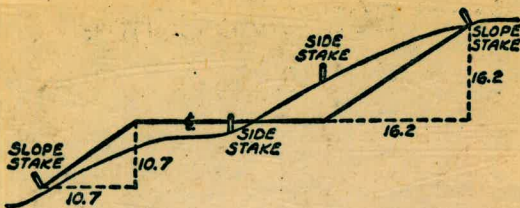


Please Return to  
 City of San Diego Water Dept.  
 Room 903 Civic Center

883



DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING  
 SLOPE 1 TO 1. ROADWAY OF ANY WIDTH

|    | 0     | .1    | .2    | .3    | .4    | .5    | .6    | .7    | .8    | .9    |    |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----|
| 0  | 0.00  | 0.10  | 0.20  | 0.30  | 0.40  | 0.50  | 0.60  | 0.70  | 0.80  | 0.90  | 0  |
| 1  | 1.00  | 1.10  | 1.20  | 1.30  | 1.40  | 1.50  | 1.60  | 1.70  | 1.80  | 1.90  | 1  |
| 2  | 2.00  | 2.10  | 2.20  | 2.30  | 2.40  | 2.50  | 2.60  | 2.70  | 2.80  | 2.90  | 2  |
| 3  | 3.00  | 3.10  | 3.20  | 3.30  | 3.40  | 3.50  | 3.60  | 3.70  | 3.80  | 3.90  | 3  |
| 4  | 4.00  | 4.10  | 4.20  | 4.30  | 4.40  | 4.50  | 4.60  | 4.70  | 4.80  | 4.90  | 4  |
| 5  | 5.00  | 5.10  | 5.20  | 5.30  | 5.40  | 5.50  | 5.60  | 5.70  | 5.80  | 5.90  | 5  |
| 6  | 6.00  | 6.10  | 6.20  | 6.30  | 6.40  | 6.50  | 6.60  | 6.70  | 6.80  | 6.90  | 6  |
| 7  | 7.00  | 7.10  | 7.20  | 7.30  | 7.40  | 7.50  | 7.60  | 7.70  | 7.80  | 7.90  | 7  |
| 8  | 8.00  | 8.10  | 8.20  | 8.30  | 8.40  | 8.50  | 8.60  | 8.70  | 8.80  | 8.90  | 8  |
| 9  | 9.00  | 9.10  | 9.20  | 9.30  | 9.40  | 9.50  | 9.60  | 9.70  | 9.80  | 9.90  | 9  |
| 10 | 10.00 | 10.10 | 10.20 | 10.30 | 10.40 | 10.50 | 10.60 | 10.70 | 10.80 | 10.90 | 10 |
| 11 | 11.00 | 11.10 | 11.20 | 11.30 | 11.40 | 11.50 | 11.60 | 11.70 | 11.80 | 11.90 | 11 |
| 12 | 12.00 | 12.10 | 12.20 | 12.30 | 12.40 | 12.50 | 12.60 | 12.70 | 12.80 | 12.90 | 12 |
| 13 | 13.00 | 13.10 | 13.20 | 13.30 | 13.40 | 13.50 | 13.60 | 13.70 | 13.80 | 13.90 | 13 |
| 14 | 14.00 | 14.10 | 14.20 | 14.30 | 14.40 | 14.50 | 14.60 | 14.70 | 14.80 | 14.90 | 14 |
| 15 | 15.00 | 15.10 | 15.20 | 15.30 | 15.40 | 15.50 | 15.60 | 15.70 | 15.80 | 15.90 | 15 |
| 16 | 16.00 | 16.10 | 16.20 | 16.30 | 16.40 | 16.50 | 16.60 | 16.70 | 16.80 | 16.90 | 16 |
| 17 | 17.00 | 17.10 | 17.20 | 17.30 | 17.40 | 17.50 | 17.60 | 17.70 | 17.80 | 17.90 | 17 |
| 18 | 18.00 | 18.10 | 18.20 | 18.30 | 18.40 | 18.50 | 18.60 | 18.70 | 18.80 | 18.90 | 18 |
| 19 | 19.00 | 19.10 | 19.20 | 19.30 | 19.40 | 19.50 | 19.60 | 19.70 | 19.80 | 19.90 | 19 |
| 20 | 20.00 | 20.10 | 20.20 | 20.30 | 20.40 | 20.50 | 20.60 | 20.70 | 20.80 | 20.90 | 20 |
| 21 | 21.00 | 21.10 | 21.20 | 21.30 | 21.40 | 21.50 | 21.60 | 21.70 | 21.80 | 21.90 | 21 |
| 22 | 22.00 | 22.10 | 22.20 | 22.30 | 22.40 | 22.50 | 22.60 | 22.70 | 22.80 | 22.90 | 22 |
| 23 | 23.00 | 23.10 | 23.20 | 23.30 | 23.40 | 23.50 | 23.60 | 23.70 | 23.80 | 23.90 | 23 |
| 24 | 24.00 | 24.10 | 24.20 | 24.30 | 24.40 | 24.50 | 24.60 | 24.70 | 24.80 | 24.90 | 24 |
| 25 | 25.00 | 25.10 | 25.20 | 25.30 | 25.40 | 25.50 | 25.60 | 25.70 | 25.80 | 25.90 | 25 |
| 26 | 26.00 | 26.10 | 26.20 | 26.30 | 26.40 | 26.50 | 26.60 | 26.70 | 26.80 | 26.90 | 26 |
| 27 | 27.00 | 27.10 | 27.20 | 27.30 | 27.40 | 27.50 | 27.60 | 27.70 | 27.80 | 27.90 | 27 |
| 28 | 28.00 | 28.10 | 28.20 | 28.30 | 28.40 | 28.50 | 28.60 | 28.70 | 28.80 | 28.90 | 28 |
| 29 | 29.00 | 29.10 | 29.20 | 29.30 | 29.40 | 29.50 | 29.60 | 29.70 | 29.80 | 29.90 | 29 |
| 30 | 30.00 | 30.10 | 30.20 | 30.30 | 30.40 | 30.50 | 30.60 | 30.70 | 30.80 | 30.90 | 30 |
| 31 | 31.00 | 31.10 | 31.20 | 31.30 | 31.40 | 31.50 | 31.60 | 31.70 | 31.80 | 31.90 | 31 |
| 32 | 32.00 | 32.10 | 32.20 | 32.30 | 32.40 | 32.50 | 32.60 | 32.70 | 32.80 | 32.90 | 32 |
| 33 | 33.00 | 33.10 | 33.20 | 33.30 | 33.40 | 33.50 | 33.60 | 33.70 | 33.80 | 33.90 | 33 |
| 34 | 34.00 | 34.10 | 34.20 | 34.30 | 34.40 | 34.50 | 34.60 | 34.70 | 34.80 | 34.90 | 34 |
| 35 | 35.00 | 35.10 | 35.20 | 35.30 | 35.40 | 35.50 | 35.60 | 35.70 | 35.80 | 35.90 | 35 |
| 36 | 36.00 | 36.10 | 36.20 | 36.30 | 36.40 | 36.50 | 36.60 | 36.70 | 36.80 | 36.90 | 36 |
| 37 | 37.00 | 37.10 | 37.20 | 37.30 | 37.40 | 37.50 | 37.60 | 37.70 | 37.80 | 37.90 | 37 |
| 38 | 38.00 | 38.10 | 38.20 | 38.30 | 38.40 | 38.50 | 38.60 | 38.70 | 38.80 | 38.90 | 38 |
| 39 | 39.00 | 39.10 | 39.20 | 39.30 | 39.40 | 39.50 | 39.60 | 39.70 | 39.80 | 39.90 | 39 |
| 40 | 40.00 | 40.10 | 40.20 | 40.30 | 40.40 | 40.50 | 40.60 | 40.70 | 40.80 | 40.90 | 40 |
| 41 | 41.00 | 41.10 | 41.20 | 41.30 | 41.40 | 41.50 | 41.60 | 41.70 | 41.80 | 41.90 | 41 |
| 42 | 42.00 | 42.10 | 42.20 | 42.30 | 42.40 | 42.50 | 42.60 | 42.70 | 42.80 | 42.90 | 42 |
| 43 | 43.00 | 43.10 | 43.20 | 43.30 | 43.40 | 43.50 | 43.60 | 43.70 | 43.80 | 43.90 | 43 |
| 44 | 44.00 | 44.10 | 44.20 | 44.30 | 44.40 | 44.50 | 44.60 | 44.70 | 44.80 | 44.90 | 44 |
| 45 | 45.00 | 45.10 | 45.20 | 45.30 | 45.40 | 45.50 | 45.60 | 45.70 | 45.80 | 45.90 | 45 |
| 46 | 46.00 | 46.10 | 46.20 | 46.30 | 46.40 | 46.50 | 46.60 | 46.70 | 46.80 | 46.90 | 46 |
| 47 | 47.00 | 47.10 | 47.20 | 47.30 | 47.40 | 47.50 | 47.60 | 47.70 | 47.80 | 47.90 | 47 |
| 48 | 48.00 | 48.10 | 48.20 | 48.30 | 48.40 | 48.50 | 48.60 | 48.70 | 48.80 | 48.90 | 48 |
| 49 | 49.00 | 49.10 | 49.20 | 49.30 | 49.40 | 49.50 | 49.60 | 49.70 | 49.80 | 49.90 | 49 |
| 50 | 50.00 | 50.10 | 50.20 | 50.30 | 50.40 | 50.50 | 50.60 | 50.70 | 50.80 | 50.90 | 50 |

Distances from slope stake from side or shoulder stake for any width roadway, slope 1 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.

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TABLE XIII—CORRECTIONS FOR TANGENTS AND EXTERNALS

These corrections are to be added to the approximate values, found by dividing the tangent, or external, for a 1° curve (Table VIII) by the degree of curve, in order to obtain the true tangents, or externals. Intermediate values may be obtained by interpolation.

FOR TANGENTS ADD

| Central Angle | DEGREE OF CURVE |      |      |      |      |      |      |      |      |      |      |      |      |      |
|---------------|-----------------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|               | 5°              | 10°  | 15°  | 20°  | 25°  | 30°  | 35°  | 40°  | 45°  | 50°  | 55°  | 60°  | 65°  | 70°  |
| 10°           | .03             | .06  | .09  | .13  | .16  | .19  | .22  | .25  | .28  | .31  | .34  | .38  | .42  | .46  |
| 15°           | .04             | .10  | .14  | .19  | .24  | .29  | .34  | .39  | .45  | .51  | .53  | .58  | .63  | .68  |
| 20°           | .06             | .13  | .19  | .26  | .32  | .39  | .45  | .51  | .58  | .65  | .72  | .79  | .84  | .90  |
| 25°           | .08             | .16  | .24  | .33  | .40  | .49  | .58  | .67  | .75  | .83  | .90  | .99  | 1.06 | 1.14 |
| 30°           | .10             | .19  | .29  | .39  | .49  | .59  | .69  | .79  | .89  | .99  | 1.09 | 1.20 | 1.29 | 1.39 |
| 35°           | .11             | .22  | .34  | .47  | .58  | .69  | .79  | .81  | .92  | 1.04 | 1.29 | 1.42 | 1.54 | 1.66 |
| 40°           | .13             | .26  | .40  | .53  | .67  | .80  | .93  | 1.06 | 1.20 | 1.34 | 1.49 | 1.64 | 1.79 | 1.94 |
| 45°           | .15             | .30  | .44  | .60  | .76  | .91  | 1.06 | 1.21 | 1.37 | 1.52 | 1.70 | 1.87 | 2.04 | 2.21 |
| 50°           | .17             | .34  | .51  | .68  | .85  | 1.02 | 1.19 | 1.36 | 1.54 | 1.72 | 1.91 | 2.10 | 2.29 | 2.48 |
| 55°           | .19             | .38  | .57  | .76  | .95  | 1.14 | 1.32 | 1.52 | 1.72 | 1.92 | 2.14 | 2.35 | 2.56 | 2.77 |
| 60°           | .21             | .42  | .63  | .84  | 1.05 | 1.27 | 1.49 | 1.71 | 1.94 | 2.17 | 2.38 | 2.60 | 2.83 | 3.07 |
| 65°           | .23             | .46  | .69  | .93  | 1.16 | 1.40 | 1.64 | 1.88 | 2.13 | 2.38 | 2.63 | 2.88 | 3.13 | 3.39 |
| 70°           | .25             | .51  | .76  | 1.02 | 1.28 | 1.54 | 1.80 | 2.06 | 2.33 | 2.60 | 2.88 | 3.16 | 3.44 | 3.72 |
| 75°           | .27             | .56  | .83  | 1.12 | 1.40 | 1.69 | 1.98 | 2.27 | 2.57 | 2.87 | 3.16 | 3.47 | 3.78 | 4.09 |
| 80°           | .30             | .61  | .91  | 1.22 | 1.53 | 1.84 | 2.15 | 2.46 | 2.78 | 3.10 | 3.44 | 3.78 | 4.12 | 4.46 |
| 85°           | .33             | .66  | 1.00 | 1.33 | 1.68 | 2.02 | 2.36 | 2.70 | 3.05 | 3.40 | 3.77 | 4.14 | 4.55 | 4.89 |
| 90°           | .36             | .72  | 1.09 | 1.45 | 1.83 | 2.20 | 2.57 | 2.94 | 3.32 | 3.70 | 4.10 | 4.50 | 4.91 | 5.32 |
| 95°           | .39             | .79  | 1.19 | 1.55 | 2.00 | 2.40 | 2.80 | 3.20 | 3.61 | 4.02 | 4.40 | 4.95 | 5.38 | 5.83 |
| 100°          | .43             | .86  | 1.30 | 1.74 | 2.18 | 2.62 | 3.06 | 3.50 | 3.95 | 4.40 | 4.88 | 5.37 | 5.85 | 6.34 |
| 110°          | .51             | 1.03 | 1.56 | 2.08 | 2.61 | 3.14 | 3.67 | 4.21 | 4.76 | 5.31 | 5.86 | 6.43 | 7.01 | 7.60 |
| 120°          | .62             | 1.25 | 1.93 | 2.52 | 3.16 | 3.81 | 4.45 | 5.11 | 5.77 | 6.44 | 7.12 | 7.80 | 8.50 | 9.22 |

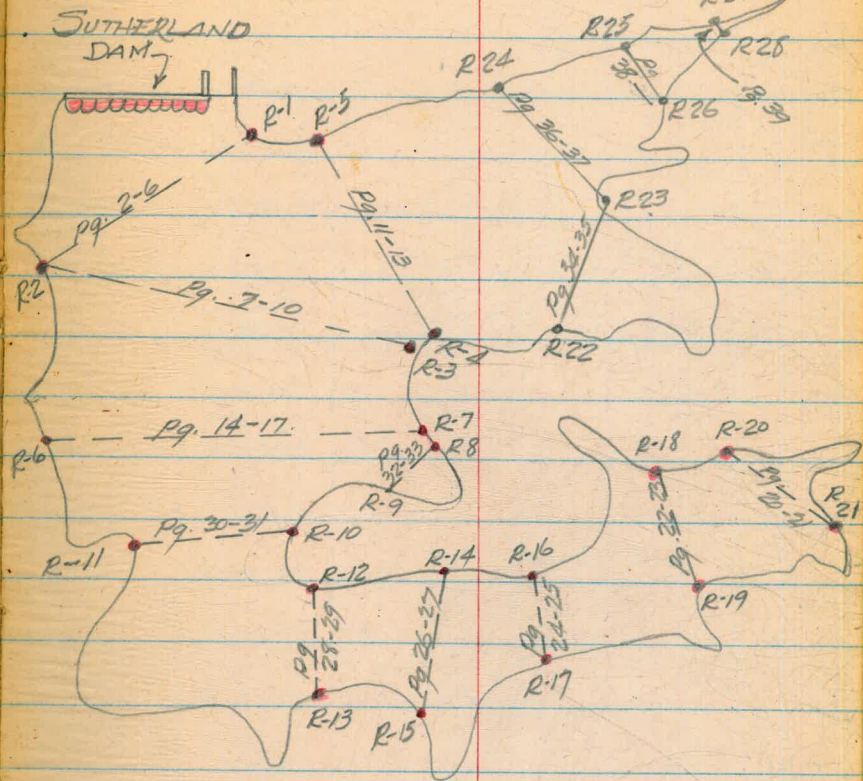
FOR EXTERNALS ADD

| Central Angle | DEGREE OF CURVE |      |      |      |      |      |      |      |      |      |      |      |      |      |
|---------------|-----------------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|               | 5°              | 10°  | 15°  | 20°  | 25°  | 30°  | 35°  | 40°  | 45°  | 50°  | 55°  | 60°  | 65°  | 70°  |
| 10°           | .001            | .003 | .004 | .006 | .007 | .008 | .009 | .011 | .012 | .014 | .015 | .017 | .018 | .020 |
| 15°           | .003            | .007 | .010 | .014 | .018 | .023 | .027 | .029 | .032 | .035 | .039 | .043 | .047 | .051 |
| 20°           | .006            | .011 | .017 | .022 | .028 | .034 | .038 | .045 | .051 | .057 | .063 | .070 | .076 | .083 |
| 25°           | .009            | .018 | .027 | .036 | .046 | .056 | .065 | .074 | .083 | .093 | .106 | .120 | .127 | .135 |
| 30°           | .013            | .025 | .038 | .051 | .065 | .078 | .090 | .103 | .116 | .129 | .149 | .170 | .179 | .188 |
| 35°           | .018            | .035 | .054 | .072 | .086 | .109 | .131 | .153 | .175 | .197 | .213 | .230 | .247 | .264 |
| 40°           | .023            | .046 | .070 | .093 | .117 | .141 | .172 | .203 | .234 | .265 | .277 | .290 | .315 | .341 |
| 45°           | .030            | .060 | .093 | .119 | .153 | .184 | .216 | .254 | .289 | .325 | .351 | .378 | .411 | .445 |
| 50°           | .037            | .075 | .116 | .151 | .189 | .227 | .266 | .305 | .345 | .384 | .425 | .467 | .508 | .550 |
| 55°           | .046            | .093 | .142 | .188 | .236 | .283 | .332 | .381 | .420 | .479 | .530 | .582 | .641 | .700 |
| 60°           | .056            | .112 | .168 | .225 | .283 | .340 | .398 | .457 | .516 | .575 | .636 | .697 | .774 | .851 |
| 65°           | .067            | .135 | .204 | .273 | .343 | .412 | .483 | .554 | .625 | .697 | .711 | .845 | .922 | 1.01 |
| 70°           | .080            | .159 | .240 | .321 | .403 | .485 | .568 | .652 | .735 | .819 | .906 | .994 | 1.08 | 1.17 |
| 75°           | .095            | .182 | .286 | .383 | .480 | .578 | .678 | .777 | .877 | .977 | 1.07 | 1.18 | 1.29 | 1.39 |
| 80°           | .110            | .220 | .332 | .445 | .558 | .671 | .787 | .903 | 1.02 | 1.13 | 1.25 | 1.38 | 1.50 | 1.62 |
| 85°           | .128            | .259 | .391 | .524 | .657 | .790 | .926 | 1.06 | 1.20 | 1.34 | 1.47 | 1.62 | 1.76 | 1.91 |
| 90°           | .149            | .299 | .450 | .603 | .756 | .910 | 1.07 | 1.22 | 1.38 | 1.54 | 1.70 | 1.87 | 2.03 | 2.20 |
| 95°           | .174            | .350 | .522 | .706 | .985 | 1.06 | 1.25 | 1.43 | 1.62 | 1.80 | 1.99 | 2.18 | 2.38 | 2.58 |
| 100°          | .200            | .401 | .604 | .809 | 1.01 | 1.22 | 1.43 | 1.64 | 1.85 | 2.06 | 2.28 | 2.50 | 2.73 | 2.96 |
| 110°          | .268            | .536 | .806 | 1.08 | 1.35 | 1.63 | 1.91 | 2.20 | 2.48 | 2.76 | 3.05 | 3.35 | 3.66 | 3.96 |
| 120°          | .360            | .721 | 1.08 | 1.45 | 1.82 | 2.19 | 2.57 | 2.95 | 3.33 | 3.72 | 4.11 | 4.50 | 4.91 | 5.32 |

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| SUTHERLAND RESERVOIR SILT SURVEY ✓  |   |               |
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| " R-8 to R-9                        |   | 18-<br>alice  |
| SUTHERLAND DAM CHECK PTS 2 & 3      |   | 40 & 41       |
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| Sutherland Trailer Park Topo Levels |   | 43 ✓          |
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SKETCH SHOWING

RANGE LINES & NUMBERS

# SUTHERLAND RESERVOIR

## PROFILE R-1 TO R-2

| STATION             | + B.S.              | I.I.    | - F.S. | Elevation        |
|---------------------|---------------------|---------|--------|------------------|
| BM.                 | 2441                | 2081.96 |        | 2057.08          |
| IP                  | 1.63                | 2083.59 | 0.00   | 2081.96          |
| CK BM.              |                     |         | 0.61   | 2082.98 = 2083.0 |
| B.M. SET, R-1.      | 0.18<br>Top 2" I.P. | 2083.18 | 0.59   | <u>2083.00</u>   |
| 0+00 R-1, NAT. GRD. |                     |         | 1.15   | 2082.0           |
| 0+15                |                     |         | 5.2    | 2078.0           |
| 0+17                |                     |         | 11.3   | 2071.9           |
| 0+32                | } Const. Roads.     |         | 10.2   | 2073.0           |
| 0+35                |                     |         | 13.2   | 2070.0           |
| 0+50                |                     |         | 13.1   | 2070.1           |
| IP                  | 0.66                | 2071.08 | 12.76  | 2070.42          |
| 0+72                |                     |         | 9.9    | 2061.2           |
| IP                  | 0.62                | 2058.56 | 13.14  | 2057.94          |
| 1+82                |                     |         | 13.7   | 2044.9           |
| IP                  | 0.03                | 2045.30 | 13.29  | 2045.27          |
| 1+91                | } Const. Road.      |         | 8.1    | 2037.2           |
| 2+27                |                     |         | 5.8    | 2039.5           |
| 2+39                |                     |         | 12.6   | 2032.7           |
| IP                  | 0.30                | 2032.38 | 13.22  | 2032.08          |

DEC. 18, 1953

BEATY  
SHOREY  
MARTELL  
ALEXANDER

2.

Construction Bench Mark, Top of ladder rung BUTT #1  
(or Pier?)

Top BUTT #1

PK NAIL on sly Fly of Highline Tower

MAG BRG R-1 to R-2      516°00W

(Slope meas'd)

Δ 228.31 @ 11°07' = 224.02

12-18-53

PROFILE  
R-1 to R-2

2032.38

2+80 76 2024.8

2+88 13.1 2019.3

3+15 } Const. Road 13.7 2018.7

P 0.14 2019.55 12.97 2019.41

3+36 7.9 2011.7

P 0.31 2007.29 12.57 2006.98

3+86 6.9 2000.4

4+48 12.1 1995.2

4+54 9.7 1997.6

4+72 Δ 11.2 1996.1

$$\Delta 251.63 @ 10^{\circ}06' = \frac{224.02}{247.86} = 471.88 = 4+72$$

P 0.28 1994.72 12.85 1992.44

5+08 7.8 1986.9

P 0.32 1981.66 13.38 1981.34

6+23 8.4 1973.3

6+96 13.3 1968.4

7+70 10.1 1971.6

$$299.20 @ 5^{\circ}40' = \frac{471.88}{297.71}$$

7+95 Δ 8.7 1973.0

$$25.41 Horiz = \frac{769.59}{25.41}$$

P 0.11 1968.62 13.15 1968.51

$$\Delta 795.00$$

8+27 0.0 1968.6

12/22/53

4

PROFILE  
R1 - R2

1968.62

(11) 0.02 1955.61 13.03 1955.59

9+00 1.0 1954.6

9+70 6.9 1958.7

(11) 0.10 1942.93 12.78 1942.83

10+45 (Edge Const. Road) 3.3 1939.6

10+92.63 Δ 5.9 1937.0

11+99 8.7 1934.2

12+30 9.5 1933.4

12+42 A 11.4 1931.5

12+47 Waters Edge 13.65 1929.28

\* Note: 12+47 to 15+41 Estimated.

12+75 \* 1924.3

13+00 \* 1923.7

13+45 WAT. Edge \* 1929.28

13+55 \* 1932.3

13+65 W.E \* 1929.28

14+00 \* 1923.3

14+35 W.E \* 1929.28

14+37 \* 1930.8

795.00  
300.00 @ 7% = 297.63  
= 1092.63

1092.63  
149.37 Horiz  
1242.00

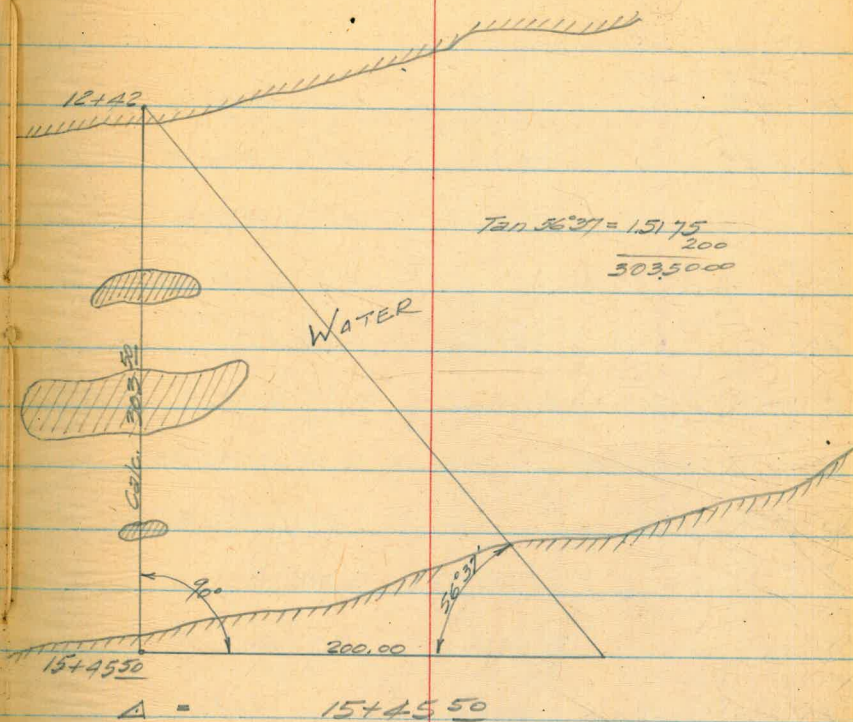
12/22/53

5.

Profile  
R-1 to R-2

1942.93

|        |       |         |              |
|--------|-------|---------|--------------|
| 14+65  |       | *       | 1930.8       |
| 14+66  | W.E   | *       | 1929.3       |
| 14+86  |       | *       | 1926.3       |
| 15+06  | W.E   | *       | 1929.3       |
| 15+07  |       | *       | 1930.3       |
| 15+17  |       | *       | 1930.3       |
| 15+19  | WE    | *       | 1929.3       |
| 15+30  |       | *       | 1925.3       |
| 15+41  | WE    | 13.65   | 1929.3       |
| HP     | 7.16  | 1940.89 | 9.20 1933.73 |
| 15+45E | Δ     | 10.4    | 1930.5       |
| 16+16  |       | 8.3     | 1932.6       |
| 16+36  |       | 3.3     | 1937.6       |
| 16+74  |       | 1.6     | 1939.3       |
| HP     | 12.46 | 1952.89 | 0.46 1940.43 |
| 16+98  |       | 9.3     | 1942.6       |
| HP     | 12.50 | 1965.35 | 0.04 1952.85 |
| 17+64  |       | 3.5     | 1961.9       |
| HP     | 12.46 | 1977.72 | 0.09 1965.26 |





12/22/53

6.

PROFILE  
R-1 to R-2

1977.72

|                    |         |         |                    |
|--------------------|---------|---------|--------------------|
| 17+95              |         | 10.1    | 1967.6             |
| 18+42.50           | Δ       | 3.3     | 1974.4             |
| 11P                | 12.12   | 1989.59 | 0.25 1977.47       |
| 11P                | 12.78   | 2002.22 | 0.15 1989.44       |
| 11P                | 12.17   | 2014.27 | 0.12 2002.10       |
| 20+80              |         | 3.3     | 2011.0             |
| 11P                | 12.94   | 2027.19 | 0.02 2014.25       |
| 2139.56            | Δ       | 9.9     | 2017.3             |
| 11P                | 11.55   | 2038.69 | 0.05 2027.14       |
| 23+00              |         | 7.1     | 2031.6             |
| 24+38.90           | Δ       | 2.0     | 2036.7             |
| 11P                | 11.67   | 2050.25 | 0.11 2038.58       |
| 24+75              |         | 14.2    | 2036.1             |
| 25+30              |         | 9.5     | 2040.8             |
| 11P                | 12.59   | 2062.56 | 0.28 2049.97       |
| 11P                | 13.02   | 2075.42 | 0.16 2062.40       |
| 26+96.46 = R2      |         | 2.5     | 2072.9             |
| CK 2073.00 Contour |         | 1.75    | 2073.67 - 2073.    |
| 343                | 2077.10 |         | on Contour Hub #31 |
| SET R-2            | 2" I.P. | 4.10    | <u>2073.00</u>     |

300.00 @ 8°09' =  $\frac{1545.50}{297.00}$   
1842.50

TARGET 13

300'00 @ 8°02' =  $\frac{1842.50}{297.06}$   
2139.56

300.00 @ 3°48' =  $\frac{2139.56}{299.34}$   
2438.90

260.00 @ 7°30' =  $\frac{2438.90}{257.76}$   
2696.66

JAN. 11, 1954.  
 " 12, 1954. - RAIN

BEATTY  
 SHOREY  
 MARTELL  
 ALEXANDER

PROFILE  
 R2 To R3

|                    |      |              |       |                |
|--------------------|------|--------------|-------|----------------|
| 0+00<br>R2         | 1.30 | 2074.30      |       | <u>2073.00</u> |
| TP                 | 0.18 | 2061.65      | 12.83 | 2061.47        |
| TP                 | 1.24 | 2051.32      | 11.57 | 2050.08        |
| 1+18               |      |              | 0.0   |                |
| 1+98               |      |              | 8.3   |                |
| TP                 | 0.00 | 2038.22      | 13.10 | 2038.22        |
| 2+81 <sup>75</sup> | A    |              | 13.4  |                |
| TP                 | 0.41 | 2025.74      | 12.89 | 2025.33        |
| 3+39               |      |              | 13.5  |                |
| TP                 | 0.08 | 2012.97      | 12.85 | 2012.89        |
| 3+54               |      | Edge of wash | 10.8  |                |
| 3+72               |      | " " "        | 11.6  |                |
| 4+95               |      |              | 12.5  |                |
| TP                 | 1.66 | 2002.02      | 12.61 | 2000.36        |
| TP                 | 0.49 | 1989.21      | 13.10 | 1988.92        |
| 5+79 <sup>53</sup> | A    |              | 1.9   | 1987.5         |
| 6+10               |      |              | 5.1   |                |
| 6+45               |      |              | 6.4   |                |
| 7+07 <sup>53</sup> | A    |              | 6.1   |                |

TT at R2; R1 to R3 33°58'45" RT.  
 MAG. BRG. S 89°45' E

A 285.75 @ 9°35' = 281.75

A 300' @ 7°00' = 297.78  
 5479.53

Horiz { 30.  
 66.  
 128.

A 7407.53

1/3/54 -

Profile

R2 - R3  
(Cont'd)

1989.41

|                     |              |         |       |         |
|---------------------|--------------|---------|-------|---------|
| 7+49                |              |         | 13.1  |         |
| P                   | 4.03         | 1980.24 | 13.20 | 1976.21 |
| 8+33                |              |         | 9.5   |         |
| 8+63                |              |         | 8.2   |         |
| P                   | 6.51         | 1986.73 | 0.02  | 1980.22 |
| 9+44                |              |         | 0.6   |         |
| 10+07 <sup>53</sup> | A            |         | 1.1   | 1985.6  |
| 11+00               |              |         | 5.1   |         |
| P                   | 0.19         | 1973.71 | 13.21 | 1973.52 |
| 12+82               |              |         | 5.5   |         |
| 13+17               |              |         | 11.7  |         |
| P                   | 0.25         | 1960.64 | 13.32 | 1960.39 |
| 13+24               |              |         | 6.2   |         |
| P                   | 0.10         | 1947.78 | 12.96 | 1947.68 |
| 13+68               |              |         | 3.8   |         |
| 13+84               | Water's Edge |         | 14.8  |         |
| 14+10               | " "          |         | 14.8  |         |
| 14+16               |              |         | 12.2  |         |
| 14+78               |              |         | 11.2  |         |

300' Horiz  
A

|                 |
|-----------------|
| 707.53          |
| 300.00          |
| <u>10107.53</u> |

300' @ 2°19' = 299.10  
A

|                 |
|-----------------|
| 1007.53         |
| <u>13106.63</u> |

Profile  
R2-R3  
(Cont'd)

1/13/54

9.

|          |       |                    |      |         |
|----------|-------|--------------------|------|---------|
| P        | 11.87 | 1947.78<br>1959.64 | 0.01 | 1947.77 |
| 15+50    |       |                    | 9.3  |         |
| 15+80    |       |                    | 12.9 |         |
| 17+85    |       |                    | 0.4  |         |
| P        | 13.14 | 1972.63            | 0.15 | 1959.49 |
| 18+53.85 | A     |                    | 12.0 |         |
| 20+48    |       |                    | 1.9  |         |
| P        | 12.20 | 1984.72            | 0.11 | 1972.52 |
| 21+03.60 | A     |                    | 10.5 |         |
| 22+88    | (7)   | (Field check)      | 7.8  |         |
| P        | 12.77 | 1997.32            | 0.17 | 1984.55 |
| 25+28    |       |                    | 6.7  |         |
| 26+28    |       |                    | 3.0  |         |
| P        | 12.72 | 2009.29            | 0.75 | 1996.57 |
| P        | 12.65 | 2020.98            | 0.96 | 2008.33 |
| P        | 12.35 | 2033.04            | 0.29 | 2020.69 |
| 28+26.80 | A     |                    | 12.6 |         |
| P        | 12.74 | 2045.72            | 0.06 | 2032.98 |
| 29+00    |       |                    | 12.3 |         |

$$247.75 @ 4^{\circ}31' = \frac{1306.63}{247.01}$$

$$15+53.64$$

$$300.36 @ 1^{\circ}50' = \frac{1553.64}{300.21}$$

$$18+53.85$$

$$250' @ 3^{\circ}04' = \frac{1853.85}{249.75}$$

$$21+03.60$$

$$2103.60$$

$$\text{Hor } 124.00$$

$$22+28.00$$

$$\text{Horz } 300'$$

$$A = 25+28$$

$$300' @ 5^{\circ}22' = \frac{2528}{298.80}$$

$$A = 28+26.80$$

1/13/54

10

Profile  
R2 - R3  
(Cont'd)

2045.72

9 TP 13.20 2058.74 0.18 2045.54

1 TP 12.58 2070.85 0.47 2058.27

1 31+24.40 A 11.9

1 TP 6.13 2076.37 0.61 2070.24

9 32+31.69 4.4

1 TP SET. Top 2" Pipe R-3 3.37 2073.00  
3.62 2076.62

2 SET BM. 4.18 2072.43

$$300' @ 7.93' = 2826.8$$

$$= 297.60$$

$$\Delta 31+24.40$$

$$110' @ 2.41' = 3124.40$$

$$= 109.63$$

$$32+34.03$$

$$= 2.34$$

ON LARGE BOULDER 32+31.69 = R3  
Between R3 & R4.

PROFILE  
R4 to R5

JAN. 13 1954

Beatty  
Shorey  
Martell  
Alexander

11.

|                      |         |         |       |                   |
|----------------------|---------|---------|-------|-------------------|
| BM                   | 5.28    | 2077.71 |       | 2072.43           |
| IP SET R-4           | 2" I.P. |         | 4.71  | <u>2073.00</u>    |
|                      | 0.14    | 2073.14 |       |                   |
| R4 0+00              |         |         | 0.9   | 2072.2            |
| OK BM                |         |         | 0.71  | 2072.43 = 2072.43 |
| 0+78                 |         |         | 5.7   |                   |
| IP                   | 0.02    | 2060.17 | 12.99 | 2060.15           |
| 2+60                 |         |         | 11.9  |                   |
| 2+99 <sup>01</sup> A |         |         | 11.2  |                   |
| 3+45                 |         |         | 10.3  |                   |
| IP                   | 0.13    | 2047.45 | 12.85 | 2047.32           |
| 4+66                 |         |         | 6.9   |                   |
| IP                   | 0.30    | 2034.77 | 12.98 | 2034.47           |
| 5+41 <sup>45</sup> A |         |         | 3.4   |                   |
| IP                   | 0.34    | 2021.80 | 13.31 | 2021.46           |
| 6+15                 |         |         | 1.6   |                   |
| IP                   | 0.42    | 2009.09 | 13.13 | 2008.67           |
| IP                   | 0.19    | 1995.92 | 13.36 | 1995.73           |
| IP                   | 0.21    | 1982.91 | 13.22 | 1982.70           |
| 8+36 <sup>35</sup> A |         |         | 5.5   |                   |
| IP                   | 0.49    | 1970.75 | 12.65 | 1970.26           |

on Large Boulder between R3 & R4

$$\begin{aligned} 300' @ 4^{\circ}41' &= 297.01 \\ \Delta &= 2+990' \end{aligned}$$

$$\begin{aligned} 243.17 @ 4^{\circ}28' &= 242.44 \\ \Delta &= 5+4145 \end{aligned}$$

$$\begin{aligned} 300' @ 10^{\circ}30' &= 294.90 \\ \Delta &= 8+36.35 \end{aligned}$$

1/13/54

12

Profile  
R4 to R5

(Cont'd)

1970.75

|                       |            |         |      |         |
|-----------------------|------------|---------|------|---------|
| 9+43                  |            |         | 3.9  |         |
| 9+64                  |            |         | 8.5  |         |
| 9+82                  |            |         | 6.8  |         |
| 10+21                 | Edge Water |         | 10.0 |         |
| 10+25                 | " "        |         | 10.0 |         |
| P                     | 12.19      | 1982.41 | 0.53 | 1970.22 |
| 11+00                 |            |         | 11.5 |         |
| 11+36 <sup>32</sup> A |            |         | 9.0  |         |
| 12+84                 |            |         | 2.1  |         |
| 13+08                 |            |         | 6.3  |         |
| P                     | 12.16      | 1994.57 | 0.00 | 1982.41 |
| 13+34                 |            |         | 10.6 |         |
| 13+92                 |            |         | 12.6 |         |
| 14+20                 |            |         | 3.7  |         |
| 14+31 <sup>94</sup> Δ |            |         | 2.1  |         |
| P                     | 12.08      | 2006.56 | 0.09 | 1994.48 |
| P                     | 12.69      | 2019.22 | 0.03 | 2006.53 |
| P                     | 12.98      | 2032.18 | 0.02 | 2019.20 |
| P                     | 13.01      | 2044.84 | 0.35 | 2031.83 |

$$300' @ 0^{\circ}51' = \frac{836.35}{299.97}$$

$$11+36.32$$

$$296' @ 2^{\circ}53' = \frac{1136.32}{295.62}$$

$$14+31.94.$$

1/13/54

13

Profile  
R4 To R5  
(Cont'd.)  
2044.84

17+2894 Δ 6.5

9P 12.57 2056.86 0.55 2044.29

P 12.43 2068.81 0.48 2056.38

P 10.08 2078.88 0.01 2068.80

18+56.62 6.7 2072.2

SET R-5 2" I.P. 5.88 2073.00

R5 12.07 2085.07 2073.00

OK 2073 Contour Hub. 12.04 2073.03

OK R1 2.08 2082.99 = 2083.00

(see pg. 2)

300' @ 8°09' = <sup>1431.94</sup> 297.00  
17+28.94

160' @ 14°10' = <sup>1728.94</sup> 155.20  
18+84.14  
- 27.51

R5 = 18+56.63



PROFILE  
R6 To R7

JAN. 14 1954  
BEATTY,  
SPOREY,  
MASTELL,  
KEMP.

14.

IP 2.61 2075.61 2073.00

Top 2" HP. R2 (see pg. 7.)

OK 2073 Contour Hub #31 1.94 2073.67 = 2073.

(see pg. 6.)

OK 2073 " " #35 1.82 2073.79 = 2073

IP 5.24 2079.03 1.82 2073.79

OK 2073 Contour Hub #37 Sec. <sub>LINE</sub> 5.33 2073.79 = 2072.94

IP 7.01 2075.19 10.85 2068.18

IP 8.98 2075.93 8.24 2066.95

IP 0.52 2067.49 7.96 2067.97

IP 12.51 2073.61 7.39 2061.10

0+00 @ R6 1.2 2072.4

MAG. BRG. N 61° 30' E

SET R6 2" HP 0.61 2073.00

2.38 2075.38  
IP 0.14 2062.34 13.18 2062.20

IP 0.21 2049.24 13.31 2049.03

1+2150 5.0

125' @ 13° 35' = 1+2150

IP 0.47 2036.58 13.13 2036.11

IP 0.00 2023.29 13.29 2023.29

2+9580 A 0.2

300' @ 9° 42' = 295.8

IP 0.46 2010.45 13.30 2009.99

Δ = 2+9580

IP 0.47 1997.78 13.14 1997.31

1/14/54

15.

Profile  
R6 - R7

|            |         |         |               |
|------------|---------|---------|---------------|
| 5+94.52 A  | 1997.78 | 0.7     |               |
| P          | 0.06    | 1984.62 | 13.22 1984.56 |
| 8+11       |         | 2.1     |               |
| 8+93.62 A  |         | 9.9     |               |
| P          | 0.22    | 1971.80 | 13.04 1971.58 |
| 11+04      |         | 7.2     |               |
| 11+41.37 A |         | 7.0     |               |
| P          | 0.38    | 1959.20 | 12.98 1958.82 |
| 11+63      |         | 2.5     |               |
| 11+80      |         | 11.2    |               |
| 12+75      |         | 13.4    |               |
| 12+98      |         | 5.8     |               |
| 13+40      |         | 4.2     |               |
| 13+50      |         | 0.4     |               |
| P          | 13.17   | 1971.98 | 0.39 1958.81  |
| 14+41.37 A |         | 6.3     | 1965.7        |
| 16+53      |         | 3.1     | 1968.9        |
| P          | 12.43   | 1984.33 | 0.08 1971.90  |
| P          | 13.21   | 1997.51 | 0.03 1984.30  |

$$300' @ 5^{\circ}18' = \frac{295.80}{298.72}$$

$$\Delta = 5+94.52$$

$$217' @ 4^{\circ}12' = \frac{594.52}{216.35}$$

$$8+1087$$

$$300' @ 2^{\circ}30' = \frac{594.52}{299.10}$$

$$\Delta = 8+9362$$

$$248' @ 2^{\circ}30' = \frac{893.62}{247.75}$$

$$\Delta = 11+4137$$

$$300' \text{ Horiz} = 14+4137$$

Profile  
R6 - R7

1997.51

17+40<sup>38</sup> Δ 2.7 1994.8

Π 12.53 2009.89 0.15 1997.36

18+54 4.3

18+83<sup>57</sup> Δ 0.9

Π 3.11 2012.57 0.43 2009.46

20+60 +0.5

21+60 Δ 4.1

Π 0.61 2000.00 13.18 1999.39

22+44 3.5

22+70 9.9

23+04 6.9

23+30 11.0

23+40 20.0

23+52 13.1

23+95 6.4

24+59<sup>67</sup> Δ 3.7

25+20 7.1

Π 12.18 2011.93 0.25 1999.75

1/14/53

16.

212' @ 3°02' =  $\frac{1441.37}{211.70}$

16+53<sup>07</sup>

300' @ 4°40' =  $\frac{1441.37}{299.07}$

Δ 17+40<sup>38</sup>

144.05' @ 6°13' =  $\frac{1740.38}{143.19}$

18+83<sup>57</sup>

Horiz  $\frac{1683.57}{226.43}$   
Δ = 21+60<sup>00</sup>

145' @ 6°47' =  $\frac{2160}{143.98}$   
23+03<sup>96</sup>

300' @ 2°43' =  $\frac{2160}{299.67}$   
Δ 24+59<sup>67</sup>

Profile  
R6 - R7

1/14/54

2011.93

|               |       |         |                        |
|---------------|-------|---------|------------------------|
| 25+52         |       | 12.4    | 1999.5                 |
| 26+10         |       | 6.1     | 2005.8                 |
| IP            | 12.82 | 2024.74 | 0.01 2011.92           |
| IP            | 13.20 | 2037.88 | 0.06 2024.68           |
| 27+27         |       | 5.3     | 2032.6                 |
| 27+57.8 Δ     |       | 0.2     | 2037.7                 |
| IP            | 13.20 | 2050.93 | 0.15 2037.73           |
| IP            | 12.79 | 2063.67 | 0.05 2050.88           |
| 28+88.97      |       | 1.7     |                        |
| IP            | 13.30 | 2076.07 | 0.90 2062.77           |
| 29+30.49 @ R7 |       | 3.6     | 2072.5                 |
| SET R7 2" IP  | 3.09  | 2076.09 | 3.07 <u>2073.00</u>    |
| SET BM        | 8.78  | 2080.06 | 4.81 2071.28           |
| CK R3         | 6.03  | 2079.03 | 7.06 2073.00           |
| CK BM         | 6.75  | 2079.18 | 6.60 2072.43 = 2072.43 |
| CK R4         |       | 6.18    | 2073.00                |

$$300' @ 7^{\circ}24' = \frac{2459.67}{297.51}$$

Δ 27+57.18

$$134' @ 10^{\circ}25' = \frac{2757.16}{131.79}$$

28+88.97

$$180' @ 11^{\circ}25' = \frac{2757.18}{176.40}$$

$$29+33.58$$

$$- 3.09$$

$$29+30.49$$

ON LARGE BOULDER 35' SW R7

ON LARGE BOULDER between R3 & R4

LEVELS TO  
R-10 TO R-11

1/15/54

18

BM 6.24 2077.32 2071.28

IP 8.65 2073.75 12.22 2065.10

BM 10.69 2077.71 6.73 2067.02

IP 10.07 2076.79 10.99 2066.72

SET R-10 1 1/2" I.P.  
0.17 2073.17 3.79 2073.00

SET R-11 1 1/2" I.P.  
0.17 2073.00

SET BM.  
10.35 2083.35  
2.59 2074.42 11.52 2071.83

CK R-10 1.42 2073.00

LARGE BOULDER SW R7 (SEE PG 17.)

LARGE BOULDER 500' SLY R7

LARGE BOULDER 800' SLY R10

JAN. 18, 1954

19.

LEVELS TO SEC. COR'S  
SE COR SEC 21 & N 1/4 COR SEC. 27

|     |       |         |       |         |
|-----|-------|---------|-------|---------|
| TBM | 11.15 | 2082.43 |       | 2071.28 |
| P   | 11.96 | 2093.80 | 0.59  | 2081.84 |
| P   | 11.92 | 2105.41 | 0.31  | 2093.49 |
| P   | 12.53 | 2117.91 | 0.03  | 2105.38 |
| P   | 12.92 | 2130.81 | 0.02  | 2117.89 |
| P   | 12.69 | 2143.16 | 0.34  | 2130.47 |
| P   | 13.28 | 2156.21 | 0.23  | 2142.93 |
| P   | 13.27 | 2169.15 | 0.33  | 2155.88 |
| P   | 13.17 | 2182.29 | 0.03  | 2169.12 |
| P   | 10.49 | 2192.46 | 0.32  | 2181.97 |
| P   | 4.81  | 2190.84 | 6.43  | 2186.03 |
| P   | 7.45  | 2192.25 | 6.04  | 2184.80 |
| P   | 5.43  | 2195.56 | 2.12  | 2190.13 |
| TBM | 10.98 | 2195.58 | 10.96 | 2184.60 |
| P   | 0.67  | 2183.28 | 12.97 | 2182.61 |
| P   | 0.27  | 2170.45 | 13.10 | 2170.18 |
| P   | 0.24  | 2157.61 | 13.08 | 2157.37 |
| P   | 0.31  | 2144.67 | 13.25 | 2144.36 |
| P   | 0.00  | 2131.92 | 12.75 | 2131.92 |

on Large BOULDER 500' Sly R-7

ON SEC COR (CHIS X) SE COR SEC. 21.

1/18/54

20

LEVELS To SEC. COR. S  
Cont'd.

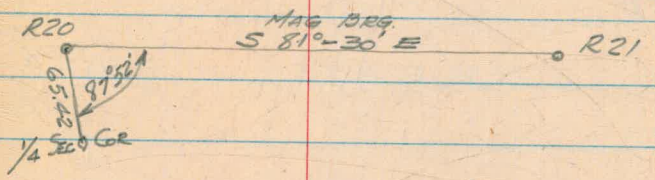
PROFILE R-20-R-21

|                      |      |         |       |           |
|----------------------|------|---------|-------|-----------|
|                      |      | 2131.92 |       |           |
| IP                   | 0.27 | 2118.92 | 13.27 | 2118.65   |
| IP                   | 0.33 | 2106.43 | 12.82 | 2106.10   |
| IP                   | 0.35 | 2093.61 | 13.17 | 2093.26   |
| IP                   | 0.33 | 2080.72 | 13.22 | 2080.39   |
| IP (Recd)            | 1.11 | 2071.40 | 10.43 | 2070.29   |
| TBM (cork)           | 8.13 | 2075.35 | 4.18  | 2067.22 ✓ |
| TBM (Sec. Cor)       | 8.70 | 2074.75 | 9.30  | 2066.05   |
| on 2073 Contour Hub  |      |         | 1.39  | 2073.26   |
| SET R-20<br>0400     | 1.77 | 2074.77 | 1.75  | 2073.00   |
| Ground at R-20       |      |         | 2.27  | 2072.5    |
| 0+60                 |      |         | 6.6   |           |
| IP                   | 0.38 | 2062.78 | 12.37 | 2062.40   |
| IP                   | 0.30 | 2049.72 | 13.36 | 2049.42   |
| 2+23 <sup>65</sup> A |      |         | 0.4   |           |
| 2+40                 |      |         | 5.6   |           |
| 2+53                 |      |         | 12.5  |           |
| IP                   | 0.35 | 2037.11 | 12.96 | 2036.76   |
| 2+62                 |      |         | 4.3   |           |
| 2+80                 |      |         | 8.7   |           |

on LARGE BOULDER JULY 40+ R 18  
 on Wly end of stone N 1/4 COR SEC. 27  
 Nly of 1/4 Cor.  
 1/2 I.P. SET FOR R-20 (Nly)

FEB. 3, 19

Beatty  
Storey  
Marrett  
Alexander



$\Delta 225' @ 6'16'' = 2+23^{65}$

Profile R20-R21  
Cont'd.

2037.11

|         |               |         |              |
|---------|---------------|---------|--------------|
| 3+16    | Edge of Creek | 12.9    |              |
| 3+36    | " " "         | 12.9    |              |
| 3+48    |               | 10.7    |              |
| 3+75    |               | 12.2    |              |
| 3+80    |               | 10.8    |              |
| 3+90    |               | 8.6     |              |
| 4+86    |               | 6.6     |              |
| 5+10    |               | 3.7     |              |
| 5+23.17 | A             | 3.7     |              |
| 5+77    |               | 3.6     |              |
| 5+88    |               | 1.9     |              |
| P       | 12.70         | 2048.53 | 1.28 2035.83 |
| 7+27    |               | 12.1    |              |
| P       | 12.29         | 2060.39 | 0.43 2048.10 |
| 7+50    |               | 7.7     |              |
| 8+22.42 | A             | 5.4     |              |
| P       | 13.01         | 2073.12 | 0.28 2060.11 |
| 9+35    |               | 15.0    |              |

2/3/54

21.

$$\begin{array}{r}
 2+23.65 \\
 300' @ 3^{\circ}17' = 299.52 \\
 \hline
 \Delta \quad 5+23.17
 \end{array}$$

$$\begin{array}{r}
 5+23.17 \\
 300' @ 4^{\circ}05' = 299.25 \\
 \hline
 \Delta \quad 8+22.42
 \end{array}$$



2/3/53

22

Profile R20 - R21  
Profile R19 - R18

2073.12

104 61.27 @ R21 0.7 2072.4

SET R-21 0.29 2073.29 0.12 2073.00

IP 10.86 2075.53 8.62 2064.67

IP 5.52 2068.41 12.64 2062.89

IP 7.54 2073.55 2.40 2066.01

SET R19 0.51 2073.51 0.55 2073.00

0+00 @ R19 1.0 2072.5

IP 0.85 2060.99 13.37 2060.14

1+25 6.7

1+50 12.9

IP 0.39 2048.73 12.65 2048.34

1+90 5.4

IP 0.48 2036.09 13.12 2035.61

2+63 2.5

2+80 8.1

2+96.40 Δ 8.9

3+25 9.5

3+73 13.0

IP 8.90 2031.77 13.22 2022.87

$$239.33 @ 3^{\circ}37' = \frac{8+22.42}{238.85} \\ 10+61.27$$

1 1/2" I.P. set for R21 (5/4)

1 1/2" I.P. set for R19 (5/4)

MAG. BEARING N 28°15' W

$$300' @ 8^{\circ}27' = 296.40$$

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23.

## PROFILE R19-R18

|          |               |         |       |                   |
|----------|---------------|---------|-------|-------------------|
|          |               | 2031.77 |       |                   |
| 4+22     | Edge of Creek |         | 14.2  |                   |
| 4+40     | " " "         |         | 14.2  |                   |
| 4+75     |               |         | 11.8  |                   |
| 5+20     |               |         | 3.8   |                   |
| 5+96.40  | A             |         | 5.4   |                   |
| 7+38     |               |         | 3.4   |                   |
| IP       | 12.43         | 2043.43 | 0.77  | 2031.00           |
| IP       | 13.03         | 2056.17 | 0.29  | 2043.14           |
| 7+80     |               |         | 11.1  |                   |
| 8+26.24  | A             |         | 4.4   |                   |
| IP       | 12.49         | 2068.57 | 0.09  | 2056.08           |
| 9+35     |               |         | 12.2  |                   |
| CK TBM   |               |         | 1.27  | 2067.30 = 2067.22 |
| IP       | 6.74          | 2075.09 | 0.22  | 2068.35           |
| 10+51    |               |         | 6.8   | 2068.2            |
| 10+76.14 | @ R18         |         | 2.8   | 2072.3            |
| SET. R18 | 2.07          | 2075.07 | 2.09  | 2073.00           |
| IP       | 1.43          | 2078.46 | 1.04  | 2074.03           |
| IP       | 10.36         | 2075.80 | 13.02 | 2065.44           |

$$300' @ 0'00' = \frac{2+96.40}{200.00}$$

$$\Delta \quad \underline{5+96.40}$$

$$231' @ 5'41' = \frac{5+96.40}{229.84}$$

$$\Delta \quad \underline{8+26.24}$$

(see pg 20.)

$$251.4 @ 3'40' = \frac{8+26.24}{249.90}$$

$$\Delta \quad \underline{10+76.14}$$

1 1/2" I.P. set for R-18 (N.Y.)

PROFILE R-16 - R17.

3/3/54

24.

|                    |              |       |         |
|--------------------|--------------|-------|---------|
|                    | 2075.80      |       |         |
| SET R16            | 0.50 2073.50 | 2.80  | 2073.00 |
| 0400 @ R16         |              | 1.0   | 2072.50 |
| 0+10               |              | 4.5   | 2069.0  |
| IP                 | 0.38 2060.72 | 13.16 | 2060.34 |
| 0+40               |              | 9.6   | 2051.1  |
| 0+50               |              | 11.5  | 2049.2  |
| IP                 | 0.22 2048.08 | 12.86 | 2047.86 |
| 0+87               |              | 13.2  | 2034.9  |
| IP                 | 0.35 2035.59 | 12.84 | 2035.24 |
| 0+93               |              | 4.2   | 2031.4  |
| 1+04.52 Δ          |              | 5.2   | 2030.4  |
| IP                 | 0.75 2023.37 | 12.97 | 2022.62 |
| 1+35               |              | 13.3  | 2010.1  |
| IP                 | 2.49 2012.51 | 13.35 | 2010.02 |
| 1+55.37 Δ          |              | 9.6   | 2002.9  |
| 1+80 Edge of Creek |              | 11.7  | 2000.8  |
| 1+87 " " "         |              | 11.7  | 2000.8  |
| 2+10               |              | 8.6   | 2003.9  |
| 2+19 Edge of Creek |              | 10.4  | 2002.1  |

SET 1/2" IP for R16 (N14)

MAG. BRG. S 32°00'E

$$55' @ 25^{\circ}25' = 49.66$$

$$113' @ 22^{\circ}23' = 104.52$$

Δ

$$\begin{array}{r} 104.52 \\ 58' @ 28^{\circ}45' = 50.87 \\ \hline 1+55.39 \end{array}$$

$$\begin{array}{r} 1404.52 \\ 110' @ 16^{\circ}18' = 105.60 \\ \hline \Delta = 2+10.12 \end{array}$$

3/3/54

25.

Profile R16-R17  
(Cont'd.)

|               |               |         |        |         |
|---------------|---------------|---------|--------|---------|
|               | 2012.51       |         |        |         |
| 2+29          | Edge of Creek | 10.4    | 2002.1 |         |
| 2+65          |               | 8.5     | 2004.0 |         |
| 2+90          |               | 8.0     | 2004.5 |         |
| 3+05          |               | 4.5     | 2008.0 |         |
| P             | 13.09         | 2024.82 | 0.78   | 2011.73 |
| 3+25          |               |         | 5.2    | 2019.6  |
| P             | 13.12         | 2037.82 | 0.12   | 2024.70 |
| 3+48          |               |         | 0.6    | 2037.2  |
| P             | 12.92         | 2050.49 | 0.25   | 2037.57 |
| 3+55          |               |         | 11.2   | 2039.3  |
| P             | 13.21         | 2063.64 | 0.06   | 2050.43 |
| 4+04          |               |         | 13.3   | 2050.3  |
| P             | 12.38         | 2075.92 | 0.10   | 2063.54 |
| 4+93.97 @ R17 |               |         | 3.4    | 2072.5  |
| SET R17       | 0.34          | 2073.34 | 2.92   | 2073.00 |
| P             | 0.53          | 2061.52 | 12.35  | 2060.99 |
| P             | 7.63          | 2063.17 | 5.98   | 2055.54 |
| P             | 10.61         | 2068.91 | 4.87   | 2058.30 |
| P             | 11.59         | 2076.51 | 3.99   | 2064.92 |

$$202' @ 6^{\circ}55' = \frac{1404.52}{200.53}$$


---


$$3+05.05$$

$$250' Horiz. \frac{1404.52}{2+50}$$


---


$$3+54.52$$

$$300' @ 3^{\circ}07' = \frac{1404.52}{299.55}$$


---


$$\Delta 4+04.07$$

$$91.92 @ 12^{\circ}08' = 89.90$$

$$4+93.97 = R17$$

1/2" I.P. Set for R17

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26

## PROFILE R-15 - R-14

|                       |               |         |         |         |
|-----------------------|---------------|---------|---------|---------|
|                       | 2076.51       |         |         |         |
| SET R-15 . 1.85       | 2074.85       | 3.51    | 2073.00 |         |
| 0+00 @ R-15           |               | 2.1     |         |         |
| P                     | 0.18          | 2061.95 | 13.08   | 2061.77 |
| 1+35                  |               | 7.4     |         |         |
| P                     | 0.66          | 2049.42 | 13.19   | 2048.76 |
| 2+98 A                |               | 10.4    |         |         |
| P                     | 0.23          | 2037.28 | 12.37   | 2037.05 |
| 3+80                  |               | 6.6     |         |         |
| P                     | 0.37          | 2024.54 | 13.11   | 2024.17 |
| 5+80 <sup>34</sup> A  |               | 3.0     |         |         |
| P                     | 0.50          | 2011.84 | 13.20   | 2011.34 |
| 7+03 A                |               | 7.4     |         |         |
| P                     | 0.19          | 2000.55 | 11.48   | 2000.36 |
| 7+18                  |               | 4.8     |         |         |
| 7+57                  |               | 9.4     |         |         |
| 7+70                  | Edge of Creek | 13.0    |         |         |
| 8+57                  | " " "         | 13.0    |         |         |
| 9+87                  |               | 8.1     |         |         |
| 10+02 <sup>77</sup> A |               | 5.7     |         |         |

SET 1 1/2" I.O. for R-15

Mag. Brq. N 18°00'E

$$300' @ 6°21' = 297.99$$

$$\Delta = 2+97.99$$

$$283.' @ 3°52' = \frac{2497.99}{5+80.34} = 282.35$$

$$\Delta$$

$$124' @ 8°29' = \frac{122.64}{7+02.98}$$

$$\Delta$$

$$300' @ 2°06' = \frac{7+02.78}{10+02.72} = 299.79$$

$$\Delta$$

$$\Delta = 10+02.72$$

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27.

PROFILE R15-R14  
(Cont'd)

2000.55  
IP 12.16 2012.45 0.26 2000.29

10+28 10.7 2001.8

11+68 8.1 2004.4

IP 12.76 2025.18 0.03 2012.42

12+23<sup>55</sup> A 59 2019.3

$$222' @ 600' = \frac{10+02.77}{220.78}$$

IP 12.29 2037.40 0.07 2025.11

$$\Delta \frac{12+23.55}{12+23.55}$$

12+50 (?) (Field check) 13.0 2024.4

IP 13.18 2050.50 0.08 2037.32

13+40 10.9 2039.6

IP 12.76 2063.17 0.09 2050.41

IP 10.67 2073.42 0.42 2062.75

$$255' @ 11^{\circ}52' = \frac{12+23.55}{250.03}$$

14+73<sup>59</sup> @ R-14 1.2 2072.2

$$\Delta 14+73.58$$

SET R-14 0.67 2073.67 0.42 2073.00

SET 1 1/2" I.P. for R14

IP 5.18 2065.67 13.18 2060.49

IP 8.96 2073.42 1.21 2064.46

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28.

## PROFILE R13-R12

|                             |              |       |         |
|-----------------------------|--------------|-------|---------|
|                             | 2073.42      |       |         |
| SET R13                     | 0.31 2073.31 | 0.42  | 2073.00 |
| 0400 @ R13                  |              | 0.9   | 2072.4  |
| $\overline{D}$ 0477         | 0.20 2060.33 | 13.18 | 2060.13 |
| $\overline{D}$              | 0.17 2047.52 | 12.98 | 2047.35 |
| 1+52                        |              | 7.4   | 2040.1  |
| $\overline{D}$              | 0.59 2035.33 | 12.78 | 2034.74 |
| $\overline{D}$              | 0.15 2022.53 | 12.95 | 2022.38 |
| $\overline{D}$              | 0.37 2009.81 | 13.09 | 2009.44 |
| 3+70 <sup>22</sup> $\Delta$ |              | 12.4  | 1997.4  |
| $\overline{D}$              | 0.36 1997.80 | 12.37 | 1997.44 |
| 4+79 <sup>54</sup> $\Delta$ |              | 11.4  | 1986.4  |
| $\overline{D}$              | 0.34 1985.15 | 12.99 | 1984.81 |
| 5+04                        |              | 9.7   | 1975.5  |
| 5+34                        |              | 9.0   | 1976.2  |
| 5+37                        |              | 6.1   | 1979.1  |
| 5+67 Edge of Creek          |              | 11.6  | 1973.6  |
| 6+05 " " "                  |              | 11.6  | 1973.6  |
| 6+46                        |              | 7.9   | 1977.3  |
| 6+98                        |              | 2.1   | 1983.1  |

SET 1 1/2" IP for R13  
(Sly. SIDE)

MAG. BRG. N 0°45' E

78' @ 9°16' = 76.99

$$300' @ 12'10" = \frac{76.99}{2.93.25}$$

$$\Delta - \frac{3+70.22}{}$$

$$110' @ 6'30" = \frac{1.09.30}{}$$

$$\Delta - \frac{4+79.54}{}$$

R13 to R12  
(Cont'd.)

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|                          |       |         |       |                   |
|--------------------------|-------|---------|-------|-------------------|
|                          |       | 1985.15 |       |                   |
| TD                       | 12.63 | 1996.98 | 0.80  | 1984.35           |
| IP                       | 12.60 | 2009.46 | 0.12  | 1996.86           |
| IP                       | 12.66 | 2021.98 | 0.14  | 2009.32           |
| 7+78 <sup>64</sup> A     |       |         | 10.8  | 2010.2            |
| IP                       | 12.89 | 2034.73 | 0.14  | 2021.84           |
| IP                       | 12.75 | 2047.11 | 0.37  | 2034.36           |
| IP                       | 12.47 | 2059.49 | 0.09  | 2047.02           |
| 9+18 <sup>88</sup> Δ     |       |         | 1.5   | 2058.0            |
| IP                       | 9.84  | 2068.94 | 0.39  | 2059.10           |
| IP                       | 11.54 | 2079.20 | 1.28  | 2067.66           |
| SET R12                  | 11.64 | 2084.64 | 6.20  | 2073.00           |
| 9+75 <sup>29</sup> @ R12 |       |         | 12.4  | 2072.2            |
| IP                       | 6.80  | 2078.42 | 13.02 | 2071.62           |
| CK BM.                   |       |         | 6.50  | 2071.92 = 2071.83 |

$$300' @ 4^{\circ}29' = \frac{4499.54}{299.10}$$

Δ 7+78<sup>64</sup>

$$147' @ 17^{\circ}32' = \frac{7478.64}{140.24}$$

9+18<sup>88</sup>

$$57.33 @ 10^{\circ}09' = \frac{9+18.88}{56.41}$$

Δ 9+75<sup>29</sup>

Set 1/2" IP R12  
(N.Y. SIDE)

on large boulder 800' S by R10 Pg. 18



PROFILE R10 to R11

|              |               |         |               |
|--------------|---------------|---------|---------------|
| T R10        | 0.03          | 2073.03 | 2073.00       |
| 7+6190 @ R10 |               | 1.0     | 2072.0        |
| 7+7          | 0.32          | 2060.36 | 12.99 2060.04 |
| 7+11         | 0.67          | 2047.81 | 13.22 2047.14 |
| 7+17         | 0.61          | 2035.25 | 13.17 2034.64 |
| 7+21         | 0.28          | 2022.22 | 13.31 2021.94 |
| 6+215 Δ      |               | 3.9     | 2018.3        |
| 7+11         | 0.07          | 2009.30 | 12.99 2009.23 |
| 5+64         |               | 10.7    | 1998.6        |
| 7+7          | 0.47          | 1996.84 | 12.93 1996.37 |
| 5+22         |               | 8.3     | 1988.5        |
| 7+11         | 0.05          | 1984.01 | 12.88 1983.96 |
| 7+11         | 0.23          | 1970.94 | 13.30 1970.71 |
| 4+25         | Edge of Creek | 13.4    | 1957.5        |
| 3+77         | " " "         | 13.4    | 1957.5        |
| 7+11         | 13.05         | 1983.91 | 0.08 1970.86  |
| 3+27         |               | 12.6    | 1971.3        |
| 3+14         |               | 12.5    | 1971.4        |
| 3+10         |               | 9.5     | 1974.4        |

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MAG BRG. R11 to R10 N 67°15' E

See pg. 18

$$\begin{array}{r}
 6+2160 \\
 148.4 @ 19^{\circ}33' = \underline{139.80} \\
 \hline
 7+6190
 \end{array}$$

$$\begin{array}{r}
 3+25.11 \\
 300' @ 8^{\circ}46' = \underline{296.49} \\
 \hline
 \Delta \quad 6+2160
 \end{array}$$

Nail in Stump

$$\begin{array}{r}
 193.56 \\
 121.0 @ 21^{\circ}04' = \underline{131.55} \\
 \hline
 \Delta \quad 3725.11
 \end{array}$$

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31.

R10 to R11  
(Cont'd)

|            |         |         |              |
|------------|---------|---------|--------------|
|            | 1983.91 |         |              |
| 2483       |         | 1.6     | 1982.3       |
| TD         | 12.66   | 1996.40 | 0.17 1983.74 |
| TD         | 13.01   | 2009.19 | 0.22 1996.18 |
| TD         | 13.14   | 2021.94 | 0.39 2008.80 |
| TD         | 13.24   | 2034.98 | 0.20 2021.74 |
| TD         | 12.98   | 2047.03 | 0.93 2034.05 |
| TD         | 13.27   | 2059.98 | 0.32 2046.71 |
| 0480       |         | 7.0     | 2053.0       |
| TD         | 13.25   | 2073.00 | 0.23 2059.75 |
| 0400 @ R11 |         | 1.0     | 2072.00      |
| OK R11     |         | 0.00    | 2073.00      |

$$200' @ 14^{\circ}35' = 193.56$$

$$A = 1493.56$$

$$82' @ 14^{\circ}20' = 79.50$$

R11 See pg. 18

PROFILE R9 to R8

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32.

TBM 6.55 2073.57 2067.02

Boulder 500' SWly R7 see pg. 18

P 2.53 2075.71 0.39 2073.18

SET R9 1.62 2074.57 2.76 2072.95 (.05 low)

1 1/2" IP SET FOR R9  
(Sly Side)

0+00 @ R9 2.6 2072.0

MAG BRG. N 22°30'E

1+44.84 Δ 7.8 2066.8

145' @ 2°43' = 144.84

P 0.17 2061.54 13.20 2061.37

Δ 1+44.84

2+42 3.6 2057.9

P 0.46 2049.01 12.99 2048.55

P 0.35 2036.16 13.20 2035.81

4+42.64 Δ 3.1 2033.1

300' @ 6°45' = 144.84  
297.80

4+65 4.1 2032.1

Δ = 442.64

P 0.27 2023.34 13.09 2023.07

5+90.45 Δ 7.9 2015.4

149' @ 7°22' = 442.64  
147.81

6+15 5.4 2017.9

Δ = 590.45

6+50 12.1 2011.2

6+55 11.9 2011.4

6+56 10.1 2013.2

6+90 10.3 2013.0

P 13.12 2036.38 0.08 2023.26

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R9 To R8  
(Cont.d)

2036.38

7+20 6.9 2029.5

7+42<sup>64</sup> A 2.7 2033.7

IP 12.63 2048.96 0.05 2036.33

IP 13.24 2062.11 0.09 2048.87

IP 12.65 2074.70 0.06 2062.05

9+16<sup>34</sup> @ R8 2.5 2072.2

SET R8 1.70 2073.00

IP  
CK 2073 Contour Hub 1.68 2073.02  
5.49 2078.49

IP 2.64 2074.29 6.84 2071.65

CK DM 3.02 2071.27 = 2071.28

Set 1 1/2" IP for R8  
(Nly Side)300' @ Horiz  
4+42<sup>64</sup>  
300.00  
- 7+42<sup>64</sup>148' @ 13°05' =  
7+42<sup>64</sup>  
144.0  
8+86<sup>64</sup>2970 Horiz  
8+86<sup>64</sup>  
2970  
9+16<sup>34</sup>

BOULDER 35' ± Sly R7 see pg. 17

PROFILE R22 - R23

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|                      |       |         |       |                  |
|----------------------|-------|---------|-------|------------------|
| TBM                  | 8.52  | 2080.95 |       | 2072.43          |
| TP                   | 3.89  | 2075.55 | 9.29  | 2071.66          |
| SET R22              | 0.61  | 2073.58 | 2.58  | 2072.97 (20/100) |
| 0400 @ R22           |       |         | 1.6   | 2072.0           |
| TP                   | 0.02  | 2060.49 | 13.11 | 2060.47          |
| TP                   | 0.16  | 2047.51 | 13.14 | 2047.35          |
| 1+40 <sup>14</sup> Δ |       |         | 2.6   | 2043.9           |
| TP                   | 0.65  | 2034.88 | 13.28 | 2034.23          |
| 2+96 Δ               |       |         | 10.2  | 2024.7           |
| 3+60                 |       |         | 13.3  | 2021.6           |
| 3+84                 |       |         | 17.4  | 2017.5           |
| 4+10                 |       |         | 14.2  | 2020.7           |
| 4+50                 |       |         | 17.3  | 2017.6           |
| 4+61                 |       |         | 9.2   | 2025.7           |
| TP                   | 12.82 | 2047.19 | 0.51  | 2034.37          |
| 5+95 <sup>41</sup> Δ |       |         | 2.4   | 2044.8           |
| TP                   | 13.17 | 2060.23 | 0.13  | 2047.06          |
| 6+87                 |       |         | 9.4   | 2050.8           |
| 7+34 <sup>13</sup> Δ |       |         | 4.8   | 2055.4           |

on large boulder between R3 & R9 see pg. 11

SET 2" I.P. for R22 (SW side)

MAG BRG. N 8°30' E

$$143' @ 11°35' = 140.14$$

$$300' @ 9°24' = 295.98$$

$$\Delta - 2+9598$$

$$300' @ 3°34' = 299.43$$

$$2+9598$$


---


$$5+9591$$

$$139' @ 3°41' = 138.72$$

$$\Delta - 7+3413$$

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35.

R22 - R23  
(Cont'd)

2060.23

7+57 7.5 2052.7

11 13.35 2073.46 0.12 2060.11

9+70 13.5 2060.0

10+34<sup>03</sup> A 8.6 2064.9

11+00 7.3 2067.2

11+20 8.7 2064.8

11+65<sup>43</sup> @ R23 1.5 2072.00

SET R23 0.31 2073.31 0.46 2073.00

$$300' @ 1^{\circ}30' = \frac{7+34.13}{299.90}$$

$$\Delta = 10+34^{\circ}03$$

$$\text{Horiz} \quad \frac{131.20}{\Delta = 11+65^{\circ}43}$$

Set 2° 1.P for R23

37  
PROFILE R23-R24

|                      |         |         |               |
|----------------------|---------|---------|---------------|
|                      | 2073.31 |         |               |
| 0+00 @ R23           |         | 1.3     | 2072.00       |
| 0+34                 |         | 6.2     | 2067.1        |
| 0+45                 |         | 5.4     | 2067.9        |
| IP                   | 0.29    | 2060.16 | 13.10 2060.17 |
| 1+93                 |         | 7.3     | 2053.2        |
| 2+19 Δ               |         | 8.0     | 2052.5        |
| 2+31                 |         | 11.8    | 2048.7        |
| IP                   | 0.00    | 2047.37 | 13.09 2047.37 |
| 2+57                 |         | 3.6     | 2043.8        |
| 3+07                 |         | 10.0    | 2037.4        |
| IP                   | 0.01    | 2034.00 | 13.38 2033.99 |
| IP                   | 0.37    | 2021.11 | 13.26 2020.74 |
| 4+42                 |         | 10.9    | 2010.2        |
| IP                   | 0.23    | 2008.08 | 13.26 2007.85 |
| 5+14 <sup>21</sup> Δ |         | 6.7     | 2001.4        |
| 5+45                 |         | 9.9     | 1998.2        |
| 5+46                 |         | 14.4    | 1993.7        |
| 5+58                 |         | 14.4    | 1993.7        |
| 5+66                 |         | 12.2    | 1995.9        |

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SET 2" I.P. R23

MAG BRG. N. 53°15' W.

$$220' @ 5^{\circ}25' = 219.01$$

$$\Delta = 2+190'$$

$$300' @ 10^{\circ}10' = \frac{295.20}{5+142'}$$

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37.

R23 - R24  
(Cont'd.)

2008.08

|                           |       |         |              |
|---------------------------|-------|---------|--------------|
| 6+57                      |       | 11.8    | 1996.3       |
| 6+76                      |       | 15.9    | 1992.2       |
| 6+86                      |       | 14.4    | 1993.7       |
| 7+20                      |       | 14.3    | 1993.8       |
| 7+24                      |       | 11.5    | 1996.6       |
| 7+37                      |       | 6.1     | 2002.0       |
| 7+64                      |       | 2.9     | 2005.2       |
| IP                        | 13.13 | 2021.10 | 0.11 2007.97 |
| 7+85                      |       | 10.8    | 2010.3       |
| 8+139 <sup>1</sup> Δ      |       | 4.0     | 2007.1       |
| IP                        | 13.22 | 2034.32 | 0.00 2021.10 |
| 8+69                      |       | 5.1     | 2029.2       |
| IP                        | 12.97 | 2047.24 | 0.05 2034.27 |
| 9+00                      |       | 8.7     | 2038.5       |
| IP                        | 12.92 | 2060.15 | 0.01 2047.23 |
| 9+67 <sup>17</sup> Δ      |       | 3.6     | 2056.6       |
| IP                        | 13.17 | 2073.32 | 0.00 2060.15 |
| 11+86 <sup>12</sup> @ R24 |       | 1.0     | 2072.3       |
| SET R24                   | 8.29  | 2081.29 | 0.32 2073.00 |

$$300' @ 2^{\circ}40' = \frac{5+14^{\circ}21}{8+13^{\circ}91} = 299.70$$

$$158' @ 14^{\circ}00' = \frac{8+13^{\circ}91}{9+67^{\circ}17} = 153.26$$

$$225^{\circ}22' @ 13^{\circ}57' = \frac{2.1895}{11+86^{\circ}12}$$

SET 2" I.P. for R24 (Nly. side)



PROFILE R25-R26

2/11/54

38

|                          |       |                    |       |         |
|--------------------------|-------|--------------------|-------|---------|
| P                        | 6.74  | 2081.29<br>2075.40 | 12.63 | 2068.66 |
| P                        | 2.53  | 2074.82            | 3.11  | 2072.29 |
| SET R25                  | 1.12  | 2074.11            | 1.83  | 2072.99 |
| 0400 @ R25               |       |                    | 1.7   | 2072.4  |
| P                        | 0.22  | 2061.22            | 13.11 | 2061.00 |
| 0480                     |       |                    | 8.2   | 2053.0  |
| P                        | 0.49  | 2048.40            | 13.31 | 2047.91 |
| 1407                     |       |                    | 6.4   | 2042.0  |
| P                        | 0.11  | 2036.59            | 11.92 | 2036.48 |
| 1420                     |       |                    | 5.4   | 2031.2  |
| 1448                     |       |                    | 9.8   | 2026.8  |
| 1453                     |       |                    | 7.8   | 2028.8  |
| 1471                     |       |                    | 4.5   | 2032.1  |
| 1495                     |       |                    | 2.6   | 2034.0  |
| P                        | 12.48 | 2048.95            | 0.12  | 2036.47 |
| P                        | 13.14 | 2061.69            | 0.40  | 2048.55 |
| P                        | 13.07 | 2074.49            | 0.27  | 2061.42 |
| 2462 <sup>25</sup> @ R26 |       |                    | 2.2   | 2072.3  |
| SET R26                  | 0.10  | 2073.10            | 1.49  | 2073.00 |

SET 2" I.P for R25 (Nly Side)

MAG BRG 553°30'E

SET 2" I.P for R26 (Sly Side)

PROFILE R27-R28

FEB. 25 1954

Shorey  
Alexander

37.

|                          |            |         |      |                   |
|--------------------------|------------|---------|------|-------------------|
|                          |            | 2073.10 |      |                   |
| CK R25                   | 3.44       | 2076.43 | 0.11 | 2072.99           |
| IP                       | 4.37       | 2077.68 | 3.12 | 2073.31           |
| SET R27                  | 1.17       | 2074.17 | 4.68 | 2073.00           |
| 0+00 @ R27               |            |         | 1.9  | 2072.3            |
| 0+04 <sup>E</sup>        |            |         | 2.8  | 2071.4            |
| 0+12                     |            |         | 7.9  | 2066.3            |
| 0+25                     | Edge Creek |         | 9.4  | 2064.8            |
| 0+32                     | " "        |         | 9.4  | 2064.8            |
| 0+37                     |            |         | 8.4  | 2065.8            |
| 0+57                     |            |         | 8.0  | 2066.2            |
| 0+62                     |            |         | 5.7  | 2068.5            |
| 0+73                     |            |         | 4.2  | 2070.0            |
| 0+75                     |            |         | 2.5  | 2071.7            |
| 0+76 <sup>45</sup> @ R28 |            |         | 2.2  | 2072.0            |
| SET R28                  | 2.08       | 2075.08 | 1.17 | 2073.00           |
| IP                       | 4.24       | 2075.58 | 3.74 | 2071.34           |
| CK R23                   | 4.39       | 2077.36 | 2.61 | 2072.97 = 73.00   |
| IP                       | 9.40       | 2081.38 | 5.38 | 2071.98           |
| CK TBM                   |            |         | 9.03 | 2072.35 = 2072.43 |

SET 2" I.P. for R27 (Nly side)

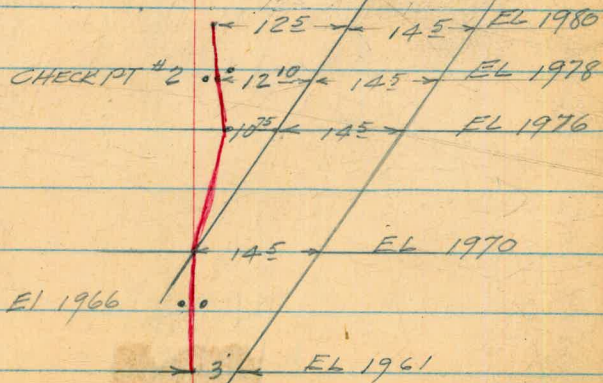
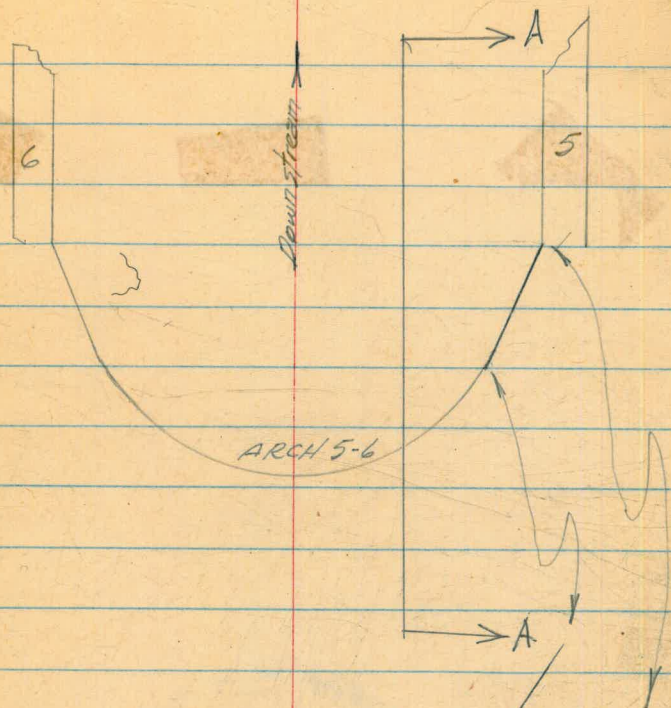
SET 2" I.P. for R-28 (Sly side)

LARGE BOULDER between R3 & R4

SUTHERLAND DAM  
CHECK POINTS #2 & #3  
ARCH 5-6  
Dimension & Elev. of Cracks.

FEB. 1 1956  
BEATTY.  
SMITH.

40

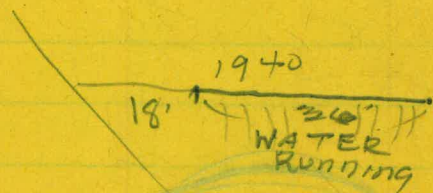


section A-A

SUTHERLAND DAM  
CHECK PTS #4 & #5  
ARCH 10-11

2/2/56  
Beatty  
Smith.

9-10

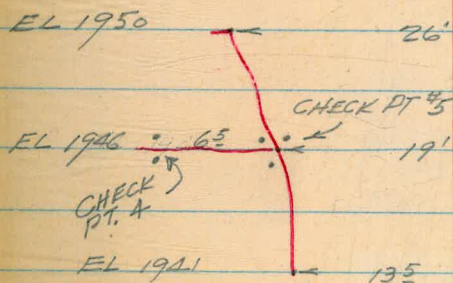
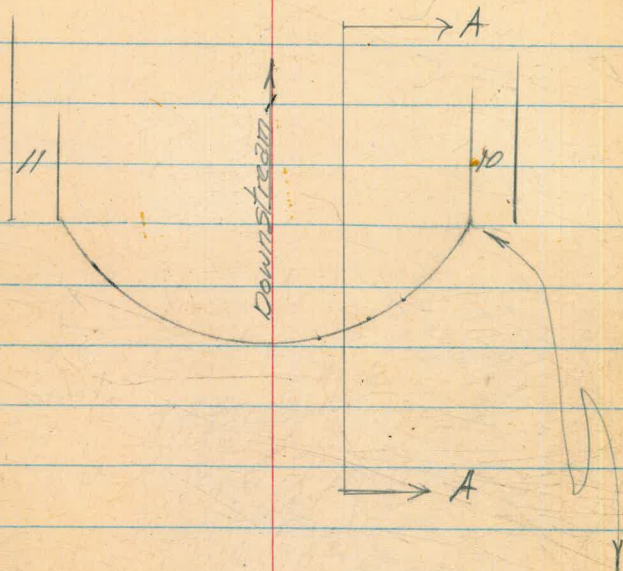


No measuring points  
This crack

com  
3-6-56

2/2/56  
Beatty  
Smith.

21.



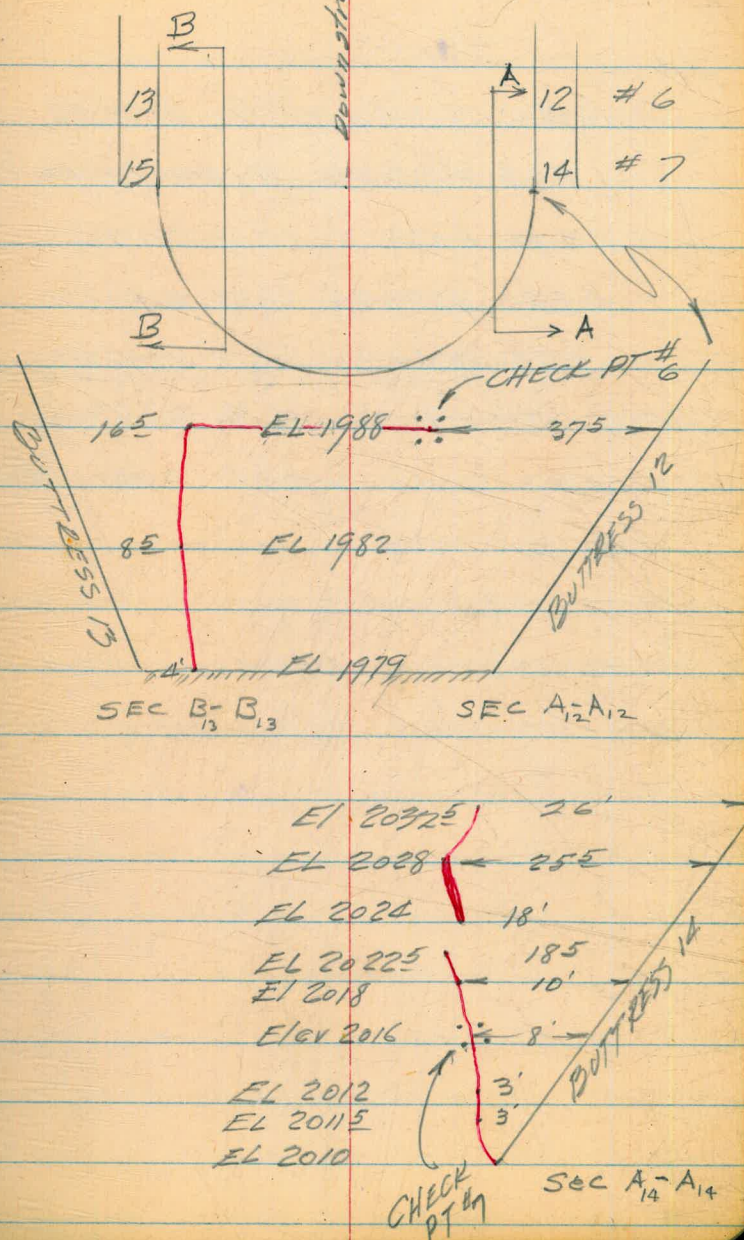
Section A-A

BUTTRESS #10

SUTHERLAND DAM  
CHECK POINTS #6 & 7

2/2/56  
BETTY  
SMITH

42



Sutherland Dam Trailer  
Park Topo Levels

|       |         |       |           |
|-------|---------|-------|-----------|
| +4.51 | 2075.11 |       | 2070.60   |
| 5.28  | 2075.22 | 5.17  | 2069.94   |
| 13.00 | 2087.10 | 1.12  | 2074.10   |
| 0.37  | 2074.45 | 13.02 | 2074.08   |
| 3.63  | 2061.91 | 13.17 | 2061.29   |
| 11.78 | 2071.33 | 5.36  | 2059.55   |
|       |         | 0.75  | 2070.58 = |

West  
Williams  
Kellhofer  
Bull

43

511157

Spillway

BM Chris A Bottom Step Wly Butt of

USGS BM Gaging Sta mkel 2071

Retaining wall by Currier Tool Shed  
Set TBM Chris A on Top Nly end of core

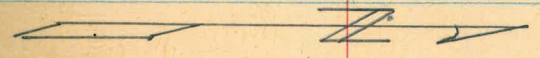
2070.60

Ties to West Line see #21  
and Topo survey for Trailer  
park

West  
Williams  
Kellhofer  
Bull

512157

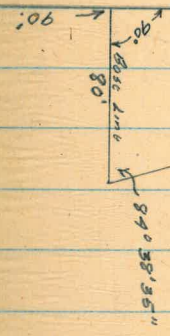
Santa



NW cor. Sec 21  
Isabel  
Full pile of rocks + Cor. rock 18" x 9" x 4"  
Grove of Asher woods  
80

1529.73

853.15' 0.1



Set 1/2" IP on see line top of Hill

T-12 S R 2 E

SEC 21

0  
Topo Base line

98° 09' 35"

Set 1/2" IP on see line  
on top of Hill below Dan Rogers  
house West of old Rock chimney

335.7

586.58

135.62

56° 44' 05"

Set 1/2" IP Topo Survey

33° 47' 10"

and Nail 2 1/2"

103° 04' 15"

8' 08.86

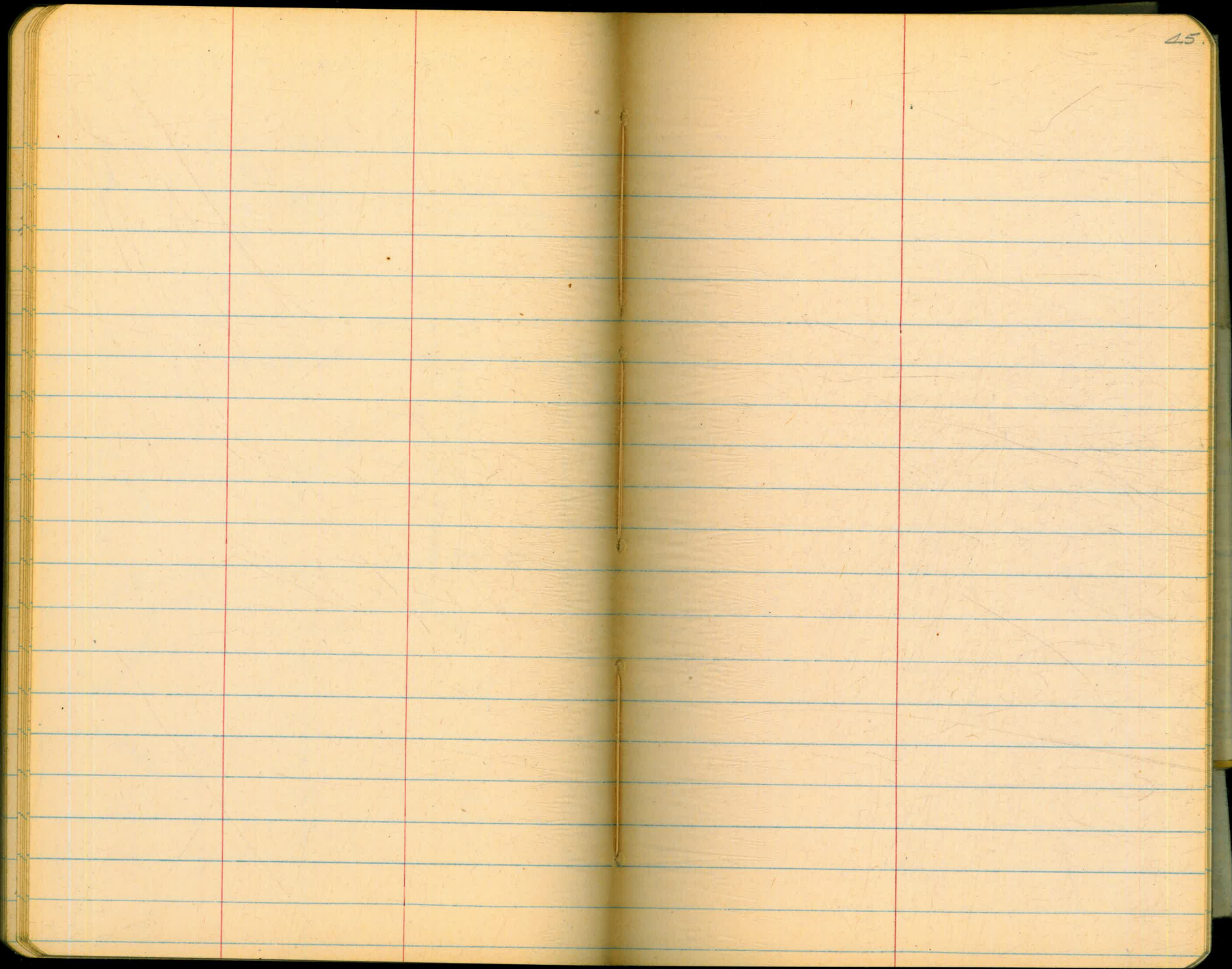
and Nail 2 1/2" 5 Butt

5 Butt  
anchors

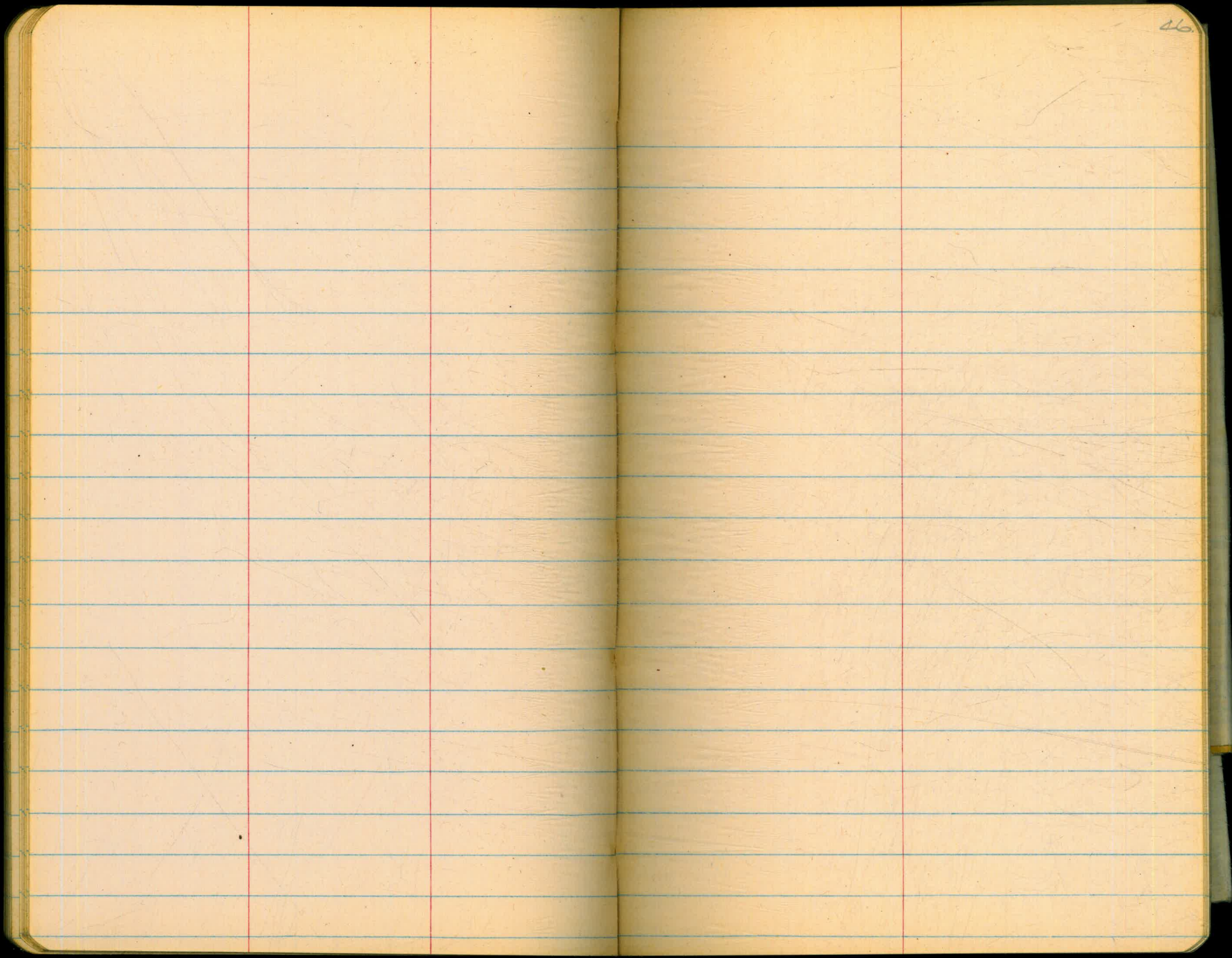
Spillway

Sutherland  
Dorm

10 Butt  
blocks

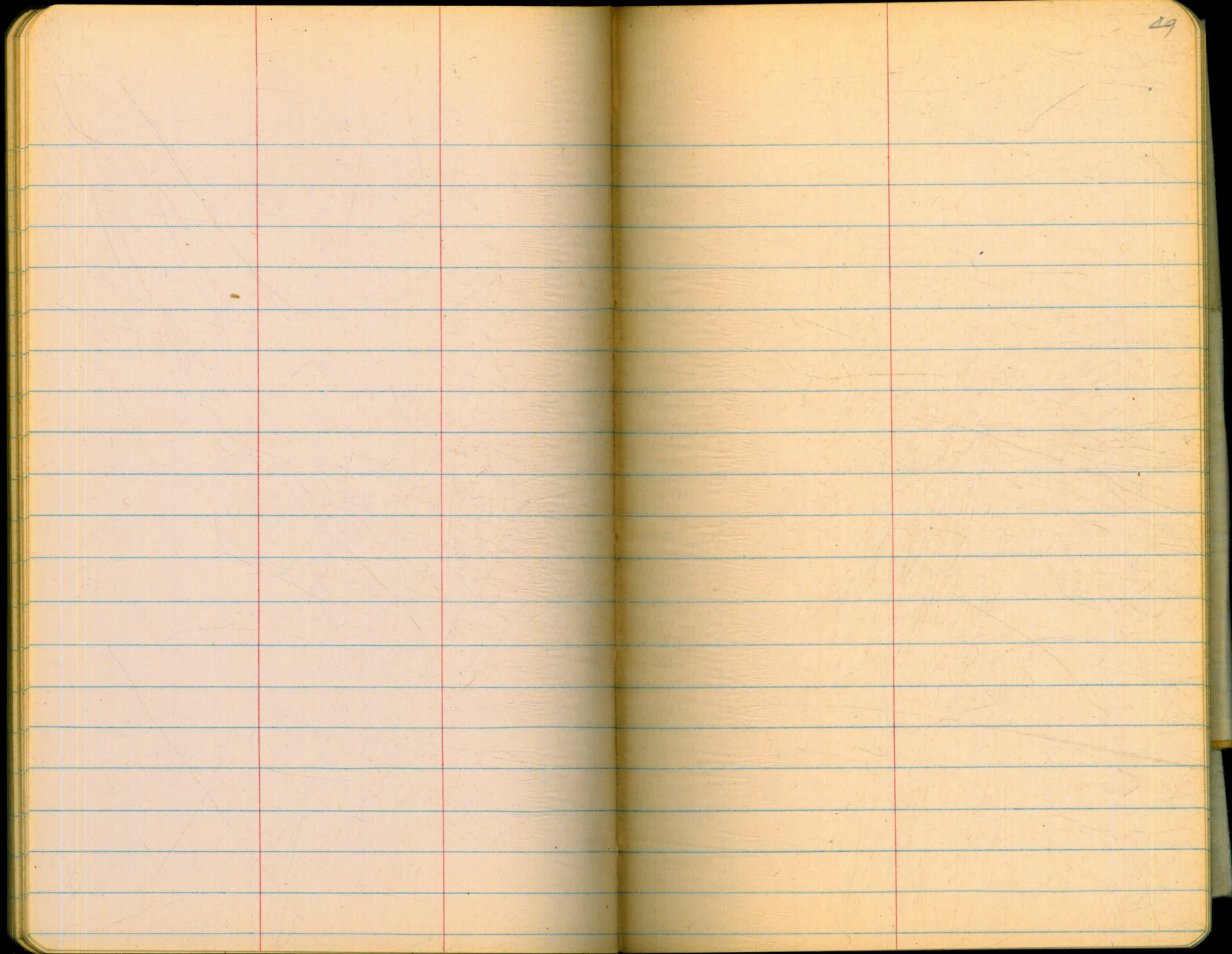


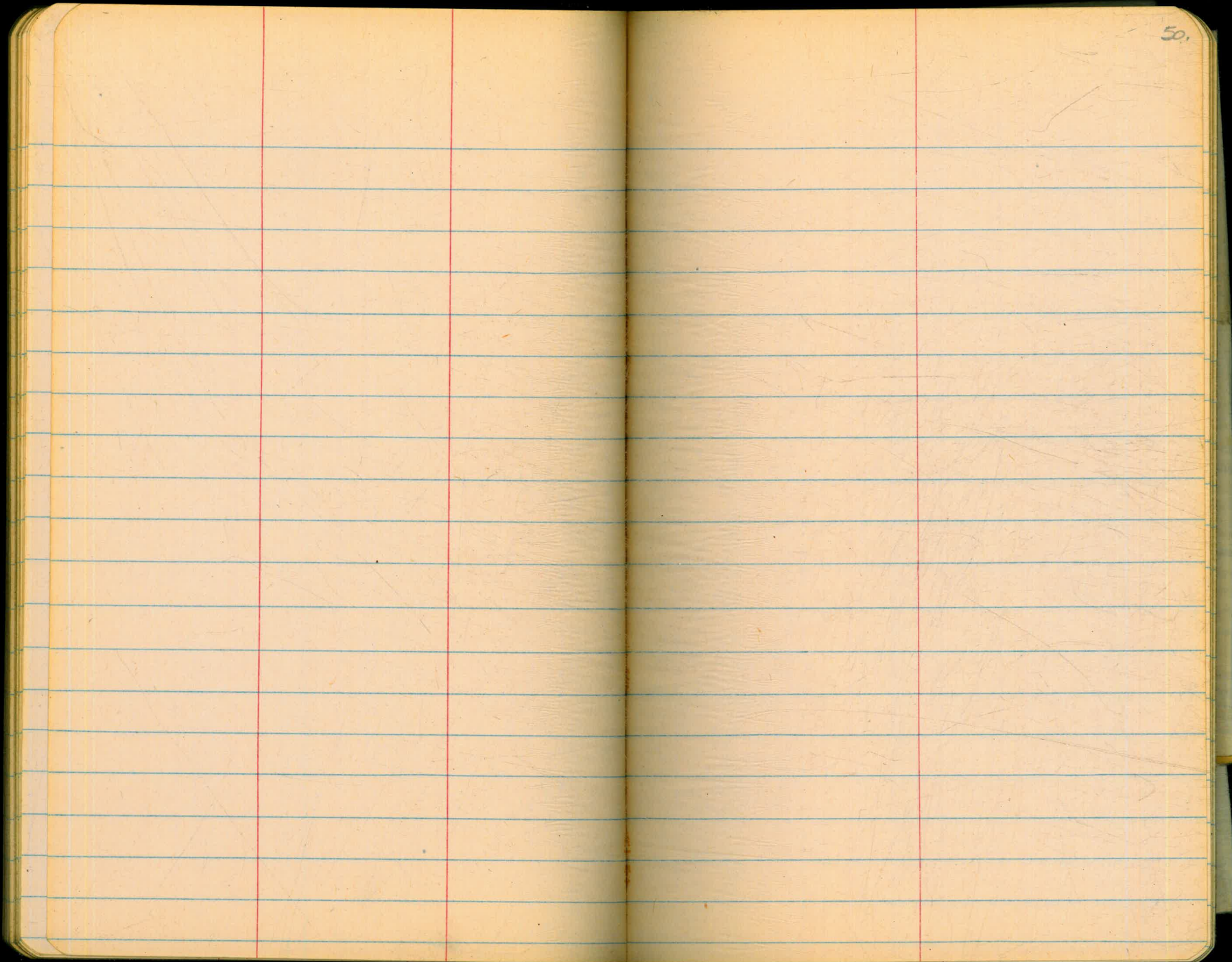












10/5/54

|                            |       |         |       |                   |
|----------------------------|-------|---------|-------|-------------------|
| B.M.                       | 4.42  | 2075.02 |       | 2070.60           |
| T.B.M.                     | 12.48 | 2086.61 | 0.89  | 2074.13           |
| IP                         | 12.25 | 2096.45 | 2.41  | 2084.20           |
| IP                         | 13.35 | 2109.33 | 0.47  | 2075.98           |
| IP                         | 12.80 | 2122.06 | 0.07  | 2102.26           |
| IP                         | 13.09 | 2134.87 | 0.28  | 2121.78           |
| IP                         | 13.25 | 2147.80 | 0.32  | 2134.55           |
| IP                         | 12.57 | 2159.22 | 1.08  | 2146.72           |
| T.B.M.                     | 12.94 | 2172.05 | 0.18  | 2159.11           |
| IP                         | 12.33 | 2184.05 | 0.33  | 2171.72           |
| IP                         | 13.12 | 2196.91 | 0.26  | 2183.79           |
| Top 2"x2" HUB<br>Sta. 0+00 | 2.58  | 2194.16 | 5.33  | 2191.58           |
| IP                         | 0.20  | 2181.50 | 12.86 | 2181.30           |
| IP                         | 2.22  | 2171.06 | 12.66 | 2168.84           |
| T.B.M.                     | 0.87  | 2160.47 | 11.46 | 2159.60           |
| IP                         | 0.56  | 2148.83 | 12.20 | 2148.27           |
| T.B.M.                     | 0.40  | 2136.68 | 12.55 | 2136.28           |
| IP                         | 0.35  | 2124.42 | 12.61 | 2124.07           |
| IP                         | 0.59  | 2112.51 | 12.50 | 2111.92           |
| IP                         | 0.72  | 2100.17 | 13.06 | 2099.45           |
| IP ON ROCK                 | 1.06  | 2092.42 | 8.81  | 2091.36           |
| IP                         | 0.27  | 2081.46 | 11.23 | 2081.19           |
| CK. T.B.M.                 | 0.87  | 2075.01 | 7.32  | 2074.14 = 2074.13 |
| CK. B.M.                   |       |         | 4.40  | 2070.61 = 2070.60 |

Chris H. Bottom step wly Buttress of Spillway  
T.B.M. WLY. END OF DAM

T.B.M. ON ROCK

T.B.M. TOP 2"x2" HUB STA. 0+00

T.B.M. NAIL IN TEL. TALE 5752538

2"x2" HUB STA. 2+98.71 (T.B.M.)

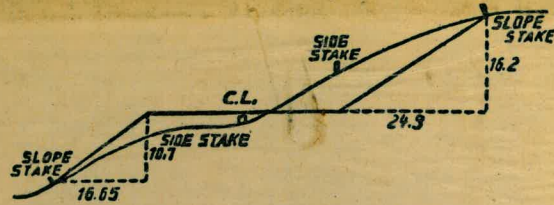
DESCRIPTION ABOVE

G.

|     |    |
|-----|----|
| 0   |    |
| .35 | 0  |
| .85 | 1  |
| .35 | 2  |
| .85 | 3  |
| .35 | 4  |
| .85 | 5  |
| .35 | 6  |
| .85 | 7  |
| .35 | 8  |
| .85 | 9  |
| .35 | 10 |
| .85 | 11 |
| .35 | 12 |
| .85 | 13 |
| .35 | 14 |
| .85 | 15 |
| .35 | 16 |
| .85 | 17 |
| .35 | 18 |
| .85 | 19 |
| .35 | 20 |
| .85 | 21 |
| .35 | 22 |
| .85 | 23 |
| .35 | 24 |
| .85 | 25 |
| .35 | 26 |
| .85 | 27 |
| .35 | 28 |
| .85 | 29 |
| .35 | 30 |
| .85 | 31 |
| .35 | 32 |
| .85 | 33 |
| .35 | 34 |
| .85 | 35 |
| .35 | 36 |
| .85 | 37 |
| .35 | 38 |
| .85 | 39 |
| .35 | 40 |
| .85 | 41 |
| .35 | 42 |
| .85 | 43 |
| .35 | 44 |
| .85 | 45 |
| .35 | 46 |
| .85 | 47 |
| .35 | 48 |
| .85 | 49 |
| .35 | 50 |

Please Return to  
 City of San Diego Water Dept.  
 Room 903 Civic Center

check { 2-3  
 22+88  
 check { 14-15  
 12+50 ?



DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING.  
 SLOPE 1 1/2 TO 1. ROADWAY OF ANY WIDTH.

|    | 0     | .1    | .2    | .3    | .4    | .5    | .6    | .7    | .8    | .9    |    |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----|
| 0  | 0.00  | 0.15  | 0.30  | 0.45  | 0.60  | 0.75  | 0.90  | 1.05  | 1.20  | 1.35  | 0  |
| 1  | 1.50  | 1.65  | 1.80  | 1.95  | 2.10  | 2.25  | 2.40  | 2.55  | 2.70  | 2.85  | 1  |
| 2  | 3.00  | 3.15  | 3.30  | 3.45  | 3.60  | 3.75  | 3.90  | 4.05  | 4.20  | 4.35  | 2  |
| 3  | 4.50  | 4.65  | 4.80  | 4.95  | 5.10  | 5.25  | 5.40  | 5.55  | 5.70  | 5.85  | 3  |
| 4  | 6.00  | 6.15  | 6.30  | 6.45  | 6.60  | 6.75  | 6.90  | 7.05  | 7.20  | 7.35  | 4  |
| 5  | 7.50  | 7.65  | 7.80  | 7.95  | 8.10  | 8.25  | 8.40  | 8.55  | 8.70  | 8.85  | 5  |
| 6  | 9.00  | 9.15  | 9.30  | 9.45  | 9.60  | 9.75  | 9.90  | 10.05 | 10.20 | 10.35 | 6  |
| 7  | 10.50 | 10.65 | 10.80 | 10.95 | 11.10 | 11.25 | 11.40 | 11.55 | 11.70 | 11.85 | 7  |
| 8  | 12.00 | 12.15 | 12.30 | 12.45 | 12.60 | 12.75 | 12.90 | 13.05 | 13.20 | 13.35 | 8  |
| 9  | 13.50 | 13.65 | 13.80 | 13.95 | 14.10 | 14.25 | 14.40 | 14.55 | 14.70 | 14.85 | 9  |
| 10 | 15.00 | 15.15 | 15.30 | 15.45 | 15.60 | 15.75 | 15.90 | 16.05 | 16.20 | 16.35 | 10 |
| 11 | 16.50 | 16.65 | 16.80 | 16.95 | 17.10 | 17.25 | 17.40 | 17.55 | 17.70 | 17.85 | 11 |
| 12 | 18.00 | 18.15 | 18.30 | 18.45 | 18.60 | 18.75 | 18.90 | 19.05 | 19.20 | 19.35 | 12 |
| 13 | 19.50 | 19.65 | 19.80 | 19.95 | 20.10 | 20.25 | 20.40 | 20.55 | 20.70 | 20.85 | 13 |
| 14 | 21.00 | 21.15 | 21.30 | 21.45 | 21.60 | 21.75 | 21.90 | 22.05 | 22.20 | 22.35 | 14 |
| 15 | 22.50 | 22.65 | 22.80 | 22.95 | 23.10 | 23.25 | 23.40 | 23.55 | 23.70 | 23.85 | 15 |
| 16 | 24.00 | 24.15 | 24.30 | 24.45 | 24.60 | 24.75 | 24.90 | 25.05 | 25.20 | 25.35 | 16 |
| 17 | 25.50 | 25.65 | 25.80 | 25.95 | 26.10 | 26.25 | 26.40 | 26.55 | 26.70 | 26.85 | 17 |
| 18 | 27.00 | 27.15 | 27.30 | 27.45 | 27.60 | 27.75 | 27.90 | 28.05 | 28.20 | 28.35 | 18 |
| 19 | 28.50 | 28.65 | 28.80 | 28.95 | 29.10 | 29.25 | 29.40 | 29.55 | 29.70 | 29.85 | 19 |
| 20 | 30.00 | 30.15 | 30.30 | 30.45 | 30.60 | 30.75 | 30.90 | 31.05 | 31.20 | 31.35 | 20 |
| 21 | 31.50 | 31.65 | 31.80 | 31.95 | 32.10 | 32.25 | 32.40 | 32.55 | 32.70 | 32.85 | 21 |
| 22 | 33.00 | 33.15 | 33.30 | 33.45 | 33.60 | 33.75 | 33.90 | 34.05 | 34.20 | 34.35 | 22 |
| 23 | 34.50 | 34.65 | 34.80 | 34.95 | 35.10 | 35.25 | 35.40 | 35.55 | 35.70 | 35.85 | 23 |
| 24 | 36.00 | 36.15 | 36.30 | 36.45 | 36.60 | 36.75 | 36.90 | 37.05 | 37.20 | 37.35 | 24 |
| 25 | 37.50 | 37.65 | 37.80 | 37.95 | 38.10 | 38.25 | 38.40 | 38.55 | 38.70 | 38.85 | 25 |
| 26 | 39.00 | 39.15 | 39.30 | 39.45 | 39.60 | 39.75 | 39.90 | 40.05 | 40.20 | 40.35 | 26 |
| 27 | 40.50 | 40.65 | 40.80 | 40.95 | 41.10 | 41.25 | 41.40 | 41.55 | 41.70 | 41.85 | 27 |
| 28 | 42.00 | 42.15 | 42.30 | 42.45 | 42.60 | 42.75 | 42.90 | 43.05 | 43.20 | 43.35 | 28 |
| 29 | 43.50 | 43.65 | 43.80 | 43.95 | 44.10 | 44.25 | 44.40 | 44.55 | 44.70 | 44.85 | 29 |
| 30 | 45.00 | 45.15 | 45.30 | 45.45 | 45.60 | 45.75 | 45.90 | 46.05 | 46.20 | 46.35 | 30 |
| 31 | 46.50 | 46.65 | 46.80 | 46.95 | 47.10 | 47.25 | 47.40 | 47.55 | 47.70 | 47.85 | 31 |
| 32 | 48.00 | 48.15 | 48.30 | 48.45 | 48.60 | 48.75 | 48.90 | 49.05 | 49.20 | 49.35 | 32 |
| 33 | 49.50 | 49.65 | 49.80 | 49.95 | 50.10 | 50.25 | 50.40 | 50.55 | 50.70 | 50.85 | 33 |
| 34 | 51.00 | 51.15 | 51.30 | 51.45 | 51.60 | 51.75 | 51.90 | 52.05 | 52.20 | 52.35 | 34 |
| 35 | 52.50 | 52.65 | 52.80 | 52.95 | 53.10 | 53.25 | 53.40 | 53.55 | 53.70 | 53.85 | 35 |
| 36 | 54.00 | 54.15 | 54.30 | 54.45 | 54.60 | 54.75 | 54.90 | 55.05 | 55.20 | 55.35 | 36 |
| 37 | 55.50 | 55.65 | 55.80 | 55.95 | 56.10 | 56.25 | 56.40 | 56.55 | 56.70 | 56.85 | 37 |
| 38 | 57.00 | 57.15 | 57.30 | 57.45 | 57.60 | 57.75 | 57.90 | 58.05 | 58.20 | 58.35 | 38 |
| 39 | 58.50 | 58.65 | 58.80 | 58.95 | 59.10 | 59.25 | 59.40 | 59.55 | 59.70 | 59.85 | 39 |
| 40 | 60.00 | 60.15 | 60.30 | 60.45 | 60.60 | 60.75 | 60.90 | 61.05 | 61.20 | 61.35 | 40 |
| 41 | 61.50 | 61.65 | 61.80 | 61.95 | 62.10 | 62.25 | 62.40 | 62.55 | 62.70 | 62.85 | 41 |
| 42 | 63.00 | 63.15 | 63.30 | 63.45 | 63.60 | 63.75 | 63.90 | 64.05 | 64.20 | 64.35 | 42 |
| 43 | 64.50 | 64.65 | 64.80 | 64.95 | 65.10 | 65.25 | 65.40 | 65.55 | 65.70 | 65.85 | 43 |
| 44 | 66.00 | 66.15 | 66.30 | 66.45 | 66.60 | 66.75 | 66.90 | 67.05 | 67.20 | 67.35 | 44 |
| 45 | 67.50 | 67.65 | 67.80 | 67.95 | 68.10 | 68.25 | 68.40 | 68.55 | 68.70 | 68.85 | 45 |
| 46 | 69.00 | 69.15 | 69.30 | 69.45 | 69.60 | 69.75 | 69.90 | 70.05 | 70.20 | 70.35 | 46 |
| 47 | 70.50 | 70.65 | 70.80 | 70.95 | 71.10 | 71.25 | 71.40 | 71.55 | 71.70 | 71.85 | 47 |
| 48 | 72.00 | 72.15 | 72.30 | 72.45 | 72.60 | 72.75 | 72.90 | 73.05 | 73.20 | 73.35 | 48 |
| 49 | 73.50 | 73.65 | 73.80 | 73.95 | 74.10 | 74.25 | 74.40 | 74.55 | 74.70 | 74.85 | 49 |
| 50 | 75.00 | 75.15 | 75.30 | 75.45 | 75.60 | 75.75 | 75.90 | 76.05 | 76.20 | 76.35 | 50 |

THE NATIONAL BLANK BOOK COMPANY  
 HOLYOKE MASSACHUSETTS  
 NEW YORK CHICAGO BOSTON SAN FRANCISCO

$\begin{matrix} 5 \\ 11 \end{matrix}$ 
 $\begin{matrix} 46.00 \\ 33.58 \\ 79.58 \end{matrix}$ 
 $\begin{matrix} 09.00 \\ 06.00 \\ 03.00 \end{matrix}$ 
 $\begin{matrix} 02.00 \\ 01.00 \\ 00.00 \end{matrix}$ 
 Sutherland Dam ①

Setup on Pt. 2, sighted Pt. 1 turned  
 Bearing  
 $33^{\circ}58'45''$  Pt. to Pt. 3  $5.89^{\circ}45'E.$

$114' @ 11^{\circ}41' = \checkmark 111.64$   
 $.0207$

$2.3578$   
 $200' @ 9^{\circ} = \checkmark 197.54'$

$.0123$   
 $2.4600$

$285.75' @ 9^{\circ}35' = 281.75'$   
 Setup Pt. 3  
 $.0140$   
 $4.0005$

$57' @ 11^{\circ}50' = 57.75$   
 $.0212$   
 $1.2508$

$84' @ 15^{\circ}37' = 80.20$   
 $.0369$

$3.0976$   
 $215' @ 6^{\circ}21' = 213.69$

$.0061$   
 $1.3115$   
 $300' @ 7^{\circ} = 297.78'$   
 Setup Pt. 5  
 $.0079$   
 $2.2200$

Sutherland Dam ②

$30.00$   
 $66.00$   
 $128.00 = 128.00'$   
 Setup Pt. 4  
 $41.47$

$127.00 @ 7^{\circ}52' = 125.81'$

$.0624$   
 $1.1938$   
 $156' @ 6^{\circ} = 155.14$

$.0055$   
 $.8580$   
 $238'$   
 $300' = 300.00'$   
 Setup Pt. 5

$111.64$   
 $197.54$   
 $281.75$   
 $297.78$   
 $128.00$   
 $300.00$   
 $1007.53$   
 $297.78$   
 $128.00$   
 $125.81$   
 $155.14$   
 $300.00$



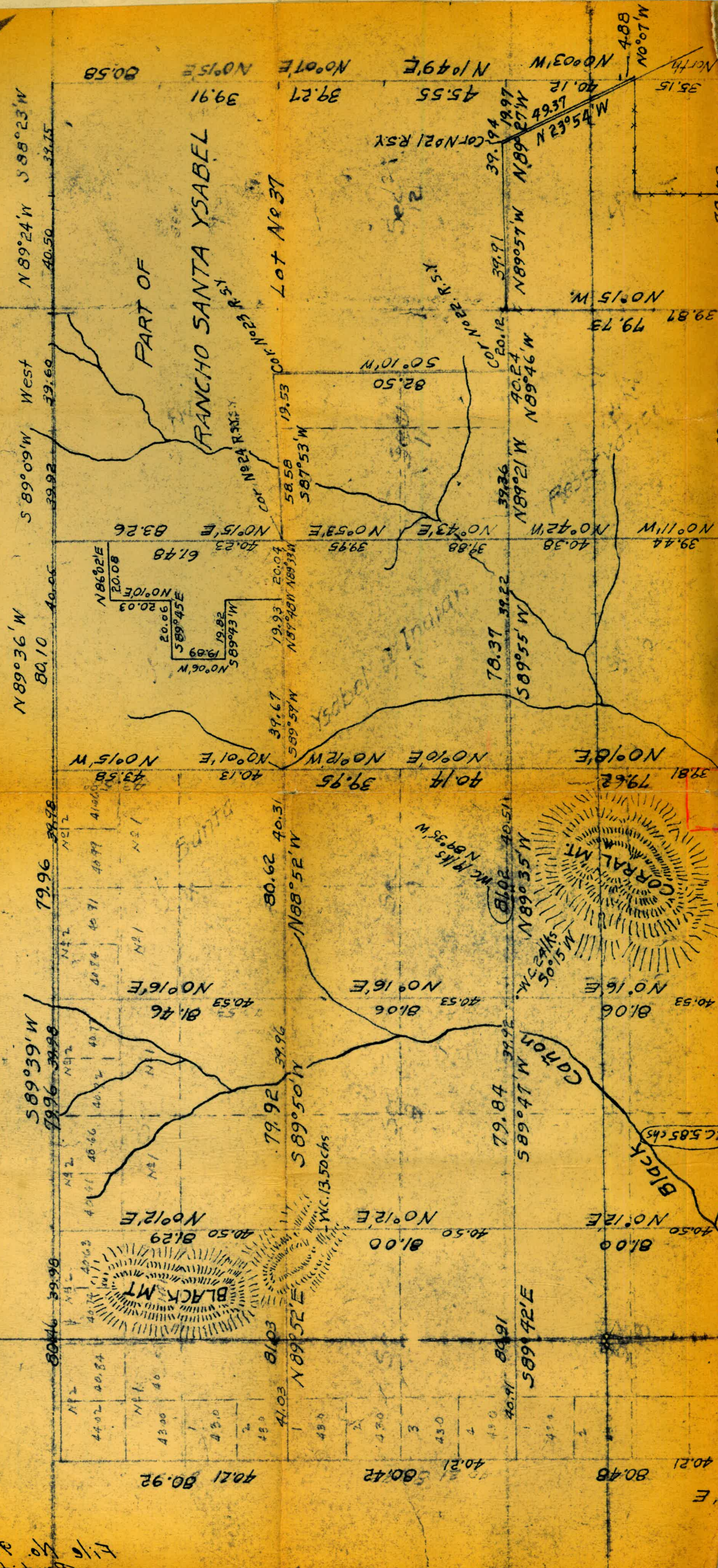
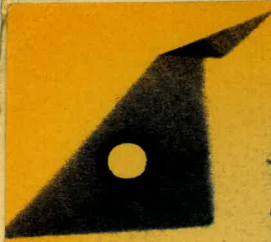


T12S R2E

THIS MAP FD, CLIPPED IN BACK  
OF FB: W-883

S-7-81  
C. ELMORE

X-25



F10  
40.21  
80.48  
80.92  
40.21  
80.42

SANTA YSABEL  
INDIAN RESERVATION

16

15

Santa Ysabel

Creek

Dam

Sutherland Dam

21

22

Cleveland National Forest

Sutherland

To

Road

2073 Foot Contour  
(U.S.G.S. Datum)

T. 12 S. R. 2 E.

40.74

40.68

2688.84  
REC.

2684.88  
REC.

28

27

26

Road

2113 Foot Contour  
(U.S.G.S. Datum)


29

28

32

33

County

City owned property  
shown outlined thus: 

THIS DWG. FD. CLIPPED  
IN BACK OF FD W-883.

5-7-81  
C. ELMORE

CITY OF  
SAN DIEGO CALIFORNIA  
WATER DEPARTMENT

SAN DIEGUITO RIVER SYSTEM  
SUTHERLAND RESERVOIR  
CITY OWNED PROPERTY

*W.B.*  
Hydraulic Engineer

*A. Beerman*  
Director

Scale: 1" = 2000'

Date: OCT. 8, 1952

Drawn: Holbeck Checked: *W.B.*