

### STADIA SURVEY NOTES

AREA Ikpikpak - Key Creek STATE or PROVINCE NORTH SLOPE, ALASKA PAGE No. 1  
 LINE No.(s) KD-96 PARTY No. 1182 DATE 30 Day 3 Mo. 77 Yr. BOOK No. \_\_\_\_\_  
 SURVEYOR K.R. ALLEN RODMAN D. HELANDER WEATHER: SNOW P.T.S. No. \_\_\_\_\_

| LINE | Bearing of Sight | Stadia Distance     | BEAMAN OR VERNIER |            |                 | ROD READING |           |            | Center Hair | Angular Elev. Diff. | Final Elev. Diff. | ELEVATIONS |     | B.S. OF S. S.S.   | Station | REMARKS                  |
|------|------------------|---------------------|-------------------|------------|-----------------|-------------|-----------|------------|-------------|---------------------|-------------------|------------|-----|-------------------|---------|--------------------------|
|      |                  |                     | Level             | Inclined   | Angle or Factor | Hair Read   | Reading   | Correction |             |                     |                   | INST.      | ROD |                   |         |                          |
| 1    |                  |                     |                   |            |                 |             |           |            |             |                     |                   |            |     |                   |         |                          |
| 2    |                  |                     |                   |            |                 |             |           |            |             |                     |                   |            |     |                   |         |                          |
| 3    |                  |                     |                   |            |                 |             |           |            |             |                     |                   |            |     |                   |         |                          |
| 4    | $\pi$            | 0                   |                   |            |                 |             |           | 5.0        |             |                     |                   | 302        |     | $\Delta$          |         |                          |
| 5    | S                | 1320                |                   | 90°39'30"  |                 | C           |           | 14.3       |             |                     |                   | 273        |     | 14                |         | TRI-STATION "FLO" = SP13 |
| 6    | "                | 2640                |                   |            |                 |             |           |            |             |                     |                   |            |     | 15                |         |                          |
| 7    | "                | 3960                |                   |            |                 |             |           |            |             |                     |                   |            |     | 16                |         | LAT. 70° 00' 15" 666     |
| 8    | "                | 5280                |                   | 91°05'51"  |                 | C           |           | 23.6       |             |                     |                   | 178        |     | 17                |         |                          |
| 9    | "                | 6600                |                   | 90°57'11"  |                 | C           |           | 14.3       |             |                     |                   | 178        |     | 18                |         |                          |
| 10   | "                | 7920                |                   | 90°47'32"  |                 | C           |           | 14.3       |             |                     |                   | 178        |     | 19                |         |                          |
| 11   | "                | 9240                |                   | 90°36'52"  |                 | C           |           | 14.3       |             |                     |                   | 189        |     | 20                |         |                          |
| 12   | "                | 10560               |                   | 90°27'48"  |                 | C           |           | 14.3       |             |                     |                   | 202        |     | 21                |         |                          |
| 13   | "                | 11880               |                   | 90°24'09"  |                 | C           |           | 14.3       |             |                     |                   | 204        |     | 22                |         |                          |
| 14   |                  |                     |                   |            |                 |             |           |            |             |                     |                   |            |     |                   |         |                          |
| 15   | $\Delta$ FLO to  | 12697 <sup>13</sup> |                   | 90°26'14"  |                 |             | 90°26'21" |            |             |                     |                   |            |     |                   |         |                          |
| 16   | Sp 22+495        |                     |                   | 269°33'31" |                 |             |           | 5.5        |             |                     |                   |            |     |                   |         |                          |
| 17   |                  |                     |                   |            |                 |             |           |            |             |                     |                   |            |     |                   |         |                          |
| 18   | Sp 22+495        | 12697 <sup>13</sup> |                   | 89°36'14"  |                 |             | 89°36'06" |            |             |                     |                   | 204.20     |     | $\odot$ 22+495825 |         | 69°58'10" 895            |
| 19   | $\Delta$ FLO     |                     |                   | 270°24'02" |                 |             |           | 4.6        |             |                     |                   |            |     |                   |         |                          |
| 20   |                  |                     |                   |            |                 |             |           |            |             |                     |                   |            |     |                   |         |                          |

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**STADIA SURVEY NOTES**

AREA Ikpikuk - Key Creek STATE or PROVINCE North Slope, ALASKA PAGE No. 2  
 LINE No.(s) K.D. 96 PARTY No. 1182 DATE 30 Day 3 Mo. 77 Yr. BOOK No. \_\_\_\_\_  
 SURVEYOR K. B. ALLEN RODMAN T. VAN ALLEN WEATHER: SNOW & Windy 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    | $\backslash$     | 0               |                   |                      |                 |             |         |             | 6.0         |                     |                   | 204.20     |     | 22+495825 |                 |
| 3    | S                | 825             |                   | 91°06'               | 30"             | C           |         |             | 14.3        |                     |                   | 180        |     | 23        |                 |
| 4    | "                | 2145            |                   | 90°26'               | 35"             | C           |         |             | 14.3        |                     |                   | 179        |     | 24        |                 |
| 5    | "                | 3465            |                   | 90°16'               | 00"             | C           |         |             | 14.3        |                     |                   | 180        |     | 25        |                 |
| 6    | "                | 4785            |                   | 90°06'               | 40"             | C           |         |             | 14.3        |                     |                   | 187        |     | 26        |                 |
| 7    | "                | 6105            |                   | 89°58'               | 57"             | C           |         |             | 14.3        |                     |                   | 199        |     | 27        |                 |
| 8    | "                | 7425            |                   | 89°45'               | 25"             | C           |         |             | 14.3        |                     |                   | 227        |     | 28        |                 |
| 9    | "                | 8745            |                   | 89°42'               | 17"             | C           |         |             | 14.3        |                     |                   | 241        |     | 29        |                 |
| 10   |                  |                 |                   |                      |                 |             |         |             |             |                     |                   |            |     |           |                 |
| 11   | Sp 22+495        | 9128.97         |                   | 89°42' 15"           | 89° 42' 07"     |             |         |             |             |                     |                   |            |     |           |                 |
| 12   | to Sp 30         |                 |                   | 270°18' 00"          |                 |             |         |             | 5.5         |                     |                   |            |     |           |                 |
| 13   |                  |                 |                   | AZIMUTH 182° 30' 53" |                 |             |         |             |             |                     |                   | 256.60     | 0   | 30        | 69° 56' 35" 286 |
| 14   | Sp 30-to-        | 9728.22         |                   | 90°19' 12"           | 90°19' 09"      |             |         |             |             |                     |                   |            |     |           |                 |
| 15   | Sp 22+495        |                 |                   | 269°40' 44"          |                 |             |         |             | 5.5         |                     |                   |            |     |           |                 |
| 16   |                  |                 |                   |                      |                 |             |         |             |             |                     |                   |            |     |           |                 |
| 17   | $\backslash$     | 0               |                   |                      |                 |             |         |             | 5.7         |                     |                   | 261.30     |     | 30        |                 |
| 18   |                  |                 |                   |                      |                 |             |         |             |             |                     |                   |            |     |           |                 |
| 19   |                  |                 |                   |                      |                 |             |         |             |             |                     |                   |            |     |           |                 |
| 20   |                  |                 |                   |                      |                 |             |         |             |             |                     |                   |            |     |           |                 |

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## STADIA SURVEY NOTES

AREA Ikpikpak - Key Creek STATE or PROVINCE North Slope, Alaska PAGE No. 13  
 LINE No.(s) KD-96 PARTY No. 1182 DATE 31 Day 3 Mo. 77 Yr. BOOK No.  
 SURVEYOR K. R. ALLEN RODMAN D. Melander 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    | Correction | Center Hair |                     |                   | INST.      | ROD |         |               |
| 1    |                  |                 |                    |             |                 |             |            |            |             |                     |                   | 256.60     |     | SP-30   | 69°56'35" 286 |
| 2    | Sp 30-70         | 11377.95        |                    | 90°01' 43"  |                 |             | 90°01' 43" |            |             |                     |                   |            |     |         |               |
| 3    | Sp 38+825        |                 |                    | 269°58' 22" |                 |             |            |            | 5.5         |                     |                   |            |     |         |               |
| 4    |                  |                 | Azimuth 182°31'09" |             |                 |             |            |            |             |                     |                   | 253.84     | ⊙   | 38+825  | 69°54' 43.481 |
| 5    | Sp 38+825        | 11377.95        |                    | 90°00' 15"  |                 |             | 90°00' 03" |            |             |                     |                   |            |     |         |               |
| 6    | 70-Sp 30         |                 |                    | 270°00' 06" |                 |             |            |            | 5.5         |                     |                   |            |     |         |               |
| 7    |                  |                 |                    |             |                 |             |            |            |             |                     |                   |            |     |         |               |
| 8    | T                | 0               |                    |             |                 |             |            |            | 5.8         |                     |                   | 259.66     | Δ   |         |               |
| 9    | S                | 495             | -                  |             |                 |             | C          |            | 11.8        |                     |                   | 2483       |     | 39      |               |
| 10   | "                | 1815            |                    | 90°18' 48"  |                 |             | C          |            | 13.0        |                     |                   | 237        |     | 40      |               |
| 11   | N                | 825             | -                  |             |                 |             | C          |            | 4.7         |                     |                   | 254.1      | ⊙   | 38      |               |
| 12   | S                | 495             | -                  |             |                 |             | C          |            | 2.0         |                     |                   | 256.3      | Δ   |         |               |
| 13   | N                | 330             |                    | 91°29' 16"  |                 |             | C          |            | 14.3        |                     |                   | 234        |     | Pin     |               |
| 14   | "                | 660             |                    | 92°24' 49"  |                 |             | C          |            | 14.3        |                     |                   | 215        |     | Pin     |               |
| 15   | "                | 825             |                    | 92°18' 54"  |                 |             | C          |            | 14.3        |                     |                   | 209        |     | 37      |               |
| 16   | "                | 2145            |                    | 91°11' 48"  |                 |             | C          |            | 14.3        |                     |                   | 197        |     | 36      |               |
| 17   | "                | 3465            |                    | 90°51' 59"  |                 |             | C          |            | 14.3        |                     |                   | 190        |     | 35      |               |
| 18   | "                | 4785            |                    | 90°53' 11"  |                 |             | C          |            | 14.3        |                     |                   | 197        |     | 34      |               |
| 19   | "                | 6105            |                    | 90°26' 16"  |                 |             | C          |            | 14.3        |                     |                   | 197        |     | 33      |               |
| 20   | "                | 7425            |                    | 90°17' 20"  |                 |             | C          |            | 14.3        |                     |                   | 206        |     | 32      |               |

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STADIA SURVEY NOTES

AREA Ikpikuk - Key Creek STATE or PROVINCE North Slope, ALASKA PAGE No. 4  
 LINE No.(s) KD-96 PARTY No. 1182 DATE 31 Day 3 Mo. 77 Yr. BOOK No. \_\_\_\_\_  
 SURVEYOR K. R. ALLEN RODMAN T. VAN ALLEN 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    |                  |                 |                   |          |                 |             |         |             |             |                     |                   | 253.8 <sup>84</sup> | 38+825 = | 69° 54' 43" 481 |                 |
| 2    | N                | 8745            |                   | 89° 56'  | 42"             | C           |         |             | 14.3        |                     |                   | 252                 |          | 31              |                 |
| 3    | S                | 495             | -                 |          |                 | C           |         |             | 2.0         |                     |                   | 254.5               | ⊙        | 38              |                 |
| 4    | N                | 825             | -                 |          |                 | C           |         |             | 4.7         |                     | 259.6             |                     | Δ        |                 |                 |
| 5    |                  | 0               |                   |          |                 |             |         |             | 5.8         |                     |                   | 253.8               | ⊙        | 38+825          | 69° 54' 43" 481 |
| 6    |                  |                 |                   |          |                 |             |         |             |             |                     |                   |                     |          |                 |                 |
| 7    | T                |                 |                   |          |                 |             |         |             |             |                     |                   | 253.8 <sup>84</sup> |          | 38+825          | 69° 54' 43" 481 |
| 8    | S 38+825         | 17211.34        |                   | 89° 57'  | 18"             | 89° 57' 18" |         |             |             |                     |                   |                     |          |                 |                 |
| 9    | S 51+887         |                 |                   | 270° 02' | 54"             |             |         |             | 5.5         |                     |                   |                     |          |                 |                 |
| 10   |                  |                 |                   | Azimuth  | 182° 34'        | 09"         |         |             |             |                     |                   | 273.82              | ⊙        | 51+887          | 69° 51' 54" 349 |
| 11   | S 51+887         | 17211.34        |                   | 90° 05'  | 17"             | 90° 05' 17" |         |             |             |                     |                   |                     |          |                 |                 |
| 12   | S 38+825         |                 |                   | 269° 54' | 55"             |             |         |             | 5.5         |                     |                   |                     |          |                 |                 |
| 13   |                  |                 |                   |          |                 |             |         |             |             |                     |                   |                     |          |                 |                 |
| 14   | T                | 0               |                   |          |                 |             |         |             | 5.6         |                     |                   | 279.82              |          | Δ               |                 |
| 15   | N                | 5342            |                   | 90° 06'  | 59"             | C           |         |             | 13.0        |                     |                   | 256                 | ⊙        | 47+825          |                 |
| 16   | T                | 0               |                   |          |                 |             |         |             | 5.7         |                     |                   | 261.7               |          | Δ               |                 |
| 17   | N                | 8745            |                   | 91° 09'  | 23"             | C           |         |             | 14.3        |                     |                   | 71                  |          | 41              | 77 223          |
| 18   | "                | 7425            |                   | 90° 33'  | 05"             | C           |         |             | 14.3        |                     |                   | 176                 |          | 42              |                 |
| 19   | "                | 6105            |                   | 90° 41'  | 16"             | C           |         |             | 14.3        |                     |                   | 174                 |          | 43              |                 |
| 20   | "                | 4785            |                   | 90° 52'  | 41"             | C           |         |             | 14.3        |                     |                   | 174                 |          | 44              |                 |

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**STADIA SURVEY NOTES**

AREA Ikpikpak - Key Creek STATE or PROVINCE North Slope, ALASKA PAGE No. 5  
 LINE No.(s) KD-96 PARTY No. 1182 DATE 31 Day 3 Mo. 77 Yr. BOOK No.  
 SURVEYOR K. R. ALLEN RODMAN T. VANALEN 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    | N                | 3465            |                   | 91°00' 17" |                 | C           |         |             | 21.8        |                     |                   | 179        |     |                   | 45      |                |
| 3    | "                | 2145            |                   | 98°43' 54" |                 | C           |         |             | 14.3        |                     |                   | 220        |     |                   | 46      |                |
| 4    | N                | 825             |                   | 90°32' 53" |                 | C           |         |             | 14.3        |                     |                   | 240        |     |                   | 47      |                |
| 5    | S                | 495             | -                 |            |                 | C           |         |             | 9.1         |                     |                   | 253        |     |                   | 48      |                |
| 6    | "                | 1815            | -                 |            |                 | C           |         |             | 8.6         |                     |                   | 253        |     |                   | 49      |                |
| 7    | "                | 3135            |                   | 90°00' 49" |                 | C           |         |             | 14.3        |                     |                   | 247        |     |                   | 50      |                |
| 8    | "                | 4455            |                   | 89°45' 05" |                 | C           |         |             | 14.3        |                     |                   | 267        |     |                   | 51      |                |
| 9    |                  | 0               |                   |            |                 |             |         |             | 5.7         |                     |                   | 256        | 0   |                   |         |                |
| 10   | N                | 5342            |                   | 90°06' 59" |                 | C           |         |             | 13.0        |                     |                   | 279.85     | Δ   |                   |         |                |
| 11   |                  | 0               |                   |            |                 |             |         |             | 5.6         |                     |                   | 273.82     | 0   |                   | 51+ 887 | 69°51' 54" 347 |
| 12   |                  |                 |                   |            |                 |             |         |             |             |                     |                   |            |     |                   |         |                |
| 13   |                  |                 |                   |            |                 |             |         |             |             |                     |                   |            |     |                   |         |                |
| 14   |                  |                 |                   |            |                 |             |         |             |             |                     |                   |            |     |                   |         |                |
| 15   |                  |                 |                   |            |                 |             |         |             |             |                     |                   |            |     |                   |         |                |
| 16   |                  |                 |                   |            |                 |             |         |             |             |                     |                   |            |     |                   |         |                |
| 17   |                  |                 |                   |            |                 |             |         |             |             |                     |                   |            |     |                   |         |                |
| 18   |                  |                 |                   |            |                 |             |         |             |             |                     |                   |            |     |                   |         |                |
| 19   |                  |                 |                   |            |                 |             |         |             |             |                     |                   |            |     |                   |         |                |
| 20   |                  |                 |                   |            |                 |             |         |             |             |                     |                   |            |     |                   |         |                |

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### STADIA SURVEY NOTES

AREA Ikpikpuk - Key Creek STATE or PROVINCE North Slope, ALASKA PAGE No. 6  
 LINE No.(s) 9 PARTY No. 1182 DATE 31 Day 3 Mo. 77 Yr. BOOK No. \_\_\_\_\_  
 SURVEYOR H.R. Allen RODMAN D. Helander 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    |                   |                 |                   |                |                 |                     |         |             |             |                     |                   |            |     |                   |         |         | <i>69° 51' 54" 349</i> |
| 2    |                   |                 |                   |                |                 |                     |         |             |             |                     |                   |            |     |                   |         |         | <i>51+ 887</i>         |
| 3    | $\pi$             | 0               |                   |                |                 |                     |         |             |             |                     |                   |            |     |                   |         |         |                        |
| 4    | S                 | 433             | -                 |                |                 | C                   |         |             |             |                     |                   |            |     |                   |         |         |                        |
| 5    | "                 | 1753            |                   | 91° 03' 06"    |                 | C                   |         |             |             |                     |                   |            |     |                   |         |         |                        |
| 6    | "                 | 3073            |                   | 90° 56' 09"    |                 | C                   |         |             |             |                     |                   |            |     |                   |         |         |                        |
| 7    | "                 | 4393            |                   | 90° 39' 43"    |                 | C                   |         |             |             |                     |                   |            |     |                   |         |         |                        |
| 8    | "                 | 5713            |                   | 90° 28' 29"    |                 | C                   |         |             |             |                     |                   |            |     |                   |         |         |                        |
| 9    | "                 | 7033            |                   | 90° 20' 35"    |                 | C                   |         |             |             |                     |                   |            |     |                   |         |         |                        |
| 10   | "                 | 8353            |                   | 90° 21' 51"    |                 | C                   |         |             |             |                     |                   |            |     |                   |         |         |                        |
| 11   | "                 | 9673            |                   | 90° 21' 13"    |                 | C                   |         |             |             |                     |                   |            |     |                   |         |         |                        |
| 12   | "                 | 10993           |                   | 90° 23' 13"    |                 | C                   |         |             |             |                     |                   |            |     |                   |         |         |                        |
| 13   | "                 | 12313           |                   | 90° 22' 41"    |                 | C                   |         |             |             |                     |                   |            |     |                   |         |         |                        |
| 14   | "                 | 13633           |                   | 90° 14' 23"    |                 | C                   |         |             |             |                     |                   |            |     |                   |         |         |                        |
| 15   |                   |                 |                   |                |                 |                     |         |             |             |                     |                   |            |     |                   |         |         |                        |
| 16   | <i>Sp 51+887</i>  | <i>1478.84</i>  |                   | 90° 02' 24"    |                 | 90° 02' 24"         |         |             |             |                     |                   |            |     |                   |         |         |                        |
| 17   | <i>Sp 62+1155</i> |                 |                   | 269° 57' 35"   |                 |                     |         |             |             |                     |                   |            |     |                   |         |         |                        |
| 18   |                   |                 |                   | <i>AZIMUTH</i> |                 | <i>182° 29' 48"</i> |         |             |             |                     |                   |            |     |                   |         |         |                        |
| 19   | <i>Sp 62+1155</i> | <i>1478.84</i>  |                   | 90° 00' 10"    |                 | 89° 59' 57"         |         |             |             |                     |                   |            |     |                   |         |         |                        |
| 20   | <i>Sp 51+887</i>  |                 |                   | 270° 00' 16"   |                 |                     |         |             |             |                     |                   |            |     |                   |         |         |                        |

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## STADIA SURVEY NOTES

AREA Ikpikpak - Key Creek STATE or PROVINCE North Slope, ALASKA PAGE No. 7  
 LINE No.(s) 2D-96 PARTY No. 1182 DATE 31 Day 3 Mo. 77 Yr. BOOK No. \_\_\_\_\_  
 SURVEYOR K.B. ALLEN RODMAN D. Helander WEATHER: CLEAR 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    | $\wedge$         | 0                  |                   |                    |                 |             |         |             | +5.6        |                     |                   | 274.15     | 268.55 | $\Delta$            | 62+1155 | 69°49'29"107 |
| 3    | S                | 165                | -                 |                    |                 | C           |         |             | 7.6         |                     |                   |            | 267.2  |                     | 63      |              |
| 4    | "                | 1485               |                   | 90°52'59"          |                 | C           |         |             | 20.8        |                     |                   |            | 230    |                     | 64      |              |
| 5    | "                | 2805               |                   | 90°36'26"          |                 | C           |         |             | 14.3        |                     |                   |            | 230    |                     | 65      |              |
| 6    | "                | 4125               |                   | 89°58'04"          |                 | C           |         |             | 14.3        |                     |                   |            | 262    |                     | 66      |              |
| 7    | "                | 5445               |                   | 90°00'24"          |                 | C           |         |             | 20.8        |                     |                   |            | 253    |                     | 67      |              |
| 8    | "                | 6765               |                   | 89°56'10"          |                 | C           |         |             | 14.3        |                     |                   |            | 267    |                     | 68      |              |
| 9    |                  |                    |                   |                    |                 |             |         |             |             |                     |                   |            |        |                     |         |              |
| 10   | Sp 62+1155       | 7255 <sup>50</sup> |                   | 90°00'10"          | 10"             | 90°00'07"   |         |             |             |                     |                   |            |        |                     |         |              |
| 11   | A Sp 68+495      |                    |                   | 269°59'57"         |                 |             |         |             |             |                     |                   |            |        |                     |         |              |
| 12   |                  |                    |                   | Azimuth 182°19'30" |                 |             |         |             |             |                     |                   |            | 269.80 | $\odot$             | 68+495  | 69°48'17"795 |
| 13   | Sp 68+495        | 7255 <sup>50</sup> |                   | 90°01'24"          | 24"             | 90°01'18"   |         |             |             |                     |                   |            |        |                     |         |              |
| 14   | A Sp 62+1195     |                    |                   | 269°58'48"         |                 |             |         |             |             |                     |                   |            |        |                     |         |              |
| 15   |                  |                    |                   |                    |                 |             |         |             |             |                     |                   |            |        |                     |         |              |
| 16   | $\wedge$         | 0                  |                   |                    |                 |             |         |             | 5.4         |                     |                   | 275.2      |        | $\Delta$            |         |              |
| 17   | S                | 825                |                   | 91°28'04"          | 04"             | C           |         |             | 14.3        |                     |                   |            | 240    |                     | 69      |              |
| 18   | "                | 2145               |                   | 92°12'17"          | 17"             | C           |         |             | 20.8        |                     |                   |            | 177    |                     | 70      |              |
| 19   | "                | 3465               |                   | 91°37'22"          | 22"             | C           |         |             | 14.3        |                     |                   |            | 168    |                     | 71      |              |
| 20   | "                | 4785               |                   | 91°12'11"          | 11"             | C           |         |             | 14.3        |                     |                   |            | 160    |                     | 72      |              |

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### STADIA SURVEY NOTES

AREA Ikpiakpak - Key Creek STATE or PROVINCE North Slope ALASKA PAGE No. 5  
 LINE No.(s) RD-96 PARTY No. 1182 DATE 31 Day 3 Mo. 77 Yr. BOOK No. \_\_\_\_\_  
 SURVEYOR R.R. Allen RODMAN D. Helander 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    | S                |                 |                   |                    |                 |             |         |             |             |                     |                   |            |     |                   |         |         |  |
| 3    | "                |                 |                   | 90°46' 40"         | C               |             |         | 14.3        |             |                     |                   |            |     |                   |         |         |  |
| 4    | "                |                 |                   | 90°38' 13"         | C               |             |         | 14.3        |             |                     |                   |            |     |                   |         |         |  |
| 5    | "                |                 |                   | 90°29' 20"         | C               |             |         | 14.3        |             |                     |                   |            |     |                   |         |         |  |
| 6    | "                |                 |                   | 90°27' 50"         | C               |             |         | 14.3        |             |                     |                   |            |     |                   |         |         |  |
| 7    | "                |                 |                   | 90°26' 50"         | C               |             |         | 14.3        |             |                     |                   |            |     |                   |         |         |  |
| 8    | S                |                 |                   | 90°23' 48"         |                 |             |         |             |             |                     |                   |            |     |                   |         |         |  |
| 9    |                  |                 |                   |                    |                 |             |         |             |             |                     |                   |            |     |                   |         |         |  |
| 10   | Sp 68+495        | 6101.22         |                   | 91°00' 36"         |                 | 90°00' 36"  |         |             |             |                     |                   |            |     |                   |         |         |  |
| 11   | A-Sp 73          |                 |                   | 268°59' 25"        |                 |             |         |             |             |                     |                   |            |     |                   |         |         |  |
| 12   |                  |                 |                   | Azimuth 182°10'17" |                 |             |         |             |             |                     |                   |            |     |                   |         |         |  |
| 13   | Sp 73-to-        | 6101.22         |                   | 89°01' 15"         |                 | 89°01' 01"  |         |             |             |                     |                   |            |     |                   |         |         |  |
| 14   | Sp 68+495        |                 |                   | 276°59' 13"        |                 |             |         |             |             |                     |                   |            |     |                   |         |         |  |
| 15   |                  |                 |                   |                    |                 |             |         |             |             |                     |                   |            |     |                   |         |         |  |
| 16   |                  |                 |                   |                    |                 |             |         |             |             |                     |                   |            |     |                   |         |         |  |
| 17   |                  |                 |                   |                    |                 |             |         |             |             |                     |                   |            |     |                   |         |         |  |
| 18   |                  |                 |                   |                    |                 |             |         |             |             |                     |                   |            |     |                   |         |         |  |
| 19   |                  |                 |                   |                    |                 |             |         |             |             |                     |                   |            |     |                   |         |         |  |
| 20   |                  |                 |                   |                    |                 |             |         |             |             |                     |                   |            |     |                   |         |         |  |

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**STADIA SURVEY NOTES**

AREA Ikpikpak - Key Creek STATE or PROVINCE North Slope, ALASKA PAGE No. 9  
 LINE No.(s) KD-96 PARTY No. 1182 DATE 1 Day 4 Mo. 77 Yr. BOOK No. \_\_\_\_\_  
 SURVEYOR H. B. Allen RODMAN T. VanAllen 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    |                  |                     |                   |                    |                 |             |         |             |             |                     |                   |            |     |         |         |       | Take off FROM TRI-STATION "FLO" USE 1959 Elevation |
| 3    | $\pi$            | 0                   |                   |                    |                 |             |         |             | 5.0         |                     |                   | 302        |     |         |         |       | "FLO" LAT. 70° 00' 15".666                         |
| 4    | N                | 1320                |                   | 90°35' 20"         |                 | C           |         |             | 13.0        |                     |                   | 276        |     |         | 12      |       |  |
| 5    | "                | 2640                |                   | 90°46' 21"         |                 | C           |         |             | 21.7        |                     |                   | 245        |     |         | 11      |       |  |
| 6    | "                | 3960                |                   | 90°52' 03"         |                 | C           |         |             | 23.9        |                     |                   | 219        |     |         | 10      |       |  |
| 7    | "                | 5280                |                   | 90°31' 25"         |                 | C           |         |             | 14.3        |                     |                   | 240        |     |         | 9       |       |  |
| 8    | "                | 6600                |                   | 90°29' 13"         |                 | C           |         |             | 14.3        |                     |                   | 232        |     |         | 8       |       |  |
| 9    | "                | 7920                |                   | 90°24' 11"         |                 | C           |         |             | 5.5         |                     |                   | 242        |     |         | 7       |       |  |
| 10   |                  |                     |                   |                    |                 |             |         |             |             |                     |                   |            |     |         |         |       |  |
| 11   | Sp 13 to -       | 15831 <sup>53</sup> |                   | 90°19' 15"         |                 |             |         |             |             |                     |                   |            |     |         |         |       |  |
| 12   | Sp 1             |                     |                   | 269°40' 52"        |                 |             |         |             | 5.5         |                     |                   |            |     |         |         |       |  |
| 13   |                  |                     |                   | Azimuth 17°34' 05" |                 |             |         |             |             |                     |                   | 205.43     |     | 0       | 1       | 205.7 |  |
| 14   | Sp 1 to -        | 15831 <sup>53</sup> |                   | 89°39' 47"         |                 |             |         |             |             |                     |                   |            |     |         |         |       |  |
| 15   | Sp 13            |                     |                   | 270°20' 35"        |                 |             |         |             | 4.9         |                     |                   |            |     |         |         |       |  |
| 16   |                  |                     |                   | Azimuth 17°34' 05" |                 |             |         |             |             |                     |                   |            |     |         |         |       |  |
| 17   | $\pi$            | 0                   |                   |                    |                 |             |         |             | 5.5         |                     |                   | 211        |     |         |         |       |  |
| 18   | S                | 6600                |                   | 89°44' 02"         |                 | C           |         |             | 14.3        |                     |                   | 228        |     |         | 6       |       |  |
| 19   | "                | 5280                |                   | 89°53' 11"         |                 | C           |         |             | 14.3        |                     |                   | 208        |     |         | 5       |       |  |
| 20   | "                | 3960                |                   | 90°05' 25"         |                 | C           |         |             | 23.8        |                     |                   | 181        |     |         | 4       |       |  |

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**STADIA SURVEY NOTES**

AREA Ikpikpak - Key Creek STATE or PROVINCE North Slope, ALASKA PAGE No. 10  
 LINE No.(s) KD L-96 PARTY No. T. VanAllen DATE 1 Day 4 Mo. 77 Yr. BOOK No.  
 SURVEYOR H.B. Allen RODMAN 1182 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 | Correction | Center Hair |                     |                   | INST.      | ROD |         |                 |
| 1    |                  |                 |                   |           |                 |             |         |            |             |                     |                   | 211.0      |     |         |                 |
| 2    | S                | 2440            |                   |           |                 |             |         |            |             |                     |                   | 182        |     | 3       |                 |
| 3    | S                | 1320            | -                 |           |                 | C           |         | 2.9        |             |                     |                   | 208        |     | 2       |                 |
| 4    | X                | 0               |                   |           |                 |             |         | 5.6        |             |                     |                   | 205.4      | D   | 1       |                 |
| 5    | S                | 825             | -                 |           |                 | C           |         | 10.2       |             |                     | 215.6             |            | Δ   |         |                 |
| 6    | X                | 0               |                   |           |                 |             |         | 6.0        |             |                     |                   | 210        |     |         | TAIL Group 3    |
| 7    | N                | 1650            |                   | 90°40'44" |                 | C           |         | 20.8       |             |                     |                   | 175        |     | "       | 8               |
| 8    | "                | 2970            |                   | 90°40'47" |                 | C           |         | 21.0       |             |                     |                   | 160        |     | "       | 12              |
| 9    | "                | 4290            |                   | 90°20'53" |                 | C           |         | 14.3       |             |                     |                   | 176        |     | "       | 16              |
| 10   | "                | 5640            |                   | 89°58'28" |                 | C           |         | 14.3       |             |                     |                   | 204        |     | "       | 20              |
| 11   | N                | 6930            |                   | 90°02'21" |                 | C           |         | 14.3       |             |                     |                   | 198        |     | "       | 24              |
| 12   | S                | 825             | -                 |           |                 | C           |         | 10.2       |             |                     |                   | 205.4      | ⊙   | 1       |                 |
| 13   | X                | 0               |                   |           |                 |             |         | 5.6        |             |                     | 211.0             |            | Δ   |         |                 |
| 14   | S                | 1320            | -                 |           |                 | C           |         | 2.9        |             |                     |                   | 208.1      | ⊙   | 2       |                 |
| 15   | N                | 1815            |                   | 89°16'26" |                 | C           |         | 2.0        |             |                     | 187.1             |            | Δ   |         |                 |
| 16   | N                | 495             | -                 |           |                 | C           |         | 5.5        |             |                     |                   | 182        |     | 3       |                 |
| 17   | X                | 0               |                   |           |                 |             |         | 5.7        |             |                     |                   | 181.4      | ⊙   |         | LINE INT. KD-96 |
| 18   |                  |                 |                   |           |                 |             |         |            |             |                     |                   |            |     |         | KD-97-5p4       |
| 19   |                  |                 |                   |           |                 |             |         |            |             |                     |                   |            |     |         | 181.6           |
| 20   |                  |                 |                   |           |                 |             |         |            |             |                     |                   |            |     |         |                 |

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**STADIA SURVEY NOTES**

AREA Ikpiqruk - Key Creek STATE or PROVINCE North Slope, ALASKA PAGE No. 1-A  
 LINE No.(s) KD-96 PARTY No. 1182 DATE 30 Day 3 Mo. 77 Yr. BOOK No. \_\_\_\_\_  
 SURVEYOR K. B. ALLEN RODMAN T. VAN ALLEN WEATHER: SNOW P.T.S. No. \_\_\_\_\_

| LINE | Bearing of Sight | Stadia Distance | BEAMAN OR VERNIER |           |                 | ROD READING |         |             |             | Angular Elev. Diff. | Final Elev. Diff. | ELEVATIONS |        | B.S.<br>O.F.S.<br>- S.S. | Station | REMARKS |                   |
|------|------------------|-----------------|-------------------|-----------|-----------------|-------------|---------|-------------|-------------|---------------------|-------------------|------------|--------|--------------------------|---------|---------|-------------------|
|      |                  |                 | Level             | Inclined  | Angle or Factor | Hair Reod   | Reading | Correc-tion | Center Hair |                     |                   | INST.      | ROD    |                          |         |         |                   |
| 1    |                  |                 |                   |           |                 |             |         |             |             |                     |                   |            |        |                          |         |         |                   |
| 2    |                  |                 |                   |           |                 |             |         |             |             |                     |                   |            |        |                          |         |         |                   |
| 3    | N                | 1320            |                   | 87°35'31" |                 | C           |         |             |             |                     |                   | 230.54     | 273.9  | Δ                        |         |         | Sp 14 - L - KD-96 |
| 4    | T                | 0               |                   |           |                 |             |         |             |             |                     |                   |            | 224.74 |                          |         |         | 15                |
| 5    | S                | 1320            |                   | 91°38'46" |                 | C           |         |             |             |                     |                   |            | 178.32 |                          |         |         | 16                |
| 6    | N                | 1320            |                   | 87°35'31" |                 | C           |         |             |             |                     |                   |            | 230.54 | ○                        |         |         | Sp 14             |
| 7    |                  |                 |                   |           |                 |             |         |             |             |                     |                   |            |        |                          |         |         |                   |
| 8    |                  |                 |                   |           |                 |             |         |             |             |                     |                   |            |        |                          |         |         |                   |
| 9    |                  |                 |                   |           |                 |             |         |             |             |                     |                   |            |        |                          |         |         |                   |
| 10   |                  |                 |                   |           |                 |             |         |             |             |                     |                   |            |        |                          |         |         |                   |
| 11   |                  |                 |                   |           |                 |             |         |             |             |                     |                   |            |        |                          |         |         |                   |
| 12   |                  |                 |                   |           |                 |             |         |             |             |                     |                   |            |        |                          |         |         |                   |
| 13   |                  |                 |                   |           |                 |             |         |             |             |                     |                   |            |        |                          |         |         |                   |
| 14   |                  |                 |                   |           |                 |             |         |             |             |                     |                   |            |        |                          |         |         |                   |
| 15   |                  |                 |                   |           |                 |             |         |             |             |                     |                   |            |        |                          |         |         |                   |
| 16   |                  |                 |                   |           |                 |             |         |             |             |                     |                   |            |        |                          |         |         |                   |
| 17   |                  |                 |                   |           |                 |             |         |             |             |                     |                   |            |        |                          |         |         |                   |
| 18   |                  |                 |                   |           |                 |             |         |             |             |                     |                   |            |        |                          |         |         |                   |
| 19   |                  |                 |                   |           |                 |             |         |             |             |                     |                   |            |        |                          |         |         |                   |
| 20   |                  |                 |                   |           |                 |             |         |             |             |                     |                   |            |        |                          |         |         |                   |

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