

## STADIA SURVEY NOTES

AREA KIMIK RIVER STATE or PROVINCE Alaska PAGE No. 1  
 LINE No.(s) 107 XE PARTY No. 1173 DATE 27 Day 4 Mo. 78 Yr. BOOK No. \_\_\_\_\_  
 SURVEYOR E. Brien RODMAN K. Barr WEATHER: Fog poor visibility P.T.S. No. \_\_\_\_\_

| LINE | Bearing of Sight | Stadia Distance | BEAMAN OR VERNIER |          |                 | ROD READING |         |             |             | Angular Elev. Diff. | Final Elev. Diff. | ELEVATIONS |     | ▲B.S. OF.S. - S.S. | Station  | REMARKS   |
|------|------------------|-----------------|-------------------|----------|-----------------|-------------|---------|-------------|-------------|---------------------|-------------------|------------|-----|--------------------|----------|-----------|
|      |                  |                 | Level             | Inclined | Angle or Factor | Hair Read   | Reading | Correc-tion | Center Hair |                     |                   | INST.      | ROD |                    |          |           |
| 1    |                  |                 |                   |          |                 |             |         |             |             |                     |                   | 1685.6     |     |                    |          |           |
| 2    |                  | 880             | ✓                 |          |                 |             |         |             | 11.5        | +11.5               | 1697.1            | 1690.5     | Δ   | 78265              | = SP1702 | (1690.76) |
| 3    |                  | ✓               | ✓                 |          |                 |             |         |             | 11.5        |                     |                   |            | Δ   |                    |          |           |
| 4    |                  | 440             | ✓                 |          |                 |             |         |             | 9.2         | -9.2                |                   | 2687.9     |     | 1701               |          |           |
| 5    |                  | 0               | ✓                 |          |                 |             |         |             | 5.0         | -5.0                |                   | 1692.1     | π   | 1700               | EOI      |           |
| 6    |                  | 440             | ✓                 |          |                 |             |         |             | 2.9         | -2.9                |                   | 1694.2     |     | TS 1               |          |           |
| 7    |                  | 880             | 89                | 47       | 41              |             |         |             | 5.0         | -1.8                |                   | 1695.3     |     | TS 2               |          |           |
| 8    |                  | 1320            | 89                | 49       | 09              |             |         |             | 5.0         | +0.8                |                   | 1697.9     |     | TS 3               |          |           |
| 9    |                  | 1760            | 89                | 49       | 09              |             |         |             | 5.0         | +0.6                |                   | 1697.7     |     | TS 4               |          | NOTES     |
| 10   |                  | 2200            | 89                | 44       | 01              |             |         |             | 10.0        | +0.3                |                   | 1697.4     |     | TS 5               |          | WORKED    |
| 11   |                  | 2640            | 89                | 48       | 14              |             |         |             | 15.0        | -5.8                |                   | 1691.3     | 0   | TS 6               |          | BACKWARD  |
| 12   |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |                    |          | FROM      |
| 13   |                  | 2640            | 88                | 26       | 26              |             |         |             | 15.0        | -57.0               | 1624.3            |            | Δ   |                    |          | 78174     |
| 14   |                  | 2200            | 88                | 37       | 28              |             |         |             | 5.0         | +47.9               |                   | 1682.2     |     | TS 7               |          | ↑         |
| 15   |                  | 1760            | 88                | 45       | 18              |             |         |             | 4.5         | +33.8               |                   | 1668.1     |     | TS 8               |          | GET       |
| 16   |                  | 1320            | 88                | 47       | 37              |             |         |             | 4.5         | +23.3               |                   | 1652.6     |     | TS 9               |          | STARTING  |
| 17   |                  | 880             | 88                | 55       | 00              |             |         |             | 4.5         | +12.2               |                   | 1646.5     |     | TS 10              |          | ELEVATION |
| 18   |                  | 440             | 89                | 15       | 50              |             |         |             | 4.5         | +1.2                |                   | 1635.5     |     | TS 11              |          |           |
| 19   |                  | 0               | ✓                 |          |                 |             |         |             | 5.0         | -5.0                |                   | 1629.3     | π   | TS 12              |          |           |
| 20   |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |                    |          |           |

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## STADIA SURVEY NOTES

AREA KILLIK RIVER STATE or PROVINCE Alaska PAGE No. 2  
 LINE No.(s) 107 X E PARTY No. 1173 DATE 27 Day 4 Mo. 78 Yr. BOOK No. \_\_\_\_\_  
 SURVEYOR F O'Brien RODMAN K Barr WEATHER: Fog P.T.S. No. \_\_\_\_\_

| LINE | Bearing of Sight | Stadia Distance | BEAMAN OR VERNIER |          |                 | ROD READING |         |             |             | Angular Elev. Diff. | Final Elev. Diff. | ELEVATIONS |     | Station       | REMARKS   |
|------|------------------|-----------------|-------------------|----------|-----------------|-------------|---------|-------------|-------------|---------------------|-------------------|------------|-----|---------------|-----------|
|      |                  |                 | Level             | Inclined | Angle or Factor | Hair Read   | Reading | Correc-tion | Center Hair |                     |                   | INST.      | ROD |               |           |
| 1    |                  |                 |                   |          |                 |             |         |             |             |                     |                   | 1685.6     |     |               | (1690.76) |
| 2    |                  | 2420            | 89                | 02       | 31              |             |         |             |             | +25.4               | 1660.2            | 1660.2     | Δ   | 1702 = 782.65 |           |
| 3    |                  | ✓               | 270               | 56       | 53              |             |         |             |             |                     |                   |            | Δ   |               |           |
| 4    |                  | 1980            | 89                | 04       | 39              |             |         |             |             | +22.0               |                   | 1682.2     |     | 1703          |           |
| 5    |                  | 1540            | 89                | 09       | 45              |             |         |             |             | -0.4                |                   | 1659.8     |     | 1704          |           |
| 6    |                  | 1100            | 89                | 05       | 55              |             |         |             |             | -3.3                |                   | 1656.9     |     | 1705          |           |
| 7    |                  | 660             | 88                | 57       | 57              |             |         |             |             | +6.9                |                   | 1667.1     |     | 1706          |           |
| 8    |                  | 220             | 88                | 47       | 13              |             |         |             |             | -0.3                |                   | 1659.9     |     | 1707          |           |
| 9    |                  | 0               | ✓                 |          |                 |             |         |             |             | -5.0                |                   | 1655.2     | ∇   | 1707+2.20     |           |
| 10   |                  | 220             | 90                | 23       | 17              |             |         |             |             | -16.5               |                   | 1643.7     |     | 1708          |           |
| 11   |                  | 660             | 92                | 34       | 58              |             |         |             |             | -44.7               |                   | 1625.5     |     | 1709          |           |
| 12   |                  | 1100            | 92                | 37       | 15              |             |         |             |             | -20.0               |                   | 1640.2     |     | 1710          |           |
| 13   |                  | 1540            | 92                | 42       | 41              |             |         |             |             | -87.8               |                   | 1572.4     |     | 1711          |           |
| 14   |                  | 1980            | 97                | 45       | 06              |             |         |             |             | -110.0              |                   | 1550.2     |     | 1712          |           |
| 15   |                  | 2420            | 92                | 09       | 29              |             |         |             |             | -106.0              |                   | 1554.2     |     | 1713          |           |
| 16   |                  | 2860            | 91                | 29       | 43              |             |         |             |             | -60.9               |                   | 1599.3     |     | 1714          |           |
| 17   |                  | 3300            | 91                | 06       | 58              |             |         |             |             | -79.2               |                   | 1581.0     | 0   | 1715          |           |
| 18   |                  | ✓               | 268               | 52       | 45              |             |         |             |             | -1.0                |                   |            | 0   |               |           |
| 19   |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |               |           |
| 20   |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |               |           |

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## STADIA SURVEY NOTES

AREA KILLIK RIVER STATE or PROVINCE Alaska PAGE No. 3  
 LINE No.(s) 107 & F PARTY No. 1173 DATE 27 Day 4 Mo. 78 Yr. BOOK No. \_\_\_\_\_  
 SURVEYOR F O'Brien RODMAN K Barr WEATHER: Fog P.T.S. No. \_\_\_\_\_

| LINE | Bearing of Sight | Stadia Distance | BEAMAN OR VERNIER |          |                 | ROD READING |         |             |             | Angular Elev. Diff. | Final Elev. Diff. | ELEVATIONS |     | AB.S. OF.S. - S.S. | Station | REMARKS   |
|------|------------------|-----------------|-------------------|----------|-----------------|-------------|---------|-------------|-------------|---------------------|-------------------|------------|-----|--------------------|---------|-----------|
|      |                  |                 | Level             | Inclined | Angle or Factor | Hair Read   | Reading | Correc-tion | Center Hair |                     |                   | INST.      | ROD |                    |         |           |
| 1    |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |                    |         |           |
| 2    |                  | 1760            | 91                | 36       | 18              |             |         |             | 15.0        | +64.4               | 1645.4            |            | Δ   | 1715               |         |           |
| 3    |                  | ✓ 269           | 23                | 13       |                 |             |         |             | 15.0        |                     |                   |            | Δ   |                    |         |           |
| 4    |                  | 1320            | 91                | 32       | 05              |             |         |             | 15.0        | -50.3               |                   | 1595.1     |     | 1716               |         |           |
| 5    |                  | 880             | 91                | 15       | 26              |             |         |             | 15.0        | -34.3               |                   | 1611.1     |     | 1717               |         |           |
| 6    |                  | 440             | 90                | 18       | 24              |             |         |             | 15.0        | -17.4               |                   | 1628.0     |     | 1718               |         | NOTE      |
| 7    |                  | 0               | ✓                 |          |                 |             |         |             | 5.0         | -5.0                |                   | 1640.4     | π   | 1719               |         |           |
| 8    |                  | 440             | ✓                 |          |                 |             |         |             | 8.5         | -8.5                |                   | 1636.9     |     | 1720               |         | WORKED    |
| 9    |                  | 880             | ✓                 |          |                 |             |         |             | 11.6        | -11.6               |                   | 1633.8     |     | 1721               |         |           |
| 10   |                  | 1320            | ✓                 |          |                 |             |         |             | 12.9        | -12.9               |                   | 1632.5     |     | 1722               |         | BACKWARDS |
| 11   |                  | 1760            | ✓                 |          |                 |             |         |             | 13.5        | -13.5               |                   | 1631.9     |     | 1723               |         |           |
| 12   |                  | 2200            | ✓                 |          |                 |             |         |             | 14.0        | -14.0               |                   | 1631.4     |     | 1724               |         |           |
| 13   |                  | 2640            | ✓                 |          |                 |             |         |             | 15.0        | -15.0               |                   | 1630.4     |     | 1725               |         |           |
| 14   |                  | 3080            | ✓                 |          |                 |             |         |             | 12.5        | -12.2               |                   | 1632.8     | o   | 1726               |         | ↑         |
| 15   |                  | ✓               | ✓                 |          |                 |             |         |             | 13.0        | -13.0               |                   |            | o   |                    |         |           |
| 16   |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |                    |         |           |
| 17   |                  | 1320            | 90                | 06       | 08              |             |         |             | 15.0        | +17.4               | 1650.2            |            | Δ   |                    |         |           |
| 18   |                  | ✓ 269           | 53                | 16       |                 |             |         |             | 15.0        |                     |                   |            | Δ   |                    |         |           |
| 19   |                  | 880             | ✓                 |          |                 |             |         |             | 10.8        | -10.8               |                   | 1639.4     |     | 1727               |         |           |
| 20   |                  | 440             | ✓                 |          |                 |             |         |             | 6.9         | -6.9                |                   | 1643.3     |     | 1728               |         |           |

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### STADIA SURVEY NOTES

AREA KILLIK RIVER STATE or PROVINCE Alaska PAGE No. 4  
 LINE No.(s) 107 XE PARTY No. 1173 DATE 27 Day 4 Mo. 78 Yr. BOOK No. \_\_\_\_\_  
 SURVEYOR F. O'Brien RODMAN K. Barr WEATHER: Fog P.T.S. No. \_\_\_\_\_

| LINE | Bearing of Sight | Stadia Distance | BEAMAN OR VERNIER |          |                 | ROD READING |         |             |             | Angular Elev. Diff. | Final Elev. Diff. | ELEVATIONS |     | B.S. OF.S. - S.S.  | Station | REMARKS  |
|------|------------------|-----------------|-------------------|----------|-----------------|-------------|---------|-------------|-------------|---------------------|-------------------|------------|-----|--------------------|---------|--|
|      |                  |                 | Level             | Inclined | Angle or Factor | Hair Read   | Reading | Correc-tion | Center Hair |                     |                   | INST.      | ROD |                    |         |  |
| 1    |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |                    |         |  |
| 2    |                  | 0               | ✓                 |          |                 |             |         |             |             |                     | -5.0              | 1645.2     | π   | 729                |         |  |
| 3    |                  | 440             | ✓                 |          |                 |             |         |             |             |                     | -6.7              | 1648.5     |     | 730                |         | NOTES<br>worked<br>PARKWAY<br>BARR<br>MARKS<br>off |
| 4    |                  | 880             | ✓                 |          |                 |             |         |             |             |                     | -15.0             | 1635.2     |     | 731                |         |  |
| 5    |                  | 1320            | 90                | 13       | 07              |             |         |             |             |                     | -20.0             | 1630.2     |     | 732                |         |  |
| 6    |                  | 1760            | ✓                 |          |                 |             |         |             |             |                     | -10.4             | 1639.8     |     | 733                |         |  |
| 7    |                  | 2200            | ✓                 |          |                 |             |         |             |             |                     | -12.7             | 1637.5     |     | 734                |         |  |
| 8    |                  | 2640            | 90                | 01       | 20              |             |         |             |             |                     | -15.9             | 1634.3     |     | 735                |         |  |
| 9    |                  | 3080            | 90                | 12       | 08              |             |         |             |             |                     | -21.2             | 1629.0     |     | 736                |         |  |
| 10   |                  | 3099            | 90                | 11       | 02              |             |         |             |             |                     | -20.1             | 1630.1     | o   | 736+19' = 782.67   |         |  |
| 11   |                  | ✓               | 269               | 48       | 09              |             |         |             |             |                     |                   | 1634.8     | o   |                    |         |  |
| 12   |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |                    |         |  |
| 13   |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |                    |         |  |
| 14   |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |                    |         |  |
| 15   |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |                    |         |  |
| 16   |                  | 218             | 88                | 19       | 04              |             |         |             |             |                     | -48.9             | 1581.2     |     | Δ 736+19' = 782.67 |         |  |
| 17   |                  | 421             | 271               | 40       | 13              |             |         |             |             |                     |                   |            |     | Δ                  |         |  |
| 18   |                  | 1760            | 88                | 17       | 23              |             |         |             |             |                     | +42.6             | 1623.8     |     | 737                |         |  |
| 19   |                  | 1320            | 88                | 15       | 28              |             |         |             |             |                     | +30.2             | 1611.4     |     | 738                |         |  |
| 20   |                  | 880             | 88                | 18       | 28              |             |         |             |             |                     | +16.0             | 1597.2     |     | 739                |         |  |

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### STADIA SURVEY NOTES

AREA Killik RIVER STATE or PROVINCE Alaska PAGE No. 5  
 LINE No.(s) 107XE PARTY No. 1173 DATE 27 Day 4 Mo. 78 Yr. BOOK No. \_\_\_\_\_  
 SURVEYOR E O'Brien RODMAN K Barr WEATHER: Fog P.T.S. No. \_\_\_\_\_

| LINE | Bearing of Sight | Stadia Distance | BEAMAN OR VERNIER |          |                 | ROD READING |         |             |             | Angular Elev. Diff. | Final Elev. Diff. | ELEVATIONS |     | Station | REMARKS                                |
|------|------------------|-----------------|-------------------|----------|-----------------|-------------|---------|-------------|-------------|---------------------|-------------------|------------|-----|---------|--|
|      |                  |                 | Level             | Inclined | Angle or Factor | Hair Read   | Reading | Correc-tion | Center Hair |                     |                   | INST.      | ROD |         |  |
| 1    |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |         |  |
| 2    |                  | 440             | 88                | 07       | 13              |             |         |             | 5.0         | +9.4                |                   | 1590.6     |     | 740     |  |
| 3    |                  | 10              | ✓                 |          |                 |             |         |             | 5.0         | -5.0                |                   | 1576.2     | π   | 741     |  |
| 4    |                  | 440             | 92                | 06       | 27              |             |         |             | 15.0        | -31.2               |                   | 1550.0     |     | 742     |  |
| 5    |                  | 628             | 92                | 10       | 52              |             |         |             | 15.0        | -38.9               |                   | 1542.3     |     | INT     | L-107XE = SP442+188<br>T-37X = 5891+36 |
| 6    |                  | 620             | 92                | 07       | 59              |             |         |             | 15.0        | -38.1               |                   | 1543.1     |     | 891     | L-37X                                  |
| 7    |                  | 880             | 92                | 20       | 39              |             |         |             | 15.0        | -51.1               |                   | 1530.0     | 0   | 743     |  |
| 8    |                  | ✓               | 267               | 38       | 34              |             |         |             | 15.0        |                     |                   |            | 0   |         | TIE FROM                               |
| 9    |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |         | 78134 TO 891                           |
| 10   |                  | 3080            | 88                | 49       | 37              |             |         |             | 15.0        | -47.9               | 14821             |            | Δ   |         | on L-37X                               |
| 11   |                  | ✓               | 271               | 09       | 37              |             |         |             | 15.0        |                     |                   |            | Δ   |         | WAS -0.4 PAW                           |
| 12   |                  | 2640            | ✓                 |          |                 |             |         |             | 7.4         | -7.4                |                   | 1474.7     |     | 744     | ADJ. TO 891                            |
| 13   |                  | 2200            | ✓                 |          |                 |             |         |             | 7.4         | -7.4                |                   | 1474.7     |     | 745     |  |
| 14   |                  | 1760            | ✓                 |          |                 |             |         |             | 4.7         | -4.7                |                   | 1472.4     |     | 746     |  |
| 15   |                  | 1320            | ✓                 |          |                 |             |         |             | 5.6         | -5.6                |                   | 1476.5     |     | 747     |  |
| 16   |                  | 880             | ✓                 |          |                 |             |         |             | 5.8         | -5.8                |                   | 1476.3     |     | 748     |  |
| 17   |                  | 440             | ✓                 |          |                 |             |         |             | 7.6         | -7.6                |                   | 1474.5     |     | 749     | WORKED<br>ISACKWARDS<br>FROM           |
| 18   |                  | 0               | ✓                 |          |                 |             |         |             | 5.0         | -5.0                |                   | 1477.1     | π   | 750     |  |
| 19   |                  | 440             | ✓                 |          |                 |             |         |             | 2.2         | -9.2                |                   | 1472.9     |     | 751     | 78134                                  |
| 20   |                  | 880             | ✓                 |          |                 |             |         |             | 11.4        | -11.4               |                   | 1470.7     |     | 752     |  |

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## STADIA SURVEY NOTES

AREA Killik River STATE or PROVINCE Alaska PAGE No. 6  
 LINE No.(s) 107XE PARTY No. 1173 DATE 27 Day 4 Mo. 78 Yr. BOOK No. \_\_\_\_\_  
 SURVEYOR F O'Brien RODMAN K Barr WEATHER: Fog P.T.S. No. \_\_\_\_\_

| LINE | Bearing of Sight | Stadia Distance | BEAMAN OR VERNIER |          |                 | ROD READING |         |             |             | Angular Elev. Diff. | Final Elev. Diff. | ELEVATIONS |       | Station | REMARKS   |
|------|------------------|-----------------|-------------------|----------|-----------------|-------------|---------|-------------|-------------|---------------------|-------------------|------------|-------|---------|-----------|
|      |                  |                 | Level             | Inclined | Angle or Factor | Hair Read   | Reading | Correc-tion | Center Hair |                     |                   | INST.      | ROD   |         |           |
| 1    |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |       |         |           |
| 2    |                  | 1320 ✓          |                   |          |                 |             |         |             |             |                     | -7.2              | 1474.9     | 753   |         | Worked    |
| 3    |                  | 1760            | 89                | 09       | 55              |             |         |             |             |                     | +20.7             | 1502.8     | 754   |         |           |
| 4    |                  | 2200            | 89                | 08       | 33              |             |         |             |             |                     | +28.0             | 1510.1     | 755   |         | Backsight |
| 5    |                  | 2640            | 89                | 05       | 56              |             |         |             |             |                     | +36.7             | 1518.8     | 756   |         |           |
| 6    |                  | 3080            | 89                | 02       | 15              |             |         |             |             |                     | +41.6             | 1523.7     | 0 757 |         |           |
| 7    |                  | ✓               | 270               | 56       | 56              |             |         |             |             |                     |                   |            | 0     |         |           |
| 8    |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |       |         |           |
| 9    |                  | 3080            | 91                | 47       | 50              |             |         |             |             |                     | +11.8             | 1635.8     | Δ     |         |           |
| 10   |                  | ✓               | 268               | 11       | 14              |             |         |             |             |                     |                   |            | Δ     |         |           |
| 11   |                  | 2640            | 91                | 59       | 40              |             |         |             |             |                     | -106.7            | 1528.8     | 758   |         |           |
| 12   |                  | 2200            | 92                | 04       | 50              |             |         |             |             |                     | -94.8             | 1540.7     | 759   |         |           |
| 13   |                  | 1760            | 92                | 07       | 13              |             |         |             |             |                     | -80.1             | 1555.4     | 760   |         |           |
| 14   |                  | 1320            | 92                | 15       | 39              |             |         |             |             |                     | -67.0             | 1568.5     | 761   |         |           |
| 15   |                  | 880             | 92                | 15       | 08              |             |         |             |             |                     | -50.6             | 1584.9     | 762   |         |           |
| 16   |                  | 440             | 91                | 41       | 13              |             |         |             |             |                     | -27.9             | 1607.6     | 763   |         |           |
| 17   |                  | 0 ✓             |                   |          |                 |             |         |             |             |                     | -5.0              | 1630.5     | 764   |         |           |
| 18   |                  | 440             | 88                | 31       | 55              |             |         |             |             |                     | +6.3              | 1646.8     | 765   |         |           |
| 19   |                  | 880             | 88                | 33       | 37              |             |         |             |             |                     | +17.1             | 1652.6     | 766   |         |           |
| 20   |                  | 1320            | 88                | 24       | 43              |             |         |             |             |                     | +21.6             | 1657.1     | 767   |         |           |

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**STADIA SURVEY NOTES**

AREA KILLIK RIVER STATE or PROVINCE Alaska PAGE No. 7  
 LINE No.(s) 107XE PARTY No. 1173 DATE 77 Day 4 Mo. 78 Yr. BOOK No. \_\_\_\_\_  
 SURVEYOR F.O. Brien RODMAN K Barr WEATHER: Fog P.T.S. No. \_\_\_\_\_

| LINE | Bearing of Sight | Stadia Distance | BEAMAN OR VERNIER |          |                 | ROD READING |         |            |             | Angular Elev. Diff. | Final Elev. Diff. | ELEVATIONS |     | B.S. OF.S. - S.S. | Station | REMARKS         |
|------|------------------|-----------------|-------------------|----------|-----------------|-------------|---------|------------|-------------|---------------------|-------------------|------------|-----|-------------------|---------|-----------------|
|      |                  |                 | Level             | Inclined | Angle or Factor | Hair Read   | Reading | Correction | Center Hair |                     |                   | INST.      | ROD |                   |         |                 |
| 1    |                  |                 |                   |          |                 |             |         |            |             |                     |                   |            |     |                   |         |                 |
| 2    |                  | 1540            | 88                | 33       | 57              |             |         |            | 15.0        |                     | +23.3             | 1658.7     | 0   | 767+220           |         |                 |
| 3    |                  | ✓               | 271               | 24       | 47              |             |         |            | 15.0        |                     |                   |            | 0   |                   |         | WORKED BACKWARD |
| 4    |                  |                 |                   |          |                 |             |         |            |             |                     |                   |            |     |                   |         |                 |
| 5    | *                | 1100            | 89                | 48       | 46              |             |         |            | 5.0         |                     | +1.5              | 1660.2     | Δ   |                   |         |                 |
| 6    |                  | ✓               | 270               | 10       | 18              |             |         |            | 5.0         |                     |                   |            | Δ   |                   |         |                 |
| 7    |                  | 880             | ✓                 |          |                 |             |         |            | 1.5         |                     | -1.5              | 1658.7     |     | 768               | PIPE    | ↑               |
| 8    |                  | 440             | ✓                 |          |                 |             |         |            | 2.0         |                     | -2.0              | 1658.2     |     | 769               |         |                 |
| 9    |                  | 0               | ✓                 |          |                 |             |         |            | 5.0         |                     | -5.0              | 1655.2     | K   | 770               |         |                 |
| 10   |                  | 440             | 90                | 04       | 12              |             |         |            | 15.0        |                     | -15.0             | 1645.2     |     | 771               |         |                 |
| 11   |                  | 880             | 90                | 56       | 57              |             |         |            | 15.0        |                     | -29.6             | 1630.6     |     | 772               |         |                 |
| 12   |                  | 1320            | 91                | 01       | 33              |             |         |            | 15.0        |                     | -32.6             | 1621.6     |     | 773               |         |                 |
| 13   |                  | 1760            | 90                | 56       | 46              |             |         |            | 15.0        |                     | -44.0             | 1616.2     |     | 774               |         |                 |
| 14   |                  | 2200            | 90                | 34       | 08              |             |         |            | 15.0        |                     | -36.7             | 1623.5     |     | 775               |         |                 |
| 15   |                  | 2640            | 90                | 36       | 00              |             |         |            | 15.0        |                     | -42.5             | 1617.7     |     | 776               |         |                 |
| 16   |                  | 3080            | 90                | 39       | 26              |             |         |            | 15.0        |                     | -50.5             | 1609.7     | 0   | 777               |         |                 |
| 17   |                  | ✓               | 269               | 19       | 41              |             |         |            | 15.0        |                     |                   |            | 0   |                   |         |                 |
| 18   |                  |                 |                   |          |                 |             |         |            |             |                     |                   |            |     |                   |         |                 |
| 19   |                  |                 |                   |          |                 |             |         |            |             |                     |                   |            |     |                   |         |                 |
| 20   |                  |                 |                   |          |                 |             |         |            |             |                     |                   |            |     |                   |         |                 |

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## STADIA SURVEY NOTES

AREA KILLIK RIVER STATE or PROVINCE Alaska PAGE No. 8  
 LINE No.(s) 107XE PARTY No. 1173 DATE 27 Day 4 Mo. 78 Yr. BOOK No. \_\_\_\_\_  
 SURVEYOR F. DeLen RODMAN K. Barry WEATHER: Fog P.T.S. No. \_\_\_\_\_

| LINE | Bearing of Sight | Stadia Distance | BEAMAN OR VERNIER |          |                 | ROD READING |         |             |             | Angular Elev. Diff. | Final Elev. Diff. | ELEVATIONS |     | Station | REMARKS |
|------|------------------|-----------------|-------------------|----------|-----------------|-------------|---------|-------------|-------------|---------------------|-------------------|------------|-----|---------|---------|
|      |                  |                 | Level             | Inclined | Angle or Factor | Hair Read   | Reading | Correc-tion | Center Hair |                     |                   | INST.      | ROD |         |         |
| 1    |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |         |         |
| 2    |                  | 3080            | 88                | 54       | 17              |             |         |             | 5.0         | -53.8               | 1555.9            |            | 777 |         |         |
| 3    |                  | ✓               | 271               | 05       | 02              |             |         |             | 5.0         |                     |                   |            | 778 | Worked  |         |
| 4    |                  | 2640            | 88                | 54       | 55              |             |         |             | 5.0         | +45.1               | 1601.0            |            | 778 | BACKUM  |         |
| 5    |                  | 2200            | 88                | 58       | 03              |             |         |             | 5.0         | +34.7               | 1590.6            |            | 779 |         |         |
| 6    |                  | 1760            | 89                | 05       | 10              |             |         |             | 5.0         | +23.1               | 1579.0            |            | 780 |         |         |
| 7    |                  | 1320            | 89                | 16       | 21              |             |         |             | 5.0         | +11.8               | 1567.7            |            | 781 |         |         |
| 8    |                  | 880             | 89                | 16       | 17              |             |         |             | 5.0         | +6.2                | 1562.1            |            | 782 |         |         |
| 9    |                  | 440             | 88                | 23       | 27              |             |         |             | 5.0         | -0.3                | 1555.6            |            | 783 |         |         |
| 10   |                  | 0               | ✓                 |          |                 |             |         |             | 5.0         | -5.0                | 1550.9            | ✓          | 784 |         |         |
| 11   |                  | 440             | ✓                 |          |                 |             |         |             | 8.3         | -8.3                | 1547.6            |            | 785 |         |         |
| 12   |                  | 880             | ✓                 |          |                 |             |         |             | 10.0        | -10.0               | 1545.9            |            | 786 |         |         |
| 13   |                  | 1320            | ✓                 |          |                 |             |         |             | 14.4        | -14.4               | 1541.5            |            | 787 |         |         |
| 14   |                  | 1760            | 90                | 02       | 45              |             |         |             | 15.0        | -16.9               | 1539.0            |            | 788 |         |         |
| 15   |                  | 2200            | 90                | 05       | 34              |             |         |             | 15.0        | -18.5               | 1537.4            |            | 789 |         |         |
| 16   |                  | 2640            | 90                | 02       | 00              |             |         |             | 15.6        | -16.4               | 1535.5            |            | 790 |         |         |
| 17   |                  | 3080            | ✓                 |          |                 |             |         |             | 14.4        |                     | 1541.3            | 0          | 791 |         |         |
| 18   |                  | ✓               | ✓                 |          |                 |             |         |             | 15.0        | -14.5               |                   | 0          |     |         |         |
| 19   |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |         |         |
| 20   |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |         |         |

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## STADIA SURVEY NOTES

AREA KILLIK RIVER STATE or PROVINCE Alaska PAGE No. 9  
 LINE No.(s) 107 X E PARTY No. 1173 DATE 27 Day 4 Mo. 78 Yr. BOOK No. \_\_\_\_\_  
 SURVEYOR F. O. Brien RODMAN K. Bair WEATHER: Fog P.T.S. No. \_\_\_\_\_

| LINE | Bearing of Sight | Stadia Distance | SEAMAN OR VERNIER |          |                 | ROD READING |         |             |             | Angular Elev. Diff. | Final Elev. Diff. | ELEVATIONS |     | ▲ B.S. OF S. - S.S. | Station | REMARKS  |
|------|------------------|-----------------|-------------------|----------|-----------------|-------------|---------|-------------|-------------|---------------------|-------------------|------------|-----|---------------------|---------|----------|
|      |                  |                 | Level             | Inclined | Angle or Factor | Hair Read   | Reading | Correc-tion | Center Hair |                     |                   | INST.      | ROD |                     |         |          |
| 1    |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |                     |         |          |
| 2    |                  | 3080            | 90                | 03       | 59              |             |         |             | 15.0        |                     | +18.6             | 1559.9     |     | Δ                   | 791     | worked   |
| 3    |                  | ✓               | 289               | 55       | 28              |             |         |             | 15.0        |                     |                   |            |     | Δ                   |         |          |
| 4    |                  | 2640            | 90                | 02       | 39              |             |         |             | 15.0        |                     | -16.9             | 1543.0     |     |                     | 792     | Backward |
| 5    |                  | 2200            | 90                | 00       | 55              |             |         |             | 15.0        |                     | -15.5             | 1544.4     |     |                     | 793     |          |
| 6    |                  | 1760            | ✓                 |          |                 |             |         |             | 12.5        |                     | -12.5             | 1547.4     |     |                     | 794     |          |
| 7    |                  | 1320            | ✓                 |          |                 |             |         |             | 8.6         |                     | -8.6              | 1551.3     |     |                     | 795     |          |
| 8    |                  | 880             | ✓                 |          |                 |             |         |             | 7.4         |                     | -7.4              | 1552.5     |     |                     | 796     |          |
| 9    |                  | 440             | ✓                 |          |                 |             |         |             | 5.6         |                     | -5.6              | 1554.3     |     |                     | 797     |          |
| 10   |                  | 0               | ✓                 |          |                 |             |         |             | 5.0         |                     | -5.0              | 1554.9     |     | κ                   | 798     |          |
| 11   |                  | 440             | 89                | 17       | 34              |             |         |             | 5.0         |                     | +0.4              | 1560.3     |     |                     | 799     |          |
| 12   |                  | 980             | 89                | 21       | 55              |             |         |             | 5.0         |                     | +4.8              | 1564.7     |     |                     | 800     |          |
| 13   |                  | 1320            | 89                | 21       | 55              |             |         |             | 5.0         |                     | +9.7              | 1569.6     |     |                     | 801     |          |
| 14   |                  | 1760            | 89                | 17       | 41              |             |         |             | 5.0         |                     | +16.7             | 1576.6     |     |                     | 802     |          |
| 15   |                  | 2200            | 89                | 20       | 14              |             |         |             | 5.0         |                     | +20.5             | 1580.4     |     |                     | 803     |          |
| 16   |                  | 2640            | 89                | 17       | 57              |             |         |             | 10.0        |                     | +22.4             | 1582.3     |     |                     | 804     |          |
| 17   |                  | 3080            | 89                | 20       | 46              |             |         |             | 5.0         |                     | +30.3             | 1590.2     |     | 0                   | 805     |          |
| 18   |                  | ✓               | 270               | 39       | 03              |             |         |             | 5.0         |                     |                   |            |     | 0                   |         |          |
| 19   |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |                     |         |          |
| 20   |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |                     |         |          |

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## STADIA SURVEY NOTES

AREA KILLIK RIVER STATE or PROVINCE Alaska PAGE No. 10  
 LINE No.(s) 107 X E PARTY No. 1173 DATE 27 Day 4 Mo. 78 Yr. BOOK No. \_\_\_\_\_  
 SURVEYOR F O'Brien RODMAN K Ball WEATHER: Fog P.T.S. No. \_\_\_\_\_

| LINE | Bearing of Sight | Stadia Distance | BEAMAN OR VERNIER |          |                 | ROD READING |         |             |             | Angular Elev. Diff. | Final Elev. Diff. | ELEVATIONS |     | Station | REMARKS            |
|------|------------------|-----------------|-------------------|----------|-----------------|-------------|---------|-------------|-------------|---------------------|-------------------|------------|-----|---------|--------------------|
|      |                  |                 | Level             | Inclined | Angle or Factor | Hair Read   | Reading | Correc-tion | Center Hair |                     |                   | INST.      | ROD |         |                    |
| 1    |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |         |                    |
| 2    |                  | 2640            | 91                | 35       | 12              |             |         |             | 15.0        | +88.0               | 1678.2            |            | Δ   | 1805    | WORKED<br>BACKWARD |
| 3    | ✓                | 268             | 24                | 42       |                 |             |         |             | 15.0        |                     |                   |            | Δ   |         |                    |
| 4    |                  | 2200            | 91                | 44       | 05              |             |         |             | 15.0        | -81.5               | 1596.7            |            |     | 1806    |                    |
| 5    |                  | 1760            | 91                | 56       | 47              |             |         |             | 15.0        | -74.7               | 1602.5            |            |     | 1807    |                    |
| 6    |                  | 1320            | 92                | 02       | 05              |             |         |             | 15.0        | -61.8               | 1616.4            |            |     | 1808    |                    |
| 7    |                  | 880             | 91                | 48       | 37              |             |         |             | 15.0        | -42.8               | 1635.4            |            |     | 1809    |                    |
| 8    |                  | 440             | 90                | 32       | 52              |             |         |             | 15.0        | -19.2               | 1659.0            |            |     | 1810    |                    |
| 9    |                  | 0               | ✓                 |          |                 |             |         |             | 5.0         | -5.0                | 1673.2            |            | X   | 1811    |                    |
| 10   |                  | 440             | ✓                 |          |                 |             |         |             | 2.7         | -2.7                | 1675.5            |            |     | 1812    |                    |
| 11   |                  | 880             | 89                | 20       | 00              |             |         |             | 5.0         | +5.3                | 1683.5            |            |     | 1813    |                    |
| 12   | ✓                | 1320            | 89                | 16       | 56              |             |         |             | 5.0         | +11.6               | 1689.8            |            |     | 1814    |                    |
| 13   |                  | 1760            | 89                | 19       | 57              |             |         |             | 5.0         | +15.6               | 1693.8            |            |     | 1815    |                    |
| 14   |                  | 2200            | 89                | 16       | 52              |             |         |             | 5.0         | +22.7               | 1700.9            |            |     | 1816    |                    |
| 15   |                  | 2640            | 89                | 15       | 12              |             |         |             | 5.0         | +29.5               | 1707.7            |            |     | 1817    |                    |
| 16   |                  | 3080            | 89                | 06       | 11              |             |         |             | 15.0        | +33.4               | 1711.5            |            | 0   | 1818    |                    |
| 17   | ✓                | 270             | 53                | 51       |                 |             |         |             | 16.0        |                     |                   |            | 0   |         |                    |
| 18   |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |         |                    |
| 19   |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |         |                    |
| 20   |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |         |                    |

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**STADIA SURVEY NOTES**

AREA KILLIK RIVER STATE or PROVINCE Alaska PAGE No. 11  
 LINE No.(s) 107XF PARTY No. 1173 DATE 27 Day 4 Mo. 78 Yr. BOOK No. \_\_\_\_\_  
 SURVEYOR FO Brien RODMAN K Barr WEATHER: Fog P.T.S. No. \_\_\_\_\_

| No. | Bearing of Sight | Stadia Distance | BEAMAN OR VERNIER |          |                 | ROD READING |         |             |             | Angular Elev. Diff. | Final Elev. Diff. | ELEVATIONS |        | A.B.S. OF S. - S.S. | Station           | REMARKS  |
|-----|------------------|-----------------|-------------------|----------|-----------------|-------------|---------|-------------|-------------|---------------------|-------------------|------------|--------|---------------------|-------------------|----------|
|     |                  |                 | Level             | Inclined | Angle or Factor | Hair Read   | Reading | Correc-tion | Center Hair |                     |                   | INST.      | ROD    |                     |                   |          |
| 1   |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |        |                     |                   |          |
| 2   |                  | 3080            | ✓                 |          |                 |             |         |             |             |                     | +2.6              | 1714.1     |        | Δ                   | 818               |          |
| 3   |                  | ✓               | ✓                 |          |                 |             |         |             |             |                     |                   |            |        | Δ                   |                   | NOTES    |
| 4   |                  | 2640            | ✓                 |          |                 |             |         |             |             |                     | -1.5              |            | 1712.6 |                     | 819               | WORKED   |
| 5   |                  | 2200            | ✓                 |          |                 |             |         |             |             |                     | -8.5              |            | 1705.6 |                     | 820               | BACKWARD |
| 6   |                  | 1760            | 90                | 00       | 46              |             |         |             |             |                     | -15.3             |            | 1698.8 |                     | 821               |          |
| 7   |                  | 1320            | 90                | 02       | 13              |             |         |             |             |                     | -15.8             |            | 1638.3 |                     | 822               | FROM     |
| 8   |                  | 880             | 89                | 59       | 00              |             |         |             |             |                     | -14.7             |            | 1699.4 |                     | 823               | 78134    |
| 9   |                  | 440             | ✓                 |          |                 |             |         |             |             |                     | -10.7             |            | 1703.4 |                     | 824               |          |
| 10  |                  | 0               | ✓                 |          |                 |             |         |             |             |                     | -5.0              |            | 1709.1 |                     | 825               | ↑        |
| 11  |                  | 440             | 89                | 27       | 38              |             |         |             |             |                     | -0.9              |            | 1713.2 |                     | 826               |          |
| 12  |                  | 880             | 89                | 22       | 08              |             |         |             |             |                     | +4.7              |            | 1718.8 |                     | 827               |          |
| 13  |                  | 1320            | 89                | 29       | 18              |             |         |             |             |                     | +6.8              |            | 1722.9 |                     | 828               |          |
| 14  |                  | 1395            | 89                | 32       | 57              |             |         |             |             |                     | +6.0              |            | 1720.1 | 0                   | 828 + 75' = 78134 |          |
| 15  |                  | ✓               | 270               | 26       | 46              |             |         |             |             |                     |                   |            |        | 0                   | 828 + 75' = 78134 |          |
| 16  |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |        |                     |                   | 1720-11  |
| 17  |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |        |                     |                   |          |
| 18  |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |        |                     |                   |          |
| 19  |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |        |                     |                   |          |
| 20  |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |        |                     |                   |          |

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## STADIA SURVEY NOTES

AREA KILLIK RIVER STATE or PROVINCE Alaska PAGE No. 12  
 LINE No.(s) 107XE PARTY No. 1173 DATE 27 Day 4 Mo 78 Yr. BOOK No. \_\_\_\_\_  
 SURVEYOR E O'Brien RODMAN K Barr WEATHER: Fog P.T.S. No. \_\_\_\_\_

| LINE | Bearing of Sight | Stadia Distance | BEAMAN OR VERNIER |          |                 | ROD READING |         |             |             | Angular Elev. Diff. | Final Elev. Diff. | ELEVATIONS |     | Station | REMARKS  |
|------|------------------|-----------------|-------------------|----------|-----------------|-------------|---------|-------------|-------------|---------------------|-------------------|------------|-----|---------|--|
|      |                  |                 | Level             | Inclined | Angle or Factor | Hair Read   | Reading | Correc-tion | Center Hair |                     |                   | INST.      | ROD |         |  |
| 1    |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |         |  |
| 2    |                  | 805             | 88                | 53       | 27              |             |         |             |             | -10.6               | 1709.53           | 1720.1     |     | INT     | $L-R = 828 + 854$<br>$= 1682$<br>$L = 107XE = 828 + 75$<br>$= 78134$ |
| 3    |                  | ✓               | 271               | 06       | 28              |             |         |             |             |                     |                   |            |     |         |  |
| 4    |                  | 440             | 88                | 36       | 43              |             |         |             |             | +5.7                |                   | 1725.8     |     | 829     |  |
| 5    |                  | 0               | ✓                 |          |                 |             |         |             |             | -5.0                | 1704.1            | 1725.1     |     | 830     |  |
| 6    |                  | 440             | 91                | 42       | 12              |             |         |             |             | -28.1               |                   | 1692.0     |     | 831     |  |
| 7    |                  | 880             | 92                | 30       | 45              |             |         |             |             | -56.6               |                   | 1663.5     |     | 832     |  |
| 8    |                  | 1320            | 92                | 47       | 04              |             |         |             |             | -79.1               |                   | 1641.0     |     | 833     |  |
| 9    |                  | 1760            | 92                | 55       | 14              |             |         |             |             | -104.6              |                   | 1615.5     |     | 834     |  |
| 10   |                  | 2200            | 92                | 55       | 40              |             |         |             |             | -127.3              |                   | 1592.8     |     | 835     |  |
| 11   |                  | 2640            | 92                | 50       | 07              |             |         |             |             | +145.4              |                   | 1574.7     |     | 836     |  |
| 12   |                  | 3080            | 92                | 43       | 13              |             |         |             |             | -161.0              |                   | 1548.6     | 0   | 837     |  |
| 13   |                  | ✓               | 267               | 16       | 50              |             |         |             |             |                     |                   |            | 0   |         |  |
| 14   |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |         |  |
| 15   |                  | 1320            | 89                | 52       | 54              |             |         |             |             | +12.1               | 1560.7            |            |     |         |  |
| 16   |                  | ✓               | 270               | 07       | 46              |             |         |             |             |                     |                   |            |     |         |  |
| 17   |                  | 880             | 90                | 34       | 27              |             |         |             |             | -23.8               |                   | 1536.9     |     | 838     |  |
| 18   |                  | 440             | 91                | 02       | 48              |             |         |             |             | -23.0               |                   | 1537.7     |     | 839     |  |
| 19   |                  | 0               | ✓                 |          |                 |             |         |             |             | -5.0                |                   | 1535.7     |     | 840     |  |
| 20   |                  | 440             | ✓                 |          |                 |             |         |             |             | -12.0               |                   | 1548.7     |     | 841     |  |

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## STADIA SURVEY NOTES

AREA Howard Pass STATE or PROVINCE Alaska PAGE No. 13  
 LINE No.(s) 107 X E PARTY No. 1173 DATE 27 Day 4 Mo. 78 Yr. BOOK No. \_\_\_\_\_  
 SURVEYOR F. O'Brien RODMAN K. Bass WEATHER: Fog P.T.S. No. \_\_\_\_\_

| L<br>I<br>N<br>E | Bearing<br>of Sight | Stadia<br>Distance | BEAMAN OR VERNIER |          |                    | ROD READING  |         |                 |                | Angular<br>Elev.<br>Diff. | Final<br>Elev.<br>Diff. | ELEVATIONS |     | ▲B.S.<br>OF.S.<br>-S.S. | Station | REMARKS |
|------------------|---------------------|--------------------|-------------------|----------|--------------------|--------------|---------|-----------------|----------------|---------------------------|-------------------------|------------|-----|-------------------------|---------|---------|
|                  |                     |                    | Level             | Inclined | Angle or<br>Factor | Hair<br>Read | Reading | Correc-<br>tion | Center<br>Hair |                           |                         | INST.      | ROD |                         |         |         |
| 1                |                     |                    |                   |          |                    |              |         |                 |                |                           |                         |            |     |                         |         |         |
| 2                |                     | 770                | 91                | 06       | 14                 |              |         |                 | 15.0           |                           | -29.8                   | 1530.9     | 0   | 1841+330                |         |         |
| 3                |                     | ✓ 268              | 53                | 42       |                    |              |         |                 | 15.0           |                           |                         |            | 0   |                         |         |         |
| 4                |                     |                    |                   |          |                    |              |         |                 |                |                           |                         |            |     | 1242                    |         |         |
| 5                |                     | 3190               | 87                | 02       | 43                 |              |         |                 | 5.0            |                           | -159.1                  | 1371.9     | Δ   | 1848                    |         |         |
| 6                |                     | ✓ 272              | 56                | 02       |                    |              |         |                 | 5.0            |                           |                         |            | Δ   | 1847                    |         |         |
| 7                |                     | 3080               | 87                | 03       | 05                 |              |         |                 | 5.0            |                           | +153.3                  | 1525.7     |     | 1842                    |         |         |
| 8                |                     | 2640               | 87                | 03       | 23                 |              |         |                 | 5.0            |                           | +126.1                  | 1498.0     |     | 1843                    |         |         |
| 9                |                     | 2200               | 88                | 15       | 08                 |              |         |                 | 4.5            |                           | +62.7                   | 1423.9     |     | 1844                    |         |         |
| 10               |                     | 1760               | ✓                 |          |                    |              |         |                 | 7.7            |                           | -7.6                    | 1364.3     |     | 1845                    |         |         |
| 11               |                     | 1320               | ✓                 |          |                    |              |         |                 | 8.4            |                           | -8.4                    | 1363.5     | π   | 1846                    |         |         |
| 12               |                     | 880                | ✓                 |          |                    |              |         |                 | 2.3            |                           | -2.3                    | 1369.6     |     | 1847                    |         |         |
| 13               |                     | 440                | ✓                 |          |                    |              |         |                 | 4.0            |                           | -4.0                    | 1367.9     |     | 1848                    |         |         |
| 14               |                     | 0                  | ✓                 |          |                    |              |         |                 | 5.0            |                           | -5.0                    | 1366.9     | π   | 1849                    |         |         |
| 15               |                     | 440                | ✓                 |          |                    |              |         |                 | 6.7            |                           | -6.7                    | 1365.2     |     | 1850                    |         |         |
| 16               |                     | 880                | ✓                 |          |                    |              |         |                 | 4.8            |                           | -4.8                    | 1367.1     |     | 1851                    |         |         |
| 17               |                     | 1320               | ✓                 |          |                    |              |         |                 | 2.1            |                           | -2.1                    | 1369.8     |     | 1852                    |         |         |
| 18               |                     | 1760               | 89                | 31       | 38                 |              |         |                 | 5.0            |                           | +9.6                    | 1381.5     |     | 1853                    |         |         |
| 19               |                     | 2200               | 88                | 34       | 02                 |              |         |                 | 5.0            |                           | +50.1                   | 1422.0     |     | 1854                    |         |         |
| 20               |                     | 2640               | 88                | 07       | 35                 |              |         |                 | 5.0            |                           | +81.5                   | 1453.4     |     | 1855                    |         |         |

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## STADIA SURVEY NOTES

AREA Howard Pass STATE or PROVINCE Alaska PAGE No. 14  
 LINE No.(s) 107XE PARTY No. 1173 DATE 27 Day 4 Mo. 78 Yr. BOOK No. \_\_\_\_\_  
 SURVEYOR F O'Brien RODMAN K Barr WEATHER: Fog P.T.S. No. \_\_\_\_\_

| LINE | Bearing of Sight | Stadia Distance | BEAMAN OR VERNIER |          |                 | ROD READING |         |             |             | Angular Elev. Diff. | Final Elev. Diff. | ELEVATIONS |     | Δ B.S. OF S.S. | Station | REMARKS |
|------|------------------|-----------------|-------------------|----------|-----------------|-------------|---------|-------------|-------------|---------------------|-------------------|------------|-----|----------------|---------|---------|
|      |                  |                 | Level             | Inclined | Angle or Factor | Hair Read   | Reading | Correc-tion | Center Hair |                     |                   | INST.      | ROD |                |         |         |
| 1    |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |                |         |         |
| 2    |                  | 3080            | 87                | 30       | 03              |             |         |             | 5.0         |                     | +120.9            | 1492.8     | 0   | 1856           |         |         |
| 3    |                  | ✓               | 272               | 19       | 47              |             |         |             | 5.0         |                     |                   |            | 0   |                |         |         |
| 4    |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |                |         |         |
| 5    |                  | 8800            | 91                | 17       | 08              |             |         |             | 15.0        |                     | +34.9             | 1527.7     | Δ   |                |         |         |
| 6    |                  | ✓               | 268               | 41       | 39              |             |         |             | 15.0        |                     |                   |            | Δ   |                |         |         |
| 7    |                  | 440             | ✓                 |          |                 |             |         |             | 14.8        |                     | -14.8             | 1512.9     |     | 1857           |         |         |
| 8    |                  | 61              | ✓                 |          |                 |             |         |             | 5.0         |                     | -5.0              | 1522.7     | κ   | 1858           |         |         |
| 9    |                  | 440             | ✓                 |          |                 |             |         |             | 8.2         |                     | -8.2              | 1519.5     | κ   | 1859           |         |         |
| 10   |                  | 880             | ✓                 |          |                 |             |         |             | 10.5        |                     | -10.5             | 1517.2     |     | 1860           |         |         |
| 11   |                  | 1320            | ✓                 |          |                 |             |         |             | 9.9         |                     | -9.9              | 1517.8     |     | 1861           |         |         |
| 12   |                  | 1760            | ✓                 |          |                 |             |         |             | 11.7        |                     | -11.6             | 1516.1     |     | 1862           |         |         |
| 13   |                  | 2200            | 90                | 04       | 20              |             |         |             | 15.0        |                     | -18.1 (20)        | 1509.6     | 0   | 1863           |         |         |
| 14   |                  | ✓               | 269               | 54       | 17              |             |         |             | 15.0        |                     |                   |            | 0   |                |         |         |
| 15   |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |                |         |         |
| 16   |                  | 1870            | 88                | 38       | 56              |             |         |             | 15.0        |                     | -28.8             | 1480.9     | Δ   |                |         |         |
| 17   |                  | ✓               | 271               | 19       | 51              |             |         |             | 15.0        |                     |                   |            | Δ   |                |         |         |
| 18   |                  | 1430            | 89                | 06       | 28              |             |         |             | 5.0         |                     | +17.3             | 1498.2     |     | 1864           |         |         |
| 19   |                  | 990             | 89                | 14       | 38              |             |         |             | 5.0         |                     | +8.1              | 1489.0     |     | 1865           |         |         |
| 20   |                  | 530             | ✓                 |          |                 |             |         |             | 1.3         |                     | -1.3              | 1479.6     |     | 1866           |         |         |

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## STADIA SURVEY NOTES

AREA Howard Pass STATE or PROVINCE Alaska PAGE No. 15  
 LINE No.(s) 107XE PARTY No. 1173 DATE 27 Day 4 Mo. 78 Yr. BOOK No. \_\_\_\_\_  
 SURVEYOR F O Brien RODMAN K Barr WEATHER: Fog P.T.S. No. \_\_\_\_\_

| LINE | Bearing of Sight | Stadia Distance | BEAMAN OR VERNIER |          |                 | ROD READING |         |             |             | Angular Elev. Diff. | Final Elev. Diff. | ELEVATIONS |     | Station  | REMARKS |
|------|------------------|-----------------|-------------------|----------|-----------------|-------------|---------|-------------|-------------|---------------------|-------------------|------------|-----|----------|---------|
|      |                  |                 | Level             | Inclined | Angle or Factor | Hair Read   | Reading | Correc-tion | Center Hair |                     |                   | INST.      | ROD |          |         |
| 1    |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |          |         |
| 2    |                  | 110             | ✓                 |          |                 |             |         |             |             |                     | -7.0              | 1473.9     |     | 1867     |         |
| 3    |                  | 0               | ✓                 |          |                 |             |         |             |             |                     | -5.0              | 1475.9     | X   | 1867+110 |         |
| 4    |                  | 330             | 91                | 16       | 041             |             |         |             |             |                     | -22.3             | 1458.6     |     | 1868     |         |
| 5    |                  | 770             | 90                | 34       | 58              |             |         |             |             |                     | -12.3             | 1468.6     |     | 1869     |         |
| 6    |                  | 1210            | 90                | 11       | 00              |             |         |             |             |                     | -18.8             | 1462.1     |     | 1870     |         |
| 7    |                  | 1650            | 90                | 09       | 08              |             |         |             |             |                     | -10.3             | 1461.6     |     | 1871     |         |
| 8    |                  | 2090            | 90                | 06       | 33              |             |         |             |             |                     | -18.9             | 1462.0     |     | 1872     |         |
| 9    |                  | 2530            | 90                | 15       | 11              |             |         |             |             |                     |                   | 1454.6     | 0   | 1873     |         |
| 10   |                  | ✓               | 269               | 44       | 10              |             |         |             |             |                     | -26.3             |            | 0   |          |         |
| 11   |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |          |         |
| 12   |                  | 2200            | 87                | 51       | 41              |             |         |             |             |                     | -66.9             | 1387.7     |     |          |         |
| 13   |                  | ✓               | 272               | 07       | 32              |             |         |             |             |                     |                   |            |     |          |         |
| 14   |                  | 1760            | 87                | 51       | 29              |             |         |             |             |                     | +50.8             | 1438.5     |     | 1874     |         |
| 15   |                  | 1320            | 88                | 00       | 27              |             |         |             |             |                     | +30.9             | 1418.6     |     | 1875     |         |
| 16   |                  | 880             | 88                | 12       | 52              |             |         |             |             |                     | +12.4             | 1400.1     |     | 1876     |         |
| 17   |                  | 440             | 89                | 05       | 12              |             |         |             |             |                     | +2.0              | 1389.7     |     | 1877     |         |
| 18   |                  | 0               | ✓                 |          |                 |             |         |             |             |                     | -5.0              | 1382.7     | X   | 1878     |         |
| 19   |                  | 440             | 91                | 44       | 20              |             |         |             |             |                     | -28.3             | 1359.4     |     | 1879     |         |
| 20   |                  | 880             | 92                | 42       | 14              |             |         |             |             |                     | -66.5             | 1331.2     |     | 1880     |         |

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## STADIA SURVEY NOTES

AREA Howard Pass STATE or PROVINCE Alaska PAGE No. 16  
 LINE No.(s) 107 XF PARTY No. 1173 DATE 30 Day 4 Mo. 78 Yr. BOOK No. \_\_\_\_\_  
 SURVEYOR F O'Brien RODMAN K Barr WEATHER: Clear P.T.S. No. \_\_\_\_\_

| LINE | Bearing of Sight | Stadia Distance | BEAMAN OR VERNIER |          |                 | ROD READING |         |             |             | Angular Elev. Diff. | Final Elev. Diff. | ELEVATIONS |     | ▲B.S. OF.S. - S.S. | Station | REMARKS |
|------|------------------|-----------------|-------------------|----------|-----------------|-------------|---------|-------------|-------------|---------------------|-------------------|------------|-----|--------------------|---------|---------|
|      |                  |                 | Level             | Inclined | Angle or Factor | Hair Read   | Reading | Correc-tion | Center Hair |                     |                   | INST.      | ROD |                    |         |         |
| 1    |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |                    |         |         |
| 2    |                  | 1320            | 92                | 23       | 07              |             |         |             |             |                     | 69.9              | 1317.8     |     | 1881               |         |         |
| 3    |                  | 1760            | 91                | 55       | 34              |             |         |             |             |                     | -74.1             | 1313.6     |     | 1882               |         |         |
| 4    |                  | 2200            | 91                | 35       | 01              |             |         |             |             |                     | -75.7             | 1312.0     |     | 1883               |         |         |
| 5    |                  | 2640            | 91                | 23       | 42              |             |         |             |             |                     | -79.1             | 1308.6     |     | 1884               |         |         |
| 6    |                  | 3080            | 91                | 14       | 56              |             |         |             |             |                     | -81.9             | 1305.8     |     | 1885               |         |         |
| 7    |                  | 3410            | 91                | 17       | 06              |             |         |             |             |                     | -91.6             | 1296.1     | 0   | 1885+230           |         |         |
| 8    | ✓                | 268             | 42                | 05       |                 |             |         |             |             |                     |                   |            | 0   |                    |         |         |
| 9    |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |                    |         |         |
| 10   |                  | 1430            | 89                | 10       | 26              |             |         |             |             |                     | -15.5             | 1280.6     | Δ   |                    |         |         |
| 11   | ✓                | 270             | 48                | 43       |                 |             |         |             |             |                     |                   |            | Δ   |                    |         |         |
| 12   |                  | 1320            | 90                | 04       | 36              |             |         |             |             |                     | -16.7             | 1263.9     |     | 1886               |         |         |
| 13   |                  | 880             | 90                | 21       | 55              |             |         |             |             |                     | -20.6             | 1260.0     |     | 1887               |         |         |
| 14   |                  | 440             | ✓                 |          |                 |             |         |             |             |                     | -4.3              | 1276.3     |     | 1888               |         |         |
| 15   |                  | 0               | ✓                 |          |                 |             |         |             |             |                     | -5.0              | 1275.6     | π   | 1889               |         |         |
| 16   |                  | 440             | 90                | 12       | 43              |             |         |             |             |                     | -16.6             | 1264.0     |     | 1890               |         |         |
| 17   |                  | 880             | 91                | 13       | 24              |             |         |             |             |                     | -33.8             | 1246.8     |     | 1891               |         |         |
| 18   |                  | 1320            | 91                | 18       | 40              |             |         |             |             |                     | -45.2             | 1235.4     |     | 1892               |         |         |
| 19   |                  | 1760            | 91                | 32       | 18              |             |         |             |             |                     | -62.3             | 1218.3     | 0   | 1893               |         |         |
| 20   | ✓                | 268             | 27                | 11       |                 |             |         |             |             |                     |                   |            | 0   |                    |         |         |

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## STADIA SURVEY NOTES

AREA Howard Pass STATE or PROVINCE Alaska PAGE No. 17  
 LINE No.(s) 107XE PARTY No. 117.9 DATE 30 Day 4 Mo. 78 Yr. BOOK No. \_\_\_\_\_  
 SURVEYOR F O'Brien RODMAN K Barr WEATHER: Clear P.T.S. No. \_\_\_\_\_

| LINE | Bearing of Sight | Stadia Distance | BEAMAN OR VERNIER |          |                 | ROD READING |         |            |             | Angular Elev. Diff. | Final Elev. Diff. | ELEVATIONS |     | B.S. OF S. - S.S. | Station  | REMARKS |
|------|------------------|-----------------|-------------------|----------|-----------------|-------------|---------|------------|-------------|---------------------|-------------------|------------|-----|-------------------|----------|---------|
|      |                  |                 | Level             | Inclined | Angle or Factor | Hair Read   | Reading | Correction | Center Hair |                     |                   | INST.      | ROD |                   |          |         |
| 1    |                  |                 |                   |          |                 |             |         |            |             |                     |                   |            |     |                   |          |         |
| 2    |                  | 2050            | 90                | 59       | 17              |             |         |            | 15.0        |                     | +50.4             | 1268.7     |     | Δ                 | 1893     |         |
| 3    |                  | ✓               | 268               | 00       | 07              |             |         |            | 15.0        |                     |                   |            |     | Δ                 |          |         |
| 4    |                  | 1610            | 92                | 11       | 57              |             |         |            | 15.0        |                     | -76.7             | 1192.0     |     |                   | 1894     |         |
| 5    | 107              | 1170            | 93                | 03       | 43              |             |         |            | 15.0        |                     | -77.5             | 1191.2     |     |                   | 1895     |         |
| 6    | 107              | 730             | 94                | 54       | 26              |             |         |            | 15.0        |                     | -77.4             | 1191.3     |     |                   | 1896     |         |
| 7    |                  | 290             | 95                | 46       | 11              |             |         |            | 4.5         |                     | -33.7             | 1235.0     |     |                   | 1897     |         |
| 8    |                  | 0               | ✓                 |          |                 |             |         |            | 5.0         |                     | -5.0              | 1263.7     |     | π                 | 1897+290 |         |
| 9    |                  | 150             | ✓                 |          |                 |             |         |            | 3.7         |                     | -3.7              | 1265.0     |     |                   | 1898     |         |
| 10   |                  | 590             | ✓                 |          |                 |             |         |            | 5.1         |                     | -5.1              | 1263.6     |     |                   | 1899     |         |
| 11   |                  | 1030            | ✓                 |          |                 |             |         |            | 4.9         |                     | -4.9              | 1263.8     |     |                   | 1900     |         |
| 12   |                  | 1470            | ✓                 |          |                 |             |         |            | 4.5         |                     | -4.5              | 1264.2     |     | o                 | 1901     |         |
| 13   |                  | ✓               | ✓                 |          |                 |             |         |            | 4.7         |                     |                   |            |     | o                 |          |         |
| 14   |                  |                 |                   |          |                 |             |         |            |             |                     |                   |            |     |                   |          |         |
| 15   |                  | 3080            | 88                | 33       | 42              |             |         |            | 15.0        |                     | -62.3             | 1202.0     |     | Δ                 |          |         |
| 16   |                  | ✓               | 271               | 25       | 55              |             |         |            | 15.0        |                     |                   |            |     | Δ                 |          |         |
| 17   |                  | 2640            | ✓                 |          |                 |             |         |            | 9.9         |                     | -9.8              | 1192.2     |     |                   | 1902     |         |
| 18   |                  | 2200            | ✓                 |          |                 |             |         |            | 11.5        |                     | -11.4             | 1192.6     |     |                   | 1903     |         |
| 19   |                  | 1760            | ✓                 |          |                 |             |         |            | 9.8         |                     | -9.7              | 1192.3     |     |                   | 1904     |         |
| 20   |                  | 1320            | ✓                 |          |                 |             |         |            | 8.0         |                     | -8.0              | 1194.0     |     |                   | 1905     |         |

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## STADIA SURVEY NOTES

AREA Howard Pass STATE or PROVINCE Alaska PAGE No. 18  
 LINE No.(s) 107XE PARTY No. 1173 DATE 30 Day 4 Mo. 78 Yr. BOOK No. \_\_\_\_\_  
 SURVEYOR F O'Brien RODMAN K Barr WEATHER: Clear P.T.S. No. \_\_\_\_\_

| LINE | Bearing of Sight | Stadia Distance | BEAMAN OR VERNIER |          |                 | ROD READING |         |             |             | Angular Elev. Diff. | Final Elev. Diff. | ELEVATIONS |     | B.S. OF.S. - S.S. | Station | REMARKS |
|------|------------------|-----------------|-------------------|----------|-----------------|-------------|---------|-------------|-------------|---------------------|-------------------|------------|-----|-------------------|---------|---------|
|      |                  |                 | Level             | Inclined | Angle or Factor | Hair Read   | Reading | Correc-tion | Center Hair |                     |                   | INST.      | ROD |                   |         |         |
| 1    |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |                   |         |         |
| 2    |                  | 880             | ✓                 |          |                 |             |         |             |             |                     | -2.7              | 1199.3     |     | 1906              |         |         |
| 3    |                  | 440             | ✓                 |          |                 |             |         |             |             |                     | -4.2              | 1197.8     |     | 1907              |         |         |
| 4    |                  | 0               | ✓                 |          |                 |             |         |             |             |                     | -5.0              | 1197.0     | π   | 1908              |         |         |
| 5    |                  | 440             | ✓                 |          |                 |             |         |             |             |                     | -6.1              | 1195.9     |     | 1909              |         |         |
| 6    |                  | 880             | ✓                 |          |                 |             |         |             |             |                     | -9.2              | 1192.8     |     | 1910              |         |         |
| 7    |                  | 1320            | 89                | 23       | 29              |             |         |             |             |                     | +9.1              | 1211.1     |     | 1911              |         |         |
| 8    |                  | 1760            | 89                | 17       | 09              |             |         |             |             |                     | +17.0             | 1219.0     |     | 1912              |         |         |
| 9    |                  | 2200            | 89                | 13       | 31              |             |         |             |             |                     | +24.8             | 1226.7     | 0   | 1913              |         |         |
| 10   |                  | ✓               | 270               | 46       | 10              |             |         |             |             |                     |                   |            | 0   |                   |         |         |
| 11   |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |                   |         |         |
| 12   |                  | 2640            | 90                | 50       | 00              |             |         |             |             |                     | +53.1             | 1279.8     | Δ   |                   |         |         |
| 13   |                  | ✓               | 269               | 10       | 26              |             |         |             |             |                     |                   |            | Δ   |                   |         |         |
| 14   |                  | 2200            | 90                | 57       | 56              |             |         |             |             |                     | -52.0             | 1227.8     |     | 1914              |         |         |
| 15   |                  | 1760            | 91                | 03       | 40              |             |         |             |             |                     | -47.5             | 1232.3     |     | 1915              |         |         |
| 16   |                  | 1320            | 91                | 09       | 57              |             |         |             |             |                     | -41.0             | 1238.0     |     | 1916              |         |         |
| 17   |                  | 880             | 90                | 56       | 40              |             |         |             |             |                     | -29.5             | 1250.3     |     | 1917              |         |         |
| 18   |                  | 440             | ✓                 |          |                 |             |         |             |             |                     | -12.9             | 1266.9     |     | 1918              |         |         |
| 19   |                  | 0               | ✓                 |          |                 |             |         |             |             |                     | -5.0              | 1274.8     | π   | 1919              |         |         |
| 20   |                  | 440             | ✓                 |          |                 |             |         |             |             |                     | -1.3              | 1278.5     |     | 1920              |         |         |

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## STADIA SURVEY NOTES

AREA Howard Pass STATE or PROVINCE Alaska PAGE No. 19  
 LINE No.(s) 107XE PARTY No. 1172 DATE 30 Day 4 Mo. 78 Yr. BOOK No. \_\_\_\_\_  
 SURVEYOR E O Ruen RODMAN X Barr WEATHER: Clear P.T.S. No. \_\_\_\_\_

| LINE | Bearing of Sight | Stadia Distance | BEAMAN OR VERNIER |          |                 | ROD READING |         |              |             | Angular Elev. Diff. | Final Elev. Diff. | ELEVATIONS |        | ▲B.S. OF.S. - S.S. | Station | REMARKS  |
|------|------------------|-----------------|-------------------|----------|-----------------|-------------|---------|--------------|-------------|---------------------|-------------------|------------|--------|--------------------|---------|--|
|      |                  |                 | Level             | Inclined | Angle or Factor | Hair Read   | Reading | Correc-tion. | Center Hair |                     |                   | INST.      | ROD    |                    |         |  |
| 1    |                  |                 |                   |          |                 |             |         |              |             |                     |                   |            |        |                    |         |  |
| 2    |                  | 880             | 89                | 34       | 32              |             |         |              |             | 5.0                 | +1.5              |            | 1281.3 |                    | 1921    |  |
| 3    |                  | 1320            | 89                | 35       | 58              |             |         |              |             | 5.0                 | +4.3              |            | 1284.1 |                    | 1922    |  |
| 4    |                  | 1760            | 89                | 33       | 22              |             |         |              |             | 5.0                 | +8.7              |            | 1288.5 |                    | 1923    |  |
| 5    |                  | 2200            | 89                | 37       | 57              |             |         |              |             | 5.0                 | +9.4              |            | 1289.2 | 0                  | 1924    |  |
| 6    |                  | ✓ 270           | 22                | 31       |                 |             |         |              |             | 5.0                 |                   |            |        | 0                  |         |  |
| 7    |                  |                 |                   |          |                 |             |         |              |             |                     |                   |            |        |                    |         |  |
| 8    |                  | 2650            | 90                | 29       | 11              |             |         |              |             | 15.0                | +37.4             | 1326.6     |        | Δ                  |         |  |
| 9    |                  | ✓ 269           | 30                | 39       |                 |             |         |              |             | 15.0                |                   |            |        | Δ                  |         |  |
| 10   |                  | 2210            | 90                | 31       | 54              |             |         |              |             | 15.0                | -35.4             |            | 1291.2 |                    | 1925    |  |
| 11   |                  | 1770            | 90                | 34       | 49              |             |         |              |             | 15.0                | -32.9             |            | 1293.7 |                    | 1926    |  |
| 12   |                  | 1330            | 90                | 36       | 05              |             |         |              |             | 15.0                | -28.9             |            | 1297.7 |                    | 1927    |  |
| 13   |                  | 890             | 90                | 43       | 09              |             |         |              |             | 15.0                | -26.2             |            | 1300.4 |                    | 1928    |  |
| 14   |                  | 450             | 90                | 45       | 27              |             |         |              |             | 15.0                | -20.9             |            | 1305.7 |                    | 1929    |  |
| 15   |                  | 10              | ✓                 |          |                 |             |         |              |             | 5.5                 | -5.5              |            | 1321.1 |                    | 1930    |  |
| 16   |                  | 0               | ✓                 |          |                 |             |         |              |             | 5.0                 | -5.0              |            | 1321.6 | K                  | INT.    | (32243)  |
| 17   |                  | 430             | 87                | 30       | 50              |             |         |              |             | 5.0                 | +13.7             |            | 1340.3 |                    | 1931    | L-107XE = 1920 + 10'<br>M-45 = 272<br>L-45X = 89.5 + 276 |
| 18   |                  | 870             | 87                | 45       | 40              |             |         |              |             | 5.0                 | +29.0             |            | 1355.6 |                    | 1932    |  |
| 19   |                  | 1310            | 87                | 45       | 46              |             |         |              |             | 13.0                | +38.1             |            | 1364.7 | 0                  | 1933    |  |
| 20   |                  | ✓ 272           | 13                | 57       |                 |             |         |              |             | 13.0                |                   |            |        | 0                  |         |  |

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## STADIA SURVEY NOTES

AREA Howard Pass STATE or PROVINCE Alaska PAGE No. 20  
 LINE No.(s) 107XE PARTY No. 1173 DATE 30 Day 4 Mo. 78 Yr. BOOK No. \_\_\_\_\_  
 SURVEYOR F O'Brien RODMAN K Barr WEATHER: Clear P.T.S. No. \_\_\_\_\_

| LINE | Bearing of Sight | Stadia Distance | BEAMAN OR VERNIER |          |                 | ROD READING |         |             |             | Angular Elev. Diff. | Final Elev. Diff. | ELEVATIONS |     | Station | REMARKS |
|------|------------------|-----------------|-------------------|----------|-----------------|-------------|---------|-------------|-------------|---------------------|-------------------|------------|-----|---------|---------|
|      |                  |                 | Level             | Inclined | Angle or Factor | Hair Read   | Reading | Correc-tion | Center Hair |                     |                   | INST.      | ROD |         |         |
| 1    |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |         |         |
| 2    |                  | 1760            | 89                | 42       | 10              |             |         |             | 15.0        | +5.9                | 1370.7            |            | Δ   | 1933    |         |
| 3    |                  | ✓               | 270               | 17       | 36              |             |         |             | 15.0        |                     |                   |            | Δ   |         |         |
| 4    |                  | 1320            | ✓                 |          |                 |             |         |             | 4.1         | -4.1                | 1366.6            |            |     | 1934    |         |
| 5    |                  | 880             | ✓                 |          |                 |             |         |             | 4.7         | -4.7                | 1366.0            |            |     | 1935    |         |
| 6    |                  | 440             | ✓                 |          |                 |             |         |             | 5.9         | -5.9                | 1364.8            |            |     | 1936    |         |
| 7    |                  | 0               | ✓                 |          |                 |             |         |             | 5.0         | -5.0                | 1365.7            |            | X   | 1937    |         |
| 8    |                  | 440             | ✓                 |          |                 |             |         |             | 3.4         | -3.4                | 1367.3            |            |     | 1938    |         |
| 9    |                  | 880             | 88                | 57       | 14              |             |         |             | 5.0         | +11.1               | 1381.8            |            |     | 1939    |         |
| 10   |                  | 1320            | 88                | 33       | 52              |             |         |             | 5.0         | +28.1               | 1398.8            |            |     | 1940    |         |
| 11   |                  | 1760            | 88                | 29       | 42              |             |         |             | 5.0         | +41.3               | 1412.0            |            |     | 1941    |         |
| 12   |                  | 2200            | 88                | 23       | 52              |             |         |             | 15.0        | +46.5               | 1417.2            |            | 0   | 1942    |         |
| 13   |                  | ✓               | 271               | 35       | 54              |             |         |             | 15.0        |                     |                   |            | 0   |         |         |
| 14   |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |         |         |
| 15   |                  | 3080            | 90                | 41       | 29              |             |         |             | 15.0        | +52.1               | 1469.4            |            | Δ   |         |         |
| 16   |                  | ✓               | 269               | 18       | 07              |             |         |             | 15.0        |                     |                   |            | Δ   |         |         |
| 17   |                  | 2640            | 90                | 45       | 10              |             |         |             | 15.0        | -49.5               | 1419.9            |            |     | 1943    |         |
| 18   |                  | 2200            | 90                | 47       | 13              |             |         |             | 15.0        | -45.1               | 1424.3            |            |     | 1944    |         |
| 19   |                  | 1760            | 90                | 50       | 47              |             |         |             | 15.0        | -40.9               | 1428.5            |            |     | 1945    |         |
| 20   |                  | 1320            | 90                | 57       | 54              |             |         |             | 15.0        | -37.2               | 1432.2            |            |     | 1946    |         |

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**STADIA SURVEY NOTES**

AREA Howard Pass STATE or PROVINCE Alaska PAGE No. 21  
 LINE No.(s) 107E PARTY No. 1173 DATE 1 Day 5 Mo. 78 Yr. BOOK No. \_\_\_\_\_  
 SURVEYOR F O Brien RODMAN K Barr WEATHER: Fog P.T.S. No. \_\_\_\_\_

| LINE | Bearing of Sight | Stadia Distance | BEAMAN OR VERNIER |          |                 | ROD READING |         |             |             | Angular Elev. Diff. | Final Elev. Diff. | ELEVATIONS |        | A.B.S. OF S. - S.S. | Station | REMARKS |
|------|------------------|-----------------|-------------------|----------|-----------------|-------------|---------|-------------|-------------|---------------------|-------------------|------------|--------|---------------------|---------|---------|
|      |                  |                 | Level             | Inclined | Angle or Factor | Hair Read   | Reading | Correc-tion | Center Hair |                     |                   | INST.      | ROD    |                     |         |         |
| 1    |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |        |                     |         |         |
| 2    |                  | 880             | 91                | 02       | 33              |             |         |             | 15.0        |                     | -31.0             |            | 1438.4 |                     | 1947    |         |
| 3    |                  | 440             | 90                | 21       | 58              |             |         |             | 15.0        |                     | -17.8             |            | 1451.6 |                     | 1948    |         |
| 4    |                  | 0               | ✓                 |          |                 |             |         |             | 5.0         |                     | -5.0              |            | 1464.4 | X                   | 1949    |         |
| 5    |                  | 440             | 89                | 05       | 55              |             |         |             | 5.0         |                     | +1.9              |            | 1471.3 |                     | 1950    |         |
| 6    |                  | 880             | 89                | 21       | 58              |             |         |             | 5.0         |                     | +4.8              |            | 1474.2 |                     | 1951    |         |
| 7    |                  | 1320            | 89                | 10       | 49              |             |         |             | 15.0        |                     | +3.8              | +          | 1473.2 | 0                   | 1952    |         |
| 8    |                  | ✓               | 270               | 48       | 36              |             |         |             | 15.0        |                     |                   |            |        | 0                   |         |         |
| 9    |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |        |                     |         |         |
| 10   |                  | 2640            | 89                | 26       | 59              |             |         |             | 15.0        |                     | -10.4             | 1462.8     |        | Δ                   |         |         |
| 11   |                  | ✓               | 270               | 32       | 41              |             |         |             | 15.0        |                     |                   |            |        | Δ                   |         |         |
| 12   |                  | 2200            | 89                | 46       | 42              |             |         |             | 5.0         |                     | +3.6              |            | 1466.4 |                     | 1953    |         |
| 13   |                  | 1760            | ✓                 |          |                 |             |         |             | 6.4         |                     | -6.3              |            | 1456.5 |                     | 1954    |         |
| 14   |                  | 1320            | 90                | 00       | 49              |             |         |             | 15.0        |                     | -15.3             |            | 1447.5 |                     | 1955    |         |
| 15   |                  | 880             | 90                | 06       | 31              |             |         |             | 15.0        |                     | -16.7             |            | 1446.1 |                     | 1956    |         |
| 16   |                  | 440             | 89                | 47       | 03              |             |         |             | 15.0        |                     | -13.3             |            | 1449.5 |                     | 1957    |         |
| 17   |                  | 0               | ✓                 |          |                 |             |         |             | 5.0         |                     | -5.0              |            | 1457.8 | X                   | 1958    |         |
| 18   |                  | 440             | 88                | 46       | 38              |             |         |             | 5.0         |                     | +4.4              |            | 1467.2 |                     | 1959    |         |
| 19   |                  | 880             | 88                | 12       | 54              |             |         |             | 5.0         |                     | +22.4             |            | 1485.2 |                     | 1960    |         |
| 20   |                  | 1320            | 87                | 58       | 31              |             |         |             | 5.0         |                     | +41.7             |            | 1504.5 |                     | 1961    |         |

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## STADIA SURVEY NOTES

AREA Howard Pass STATE or PROVINCE Alaska PAGE No. 22  
 LINE No.(s) 107XE PARTY No. 1173 DATE 1 Day 5 Mo. 78 Yr. BOOK No. -  
 SURVEYOR F O'Brien RODMAN K Barr WEATHER: Fog P.T.S. No. -

| LINE | Bearing of Sight | Stadia Distance | BEAMAN OR VERNIER |          |                 | ROD READING |         |             |             | Angular Elev. Diff. | Final Elev. Diff. | ELEVATIONS |     | ▲B.S. OF.S. - S.S. | Station | REMARKS |
|------|------------------|-----------------|-------------------|----------|-----------------|-------------|---------|-------------|-------------|---------------------|-------------------|------------|-----|--------------------|---------|---------|
|      |                  |                 | Level             | Inclined | Angle or Factor | Hair Read   | Reading | Correc-tion | Center Hair |                     |                   | INST.      | ROD |                    |         |         |
| 1    |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |                    |         |         |
| 2    |                  | 1760            | 87                | 58       | 51              |             |         |             |             | +57.0               |                   | 1519.8     | 0   | 1962               |         |         |
| 3    |                  | ✓ 272           | 00                | 56       |                 |             |         |             |             |                     |                   |            | 0   |                    |         |         |
| 4    |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |                    |         |         |
| 5    |                  | 3520            | 91                | 40       | 58              |             |         |             |             | +118.2              | 1638.1            |            | Δ   |                    |         |         |
| 6    |                  | ✓ 268           | 18                | 50       |                 |             |         |             |             |                     |                   |            | Δ   |                    |         |         |
| 7    |                  | 3080            | 91                | 40       | 32              |             |         |             |             | -104.9              |                   | 1533.2     |     | 1963               |         |         |
| 8    |                  | 2646            | 91                | 43       | 11              |             |         |             |             | -94.1               |                   | 1544.0     |     | 1964               |         |         |
| 9    |                  | 2200            | 91                | 47       | 49              |             |         |             |             | -83.9               |                   | 1554.2     |     | 1965               |         |         |
| 10   |                  | 1760            | 91                | 45       | 51              |             |         |             |             | -69.1               |                   | 1569.0     |     | 1966               |         |         |
| 11   |                  | 1320            | 91                | 41       | 21              |             |         |             |             | -53.9               |                   | 1584.2     |     | 1967               |         |         |
| 12   |                  | 880             | 91                | 32       | 34              |             |         |             |             | -38.7               |                   | 1599.4     |     | 1968               |         |         |
| 13   |                  | 440             | 90                | 55       | 15              |             |         |             |             | -22.1               |                   | 1616.0     |     | 1969               |         |         |
| 14   |                  | 0               | ✓                 |          |                 |             |         |             |             | -5.0                |                   | 1633.1     | π   | 1970               |         |         |
| 15   |                  | 440             | 88                | 49       | 26              |             |         |             |             | +4.0                |                   | 1642.1     |     | 1971               |         |         |
| 16   |                  | 880             | 89                | 01       | 24              |             |         |             |             | +10.0               |                   | 1648.1     |     | 1972               |         |         |
| 17   |                  | 1320            | 88                | 53       | 47              |             |         |             |             | +20.5               |                   | 1658.6     |     | 1973               |         |         |
| 18   |                  | 1760            | 88                | 50       | 54              |             |         |             |             | +30.4               |                   | 1668.5     |     | 1974               |         |         |
| 19   |                  | 2200            | 88                | 39       | 67              |             |         |             |             | +36.8               |                   | 1674.9     | 0   | 1975               |         |         |
| 20   |                  | ✓ 271           | 20                | 36       |                 |             |         |             |             |                     |                   |            | 0   |                    |         |         |

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## STADIA SURVEY NOTES

AREA Howard Pass STATE or PROVINCE Alaska PAGE No. 23  
 LINE No.(s) 107XF PARTY No. 1173 DATE 1 Day 5 Mo. 78 Yr. BOOK No. \_\_\_\_\_  
 SURVEYOR F O'Brien RODMAN K Barr WEATHER: Fog P.T.S. No. \_\_\_\_\_

| LINE | Bearing of Sight | Stadia Distance | BEAMAN OR VERNIER |          |                 | ROD READING |         |             |             | Angular Elev. Diff. | Final Elev. Diff. | ELEVATIONS |     | Station | REMARKS |
|------|------------------|-----------------|-------------------|----------|-----------------|-------------|---------|-------------|-------------|---------------------|-------------------|------------|-----|---------|---------|
|      |                  |                 | Level             | Inclined | Angle or Factor | Hair Read   | Reading | Correc-tion | Center Hair |                     |                   | INST.      | ROD |         |         |
| 1    |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |         |         |
| 2    |                  | 1320            | 88                | 55       | 12              |             |         |             | 10.0        | -14.9               | 1660.0            |            | Δ   | 1975    |         |
| 3    |                  | ✓               | 271               | 04       | 37              |             |         |             | 10.0        |                     |                   |            | Δ   |         |         |
| 4    |                  | 880             | 89                | 00       | 38              |             |         |             | 5.0         | +10.2               | 1670.2            |            |     | 1976    |         |
| 5    |                  | 440             | 89                | 10       | 08              |             |         |             | 5.0         | +1.4                | 1661.4            |            |     | 1977    |         |
| 6    |                  | 100             | ✓                 |          |                 |             |         |             | 5.0         | -5.0                | 1655.0            |            | κ   | 1978    |         |
| 7    |                  | 440             | ✓                 |          |                 |             |         |             | 11.4        | -11.4               | 1648.6            |            |     | 1979    |         |
| 8    |                  | 880             | 90                | 26       | 22              |             |         |             | 15.0        | -21.7               | 1638.3            |            |     | 1980    |         |
| 9    |                  | 1320            | 90                | 22       | 32              |             |         |             | 15.0        | -23.6               | 1636.4            |            |     | 1981    |         |
| 10   |                  | 1760            | 90                | 21       | 45              |             |         |             | 10.0        | -21.1               | 1638.9            |            | ⊙   | 1982    |         |
| 11   |                  | ✓               | 269               | 38       | 13              |             |         |             | 10.0        |                     |                   |            | 0   |         |         |
| 12   |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |         |         |
| 13   |                  | 1760            | 89                | 23       | 08              |             |         |             | 10.0        | -8.9                | 1630.1            |            | Δ   |         |         |
| 14   |                  | ✓               | 270               | 36       | 57              |             |         |             | 10.0        |                     |                   |            | Δ   |         |         |
| 15   |                  | 1320            | 89                | 21       | 28              |             |         |             | 15.0        | -0.2                | 1629.9            |            |     | 1983    |         |
| 16   |                  | 880             | 89                | 51       | 29              |             |         |             | 5.0         | -2.8                | 1627.3            |            |     | 1984    |         |
| 17   |                  | 440             | 89                | 58       | 13              |             |         |             | 5.0         | -4.8                | 1625.3            |            |     | 1985    |         |
| 18   |                  | 0               | ✓                 |          |                 |             |         |             | 5.0         | -5.0                | 1625.1            |            | κ   | 1986    |         |
| 19   |                  | 440             | ✓                 |          |                 |             |         |             | 10.7        | -10.7               | 1619.4            |            |     | 1987    |         |
| 20   |                  | 880             | ✓                 |          |                 |             |         |             | 10.9        | -10.9               | 1619.2            |            |     | 1988    |         |

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### STADIA SURVEY NOTES

AREA Howard Pass STATE or PROVINCE Alaska PAGE No. 24  
 LINE No.(s) 107XE PARTY No. 1173 DATE 1 Day 5 Mo. 78 Yr. BOOK No. \_\_\_\_\_  
 SURVEYOR F O'Brien RODMAN K Barr WEATHER: Fog P.T.S. No. \_\_\_\_\_

| LINE | Bearing of Sight | Stadia Distance | BEAMAN OR VERNIER |          |                 | ROD READING |         |             |             | Angular Elev. Diff. | Final Elev. Diff. | ELEVATIONS |        | A.B.S. OF S. - S.S. | Station  | REMARKS |
|------|------------------|-----------------|-------------------|----------|-----------------|-------------|---------|-------------|-------------|---------------------|-------------------|------------|--------|---------------------|----------|---------|
|      |                  |                 | Level             | Inclined | Angle or Factor | Hair Read   | Reading | Correc-tion | Center Hair |                     |                   | INST.      | ROD    |                     |          |         |
| 1    |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |        |                     |          |         |
| 2    |                  | 1320            | ✓                 |          |                 |             |         |             | 13.0        |                     | -13.0             |            | 1617.1 | 0                   | 1989     |         |
| 3    |                  | ✓               | ✓                 |          |                 |             |         |             | 13.0        |                     |                   |            |        | 0                   |          |         |
| 4    |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |        |                     |          |         |
| 5    |                  | 1320            | ✓                 |          |                 |             |         |             | 13.8        |                     | +13.8             | 1630.8     |        | Δ                   |          |         |
| 6    |                  | ✓               | ✓                 |          |                 |             |         |             | 13.7        |                     |                   |            |        | Δ                   |          |         |
| 7    |                  | 880             | ✓                 |          |                 |             |         |             | 11.8        |                     | -11.8             |            | 1619.0 |                     | 1990     |         |
| 8    |                  | 440             | ✓                 |          |                 |             |         |             | 4.3         |                     | -4.3              |            | 1626.5 |                     | 1991     |         |
| 9    |                  | 0               | ✓                 |          |                 |             |         |             | 5.0         |                     | -5.0              |            | 1625.8 | K                   | 1992     |         |
| 10   |                  | 440             | ✓                 |          |                 |             |         |             | 1.8         |                     | -1.8              |            | 1629.0 |                     | 1993     |         |
| 11   |                  | 880             | 88                | 45       | 23              |             |         |             | 10.0        |                     | +9.1              |            | 1639.9 |                     | 1994     |         |
| 12   |                  | 1320            | 88                | 22       | 36              |             |         |             | 9.0         |                     | +28.5             |            | 1659.3 | 0                   | 1995     |         |
| 13   |                  | ✓               | 271               | 37       | 41              |             |         |             | 9.0         |                     |                   |            |        | 0                   |          |         |
| 14   |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |        |                     |          |         |
| 15   |                  | 1100            | 91                | 44       | 25              |             |         |             | 15.0        |                     | +48.4             | 1707.7     |        | Δ                   |          |         |
| 16   |                  | ✓               | 268               | 15       | 30              |             |         |             | 15.0        |                     |                   |            |        | Δ                   |          |         |
| 17   |                  | 660             | 91                | 14       | 32              |             |         |             | 15.0        |                     | -29.3             |            | 1678.4 |                     | 1996     |         |
| 18   |                  | 220             | ✓                 |          |                 |             |         |             | 10.1        |                     | -10.1             |            | 1697.6 |                     | 1997     |         |
| 19   |                  | 0               | ✓                 |          |                 |             |         |             | 5.0         |                     | -5.0              |            | 1702.7 | K                   | 1997+220 |         |
| 20   |                  | 220             | ✓                 |          |                 |             |         |             | 3.7         |                     | -3.7              |            | 1704.0 |                     | 1998     |         |

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## STADIA SURVEY NOTES

AREA Howard Pass STATE or PROVINCE Alaska PAGE No. 25  
 LINE No.(s) 107XE PARTY No. 1173 DATE 1 Day 5 Mo. 78 Yr. BOOK No. \_\_\_\_\_  
 SURVEYOR F O'Brien RODMAN K Barr WEATHER: Fog P.T.S. No. \_\_\_\_\_

| LINE | Bearing of Sight | Stadia Distance | BEAMAN OR VERNIER |          |                 | ROD READING |         |             |             | Angular Elev. Diff. | Final Elev. Diff. | ELEVATIONS |     | Station | REMARKS                                   |
|------|------------------|-----------------|-------------------|----------|-----------------|-------------|---------|-------------|-------------|---------------------|-------------------|------------|-----|---------|---|
|      |                  |                 | Level             | Inclined | Angle or Factor | Hair Read   | Reading | Correc-tion | Center Hair |                     |                   | INST.      | ROD |         |   |
| 1    |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |         |   |
| 2    |                  | 660             | ✓                 |          |                 |             |         | 12.9        |             | -12.8               |                   | 1694.9     | ○   | 1999    |   |
| 3    |                  | ✓               | ✓                 |          |                 |             |         | 12.8        |             |                     |                   |            | ○   |         |   |
| 4    |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |         |   |
| 5    |                  | 936             | 87                | 37       | 36              |             |         | 10.0        |             | -28.8               | 1666.2            |            | Δ   |         | 1671.2                                    |
| 6    |                  | ✓               | 272               | 22       | 42              |             |         | 10.0        |             |                     |                   |            | Δ   |         |   |
| 7    |                  | 496             | 87                | 33       | 35              |             |         | 5.0         |             | +16.1               |                   | 1682.3     |     | 2000    |   |
| 8    |                  | 56              | ✓                 |          |                 |             |         | 2.2         |             | -2.2                |                   | 1664.0     |     | 2001    |   |
| 9    |                  | 0               | ✓                 |          |                 |             |         | 5.0         |             | -5.0                |                   | 1661.2     | π   | INT     | $107XE = 2001 + 56$<br>$LR2A = 263 + 267$ |
| 10   |                  | 178             | ✓                 |          |                 |             |         | 8.6         |             | -8.6                |                   | 1657.6     |     | 264     | LR2A (1658-65)                            |
| 11   |                  | 384             | 92                | 33       | 56              |             |         | 15.0        |             | -32.2               |                   | 1634.0     |     | 2002    |   |
| 12   |                  | 824             | 93                | 43       | 23              |             |         | 15.0        |             | -68.5               |                   | 1597.7     |     | 2003    |   |
| 13   |                  | 1264            | 93                | 33       | 40              |             |         | 15.0        |             | -93.5               |                   | 1572.7     |     | 2004    |   |
| 14   |                  | 1704            | 93                | 06       | 09              |             |         | 16.0        |             | -107.1              |                   | 1559.1     | ○   | 2005    |   |
| 15   |                  | ✓               | 266               | 54       | 16              |             |         | 15.0        |             |                     |                   |            | ○   |         |   |
| 16   |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |         |   |
| 17   |                  | 2200            | 89                | 46       | 23              |             |         | 5.0         |             | -3.5                | 1555.6            |            | Δ   |         |   |
| 18   |                  | ✓               | 270               | 12       | 40              |             |         | 5.0         |             |                     |                   |            | Δ   |         |   |
| 19   |                  | 1760            | ✓                 |          |                 |             |         | 1.6         |             | -1.6                |                   | 1554.0     |     | 2006    |   |
| 20   |                  | 1320            | ✓                 |          |                 |             |         | 4.2         |             | -4.2                |                   | 1551.4     |     | 2007    |   |

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## STADIA SURVEY NOTES

AREA Howard Pass STATE or PROVINCE Alaska PAGE No. 26  
 LINE No.(s) 107XE PARTY No. 1173 DATE 2 Day 5 Mo. 78 Yr. BOOK No. \_\_\_\_\_  
 SURVEYOR F O'Brien RODMAN K Barr WEATHER: Pty Cloudy P.T.S. No. \_\_\_\_\_

| LINE | Bearing of Sight | Stadia Distance | BEAMAN OR VERNIER |          |                 | ROD READING |         |             |             | Angular Elev. Diff. | Final Elev. Diff. | ELEVATIONS |     | ▲B.S. OF.S. - S.S. | Station | REMARKS |
|------|------------------|-----------------|-------------------|----------|-----------------|-------------|---------|-------------|-------------|---------------------|-------------------|------------|-----|--------------------|---------|---------|
|      |                  |                 | Level             | Inclined | Angle or Factor | Hair Read   | Reading | Correc-tion | Center Hair |                     |                   | INST.      | ROD |                    |         |         |
| 1    |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |                    |         |         |
| 2    |                  | 880             | ✓                 |          |                 |             |         |             | 5.6         |                     | -5.6              | 1550.0     |     |                    | 2008    |         |
| 3    |                  | 440             | ✓                 |          |                 |             |         |             | 10.9        |                     | -10.9             | 1544.7     |     |                    | 2009    |         |
| 4    |                  | 0               | ✓                 |          |                 |             |         |             | 5.0         |                     | -5.0              | 1550.6     | κ   |                    | 2010    |         |
| 5    |                  | 440             | ✓                 |          |                 |             |         |             | 4.5         |                     | -4.5              | 1551.1     |     |                    | 2011    |         |
| 6    |                  | 880             | 89                | 20       | 00              |             |         |             | 5.0         |                     | +5.3              | 1560.9     |     |                    | 2012    |         |
| 7    |                  | 1320            | 88                | 48       | 59              |             |         |             | 5.0         |                     | +22.3             | 1577.9     |     |                    | 2013    |         |
| 8    |                  | 1760            | 88                | 45       | 24              |             |         |             | 10.0        |                     | +28.1             | 1583.7     | 0   |                    | 2014    |         |
| 9    |                  | ✓               | 271               | 14       | 00              |             |         |             | 10.0        |                     |                   |            | 0   |                    |         |         |
| 10   |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |                    |         |         |
| 11   |                  | 3080            | 88                | 43       | 27              |             |         |             | 15.0        |                     | -53.4             | 1530.4     |     | Δ                  |         |         |
| 12   |                  | ✓               | 271               | 15       | 45              |             |         |             | 15.0        |                     |                   |            |     | Δ                  |         |         |
| 13   |                  | 2640            | 88                | 52       | 04              |             |         |             | 5.0         |                     | +47.3             | 1577.7     |     |                    | 2015    |         |
| 14   |                  | 2200            | 89                | 01       | 41              |             |         |             | 5.0         |                     | +32.4             | 1562.8     |     |                    | 2016    |         |
| 15   |                  | 1760            | 89                | 14       | 37              |             |         |             | 5.0         |                     | +18.3             | 1548.7     |     |                    | 2017    |         |
| 16   |                  | 1320            | 89                | 29       | 49              |             |         |             | 5.0         |                     | +6.6              | 1537.0     |     |                    | 2018    |         |
| 17   |                  | 880             | 89                | 44       | 18              |             |         |             | 5.0         |                     | -7.0              | 1529.4     |     |                    | 2019    |         |
| 18   |                  | 440             | ✓                 |          |                 |             |         |             | 2.9         |                     | -7.9              | 1522.5     |     |                    | 2020    |         |
| 19   |                  | 0               | ✓                 |          |                 |             |         |             | 5.0         |                     | -5.0              | 1525.4     | κ   |                    | 2021    |         |
| 20   |                  | 440             | ✓                 |          |                 |             |         |             | 7.1         |                     | -7.1              | 1523.3     |     |                    | 2022    |         |

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### STADIA SURVEY NOTES

AREA Howard Pass STATE or PROVINCE Alaska PAGE No. 27  
 LINE No.(s) 107XE PARTY No. 1173 DATE 2 Day 5 Mo. 78 Yr. BOOK No. \_\_\_\_\_  
 SURVEYOR F O'Brien RODMAN K Barr WEATHER: cloudy P.T.S. No. \_\_\_\_\_

| LINE | Bearing of Sight | Stadia Distance | BEAMAN OR VERNIER |          |                 | ROD READING |         |             |             | Angular Elev. Diff. | Final Elev. Diff. | ELEVATIONS |     | AB.S. OF S. - S.S. | Station | REMARKS                       |
|------|------------------|-----------------|-------------------|----------|-----------------|-------------|---------|-------------|-------------|---------------------|-------------------|------------|-----|--------------------|---------|-------------------------------|
|      |                  |                 | Level             | Inclined | Angle or Factor | Hair Read   | Reading | Correc-tion | Center Hair |                     |                   | INST.      | ROD |                    |         |                               |
| 1    |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |                    |         |                               |
| 2    |                  | 880             | ✓                 |          |                 |             |         |             | 6.8         |                     | -6.8              | 1523.6     |     | 2023               |         |                               |
| 3    |                  | 1320            | ✓                 |          |                 |             |         |             | 2.9         |                     | -2.9              | 1527.5     |     | 2024               |         |                               |
| 4    |                  | 1760            | 89                | 49       | 14              |             |         |             | 5.0         |                     | +0.6              | 1531.0     |     | 2025               |         |                               |
| 5    |                  | 2200            | 89                | 47       | 51              |             |         |             | 5.0         |                     | +6.7              | 1537.1     |     | 2026               |         |                               |
| 6    |                  | 2640            | 89                | 28       | 02              |             |         |             | 5.0         |                     | +19.7             | 1550.1     |     | 2027               |         |                               |
| 7    |                  | 3080            | 89                | 06       | 34              |             |         |             | 10.0        |                     | +37.7             | 1568.1     | 0   | 2028               |         |                               |
| 8    |                  | ✓               | 270               | 52       | 40              |             |         |             | 10.0        |                     |                   |            | 0   |                    |         |                               |
| 9    |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |                    |         |                               |
| 10   |                  | 440             | ✓                 |          |                 |             |         |             | 13.6        |                     | +13.6             | 1581.7     |     |                    |         | 1581.7                        |
| 11   |                  | ✓               | ✓                 |          |                 |             |         |             | 13.7        |                     |                   |            |     |                    |         |                               |
| 12   |                  | 614             | 90                | 45       | 17              |             |         |             | 15.0        |                     | -23.1             | 1558.6     |     | INT                |         | 107XE=2027+266<br>L-R=488+370 |
| 13   |                  | 640             | 90                | 49       | 42              |             |         |             | 15.0        |                     | -24.2             | 1557.5     |     | 499                | 1-R2    | (1553.5)                      |
| 14   |                  | 0               | ✓                 |          |                 |             |         |             | 5.0         |                     | 5.0               | 1576.7     | K   | 2029               |         |                               |
| 15   |                  | 440             | ✓                 |          |                 |             |         |             | 6.8         |                     | -6.8              | 1574.9     |     | 2030               |         |                               |
| 16   |                  | 880             | ✓                 |          |                 |             |         |             | 10.7        |                     | -10.7             | 1571.0     |     | 2031               |         |                               |
| 17   |                  | 1320            | 90                | 16       | 21              |             |         |             | 15.0        |                     | -21.4             | 1560.3     | 0   | 2032               |         |                               |
| 18   |                  | ✓               | 269               | 43       | 04              |             |         |             | 15.0        |                     |                   |            | 0   |                    |         |                               |
| 19   |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |                    |         |                               |
| 20   |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |                    |         |                               |

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## STADIA SURVEY NOTES

AREA Howard Pass STATE or PROVINCE Alaska PAGE No. 28  
 LINE No.(s) 107XF PARTY No. 1173 DATE 2 Day 5 Mo. 78 Yr. BOOK No. \_\_\_\_\_  
 SURVEYOR F O Brien RODMAN K Barr WEATHER: Cloudy P.T.S. No. \_\_\_\_\_

| LINE | Bearing of Sight | Stadia Distance | BEAMAN OR VERNIER |          |                 | ROD READING |         |             |             | Angular Elev. Diff. | Final Elev. Diff. | ELEVATIONS |     | A.B.S. OF S. - S.S. | Station  | REMARKS |
|------|------------------|-----------------|-------------------|----------|-----------------|-------------|---------|-------------|-------------|---------------------|-------------------|------------|-----|---------------------|----------|---------|
|      |                  |                 | Level             | Inclined | Angle or Factor | Hair Read   | Reading | Correc-tion | Center Hair |                     |                   | INST.      | ROD |                     |          |         |
| 1    |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |                     |          |         |
| 2    |                  | 1320            | 87                | 59       | 41              |             |         |             | 5.0         | -41.1               | 1519.2            |            | Δ   | 2037                |          |         |
| 3    |                  | ✓               | 271               | 53       | 47              |             |         |             | 5.0         |                     |                   |            | Δ   |                     |          |         |
| 4    |                  | 880             | 88                | 47       | 36              |             |         |             | 5.0         | +13.5               |                   | 1532.7     |     | 2038                |          |         |
| 5    |                  | 440             | 89                | 08       | 00              |             |         |             | 5.0         | +1.7                |                   | 1520.9     |     | 2034                |          |         |
| 6    |                  | 0               | ✓                 |          |                 |             |         |             | 5.0         | -5.0                |                   | 1514.2     | π   | 2035                |          |         |
| 7    |                  | 805             | 87                | 29       | 31              |             |         |             | 5.0         | +30.2               |                   | 1549.4     | 0   | TBM 782.71          | 1549.4   |         |
| 8    |                  | ✓               | 272               | 29       | 57              |             |         |             | 5.0         |                     |                   |            | 0   |                     |          |         |
| 9    |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |                     |          |         |
| 10   |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |                     |          |         |
| 11   |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |                     |          |         |
| 12   |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |                     |          |         |
| 13   |                  | 805             | 87                | 29       | 31              |             |         |             | 5.0         | -30.2               | 1519.5            |            | Δ   | TBM 782.71          | (1549.4) |         |
| 14   |                  | ✓               | 272               | 29       | 57              |             |         |             | 5.0         |                     |                   |            | Δ   |                     |          |         |
| 15   |                  | 0               | ✓                 |          |                 |             |         |             | 5.0         | -5.0                |                   | 1514.5     | π   | 2035                |          |         |
| 16   |                  | 440             | 91                | 04       | 27              |             |         |             | 15.0        | -23.2               |                   | 1496.3     |     | 2036                |          |         |
| 17   |                  | 880             | 91                | 49       | 50              |             |         |             | 15.0        | -43.1               |                   | 1476.4     |     | 2037                |          |         |
| 18   |                  | 1320            | 91                | 58       | 05              |             |         |             | 15.0        | -60.3               |                   | 1459.2     |     | 2038                |          |         |
| 19   |                  | 1760            | 92                | 07       | 40              |             |         |             | 15.0        | -80.3               |                   | 1439.2     |     | 2039                |          |         |
| 20   |                  | 2200            | 92                | 08       | 45              |             |         |             | 15.0        | -97.3               |                   | 1422.2     |     | 2040                |          |         |

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## STADIA SURVEY NOTES

AREA Howard Pass STATE or PROVINCE Alaska PAGE No. 29  
 LINE No.(s) 107XE PARTY No. 1173 DATE 2 Day 5 Mo. 78 Yr. BOOK No. \_\_\_\_\_  
 SURVEYOR F O Roien RODMAN K Barr WEATHER: Cloudy P.T.S. No. \_\_\_\_\_

| LINE | Bearing of Sight | Stadia Distance | BEAMAN OR VERNIER |          |                 | ROD READING |         |             |             | Angular Elev. Diff. | Final Elev. Diff. | ELEVATIONS |        | ▲B.S. OF.S. -S.S. | Station | REMARKS |
|------|------------------|-----------------|-------------------|----------|-----------------|-------------|---------|-------------|-------------|---------------------|-------------------|------------|--------|-------------------|---------|---------|
|      |                  |                 | Level             | Inclined | Angle or Factor | Hair Read   | Reading | Correc-tion | Center Hair |                     |                   | INST.      | ROD    |                   |         |         |
| 1    |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |        |                   |         |         |
| 2    |                  | 2640            | 92                | 15       | 10              |             |         |             | 15.0        |                     | -718.6            |            | 1400.9 |                   | 2041    |         |
| 3    |                  | 3080            | 91                | 42       | 58              |             |         |             | 15.0        |                     | -107.4            |            | 1412.1 | 0                 | 2042    |         |
| 4    |                  | ✓               | 268               | 16       | 18              |             |         |             | 15.0        |                     |                   |            |        | 0                 |         |         |
| 5    |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |        |                   |         |         |
| 6    |                  | 3080            | 89                | 57       | 45              |             |         |             | 15.0        |                     | +13.0             | 1425.4     |        | Δ                 |         |         |
| 7    |                  | ✓               | 270               | 01       | 45              |             |         |             | 15.0        |                     |                   |            |        | Δ                 |         |         |
| 8    |                  | 2640            | ✓                 |          |                 |             |         |             | 10.0        |                     | -9.9              |            | 1415.5 |                   | 2048    |         |
| 9    |                  | 2200            | ✓                 |          |                 |             |         |             | 11.9        |                     | -11.8             |            | 1413.6 |                   | 2044    |         |
| 10   |                  | 1760            | ✓                 |          |                 |             |         |             | 14.6        |                     | -14.5             |            | 1410.9 |                   | 2045    |         |
| 11   |                  | 1320            | ✓                 |          |                 |             |         |             | 12.4        |                     | -12.4             |            | 1413.6 |                   | 2046    |         |
| 12   |                  | 880             | 90                | 16       | 10              |             |         |             | 15.0        |                     | -19.1             |            | 1406.3 |                   | 2047    |         |
| 13   |                  | 440             | ✓                 |          |                 |             |         |             | 14.7        |                     | -14.7             |            | 1410.7 |                   | 2048    |         |
| 14   |                  | 0               | ✓                 |          |                 |             |         |             | 5.0         |                     | -5.0              |            | 1420.4 | π                 | 2049    |         |
| 15   |                  | 440             | 88                | 58       | 10              |             |         |             | 5.0         |                     | +2.9              |            | 1428.3 |                   | 2050    |         |
| 16   |                  | 880             | 88                | 59       | 55              |             |         |             | 5.0         |                     | +10.4             |            | 1435.8 |                   | 2051    |         |
| 17   |                  | 1320            | 88                | 54       | 04              |             |         |             | 5.0         |                     | +20.4             |            | 1445.8 |                   | 2052    |         |
| 18   |                  | 1760            | 88                | 58       | 37              |             |         |             | 5.0         |                     | +26.5             |            | 1451.9 |                   | 2053    |         |
| 19   |                  | 2200            | 89                | 01       | 23              |             |         |             | 5.0         |                     | +32.6             |            | 1458.0 |                   | 2054    |         |
| 20   |                  | 2640            | 89                | 02       | 53              |             |         |             | 5.0         |                     | +39.0             |            | 1464.4 |                   | 2055    |         |

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## STADIA SURVEY NOTES

AREA Howard Pass STATE or PROVINCE Alaska PAGE No. 30  
 LINE No.(s) 107XE PARTY No. 1173 DATE 2 Day 5 Mo. 78 Yr. BOOK No. \_\_\_\_\_  
 SURVEYOR F O'Brien RODMAN K Barr WEATHER: cloudy P.T.S. No. \_\_\_\_\_

| LINE | Bearing of Sight | Stadia Distance | SEAMAN OR VERNIER |          |                 | ROD READING |         |             |             | Angular Elev. Diff. | Final Elev. Diff. | ELEVATIONS |     | ▲B.S.<br>○F.S.<br>-S.S. | Station | REMARKS |
|------|------------------|-----------------|-------------------|----------|-----------------|-------------|---------|-------------|-------------|---------------------|-------------------|------------|-----|-------------------------|---------|---------|
|      |                  |                 | Level             | Inclined | Angle or Factor | Hair Read   | Reading | Correc-tion | Center Hair |                     |                   | INST.      | ROD |                         |         |         |
| 1    |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |                         |         |         |
| 2    |                  | 3080            | 88                | 57       | 19              |             |         |             | 15.0        | +41.1               |                   | 1466.5     | 0   | 2056                    |         |         |
| 3    |                  | ✓               | 271               | 02       | 11              |             |         |             | 15.0        |                     |                   |            | 0   |                         |         |         |
| 4    |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |                         |         |         |
| 5    |                  | 2200            | 91                | 44       | 52              |             |         |             | 15.0        | +82.2               | 1545.0            |            | Δ   |                         |         |         |
| 6    |                  | ✓               | 268               | 14       | 34              |             |         |             | 15.0        |                     |                   |            | Δ   |                         |         |         |
| 7    |                  | 1760            | 92                | 06       | 27              |             |         |             | 15.0        | -79.7               |                   | 1469.3     |     | 2057                    |         |         |
| 8    |                  | 1320            | 92                | 33       | 09              |             |         |             | 15.0        | -73.8               |                   | 1475.2     |     | 2058                    |         |         |
| 9    |                  | 880             | 92                | 56       | 26              |             |         |             | 15.0        | -60.1               |                   | 1488.9     |     | 2059                    |         |         |
| 10   |                  | 440             | 93                | 15       | 27              |             |         |             | 15.0        | -40.0               |                   | 1509.0     |     | 2060                    |         |         |
| 11   |                  | 0               | ✓                 |          |                 |             |         |             | 5.0         | -5.0                |                   | 1544.0     | π   | 2061                    |         |         |
| 12   |                  | 440             | 90                | 20       | 00              |             |         |             | 15.0        | -17.6               |                   | 1531.4     |     | 2062                    |         |         |
| 13   |                  | 880             | 91                | 15       | 23              |             |         |             | 15.0        | -24.3               |                   | 1514.7     |     | 2063                    |         |         |
| 14   |                  | 1320            | 91                | 06       | 55              |             |         |             | 15.0        | -40.7               |                   | 1508.3     |     | 2064                    |         |         |
| 15   |                  | 1760            | 90                | 54       | 32              |             |         |             | 15.0        | -42.9               |                   | 1506.1     |     | 2065                    |         |         |
| 16   |                  | 2200            | 90                | 42       | 31              |             |         |             | 15.0        | -42.1               |                   | 1506.9     |     | 2066                    |         |         |
| 17   |                  | 2640            | 90                | 33       | 24              |             |         |             | 15.0        | -40.5               |                   | 1508.5     |     | 2067                    |         |         |
| 18   |                  | 3080            | 90                | 28       | 45              |             |         |             | 15.0        | -40.7               |                   | 1508.3     | 0   | 2068                    |         |         |
| 19   |                  | ✓               | 269               | 30       | 58              |             |         |             | 15.0        |                     |                   |            | 0   |                         |         |         |
| 20   |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |                         |         |         |

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## STADIA SURVEY NOTES

AREA Howard Pass STATE or PROVINCE Alaska PAGE No. 31  
 LINE No.(s) 107XE PARTY No. 1173 DATE 2 Day 5 Mo. 78 Yr. BOOK No.  
 SURVEYOR F O'Brien RODMAN K Barr WEATHER: Cloudy P.T.S. No.

| LINE | Bearing of Sight | Stadia Distance | BEAMAN OR VERNIER |          |                 | ROD READING |         |             |             | Angular Elev. Diff. | Final Elev. Diff. | ELEVATIONS |     | Station | REMARKS |
|------|------------------|-----------------|-------------------|----------|-----------------|-------------|---------|-------------|-------------|---------------------|-------------------|------------|-----|---------|---------|
|      |                  |                 | Level             | Inclined | Angle or Factor | Hair Read   | Reading | Correc-tion | Center Hair |                     |                   | INST.      | ROD |         |         |
| 1    |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |         |         |
| 2    |                  | 1760            | 91                | 43       | 48              |             |         |             | 15.0        |                     | +52.8             | 1561.1     |     | Δ       | 2068    |
| 3    |                  | ✓               | 268               | 45       | 58              |             |         |             | 15.0        |                     |                   |            |     | Δ       |         |
| 4    |                  | 1320            | 91                | 36       | 38              |             |         |             | 15.0        |                     | -52.1             | 1509.0     |     |         | 2069    |
| 5    |                  | 880             | 91                | 38       | 15              |             |         |             | 15.0        |                     | -40.1             | 1521.0     |     |         | 2070    |
| 6    |                  | 440             | 91                | 10       | 00              |             |         |             | 15.0        |                     | -24.0             | 1537.1     |     |         | 2071    |
| 7    |                  | 0               | ✓                 |          |                 |             |         |             | 5.0         |                     | -5.0              | 1556.1     |     | κ       | 2072    |
| 8    |                  | 440             | ✓                 |          |                 |             |         |             | 7.7         |                     | -7.7              | 1553.4     |     | 0       | 2073    |
| 9    |                  | ✓               | ✓                 |          |                 |             |         |             | 7.7         |                     |                   |            |     | 0       |         |
| 10   |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |         |         |
| 11   |                  | 3080            | 87                | 23       | 37              |             |         |             | 15.0        |                     | -125.1            | 1428.6     |     | Δ       |         |
| 12   |                  | ✓               | 272               | 36       | 06              |             |         |             | 15.0        |                     |                   |            |     | Δ       |         |
| 13   |                  | 2640            | 87                | 35       | 00              |             |         |             | 15.0        |                     | +98.0             | 1526.6     |     |         | 2074    |
| 14   |                  | 2200            | 87                | 48       | 24              |             |         |             | 15.0        |                     | +72.5             | 1501.1     |     |         | 2075    |
| 15   |                  | 1760            | 87                | 51       | 31              |             |         |             | 15.0        |                     | +50.8             | 1479.4     |     |         | 2076    |
| 16   |                  | 1320            | 88                | 19       | 00              |             |         |             | 5.0         |                     | +36.5             | 1465.1     |     |         | 2077    |
| 17   |                  | 880             | 88                | 29       | 33              |             |         |             | 5.0         |                     | +18.2             | 1446.8     |     |         | 2078    |
| 18   |                  | 440             | 89                | 05       | 14              |             |         |             | 5.0         |                     | +2.0              | 1430.6     |     |         | 2079    |
| 19   |                  | 0               | ✓                 |          |                 |             |         |             | 5.0         |                     | -5.0              | 1423.6     |     | κ       | 2080    |
| 20   |                  | 440             | ✓                 |          |                 |             |         |             | 11.7        |                     | -11.7             | 1416.9     |     |         | 2081    |

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## STADIA SURVEY NOTES

AREA Howard Pass STATE or PROVINCE Alaska PAGE No. 32  
 LINE No.(s) 107XE PARTY No. 1173 DATE 2 Day 5 Mo. 28 Yr. BOOK No. \_\_\_\_\_  
 SURVEYOR F. O'Brien RODMAN K. Barr WEATHER: Cloudy P.T.S. No. \_\_\_\_\_

| LINE | Bearing of Sight | Stadia Distance | BEAMAN OR VERNIER |          |                 | ROD READING |         |             |             | Angular Elev. Diff. | Final Elev. Diff. | ELEVATIONS |        | Station | REMARKS |
|------|------------------|-----------------|-------------------|----------|-----------------|-------------|---------|-------------|-------------|---------------------|-------------------|------------|--------|---------|---------|
|      |                  |                 | Level             | Inclined | Angle or Factor | Hair Read   | Reading | Correc-tion | Center Hair |                     |                   | INST.      | ROD    |         |         |
| 1    |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |        |         |         |
| 2    |                  | 880             | 90                | 15       | 15              |             |         |             | 15.0        |                     | -18.9             |            | 1409.7 |         | 2082    |
| 3    |                  | 1320            | 90                | 30       | 00              |             |         |             | 15.0        |                     | -26.5             |            | 1402.1 |         | 2083    |
| 4    |                  | 1760            | 90                | 43       | 34              |             |         |             | 15.0        |                     | -37.2             |            | 1391.4 |         | 2084    |
| 5    |                  | 2200            | 90                | 45       | 04              |             |         |             | 15.0        |                     | -43.7             |            | 1384.9 |         | 2085    |
| 6    |                  | 2640            | 90                | 49       | 40              |             |         |             | 15.0        |                     | -53.0             |            | 1375.6 |         | 2086    |
| 7    |                  | 3080            | 90                | 48       | 48              |             |         |             | 15.0        |                     | -58.6             |            | 1370.0 | 0       | 2087    |
| 8    |                  | ✓               | 269               | 11       | 02              |             |         |             | 15.0        |                     |                   |            |        | 0       |         |
| 9    |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |        |         |         |
| 10   |                  | 3080            | 89                | 40       | 14              |             |         |             | 5.0         |                     | -12.8             | 1357.5     |        | Δ       |         |
| 11   |                  | ✓               | 270               | 19       | 35              |             |         |             | 5.0         |                     |                   |            |        | Δ       |         |
| 12   |                  | 2640            | 89                | 42       | 22              |             |         |             | 5.0         |                     | +8.7              |            | 1366.2 |         | 2088    |
| 13   |                  | 2200            | 89                | 43       | 54              |             |         |             | 5.0         |                     | +5.4              |            | 1362.9 |         | 2089    |
| 14   |                  | 1760            | 89                | 46       | 48              |             |         |             | 15.0        |                     | +1.8              |            | 1359.3 |         | 2090    |
| 15   |                  | 1320            | 89                | 51       | 00              |             |         |             | 5.0         |                     | -1.5              |            | 1356.0 |         | 2091    |
| 16   |                  | 880             | ✓                 |          |                 |             |         |             | 2.8         |                     | -2.8              |            | 1354.7 |         | 2092    |
| 17   |                  | 440             | ✓                 |          |                 |             |         |             | 4.8         |                     | -4.8              |            | 1352.7 |         | 2093    |
| 18   |                  | 0               | ✓                 |          |                 |             |         |             | 5.0         |                     | -5.0              |            | 1352.5 | κ       | 2094    |
| 19   |                  | 440             | ✓                 |          |                 |             |         |             | 8.1         |                     | -8.1              |            | 1349.4 |         | 2095    |
| 20   |                  | 880             | ✓                 |          |                 |             |         |             | 12.5        |                     | -12.5             |            | 1345.0 |         | 2096    |

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**STADIA SURVEY NOTES**

AREA Howard Pass STATE or PROVINCE - Alaska PAGE No. 33  
 LINE No.(s) 107XF PARTY No. 1173 DATE 2 Day 5 Mo. 78 Yr. BOOK No. \_\_\_\_\_  
 SURVEYOR F O Brien RODMAN K Barr WEATHER: Cloudy P.T.S. No. \_\_\_\_\_

| LINE | Bearing of Sight | Stadia Distance | BEAMAN OR VERNIER |          |                 | ROD READING |         |             |             | Angular Elev. Diff. | Final Elev. Diff. | ELEVATIONS |        | Station | REMARKS                   |
|------|------------------|-----------------|-------------------|----------|-----------------|-------------|---------|-------------|-------------|---------------------|-------------------|------------|--------|---------|---------------------------|
|      |                  |                 | Level             | Inclined | Angle or Factor | Hair Read   | Reading | Correc-tion | Center Hair |                     |                   | INST.      | ROD    |         |                           |
| 1    |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |        |         |                           |
| 2    |                  | 1320            | 90                | 00       | 58              |             |         |             | 15.0        |                     | -15.3             |            | 1342.2 |         | 2097                      |
| 3    |                  | 1760            | 90                | 09       | 40              |             |         |             | 15.0        |                     | -19.9             |            | 1337.6 |         | 2098                      |
| 4    |                  | 2200            | 90                | 14       | 51              |             |         |             | 15.0        |                     | -24.4             |            | 1333.1 |         | 2099                      |
| 5    |                  | 2640            | 90                | 15       | 10              |             |         |             | 15.0        |                     | -26.6             |            | 1331.0 |         | 2100                      |
| 6    |                  | 3080            | 90                | 16       | 02              |             |         |             | 15.0        |                     | -29.3             |            | 1328.2 | 0       | 2101                      |
| 7    |                  | ✓ 269           | 43                | 44       |                 |             |         |             | 15.0        |                     |                   |            |        | 0       |                           |
| 8    |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |        |         |                           |
| 9    |                  | 2225            | 89                | 16       | 59              |             |         |             | 15.0        |                     | -13.2             | 3<br>13.0  |        | Δ       |                           |
| 10   |                  | ✓ 270           | 43                | 43       |                 |             |         |             | 15.0        |                     |                   |            |        | Δ       |                           |
| 11   |                  | 1785            | 89                | 28       | 40              |             |         |             | 5.0         |                     | +11.3             |            | 1326.3 |         | 2102                      |
| 12   |                  | 1345            | 89                | 25       | 14              |             |         |             | 5.0         |                     | +8.6              |            | 1323.6 |         | 2103                      |
| 13   |                  | 305             | 89                | 18       | 05              |             |         |             | 5.0         |                     | +6.1              |            | 1321.1 |         | 2104                      |
| 14   |                  | 465             | 89                | 25       | 43              |             |         |             | 5.0         |                     | -0.4              |            | 1314.6 |         | 2105                      |
| 15   |                  | 25              | ✓                 |          |                 |             |         |             | 5.0         |                     | -5.0              |            | 1310.0 |         | 2106                      |
| 16   |                  | 0               | ✓                 |          |                 |             |         |             | 5.0         |                     | -5.0              |            | 1310.0 | π       | 2106+25' = SP 107, L-107  |
| 17   |                  | 0               | ✓                 |          |                 |             |         |             | 5.0         |                     | -5.0              |            | 1310.0 | 0       | 2106+25'                  |
| 18   |                  | 0               | ✓                 |          |                 |             |         |             | 5.0         |                     |                   |            |        | 0       | = S.P. 101-L-107 = 1310.0 |
| 19   |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |        |         |                           |
| 20   |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |        |         | -1.4 MISTIE RAW           |

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## STADIA SURVEY NOTES

AREA Howard Pass STATE or PROVINCE Alaska PAGE No. 34  
 LINE No.(s) 107XE PARTY No. 1173 DATE 2 Day 5 Mo. 78 Yr. BOOK-No. \_\_\_\_\_  
 SURVEYOR F O'Brien RODMAN K Barr WEATHER: Cloudy P.T.S. No. \_\_\_\_\_

| LINE | Bearing of Sight | Stadia Distance | BEAMAN OR VERNIER |          |                 | ROD READING |         |             |             | Angular Elev. Diff. | Final Elev. Diff. | ELEVATIONS |     | ▲B.S. OF.S. -S.S. | Station | REMARKS |
|------|------------------|-----------------|-------------------|----------|-----------------|-------------|---------|-------------|-------------|---------------------|-------------------|------------|-----|-------------------|---------|---------|
|      |                  |                 | Level             | Inclined | Angle or Factor | Hair Read   | Reading | Correc-tion | Center Hair |                     |                   | INST.      | ROD |                   |         |         |
| 1    |                  |                 |                   |          |                 |             |         |             |             |                     |                   | 1310.0     |     |                   |         |         |
| 2    |                  | 0               | ✓                 |          |                 |             |         |             | 5.0         | +5.0                | 1315.0            |            | Δ   | 2106-25           |         |         |
| 3    |                  | 0               | ✓                 |          |                 |             |         |             | 5.0         |                     |                   |            | Δ   |                   |         |         |
| 4    |                  | 0               | ✓                 |          |                 |             |         |             | 5.0         | -3.0                |                   | 1310.0     | κ   | 2106-25           |         |         |
| 5    |                  | 415             | ✓                 |          |                 |             |         |             | 12.8        | -12.8               |                   | 1302.2     |     | TS 1              |         |         |
| 6    |                  | 855             | 90                | 24       | 20              |             |         |             | 15.0        | -21.0               |                   | 1294.0     |     | TS 2              |         |         |
| 7    |                  | 1295            | 90                | 26       | 30              |             |         |             | 7.0         | -16.9               |                   | 1298.1     |     | TS 3              |         |         |
| 8    |                  | 1735            | 90                | 19       | 25              |             |         |             | 7.0         | -16.7               |                   | 1298.3     |     | TS 4              |         |         |
| 9    |                  | 2175            | 90                | 11       | 22              |             |         |             | 7.0         | -14.1               |                   | 1300.9     |     | TS 5              |         |         |
| 10   |                  | 2615            | 90                | 11       | 30              |             |         |             | 7.0         | -15.6               |                   | 1299.4     |     | TS 6              |         |         |
| 11   |                  | 3055            | 90                | 12       | 12              |             |         |             | 7.0         | -12.6               |                   | 1297.4     |     | TS 7              |         |         |
| 12   |                  | 3495            | 90                | 08       | 18              |             |         |             | 7.0         | -15.2               |                   | 1299.8     |     | TS 8              |         |         |
| 13   |                  | 3935            | 90                | 05       | 44              |             |         |             | 7.0         | -13.2               |                   | 1301.8     |     | TS 9              |         |         |
| 14   |                  | 4375            | 90                | 05       | 21              |             |         |             | 7.0         | -13.4               |                   | 1301.6     |     | TS 10             |         |         |
| 15   |                  | 4815            | 90                | 05       | 52              |             |         |             | 7.0         | -14.7               |                   | 1300.3     |     | TS 11             |         |         |
| 16   |                  | 5255            | 90                | 08       | 41              |             |         |             | 7.0         | -19.7               |                   | 1295.7     |     | TS 12             |         |         |
| 17   |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |                   |         |         |
| 18   |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |                   |         |         |
| 19   |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |                   |         |         |
| 20   |                  |                 |                   |          |                 |             |         |             |             |                     |                   |            |     |                   |         |         |

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