

Contour lines in Round
son, "Dam sites"
Page 1 to 51-1/2

Return to City Engineer's Office
City Hall, San Diego, Cal.

398

TRANSIT

F.B. 162

Table showing the difference of latitude and departure in running 80 chains at any course from 1 to 60 minutes.

| MINUTES | LKS. | MINUTES | LKS. | MINUTES | LKS. |
|---------|--------|---------|--------|---------|---------|
| 1 | 2 1/3 | 21 | 49 | 41 | 95 2/3 |
| 2 | 4 2/3 | 22 | 51 1/3 | 42 | 98 |
| 3 | 7 | 23 | 53 2/3 | 43 | 100 1/3 |
| 4 | 9 1/3 | 24 | 56 | 44 | 102 2/3 |
| 5 | 11 2/3 | 25 | 58 1/3 | 45 | 105 |
| 6 | 14 | 26 | 60 2/3 | 46 | 107 1/3 |
| 7 | 16 1/3 | 27 | 63 | 47 | 109 2/3 |
| 8 | 18 2/3 | 28 | 65 1/3 | 48 | 112 |
| 9 | 21 | 29 | 67 2/3 | 49 | 114 1/3 |
| 10 | 23 1/3 | 30 | 70 | 50 | 116 2/3 |
| 11 | 25 2/3 | 31 | 72 1/3 | 51 | 119 |
| 12 | 28 | 32 | 74 2/3 | 52 | 121 1/3 |
| 13 | 30 1/3 | 33 | 77 | 53 | 123 2/3 |
| 14 | 32 2/3 | 34 | 79 1/3 | 54 | 126 |
| 15 | 35 | 35 | 81 2/3 | 55 | 128 1/3 |
| 16 | 37 1/3 | 36 | 84 | 56 | 130 2/3 |
| 17 | 39 2/3 | 37 | 86 1/3 | 57 | 133 |
| 18 | 42 | 38 | 88 2/3 | 58 | 135 1/3 |
| 19 | 44 1/3 | 39 | 91 | 59 | 137 2/3 |
| 20 | 46 2/3 | 40 | 93 1/3 | 60 | 140 |

Return to City Engineers Office
City Hall, San Diego, Cal.
TABLE FOR RUNNING ON SLOPES.

In the following table the first column shows the angle, the second the number of links to be added to a chain on the slopes, to make one chain, horizontal measurement.

MICROFILMED

| Angle | COR. IN LINKS | Angle | COR. IN LINKS | Angle | COR. IN LINKS | Angle | COR. IN LINKS |
|-------|---------------|-------|---------------|-------|---------------|-------|---------------|
| 0 | | 0 | | 0 | | 0 | |
| 4 | 0.24 | 11 | 1.88 | 18 | 5.14 | 25 | 10.54 |
| 5 | 0.38 | 12 | 2.24 | 19 | 5.76 | 26 | 11.26 |
| 6 | 0.55 | 13 | 2.63 | 20 | 6.42 | 27 | 12.24 |
| 7 | 0.76 | 14 | 3.06 | 21 | 7.11 | 28 | 13.37 |
| 8 | 0.98 | 15 | 3.53 | 22 | 7.85 | 29 | 14.34 |
| 9 | 1.24 | 16 | 4.02 | 23 | 8.64 | 30 | 15.47 |
| 10 | 1.55 | 17 | 4.56 | 24 | 9.47 | 35 | 22.07 |

Return to City Engineers Office
City Hall, San Diego, Cal.

d'Hemecourt
Crowell
Fortiner
Doris

9-16-02

Contours in Round
Canyon City Park

| | Hor. | Vert. | Rpd | | |
|---------------------|---------------|--------|------|-----|---|
| Station 20+53 → 18' | | | | | |
| | Contour 110.0 | | | | |
| | 9° 20' L | 1° 15' | 2.25 | 225 | ✓ |
| | 17° 20' L | 2° 45' | 1.72 | 172 | ✓ |
| | 33° L | 3° | 1.08 | 108 | ✓ |
| | 67° 45' L | 5° | 0.63 | 63 | ✓ |
| | 126° L | 5° 30' | 0.63 | 62 | ✓ |
| | 162° L | 3° | 1.05 | 105 | ✓ |
| | 168° 10' L | 2° | 1.58 | 158 | ✓ |
| | 169° 40' L | 2° | 2.20 | 220 | ✓ |
| | 161° 30' R | 2° | 2.40 | 240 | ✓ |
| | 144° 20' R | 2° | 2.20 | 220 | ✓ |
| | 132° 20' R | 2° 15' | 1.80 | 180 | ✓ |
| | 120° 35' R | 2° 30' | 1.50 | 150 | ✓ |
| | 97° R | 2° 30' | 1.15 | 115 | ✓ |
| | 71° R | 2° 30' | 1.12 | 112 | ✓ |

10

| Hor. | Vert. | Rod | | | |
|----------------|--------|------|------|---|--|
| Contours 115.0 | | | | | |
| 76° 20' R | 4° | 1.25 | 1.25 | ✓ | |
| 100° 15' R | 4° | 1.25 | 1.25 | ✓ | |
| 123° R | 4° 15' | 1.65 | 1.65 | ✓ | |
| 133° 45' R | 4° 15' | 2.05 | 2.05 | ✓ | |
| 145° R | 3° 30' | 2.40 | 2.40 | ✓ | |
| 154° 45' R | 3° 30' | 2.80 | 2.80 | ✓ | |
| 162° 55' R | 2° 45' | 3.40 | 3.40 | ✓ | |
| 174° 10' L | 2° 45' | 2.12 | 2.12 | ✓ | |
| 162° 30' L | 3° 45' | 1.78 | 1.78 | ✓ | |
| 155° 55' L | 5° | 1.25 | 1.25 | ✓ | |
| 134° 45' L | 6° 15' | 0.90 | 89 | ✓ | |
| 94° 10' L | 7° 15' | 0.75 | 74 | ✓ | |
| 55° 25' L | 7° 30' | 1.20 | 118 | ✓ | |
| 33° 15' L | 7° 15' | 1.40 | 138 | ✓ | |
| 22° 35' L | 5° 30' | 1.70 | 168 | ✓ | |
| 15° 50' L | 4° 15' | 2.15 | 215 | ✓ | |
| 10° 55' L | 3° 15' | 2.62 | 262 | ✓ | |

| Hor. | Vert. | Rod | | |
|---------------|----------|------|-----|---|
| Contour 120.0 | | | | |
| 17° | L 4' | 2.32 | 232 | ✓ |
| 25° | L 4° 45' | 1.82 | 182 | ✓ |
| 39° 15' | L 5° 30' | 1.48 | 147 | ✓ |
| 56° 10' | L 7° | 1.40 | 139 | ✓ |
| 67° 30' | L 8° | 1.50 | 147 | ✓ |
| 84° 30' | L 8° 30' | 1.00 | 98 | ✓ |
| 112° 45' | L 9° | 1.05 | 102 | ✓ |
| 138° 45' | L 6° 45' | 1.25 | 123 | ✓ |
| 154° | L 5° 45' | 1.62 | 160 | ✓ |
| 159° 30' | L 4° 30' | 2.15 | 215 | ✓ |
| 163° | L 3° 30' | 2.52 | 252 | ✓ |

| | | | | |
|---------------|----------|------|-----|---|
| Contour 125.0 | | | | |
| 159° 45' | L 5° | 2.50 | 250 | ✓ |
| 153° 55' | L 5° 45' | 2.00 | 198 | ✓ |
| 143° 30' | L 7° 45' | 1.58 | 155 | ✓ |
| 123° 5' | L 9° | 1.30 | 127 | ✓ |
| 99° 35' | L 10° | 1.12 | 109 | ✓ |

| Hor. | Vert. | Rod | | |
|------------|--------|------|-----|---|
| 77° 55' L | 9° 45' | 1.32 | 128 | ✓ |
| 71' L | 9° 30' | 1.55 | 151 | ✓ |
| 53° 52' L | 8° 30' | 1.50 | 147 | ✓ |
| 35° L | 7° | 1.70 | 167 | ✓ |
| 25° 30' L | 6° | 2.05 | 203 | ✓ |
| 20° 15' L | 5° | 2.42 | 242 | ✓ |
| 84° R | 8° | 1.45 | 142 | ✓ |
| 99° 35' R | 8° 15' | 1.62 | 159 | ✓ |
| 116° 10' R | 6° | 1.80 | 178 | ✓ |
| 129° 10' R | 5° 30' | 2.22 | 220 | ✓ |
| 141° 10' R | 4° 30' | 2.62 | 262 | ✓ |
| 145° 15' R | 4° 30' | 2.95 | 295 | ✓ |
| 153° R | 3° 30' | 3.42 | 342 | ✓ |
| 159° 30' R | 3° 15' | 3.55 | 355 | ✓ |

Contour 120.0

| | | | | |
|------------|--------|------|-----|---|
| 161° 45' R | 2° 45' | 3.50 | 350 | ✓ |
| 153° 35' R | 2° 45' | 3.25 | 325 | ✓ |
| 146° 15' R | 3° 30' | 2.65 | 265 | ✓ |

| Hor. | Vert. | Rad- | | | |
|-----------|-------|------|-----|---|--|
| 157°30' R | 3°45' | 2.40 | 240 | ✓ | |
| 129°5' R | 4°30' | 2.05 | 205 | ✓ | |
| 118°45' R | 5° | 1.70 | 170 | ✓ | |
| 100°35' R | 5°30' | 1.40 | 139 | ✓ | |
| 77°45' R | 6°30' | 1.32 | 130 | ✓ | |

Sta. 25 + 75 → 24

Contour 100.0

| | | | | | |
|----------|-------|------|-----|---|--|
| 5°30' L | 1° | 3.30 | 330 | ✓ | |
| 3°30' L | 1° | 2.70 | 270 | ✓ | |
| 0°15' R | 1° | 2.20 | 220 | ✓ | |
| 9°45' R | 1° | 1.80 | 180 | ✓ | |
| 28°5' R | 2° | 1.70 | 170 | ✓ | |
| 29°5' R | 2° | 1.25 | 125 | ✓ | |
| 23°25' R | 3°15' | 0.78 | 78 | ✓ | |
| 46°25' R | 6°15' | 0.48 | 47 | ✓ | |
| 24°45' R | 6°15' | 0.90 | 89 | ✓ | |
| 35°35' R | 2°45' | 1.42 | 142 | ✓ | |
| 28°45' R | 2° | 1.80 | 180 | ✓ | |
| 9°30' R | 1°30' | 2.10 | 210 | ✓ | |

| Hor. | Vert. | Rod | | |
|---------|--------|------|-----|---|
| 1° 5' R | 1° 30' | 2.55 | 255 | ✓ |
| 2° L | 1° 30' | 3.00 | 300 | ✓ |

Contour 105.0

| | | | | |
|------------|--------|------|-----|---|
| ① 6° 45' R | 1° | 2.78 | 278 | ✓ |
| 14° 25' R | 1° | 2.22 | 222 | ✓ |
| 33° R | 2° | 1.82 | 182 | ✓ |
| 42° 30' R | 1° 45' | 1.35 | 135 | ✓ |
| 44° 25' R | 3° 30' | 0.80 | 80 | ✓ |
| 76° 50' R | 2° 15' | 0.54 | 53 | ✓ |
| 110° 45' R | 7° 30' | 0.68 | 67 | ✓ |
| 130° 30' R | 4° 15' | 0.95 | 95 | ✓ |
| 145° 55' R | 2° | 1.25 | 125 | ✓ |
| 165° 15' R | 0° 30' | 1.70 | 170 | ✓ |
| 176° 45' R | 1° 30' | 1.62 | 162 | ✓ |
| 153° 30' R | 1° | 1.15 | 115 | ✓ |
| 140° 55' R | 3° 30' | 0.75 | 75 | ✓ |
| 106° 30' R | 8° 15' | 0.35 | 34 | ✓ |
| 34° R | 7° 30' | 0.38 | 37 | ✓ |

| Hor. | Vert. | Rod | | |
|----------|-------|------|-----|---|
| 16°35' R | 3°45' | 0.80 | 80 | ✓ |
| 23° R | 3° | 1.40 | 140 | ✓ |
| 7°30' R | 2° | 1.72 | 172 | ✓ |
| 2°25' L | 1°30' | 2.25 | 225 | ✓ |

✓ Contain 110.0

| | | | | |
|-----------|-------|------|-----|---|
| 7° L | 0°45' | 2.35 | 235 | ✓ |
| 8°45' L | 0°45' | 1.78 | 178 | ✓ |
| 6°10' L | 0°30' | 1.30 | 130 | ✓ |
| 1°45' L | 0°30' | 0.80 | 80 | ✓ |
| 0°15' L | 1°30' | 0.30 | 30 | ✓ |
| 174° R | 1°15' | 0.40 | 40 | ✓ |
| 176° R | 1°30' | 1.05 | 105 | ✓ |
| 171°30' R | 1°30' | 1.35 | 135 | ✓ |
| 155°30' R | 0°0' | 1.62 | 162 | ✓ |
| 137°45' R | 0°0' | 1.30 | 130 | ✓ |
| 108°50' R | 0°30' | 0.82 | 82 | ✓ |
| 75°45' R | 0°30' | 0.88 | 88 | ✓ |
| 57°50' R | 0°30' | 1.35 | 135 | ✓ |

| Hon. | Vert. | Rod | | |
|-----------|--------|------|-----|---|
| 40° 50' R | 0° 30' | 1.72 | 172 | ✓ |
| 33° 15' R | 0° 30' | 2.15 | 215 | ✓ |
| 24° 15' R | 0° 0' | 2.50 | 250 | ✓ |
| 16° 20' R | 0° 0' | 2.85 | 285 | ✓ |

Contour 115.0

| | | | | |
|------------|--------|------|-----|---|
| 33° 20' R | 0° 45' | 2.35 | 235 | ✓ |
| 42° 5' R | 0° 45' | 2.00 | 200 | ✓ |
| 49° 15' R | 1° 45' | 1.88 | 188 | ✓ |
| 62° 45' R | 1° 45' | 1.60 | 160 | ✓ |
| 75° R | 1° 30' | 1.32 | 132 | ✓ |
| 94° 15' R | 2° 15' | 1.25 | 125 | ✓ |
| 115° 25' R | 2° | 1.32 | 132 | ✓ |
| 134° 40' R | 2° 15' | 1.68 | 168 | ✓ |
| 149° 45' R | 0° 45' | 1.82 | 182 | ✓ |
| 159° 35' R | 0° 30' | 2.25 | 225 | ✓ |

| Hor. | Vert. | Rod | | |
|----------|-------|-------|-----|---|
| Contours | | 120.0 | | |
| 156°35'R | 2°15' | 2.32 | 232 | ✓ |
| 146°40'R | 2°15' | 1.95 | 195 | ✓ |
| 137°8'R | 2°15' | 1.75 | 175 | ✓ |
| 121°05'R | 2°15' | 1.68 | 168 | ✓ |
| 107°35'R | 3°30' | 1.50 | 150 | ✓ |
| 88°30'R | 3°30' | 1.42 | 142 | ✓ |
| 69°35'R | 3°30' | 1.52 | 152 | ✓ |
| 55°25'R | 3°30' | 1.80 | 180 | ✓ |
| 42°5'R | 1°30' | 2.08 | 208 | ✓ |
| 34°45'R | 1°30' | 2.48 | 248 | ✓ |
| 30°15'R | 2° | 2.70 | 270 | ✓ |
| 26°15'R | 2° | 3.10 | 310 | ✓ |

| | | | | |
|----------|-------|-------|-----|---|
| Contours | | 125.0 | | |
| 32°30'R | 2°45' | 2.75 | 275 | ✓ |
| 37°15'R | 3° | 2.50 | 250 | ✓ |
| 46°37'R | 3°30' | 2.20 | 220 | ✓ |
| 54°30'R | 3°30' | 2.00 | 200 | ✓ |

| Hor. | Vert. | Rod | | |
|---------------|---------|------|-----|---|
| 66°5'R | 4° | 1.75 | 175 | ✓ |
| 76°35'R | 4° | 1.62 | 162 | ✓ |
| 96°35'R | 4°15' | 1.58 | 158 | ✓ |
| 107°10'R | 4°15' | 1.78 | 178 | ✓ |
| 115°5'R | 4° | 2.12 | 212 | ✓ |
| 127°30'R | 4° | 2.00 | 200 | ✓ |
| 138°30'R | 4° | 2.00 | 200 | ✓ |
| 148°25'R | 4° | 2.20 | 220 | ✓ |
| 153°40'R | 3° | 2.42 | 242 | ✓ |
| 122°20'L | 17°45' | 0.40 | 36 | ✓ |
| 65°45'L | 19°15' | 0.55 | 49 | ✓ |
| 35°45'L | 9°30' | 0.85 | 83 | ✓ |
| 25°5'L | 6°30' | 1.40 | 138 | ✓ |
| 22°45'L | 6° | 1.82 | 180 | ✓ |
| Bontrou 120.0 | | | | |
| 15°45'L | 4°45' | 1.72 | 172 | ✓ |
| 19°5'L | 5° | 1.30 | 130 | ✓ |
| 32° | L 5°15' | 0.75 | 74 | ✓ |

| Hor. | Vert. | Rod | | |
|-----------|--------|------|----|---|
| 54°10' L | 18° | 0.37 | 33 | ✓ |
| 130°50' L | 15°30' | 0.30 | 28 | ✓ |

Contour 115.0

| | | | | |
|----------|----------|------|-----|---|
| 147° | L 11°15' | 0.25 | 24 | ✓ |
| 54°15' L | 11°45' | 0.18 | 17 | ✓ |
| 27°15' L | 6°30' | 0.55 | 54 | ✓ |
| 12°15' L | 4°45' | 0.92 | 92 | ✓ |
| 13°50' L | 2°30' | 1.40 | 140 | ✓ |
| 11°10' L | 1°15' | 2.00 | 200 | ✓ |
| 11°30' L | 1°15' | 2.30 | 230 | ✓ |

Sta. 30 → 27

Contour 110.0

| | | | | |
|----------|-------|------|-----|---|
| 6°55' L | 0°30' | 2.50 | 250 | ✓ |
| 13°45' L | 0°45' | 1.90 | 190 | ✓ |
| 17°45' L | 0°30' | 1.35 | 135 | ✓ |
| 28°35' L | 0°45' | 0.92 | 92 | ✓ |
| 46°15' L | 1° | 0.58 | 58 | ✓ |

| Hon. | Vert. | Rod | | |
|------------|--------|------|-----|---|
| 55° 15' L | 2° 45' | 0.12 | 12 | ✓ |
| 121° 30' R | 0° 30' | 0.38 | 38 | ✓ |
| 128° 10' R | 0° 30' | 0.90 | 90 | ✓ |
| 145° 55' R | 0° 30' | 1.38 | 138 | ✓ |
| 162° R | 0° 30' | 1.70 | 170 | ✓ |
| 171° 35' R | 1° | 2.05 | 205 | ✓ |
| 176° 50' R | 1° 30' | 3.00 | 300 | ✓ |
| 172° R | 1° 30' | 2.25 | 225 | ✓ |
| 163° R | 1° | 1.80 | 180 | ✓ |
| 140° 35' R | 0° 30' | 1.35 | 135 | ✓ |
| 105° R | 0° 15' | 0.70 | 70 | ✓ |
| 49° 20' R | 0° 0' | 0.22 | 22 | ✓ |
| 5° L | 0° 0' | 0.65 | 65 | ✓ |
| 6° 25' L | 0° 15' | 1.40 | 140 | ✓ |
| 2° L | 0° 15' | 2.20 | 220 | ✓ |
| 11° 50' R | 1° | 2.50 | 250 | ✓ |
| 13° 55' R | 1° | 3.20 | 320 | ✓ |
| 15° R | 0° 45' | 3.65 | 365 | ✓ |

| Hor. | Vert. | Rod | | |
|-----------------|-------|------|-----|---|
| Continued 115.0 | | | | |
| 24°45' R | 2° | 1.82 | 182 | ✓ |
| 43°20' R | 2°30' | 1.20 | 120 | ✓ |
| 73°45' R | 2°30' | 0.72 | 72 | ✓ |
| 116°30' R | 2°30' | 1.10 | 110 | ✓ |
| 146°20' R | 1°15' | 1.70 | 170 | ✓ |
| 151°5' R | 1°15' | 2.05 | 205 | ✓ |
| 157°15' R | 1°30' | 2.65 | 265 | ✓ |
| 179°50' L | 2°15' | 1.90 | 190 | ✓ |
| 179°30' L | 2°30' | 1.22 | 122 | ✓ |
| 178° R | 3°45' | 0.60 | 60 | ✓ |
| 96°20' L | 4° | 0.23 | 23 | ✓ |
| 55°35' L | 5° | 0.58 | 58 | ✓ |
| 32°35' L | 3° | 1.00 | 100 | ✓ |
| 22°20' L | 1°45' | 1.45 | 145 | ✓ |
| 16°15' L | 1°45' | 1.95 | 195 | ✓ |
| 11°25' L | 1° | 2.55 | 255 | ✓ |
| 7°10' L | 1° | 3.10 | 310 | ✓ |

| Hor. | Vert. | Pod' | | |
|------------|----------|-------|-----|---|
| Contours | | 120.0 | | |
| 7° | + 1° 30' | 3.52 | 352 | ✓ |
| 11° 40' L | 1° 30' | 3.00 | 300 | ✓ |
| 17° 15' L | 1° 30' | 2.10 | 210 | ✓ |
| 7° | + 2° 30' | 1.70 | 170 | ✓ |
| 39° 30' L | 3° 30' | 1.00 | 100 | ✓ |
| 74° 15' L | 7° 45' | 0.52 | 51 | ✓ |
| 144° 15' L | 7° 15' | 0.50 | 49 | ✓ |
| 163° | + 5° 15' | 0.95 | 94 | ✓ |
| 168° 30' L | 4° 15' | 1.50 | 150 | ✓ |
| 168° 15' L | 4° 30' | 2.00 | 200 | ✓ |
| 169° 15' L | 3° 45' | 2.45 | 245 | ✓ |

| | | | | |
|----------|------------|---------|------|----|
| Contours | | 125.0 | | |
| † | 163° 30' L | 5° | 240 | ✓ |
| | 164° | + 5° | 185 | ✓ |
| | 160° 45' L | 5° | 135 | ✓ |
| | 140° 30' L | 9° 15' | 0.75 | 73 |
| | 94° 55' L | 11° 30' | 0.65 | 62 |

| Hor. | Vert. | Pod | | |
|----------|-------|------|-----|---|
| 59°10' L | 8° | 0.95 | 93 | ✓ |
| 38°10' L | 5°15' | 1.40 | 139 | ✓ |
| 27°15' L | 4° | 1.85 | 185 | ✓ |
| 18°30' L | 3°15' | 2.42 | 242 | ✓ |
| 14°45' L | 2°30' | 3.00 | 300 | ✓ |
| 9° L | 2°15' | 3.45 | 345 | ✓ |
| 5°15' L | 2°15' | 3.90 | 390 | ✓ |

Continued 120.0

| | | | | |
|-----------|-------|------|-----|---|
| 29°45' R | 3°30' | 1.72 | 172 | ✓ |
| 39°25' R | 3°30' | 1.47 | 147 | ✓ |
| 62°15' R | 4° | 1.20 | 120 | ✓ |
| 88°40' R | 4°15' | 1.00 | 100 | ✓ |
| 112°5' R | 4°30' | 1.17 | 117 | ✓ |
| 122°25' R | 4°15' | 1.38 | 138 | ✓ |
| 142°35' R | 2°30' | 1.75 | 175 | ✓ |
| 148°40' R | 2°15' | 2.18 | 218 | ✓ |
| 155°45' R | 2°15' | 2.75 | 275 | ✓ |
| 162°45' R | 2° | 2.85 | 285 | |

| Hor. | Vert. | Pod | | | |
|-----------|-------|-------|-----|---|--|
| Bontann | | 125.0 | | | |
| 161°35' R | 2°30' | 292 | 292 | ✓ | |
| 153°10' R | 2°30' | 262 | 262 | ✓ | |
| 145°20' R | 4° | 215 | 215 | ✓ | |
| 132°45' R | 5° | 165 | 165 | ✓ | |
| 109°10' R | 5° | 120 | 120 | ✓ | |
| 68°30' R | 5°30' | 118 | 117 | ✓ | |
| 45°30' R | 5°30' | 140 | 139 | ✓ | |
| 33° R | 5°30' | 170 | 168 | ✓ | |

Sta 33+80 → 35

| Hor. | Vert. | Pod | | | |
|-----------|-------|-------|-----|----|--|
| Bontann | | 125.0 | | | |
| 148°45' L | 4° | 90 | 90 | ✓✓ | |
| 122°30' L | 6°30' | 59 | 58 | ✓✓ | |
| 67° L | 6° | 59 | 58 | ✓✓ | |
| 37° L | 5°15' | 88 | 87 | ✓✓ | |
| 36°55' L | 5° | 135 | 135 | ✓✓ | |
| 24°35' L | 1°30' | 180 | 180 | ✓✓ | |

| Hor. | Vert. | Pod | | |
|-----------|-------|-------|-----|---|
| Contours | | 122.5 | | |
| 21°45' L | 1°30' | 1.78 | 178 | ✓ |
| 27°45' L | 1°30' | 1.48 | 148 | ✓ |
| 31°30' L | 3°30' | 0.88 | 88 | ✓ |
| 44°15' L | 4° | 0.55 | 58 | ✓ |
| 122°55' L | 3°45' | 0.45 | 45 | ✓ |
| 157°30' L | 3°45' | 0.92 | 92 | ✓ |

| | | | | |
|-----------|-------|-------|-----|----|
| Contours | | 120.0 | | |
| 167°45' L | 3°45' | 0.97 | 97 | ✓✓ |
| 160°45' L | 3°15' | 0.59 | 59 | ✓✓ |
| 129°45' L | 2°15' | 0.25 | 25 | ✓✓ |
| 55°25' L | 1°30' | 0.44 | 44 | ✓✓ |
| 23°55' L | 1°30' | 0.76 | 76 | ✓✓ |
| 34°40' L | 3°30' | 1.35 | 135 | ✓✓ |
| 16°40' L | 2° | 1.72 | 172 | ✓✓ |

| Hor. | Vert. | Rod | | |
|--------------|-------|------|-----|---|
| Bontow 117.5 | | | | |
| 13°15' L | 2°15' | 168 | 168 | ✓ |
| 14°45' L | 2°15' | 130 | 130 | ✓ |
| 21°30' L | 2°15' | 0.78 | 78 | ✓ |
| 39°5' L | 2°30' | 0.45 | 45 | ✓ |
| 66°30' L | 2°30' | 0.35 | 35 | ✓ |
| 75°30' L | 3°30' | 0.25 | 25 | ✓ |
| 72°45' L | 3°30' | 0.12 | 12 | ✓ |
| 165°40' L | 3°15' | 0.11 | 11 | ✓ |
| 171°15' L | 1° | 0.38 | 38 | ✓ |
| 175°20' L | 1°15' | 1.00 | 100 | ✓ |

+

9-24-02

Bontow 117.5

{
 Brown
 McLaren
 Fortino
 Davis
 }

Sta B + 85 → 35

| | | | | |
|-----------|-------|------|------|---|
| 148°30' R | 1.15' | 1.25 | 1.25 | ✓ |
| 128° R | 0.0' | 0.90 | 0.90 | ✓ |
| 100° R | 0.0' | 0.61 | 61 | ✓ |
| 63°45' R | 0.0' | 0.75 | 75 | ✓ |
| 48°15' R | 0.0' | 1.05 | 105 | ✓ |
| 34°45' R | 0.15' | 1.35 | 135 | ✓ |
| 17°30' R | 0.15' | 1.55 | 155 | ✓ |

| Hor. | Vert. | Rod | | |
|---------|-------|------|-----|---|
| 5°45' R | 0.15' | 1.72 | 172 | ✓ |

Contours 115.0

| | | | | |
|-----------|-------|------|-----|----|
| 10°30' R | 0.15' | 2.55 | 255 | ✓✓ |
| 12°45' R | 0.15' | 2.10 | 210 | ✓✓ |
| 1°15' R | 0.15' | 2.00 | 200 | ✓✓ |
| 5° L | 0.30' | 1.70 | 170 | ✓✓ |
| 6°30' R | 0.30' | 1.22 | 122 | ✓✓ |
| 28°35' R | 0.45' | 1.10 | 110 | ✓✓ |
| 35°35' R | 1.00' | 0.58 | 58 | ✓✓ |
| 73°5' R | 7.15' | 0.15 | 15 | ✓✓ |
| 172°30' R | 0.45' | 0.55 | 55 | ✓✓ |
| 176° R | 0.30' | 1.30 | 130 | ✓✓ |
| 176°22' L | 0.30' | 1.90 | 190 | ✓✓ |
| 177°30' L | 0.30' | 2.60 | 260 | ✓✓ |
| 157°45' R | 1.15' | 1.48 | 148 | ✓✓ |
| 150°20' R | 1.15' | 1.08 | 108 | ✓✓ |
| 125°45' R | 1.45' | 0.60 | 60 | ✓✓ |
| 71°45' R | 1.30' | 0.62 | 62 | ✓✓ |

| Hor. | Vert. | Rod | | |
|-----------|-------|-------|------|----|
| 48° R | 1° | 1.00 | 1.00 | ✓✓ |
| 27°45' R | 0°45' | 1.32 | 1.32 | ✓✓ |
| 4° R | 0°30' | 1.40 | 1.40 | ✓✓ |
| 1°30' L | 0°15' | 1.82 | 1.82 | ✓✓ |
| 14°30' R | 0°15' | 2.10 | 2.10 | ✓✓ |
| 11°5' R | 0°0' | 2.58 | 2.58 | ✓✓ |
| 6°45' R | 0°15' | 2.80 | 2.80 | ✓✓ |
| Contains | | 112.5 | | |
| 3°10' L | 0°45' | 1.70 | 1.70 | ✓ |
| 6°10' R | 0°30' | 1.30 | 1.30 | ✓ |
| 22°35' R | 0°30' | 1.20 | 1.20 | ✓ |
| 36°37' R | 0°45' | 1.10 | 1.10 | ✓ |
| 47°30' R | 1° | 0.75 | 0.75 | ✓ |
| 89°30' R | 2°30' | 0.40 | 0.40 | ✓ |
| 154°25' R | 2° | 0.50 | 0.50 | ✓ |
| 175° R | 1°45' | 0.82 | 0.82 | ✓ |
| 171°45' R | 2° | 1.25 | 1.25 | ✓ |
| 163°30' R | 2° | 1.25 | 1.25 | ✓ |

| Hor. | Vert. | Pod | | |
|------------|--------|-------|-----|----|
| 159° 5' R | 2" | 0.70 | 70 | ✓ |
| 128° 20' R | 2" | 0.48 | 48 | ✓ |
| 76° R | 2" | 0.52 | 52 | ✓ |
| 51° 45' R | 2" | 0.75 | 75 | ✓ |
| 34° 35' R | 1" | 1.20 | 120 | ✓ |
| 11° 35' R | 0° 45' | 1.35 | 135 | ✓ |
| 3° L | 0° 45' | 1.70 | 170 | ✓ |
| Content | | 120.0 | | |
| 15° 0' R | 0° 30' | 1.95 | 195 | ✓✓ |
| 30° 45' R | 0° 30' | 1.55 | 155 | ✓✓ |
| 43° 20' R | 0° 30' | 1.25 | 125 | ✓✓ |
| 85° 30' R | 0° 0' | 0.72 | 72 | ✓✓ |
| 115° R | 0° 0' | 0.82 | 82 | ✓✓ |
| 136° 15' R | 0° 15' | 1.22 | 122 | ✓✓ |
| 154° 35' R | 0° 15' | 2.70 | 270 | ✓✓ |

| Hor. | Vert. | Rod | | |
|---------------|-------|------|-----|---|
| Contour 122.5 | | | | |
| 140°30'R | 0°45' | 1.70 | 170 | ✓ |
| 129°30'R | 0°45' | 1.30 | 130 | ✓ |
| 114° R | 1°45' | 1.08 | 108 | ✓ |
| 82°25'R | 1°45' | 0.90 | 90 | ✓ |
| 57° R | 2° | 1.08 | 108 | ✓ |
| 38°15'R | 0°30' | 1.40 | 140 | ✓ |
| 26° R | 0°45' | 1.78 | 178 | ✓ |
| 18°15'R | 0°45' | 2.28 | 228 | ✓ |
| 16°55'R | 0°45' | 2.75 | 275 | ✓ |

| Hor. | Vert. | Rod | | |
|---------------|-------|------|-----|---|
| Contour 127.5 | | | | |
| 28°30'L | 3°30' | 1.85 | 185 | ✓ |
| 41°10'L | 5° | 1.90 | 190 | ✓ |
| 40°7'L | 5°15' | 1.12 | 111 | ✓ |
| 49° L | 6°15' | 0.82 | 81 | ✓ |
| 86°15'L | 8°30' | 0.60 | 59 | ✓ |
| 122°15'L | 8°30' | 0.69 | 68 | ✓ |
| 143° L | 6° | 0.95 | 94 | ✓ |

| Hor. | Vert. | Rod | | |
|-----------|-------|------|------|---|
| 153°45' L | 4°30' | 1.35 | 1.35 | ✓ |

Contour 130.0

| | | | | |
|-----------|-------|------|------|----|
| 148°25' L | 6° | 1.02 | 1.31 | ✓✓ |
| 127°45' L | 6°30' | 0.95 | 94 | ✓✓ |
| 113° L | 8°30' | 0.92 | 70 | ✓✓ |
| 70°25' L | 8°30' | 0.72 | 70 | ✓✓ |
| 48°15' L | 6°30' | 1.08 | 1.07 | ✓✓ |

Contour 132.5

| | | | | |
|-----------|--------|------|-----|---|
| 49°15' L | 8° | 1.20 | 118 | ✓ |
| 60°50' L | 8°30' | 0.90 | 88 | ✓ |
| 93°20' L | 11°15' | 0.72 | 69 | ✓ |
| 128° L | 9° | 0.92 | 90 | ✓ |
| 139°30' L | 7° | 1.15 | 113 | ✓ |

| Hor. | Vert. | Pod | | |
|-----------|--------|-------|-----|----|
| Contour | | 135.0 | | |
| 142°45' L | 7° | 1.40 | 139 | ✓✓ |
| 125°45' L | 9°30' | 0.95 | 92 | ✓✓ |
| 95°45' L | 11° | 0.80 | 77 | ✓✓ |
| 70°15' L | 11°15' | 0.90 | 87 | ✓✓ |
| 52°30' L | 9° | 1.25 | 122 | ✓✓ |

| | | | | |
|-----------|--------|-------|-----|---|
| Contour | | 137.5 | | |
| 55°20' L | 9°30' | 1.25 | 122 | ✓ |
| 63°50' L | 11° | 1.05 | 101 | ✓ |
| 82°40' L | 13°30' | 0.85 | 80 | ✓ |
| 105°45' L | 13°30' | 0.88 | 83 | ✓ |
| 125°45' L | 10° | 1.02 | 99 | ✓ |
| 135°30' L | 9° | 1.28 | 125 | ✓ |
| 145° L | 7° | 1.62 | 160 | ✓ |

| Hor. | Vert. | Rod | | |
|---------------|--------|------|-----|----|
| Contour 140.0 | | | | |
| 144°30' L | 7°30' | 1.70 | 169 | ✓✓ |
| 139°30' L | 8°30' | 1.50 | 147 | ✓✓ |
| 128°45' L | 10°30' | 1.15 | 111 | ✓✓ |
| 109°5' L | 13° | 0.95 | 90 | ✓✓ |
| 70° L | 11°45' | 1.00 | 96 | ✓✓ |
| 57°30' L | 10°30' | 1.32 | 128 | ✓✓ |
| Contour 142.5 | | | | |
| 59°45' L | 11°30' | 1.35 | 130 | ✓ |
| 65°30' L | 12°45' | 1.18 | 112 | ✓ |
| 87°10' L | 15° | 0.95 | 89 | ✓ |
| 106°10' L | 14°45' | 0.97 | 97 | ✓ |
| 123°45' L | 13°15' | 1.20 | 114 | ✓ |
| 134°25' L | 10°30' | 1.42 | 137 | ✓ |
| 142°10' L | 8°30' | 1.70 | 146 | ✓ |

| Hor. | Vert. | Rod | | |
|-----------|--------|-------|-----|---|
| Contour | | 145.0 | | |
| 141°35' L | 8°30' | 1.78 | 174 | ✓ |
| 136°15' L | 11°15' | 1.42 | 137 | ✓ |
| 116°35' L | 13°45' | 1.15 | 109 | ✓ |
| 95° L | 16° | 1.03 | 95 | ✓ |
| 75°16' L | 16° | 1.08 | 100 | ✓ |
| 62°10' L | 12°30' | 1.38 | 132 | ✓ |

| | | | | |
|-----------|--------|-------|-----|---|
| Contour | | 117.5 | | |
| 64° L | 13° | 1.42 | 105 | ✓ |
| 73° L | 15°30' | 1.12 | 104 | ✓ |
| 98°20' L | 15°30' | 1.07 | 99 | ✓ |
| 119°10' L | 14°30' | 1.28 | 120 | ✓ |
| 130°5' L | 12°30' | 1.55 | 148 | ✓ |
| 137° L | 10°30' | 1.70 | 164 | ✓ |

| Hor. | Vert. | Rod | | |
|---------------|--------|------|------|---|
| Contour 150.0 | | | | |
| 135°45' L | 10°45' | 1.75 | 1.69 | ✓ |
| 128°15' L | 12°45' | 1.55 | 1.47 | ✓ |
| 106°25' L | 16° | 1.25 | 1.16 | ✓ |
| 85°20' L | 16°15' | 1.18 | 1.09 | ✓ |
| 64°50' L | 13°30' | 1.55 | 1.47 | ✓ |

| | | | | |
|---------------|--------|------|------|---|
| Contour 152.5 | | | | |
| 66°30' L | 14° | 1.50 | 1.47 | ✓ |
| 78°20' L | 17° | 1.25 | 1.14 | ✓ |
| 95°40' L | 17° | 1.20 | 1.10 | ✓ |
| 107°30' L | 16°30' | 1.25 | 1.15 | ✓ |
| 123° L | 14°15' | 1.47 | 1.38 | ✓ |
| 131°40' L | 12° | 1.58 | 1.51 | ✓ |
| 138°20' L | 10°30' | 1.92 | 1.87 | ✓ |

| Hor. | Vert. | Rod | | | |
|----------------|-----------|--------|------|-----|----|
| Contours 155.0 | | | | | |
| 8 | 136°35' L | 11° | 1.97 | 190 | rV |
| | 128°10' L | 13°30' | 1.68 | 159 | rV |
| | 120° L | 14°45' | 1.50 | 140 | rV |
| | 108°15' L | 16°45' | 1.45 | 133 | rV |
| | 87°15' L | 18° | 1.27 | 115 | rV |
| | 68° L | 14°45' | 1.70 | 160 | rV |
| Contours 122.5 | | | | | |
| | 137°10' R | 2° | 1.55 | 155 | } |
| | 126°30' R | 2°15' | 1.20 | 120 | |
| | 99°15' R | 2°15' | 0.92 | 92 | |
| | 61°10' R | 2° | 1.00 | 100 | |
| | 43° R | 2° | 1.35 | 135 | |
| | 30°45' R | 2° | 1.55 | 155 | |
| | 18°15' R | 1° | 2.25 | 225 | |
| | 17°10' R | 1° | 2.72 | 272 | |
| Taken twice. | | | | | |

| Hor. | Vert. | Rod | | |
|-----------|--------|-------|------|----|
| Contour | | 125.0 | | |
| 17°20' R | 1' | 2.85 | 2.85 | ✓✓ |
| 26°45' R | 1' | 2.22 | 2.22 | ✓✓ |
| 31°45' R | 1' 15" | 1.90 | 1.90 | ✓✓ |
| 45° R | 1° 30' | 1.40 | 1.40 | ✓✓ |
| 61°45' R | 3° 30' | 1.05 | 1.05 | ✓✓ |
| 89°45' R | 3°45' | 1.00 | 1.00 | ✓✓ |
| 124°20' R | 3°45' | 1.28 | 1.28 | ✓✓ |
| 137°50' R | 1°45' | 1.72 | 1.72 | ✓✓ |
| 146°30' R | 1°45" | 2.12 | 2.12 | ✓✓ |

| | | | | |
|-----------|-------|-------|------|---|
| Contour | | 127.5 | | |
| 32°25' R | 3' | 1.72 | 1.72 | ✓ |
| 121°35' R | 4' | 1.28 | 1.28 | ✓ |
| 104°15' R | 4' | 1.08 | 1.08 | ✓ |
| 76° R | 4' | 1.00 | 1.00 | ✓ |
| 55° R | 3°49' | 1.18 | 1.18 | ✓ |
| 41°35' R | 3°45' | 1.52 | 1.52 | ✓ |
| 31°15' R | 2°30' | 1.90 | 1.90 | ✓ |

| Hor. | Vert. | Rod | | |
|-------|-------|------|------|---|
| 23° R | 2°30' | 2.45 | 2.45 | ✓ |

Continued 130.0

| | | | | | |
|----|-----------|-------|------|------|----|
| 16 | 18°10' R | 2°15' | 3.32 | 3.32 | ✓✓ |
| | 20°40' R | 2°30' | 3.00 | 3.00 | ✓✓ |
| | 27°15' R | 2°45' | 2.20 | 2.20 | ✓✓ |
| | 37°45' R | 3°15' | 1.75 | 1.75 | ✓✓ |
| | 46°15' R | 3°45' | 1.45 | 1.45 | ✓✓ |
| | 56°50' R | 4° | 1.21 | 1.21 | ✓✓ |
| | 75°20' R | 4°30' | 1.04 | 1.04 | ✓✓ |
| | 104°22' R | 4°45' | 1.12 | 1.12 | ✓✓ |
| | 124° R | 5° | 1.45 | 1.45 | ✓✓ |
| | 128°30' R | 3°45' | 1.81 | 1.81 | ✓✓ |

Continued 132.5

| | | | | | |
|--|-----------|----|------|------|---|
| | 125°30' R | 5° | 1.82 | 1.82 | ✓ |
| | 122° R | 5° | 1.50 | 1.50 | ✓ |

| Hor. | Vert. | Rod | | |
|----------|--------|------|-----|---|
| 117°40'R | 6° | 1.20 | 119 | ✓ |
| 85° R | 6° | 1.08 | 107 | ✓ |
| 57° R | 6° 15' | 1.28 | 127 | ✓ |
| 47°20'R | 6° | 1.50 | 149 | ✓ |
| 35°25'R | 3° 30' | 1.92 | 192 | ✓ |
| 27°25'R | 3° 30' | 2.30 | 230 | ✓ |

| Borden | | 1350 | | |
|----------|--------|------|-----|----|
| 22°15'R | 3° 30' | 2.90 | 290 | ✓✓ |
| 27°35'R | 3° 30' | 2.42 | 242 | ✓✓ |
| 35°50'R | 4° 45' | 1.95 | 195 | ✓✓ |
| 47°25'R | 6° | 1.55 | 153 | ✓✓ |
| 58°25'R | 6° 45' | 1.30 | 128 | ✓✓ |
| 75°35'R | 6° 30' | 1.15 | 113 | ✓✓ |
| 103° R | 6° 45' | 1.22 | 120 | ✓✓ |
| 117°20'R | 6° 30' | 1.45 | 143 | ✓✓ |
| 123° R | 6° | 1.82 | 180 | ✓✓ |

| Hor. | Vert. | Rod | | |
|---------------|-------|------|-----|---|
| Contour 137.5 | | | | |
| 120°35'R | 6°30' | 1.65 | 163 | ✓ |
| 113°30'R | 7°15' | 1.40 | 138 | ✓ |
| 102°15'R | 7° | 1.25 | 123 | ✓ |
| 81°15'R | 7°30' | 1.18 | 116 | ✓ |
| 67° R | 7°30' | 1.25 | 123 | ✓ |
| 52°30'R | 7°30' | 1.52 | 150 | ✓ |
| 38°45'R | 5°30' | 1.92 | 190 | ✓ |

| Hor. | Vert. | Rod | | |
|---------------|-------|------|-----|----|
| Contour 140.0 | | | | |
| 23°45'R | 4° | 2.90 | 290 | ✓✓ |
| 30°10'R | 5° | 2.40 | 240 | ✓✓ |
| 37°30'R | 6° | 2.05 | 203 | ✓✓ |
| 45°10'R | 6°45' | 1.78 | 176 | ✓✓ |
| 59°40'R | 8°30' | 1.45 | 142 | ✓✓ |
| 71°30'R | 10° | 1.30 | 126 | ✓✓ |
| 9°30'R | 9°45' | 1.28 | 124 | ✓✓ |
| 115°45'R | 8° | 1.48 | 145 | ✓✓ |
| 118°30'R | 8° | 1.75 | 172 | ✓✓ |

| Hor. | Vert. | Rod | | |
|----------|--------|-------|-----|---|
| Contour | | 142.5 | | |
| 115°45'R | 8° | 1.70 | 167 | ✓ |
| 110°45'R | 9° | 1.50 | 146 | ✓ |
| 100°15'R | 10° | 1.35 | 131 | ✓ |
| 84°25'R | 10° | 1.30 | 126 | ✓ |
| 67°30'R | 10°15' | 1.45 | 140 | ✓ |
| 53°20'R | 8° | 1.60 | 157 | ✓ |
| 45°45'R | 8° | 1.80 | 177 | ✓ |
| 31°50'R | 6°15' | 2.22 | 219 | ✓ |

| Hor. | Vert. | Rod | | |
|----------|--------|-------|-----|----|
| Contour | | 145.0 | | |
| 25°15'R | 4°45' | 3.00 | 300 | ✓✓ |
| 30°10'R | 5°30' | 2.65 | 263 | ✓✓ |
| 39°10'R | 7° | 2.10 | 207 | ✓✓ |
| 46°50'R | 8°15' | 1.82 | 178 | ✓✓ |
| 58°45'R | 9° | 1.60 | 156 | ✓✓ |
| 76°30'R | 10°30' | 1.40 | 135 | ✓✓ |
| 98°45'R | 10°45' | 1.45 | 140 | ✓✓ |
| 113°15'R | 9° | 1.70 | 166 | ✓✓ |

| Hor. | Vert. | Rod | | |
|----------------|--------|------|------|---|
| Contours 147.5 | | | | |
| 110° R | 10° | 1.70 | 1.65 | ✓ |
| 104°20' R | 10°30' | 1.55 | 1.50 | ✓ |
| 88°50' R | 11° | 1.40 | 1.35 | ✓ |
| 72° R | 10°45' | 1.45 | 1.40 | ✓ |
| 58° R | 9°45' | 1.65 | 1.60 | ✓ |
| 47°30' R | 9° | 1.89 | 1.83 | ✓ |
| 39°30' R | 7°30' | 2.20 | 2.16 | ✓ |
| 30° R | 6°45' | 2.55 | 2.52 | ✓ |

| | | | | |
|----------------|--------|------|------|----|
| Contours 150.0 | | | | |
| 26°30' R | 6° | 3.00 | 2.97 | ✓✓ |
| 31°20' R | 6°45' | 2.75 | 2.71 | ✓✓ |
| 38°5' R | 8° | 2.30 | 2.25 | ✓✓ |
| 46°15' R | 9°30' | 2.00 | 1.95 | ✓✓ |
| 59° R | 10°30' | 1.72 | 1.64 | ✓✓ |
| 80°20' R | 12°45' | 1.50 | 1.43 | ✓✓ |
| 102°5' R | 11°15' | 1.58 | 1.52 | ✓✓ |
| 107°20' R | 10°45' | 1.68 | 1.62 | ✓✓ |

| Hor. | Vert. | Rod | | |
|----------------|----------|------|------|---|
| Contours 152.5 | | | | |
| 103°45'R | 11°45' | 1.72 | 1.65 | ✓ |
| 94°45'R | 12°30' | 1.60 | 1.53 | ✓ |
| 81° | R 12°45' | 1.52 | 1.45 | ✓ |
| 64°50'R | 12° | 1.68 | 1.61 | ✓ |
| 52°50'R | 10° | 1.85 | 1.79 | ✓ |
| 36°50'R | 8° | 2.40 | 2.35 | ✓ |

| | | | | |
|----------------|---------|------|------|----|
| Contours 155.0 | | | | |
| 28° | R 6°45' | 3.00 | 2.96 | ✓✓ |
| 34°45' | R 8° | 2.65 | 2.60 | ✓✓ |
| 40°45' | R 9° | 2.40 | 2.34 | ✓✓ |
| 48°50'R | 10°30' | 2.05 | 1.98 | ✓✓ |
| 62°35'R | 11°45' | 1.75 | 1.68 | ✓✓ |
| 77° | R 13° | 1.60 | 1.52 | ✓✓ |
| 92°30'R | 13° | 1.65 | 1.57 | ✓✓ |
| 103°10'R | 12° | 1.88 | 1.80 | ✓✓ |

Sta. 34+24.5 = axis of Upper Dam

Sta. 34+24.5 → 33+85 105°16' L

Sta. 33+85 → Sta. 30 27°08' L to □
100.9'

9-26-02

 Brownell
 M. Laren
 Fortliner
 Davis

36

Hor. Vert. Rod

Sta. D → 33+85

Contour 132.5

91°30' R 3°30' 0.30 30 ✓

115°10' R 5°45' 0.38 38 ✓

150°15' R 5°45' 0.25 25 ✓

Contour 135.0

160°05' R 11° 0.32 31 ✓✓

130° R 8°30' 0.48 48 ✓✓

116°35' R 6°30' 0.52 51 ✓✓

74°15' R 7°15' 0.40 39 ✓✓

Contour 137.5

85°5' R 7° 0.52 51 ✓

108°45' R 7° 0.72 71 ✓

140° R 10° 0.50 48 ✓

| Hor. | Vert. | Rod | | | |
|---------------|--------|------|-----|----|--|
| Contour 140.0 | | | | | |
| 138°40' R | 9°45' | 0.60 | 58 | ✓✓ | |
| 110°15' R | 7° | 0.95 | 94 | ✓✓ | |
| 83°40' R | 9°45' | 0.60 | 58 | ✓✓ | |
| Contour 142.5 | | | | | |
| 82°15' R | 11° | 0.68 | 66 | ✓ | |
| 104°45' R | 7° | 1.04 | 102 | ✓ | |
| 109°10' R | 7°15' | 1.15 | 113 | ✓ | |
| 125° R | 9°15' | 0.90 | 88 | ✓ | |
| 135°30' R | 11°15' | 0.70 | 67 | ✓ | |
| Contour 145.0 | | | | | |
| 136°50' R | 11° | 0.73 | 70 | ✓✓ | |
| 122° R | 9° | 1.10 | 107 | ✓✓ | |
| 108° R | 6°30' | 1.42 | 140 | ✓✓ | |
| 100°45' R | 8°30' | 1.08 | 106 | ✓✓ | |
| 83°30' R | 11° | 0.72 | 69 | ✓✓ | |

| Hor. | Vert. | Rod | | |
|---------------|--------|------|-----|---|
| Contour 147.5 | | | | |
| 75°10' R | 12° | 0.78 | 75 | ✓ |
| 98°30' R | 9°30' | 1.12 | 115 | ✓ |
| 107°20' R | 7°30' | 1.60 | 157 | ✓ |
| 126°10' R | 10°30' | 1.10 | 106 | ✓ |
| 126°30' R | 11° | 0.95 | 91 | ✓ |

| Hor. | Vert. | Rod | | |
|---------------|--------|------|-----|----|
| Contour 150.0 | | | | |
| 131°45' R | 12°15' | 1.00 | 96 | ✓✓ |
| 119°15' R | 9° | 1.35 | 132 | ✓✓ |
| 108°40' R | 7°15' | 1.95 | 192 | ✓✓ |
| 101°30' R | 9° | 1.32 | 129 | ✓✓ |
| 81° R | 13°30' | 0.90 | 85 | ✓✓ |

| Hor. | Vert. | Rod | | |
|---------------|--------|------|-----|---|
| Contour 152.5 | | | | |
| 85°15' R | 13°15' | 1.03 | 98 | ✓ |
| 105°21' R | 9°15' | 1.45 | 141 | ✓ |
| 108°30' R | 7° | 2.15 | 212 | ✓ |
| 116°35' R | 8°45' | 1.62 | 158 | ✓ |

| Hor | Vert. | Rod | | |
|-----------------|--------|------|-----|----|
| Contour 155.0 | | | | |
| 120°55' R | 10° | 1.40 | 136 | ✓✓ |
| 123°25' R | 10°45' | 1.40 | 135 | ✓✓ |
| 115°45' R | 9° | 1.85 | 181 | ✓✓ |
| 111°20' R | 7°30' | 2.20 | 216 | ✓✓ |
| 181°40' R | 7° | 2.42 | 239 | ✓✓ |
| 102°10' R | 9° | 1.82 | 178 | ✓✓ |
| 92°35' R | 11°30' | 1.22 | 117 | ✓✓ |
| Sta. 35 → 33+85 | | | | |
| Contour 127.5 | | | | |
| 65°15' R | 3°30' | 0.78 | 78 | ✓ |
| 81°35' R | 3°30' | 1.00 | 100 | ✓ |
| 95°45' R | 3°30' | 1.30 | 130 | ✓ |
| 120°45' R | 3° | 1.00 | 100 | ✓ |

| Hor | Vert. | Rod | | |
|-----------------|-------|------|-----|---|
| Continued 130.0 | | | | |
| 82°20'R | 4° | 1.00 | 100 | ✓ |
| 92°30'R | 4°30' | 1.30 | 130 | ✓ |
| 94°50'R | 4° | 1.75 | 175 | ✓ |
| 102°30'R | 3°45' | 1.40 | 140 | ✓ |
| 125°35'R | 4° | 1.12 | 112 | ✓ |
| 140°35'R | 4° | 1.30 | 130 | ✓ |
| 151°30'R | 3°30' | 1.60 | 160 | ✓ |
| 162°10'R | 2°30' | 2.12 | 212 | ✓ |
| 166°25'R | 2° | 2.82 | 282 | ✓ |

| | | | | |
|-------------------|-------|------|-----|---|
| 2 Continued 135.0 | | | | |
| 162°10'R | 4° | 2.82 | 282 | ✓ |
| 159°30'R | 4° | 2.30 | 230 | ✓ |
| 147°45'R | 5° | 1.68 | 168 | ✓ |
| 123°15'R | 6° | 1.25 | 124 | ✓ |
| 107°5'R | 5°15' | 1.48 | 147 | ✓ |
| 98°35'R | 4°15' | 2.00 | 200 | ✓ |
| 93°55'R | 4°15' | 2.52 | 252 | ✓ |
| 90°20'R | 5°30' | 2.05 | 204 | ✓ |

| | Hor. | Vert. | Rod | |
|--|----------|-------|-----|-------|
| | 79°45' R | 6° | 120 | 119 ✓ |

3 *Contours* 140.0

| | | | | |
|--|-----------|-------|-----|-------|
| | 81°45' R | 7°30' | 150 | 147 ✓ |
| | 87°40' R | 5°30' | 205 | 203 ✓ |
| | 90°45' R | 4°45' | 262 | 262 ✓ |
| | 91°45' R | 4°30' | 340 | 340 ✓ |
| | 98° R | 4°45' | 252 | 252 ✓ |
| | 110° R | 6°45' | 158 | 156 ✓ |
| | 130°30' R | 7° | 145 | 143 ✓ |
| | 146°35' R | 6°15' | 187 | 186 ✓ |
| | 157°45' R | 5° | 255 | 253 ✓ |
| | 159°55' R | 4°30' | 290 | 290 ✓ |

4 *Contours* 145.0

| | | | | |
|--|-----------|-------|-----|-------|
| | 157°5' R | 5°30' | 290 | 287 ✓ |
| | 153°15' R | 6° | 242 | 239 ✓ |
| | 145°45' R | 7°15' | 200 | 197 ✓ |
| | 125°50' R | 8°45' | 155 | 151 ✓ |

| Hor. | Vert. | Rod | | |
|-----------|--------|------|-----|---|
| 113°50' R | 6°15' | 2.00 | 192 | ✓ |
| 99°5' R | 5° | 2.68 | 266 | ✓ |
| 94°30' R | 4°30' | 3.45 | 345 | ✓ |
| 92°50' R | 4°30' | 4.00 | 400 | ✓ |
| 90°45' R | 4°45' | 3.60 | 360 | ✓ |
| 86°15' R | 6°45' | 2.22 | 219 | ✓ |
| 71°5' R | 10°45' | 1.28 | 124 | ✓ |

5' Contour 150.0

| | | | | |
|-----------|-------|------|-----|---|
| 80° R | 9°15' | 1.88 | 195 | ✓ |
| 84°50' R | 7°30' | 2.30 | 226 | ✓ |
| 88°15' R | 6° | 3.28 | 324 | ✓ |
| 91°10' R | 4°45' | 4.10 | 407 | ✓ |
| 94°55' R | 4°30' | 4.50 | 447 | ✓ |
| 95° R | 5° | 3.90 | 387 | ✓ |
| 98°10' R | 5°30' | 3.00 | 297 | ✓ |
| 105°15' R | 8° | 2.20 | 216 | ✓ |
| 126°10' R | 10° | 1.68 | 163 | ✓ |
| 140° R | 8°45' | 1.90 | 186 | ✓ |
| 148° R | 8° | 2.25 | 221 | ✓ |

| Hor. | Vert. | Rod | | |
|----------|-------|------|-----|---|
| 154°50'R | 6°30' | 3.05 | 301 | ✓ |

6 Contour 155.0

| | | | | |
|----------|--------|------|-----|---|
| 152°30'R | 7°15' | 3.10 | 305 | ✓ |
| 148°25'R | 8° | 2.62 | 267 | ✓ |
| 141°25'R | 9°45' | 2.15 | 209 | ✓ |
| 129°10'R | 10°45' | 1.82 | 176 | ✓ |
| 106°30'R | 8°30' | 2.35 | 230 | ✓ |
| 99°25'R | 6°30' | 3.10 | 306 | ✓ |
| 97°45'R | 5°45' | 3.60 | 356 | ✓ |
| 96°10'R | 5°15' | 4.00 | 397 | ✓ |
| 94°55'R | 4°30' | 4.50 | 447 | ✓ |
| 90°40'R | 5° | 4.00 | 397 | ✓ |
| 87°35'R | 6°15' | 3.50 | 346 | ✓ |
| 81°20'R | 9°30' | 2.22 | 216 | ✓ |

| | Hor. | Vert. | Rod | |
|------|-----------|---------|-------|-------|
| Sta. | 39+50 | → 33+85 | | |
| | Continued | | 120.0 | |
| | 10°55' R | 1° | 3.40 | 340 ✓ |
| | 10°55' R | 1° | 2.75 | 275 ✓ |
| | 13°15' R | 1°15' | 2.05 | 205 ✓ |
| | 21°35' R | 2°30' | 1.60 | 160 ✓ |
| | 6° R | 5°15' | 0.95 | 94 ✓ |
| | 87°15' R | 5°30' | 0.80 | 79 ✓ |
| | 115° R | 7° | 0.95 | 94 ✓ |
| | 57°10' R | 7°15' | 0.80 | 79 ✓ |
| | 21°45' R | 2°15' | 0.97 | 97 ✓ |
| | 4°25' R | 2°15' | 1.48 | 148 ✓ |
| | 14° L | 2°30' | 2.30 | 230 ✓ |
| | 14°15' L | 1°30' | 3.00 | 300 ✓ |

| | | | | |
|--|-----------|-------|-------|-------|
| | Continued | | 125.0 | |
| | 23° L | 1°15' | 2.30 | 230 ✓ |
| | 37° L | 1°30' | 1.85 | 185 ✓ |
| | 52°25' L | 1°30' | 1.18 | 118 ✓ |
| | 24° L | 1°30' | 0.60 | 60 ✓ |

| Hor. | Vert. | Rod | |
|-----------|-------|------|-------|
| 74°30' R | 1°45' | 0.50 | 50 ✓ |
| 129°30' R | 0°45' | 0.90 | 90 ✓ |
| 129°15' R | 0°30' | 1.22 | 122 ✓ |
| 92°50' R | 0°30' | 1.05 | 105 ✓ |
| 71°15' R | 0°30' | 1.15 | 115 ✓ |
| 35°10' R | 0°30' | 1.42 | 142 ✓ |
| 15°5' R | 0°30' | 1.90 | 190 ✓ |
| 12°15' R | 0°0' | 2.30 | 230 ✓ |
| 13°45' R | 1°30' | 4.00 | 400 ✓ |

Continuation 130.0

| | | | |
|-----------|-------|------|-------|
| 139°45' R | 2° | 2.00 | 200 ✓ |
| 130°35' R | 0°45' | 1.45 | 145 ✓ |
| 91°30' R | 0°30' | 1.10 | 110 ✓ |
| 52°40' R | 1°30' | 1.48 | 148 ✓ |
| 57°35' R | 1°15' | 1.70 | 170 ✓ |

| | Hor. | Vert. | Rod | | |
|---|---------------|-------|------|-----|---|
| 3 | Contour 135.0 | | | | |
| | 38° R | 2°30' | 1.60 | 160 | ✓ |
| | 72°50' R | 2°30' | 1.33 | 133 | ✓ |
| | 102°15' R | 2°45' | 1.25 | 125 | ✓ |
| | 124°10' R | 3° | 1.90 | 190 | ✓ |
| 4 | Contour 140.0 | | | | |
| | 130°50' R | 3°30' | 1.95 | 195 | ✓ |
| | 111° R | 4°15' | 1.40 | 140 | ✓ |
| | 77°15' R | 4°30' | 1.55 | 155 | ✓ |
| | 52°45' R | 4°30' | 1.65 | 165 | ✓ |
| | 35° R | 4°15' | 1.88 | 188 | ✓ |
| 5 | Contour 145.0 | | | | |
| | 39°10' R | 4°45' | 1.82 | 182 | ✓ |
| | 54°15' R | 4°45' | 1.82 | 182 | ✓ |
| | 66°30' R | 4°45' | 1.95 | 195 | ✓ |
| | 83°45' R | 6°00' | 1.65 | 165 | ✓ |

| Hor. | Vert. | Rod | | |
|------------|--------|-----|------|---|
| 102° 45' R | 5° 45' | 150 | 1.78 | ✓ |
| 129° 10' R | 4° 30' | 205 | 2.05 | ✓ |

6 Contour 150.0

| | | | | |
|------------|--------|-----|------|---|
| 126° 15' R | 6° | 218 | 2.16 | ✓ |
| 111° 45' R | 6° 15' | 175 | 1.73 | ✓ |
| 52° R | 6° 15' | 190 | 1.88 | ✓ |
| 74° 30' R | 6° | 223 | 2.21 | ✓ |
| 59° R | 6° | 203 | 2.01 | ✓ |
| 40° 5' R | 6° 15' | 210 | 2.08 | ✓ |

7 Contour 155.0

| | | | | |
|------------|--------|-----|------|---|
| 51° R | 7° 30' | 210 | 2.07 | ✓ |
| 67° R | 7° | 230 | 2.27 | ✓ |
| 76° 50' R | 6° 30' | 260 | 2.57 | ✓ |
| 82° R | 7° 30' | 218 | 2.15 | ✓ |
| 96° 50' R | 4° 15' | 188 | 1.85 | ✓ |
| 115° 10' R | 7° 30' | 200 | 1.97 | ✓ |
| 122° 45' R | 7° 30' | 215 | 2.12 | ✓ |
| 163° 40' L | 5° 45' | 258 | 2.55 | ✓ |

| Hor. | Vert. | Pod | | |
|----------|----------|------|-----|---|
| 151° | + 5° 45' | 2.52 | 249 | ✓ |
| 139° 35' | L 6° 30' | 275 | 272 | ✓ |
| 133° 15' | L 7° 45' | 228 | 224 | ✓ |
| 123° | L 5° 00' | 190 | 186 | ✓ |
| 111° 50' | L 7° 30' | 200 | 197 | ✓ |
| 104° 10' | L 6° 30' | 240 | 237 | ✓ |
| 98° 30' | L 5° 15' | 292 | 290 | ✓ |
| 96° | + 4° 30' | 345 | 345 | ✓ |
| 93° 25' | L 4° 30' | 510 | 510 | ✓ |
| 89° 30' | L 4° 15' | 440 | 443 | ✓ |
| 83° 50' | L 6° 30' | 250 | 247 | ✓ |
| 77° | L 7° 15' | 200 | 197 | ✓ |
| 66° 15' | L 7° 15' | 175 | 172 | ✓ |
| 48° 20' | L 7° 15' | 2.20 | 217 | ✓ |
| 38° 30' | L 6° 30' | 2.50 | 247 | ✓ |
| 30° | L 5° 30' | 290 | 287 | ✓ |

| Hor. | Vert. | Rod | | |
|----------------|-------|------|-----|---|
| Contours 150.0 | | | | |
| 30°25' L | 5°15' | 2.80 | 272 | ✓ |
| 39°10' L | 5°15' | 2.38 | 236 | ✓ |
| 53°10' L | 6°15' | 2.00 | 198 | ✓ |
| 73° L | 7° | 1.82 | 179 | ✓ |
| 84°10' L | 6°30' | 2.28 | 225 | ✓ |
| 88°15' L | 5°30' | 2.80 | 277 | ✓ |
| 92°15' L | 4°15' | 3.40 | 340 | ✓ |
| 96°10' L | 4°30' | 2.90 | 290 | ✓ |
| 102°15' L | 6° | 2.30 | 227 | ✓ |
| 109°45' L | 7° | 1.82 | 179 | ✓ |
| 122°15' L | 9°15' | 1.60 | 156 | ✓ |
| 135°45' L | 7° | 1.97 | 194 | ✓ |
| 143°45' L | 6°30' | 2.38 | 235 | ✓ |
| 156°5' L | 4°45' | 2.30 | 230 | ✓ |
| 167°20' L | 4°45' | 2.40 | 240 | ✓ |

| Hor. | Vert. | Rod | | |
|---------------|--------|------|-----|---|
| Contour 145.0 | | | | |
| 169° 5' L | 4° 30' | 2.37 | 237 | ✓ |
| 150° 45' L | 4° 30' | 1.92 | 192 | ✓ |
| 134° 25' L | 6° 15' | 1.45 | 148 | ✓ |
| 118° 5' L | 6° 15' | 1.40 | 138 | ✓ |
| 107° 5' L | 6° | 1.63 | 161 | ✓ |
| 100° 10' L | 5° | 2.10 | 208 | ✓ |
| 92° 20' L | 4° 30' | 2.78 | 278 | ✓ |
| 86° 18' L | 4° 30' | 2.20 | 220 | ✓ |
| 80° L | 5° 45' | 1.82 | 180 | ✓ |
| 64° 55' L | 6° | 1.66 | 166 | ✓ |
| 51° 40' L | 4° 30' | 1.90 | 190 | ✓ |
| 55° 10' L | 4° 25' | 2.30 | 230 | ✓ |
| 29° | 4° | 2.80 | 288 | ✓ |

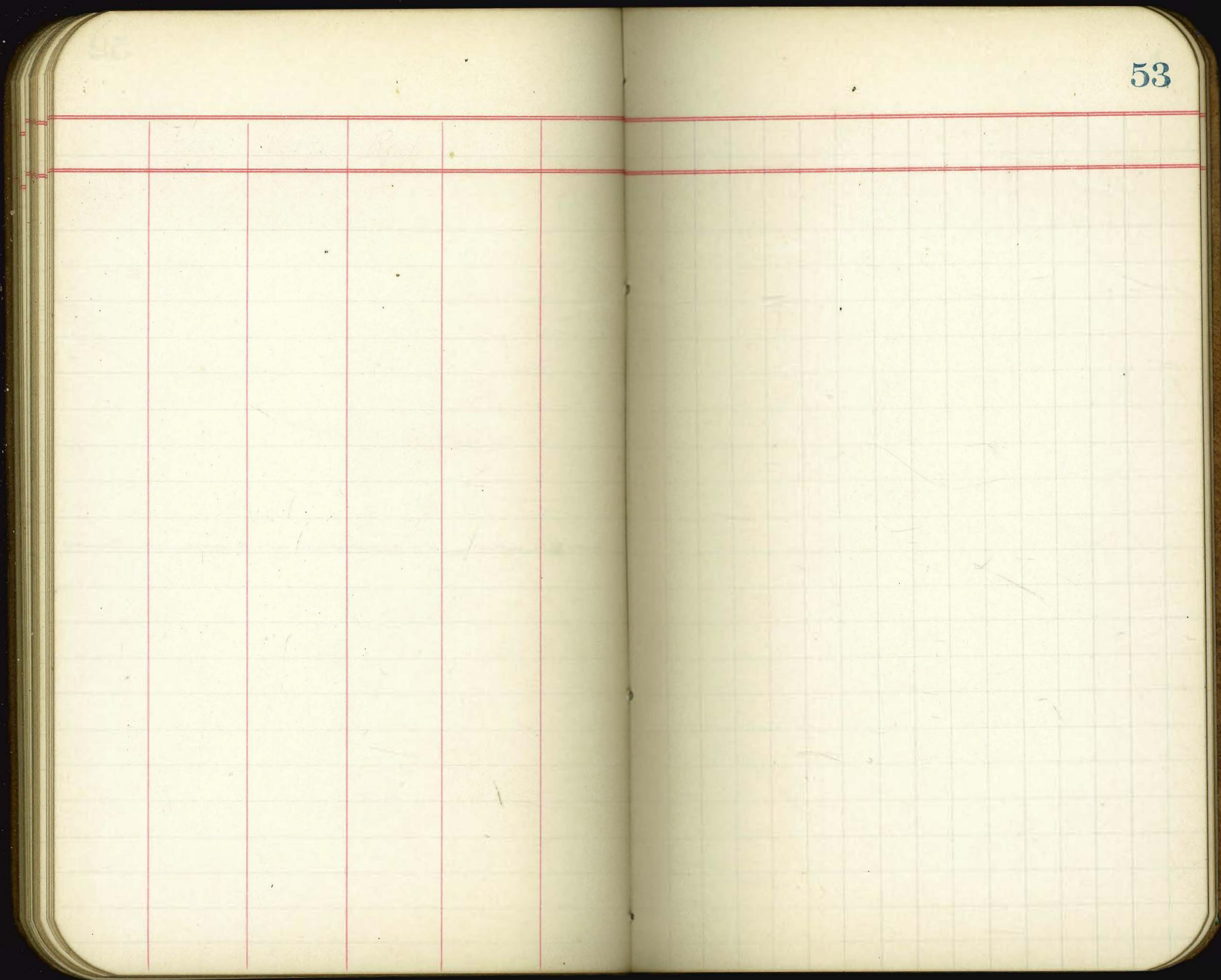
| | | | | |
|---------------|--------|------|-----|---|
| Contour 140.0 | | | | |
| 24° 30' L | 3° 30' | 2.90 | 290 | ✓ |
| 31° 30' L | 4° | 2.42 | 242 | ✓ |
| 37° 30' L | 2° 45' | 2.20 | 220 | ✓ |
| 51° 20' L | 3° | 1.80 | 180 | ✓ |

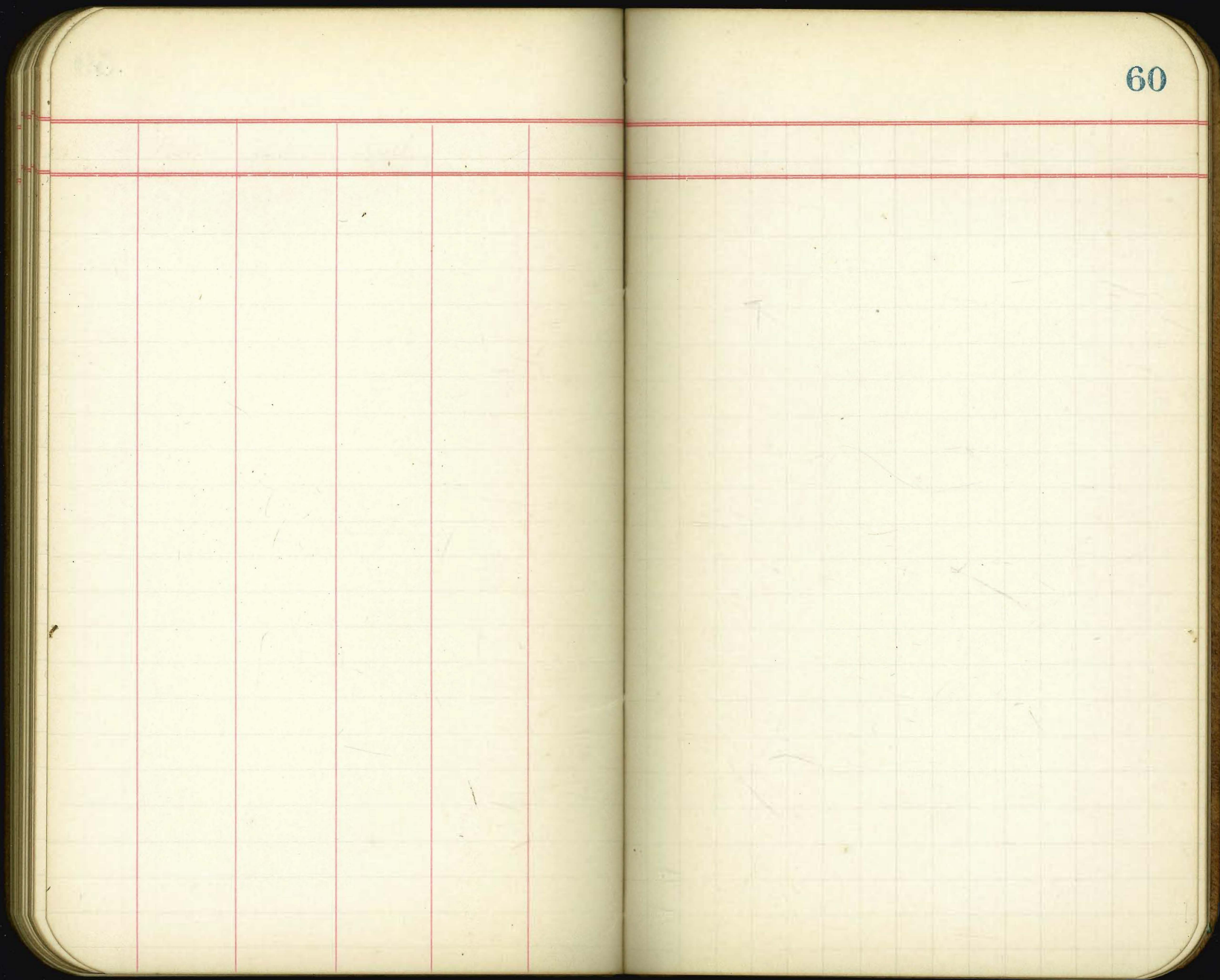
| Hor. | Vert. | Rod | | |
|-----------|-------|-----|-----|---|
| 64°25' L | 4°30' | 155 | 155 | ✓ |
| 81°20' L | 4°15' | 160 | 160 | ✓ |
| 89°45' L | 4°15' | 220 | 220 | ✓ |
| 106°10' L | 4°30' | 140 | 140 | ✓ |
| 120° L | 4°30' | 120 | 120 | ✓ |
| 153°45' L | 4°15' | 145 | 145 | ✓ |
| 171°20' L | 4°30' | 225 | 225 | ✓ |

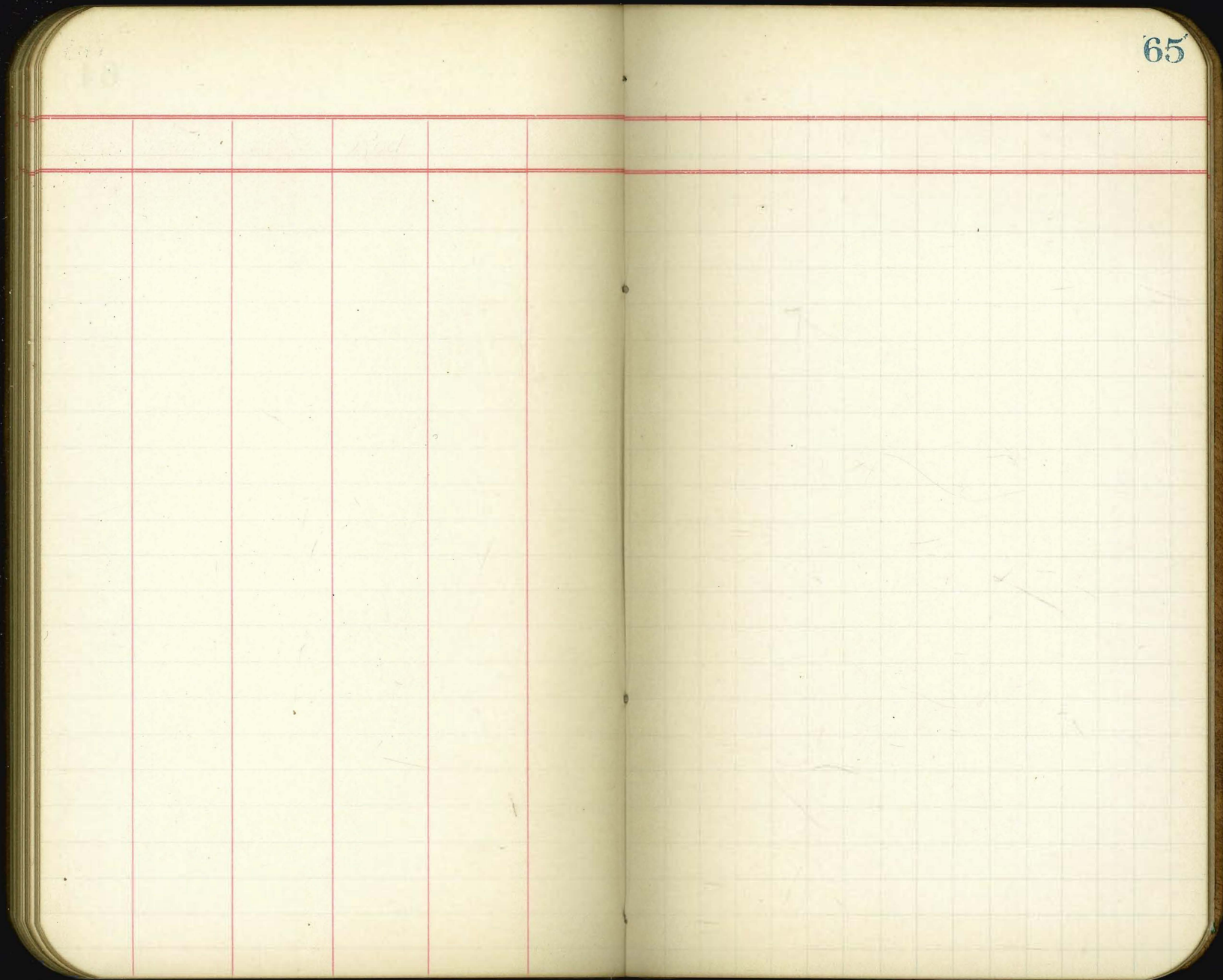
Continued 1350

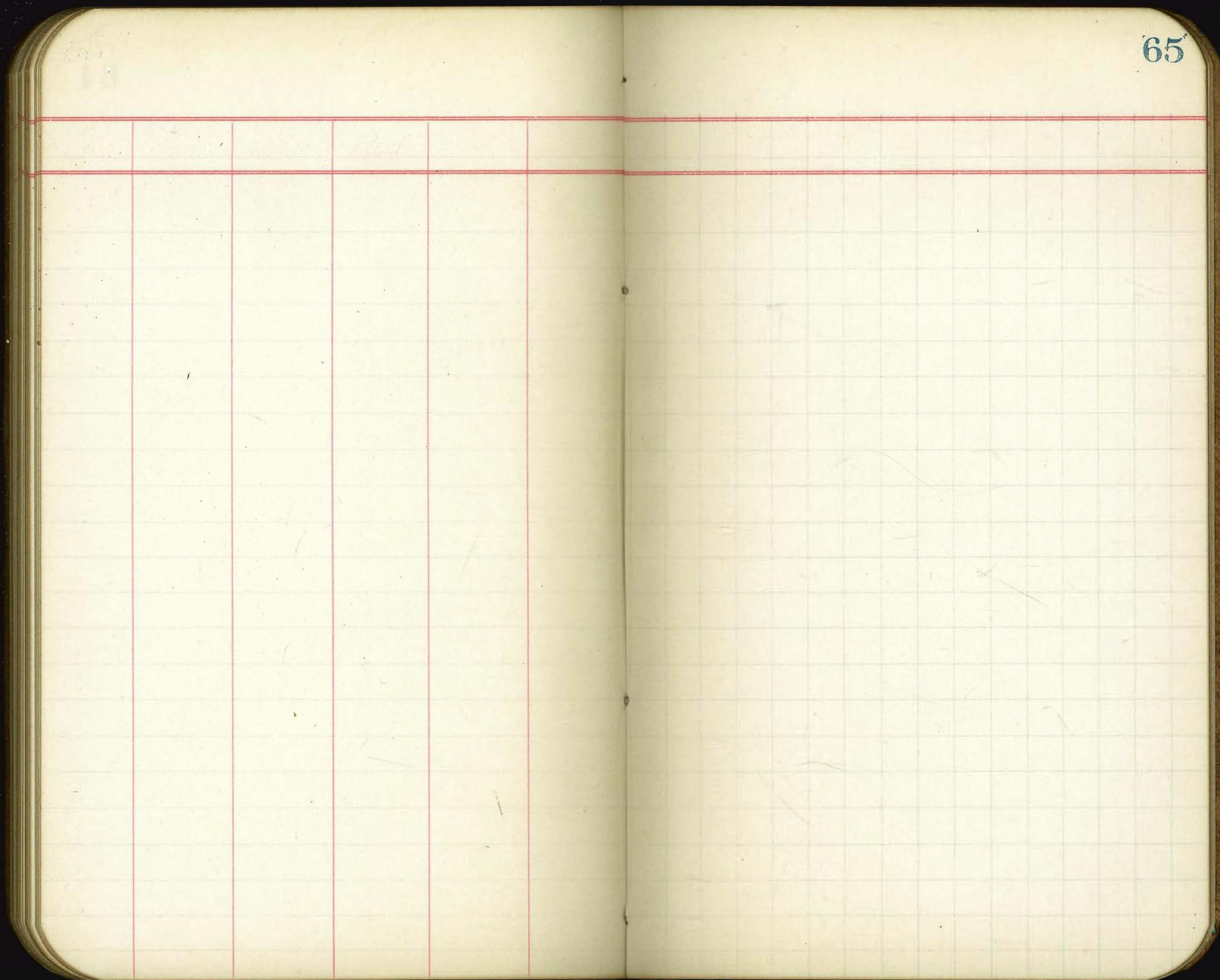
| | | | | |
|-----------|-------|-----|-----|---|
| 170°25' L | 1°15' | 218 | 218 | ✓ |
| 168°30' L | 1°45' | 160 | 160 | ✓ |
| 131° L | 1°45' | 110 | 110 | ✓ |
| 72°15' L | 1°30' | 135 | 135 | ✓ |
| 45°45' L | 1°30' | 192 | 192 | ✓ |
| 30°45' L | 1°15' | 230 | 230 | ✓ |
| 22°40' L | 1°30' | 300 | 300 | ✓ |

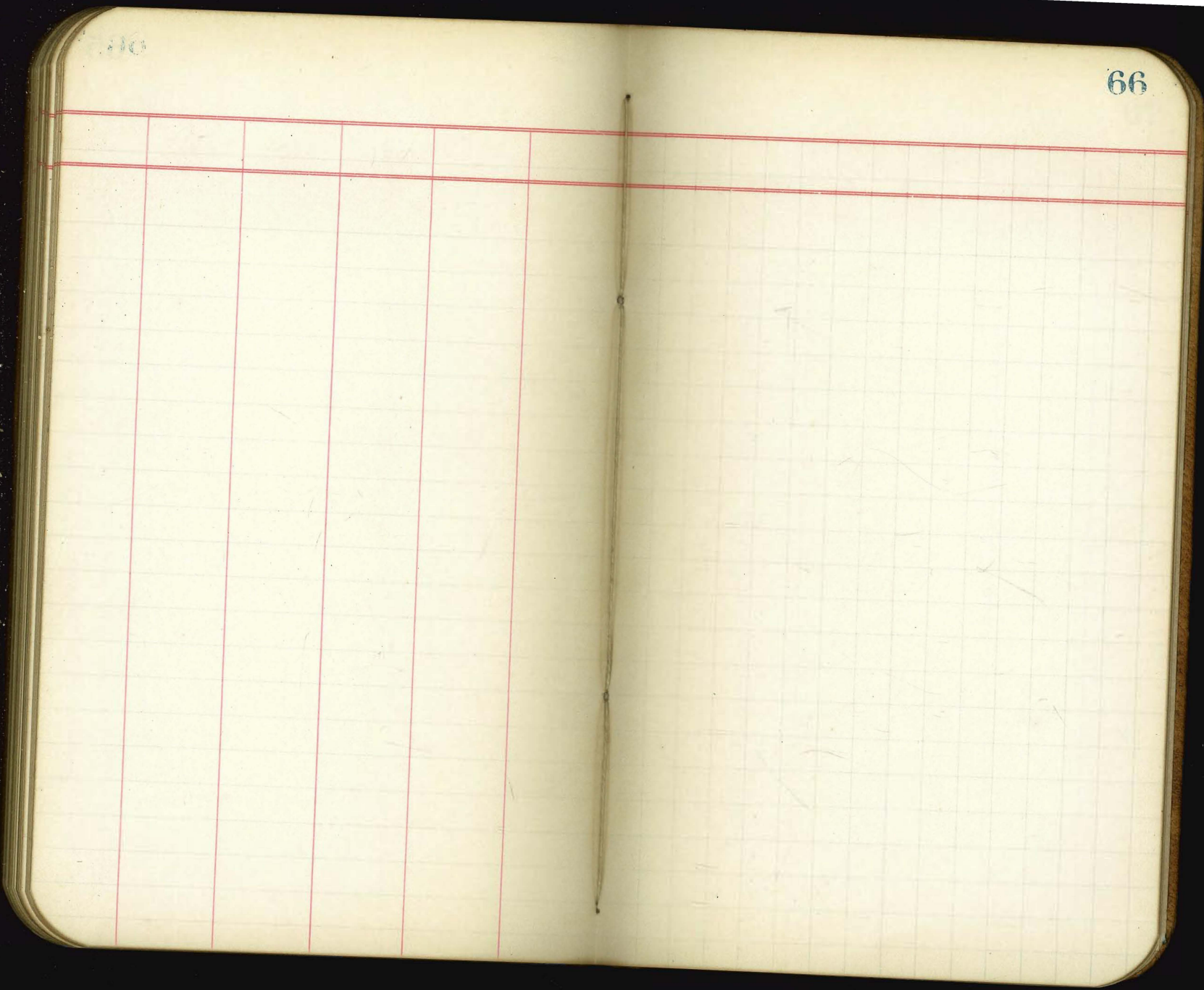
| Hor. | Vert. | Rod | | |
|---------------|-------|------|-----|---|
| Circuit 130.0 | | | | |
| 20°45' L | 0°45' | 2.70 | 270 | ✓ |
| 26° L | 0°0' | 240 | 240 | ✓ |
| 40°10' L | 0°0' | 200 | 200 | ✓ |
| 66°40' L | 0°0' | 148 | 148 | ✓ |
| 96°30' L | 0°15' | 088 | 88 | ✓ |
| 156° L | 0°30' | 060 | 60 | ✓ |
| 139°40' R | 0°15' | 075 | 75 | ✓ |
| 161° R | 1° | 085 | 85 | ✓ |











The image shows an open notebook with two pages. The left page is ruled with a grid and has a vertical margin line on the left. The right page is ruled with a grid and has the number '68' printed in the top right corner. The notebook has a dark cover and the pages are cream-colored.

1000 1000 1000

100
47
5
Return to City Engineers Office
City Hall, San Diego, Cal.

162

Return to City Engineers Office
City Hall, San Diego, Cal.
TRAVERSE TABLE FOR TRANSIT BOOK.
From 1° to 90° for a distance of 100.

| Degrees. | DEGREES. | | ¼ DEGREE. | | ½ DEGREE. | | ¾ DEGREE. | | Degrees. |
|----------|----------|-------|-----------|-------|-----------|-------|-----------|-------|----------|
| | Lat. | Dep. | Lat. | Dep. | Lat. | Dep. | Lat. | Dep. | |
| 0 | | | 100.00 | 0.44 | 100.00 | 0.87 | 99.99 | 1.31 | 89 |
| 1 | 99.98 | 1.75 | 99.98 | 2.18 | 99.97 | 2.62 | 99.95 | 3.05 | 88 |
| 2 | 99.94 | 3.49 | 99.92 | 3.93 | 99.91 | 4.36 | 99.88 | 4.80 | 87 |
| 3 | 99.86 | 5.23 | 99.84 | 5.67 | 99.81 | 6.10 | 99.79 | 6.54 | 86 |
| 4 | 99.76 | 6.98 | 99.73 | 7.41 | 99.69 | 7.85 | 99.66 | 8.28 | 85 |
| 5 | 99.62 | 8.72 | 99.58 | 9.15 | 99.54 | 9.58 | 99.50 | 10.02 | 84 |
| 6 | 99.45 | 10.45 | 99.41 | 10.89 | 99.36 | 11.32 | 99.31 | 11.75 | 83 |
| 7 | 99.25 | 12.19 | 99.20 | 12.62 | 99.14 | 13.05 | 99.09 | 13.49 | 82 |
| 8 | 99.03 | 13.92 | 98.97 | 14.35 | 98.90 | 14.78 | 98.84 | 15.21 | 81 |
| 9 | 98.77 | 15.64 | 98.70 | 16.07 | 98.63 | 16.50 | 98.56 | 16.93 | 80 |
| 10 | 98.48 | 17.36 | 98.40 | 17.79 | 98.33 | 18.22 | 98.25 | 18.65 | 79 |
| 11 | 98.16 | 19.08 | 98.08 | 19.51 | 97.99 | 19.94 | 97.90 | 20.36 | 78 |
| 12 | 97.81 | 20.79 | 97.72 | 21.22 | 97.63 | 21.64 | 97.53 | 22.07 | 77 |
| 13 | 97.44 | 22.50 | 97.34 | 22.92 | 97.24 | 23.34 | 97.13 | 23.77 | 76 |
| 14 | 97.03 | 24.19 | 96.92 | 24.62 | 96.81 | 25.04 | 96.70 | 25.46 | 75 |
| 15 | 96.59 | 25.88 | 96.48 | 26.30 | 96.36 | 26.72 | 96.25 | 27.14 | 74 |
| 16 | 96.13 | 27.56 | 96.00 | 27.98 | 95.88 | 28.40 | 95.76 | 28.82 | 73 |
| 17 | 95.63 | 29.24 | 95.50 | 29.65 | 95.37 | 30.07 | 95.24 | 30.49 | 72 |
| 18 | 95.11 | 30.90 | 94.97 | 31.32 | 94.83 | 31.73 | 94.69 | 32.14 | 71 |
| 19 | 94.55 | 32.56 | 94.41 | 32.97 | 94.26 | 33.38 | 94.12 | 33.79 | 70 |
| 20 | 93.97 | 34.20 | 93.82 | 34.61 | 93.67 | 35.02 | 93.51 | 35.43 | 69 |
| 21 | 93.36 | 35.84 | 93.20 | 36.24 | 93.04 | 36.65 | 92.88 | 37.06 | 68 |
| 22 | 92.72 | 37.46 | 92.55 | 37.86 | 92.39 | 38.27 | 92.22 | 38.67 | 67 |
| 23 | 92.05 | 39.07 | 91.88 | 39.47 | 91.71 | 39.87 | 91.53 | 40.27 | 66 |
| 24 | 91.35 | 40.67 | 91.18 | 41.07 | 91.00 | 41.47 | 90.81 | 41.87 | 65 |
| 25 | 90.63 | 42.26 | 90.45 | 42.66 | 90.26 | 43.05 | 90.07 | 43.44 | 64 |
| 26 | 89.88 | 43.84 | 89.69 | 44.23 | 89.49 | 44.62 | 89.30 | 45.01 | 63 |
| 27 | 89.10 | 45.40 | 88.90 | 45.79 | 88.70 | 46.17 | 88.50 | 46.56 | 62 |
| 28 | 88.29 | 46.95 | 88.09 | 47.33 | 87.88 | 47.72 | 87.67 | 48.10 | 61 |
| 29 | 87.46 | 48.48 | 87.25 | 48.86 | 87.04 | 49.24 | 86.82 | 49.62 | 60 |
| 30 | 86.60 | 50.00 | 86.38 | 50.38 | 86.16 | 50.75 | 85.94 | 51.13 | 59 |
| 31 | 85.72 | 51.50 | 85.49 | 51.88 | 85.26 | 52.25 | 85.04 | 52.62 | 58 |
| 32 | 84.80 | 52.99 | 84.57 | 53.36 | 84.34 | 53.73 | 84.10 | 54.10 | 57 |
| 33 | 83.87 | 54.46 | 83.63 | 54.83 | 83.39 | 55.19 | 83.15 | 55.56 | 56 |
| 34 | 82.90 | 55.92 | 82.66 | 56.28 | 82.41 | 56.64 | 82.16 | 57.00 | 55 |
| 35 | 81.92 | 57.36 | 81.66 | 57.71 | 81.41 | 58.07 | 81.16 | 58.42 | 54 |
| 36 | 80.90 | 58.78 | 80.64 | 59.13 | 80.39 | 59.48 | 80.13 | 59.83 | 53 |
| 37 | 79.86 | 60.18 | 79.60 | 60.53 | 79.34 | 60.88 | 79.07 | 61.22 | 52 |
| 38 | 78.80 | 61.57 | 78.53 | 61.91 | 78.26 | 62.25 | 77.99 | 62.59 | 51 |
| 39 | 77.71 | 62.93 | 77.44 | 63.27 | 77.16 | 63.61 | 76.88 | 63.94 | 50 |
| 40 | 76.60 | 64.28 | 76.32 | 64.61 | 76.04 | 64.94 | 75.76 | 65.28 | 49 |
| 41 | 75.47 | 65.61 | 75.18 | 65.93 | 74.90 | 66.26 | 74.61 | 66.59 | 48 |
| 42 | 74.31 | 66.91 | 74.02 | 67.24 | 73.73 | 67.56 | 73.43 | 67.88 | 47 |
| 43 | 73.14 | 68.20 | 72.84 | 68.52 | 72.54 | 68.84 | 72.24 | 69.15 | 46 |
| 44 | 71.93 | 69.47 | 71.63 | 69.78 | 71.33 | 70.09 | 71.02 | 70.40 | 45 |
| 45 | 70.71 | 70.71 | | | | | | | |
| Degrees. | Dep. | Lat. | Dep. | Lat. | Dep. | Lat. | Dep. | Lat. | Degrees. |
| | DEGREES. | | ¼ DEGREE. | | ½ DEGREE. | | ¾ DEGREE. | | |

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