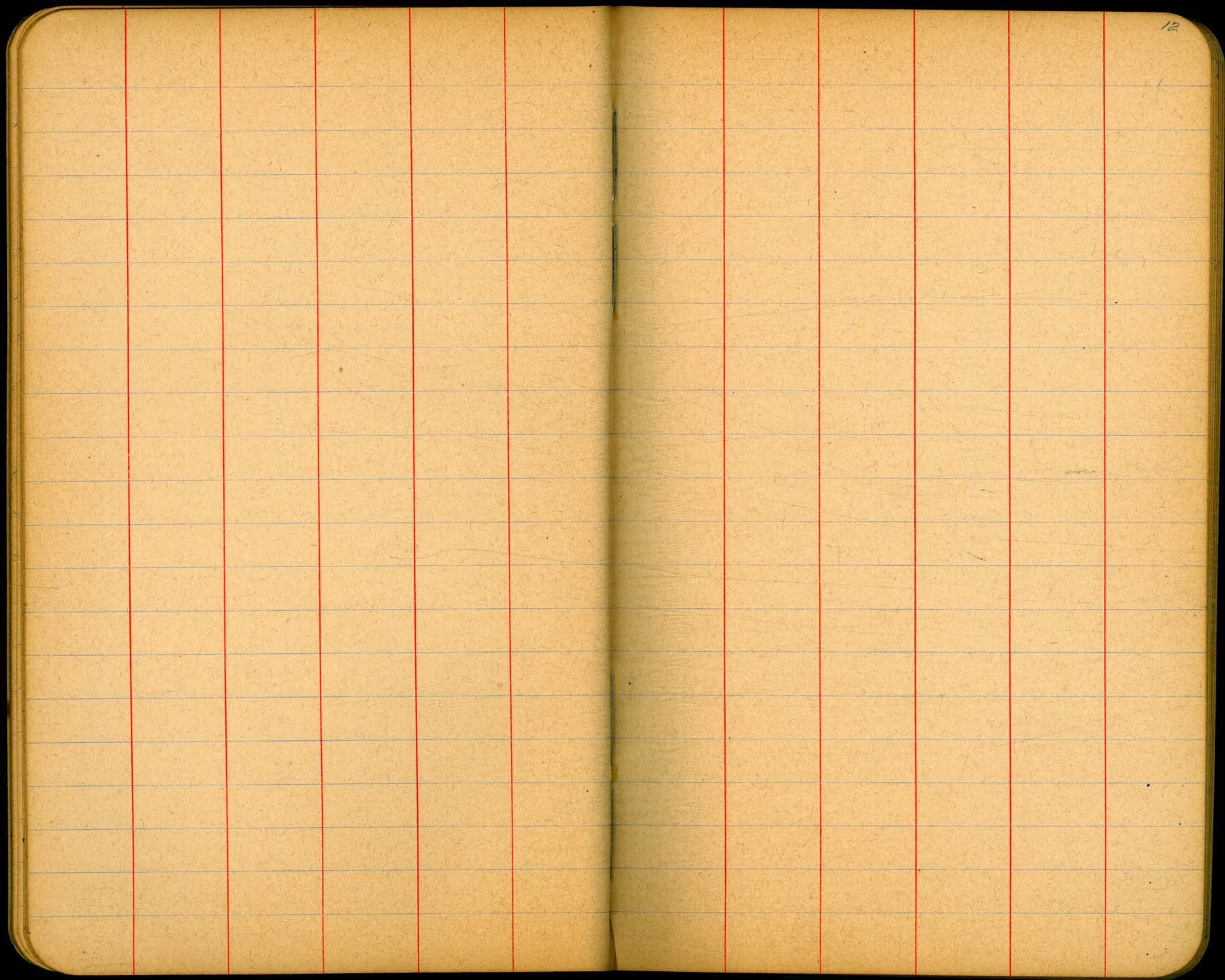
A

B

89° 45' 30"

18 + 63^I = 63

16 + 60^{2x}

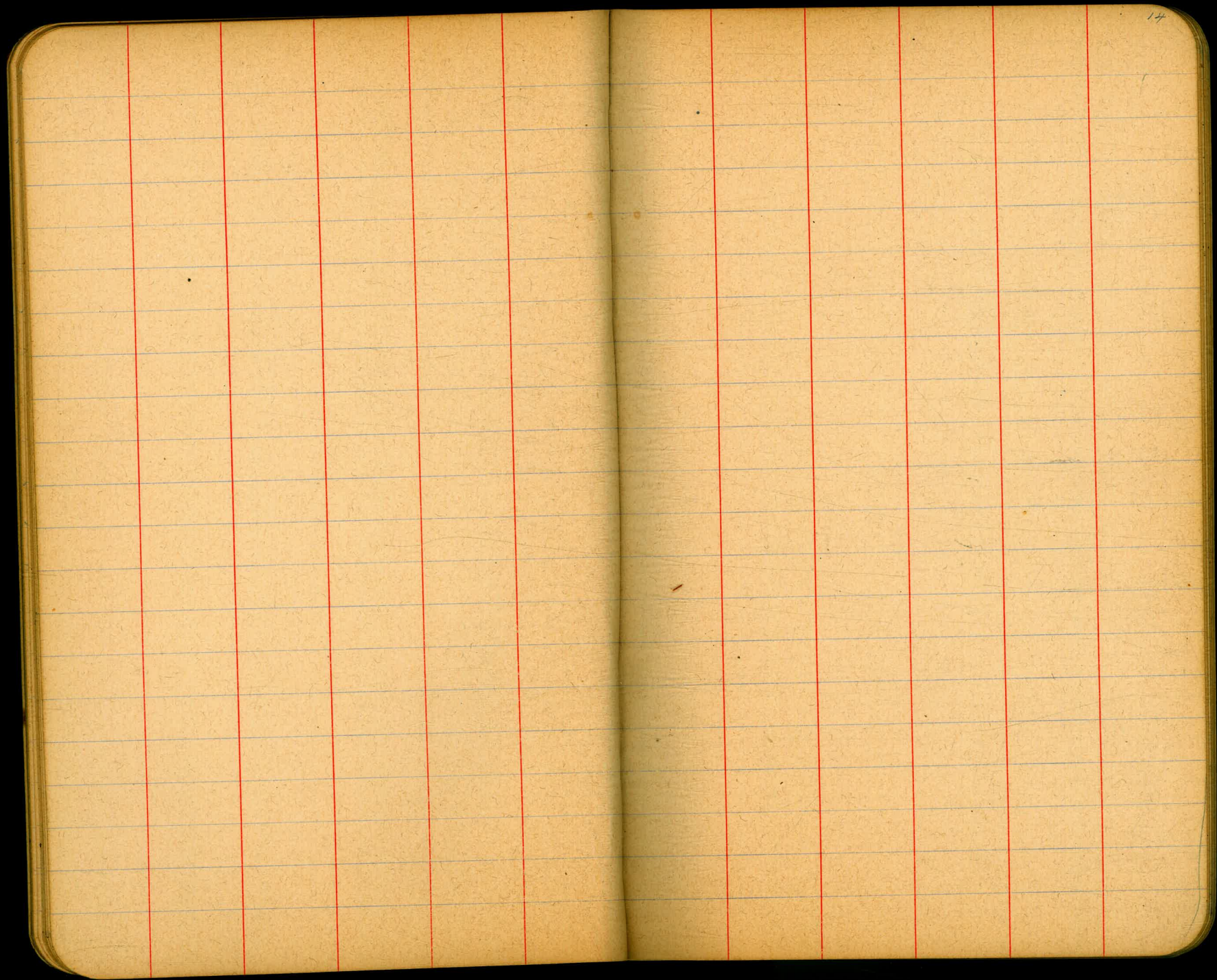


Huston 6-10-15 13
Childs
Evans
Shaw

17+16

0.27

0+00



14

F LINE OF 51 MISSISSIPPI LOT 45

Huston
Childs
Frans
Shaw

15

Tan

222014
295

887 5000

14780

147

8+63³ FENCE

8+21⁵ FENCE

1067⁴

0700

COUNTY ROAD

E-line Exm 40's 31-37 196

15+26¹ HVB south line city prop 30+32

14+84⁰82

11+30 Fence M^cDermott

8+97 Gas pipe

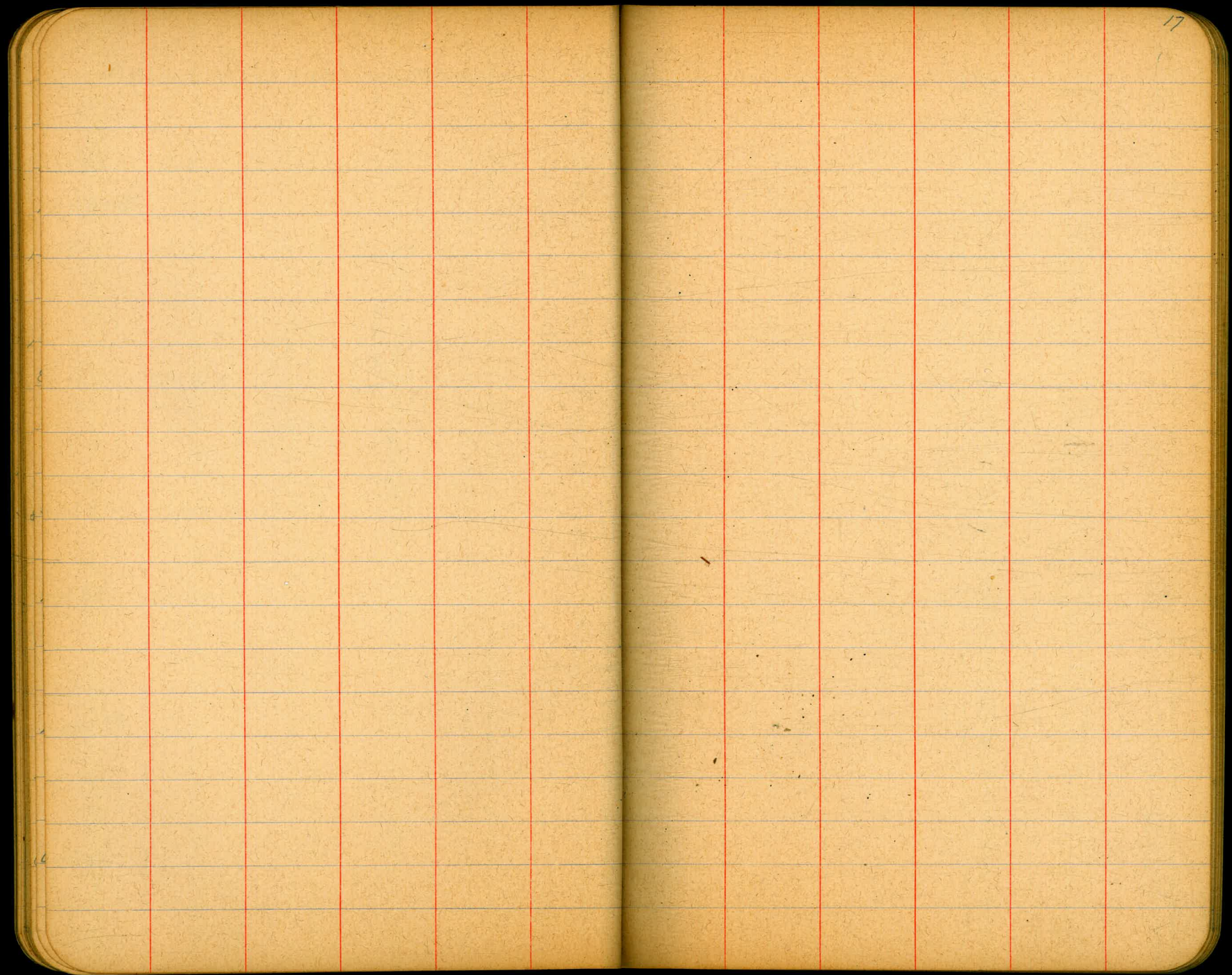
Gas pipe
oh

5+41 Fence

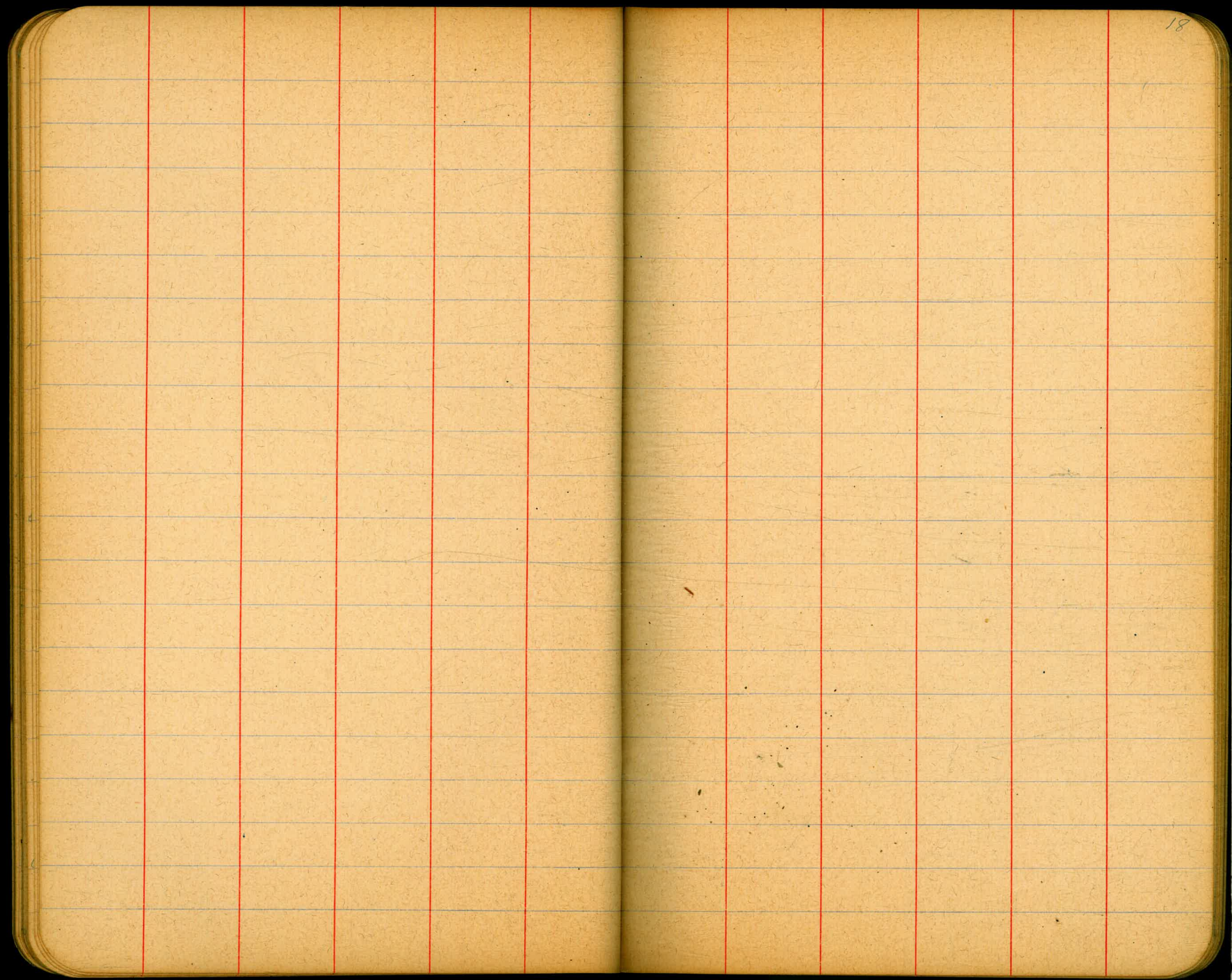
4+93 Fence

4+87⁵² HVB

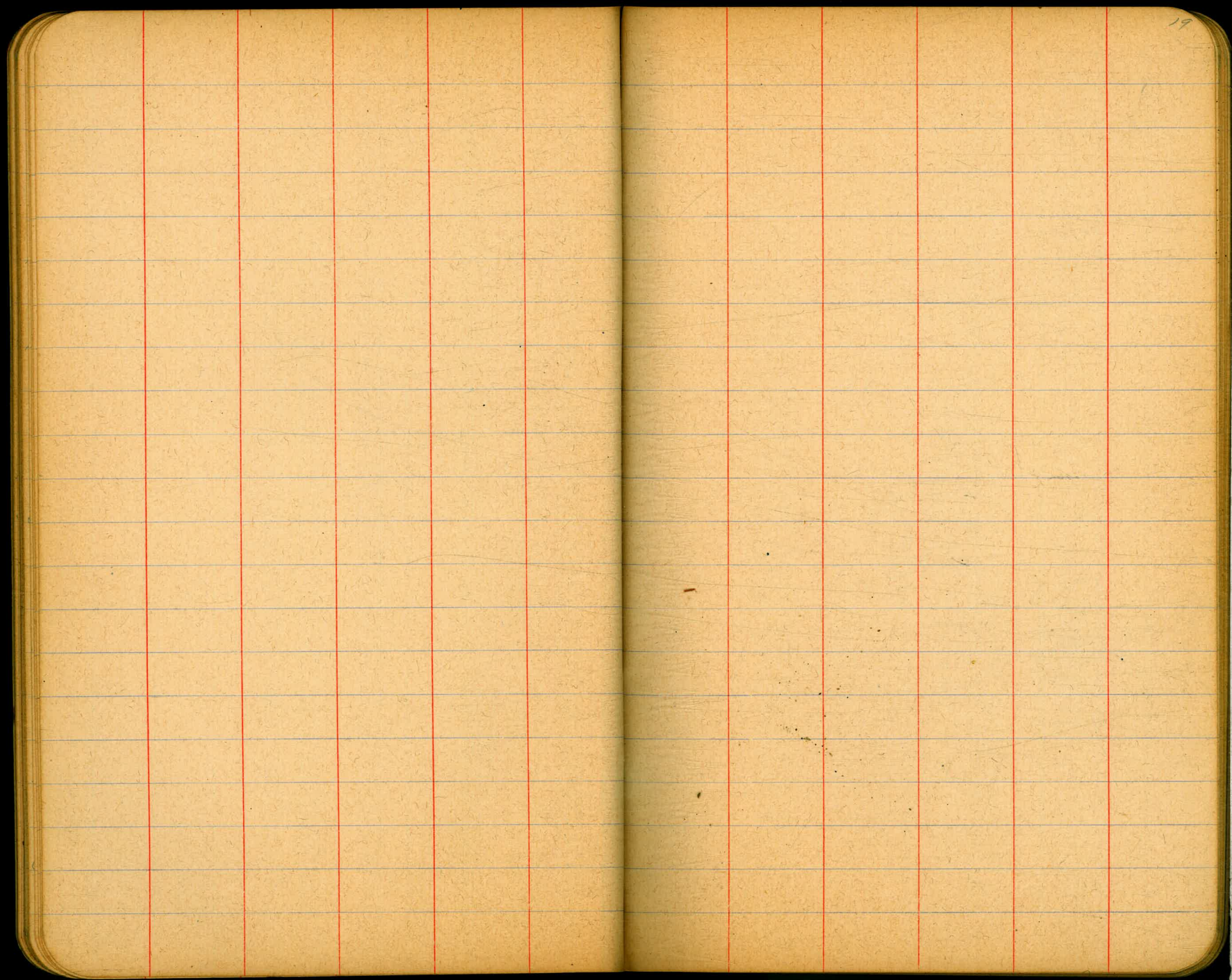
0+00

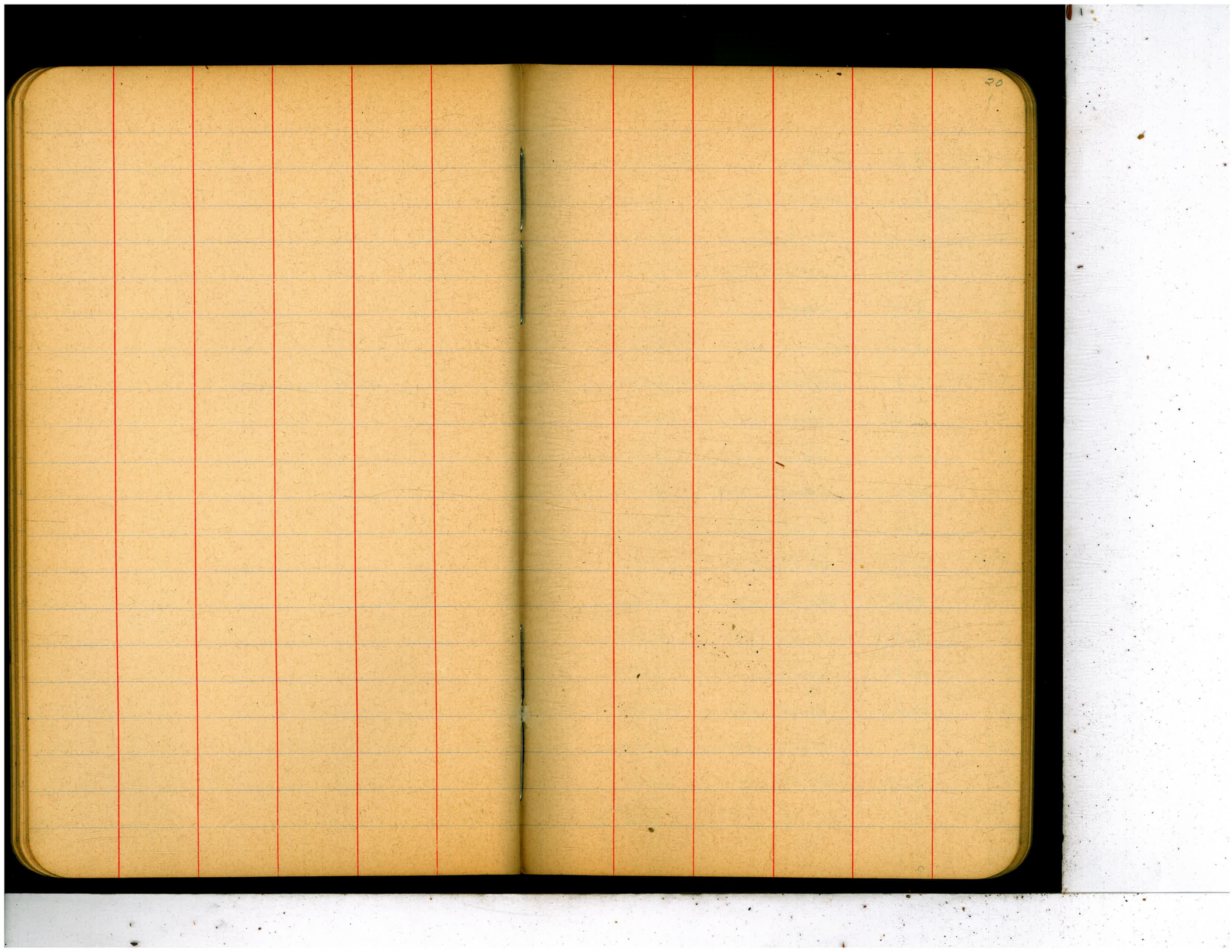


17



18





20

B. ITT.	3.10	349.15		346.03
T.P.	2.625	44.405	7.15	41.98
T.P.	0.28	34.645	10.24	34.365
T.P.	0.26	25.855	9.74	24.905
T.P.	0.43	15.245	11.05	14.815
T.P.	0.63	308.515	10.55	304.885
T.P.	1.14	949.45	11.71	293.805
T.P.	0.69	84.48	11.155	83.790
T.P.	0.59	74.64	10.41	74.07
T.P.	0.89	64.19	11.29	63.37
T.P.	0.61	52.34	12.46	51.73
T.P.	1.08	40.55	12.87	39.47
T.P.	0.98	30.32	11.21	29.34
T.P.	0.57	20.74	10.15	20.17
T.P.	0.19	10.34	10.57	10.17
T.P.	0.40	99.48	11.22	199.08
T.P.	0.10	87.38	12.20	87.28
T.P.	0.78	74.59	11.57	75.81
T.P.	0.35	67.69	9.26	67.33

Levels - To Pump House in
MISSION VALLEY

167.49

T.P.	0.53	56.84	11.67	156.02
T.P.	0.39	45.66	11.17	45.37
T.P.	0.09	35.38	10.37	35.29
T.P.	1.20	27.93	8.65	26.73
T.P.	1.13	20.20	8.86	19.07
T.P.	0.37	11.87	8.60	11.50
T.P.	-0.01	102.13	9.73	102.14
T.P.	0.03	92.47	9.69	92.44
T.P.	0.09	81.35	11.31	81.16
T.P.	0.78	71.69	10.34	70.91
T.P.	0.01	62.50	9.40	62.29
T.P.	0.58	53.52	9.36	52.94
T.P.	2.27	47.12	8.67	44.85
B.M.			2.12	45.00
T.P.	4.08	44.18	7.02	40.10
T.P.	3.92	42.46	5.64	38.54
T.P.	7.95	47.57	2.84	39.62
T.P.	4.07	48.93	2.71	44.86
T.P.	5.00	49.08	4.85	44.08

Nail in Tel Post

Nail in Power Pole S.E. Texas & Mission Valley Road

5-19-16

Huston
Maguire

23

		49.08		
T.P.	8.37	55.42	8.03	47.05
T.P.	10.37	64.65	10.4	54.38
T.P.	6.16	69.78	10.3	63.62
T.P.	0.17	59.22	10.73	59.05
B.M.	2.91	49.76	12.37	46.85
T.P.	0.46	44.72	5.50	44.36
T.P.	4.45	41.18	7.99	36.73
H.W.			5.87	35.61
B.M.			3.37	37.81
T.P.	3.24	40.59	3.85	37.33
B.M.	4.43	41.34	3.78	36.81
B.M.			3.97	37.27
	4.95	42.76		37.81
B.M.	4.94	43.15	4.50	38.31
B.M.			4.33	38.82

+ ON FLOOR OF PUMP HOUSE NO. 6 - R. SIDE

S. SIDE MAIN SHAR

Water level in River opp Pump House 5-19-16
1 P.M.

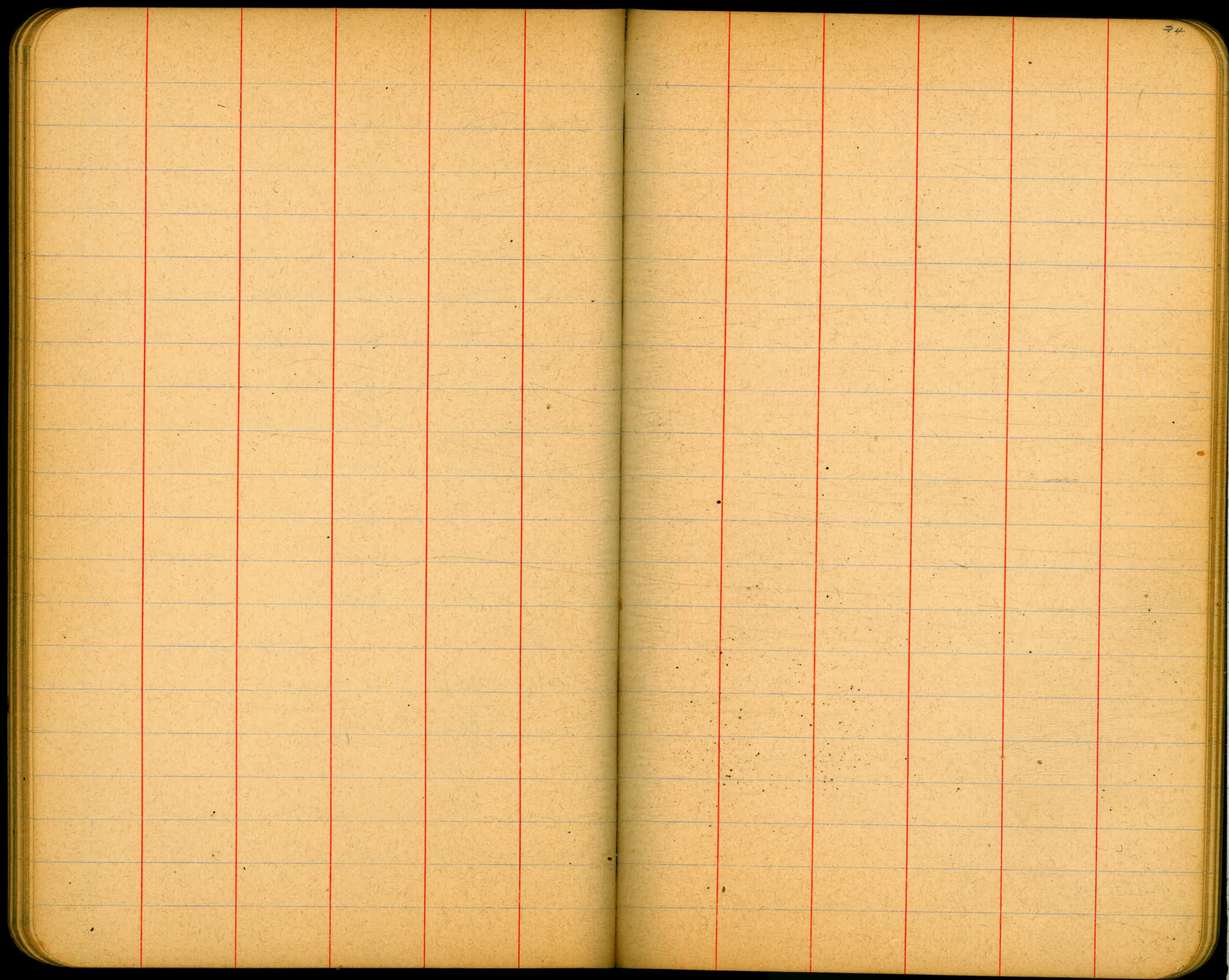
Hub 55' N of #10 well

Hub 80' N of #11 well

Hub 80' N of #12 well

Hub 175' N of #10 well

Hub 200' N of #13 well



Locating wells

stone 34' 14" N66°07' W

Hub 4°08' N31°53' W
N27°45' W

#1 line sump

N.W. COR EX-III LOT 32

June 1915

Childs
Evans
Shaw

3.31 ^{H.I.} 46.97 43.66

J.P. 3.56 43.41

J.P. 1.49 ^{H.I.} 45.32 3.14 43.83

J.P. 3.11 ^{H.I.} 43.64 4.79 40.53

J.P. 5.15 ^{H.I.} 45.68

~~3.02 42.66~~

8.66 37.02

J.P. 9.05 ^{H.I.} 49.58 40.53

39' contour

1

2

3

4

5

6

7

8

9

B.M. NE cor. base of Well No. 12

" S. East door frame " " "

" casing test well no. 2

hub. field north of River

top 4"x4" S.E. cor. well No. 15 same as 2013

water level nail post. near No. 1 side river
→ river reading no. 1

39' contour level.

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

29

30

R.C. 1

R.C. 2

R.C. 3

R.C. 4

39' contour level

Ring contour

11

11

4

8.18

HI.
49.58 995 39.63

top feed pipe at well. No 31 (new no.)

8.18 41.40

" " " near house (west pump stairs)

J.P. 2.76 50.32 2.02 47.56

rock point no. river

J.P. 2.83 47.99

4" x 4" on fence line north of river

J.P. HI.
4.69 48.52 43.83

43' cutout (ring cutout)

R.C. 1 near no. 12 pumping plant

R.C. 2

R.C. 3

R.C. 4

R.C. 5

R.C. 6

J.P. HI.
1203 54.69 42.66

43' cutout

- 1
- 2
- 3
- 4
- 5

47' cutline

1

2

3

4

51' cutline

1

2

3

4

J.P.

3.92

H.I.
55.54

3.07

51.62

Stump no. side of road.

43'

9.55

45.99

Top. feed pipe no. 16. Same as no 14

43' cutline

6

7

8

47' cutline

5

6

53.54 H.I.

498

30

51' contour

5

6

7.67 47.87

top crib well no. 15. new no.

53' contour

1

2

J.P.

3.95 ^{H.I.} 55.84 3.65 51.89

43' contour

9

10

5.50 50.34

top floor well (Kingsby)

47' contour 4.98

7

8

51' contour

7

55' contour

3

J.P.

5.16 ^{H.I.} 56.02 498 50.86

43' contour

top. dump post. SE. air. reservoir

11

12

13

14

15

16

17

J.P. low.

12.87 43.15

board walk east with 10

47' contour

9

10

11

12

13

37' contour

- 8
- 9
- 10
- 11
- 12
- 13

55' contour

- 4
- 5
- 6
- 7
- 8
- 9

9.22 46.82

8.95 47.07

J.P.

Ⓢ

(windmill)
top. drive well

well no. 16 east main
pumphouse

J.P.

13.08 ^{H.I.} 68.93 0.17 35.85

59' contour.

rock in front of pump house (main)

1

2

3

4

5

6

7

63' contour

1

2

3

4

67' contour

1

2

3

4

J.P. 5.09 ^{HI.} 72.76 1.26 67.67

- 1 59' contour

- 1 63' contour

- 1 67' contour

- 1 12.89 ^{HI.} 59.96 4 47.07

47' contour

14

15

16

17

18

19

20

51' contour

14

15

16

15.05 44.91

top curbing

well no. 17

13.17
13.88
15.05
59 05 51
8 10 14
9 11 15
10 12 16
13 17

51' contour

17

55' contour

10

11

12

13

59' contour

8

9

10

11

J.P.

contour

8.91 51.05

hub in field

J.P.

11.35

H.I.

70.59

0.62 59.34

rock in path so. of well no. 20

6.28

H.I.

75.59

1.28 69.31

63' contour

5

6

7

8

67' contour

5

6

7

8

71' contour

1

2

3

4

75' contour

1

J.P.

13.02

H.I.
64.07

51.05

51' contour

18

19

20

21

22

23

55' contour

14

15

16

17

59' contour

12

13

14

15

63' contour

9

10

11

12

J.P.

6.12 57.95

rock foot of point So. of river opposite no 5 well

J.P.

High train

1.30 62.77

" in lane

3.95 ^{H.I.} 47.10 43.15

4.84 42.26
2.77 44.33

water hole 111
top barrel so. of so. end of foot bridge
Test well no. 3 hub.

J.P. 6.37 ^{H.I.} 49.11 4.36 42.74

43' contour

18

19

20

21

22

3.82 45.27

4" x 4" Top

well Ore's lower (wind mill)

J.P. 6.56 49.42 6.25 42.86

1.42 48.00

4" x 4" Top

X piece well no 28
Chris ore place

43' contour

23

5.42 44.00

110 in water hole so. wind mill

J.P. 2.46 ^{H.I.} 49.15 2.73 46.69

43' contour

24

J.P. 4.90 50.64 3.41 45.74

J.P. 1.06 48.85 2.85 47.79

47' contour

21

22

23

24

J.P. 6.35 ^{H.I.} 53.51 1.69 47.16

- 0.52 54.03

47' contour

Stake near pumping station
River reading no 3 near pump house
top of 2" x 6" plank

25

J.P. 5.95 ^{H.I.} 54.79 4.67 48.84

Top stake east of No. 2 Pump. so.
of river.

26

27

51' contour

24

25

26

27

J.P.

3.97 50.82

J.P.

6.25 ^{HI.} 59.66 1.38 53.41

51' enclosure

28

29

30

31

32

33

34

35

36

37

38

J.P.

4.63 55.03

4th board east tel. Box west no. 3 pump house

J.P.

3.95 ^{HI.} 54.77 50.82

51' enclosure

39

to

Cor. board walk west no. 5 pump

Stake about 500' S.E. no. 5 ^{Sta.} near river bank

J.P. 2.59 ^{H.I.} 53.54 3.82 50.95
51' contour

Stake No. Pump. Sta. No. 5

40

J.P. 5.57 ^{H.I.} 53.82 5.29 48.25
51' contour

3" elbow best well No. 24 No. of No. 5 Pump. Sta.

41

42

43

44

45

46

47

J.P. low ~~in~~ ^{H.I.} 6.50 52.23 9.04 45.73
47' depression contour

Doc. 1

" 2

" 3

" 4

2.67 49.56

47' depression contour

test well no. 1 about 600' NW most
pumping sta. well

20.C. 5

20.C. 6

" 7

47' contour

28

29

30

31

32

33

34

35

36

37

38

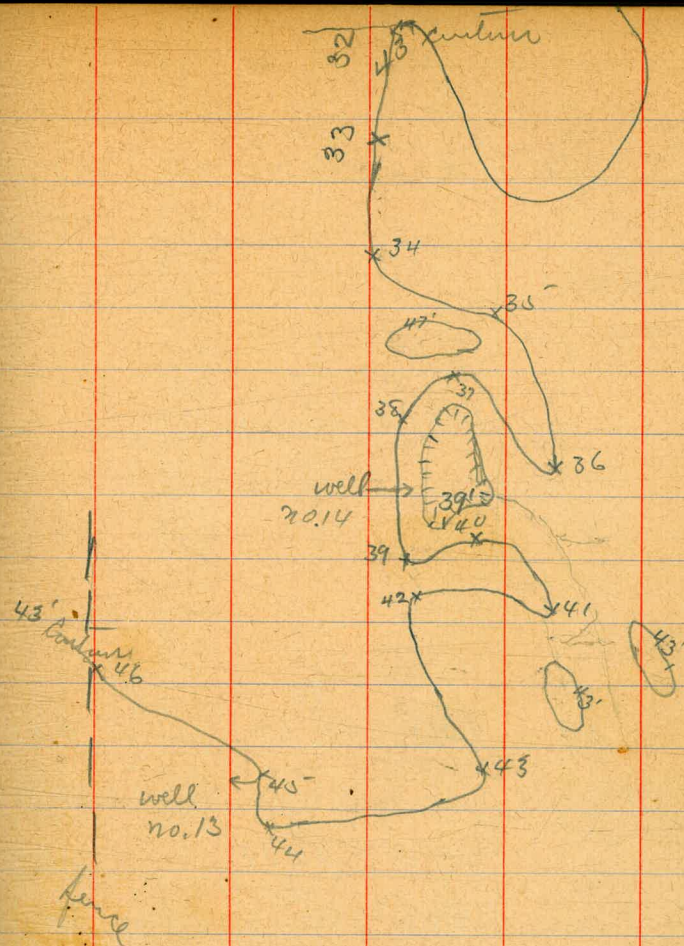
39

40

41

25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43

43' contour



43' pasture

44

45

46

47' pasture

42

43

44

45

46

47

48

J.S.

425

H.I.
68.30

> 57.05

8.14 47.16

water hole no 4 city prop no. of pump sta no. 6

J.P.

9.34

H.I.
72.11

62.77

J.P.

9.08

H.I.
80.13

1.06 71.05

rock in lane west of Gibsons.

67' pasture

9

10

11

12

71' contour

5

6

7

8

75' contour

2

3

4

5

79' contour

1

2

3

4

J.P.

10.00 ^{H.I.} 67.95

57.95

13.80 54.15

13.98 53.97

Well no. 19 (Gibson's windmill) 348

" no. 20 " well near house.

$\frac{59}{16}$ $\frac{63}{13}$ $\frac{67}{13}$
 11

53' contour

- 18
- 19
- 20
- 21
- 22
- 23

1.28

59' contour

- 16
- 17

63' contour

- 13
- 14

59
72

67' contour

- 13
- 14

J.P.			8.00	59.95
J.P.	12.92	HI.		
J.P.	high	79.59	128	66.67
J.P.		HI		
J.P.	10.47	84.16	590	73.69

71' contour

9

10

75' contour

6

7

79' contour

5

6

83' contour

1

2

3

J.P.

12.12 ^{H.I.} 72.07

59.95

59' contour

18

19

20

21

63' contour

15

16

17

67' contour

15

16

17

71' contour

11

12

13

rock

J.P

12.18 59.89

rock near so. bank of river

J.P

11.63

H.I.

83.00

0.70 71.37

J.P

8.89

H.I.

88.47

3.42 79.58

75' contour

8

rock

9

10

11

79' cuttings

7

8

9

10

83' cuttings

4

5

6

7

87' cuttings

1

2

3

J.P.

12.38 ^{H.I.} 72.27

59.89

59' cuttings

22

9.93 62.34

Test well

no 11

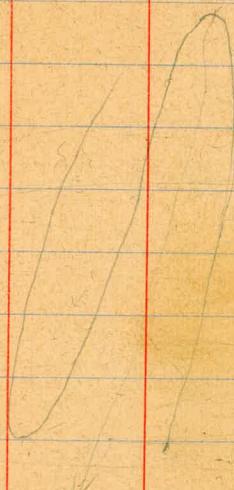
new no.

23

24

63-67 71
19 19 19
19 19 15

361



63' contour

18

19

20

67' contour

18

19

71' contour

14

15

63 ring contour

R.C. 1

" 2

" 3

" 4

J.P.

7.30

H.I.
75.96

12.87

59.40

3.61

68.66

well no. 21 south side river

fence post about 1200' n.w. Bridge

63
13
76

67 71 75
20 16 12

147

63' contour

21
22

67' contour

20
21

71' contour

16
17

75' contour

12
13
14

J.P. 11.13 ^{H.I.} 85.62 147 74.49

J.P. 4.06 71.90

J.P. 9.25 ^{H.I.} 91.94 293 82.69

79' contour

11
12
13

14

79' contour

8

9

10

11

87' contour

4

5

6

7

91' contour

1

2

3

4

83

8

10

87

4

6

91

1

3

J.P.

6.20 ^{H.I.} 78.10

71.90

63' contour

23

67' contour

22

71' contour

18

75' contour

15

J.P.

6.65

71.45

top of iron pier SE. cor. Bridge main
road to Escondido.

5.07

J.P. 4.18 ^{H.I.} 64.07 59.89

River reading 70.4. 6.21 57.86
55' contour

^{willow} tack in tree so. of river about 1000'
east of Gibson river reading
70.4.

24

^{rod}
water level 70.92

25

26

27

28

6.02 58.05 Test well no. 7 (east no. 1 pumping sta)

8.33 55.74 Test well no. 8 (near old engine)

59' contour

25

59' contour (Ring)

R.C. 1

" 2

" 3

" 4

" 5

59' Ring contour

1 RC

2 RC

3 RC

J.P.

H.I.
4.25 59.65 8.67 55.40

55' contour

29

30

J.P.

H.I.
5.35 60.75 55.40

59' contour

26

27

28

59' contour Ring around island
at bridge

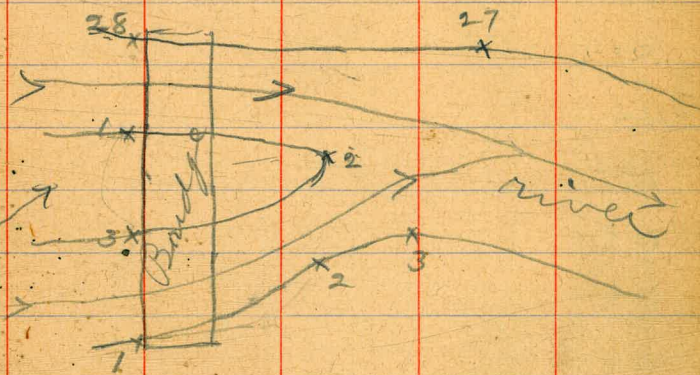
RC. 1

" 2

" 3

see diagram opposite

note - do not connect no 1 to no 3
as contour closes farther up river



55' culture

31

32

33

34

35

36

37

38

39

40

41

42

43

44

45

46

47

48

55' contour

49

50

51

52

53

North of River + East +

5.75

H.I.
77.20

71.45

5.35 71.85

J.P.

9.65 67.55

J.P.

3.34

H.I.
67.49

13.05 64.15

59' contour north of river

1

2

3

4

5

6

7

8

9

J.P.

6.25

H.I.

66.17

7.57 59.92

59' contour

10

J.P.

3.20 62.97

at well no 22 (Inglewenti Junction)

Murphy Canyon

Gov. Bench N.E. cor Bridge top steel
plate River reading no. 5

J.P.

5.81 ^{HI.} 62.92 9.06 57.11

8.45 54.37

Test well no. 6

5.9' contour

11

J.P.

9.58 ^{HI.} 67.17 5.33 57.59

just east

near test well no. 6

5.9' contour

12

13

J.P.

9.71 ^{HI.} 72.60 4.28 62.89

6.68 65.92

Test well no. 5 on 12" x 12" beam
of bridge

5.9' contour

14

15

16^x

17

J.P.

4.72 ^{HI.} 67.69 62.97

3.11 64.58

well no. 22 Englemont (junior)

J.P.

8.50

HI.

76.05

67.55

63' contour

1

2

3

67' contour

1

2

71' contour

1

2

75' contour

1

2

J.P.

contour

10.43

65.62

J.P.

high

11.90

HI.

87.49

0.46

75.59

J.P.

6.02

HI.

92.19

1.32

86.17

79' contour

1

2

63
15

10.43

77

15

92

83' contour

1

2

87' contour

1

2

91' contour

1

2

J.P

13.05 ^{H.I.} 78.67

65.62

63' contour

4

67' contour

3

4

71' contour

3

4

0.17

75' contour

3

4

J.P.

12.78 67.89

J.P.

12.66 ^{H.I.} 91.16 0.17 78.50

79' contour

3

4

83' contour

3

4

87' contour

3

4

91' contour

3

4

J.P

7.80 ^{HI} 75.69

67.89

63' contour

5

6

7

8

9

67' contour

5

6

71' contour

5

6

75' contour

5

6

1

5.87 69.82

water Hole 105
10" x 10" beam Gov. mark north side bridge
near allerts

J.P

1

12.89

^{HI} 85.62

2.96

72.73

12.89

12.89

J.P.

H.I.
5.83 90.98 0.47 85.15

79' contour

5

6

83' contour

5

6

87' contour

5

6

91' contour

5

6

West of Murphy Canyon

79' contour

1

2

3

4

83' contour ²/_{1.98}

1

2

3

4

87' contour

1

2

3

4

75' contour

1

2

3

4

J.P.

H.I.
6.27 72.19 65.92

59' contour

18

63' contour

10

67' contour

1

2

3

71' contour

1

2

3

4

J.P.

7.67 ^{HI.} 71.91 7.95 64.24

J.P.

contour

12.29 59.62

J.P.

10.20 ^{HI.} 80.60 1.57 70.40

J.P.

10.50 ^{HI.} 87.85 3.25 77.35

87' contour

5

6

7

8

J.P.

3.26 ^{HI.} 62.88 59.62

9.90 52.98

Test well no. 12

H.L.
6288

9.98 52.90

well no. 23 (new no.)

10.36 52.52

water hole no. 106

55' contour

54

55

56

57

58

59' contour

19

20

21

22

23

63' contour

11

12

13

14

15

J.P.

	HI		
12.85	75.40	0.33	62.55

J.P.

	HI		
9.97	83.76	1.61	73.79

67' contour

4

5

6

7

8

3.26	80.50
------	-------

above well (Wind mill)

71' contour

5

6

7

8

9

75' contour

5

6

7

8

9

79' contour

5

6

7

8

9

83' contour

5

6

7

8

9

J.P. 5.60 ^{H.I.} 84.07 5.29 78.47

J.P. 2.39 ^{H.I.} 73.53 12.93 71.14

J.P. 6.55 ^{K.I.} 68.07 12.01 61.52

rock.

55' contour

59

60

61

62

55' contour

63

64

65

66

67

59' contour

24

25

26

27

28

63' contour

16

17

18

19

20

21

1234

0.58

67' contour

9

10

11

12

13

14

J.P.

J.P.

J.P.

			12.33	55.74
		H.I.		
11.00	78.49	0.58	67.49	
		H.I.		
6.56	83.64	1.41	77.08	

71' contour

10

11

12

13

14

15

16

17

75' contour

10

11

12

13

14

15

16

17

79' contour

10

11

12

13

14

15

16

17

83' cuttings

10

11

12

13

14

15

16

17

J.P.

6.97

H.I.
62.71

55.74

J.P.

5.25

H.I.
56.47

11.49

51.22

11.50

44.97

4.82

51.65

11.48

44.99

J.P.

6.13

H.I.
54.96

7.64

48.83

8.70

46.26

check on test well no 1
going up =

5.46

49.50

49.56

water hole 107

Test well no. 9

water Hole 108

Well 24 new (new number)

J.P.

8.17. ^{KE} 63.91

55.74

J.P.

cont. today

1132 52.59

51' contour

48

49

50

51

52

55' contour

68

69

70

59' contour

29

30

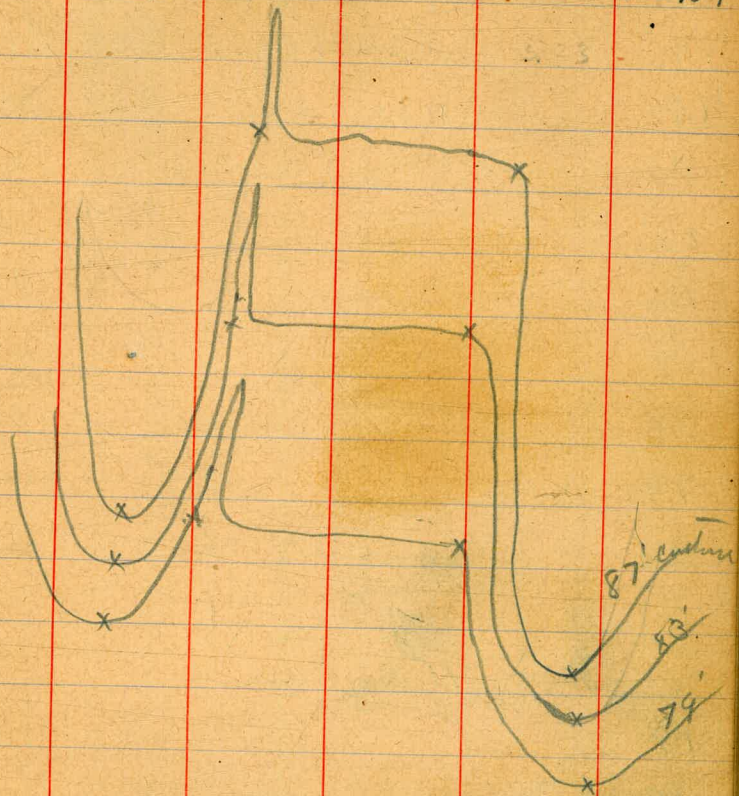
31

63' contour

22

23

24



crosses are where readings were taken

J.P.			3.23	58.68
J.P.	9.30	H.I. 70.59	2.62	61.29
J.P.	11.80	H.I. 80.39	2.00	68.59

67' contour

15

16

17

18

19

20

21

71' contour

18

19

20

21

22

23

24

Top pipe.

75' contour

18

19

20

21

22

23

24

79' contour

18

19

20

21

22

23

24

J.P. 7.38 ^{H.I.} 66.06 58.68

J.P. 3.57 ^{H.I.} 56.16 52.59

11.37 44.79

3.17 52.99

J.P. 11.94 ^{H.I.} 64.53 52.59

51' cutline

63' cutline

53

25

54

26

55

55' cutline

27

71

28

72

29

73

30

59' cutline

J.P. ^{8.85} cutline ^{H.I.} 63.02 10.36 54.17

32

J.P. 11.39 ^{H.I.} 63.95 10.46 52.56

33

34

35

36

37

Well no. 25 (new no) (Hoff.)

Well no. 26 (new no)

water hole 109

J.P. 12.82 ^{H.I.} 76.15 1.20 63.33

J.P. 9.55 ^{H.I.} 80.26 5.74 70.41

J.P. 0.45 79.81

^{H.I.} 63.98

57' contour

53

56

55' contour

74

75

59' contour

38

39

63' contour

31

32

J.P. 13.08 50.87

J.P. 12.72 ^{H.I.} 75.43 1.24 62.71

J.P. 6.26 ^{H.I.} 80.09 1.60 73.83

X for windmill 67' contour

22

23

24

25

71' contour

28

26

27

28

75' contour

25

26

27

28

79' contour

25

26

27

28

8.36 ^{H.I.} 59.23 50.87

J.P.

6.39 ^{H.I.} 64.23 139 57.84

51' contour

57

58

59

55' contour

76

77

78

59' contour

40

41

42

63' contour

33

34

35

J.P.

low.

11.87 52.36

J.P.

1302 ^{H.I.} 77.12 0.13 64.10

67' contour

26

27

28

71' contour

29

30

31

75' contour

29

30

31

J.P.

H.I.
11.54 63.90
51' contour

52.36

60

61

62

63

64

55' contour

79

80

81

82

83

59' contour

43

44

45

46

47

63' contour

36

37

38

39

40

J.P.

H.I.
12.86 76.45 0.31 63.59

67' contour

29

30

31

32

33

71' contour

32

33

34

35

36

75' contour

32

33

34

35

36

J.P.

1.85 ^{H.I.} 52.72

50.87

check

8.90 } 43.82
43.83

→ test well No 2 starting point

J.P.

1.78 ^{H.I.} 52.65

50.87

J.P.

3.55 ^{H.I.} 50.05 6.15 46.50

43' contour

1

2

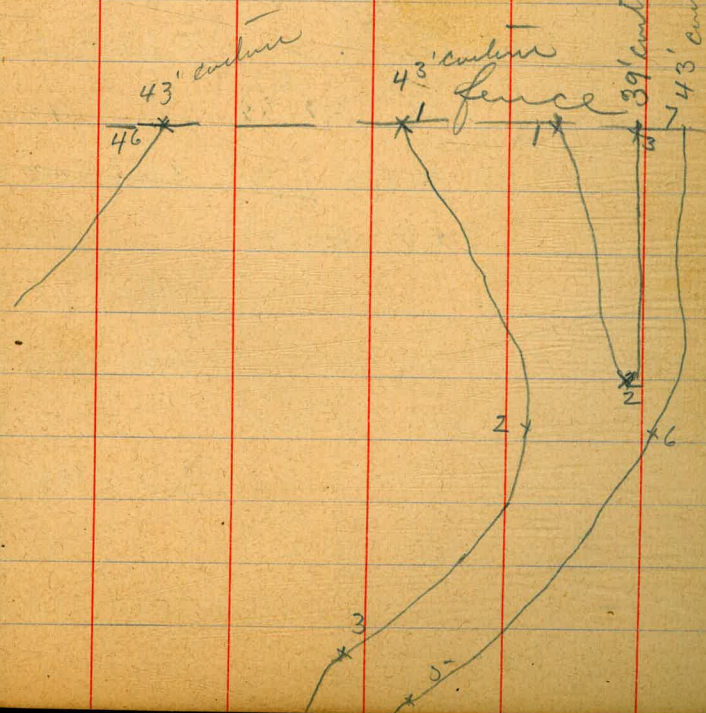
3

4

5

6

7



580 44.25

(new no)
well no. 29 (wind mill)

39' cutout

1

2

3

J.P. 11.60 ^{H.I.} 91.46 79.81

J.P. 5.05 ^{H.I.} 95.63 0.88 90.58

J.P. 0.44 ^{H.I.} 46.94 46.00

well no. 27 ^(new no)
on Hill (wind mill)

7.56 39.38

Test well no. 10 (new no.)

J.P. 8.48 ^{H.I.} 49.88 41.40

7.67 42.21

Well no. 30 ^{East pump sta.}
new no. (old pump sta)

J.P. 2.82 ^{H.I.} 45.48 42.66

4.60 40.88

water Hole 100

1.25 44.23

Well no. 13 new no.

J.P. 4.46 ^{H.I.} 50.45 45.99

6.59 43.86

Well no. 14 new no.

J.P. 7.71 ^{H.I.} 55.58 47.87

6.47 49.11

Well no. 32 (wind mill)

		H.I.	
+	1.02	51.88	50.86
Test Well no 13	8.44		43.44
River reading no. 2.	5.15		46.73
Test well no. 4	6.27		45.61
		H.I.	
	2.70	50.01	47.31
Water hole 101	8.03		41.98
water " 102	7.18		42.83
J.P.	8.75	H.I. 53.66	44.91
water hole 103 tack tree. very deep hole.	7.47		46.19
Well no. 18	4.89		48.77



8.25 1 to cor 44
11.41
15.85 2 to cor 36

	36	42	10.92	
	36		53.15	
	33		59.40	
	40		6.25	
	47			
	83		11	349
	64		28	2.70
	28		15	49
	17		18	
	8		22	4731
	42		23	
	434		14	
	295		11	
	729		7	
	72		4	
	70		154	
	1440		46	
	720		46	
	28720		30	
	40348		276	
	13200		9	
			10	
			295	

N16°11'W Δ11003 1240
 170
 107
 PASCOR 2730 W N17°W

412.7
 462.6
 107
 1402.1
 795
 174
 1.5
 1116

End of bridge 193+98
 120725 2 line 24 E 200
 205.5
 6
 7.5

125.4 20° 22' - 422
 44.00 Gw. RP 346
 53.57 RP 348
 5.94
 58.13
 18
 9
 300
 5000
 18
 80
 1400

37.54
 6.12
 43.66
 36.76
 6.12
 42.88
 716.10
 47

110
 302.13
 45.21
 6.12
 51.33
 no. 5

51.96
 6.12
 58.08
 710.1

1000
 240
 3600
 400
 1200
 5400
 1440
 13280
 10560
 2720
 7149
 280
 5
 500
 300

163
 1103
 2744
 1258
 915
 430
 124
 604
 1103
 460.6
 429.70
 83
 31
 4278
 43
 12
 58
 56
 76
 13
 54

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.
 ROADWAY 14 FEET WIDE. SIDE SLOPES 1½ 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

Calculated by Julien A. Hall, M. Am. Soc. C. E.

MADE IN GERMANY.

N16°11'W 211°03' 1240
 170
 107
 PASCO 2730' W N17°W

612.9
 463.6
 149.3

1402.1
 412.8

795
 174

1.25
 411.6

End of bridge 123478

123725 L.L. line 243 60m

125.420° 21.422

44.00 Gov. RP 346

53.57 RP 348

37.54
 6.12
 43.66

36.76
 6.12
 42.88

No. 10

110
 352.13

45.21
 6.12
 51.33

No. 5

1000
 240
 3600
 400
 1200
 5400
 1440
 13280
 10560
 2720

51.96
 6.12
 58.08

No. 1

7149

280
 5
 560300

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

ROADWAY 14 FEET WIDE. SIDE SLOPES 1 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

Calculated by Julien A. Hall, M. Am. Soc. C. E.

MADE IN GERMANY.