

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshkepak STATE/COUNTY ALASKA BOOK NO. A-2 PAGE 1 OF 1
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert. CLIENT USGS DATE 1 BY 2 MO 81 YR
 SURVEYOR M. OGRADY INSTRUMENT DESC/SERIAL NO. T-2 Wild CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ○ | STATION | VERTICAL | | | | | | HORIZONTAL | | LINE | REMARKS | | |
|------|---|-----------|----------|---|---------------------|---------------|-----------|----------------------|------------|------|------|---------|--------------|-------------------------------|
| | | | DISTANCE | <input checked="" type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | | L/R OR DI | RIGHT TURNED HORIZONTAL ANGLE |
| | | | | SLOPE | | | | | HORIZ | INST | | | | |
| 1 | Δ | Barr Mark | 1460 | | 90° | 9.0 | | | | | | 1 | Barr Mark on | |
| 2 | | # 81389 | | | | | | | | | | 2 | LINE 22-81 | |
| 3 | Δ | SP 102 | | | 90 | 5.2 | | 32.4 | 27.2 | | | 3 | SP 127 + | |
| 4 | | TB 88 | 6160 | | 89 55 53 | 11 | | | 29.6 | | | 4 | Elev 23.4 ✓ | |
| 5 | | TB 89 | 5720 | | 89 55 01 | 11 | | | 30.4 | | | 5 | | |
| 6 | | SS 90 | 5280 | | 89 55 57 | 11 | | | 28.2 | | | 6 | | |
| 7 | | 91 | 4840 | | 89 53 55 | 11 | | | 30.4 | | | 7 | | |
| 8 | | 92 | 4400 | | 90 00 40 | 11 | | | 20.9 | | | 8 | | |
| 9 | | 93 | 3960 | | 90 00 41 | 11 | | | 20.9 | | | 9 | | |
| 10 | | 94 | 3520 | | 90 00 56 | 11 | | | 20.7 | | | 10 | | |
| 11 | | 95 | 3080 | | 90 01 18 | 11 | | | 20.4 | | | 11 | | |
| 12 | | 96 | 2640 | | 90 01 30 | 11 | | | 20.4 | | | 12 | | |
| 13 | | 97 | 2200 | | 90 01 50 | 11 | | | 20.3 | | | 13 | | |
| 14 | | 98 | 1760 | | 90 01 57 | 11 | | | 20.5 | | | 14 | | |
| 15 | | 99 | 1320 | | 90 03 04 | 11 | | | 20.3 | | | 15 | | |
| 16 | | SP 100 | 880 | | 90 04 34 | 11 | | | | | | 16 | | |
| 17 | | SP 101 | 440 | | 89 57 55 | 11 | | | | | | 17 | | |

WORKED BY _____ CHECKED BY 1ST M. Ogrady 2ND _____

SYMBOLS Δ = BACKSIGHT = INSTRUMENT SET-UP SS = SIDESHOT ○ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshokpaik STATE/COUNTY Alaska BOOK NO. A2 PAGE 2 OF 2
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 1 DY 2 MO 81 YR
 SURVEYOR M. O'GRADY INSTRUMENT DESC/SERIAL NO. 1-2 Wild CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙ | STATION | VERTICAL | | | | | | HORIZONTAL | | LINE | REMARKS | | |
|------|---|--------------|----------|--|---------------------|---------------|-----------|----------------------|------------|------|------|---------|-----------|-------------------------------|
| | | | DISTANCE | <input type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | | L/R OR DI | RIGHT TURNED HORIZONTAL ANGLE |
| | | | | SLOPE | | | | | HORIZ | INST | | | | |
| 1 | | SP103 | 440 | | 89 12 10 | 11 | | | | | | 1 | | |
| 2 | | SP104 | 880 | | 89 40 43 | 11 | | | | | | 2 | | |
| 3 | | SP105 | 1320 | | 89 45 48 | 11 | | | | | | 3 | | |
| 4 | SS | Well | 1610 | | 89 51 37 | 1.0 | | | | | | 4 | | |
| 5 | | | | | | | | | | | | 5 | | |
| 6 | | Intersection | | | 89 39 08 | 11 | | | | | | 6 | | |
| 7 | | Line 22 → 81 | | | 89 38 48 | 11 | | | 31.2 | | | 7 | | |
| 8 | | Line 18-81 | | | 270 21 00 | 11 | | | | | | 8 | | |
| 9 | | | | | | | | | | | | 9 | | |
| 10 | | SP106 | 1760 | | 89 41 35 | 11 | | | | | | 10 | | |
| 11 | | SP107 | 2200 | | 89 50 56 | 11 | | | | | | 11 | | |
| 12 | ⊙ | SP108 | 2640 | | 89 55 26 | 11 | | | | | | 12 | | |
| 13 | | | | | 270 04 20 | 11 | | -7.4 | 24.9 | | | 13 | | |
| 14 | | | | | | | | | | | | 14 | | |
| 15 | Δ | SP108 | 2640 | | 89 54 14 | 11 | | | | | | 15 | | |
| 16 | | | | | 270 05 46 | 11 | | +4.4 | | | | 16 | | |
| 17 | | | | | | | | | | | | 17 | | |

WORKED BY _____ CHECKED BY 1ST MW 2ND _____

SYMBOLS

Δ = BACKSIGHT

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HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshokruk STATE/COUNTY Alaska BOOK NO. A² PAGE 3 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 1 DY 2 MO 8 YR
 SURVEYOR N. O'GRADY INSTRUMENT DESC/SERIAL NO. T-2 Wild CREW NO. 1186

| LINE | SS | STATION | VERTICAL | | | | | | ELEVATION | | L/R OR DI | RIGHT TURNED HORIZONTAL ANGLE | LINE | REMARKS |
|------|--------|----------------|-----------------|---|---------------------|---------------|-----------|----------------------|-----------|-----|-----------|-------------------------------|------|---------|
| | | | DISTANCE | <input checked="" type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | INST | ROD | | | | |
| | | | | SLOPE | | | | | | | | | | |
| 1 | | SP109 | 2400 | 2200 | 89 54 32 | 11 | | | | | | 1 | | |
| 2 | | SP110 | 1760 | | 89 52 46 | 11 | | | | | | 2 | | |
| 3 | | 111 | 1320 | | 89 48 01 | 11 | | | | | | 3 | | |
| 4 | | 112 | 890 | | 89 34 11 | 11 | | | | | | 4 | | |
| 5 | | 113 | 996 | | 89 05 49 | 11 | | | | | | 5 | | |
| 6 | | 114 | -0- | | 90 | 5.3 | | | 31.3 | | | 6 | | |
| 7 | | 115 | 416 | | 89 14 11 | 11 | | | | | | 7 | | |
| 8 | | 116 | 880 | | 89 39 24 | 11 | | | | | | 8 | | |
| 9 | | 117 | 1320 | | 89 41 00 | 11 | | | | | | 9 | | |
| 10 | | 118 | 1760 | | 89 45 15 | 11 | | | | | | 10 | | |
| 11 | ⊙ | 119 | 2200 | | 89 54 14 | 11 | | | | | | 11 | | |
| 12 | | 120 | 2680 | | 89 54 09 | 11 | | | | | | 12 | | |
| 13 | | | | | 290 05 44 | 11 | | | -7.2 | | 24.2 | 13 | | |
| 14 | | | | | | | | | | | | 14 | | |
| 15 | A | SP119 | 3080 | | 90 05 44 | 11 | | | +11.4 | | | 15 | | |
| 16 | | | | | 269 59 28 | 11 | | | | | | 16 | | |
| 17 | | | | | | | | | | | | 17 | | |

WORKED BY _____ CHECKED BY 1ST MW 2ND _____

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⊙ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshokruk STATE/COUNTY Alaska BOOK NO. 42 PAGE 4 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 1 DY 2 MO 81 YR
 SURVEYOR M. O'GRADY INSTRUMENT DESC/SERIAL NO. T-2 Wild CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙ | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | | |
|------|---|---------|----------|--|---------------------|---------------|-----------|----------------------|------------|------|---------|------------|-------------------------------|
| | | | DISTANCE | <input type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | L/R OR DIR | RIGHT TURNED HORIZONTAL ANGLE |
| | | | | SLOPE | | | | | HORIZ | INST | | | |
| 1 | | SP 120 | 2140 | | 90 10 31 | 11 | | | | | | 1 | |
| 2 | | " 121 | 2200 | | 90 10 39 | 11 | | | | | | 2 | |
| 3 | | " 122 | 1760 | | 90 05 40 | 11 | | | | | | 3 | |
| 4 | | " 123 | 1320 | | 90 07 00 | 11 | | | | | | 4 | |
| 5 | | " 124 | 880 | | 90 12 36 | 11 | | | | | | 5 | |
| 6 | | " 125 | 440 | | 89 43 56 | 11 | | | | | | 6 | |
| 7 | Δ | " 126 | -0- | | 90 | 5.1 | | | 35.5 | | | 7 | |
| 8 | | " 127 | 440 | | 89 16 37 | 11 | | | | | | 8 | |
| 9 | | " 128 | 880 | | 89 40 33 | 11 | | | | | | 9 | |
| 10 | | " 129 | 1320 | | 89 50 13 | 11 | | | | | | 10 | |
| 11 | | " 130 | 1760 | | 89 52 43 | 11 | | | | | | 11 | |
| 12 | | " 131 | 2200 | | 89 45 06 | 11 | | | | | | 12 | |
| 13 | ⊙ | " 132 | 2640 | | 89 48 17 | 11 | | | | | | 13 | |
| 14 | | | | | 270 15 48 | 11 | | +1.2 | 36.8 | | | 14 | |
| 15 | | | | | | | | | | | | 15 | |
| 16 | Δ | SP 132 | 2200 | | 89 36 00 | 11 | | -4.5 | | | | 16 | |
| 17 | | | | | 270 26 12 | 11 | | | | | | 17 | |

WORKED BY _____ CHECKED BY 1ST MW 2ND _____

SYMBOLS

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⊙ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshkeguk STATE/COUNTY Alaska BOOK NO. A² PAGE 5 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert. CLIENT USGS DATE 1 DY 2 MO 81 YR
 SURVEYOR M. O'Grady INSTRUMENT DESC/SERIAL NO. T-2 Wild CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙ | STATION | VERTICAL | | | | | | HORIZONTAL | | LINE | REMARKS | | |
|------|---|---------|----------|--|---------------------|---------------|-----------|----------------------|------------|------|------|---------|-----------|-------------------------------|
| | | | DISTANCE | <input type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | | L/R OR DI | RIGHT TURNED HORIZONTAL ANGLE |
| | | | | SLOPE | | | | | HORIZ | INST | | | | |
| 1 | | SP 133 | 1760 | | 89 32 23 | 11 | | | | | | 1 | | |
| 2 | | 134 | 1320 | | 89 31 27 | 11 | | | | | | 2 | | |
| 3 | | 135 | 880 | | 89 20 45 | 11 | | | | | | 3 | | |
| 4 | | 136 | 440 | | 88 53 00 | 11 | | | | | | 4 | | |
| 5 | Δ | 137 | -0- | | 90 | 5.0 | | 32.2 | | | | 5 | | |
| 6 | | 138 | 440 | | 88 56 03 | 11 | | | | | | 6 | | |
| 7 | | 139 | 880 | | 88 34 34 | 11 | | | | | | 7 | | |
| 8 | | 140 | 1320 | | 88 34 42 | 11 | | | | | | 8 | | |
| 9 | | 141 | 1760 | | 88 44 47 | 11 | | | | | | 9 | | |
| 10 | ⊙ | 142 | 2200 | | 88 56 25 | 11 | | | | | | 10 | | |
| 11 | | | | | 271 03 40 | 11 | +09.8 | 62.1 | | | | 11 | | |
| 12 | | | | | | | | | | | | 12 | | |
| 13 | Δ | SP 142 | 2200 | | 89 24 53 | 11 | -11.6 | | | | | 13 | | |
| 14 | | | | | 270 35 12 | 11 | | | | | | 14 | | |
| 15 | | 143 | 1760 | | 89 24 12 | 11 | | | | | | 15 | | |
| 16 | | 144 | 1320 | | 89 40 50 | 11 | | | | | | 16 | | |
| 17 | | | | | | | | | | | | 17 | | |

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WORKED BY _____ CHECKED BY 1ST _____ 2ND _____

SYMBOLS Δ = BACKSIGHT Δ = INSTRUMENT SET-UP SS = SIDESHOT ⊙ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshekpuk STATE/COUNTY Alaska BOOK NO. 42 PAGE 6 OF
 LINE/LOOP NO. 12-81 TYPE SURVEY Vert CLIENT USGS DATE 1 DY 2 MO 81 YR
 SURVEYOR M. O'LEARY INSTRUMENT DESC/SERIAL NO. T-2 Wild CREW NO. 1186

| LINE | SS | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | | | |
|------|--------|---------|----------|---|---------------------|---------------|-----------|----------------------|------------|------|---------|-----------|-------------------------------|------|
| | | | DISTANCE | <input checked="" type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | L/R OR DI | RIGHT TURNED HORIZONTAL ANGLE | LINE |
| | | | | SLOPE | | | | | HORIZ | INST | | | | |
| 1 | | SP 145 | 880 | | 89 36 33 | 11 | | | | | | 1 | | |
| 2 | | " 146 | 440 | | 89 09 53 | 11 | | | | | | 2 | | |
| 3 | | " 147 | 0 | | 90 | 5.3 | | 50.5 | | | | 3 | | |
| 4 | | " 148 | 440 | | 90 13 35 | 11 | | | | | | 4 | | |
| 5 | | " 149 | 880 | | 90 02 30 | 11 | | | | | | 5 | | |
| 6 | | " 150 | 1320 | | 89 54 48 | 11 | | | | | | 6 | | |
| 7 | | " 151 | 1760 | | 89 50 22 | 11 | | | | | | 7 | | |
| 8 | | " 152 | 2200 | | 89 45 23 | 11 | | | | | | 8 | | |
| 9 | | " 153 | 2640 | | 89 49 07 | 11 | | | | | | 9 | | |
| 10 | | | | | 270 11 00 | 11 | -2.5 | 48.0 | | | | 10 | | |
| 11 | | | | | | | | | | | | 11 | | |
| 12 | | | | | | | | | | | | 12 | | |
| 13 | | | | | | | | | | | | 13 | | |
| 14 | | | | | | | | | | | | 14 | | |
| 15 | | | | | | | | | | | | 15 | | |
| 16 | | | | | | | | | | | | 16 | | |
| 17 | | | | | | | | | | | | 17 | | |

WORKED BY _____ CHECKED BY 1ST _____ 2ND _____

SYMBOLS

= BACKSIGHT

= INSTRUMENT SET-UP

SS = SIDESHOT

= FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshkeguk STATE/COUNTY ALASKA BOOK NO. 42 PAGE 7 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 2 DY 2 MO 81 YR
 SURVEYOR M. O'GRADY INSTRUMENT DESC/SERIAL NO. T-2 wild CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙ | STATION | VERTICAL | | | | | | HORIZONTAL | | LINE | REMARKS | | |
|------|---|---------------|----------|---|---------------------|---------------|-----------|----------------------|------------|------|------|---------|------------|-------------------------------|
| | | | DISTANCE | <input checked="" type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | | L/R OR D/I | RIGHT TURNED HORIZONTAL ANGLE |
| | | | | SLOPE | | | | | HORIZ | INST | | | | |
| 1 | Δ | SP153 | 2640 | | 90 19 25 | 11 | | +25.7 | | | | 1 | | |
| 2 | | | | | 269 40 44 | 11 | | | | | | 2 | | |
| 3 | | 154 | 2700 | | 90 26 11 | 17 | | | | | | 3 | | |
| 4 | | 155 | 1760 | | 90 29 29 | 18 | | | | | | 4 | | |
| 5 | | 156 | 1320 | | 90 29 59 | 11 | | | | | | 5 | | |
| 6 | | 157 | 880 | | 89 59 55 | 11 | | | | | | 6 | | |
| 7 | | 158 | 440 | | 90 00 04 | 11 | | | | | | 7 | | |
| 8 | π | 159 | -0- | | 90 | 5.2 | | | 73.7 | | | 8 | | |
| 9 | | 160 | 440 | | 90 18 35 | 11 | | | | | | 9 | | |
| 10 | | Int. line 161 | 880 | | 91 23 21 | 18 | | | | | | 10 | | |
| 11 | SS | Iron Pipe | 630 | | 90 | 8.4 | | | | | | 11 | | |
| 12 | | 162 | 1320 | | 91 12 23 | 11 | | | | | | 12 | | |
| 13 | | 163 | 1760 | | 90 54 15 | 11 | | | | | | 13 | | |
| 14 | | 164 | 2200 | | 90 43 33 | 11 | | | | | | 14 | | |
| 15 | ⊙ | 165 | 2640 | | 90 35 33 | 11 | | | | | | 15 | | |
| 16 | | | | | 269 24 30 | 11 | | -38.1 | 35.6 | | | 16 | | |
| 17 | | | | | | | | | | | | 17 | | |

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WORKED BY _____ CHECKED BY 1ST _____ 2ND _____

SYMBOLS

Δ = BACKSIGHT

π = INSTRUMENT SET-UP

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⊙ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Tashetpak STATE/COUNTY ALASKA BOOK NO. A² PAGE 8 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 2 DY 2 MO 81 YR
 SURVEYOR M. O'GRADY INSTRUMENT DESC/SERIAL NO. T-2 with CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> \odot | STATION | VERTICAL | | | | | | HORIZONTAL | | LINE | REMARKS | | |
|------|--|---------------------------|----------|--|---------------------|---------------|-----------|----------------------|------------|------|------|---------|-----------|-------------------------------|
| | | | DISTANCE | <input type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD ROD OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | | L/R OR DI | RIGHT TURNED HORIZONTAL ANGLE |
| | | | | SLOPE | | | | | HORIZ | INST | | | | |
| 1 | | | | | | | | | | | | 1 | | |
| 2 | Δ | SP 162 ^{in line} | -0- | | 90 | 5.3 | | | | | | | 2 | |
| 3 | Δ | SP 162 ^{in line} | -0- | | 90 | 5.3 | | | | | | | 3 | |
| 4 | SS | SP 162 offset | 530 | | 90 | 5.3 | | | | | | | 4 | |
| 5 | | 161 offset | | | 90 | 5.3 | | | | | | | 5 | |
| 6 | | 163 offset | | | 90 | 5.3 | | | | | | | 6 | |
| 7 | | | | | | | | | | | | | 7 | |
| 8 | | | | | | | | | | | | | 8 | |
| 9 | Δ | SP 165 | 880 | | 91 16 00 | 11 | 430.4 | | | | | | 9 | |
| 10 | | | | | 268 44 13 | 11 | | | | | | | 10 | |
| 11 | | SD 166 | 440 | | 91 23 46 | 11 | | | | | | | 11 | |
| 12 | | 167 | -0- | | 90 | 5.4 | | 66.0 | | | | | 12 | |
| 13 | | 168 | 440 | | 89 02 24 | 11 | | | | | | | 13 | |
| 14 | \odot | 169 | 880 | | 89 06 40 | 11 | | | | | | | 14 | |
| 15 | | | | | 215 53 30 | 11 | 12.7 | 68.7 | | | | | 15 | |
| 16 | | | | | | | | | | | | | 16 | |
| 17 | | | | | | | | | | | | | 17 | |

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\odot = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshkepuk STATE/COUNTY ALASKA BOOK NO. 42 PAGE 9 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 2 DY 2 MO 81 YR
 SURVEYOR M. O'Leary INSTRUMENT DESC/SERIAL NO. T-2 with CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙ | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | | |
|------|---|---------|----------|---|---------------------|---------------|-----------|----------------------|------------|------|---------|-------------------------------|------|
| | | | DISTANCE | <input checked="" type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | RIGHT TURNED HORIZONTAL ANGLE | LINE |
| | | | | SLOPE | | | | | HORIZ | INST | | | |
| 1 | A | SP 169 | 3080 | | 89 51 52 | 11 | | 43.5 | | | | 1 | |
| 2 | | | | | 270 08 15 | 11 | | | | | | 2 | |
| 3 | | 170 | 2640 | | 90 24 00 | 11 | | | | | | 3 | |
| 4 | | 171 | 2200 | | 90 28 21 | 11 | | | | | | 4 | |
| 5 | | 172 | 1760 | | 90 35 26 | 11 | | | | | | 5 | |
| 6 | | 173 | 1320 | | 90 35 06 | 11 | | | | | | 6 | |
| 7 | | 174 | 880 | | 89 59 43 | 11 | | | | | | 7 | |
| 8 | | 175 | 440 | | 89 45 46 | 11 | | | | | | 8 | |
| 9 | A | 176 | 0 | | 90 5.3 | | | 72.1 | | | | 9 | |
| 10 | | 177 | 440 | | 89 26 12 | 11 | | | | | | 10 | |
| 11 | | 178 | 880 | | 89 47 15 | 11 | | | | | | 11 | |
| 12 | | 179 | 1320 | | 90 01 45 | 11 | | | | | | 12 | |
| 13 | | 180 | 1760 | | 89 53 24 | 11 | | | | | | 13 | |
| 14 | | 181 | 2200 | | 89 59 56 | 11 | | | | | | 14 | |
| 15 | O | 182 | 2640 | | 90 08 20 | 11 | | | | | | 15 | |
| 16 | | | | | 269 51 51 | 11 | | -17.2 | 55.0 | | | 16 | |
| 17 | | | | | | | | | | | | 17 | |

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HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshkevik STATE/COUNTY Alaska BOOK NO. A² PAGE 10 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert. CLIENT USGS DATE 2 BY 2 MO 8 YR
 SURVEYOR M. O'GRADY INSTRUMENT DESC/SERIAL NO. T-2 Wild CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙ | STATION | VERTICAL | | | | | | ELEVATION | | LIR OR DIR | RIGHT TURNED HORIZONTAL ANGLE | LINE | REMARKS |
|------|---|---------|----------|--|---------------------|---------------|-----------|----------------------|-----------|-----|------------|-------------------------------|------|---------|
| | | | DISTANCE | <input type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | INST | ROD | | | | |
| | | | SLOPE | HORIZ | | | | | | | | | | |
| 1 | Δ | SP 182 | 2585 | | 90 13 32 | 11 | | +21.0 | | | | | 1 | |
| 2 | | | | | 269 46 33 | 11 | | | | | | | 2 | |
| 3 | | SP 183 | 2145 | | 90 47 25 | 11 | | | | | | | 3 | |
| 4 | | 184 | 1705 | | 90 55 39 | 11 | | | | | | | 4 | |
| 5 | | 185 | 1265 | | 91 12 27 | 11 | | | | | | | 5 | |
| 6 | | 186 | 825 | | 91 09 00 | 11 | | | | | | | 6 | |
| 7 | | 187 | 385 | | 89 59 52 | 11 | | | | | | | 7 | |
| 8 | ⊙ | TP6 | -6- | | 90 50 | | | 76.0 | | | | | 8 | |
| 9 | | 188 | 55' | | 93 04 31 | 4.0 | | | | | | | 9 | |
| 10 | | 189 | 495 | | 90 00 42 | 11 | | | | | | | 10 | |
| 11 | | 190 | 935 | | 89 54 35 | 11 | | | | | | | 11 | |
| 12 | | 191 | 1375 | | 89 41 01 | 11 | | | | | | | 12 | |
| 13 | | 192 | 1815 | | 89 39 53 | 11 | | | | | | | 13 | |
| 14 | ⊙ | 193 | 2255 | | 89 55 23 | 11 | | | | | | | 14 | |
| 15 | | | | | 270 04 29 | 11 | | | | | | | 15 | |
| 16 | | | | | | | | | | | | | 16 | |
| 17 | | | | | | | | | | | | | 17 | |

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⊙ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Jeshokouk STATE/COUNTY ALASKA BOOK NO. 42 PAGE 11 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 3 DY 2 MO 81 YR
 SURVEYOR M. O'GRADY INSTRUMENT DESC/SERIAL NO. T-2 Wild CREW NO. 1186

| LINE | | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | | |
|------|----------|-----------|-----------------|---|-------------------------|---------------|-----------|----------------------|------------|------|---------|-----------|-------------------------------|
| | | | DISTANCE | <input checked="" type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | L/R OR DI | RIGHT TURNED HORIZONTAL ANGLE |
| | | | | SLOPE | | | | | HORIZ | INST | | | |
| 1 | | | | | | | | | | | | 1 | |
| 2 | | TP 7 | 1540 | | 89 35 46 11 | | | | | | | 2 | |
| 3 | | | | | 210 24 15 11 | | | | 75.9 | | | 3 | |
| 4 | | TP 7 | 0 | | 90 | 5.2 | | | | | | 4 | |
| 5 | | TP 7 | 0 | | 90 | 3.2 | | | 81.1 | | | 5 | |
| 6 | | | | | | | | | | | | 6 | |
| 7 | | BANK MARK | | 3257.22 | 90 02 08 | 6.0 | | -7.9 | 73.2 | | | 7 | Elev 71.3 |
| 8 | | 81393 | | | 269 57 37 | 6.0 | | | | | | 8 | 73.2 - 71.3 = |
| 9 | | BANK MARK | | 3257.22 | 90 02 08 | 6.0 | | | | | | 9 | 1.9 tie |
| 10 | | | | | 269 57 37 | 6.0 | | | | | | 10 | 1.9 + IE |
| 11 | | TP 7 | 0 | | 90 | 5.2 | | | 79.2 | | | 11 | |
| 12 | | TP 7 | 0 | | 90 | 5.2 | | | 74.0 | | | 12 | |
| 13 | | | 1540 | | 89 35 46 11 | | | | | | | 13 | |
| 14 | | | 2355 | | 89 55 55 11 | | | | | | | 14 | |
| 15 | | | | | 270 24 15 11 | | | | | | | 15 | |
| 16 | | TP 6 | | | 210 24 15 11 | | | | 74.1 | | | 16 | |
| 17 | | TP 6 | | | | | | | 74.1 | | | 17 | |

WORKED BY _____ CHECKED BY 1ST _____ 2ND _____

SYMBOLS

= BACKSIGHT










= INSTRUMENT SET-UP

= SIDESHOT

= FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshkepuk STATE/COUNTY Alaska BOOK NO. A2 PAGE 12 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 2 DY 2 MO 8 YR 81
 SURVEYOR M.O'GRADY INSTRUMENT DESC/SERIAL NO. T-2 Wild CREW NO. 1186

| LINE |     | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | | | | |
|------|--|--------------|----------|---|-----------|---------------------|---------------|-----------|----------------------|-----------|---------|-----------|-------------------------------|------|-----|
| | | | DISTANCE | <input checked="" type="checkbox"/> FEET <input type="checkbox"/> METERS | | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | L/R OR DI | RIGHT TURNED HORIZONTAL ANGLE | LINE | |
| | | | | SLOPE | HORIZ | | | | | INST | | | | | ROD |
| 1 |  | SP 193 | 2255 | | 89 55 33 | 11 | | | | | | 1 | | | |
| 2 | | | | | 210 04 29 | 11 | | | 66.1 | | | 2 | | | |
| 3 |  | SP 193 dir | 3080 | | 89 50 30 | 11 | | | | | | 3 | | | |
| 4 |  | SP 193 indir | 3080 | | 270 04 44 | 11 | +2.2 | | | | | 4 | | | |
| 5 | | | | | | | | | | | | 5 | | | |
| 6 | | 194 | 2640 | | 90 05 56 | 11 | | | | | | 6 | | | |
| 7 | | 195 | 2200 | | 90 33 20 | 11 | | | | | | 7 | | | |
| 8 | | 196 | 1760 | | 90 49 20 | 11 | | | | | | 8 | | | |
| 9 | | 197 | 1320 | | 90 32 22 | 11 | | | | | | 9 | | | |
| 10 | | 198 | 880 | | 90 27 12 | 11 | | | | | | 10 | | | |
| 11 | | 199 | 440 | | 89 48 42 | 11 | | | | | | 11 | | | |
| 12 |  | 200 | -0- | | 90 | 5.2 | | 68.3 | | | | 12 | | | |
| 13 | | 201 | 440 | | 89 01 37 | 11 | | | | | | 13 | | | |
| 14 | | 202 | 880 | | 89 36 04 | 11 | | | | | | 14 | | | |
| 15 | | 203 | 1320 | | 89 47 03 | 11 | | | | | | 15 | | | |
| 16 |  | 204 | 1760 | | 90 06 07 | 11 | -14.0 | | 54.3 | | | 16 | | | |
| 17 | | | | | 269 54 04 | 11 | | | | | | 17 | | | |

TI-23471B

WORKED BY _____ CHECKED BY 1ST _____ 2ND _____

SYMBOLS

 = BACKSIGHT

 = INSTRUMENT SET-UP

 = SIDESHOT

 = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshkepak STATE/COUNTY Alaska BOOK NO. A2 PAGE 13 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 2 BY 2 MO 81 YR
 SURVEYOR M. O'GRADY INSTRUMENT DESC/SERIAL NO. T-2 Wild CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ○ | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | |
|------|---|---------|----------|---|---------------------|---------------|-----------|----------------------|------------|------|---------|-------------------------------|
| | | | DISTANCE | <input checked="" type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | RIGHT TURNED HORIZONTAL ANGLE |
| | | | | SLOPE | | | | | HORIZ | INST | | |
| 1 | Δ | SP 20A | 2160 | | 90 15 20 | 11 | | +2216 | | | 1 | |
| 2 | | | | | 269 45 2 | 11 | | | | | 2 | |
| 3 | | 205 | 2200 | / | 90 26 43 | 11 | | | | | 3 | |
| 4 | | 206 | 1760 | | 90 41 20 | 11 | | | | | 4 | |
| 5 | | 207 | 1320 | | 90 43 14 | 11 | | | | | 5 | |
| 6 | | 208 | 880 | | 92 12 58 | 11 | | | | | 6 | |
| 7 | | 209 | 440 | | 94 00 04 | 11 | | | | | 7 | |
| 8 | Δ | 210 | -0- | | 90 | 5.2 | | | 76.9 | | 8 | |
| 9 | | 211 | 440 | | 90 39 52 | 11 | | | | | 9 | |
| 10 | | 212 | 880 | | 90 30 29 | 11 | | | | | 10 | |
| 11 | | 213 | 1320 | | 90 17 19 | 11 | | | | | 11 | |
| 12 | | 214 | 1760 | | 90 14 00 | 11 | | | | | 12 | |
| 13 | | 215 | 2200 | | 89 41 45 | 11 | | | | | 13 | |
| 14 | ○ | 216 | 2160 | | 89 45 50 | 11 | | | | | 14 | |
| 15 | | | | | 270 14 10 | 11 | | 0.0 | 76.9 | | 15 | |
| 16 | | | | | | | | | | | 16 | |
| 17 | | | | | | | | | | | 17 | |

WORKED BY _____ CHECKED BY 1ST _____ 2ND _____

SYMBOLS

Δ = BACKSIGHT

⊕ = INSTRUMENT SET-UP

SS = SIDESHOT

○ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshkepek STATE/COUNTY ALASKA BOOK NO. 42 PAGE 11 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 3 DY 2 MO 81 YR
 SURVEYOR M. O'GRADY INSTRUMENT DESC/SERIAL NO. J-2 Wild CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙ | STATION | VERTICAL | | | | | | HORIZONTAL | | L/R OR DI | RIGHT TURNED HORIZONTAL ANGLE | LINE | REMARKS |
|------|---|----------------|-----------------|--|---------------------|---------------|-----------|----------------------|------------|------|-----------|-------------------------------|------|---------|
| | | | DISTANCE | <input type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | | | |
| | | | | SLOPE | | | | | HORIZ | INST | | | | |
| 1 | | | | | | | | | | | | 1 | | |
| 2 | Δ | SP216 | 1760 | | 89 35 13 | 11 | | -1.7 | | | | 2 | | |
| 3 | | | | | 270 24 49 | 11 | | | | | | 3 | | |
| 4 | | 217 | 1320 | | 89 31 07 | 11 | | | | | | 4 | | |
| 5 | | 218 | 880 | | 89 22 22 | 11 | | | | | | 5 | | |
| 6 | | 219 | 440 | | 88 52 46 | 11 | | | | | | 6 | | |
| 7 | π | 220 | -0- | | 90 | 5.3 | | | 15.2 | | | 7 | | |
| 8 | | 221 | 440 | | 89 52 46 | 11 | | | | | | 8 | | |
| 9 | | 222 | 880 | | 90 28 18 | 11 | | | | | | 9 | | |
| 10 | ⊙ | 223 | 1320 | | 90 22 27 | 11 | | | | | | 10 | | |
| 11 | | 224 | 1760 | | 90 22 59 | 11 | | -19.8 | | | | 11 | | |
| 12 | | | | | 269 37 03 | 11 | | | | 55.4 | | 12 | | |
| 13 | | | | | | | | | | | | 13 | | |
| 14 | Δ | SP 223 | 2640 | | 90 04 49 | 11 | | +14.6 | | | | 14 | | |
| 15 | | | | | 28 55 20 | 11 | | | | | | 15 | | |
| 16 | | | | | | | | | | | | 16 | | |
| 17 | | | | | | | | | | | | 17 | | |

WORKED BY _____ CHECKED BY 1ST _____ 2ND _____

SYMBOLS Δ = BACKSIGHT π = INSTRUMENT SET-UP SS = SIDESHOT ⊙ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshokputk STATE/COUNTY Alaska BOOK NO. 42 PAGE 15 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 3 DY 2 MO 81 YR
 SURVEYOR M. O'GRADY INSTRUMENT DESC/SERIAL NO. J-2 wild CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ○ | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | | |
|------|---|---------|----------|---|---------------------|---------------|-----------|----------------------|------------|------|---------|-------------------------------|------|
| | | | DISTANCE | <input checked="" type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | RIGHT TURNED HORIZONTAL ANGLE | LINE |
| | | | | SLOPE | | | | | HORIZ | INST | | | |
| 1 | | 224 | 2200 | | 90 26 33 | 11 | | | | | 1 | | |
| 2 | | 225 | 1760 | | 90 38 22 | 11 | | | | | 2 | | |
| 3 | | 226 | 1320 | | 90 43 20 | 11 | | | | | 3 | | |
| 4 | | 227 | 880 | | 90 40 21 | 11 | | | | | 4 | | |
| 5 | | 228 | 440 | | 90 15 51 | 11 | | | | | 5 | | |
| 6 | Δ | 229 | 6 | | 90 | 5.4 | | 70.0 | | | 6 | | |
| 7 | | 230 | 440 | | 89 12 06 | 11 | | | | | 7 | | |
| 8 | | 231 | 880 | | 89 59 14 | 11 | | | | | 8 | | |
| 9 | | 232 | 1320 | | 89 02 50 | 11 | | | | | 9 | | |
| 10 | | 233 | 1760 | | 89 12 45 | 11 | | | | | 10 | | |
| 11 | | 234 | 2200 | | 89 21 33 | 11.5 | | | | | 11 | | |
| 12 | | 235 | 2640 | | 89 34 27 | 17.5 | | | | | 12 | | |
| 13 | ○ | 236 | 3080 | | 89 28 18 | 11.0 | | | | | 13 | | |
| 14 | | | | | 270 31 50 | 11.0 | +17.7 | 87.7 | | | 14 | | |
| 15 | | | | | | | | | | | 15 | | |
| 16 | Δ | SP 236 | 935 | | 89 23 34 | 11 | 41.0 | | | | 16 | | |
| 17 | | | | | 270 36 38 | 11 | | | | | 17 | | |

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WORKED BY _____ CHECKED BY 1ST _____ 2ND _____

SYMBOLS Δ = BACKSIGHT Δ = INSTRUMENT SET-UP SS = SIDESHOT ○ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshelput STATE/COUNTY ALASKA BOOK NO. 42 PAGE 16 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 3 DY 2 MO 81 YR
 SURVEYOR M. O'GRADY INSTRUMENT DESC/SERIAL NO. T-2 wild CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙ | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | | | |
|------|---|---------|----------|---|----------------------|---------------|-----------|----------------------|------------|------|---------|-----------|-------------------------------|------|
| | | | DISTANCE | <input checked="" type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | L/R OR DI | RIGHT TURNED HORIZONTAL ANGLE | LINE |
| | | | | SLOPE | | | | | HORIZ | INST | | | | |
| 1 | | SP 237 | 495 | | 94 13 07 | 3.5 | | | | | | 1 | | |
| 2 | | SP 238 | 55 | | 92 12 57 | 3.5 | | | | | | 2 | | |
| 3 | Δ | TP | -0- | | 90 | 5.0 | | | 88.7 | | | 3 | | |
| 4 | | SP 239 | 385 | | 89 05 12 | 11 | | | | | | 4 | | |
| 5 | | JP 240 | 825 | | 90 08 15 | 11 | | | | | | 5 | | |
| 6 | ⊙ | " 241 | 1265 | | 90 13 55 | 11 | | | | | | 6 | | |
| 7 | | | | | 269 46 05 | 11 | | -16.1 | | 92.6 | | 7 | | |
| 8 | | | | | | | | | | | | 8 | | |
| 9 | Δ | SP 241 | 2200 | | 89 41 59 | 11 | | -0.7 | | | | 9 | | |
| 10 | | | | | 270 18 15 | 11 | | | | | | 10 | | |
| 11 | | | | | 270 18 13 | 11 | | | | | | 11 | | |
| 12 | | 242 | 1760 | | 90 06 14 | 11 | | | | | | 12 | | |
| 13 | | 243 | 1320 | | 90 09 20 | 11 | | | | | | 13 | | |
| 14 | | 244 | 880 | | 90 27 43 | 11 | | | | | | 14 | | |
| 15 | | 245 | 440 | | 89 46 08 | 11 | | | | | | 15 | | |
| 16 | Δ | 246 | -0- | | 90 | #3 | | | 71.9 | | | 16 | | |
| 17 | | | | | | | | | | | | 17 | | |

TI-23471B

WORKED BY _____ CHECKED BY 1ST _____ 2ND _____

SYMBOLS

Δ = BACKSIGHT

⊕ = INSTRUMENT SET-UP

SS = SIDESHOT

⊙ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshkepwuk STATE/COUNTY Alaska BOOK NO. A 2 PAGE 17 OF
 LINE/LOOP NO. 13-81 TYPE SURVEY Vert CLIENT USGS DATE 3 DY 2 MO 81 YR
 SURVEYOR M. O'BRYEN INSTRUMENT DESC/SERIAL NO. T-2 Wild CREW NO. 1186

| LINE | | STATION | VERTICAL | | | | | | HORIZONTAL | | LINE | REMARKS | | |
|------|----------|---------|----------|---|---------------------|---------------|-----------|----------------------|------------|------|------|---------|------------|-------------------------------|
| | | | DISTANCE | <input checked="" type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | | L/R OR DJI | RIGHT TURNED HORIZONTAL ANGLE |
| | | | | SLOPE | | | | | HORIZ | INST | | | | |
| 1 | | SP 247 | 440 | | 88 57 40 | // | | | | | | 1 | | |
| 2 | | 248 | 880 | | 90 28 39 | // | | | | | | 2 | | |
| 3 | | 249 | 1320 | | 89 55 17 | // | | | | | | 3 | | |
| 4 | | 250 | 1760 | | 89 34 18 | // | | | | | | 4 | | |
| 5 | | 251 | 2200 | | 89 19 14 | // | | | | | | 5 | | |
| 6 | | | | | 276 46 49 | // | 15.2 | | 87.8 | | | 6 | | |
| 7 | | | | | | | | | | | | 7 | | |
| 8 | | | | | | | | | | | | 8 | | |
| 9 | | | | | | | | | | | | 9 | | |
| 10 | | | | | | | | | | | | 10 | | |
| 11 | | | | | | | | | | | | 11 | | |
| 12 | | | | | | | | | | | | 12 | | |
| 13 | | | | | | | | | | | | 13 | | |
| 14 | | | | | | | | | | | | 14 | | |
| 15 | | | | | | | | | | | | 15 | | |
| 16 | | | | | | | | | | | | 16 | | |
| 17 | | | | | | | | | | | | 17 | | |

WORKED BY _____ CHECKED BY 1ST _____ 2ND _____

SYMBOLS

= BACKSIGHT

= INSTRUMENT SET-UP

= SIDESHOT

= FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshukpak STATE/COUNTY ALASKA BOOK NO. 42 PAGE 18 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 4 DY 2 MO 8 YR
 SURVEYOR M. O'GRADY INSTRUMENT DESC/SERIAL NO. T-2 Wild CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙ | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | | |
|------|---|---------|----------|--|---------------------|---------------|-----------|----------------------|------------|------|---------|-------------------------------|------|
| | | | DISTANCE | <input type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | RIGHT TURNED HORIZONTAL ANGLE | LINE |
| | | | | SLOPE | | | | | HORIZ | INST | | | |
| 1 | A | SP 251 | 2640 | | 89 24 43 | | | -16.3 | | | | 1 | |
| 2 | | | | | 270 35 20 | | | | | | | 2 | |
| 3 | | 252 | 2200 | | 89 39 37 | | | | | | | 3 | |
| 4 | | 253 | 1760 | | 89 41 21 | | | | | | | 4 | |
| 5 | | 254 | 1320 | | 89 43 23 | | | | | | | 5 | |
| 6 | | 255 | 880 | | 89 43 11 | | | | | | | 6 | |
| 7 | | 256 | 440 | | 90 14 32 | | | | | | | 7 | |
| 8 | A | 257 | -10- | | 90 | 5.3 | | | 70.8 | | | 8 | |
| 9 | | 258 | 440 | | 88 39 22 | | | | | | | 9 | |
| 10 | | 259 | 880 | | 88 53 10 | | | | | | | 10 | |
| 11 | | 260 | 1320 | | 88 52 21 | | | | | | | 11 | |
| 12 | | 261 | 1760 | | 88 58 21 | | | | | | | 12 | |
| 13 | ⊙ | 262 | 2200 | | 89 07 48 | | | | | | | 13 | |
| 14 | | | | | 270 52 08 | | | +12.5 | 193.3 | | | 14 | |
| 15 | | | | | | | | | | | | 15 | |
| 16 | A | 262 | 880 | | 89 48 02 | | | +7.9 | | | | 16 | |
| 17 | | | | | 270 12 12 | | | | | | | 17 | |

WORKED BY _____ CHECKED BY 1ST _____ 2ND _____

SYMBOLS Δ = BACKSIGHT ⊕ = INSTRUMENT SET-UP SS = SIDESHOT ⊙ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshkepunk STATE/COUNTY ALASKA BOOK NO. 42 PAGE 19 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE BY MO YR
 SURVEYOR M. O'GRADY INSTRUMENT DESC/SERIAL NO. T-2 CREW NO.

| LINE | | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | | |
|------|----------|---------|----------|--|---------------------|---------------|-----------|----------------------|------------|------|---------|-----------|-------------------------------|
| | | | DISTANCE | <input type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | L/R OR DI | RIGHT TURNED HORIZONTAL ANGLE |
| | | | | SLOPE | | | | | HORIZ | INST | | | |
| 1 | | 263 | 440 | | 89 59 41 | 11 | | | | | | 1 | |
| 2 | | 264 | -0- | | 90 | 53 | | | 101.2 | | | | 2 |
| 3 | | 265 | 440 | | 90 50 55 | 11 | | | | | | | 3 |
| 4 | | 266 | 880 | | 90 30 37 | 11 | | | | | | | 4 |
| 5 | | 267 | 1320 | | 90 04 16 | 11 | | | | | | | 5 |
| 6 | | 268 | 1760 | | 90 02 31 | 11 | | | | | | | 6 |
| 7 | | 269 | 2200 | | 89 53 00 | 11 | | | | | | | 7 |
| 8 | | 270 | 2640 | | 89 54 12 | 11 | | | | | | | 8 |
| 9 | | | | | 270 05 52 | 11 | -6.4 | | 94.8 | | | | 9 |
| 10 | | | | | | | | | | | | | 10 |
| 11 | | 270 | 1320 | | 89 52 10 | 11 | 47.9 | | | | | | 11 |
| 12 | | | | | 270 07 57 | 11 | | | | | | | 12 |
| 13 | | 271 | 880 | | 89 40 58 | 11 | | | | | | | 13 |
| 14 | | 272 | 440 | | 89 03 00 | 11 | | | | | | | 14 |
| 15 | | 273 | -0- | | 90 | 52 | | | 102.7 | | | | 15 |
| 16 | | | | | | | | | | | | | 16 |
| 17 | | | | | | | | | | | | | 17 |

WORKED BY _____ CHECKED BY 1ST _____ 2ND _____

SYMBOLS = BACKSIGHT
 = INSTRUMENT SET-UP
 SS = SIDESHOT
 = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Tetchepuk STATE/COUNTY ALASKA BOOK NO. A2 PAGE 20 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 4 DY 2 MO 81 YR
 SURVEYOR M. O'GEADY INSTRUMENT DESC/SERIAL NO. T-2 w/d CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙ | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | | |
|------|---|---------|----------|--|---------------------|---------------|-----------|----------------------|------------|------|---------|-----------|-------------------------------|
| | | | DISTANCE | <input type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | L/R OR DI | RIGHT TURNED HORIZONTAL ANGLE |
| | | | | SLOPE | | | | | HORIZ | INST | | | |
| 1 | | SP 274 | 440 | | 90 07 28 | 11 | | | | | | 1 | |
| 2 | | 275 | 880 | | 90 39 29 | 11 | | | | | | 2 | |
| 3 | | 276 | 1320 | | 90 40 32 | 11 | | | | | | 3 | |
| 4 | | 277 | 1760 | | 90 24 39 | 11 | | | | | | 4 | |
| 5 | | 278 | 2200 | | 90 08 58 | 11 | | | | | | 5 | |
| 6 | ⊙ | 279 | 2690 | | 90 00 42 | 11 | | | | | | 6 | |
| 7 | | | | | 269 59 26 | 11 | -11.3 | 914 | | | | 7 | |
| 8 | | | | | | | | | | | | 8 | |
| 9 | Δ | SP 279 | 1760 | | 90 15 16 | 11 | 418.7 | | | | | 9 | |
| 10 | | | | | 269 49 50 | 11 | | | | | | 10 | |
| 11 | | 280 | 1320 | | 90 31 06 | 11 | | | | | | 11 | |
| 12 | | 281 | 880 | | 90 34 46 | 11 | | | | | | 12 | |
| 13 | | 282 | 440 | | 90 14 03 | 11 | | | | | | 13 | |
| 14 | ⊙ | 283 | 0 | | 90 | 5.2 | | 110.1 | | | | 14 | |
| 15 | | 284 | 440 | | 89 15 18 | 11 | | | | | | 15 | |
| 16 | | 285 | 880 | | 89 29 16 | 11 | | | | | | 16 | |
| 17 | | | | | | | | | | | | 17 | |

TI-23471B

WORKED BY _____ CHECKED BY 1ST _____ 2ND _____

SYMBOLS

Δ = BACKSIGHT

⊙ = INSTRUMENT SET-UP

SS = SIDESHOT

⊙ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshkepak STATE/COUNTY ALASKA BOOK NO. 42 PAGE 21 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 4 DY 2 MO 81 YR
 SURVEYOR M. O'GRADY INSTRUMENT DESC/SERIAL NO. T-2 wild CREW NO. 126

| LINE | SS C | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | | | |
|------|-----------------|---------|----------|---|---------------------|---------------|-----------|----------------------|------------|-------|---------|------------|-------------------------------|------|
| | | | DISTANCE | <input checked="" type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | L/R OR D/I | RIGHT TURNED HORIZONTAL ANGLE | LINE |
| | | | | SLOPE | | | | | HORIZ | INST | | | | |
| 1 | | 286 | 1320 | | 89 44 27 | 11 | | | | | | 1 | | |
| 2 | | | | | 270 15 41 | 11 | | -5.0 | | 105.2 | | 2 | | |
| 3 | | | | | | | | | | | | 3 | | |
| 4 | | SP 286 | 880 | | 88 48 35 | 11 | | -7.3 | | | | 4 | | |
| 5 | | | | | 271 11 38 | 11 | | | | | | 5 | | |
| 6 | | off 287 | 440 | | 90 | 5.0 | | | | | | 6 | | |
| 7 | | 288 | - 0 - | | 90 | 5.3 | | | 97.8 | | | 7 | | |
| 8 | | off 288 | | 330 | 90 | 5.0 | | | | | | 8 | | |
| 9 | | | | | | | | | | | | 9 | | |
| 10 | | SP 289 | 440 | | 89 11 32 | 11 | | | | | | 10 | | |
| 11 | | SP 290 | 880 | | 89 14 52 | 11 | | | | | | 11 | | |
| 12 | | SP 291 | 1320 | | 89 15 49 | 11 | | | | | | 12 | | |
| 13 | | SP 292 | 1760 | | 89 33 30 | 11 | | | | | | 13 | | |
| 14 | | | | | 270 26 31 | 11 | | +2.6 | | 106.4 | | 14 | | |
| 15 | | | | | | | | | | | | 15 | | |
| 16 | | | | | | | | | | | | 16 | | |
| 17 | | | | | | | | | | | | 17 | | |

WORKED BY _____ CHECKED BY 1ST _____ 2ND _____

SYMBOLS = BACKSIGHT
 = INSTRUMENT SET-UP
 = SIDESHOT
 = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshkevik STATE/COUNTY ALASKA BOOK NO. #2 PAGE 22 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 4 DY 2 MO 81 YR
 SURVEYOR M. O'GADY INSTRUMENT DESC/SERIAL NO. T-2 Wild CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙ | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | |
|------|---|---------|----------|---|---------------------|---------------|-----------|----------------------|------------|------|---------|-------------------------------|
| | | | DISTANCE | <input checked="" type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | RIGHT TURNED HORIZONTAL ANGLE |
| | | | | SLOPE | | | | | HORIZ | INST | | |
| 1 | Δ | SP 292 | 2200 | | 89 29 04 | 11 | | -9.0 | | | 1 | |
| 2 | | | | | 270 31 12 | 11 | | | | | 2 | |
| 3 | | 293 | 1760 | | 89 44 51 | 11 | | | | | 3 | |
| 4 | | 294 | 1320 | | 89 44 06 | 11 | | | | | 4 | |
| 5 | | 295 | 880 | | 89 40 53 | 11 | | | | | 5 | |
| 6 | | 296 | 440 | | 89 40 01 | 11 | | | | | 6 | |
| 7 | ⊥ | 297 | -0- | | 90° | 52 | | 91.5 | | | 7 | |
| 8 | | 298 | 440 | | 89 44 07 | 11 | | | | | 8 | |
| 9 | | 299 | 880 | | 89 35 47 | 11 | | | | | 9 | |
| 10 | | 300 | 1320 | | 89 42 32 | 11 | | | | | 10 | |
| 11 | | 301 | 1760 | | 89 41 46 | 11 | | | | | 11 | |
| 12 | ⊙ | 302 | 2200 | | 89 44 37 | 11 | | | | | 12 | |
| 13 | | | | | 270 15 30 | 11 | | | | | 13 | |
| 14 | | | | | | | | | | | 14 | |
| 15 | | | | | | | | | | | 15 | |
| 16 | | | | | | | | | | | 16 | |
| 17 | | | | | | | | | | | 17 | |

WORKED BY _____ CHECKED BY 1ST _____ 2ND _____

SYMBOLS

Δ = BACKSIGHT

⊥ = INSTRUMENT SET-UP

SS = SIDESHOT

⊙ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshukpak STATE/COUNTY ALASKA BOOK NO. A 2 PAGE 23 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 5 BY 2 MO 81 YR
 SURVEYOR M. O'GRADY INSTRUMENT DESC/SERIAL NO. T-2 W&K CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ◎ | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | | |
|------|---|-----------|----------|---|---------------------|---------------|-----------|----------------------|------------|------|---------|-----------|-------------------------------|
| | | | DISTANCE | <input checked="" type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | L/R OR DI | RIGHT TURNED HORIZONTAL ANGLE |
| | | | | SLOPE | | | | | HORIZ | INST | | | |
| 1 | ◎ | BARR MARK | 205.44 | | 89 12 A | 11 | | | | | | 1 | 81395 |
| 2 | | #81395 | | | 270 47 15 | 11 | 19.3 | | 110.7 | | | 2 | Elev 109.0 |
| 3 | | | | | | | | | | | | 3 | 110.7 - 109.0 = 1.7 |
| 4 | Δ | BARR MARK | 2195.41 | | 89 12 A | 11 | -9.3 | | | | | 4 | 1.7 TIE |
| 5 | | #81395 | | | 270 47 15 | 11 | | | | | | 5 | |
| 6 | | | | | | | | | | | | 6 | |
| 7 | ⊥ | SP 297 | -0- | | 96.0 | 5.1 | | 89.7 | | | | 7 | |
| 8 | | | | | | | | | | | | 8 | |
| 9 | ◎ | SP 302 | 2200 | | 89 44 37 | 11 | | | | | | 9 | |
| 10 | | | | | 220 15 30 | 11 | -1.0 | | 89.7 | | | 10 | |
| 11 | | | | | | | | | | | | 11 | |
| 12 | Δ | SP 302 | 2475 | | 90 38 32 | 15 | | | | | | 12 | |
| 13 | | | | | 269 22 02 | 15 | -42.7 | | | | | 13 | |
| 14 | | 303 | 2035 | | 90 42 33 | 11 | | | | | | 14 | |
| 15 | | 304 | 1595 | | 90 29 15 | 11 | | | | | | 15 | |
| 16 | | 305 | 1155 | | 90 16 14 | 11 | | | | | | 16 | |
| 17 | | | | | | | | | | | | 17 | |

WORKED BY _____ CHECKED BY 1ST _____ 2ND _____

SYMBOLS Δ = BACKSIGHT ⊥ = INSTRUMENT SET-UP SS = SIDESHOT ◎ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshkepak STATE/COUNTY ALASKA BOOK NO. A2 PAGE 24 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 5 BY 2 MO 8 YR
 SURVEYOR M. O'GRADY INSTRUMENT DESC/SERIAL NO. T-2 Wild CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙ | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | | |
|------|---|---------|----------|-------|---------------------|---------------|-----------|----------------------|------------|-----|---------|-------------------------------|------|
| | | | DISTANCE | | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | RIGHT TURNED HORIZONTAL ANGLE | LINE |
| | | | SLOPE | HORIZ | | | | | INST | ROD | | | |
| 1 | | 306 | 715 | | 90 05 17 | 11 | | | | | | 1 | |
| 2 | | 307 | 295 | | 89 28 30 | 11 | | | | | | 2 | |
| 3 | Δ | TP | -0- | | 90 | 5.0 | | 131.4 | | | | 3 | |
| 4 | | 308 | 165 | | 88 12 52 | 11 | | | | | | 4 | |
| 5 | | 309 | 605 | | 89 37 46 | 11 | | | | | | 5 | |
| 6 | | 310 | 1045 | | 89 55 54 | 11 | | | | | | 6 | |
| 7 | | 311 | 1485 | | 90 00 20 | 11 | | | | | | 7 | |
| 8 | | 312 | 1925 | | 90 01 57 | 11 | | | | | | 8 | |
| 9 | | 313 | 2365 | | 89 58 27 | 11 | | | | | | 9 | |
| 10 | ⊙ | 314 | 2805 | | 89 55 52 | 11 | | | | | | 10 | |
| 11 | | | | | 90 03 55 | 11 | -7.6 | 123.9 | | | | 11 | |
| 12 | | | | | | | | | | | | 12 | |
| 13 | | | | | 89 24 30 | 11 | | | | | | 13 | |
| 14 | Δ | SP 314 | 2140 | | 90 35 23 | 11 | -16.4 | | | | | 14 | |
| 15 | | 315 | 2200 | | 89 31 37 | 11 | | | | | | 15 | |
| 16 | | 316 | 1760 | | 89 37 17 | 11 | | | | | | 16 | |
| 17 | | | | | | | | | | | | 17 | |

WORKED BY _____ CHECKED BY 1ST _____ 2ND _____

SYMBOLS Δ = BACKSIGHT Δ = INSTRUMENT SET-UP SS = SIDESHOT ⊙ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshokpek STATE/COUNTY Alaska BOOK NO. A2 PAGE 26 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 5 BY 2 MO 8 YR
 SURVEYOR M. O'LEARY INSTRUMENT DESC/SERIAL NO. T-2 wild CREW NO. 186

| LINE | <small>SS</small> | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | | | |
|------|---------------------------|---------|----------|-------|---------------------|---------------|-----------|----------------------|------------|-------|---------|----------|-------------------------------|--|
| | | | DISTANCE | | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | LR OR DI | RIGHT TURNED HORIZONTAL ANGLE | |
| | | | SLOPE | HORIZ | | | | | INST | ROD | | | | |
| 1 | | SP 317 | 1320 | | 89 57 58 | 11 | | | | | | 1 | | |
| 2 | | 318 | 880 | | 90 07 12 | 11 | | | | | | | 2 | |
| 3 | | 319 | 440 | | 89 50 08 | 11 | | | | | | | 3 | |
| 4 | | SP 320 | -0- | | 90 | 5.1 | | | 107.5 | | | | 4 | |
| 5 | | 321 | 440 | | 89 05 25 | 11 | | | | | | | 5 | |
| 6 | | 322 | 880 | | 89 23 07 | 11 | | | | | | | 6 | |
| 7 | | SP 323 | 1320 | | 89 25 46 | 11 | | | | | | | 7 | |
| 8 | | 324 | 1760 | | 89 26 15 | 11 | | | | | | | 8 | |
| 9 | | 325 | 2200 | | 89 30 09 | 11 | | | | | | | 9 | |
| 10 | | 326 | 2640 | | 89 50 48 | 11 | | | | | | | 10 | |
| 11 | | | | | 270 28 54 | 11 | | | | | | | 11 | |
| 12 | | | | | 270 29 00 | 11 | | 115 | | 119.0 | | | 12 | |
| 13 | | | | | | | | | | | | | 13 | |
| 14 | | SP 326 | 2100 | | 269 53 23 | 11 | | +15.1 | | | | | 14 | |
| 15 | | | | | 90 06 10 | | | | | | | | 15 | |
| 16 | | | | | | | | | | | | | 16 | |
| 17 | | | | | | | | | | | | | 17 | |

WORKED BY _____ CHECKED BY 1ST _____ 2ND _____

SYMBOLS

= BACKSIGHT

= INSTRUMENT SET-UP

= SIDESHOT

= FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshoepuk STATE/COUNTY ALASKA BOOK NO. 42 PAGE 26 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 5 DY 2 MO 81 YR
 SURVEYOR M. O'GRADY INSTRUMENT DESC/SERIAL NO. T-2 Wild CREW NO. 1186

| LINE | <small>SS</small> | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | | |
|------|-----------------------|--------------------|----------|---|---------------------|---------------|-----------|----------------------|------------|------|---------|----------|-------------------------------|
| | | | DISTANCE | <input checked="" type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | LR OR DI | RIGHT TURNED HORIZONTAL ANGLE |
| | | | | SLOPE | | | | | HORIZ | INST | | | |
| 1 | | | | | | | | | | | | 1 | |
| 2 | | 331 | -0- | | 90 | 55 | | | 134.1 | | | 2 | |
| 3 | | | | | 90 05 04 | 11 | -14.5 | | | | | 3 | |
| 4 | | BENCH MARK # 81396 | 2432 | | 269 55 13 | 11 | -14.4 | | | | | 4 | Elev 119.56 |
| 5 | | | | | | | | 119.7 | | | | 5 | |
| 6 | | | | | | | | | | | | 6 | 119.7 - 119.56 = |
| 7 | | BENCH MARK # 81396 | 2432 | | 90 05 04 | 11 | +14.5 | | | | | 7 | 0.14 tie |
| 8 | | | | | 269 55 13 | 11 | +14.4 | | | | | 8 | |
| 9 | | | | | | | | | | | | 9 | |
| 10 | | SP 331 | 70- | | 90 | 55 | | | 134.0 | | | 10 | |
| 11 | | | | | | | | | | | | 11 | |
| 12 | | SP 327 | 1760 | | 90 06 50 | 11 | | | | | | 12 | |
| 13 | | 328 | 1320 | | 89 57 45 | 11 | | | | | | 13 | |
| 14 | | 329 | 880 | | 89 47 58 | 11 | | | | | | 14 | |
| 15 | | 326 | 440 | | 89 16 43 | 11 | | | | | | 15 | |
| 16 | | 332 | 440 | | 90 15 18 | 11 | | | | | | 16 | |
| 17 | | | | | | | | | | | | 17 | |

WORKED BY _____ CHECKED BY 1ST MNY 2ND _____

SYMBOLS

= BACKSIGHT

= INSTRUMENT SET-UP

= SIDESHOT

= FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshkepak STATE/COUNTY Alaska BOOK NO. 42 PAGE 27 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 5 DY 2 MO 81 YR
 SURVEYOR M. O'GRADY INSTRUMENT DESC/SERIAL NO. T-2 wild CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙ | STATION | VERTICAL | | | | | | HORIZONTAL | | | REMARKS | | |
|------|---|---------|----------|--|---------------------|---------------|-----------|----------------------|------------|------|----------|---------|-------------------------------|------|
| | | | DISTANCE | <input type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | LR OR DI | | RIGHT TURNED HORIZONTAL ANGLE | LINE |
| | | | | SLOPE | | | | | HORIZ | INST | | | | |
| 1 | | SP333 | 880 | | 90 13 16 | 11 | | | | | | 1 | | |
| 2 | | SP334 | 1320 | | 90 06 35 | 11 | | | | | | 2 | | |
| 3 | | 335 | 1760 | | 90 01 30 | 11 | | | | | | 3 | | |
| 4 | ⊙ | 336 | 2200 | | 89 58 59 | 11 | | | | | | 4 | | |
| 5 | | | | | 270 00 57 | 11 | -10.3 | | 123.8 | | | 5 | | |
| 6 | | | | | | | | | | | | 6 | | |
| 7 | Δ | SP 336 | 2200 | | 89 56 56 | 11 | | | | | | 7 | | |
| 8 | | | | | 270 04 06 | 11 | +7.7 | 131.9 | | | | 8 | | |
| 9 | | 337 | 2200 | | 90 12 18 | 11 | | | | | | 9 | | |
| 10 | | 338 | 1760 | | 90 31 00 | 11 | | | | | | 10 | | |
| 11 | | 339 | 1320 | | 90 19 14 | 11 | | | | | | 11 | | |
| 12 | | 340 | 880 | | 90 48 43 | 11 | | | | | | 12 | | |
| 13 | | 341 | 440 | | 89 30 24 | 11 | | | | | | 13 | | |
| 14 | Δ | 342 | 0 | | 90 | 54 | | | 131.5 | | | 14 | | |
| 15 | | 343 | 440 | | 89 42 04 | 11 | | | | | | 15 | | |
| 16 | | 344 | 880 | | 89 52 07 | 11 | | | | | | 16 | | |
| 17 | | 345 | 1320 | | 89 54 11 | 11 | | | | | | 17 | | |

WORKED BY _____ CHECKED BY MM 1ST _____ 2ND _____

SYMBOLS Δ = BACKSIGHT Δ = INSTRUMENT SET-UP SS = SIDESHOT ⊙ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshedupuk STATE/COUNTY Alaska BOOK NO. 42 PAGE 28 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 5 DY 2 MO 81 YR
 SURVEYOR M. O'BRIEN INSTRUMENT DESC/SERIAL NO. T-2 wild CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙ | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | | |
|------|---|---------|----------|--------|---------------------|---------------|-----------|----------------------|------------|--------|---------|-------------------------------|------|
| | | | DISTANCE | | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | RIGHT TURNED HORIZONTAL ANGLE | LINE |
| | | | SLOPE | HORIZ. | | | | | FEET | METERS | | | |
| 1 | | SP 346 | 1760 | | 89 56 05 | 11 | | | | | | 1 | |
| 2 | | 347 | 2200 | | 89 52 42 | 11 | | | | | | 2 | |
| 3 | | 348 | 2640 | | 89 45 42 | 11 | | | | | | 3 | |
| 4 | ⊙ | 349 | 3080 | | 89 41 47 | 11 | | | | | | 4 | |
| 5 | | | | | 270 18 11 | 11 | 45.5 | | 137.6 | | | 5 | |
| 6 | | | | | | | | | | | | 6 | |
| 7 | Δ | SP 349 | 2640 | | 89 51 18 | 11 | | | | | | 7 | |
| 8 | | | | | 270 09 02 | # | 44.1 | 141.5 | | | | 8 | |
| 9 | | | | | 270 08 58 | 11 | | | | | | 9 | |
| 10 | | 350 | 2200 | | 89 49 11 | 11 | | | | | | 10 | |
| 11 | | 351 | 1760 | | 89 40 33 | 11 | | | | | | 11 | |
| 12 | | 352 | 1320 | | 89 38 35 | 11 | | | | | | 12 | |
| 13 | | 353 | 080 | | 89 34 42 | 11 | | | | | | 13 | |
| 14 | | 354 | 440 | | 89 23 13 | 11 | | | | | | 14 | |
| 15 | Δ | 355 | 0 | | 90 | 2.3 | | 14.1 | | | | 15 | |
| 16 | | 356 | 440 | | 89 13 20 | 11 | | | | | | 16 | |
| 17 | | | | | | | | | | | | 17 | |

WORKED BY _____ CHECKED BY 1ST MW 2ND _____

SYMBOLS

Δ = BACKSIGHT

⊕ = INSTRUMENT SET-UP

SS = SIDESHOT

⊙ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshikvak STATE/COUNTY Alaska BOOK NO. 42 PAGE 29 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 5 DY 2 MO 81 YR
 SURVEYOR M. OGRAIN INSTRUMENT DESC/SERIAL NO. T-2 CREW NO. 1186

| LINE | | STATION | VERTICAL | | | | | | ELEVATION | | HORIZONTAL | | REMARKS | |
|------|----------|---------|----------|--|---------------------|---------------|-----------|----------------------|-----------|-------|------------|-------------------------------|---------|------|
| | | | DISTANCE | <input type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | INST | ROD | L/R OR D/I | RIGHT TURNED HORIZONTAL ANGLE | | LINE |
| | | | | SLOPE | | | | | | | | | | |
| 1 | | 357 | 880 | | 89 27 42 | 11 | | | | | | 1 | | |
| 2 | | 358 | 1320 | | 89 25 55 | 11 | | | | | | 2 | | |
| 3 | | 359 | 1760 | | 89 25 45 | 11 | | | | | | 3 | | |
| 4 | | | | | 270 34 20 | 11 | | Heib | | 127.1 | | 4 | | |
| 5 | | | | | | | | | | | | 5 | | |
| 6 | | | | | | | | | | | | 6 | | |
| 7 | | | | | | | | | | | | 7 | | |
| 8 | | | | | | | | | | | | 8 | | |
| 9 | | | | | | | | | | | | 9 | | |
| 10 | | | | | | | | | | | | 10 | | |
| 11 | | | | | | | | | | | | 11 | | |
| 12 | | | | | | | | | | | | 12 | | |
| 13 | | | | | | | | | | | | 13 | | |
| 14 | | | | | | | | | | | | 14 | | |
| 15 | | | | | | | | | | | | 15 | | |
| 16 | | | | | | | | | | | | 16 | | |
| 17 | | | | | | | | | | | | 17 | | |

WORKED BY _____ CHECKED BY 1ST M. OGRAIN 2ND _____

SYMBOLS = BACKSIGHT = INSTRUMENT SET-UP = SIDESHOT = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshkepak STATE/COUNTY Alaska BOOK NO. A2 PAGE 30 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 6 DY 2 MO 31 YR
 SURVEYOR M. O'GEADY INSTRUMENT DESC/SERIAL NO. T-2 wild CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙ | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | |
|------|---|---------|----------|---|---------------------|---------------|-----------|----------------------|------------|-------|---------|-------------------------------|
| | | | DISTANCE | <input checked="" type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD ROD OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | RIGHT TURNED HORIZONTAL ANGLE |
| | | | | SLOPE | | | | | HORIZ. | INST | | |
| 1 | Δ | SP 359 | 2660 | | 89 26 42 | 11 | | -14.7 | 133.2 | 147.7 | | 1 |
| 2 | | | | | 270 33 23 | 11 | | | | | | 2 |
| 3 | | SP 360 | 2200 | | 89 27 03 | 11 | | | | | | 3 |
| 4 | | 361 | 1760 | | 89 26 55 | 11 | | | | | | 4 |
| 5 | | 362 | 1380 | | 89 13 04 | 11 | | | | | | 5 |
| 6 | | 363 | 880 | | 89 37 30 | 11 | | | | | | 6 |
| 7 | | 364 | 440 | | 89 12 10 | 11 | | | | | | 7 |
| 8 | Δ | 365 | -0- | | 90 | 5.2 | | | 133.0 | | | 8 |
| 9 | | 366 | 440 | | 89 15 41 | 11 | | | | | | 9 |
| 10 | | 367 | 880 | | 89 34 23 | 11 | | | | | | 10 |
| 11 | | 368 | 1320 | | 89 30 18 | 11 | | | | | | 11 |
| 12 | | 369 | 1760 | | 89 31 28 | 11 | | | | | | 12 |
| 13 | | 370 | 2200 | | 89 29 47 | 11 | | | | | | 13 |
| 14 | | 371 | 2660 | | 89 35 49 | 11 | | | | | | 14 |
| 15 | | 372 | 3080 | | 89 34 31 | 11 | | | | | | 15 |
| 16 | ⊙ | 373 | 3520 | | 89 32 51 | 11 | | +17.0 | | 150.0 | | 16 |
| 17 | | | | | 270 27 03 | 11 | | | | | | 17 |

WORKED BY _____ CHECKED BY 1ST MM 2ND _____

SYMBOLS

Δ = BACKSIGHT

⊕ = INSTRUMENT SET-UP

SS = SIDESHOT

⊙ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshkepunk STATE/COUNTY ALASKA BOOK NO. A2 PAGE 31 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert. CLIENT USGS DATE 6 BY 2 MO 81 YR
 SURVEYOR M. O'GRADY INSTRUMENT DESC/SERIAL NO. T-2 Wild CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙ | STATION | VERTICAL | | | | | | HORIZONTAL | | LINE | REMARKS | |
|------|---|---------------------|----------|---|---------------------|---------------|-----------|----------------------|------------|------|------|---------------------|-------------------------------|
| | | | DISTANCE | <input checked="" type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | | RIGHT TURNED HORIZONTAL ANGLE |
| | | | | SLOPE | | | | | HORIZ | INST | | | |
| 1 | Δ | SP 373 | 2200 | | 89 18 28 // | | -15.7 | | | | 1 | | |
| 2 | | | | | 210 11 42 // | | -15.7 | | | | 2 | | |
| 3 | | SP 374 | 1760 | | 89 28 04 // | | | | | | 3 | | |
| 4 | | 375 | 1320 | | 89 54 57 // | | | | | | 4 | | |
| 5 | | 376 | 880 | | 90 04 35 // | | | | | | 5 | | |
| 6 | | 377 | 440 | | 90 22 28 // | | | | | | 6 | | |
| 7 | Δ | SP 378 | -0- | | 90 5.2 | | | 134.2 | | | 7 | | |
| 8 | | | | | | | | | | | 8 | | |
| 9 | ⊙ | BAR MARK ± 81317 | 105 | | 90 3.45 | | | 130.8 | | | 9 | 131.43 | |
| 10 | | | | | | | | | | | 10 | 131.4 - 130.8 = 0.6 | |
| 11 | | | | | | | | | | | 11 | | |
| 12 | Δ | BAR MARK | 105 | | 90 3.45 | | | | | | 12 | 0.6 tie | |
| 13 | | | | | | | | | | | 13 | | |
| 14 | Δ | SP 378 | 0 | | 90 5.2 | | | 134.9 | | | 14 | | |
| 15 | | SP 379 | 440 | | 90 24 51 // | | | | | | 15 | | |
| 16 | | 880 | 880 | | 90 37 33 // | | | | | | 16 | | |
| 17 | | | | | | | | | | | 17 | | |

WORKED BY _____ CHECKED BY 1ST M. O'GRADY 2ND _____

SYMBOLS

Δ = BACKSIGHT

⊕ = INSTRUMENT SET-UP

SS = SIDESHOT

⊙ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshkepunk STATE/COUNTY ALASKA BOOK NO. 42 PAGE 32 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 6 BY 2 MO 81 YR
 SURVEYOR M. O'BREADY INSTRUMENT DESC/SERIAL NO. T-2 Wild CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙ | STATION | VERTICAL | | | | | ELEVATION | | L/R OR D/I | RIGHT TURNED HORIZONTAL ANGLE | LINE | REMARKS | |
|------|---|---------|----------|---|---------------------|--------------------|-----------|----------------------|-------|------------|-------------------------------|------|---------|-----|
| | | | DISTANCE | <input checked="" type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | INST | | | | | ROD |
| | | | | SLOPE | | | | | HORIZ | | | | | |
| 1 | ⊙ | SP 381 | 1320 | | 90 26 54 | 11 | | -21.3 | | | | 1 | | |
| 2 | | | | | 269 33 03 | 11 | | | | 113.6 | | 2 | | |
| 3 | | | | | | | | | | | | 3 | | |
| 4 | Δ | SP 381 | 2610 | | 90 15 00 | 11 | | +22.4 | | | | 4 | | |
| 5 | | | | | 269 45 10 | 11 | | +22.3 | | | | 5 | | |
| 6 | | 382 | 2200 | | 90 58 25 | 11 | | | | | | 6 | | |
| 7 | | 383 | 1760 | | 91 23 06 | 11 | | | | | | 7 | | |
| 8 | | 384 | 1320 | | 91 57 29 | 11 | | | | | | 8 | | |
| 9 | | 385 | 880 | | 92 16 22 | 11 | | | | | | 9 | | |
| 10 | | 386 | 440 | | 91 51 16 | 11 | | | | | | 10 | | |
| 11 | Δ | 387 | -0- | | 90 | 5.3 | | | 135.9 | | | 11 | | |
| 12 | ⊙ | 387 | 388 | -0- | 90 | 5.3 5.3 | | -5.3 | | 130.6 | | 12 | | |
| 13 | | | | | | | | | | | | 13 | | |
| 14 | | | | | | | | | | | | 14 | | |
| 15 | | | | | | | | | | | | 15 | | |
| 16 | | | | | | | | | | | | 16 | | |
| 17 | | | | | | | | | | | | 17 | | |

WORKED BY _____ CHECKED BY 1ST _____ 2ND _____

SYMBOLS

Δ = BACKSIGHT

⊕ = INSTRUMENT SET-UP

SS = SIDESHOT

⊙ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshke park STATE/COUNTY Alaska BOOK NO. 42 PAGE 33 OF
 LINE/LOOP NO. 18-B1 TYPE SURVEY Vert CLIENT USGS DATE 7 DY 2 MO 31 YR
 SURVEYOR M. O'GRADY INSTRUMENT DESC/SERIAL NO. T-2 Wild CREW NO. 1186

| LINE | | STATION | VERTICAL | | | | | | ELEVATION | | L/R OR D/I | RIGHT TURNED HORIZONTAL ANGLE | LINE | REMARKS |
|------|----------|---------|----------|---|---------------------|---------------|-----------|----------------------|-----------|-----|------------|-------------------------------|------|---------|
| | | | DISTANCE | <input checked="" type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | INST | ROD | | | | |
| | | | | SLOPE | | | | | | | | | | |
| 1 | | SP 387 | 2200 | | 90 14 36 | 11 | | | 890.2 | | | | 1 | |
| 2 | | | | | 269 45 08 | 11 | | | 110.3 | | | | 2 | |
| 3 | | SP 388 | 1760 | | 90 13 15 | 11 | | | | | | | 3 | |
| 4 | | 389 | 1320 | | 90 05 47 | 11 | | | | | | | 4 | |
| 5 | | 390 | 880 | | 89 53 24 | 11 | | | | | | | 5 | |
| 6 | | 391 | 440 | | 89 39 30 | 11 | | | | | | | 6 | |
| 7 | | 392 | 0 | | 90 | 5.3 | | 150.9 | | | | | 7 | |
| 8 | | 393 | 440 | | 89 46 28 | 11 | | | | | | | 8 | |
| 9 | | 394 | 880 | | 91 31 48 | 11 | | | | | | | 9 | |
| 10 | | 395 | 1320 | | 91 24 33 | 11 | | | | | | | 10 | |
| 11 | | 396 | 1760 | | 91 00 18 | 11 | | | | | | | 11 | |
| 12 | | 397 | 2200 | | 90 46 23 | 11 | | | 40.6 | | | | 12 | |
| 13 | | | | | 269 13 27 | 11 | | 110.3 | | | | | 13 | |
| 14 | | | | | | | | | | | | | 14 | |
| 15 | | SP 397 | 3520 | | 90 26 31 | 11 | | | -37.8 | | | | 15 | |
| 16 | | | | | 269 33 40 | 11 | | | -37.7 | | | | 16 | |
| 17 | | | | | | | | | | | | | 17 | |

WORKED BY _____ CHECKED BY 1ST _____ 2ND _____

SYMBOLS

= BACKSIGHT

= INSTRUMENT SET-UP

= SIDESHOT

= FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshukuk STATE/COUNTY ALASKA BOOK NO. A 2 PAGE 34 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 7 DY 2 MO 81 YR
 SURVEYOR K. O'BRIEN INSTRUMENT DESC/SERIAL NO. T-2 Wild CREW NO. 1126

| LINE | | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | | |
|------|----------|---------|----------|---|---------------------|---------------|-----------|----------------------|------------|------|---------|-------------------------------|------|
| | | | DISTANCE | <input checked="" type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | RIGHT TURNED HORIZONTAL ANGLE | LINE |
| | | | | SLOPE | | | | | HORIZ | INST | | | |
| 1 | | 398 | 3080 | | 90 29 18 | 11 | | | | | | 1 | |
| 2 | | 399 | 2640 | | 90 34 44 | 11 | | | | | | 2 | |
| 3 | | 400 | 2200 | | 90 41 43 | 11 | | | | | | 3 | |
| 4 | | 401 | 1760 | | 90 40 19 | 11 | | | | | | 4 | |
| 5 | | 402 | 1320 | | 90 54 16 | 11 | | | | | | 5 | |
| 6 | | 403 | 880 | | 90 37 56 | 11 | | | | | | 6 | |
| 7 | | 404 | 440 | | 89 47 28 | 11 | | | | | | 7 | |
| 8 | | 405 | 0 | | 90 | 5.3 | | 142.0 | | | | 8 | |
| 9 | | 406 | 440 | | 88 47 27 | 11 | | | | | | 9 | |
| 10 | | 407 | 880 | | 89 18 44 | 11 | | | | | | 10 | |
| 11 | | 408 | 1320 | | 89 33 09 | 11 | | | | | | 11 | |
| 12 | | 409 | 1760 | | 89 35 19 | 11 | | | | | | 12 | |
| 13 | | 410 | 2200 | | 89 44 05 | 11 | | | | | | 13 | |
| 14 | | 411 | 2640 | | 89 52 29 | 11 | -5.1 | | 142.9 | | | 14 | |
| 15 | | | | | 270 07 27 | 11 | | | | | | 15 | |
| 16 | | | | | | | | | | | | 16 | |
| 17 | | | | | | | | | | | | 17 | |

WORKED BY _____ CHECKED BY 1ST _____ 2ND _____

SYMBOLS

= BACKSIGHT

= INSTRUMENT SET-UP

= SIDESHOT

= FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshkepuk STATE/COUNTY Alaska BOOK NO. 42 PAGE 35 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 7 DY 2 MO 81 YR
 SURVEYOR M. O'GRADY INSTRUMENT DESC/SERIAL NO. T-2LW1d CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙ | STATION | VERTICAL | | | | | | ELEVATION | | L/R OR DJI | RIGHT TURNED HORIZONTAL ANGLE | LINE | REMARKS | |
|------|---|---------|----------|--|-------|---------------------|---------------|-----------|----------------------|-------|------------|-------------------------------|------|---------|-----|
| | | | DISTANCE | <input type="checkbox"/> FEET <input type="checkbox"/> METERS | | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | INST | | | | | ROD |
| | | | | SLOPE | HORIZ | | | | | | | | | | |
| 1 | Δ | SP 411 | 2200 | | | 89 20 43 | 11 | | -14.2 | | | | 1 | | |
| 2 | | | | | | 270 39 14 | 11 | | | | | | 2 | | |
| 3 | | 412 | 1760 | | | 89 50 08 | 11 | | | | | | 3 | | |
| 4 | | 413 | 1320 | | | 89 53 19 | 11 | | | | | | 4 | | |
| 5 | | 414 | 880 | | | 89 40 08 | 11 | | | | | | 5 | | |
| 6 | | 415 | 410 | | | 89 00 12 | 11 | | | | | | 6 | | |
| 7 | Δ | 416 | -0- | | | 90 | 5.3 | | | 128.7 | | | 7 | | |
| 8 | | 417 | 410 | | | 89 57 54 | 11.0 | | | | | | 8 | | |
| 9 | | 418 | 880 | | | 89 02 15 | 11 | | | | | | 9 | | |
| 10 | | 419 | 1320 | | | 90 06 28 | 11 | | | | | | 10 | | |
| 11 | | 420 | 1760 | | | 89 34 31 | 11 | | | | | | 11 | | |
| 12 | | 421 | 2200 | | | 89 31 06 | 11 | | | | | | 12 | | |
| 13 | ⊙ | 422 | 2640 | | | 89 35 50 | 11 | | 47.7 | | | | 13 | | |
| 14 | | | | | | 270 24 07 | 11 | | | 136.4 | | | 14 | | |
| 15 | | | | | | | | | | | | | 15 | | |
| 16 | | | | | | | | | | | | | 16 | | |
| 17 | | | | | | | | | | | | | 17 | | |

WORKED BY _____ CHECKED BY 1ST _____ 2ND _____

SYMBOLS

Δ = BACKSIGHT

⊕ = INSTRUMENT SET-UP

SS = SIDESHOT

⊙ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshokput STATE/COUNTY Alaska BOOK NO. A2 PAGE 36 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 7 DY 2 MO 81 YR
 SURVEYOR M.O'GRADY INSTRUMENT DESC/SERIAL NO. T-2 wild CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙ | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | | | |
|------|---|----------------|----------|---|----------------------|---------------|-----------|----------------------|------------|------|---------|------------|-------------------------------|------|
| | | | DISTANCE | <input checked="" type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | L/R OR D/I | RIGHT TURNED HORIZONTAL ANGLE | LINE |
| | | | | SLOPE | | | | | HORIZ | INST | | | | |
| 1 | Δ | SP422 | 1760 | | 90 25 47 | 11 | | +24.1 | | | | 1 | | |
| 2 | | | | | 269 34 10 | 11 | | | | | | 2 | | |
| 3 | | 423 | 1320 | | 90 25 09 | 11 | | | | | | 3 | | |
| 4 | | 424 | 880 | | 89 57 12 | 11 | | | | | | 4 | | |
| 5 | | 425 | 490 | | 89 46 45 | 11 | | | | | | 5 | | |
| 6 | ⊗ | 426 | -0- | | 90 | 5.3 | | 160.5 | | | | 6 | | |
| 7 | | 427 | 440 | | 89 32 09 | 11 | | | | | | 7 | | |
| 8 | | 428 | 880 | | 90 02 57 | 11 | | | | | | 8 | | |
| 9 | | 429 | 1320 | | 90 01 48 | 11 | | | | | | 9 | | |
| 10 | | 430 | 1760 | | 90 10 35 | 11 | | | | | | 10 | | |
| 11 | | 431 | 2200 | | 90 15 02 | 11 | | | | | | 11 | | |
| 12 | ⊙ | 432 | 2640 | | 90 24 42 | 11 | | -29.8 | | | | 12 | | |
| 13 | | 433 | | | 269 35 39 | 11 | | | | | | 13 | | |
| 14 | | | | | 269 35 27 | 11 | | | 130.8 | | | 14 | | |
| 15 | | | | | | | | | | | | 15 | | |
| 16 | | | | | | | | | | | | 16 | | |
| 17 | | | | | | | | | | | | 17 | | |

WORKED BY _____ CHECKED BY 1ST _____ 2ND _____

SYMBOLS Δ = BACKSIGHT ⊗ = INSTRUMENT SET-UP SS = SIDESHOT ⊙ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshkepuruk STATE/COUNTY ALASKA BOOK NO. 42 PAGE 31 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 7 DY 2 MO 81 YR
 SURVEYOR N. O'GRADY INSTRUMENT DESC/SERIAL NO. T-2 wild CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ○ | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | | | |
|------|---|---------|----------|---|---------------------|---------------|-----------|----------------------|------------|------|---------|----------|-------------------------------|------|
| | | | DISTANCE | <input checked="" type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | LR OR DR | RIGHT TURNED HORIZONTAL ANGLE | LINE |
| | | | | SLOPE | | | | | HORIZ | INST | | | | |
| 1 | Δ | SP432 | 1760 | | 89 32 19 | | | +0.6 | | | | 1 | | |
| 2 | | | | | 270 20 22 | | | | | | | 2 | | |
| 3 | | SP433 | 1320 | | 90 10 34 | | | | | | | 3 | | |
| 4 | | 434 | 880 | | 90 13 47 | | | | | | | 4 | | |
| 5 | | 435 | 440 | | 89 10 48 | | | | | | | 5 | | |
| 6 | ⊥ | 436 | -0- | | 90 | 5.1 | | | 131.3 | | | 6 | | |
| 7 | | 437 | 440 | | 89 28 30 | | | | | | | 7 | | |
| 8 | | 438 | 880 | | 90 03 57 | | | | | | | 8 | | |
| 9 | | 439 | 1320 | | 90 03 05 | | | | | | | 9 | | |
| 10 | | 440 | 1760 | | 90 13 48 | | | | | | | 10 | | |
| 11 | | 441 | 2200 | | 90 19 58 | | | | | | | 11 | | |
| 12 | ○ | 442 | 2640 | | 90 17 38 | | | -24.4 | | | | 12 | | |
| 13 | | | | | 264 42 24 | | | | 156.9 | | | 13 | | |
| 14 | | | | | | | | | | | | 14 | | |
| 15 | Δ | SP442 | 1320 | | 90 26 16 | | | +21.0 | | | | 15 | | |
| 16 | | | | | 264 33 33 | | | +0.1 | | | | 16 | | |
| 17 | | | | | 264 33 38 | | | | | | | 17 | | |

WORKED BY _____ CHECKED BY 1ST _____ 2ND _____

SYMBOLS

Δ = BACKSIGHT

⊥ = INSTRUMENT SET-UP

SS = SIDESHOT

○ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshkepuk STATE/COUNTY Alaska BOOK NO. 42 PAGE 30 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 7 DY 2 MO 81 YR
 SURVEYOR M. O'GRADY INSTRUMENT DESC/SERIAL NO. T-2 Wild CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙ | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | | |
|------|---|---------|----------|---|---------------------|---------------|-----------|----------------------|------------|------|---------|-------------------------------|------|
| | | | DISTANCE | <input checked="" type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | RIGHT TURNED HORIZONTAL ANGLE | LINE |
| | | | | SLOPE | | | | | HORIZ | INST | | | |
| 1 | | SP 443 | 880 | | 90 30 00 | 11 | | | | | | 1 | |
| 2 | | 444 | 440 | | 90 40 29 | 11 | | | | | | 2 | |
| 3 | <input checked="" type="checkbox"/> | 445 | -0- | | 90 | 5.3 | | 128.0 | | | | 3 | |
| 4 | | 446 | 440 | | 89 55 48 | 11 | | | | | | 4 | |
| 5 | | 447 | 880 | | 89 48 00 | 11 | | | | | | 5 | |
| 6 | | 448 | 1320 | | 89 40 21 | 11 | | | | | | 6 | |
| 7 | | 449 | 1760 | | 89 36 40 | 11 | | | | | | 7 | |
| 8 | | 450 | 2200 | | 89 31 46 | 11 | | | | | | 8 | |
| 9 | <input checked="" type="checkbox"/> | SP 451 | 2690 | | 89 32 52 | 11 | 46.0 | 138.0 | | | | 9 | |
| 10 | | | | | 270 29 08 | 11 | | | | | | 10 | |
| 11 | | | | | | | | | | | | 11 | |
| 12 | <input checked="" type="checkbox"/> | SP 451 | 2200 | | 89 20 57 | 11 | -4.1 | | | | | 12 | |
| 13 | | | | | 270 39 09 | 11 | | | | | | 13 | |
| 14 | | 452 | 1760 | | 89 17 25 | 11 | | | | | | 14 | |
| 15 | | ORP 453 | 1320 | | 90 | 4.8 | | | | | | 15 | |
| 16 | | ORP 454 | 880 | | 90 | 4.8 | | | | | | 16 | |
| 17 | | | | | | | | | | | | 17 | |

WORKED BY _____ CHECKED BY 1ST _____ 2ND _____

SYMBOLS Δ = BACKSIGHT = INSTRUMENT SET-UP SS = SIDESHOT ⊙ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Tashokpak STATE/COUNTY Alaska BOOK NO. 42 PAGE 39 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 7 DY 2 MO 81 YR
 SURVEYOR M. O'GRADY INSTRUMENT DESC/SERIAL NO. T-2 Wild CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> \odot | STATION | VERTICAL | | | | | | HORIZONTAL | | LINE | REMARKS | | |
|------|--|---------|----------|--|---------------------|---------------|-----------|----------------------|------------|------|------|---------|-----------|-------------------------------|
| | | | DISTANCE | <input type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | | L/R OR DI | RIGHT TURNED HORIZONTAL ANGLE |
| | | | | SLOPE | | | | | HORIZ | INST | | | | |
| 1 | Δ | 455 | 440 | | 90 | 4.8 | | | | | | 1 | | |
| 2 | Δ | 456 | 410 | | 90 | 4.3 | | 123.9 | | | | 2 | | |
| 3 | | 456 | 740 | | 90 | 4.8 | | | | | | 3 | | |
| 4 | | 457 | 440 | | 90 | 4.8 | | | | | | 4 | | |
| 5 | | 458 | 880 | | 89 33 42 | 11 | | | | | | 5 | | |
| 6 | | 459 | 1320 | | 89 14 07 | 11 | | | | | | 6 | | |
| 7 | | | | | 89 26 30 | 11 | | | | | | 7 | | |
| 8 | \odot | 460 | 1760 | | 89 26 22 | 11 | +6.3 | | | | | 8 | | |
| 9 | | | | | 210 33 37 | 11 | | | 130.1 | | | 9 | | |
| 10 | | | | | | | | | | | | 10 | | |
| 11 | Δ | SP 460 | 2200 | | 89 34 52 | 11 | -5.2 | | | | | 11 | | |
| 12 | | | | | 270 25 11 | 11 | | | | | | 12 | | |
| 13 | | 461 | 1760 | | 89 40 57 | 11 | | | | | | 13 | | |
| 14 | | 462 | 1320 | | 89 41 53 | 11 | | | | | | 14 | | |
| 15 | | 463 | 880 | | 89 41 40 | 11 | | | | | | 15 | | |
| 16 | | 464 | 440 | | 89 20 18 | 11 | | | | | | 16 | | |
| 17 | | | | | | | | | | | | 17 | | |

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WORKED BY _____ CHECKED BY 1ST _____ 2ND _____

SYMBOLS

Δ = BACKSIGHT

∇ = INSTRUMENT SET-UP

SS = SIDESHOT

\odot = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshke-puk STATE/COUNTY Alaska BOOK NO. 42 PAGE 40 OF
 LINE/LOOP NO. 18-80 TYPE SURVEY Vert CLIENT USGS DATE 7 DY 2 MO 81 YR
 SURVEYOR M. O'Leary INSTRUMENT DESC/SERIAL NO. T-2 wild CREW NO. 1186

| LINE | <input type="checkbox"/> <input type="checkbox"/> SS <input type="checkbox"/> | STATION | VERTICAL | | | | | | HORIZONTAL | | LINE | REMARKS | |
|------|---|---------|----------|---|---------------------|---------------|-----------|----------------------|------------|------|------|---------|-------------------------------|
| | | | DISTANCE | <input checked="" type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | | RIGHT TURNED HORIZONTAL ANGLE |
| | | | | SLOPE | | | | | HORIZ | INST | | | |
| 1 | <input checked="" type="checkbox"/> | 465 | 0 | | 90 | S.Z | | | 124.9 | | | 1 | |
| 2 | | 466 | 40 | | 88 40 28 | | | | | | | 2 | |
| 3 | | 467 | 880 | | 88 35 22 | | | | | | | 3 | |
| 4 | | 468 | 1320 | | 88 53 15 | | | | | | | 4 | |
| 5 | <input checked="" type="checkbox"/> | 469 | 1760 | | 89 03 45 | | +17.9 | | 142.8 | | | 5 | |
| 6 | | | | | 270 56 23 | | | | | | | 6 | |
| 7 | | | | | | | | | | | | 7 | |
| 8 | <input checked="" type="checkbox"/> | | | | 89 57 01 | | +7.2 | | | | | 8 | |
| 9 | <input checked="" type="checkbox"/> | 469 | 3160 | | 270 03 26 | | | | | | | 9 | |
| 10 | | | | | 90 15 53 | | | | | | | 10 | |
| 11 | | 476 | 3520 | | 90 15 33 | | | | | | | 11 | |
| 12 | | 471 | 3080 | | 90 19 52 | | | | | | | 12 | |
| 13 | | 472 | 2640 | | 90 21 27 | | | | | | | 13 | |
| 14 | | 473 | 2200 | | 90 29 08 | | | | | | | 14 | |
| 15 | | 474 | 1760 | | 90 45 56 | | | | | | | 15 | |
| 16 | | 475 | 1320 | | 91 16 49 | | | | | | | 16 | |
| 17 | | | | | | | | | | | | 17 | |

WORKED BY _____ CHECKED BY 1ST _____ 2ND _____

SYMBOLS

= BACKSIGHT

= INSTRUMENT SET-UP

SS = SIDESHOT

= FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshkeguk STATE/COUNTY Alaska BOOK NO. A2 PAGE 41 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert. CLIENT USGS DATE 7 DY 2 MO 81 YR
 SURVEYOR M. O'GRADY INSTRUMENT DESC/SERIAL NO. T-2 Wild CREW NO. 1186

| LINE | SS | STATION | VERTICAL | | | | | | HORIZONTAL | | LINE | REMARKS | | |
|------|------------|-----------|----------|--|---------------------|---------------|-----------|----------------------|------------|------|------|---------|-----------------|-------------------------------|
| | | | DISTANCE | <input type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | | L/R OR DI | RIGHT TURNED HORIZONTAL ANGLE |
| | | | | SLOPE | | | | | HORIZ | INST | | | | |
| 1 | | 476 | 880 | | 91 27 17 | 11 | | | | | | 1 | | |
| 2 | | 477 | 440 | | 91 46 36 | 11 | | | | | | 2 | | |
| 3 | | SP 478 | 0. | | 90 | 5.3 | | 150.0 | | | | 3 | | |
| 4 | | 479 | 440 | | 88 19 48 | 11 | | | | | | 4 | | |
| 5 | | 480 | 880 | | 88 41 17 | 11 | | | | | | 5 | | |
| 6 | | 481 | 1320 | | 89 05 43 | 11 | | | | | | 6 | | |
| 7 | | BARR MARK | 1760 | | 89 14 46 | 11 | | +12.2 | | | | 7 | | |
| 8 | | SP 482 | | | 210 45 30 | 11 | | 12.3 | 162.3 | | | 8 | 14 Elev 157.6 | |
| 9 | | | | | | | | | | | | 9 | 162.3 - 157.6 = | |
| 10 | | | | | | | | | | | | 10 | 4.7 + IE | |
| 11 | | | | | | | | | | | | 11 | | |
| 12 | | | | | | | | | | | | 12 | 4.7 + IE | |
| 13 | | | | | | | | | | | | 13 | | |
| 14 | | | | | | | | | | | | 14 | | |
| 15 | | | | | | | | | | | | 15 | | |
| 16 | | | | | | | | | | | | 16 | | |
| 17 | | | | | | | | | | | | 17 | | |

WORKED BY _____ CHECKED BY 1ST _____ 2ND _____

SYMBOLS

= BACKSIGHT

= INSTRUMENT SET-UP

SS = SIDESHOT

= FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Toshokuk STATE/COUNTY Alaska BOOK NO. 42 PAGE 42 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT 4369 DATE 11 DY 2 MO 81 YR
 SURVEYOR M. O'GRADY INSTRUMENT DESC/SERIAL NO. T-2 wild CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙ | STATION | VERTICAL | | | | | | HORIZONTAL | | LINE | REMARKS | | | |
|------|---|-----------|----------|--|-------|---------------------|---------------|-----------|----------------------|-----------|------|---------|----------------|-------------------------------|-----|
| | | | DISTANCE | <input type="checkbox"/> FEET <input type="checkbox"/> METERS | | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | LR OR DR | RIGHT TURNED HORIZONTAL ANGLE | |
| | | | | SLOPE | HORIZ | | | | | INST | | | | | ROD |
| 1 | Δ | Barr Mark | | | | | | | | | | 1 | | | |
| 2 | | # 81399 | | | | | | | | | | 2 | Barr Mark 6/15 | | |
| 3 | | E SP 482 | 2640 | | | 89 20 52 | 11 | | | | | 3 | Old SP 482 | | |
| 4 | | | | | | 270 39 03 | 11 | -19.2 | | | | 4 | 157.6 | | |
| 5 | | 483 | 2200 | | | 89 17 30 | 11 | | | | | 5 | | | |
| 6 | | 484 | 1760 | | | 89 16 28 | 11 | | | | | 6 | | | |
| 7 | | 485 | 1320 | | | 89 23 04 | 11 | | | | | 7 | | | |
| 8 | | 486 | 880 | | | 89 25 35 | 11 | | | | | 8 | | | |
| 9 | | 487 | 240 | | | 89 47 13 | 11 | | | | | 9 | | | |
| 10 | ⊥ | 488 | -0- | | | 90 | 5.1 | | 138A | | | 10 | | | |
| 11 | | 489 | 440 | | | 89 06 10 | 11 | | | | | 11 | | | |
| 12 | | 490 | 880 | | | 89 23 03 | 11 | | | | | 12 | | | |
| 13 | | 491 | 1320 | | | 89 29 24 | 11 | | | | | 13 | | | |
| 14 | | 492 | 1760 | | | 89 31 46 | 11 | | | | | 14 | | | |
| 15 | | 493 | 2200 | | | 89 39 08 | 11 | | | | | 15 | | | |
| 16 | | 494 | 2640 | | | 89 38 36 | 11 | | | | | 16 | | | |
| 17 | | | | | | | | | | | | 17 | | | |

WORKED BY MTO CHECKED BY 1ST _____ 2ND _____

SYMBOLS Δ = BACKSIGHT ⊥ = INSTRUMENT SET-UP SS = SIDESHOT ⊙ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshkepak STATE/COUNTY Alaska BOOK NO. A 2 PAGE 43 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 11 DY 2 MO 81 YR
 SURVEYOR M. O'GRADY INSTRUMENT DESC/SERIAL NO. T-2 Wild CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙ | STATION | VERTICAL | | | | | | ELEVATION | | L/R OR D/I | RIGHT TURNED HORIZONTAL ANGLE | LINE | REMARKS |
|------|---|---------|----------|---|---------------------|---------------|-----------|----------------------|-----------|-----|------------|-------------------------------|------|---------|
| | | | DISTANCE | <input checked="" type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | INST | ROD | | | | |
| | | | | SLOPE | | | | | | | | | | |
| 1 | ⊙ | SP 495 | 3080 | | 89 38 44 | 11 | | +8.2 | | | | 1 | | |
| 2 | | | | | 210 21 56 | 11 | | | | | | 2 | | |
| 3 | | | | | | | | | | | | 3 | | |
| 4 | | | | | 89 15 57 | 11 | | -23.0 | | | | 4 | | |
| 5 | A | SP 495 | 260 | | 210 44 10 | 11 | | | | | | 5 | | |
| 6 | | 496 | 2200 | | 89 10 27 | 11 | | | | | | 6 | | |
| 7 | | 497 | 1760 | | 89 01 26 | 11 | | | | | | 7 | | |
| 8 | | 498 | 1320 | | 89 23 27 | 11 | | | | | | 8 | | |
| 9 | | 499 | 880 | | 89 30 28 | 11 | | | | | | 9 | | |
| 10 | | 500 | 440 | | 89 15 19 | 11 | | | | | | 10 | | |
| 11 | + | 501 | -0- | | 90 | 5.1 | | | | | | 11 | | |
| 12 | | 502 | 440 | | 89 18 52 | 11 | | | | | | 12 | | |
| 13 | | 503 | 880 | | 89 37 12 | 11 | | | | | | 13 | | |
| 14 | | 504 | 1320 | | 89 43 38 | 11 | | | | | | 14 | | |
| 15 | | 505 | 1760 | | 89 48 20 | 11 | | | | | | 15 | | |
| 16 | | 506 | 2200 | | 89 46 52 | 11 | | | | | | 16 | | |
| 17 | | | | | | | | | | | | 17 | | |

WORKED BY MTO CHECKED BY 1ST _____ 2ND _____

SYMBOLS

Δ = BACKSIGHT

⊕ = INSTRUMENT SET-UP

SS = SIDESHOT

⊙ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Tesholpak STATE/COUNTY ALASKA BOOK NO. A 2 PAGE 44 OF
 LINE/LOOP NO. 18-31 TYPE SURVEY Vert CLIENT USGS DATE 11 DY 2 MO 81 YR
 SURVEYOR M. O'GRADY INSTRUMENT DESC/SERIAL NO. T-2 Wild CREW NO. 11836

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙ | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | | | | |
|------|---|---------|----------|---|-----------|---------------------|---------------|-----------|----------------------|-----------|---------|----------|-------------------------------|------|-----|
| | | | DISTANCE | <input checked="" type="checkbox"/> FEET <input type="checkbox"/> METERS | | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | LR OR DI | RIGHT TURNED HORIZONTAL ANGLE | LINE | |
| | | | | SLOPE | HORIZ | | | | | INST | | | | | ROD |
| 1 | ⊙ | SP 507 | 2640 | | 89 42 22 | 11 | | +2.7 | | | | | 1 | | |
| 2 | | | | | 270 17 31 | 11 | | +2.6 | | | | | 2 | | |
| 3 | | | | | | | | | | | | | 3 | | |
| 4 | A | SP 507 | 1320 | | 89 44 20 | 11 | | +4.9 | | | | | 4 | | |
| 5 | | | | | 270 15 42 | 11 | | | | | | | 5 | | |
| 6 | | 508 | 880 | | 90 33 12 | 11 | | | | | | | 6 | | |
| 7 | | 509 | 440 | | 89 36 44 | 11 | | | | | | | 7 | | |
| 8 | Δ | 510 | -6- | | 90 | 5.5 | | | | | | | 8 | | |
| 9 | | 511 | 440 | | 91 07 27 | 11 | | | | | | | 9 | | |
| 10 | | 512 | 880 | | 90 41 12 | 11 | | | | | | | 10 | | |
| 11 | | 513 | 1320 | | 90 34 40 | 11 | | | | | | | 11 | | |
| 12 | | 514 | 1760 | | 90 43 26 | 11 | | | | | | | 12 | | |
| 13 | | 515 | 2200 | | 90 36 27 | 11 | | | | | | | 13 | | |
| 14 | | 516 | 2640 | | 90 30 27 | 11 | | | | | | | 14 | | |
| 15 | | 517 | 3080 | | 90 19 24 | 11 | | | | | | | 15 | | |
| 16 | | 518 | 3520 | | 90 02 08 | 11 | | | | | | | 16 | | |
| 17 | | | | | | | | | | | | | 17 | | |

WORKED BY MTU CHECKED BY 1ST _____ 2ND _____

SYMBOLS

Δ = BACKSIGHT

⊕ = INSTRUMENT SET-UP

SS = SIDESHOT

⊙ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshokpak STATE/COUNTY Alaska BOOK NO. A2 PAGE 45 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 11 DY 2 MO 81 YR
 SURVEYOR M. O'GRADY INSTRUMENT DESC/SERIAL NO. T-2 Wild CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙ | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | |
|------|---|-------------|----------|---|---------------------|---------------|-----------|----------------------|------------|------|---------|-------------------------------|
| | | | DISTANCE | <input checked="" type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD ROD OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | RIGHT TURNED HORIZONTAL ANGLE |
| | | | | SLOPE | | | | | HORIZ. | INST | | |
| 1 | ⊙ | TP518 +120' | 3640 | | 89 30 54 | 11 | | +20.1 | | | 1 | |
| 2 | | | | | 210 29 10 | 11 | | +20.1 | | | 2 | |
| 3 | | | | | | | | | | | 3 | |
| 4 | Δ | TP518 +120' | 4960 | | 89 59 07 | 11 | | +10.1 | | | 4 | |
| 5 | | | | | 210 00 54 | 11 | | | | | 5 | |
| 6 | | | | | | | | | | | 6 | |
| 7 | | SP 519 | 2640 | | 90 05 49 | 11 | | | | | 7 | |
| 8 | | 520 | 2200 | | 89 52 54 | 11 | | | | | 8 | |
| 9 | | 521 | 1760 | | 89 45 23 | 11 | | | | | 9 | |
| 10 | | 522 | 1320 | | 89 42 35 | 11 | | | | | 10 | |
| 11 | | 523 | 880 | | 89 37 45 | 11 | | | | | 11 | |
| 12 | | 524 | 490 | | 89 18 35 | 11 | | | | | 12 | |
| 13 | Δ | 525 | -0- | | 90 | 5.2 | | | | | 13 | |
| 14 | ⊙ | SP 525 | -0- | | 90 | 5.6 | | -5.6 | | | 14 | |
| 15 | | | | | | | | | | | 15 | |
| 16 | Δ | SP 525 | 2640 | | 90 00 11 | 11 | | +11.0 | | | 16 | |
| 17 | | | | | 270 06 07 | 11 | | +10.9 | | | 17 | |

WORKED BY MTO CHECKED BY 1ST _____ 2ND _____

SYMBOLS

Δ = BACKSIGHT

⊕ = INSTRUMENT SET-UP

SS = SIDESHOT

⊙ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshkeputk STATE/COUNTY ALASKA BOOK NO. A2 PAGE 46 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 11 BY 2 MO 81 YR
 SURVEYOR M. O'GRADY INSTRUMENT DESC/SERIAL NO. T-2 Wild CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙ | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | | |
|------|---|---------|----------|--|-------|---------------------|---------------|-----------|----------------------|-----------|---------|-------------------------------|-----|
| | | | DISTANCE | <input type="checkbox"/> FEET <input type="checkbox"/> METERS | | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | RIGHT TURNED HORIZONTAL ANGLE | |
| | | | | SLOPE | HORIZ | | | | | INST | | | ROD |
| 1 | | SP 526 | 2200 | | | 90 01 30 | | | | | | 1 | |
| 2 | | 527 | 1760 | | | 90 05 41 | | | | | | 2 | |
| 3 | | 528 | 1320 | | | 90 08 53 | | | | | | 3 | |
| 4 | | 529 | 880 | | | 90 11 57 | | | | | | 4 | |
| 5 | | 530 | 440 | | | 89 47 09 | | | | | | 5 | |
| 6 | Δ | SP 531 | -0- | | | 90 | 5.2 | | | | | 6 | |
| 7 | | 532 | 440 | | | 89 54 40 | | | | | | 7 | |
| 8 | | 533 | 880 | | | 90 36 47 | | | | | | 8 | |
| 9 | | 534 | 1320 | | | 90 38 42 | | | | | | 9 | |
| 10 | | 535 | 1760 | | | 90 40 11 | | | | | | 10 | |
| 11 | | 536 | 2200 | | | 90 35 43 | | | | | | 11 | |
| 12 | ⊙ | 537 | 2640 | | | 90 32 03 | | | -35.5 | | | 12 | |
| 13 | | | | | | 269 21 53 | | | | | | 13 | |
| 14 | | | | | | | | | | | | 14 | |
| 15 | | | | | | 89 46 35 | | | -1.2 | | | 15 | |
| 16 | Δ | 537 | 3080 | | | 270 13 29 | | | | | | 16 | |
| 17 | | | | | | | | | | | | 17 | |

WORKED BY MTO CHECKED BY 1ST _____ 2ND _____

SYMBOLS Δ = BACKSIGHT Δ = INSTRUMENT SET-UP SS = SIDESHOT ⊙ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshokuk STATE/COUNTY Alaska BOOK NO. 42 PAGE 47 OF
 LINE/LOOP NO. 18-31 TYPE SURVEY Vert CLIENT USGS DATE 11 BY 2 MO 8 YR
 SURVEYOR M. O'GRADY INSTRUMENT DESC/SERIAL NO. 1-2 Wild CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙ | STATION | VERTICAL | | | | | ELEVATION | | HORIZONTAL | | REMARKS | | | |
|------|---|---------|----------|--|-------|---------------------|---------------|-----------|----------------------|------------|-----|---------|-----------|-------------------------------|------|
| | | | DISTANCE | <input type="checkbox"/> FEET <input type="checkbox"/> METERS | | VERTICAL ANGLE OBS. | ROD ROD OR HI | ELEV DIFF | FINAL ELEVATION DIFF | INST | ROD | | L/R OR DI | RIGHT TURNED HORIZONTAL ANGLE | LINE |
| | | | | SLOPE | HORIZ | | | | | | | | | | |
| 1 | | SP 538 | 2640 | | | 89 47 48 | 11 | | | | | | 1 | | |
| 2 | | 539 | 2200 | | | 89 48 50 | 11 | | | | | | 2 | | |
| 3 | | 540 | 1760 | | | 89 48 30 | 11 | | | | | | 3 | | |
| 4 | | 541 | 1320 | | | 89 29 02 | 11 | | | | | | 4 | | |
| 5 | | 542 | 880 | | | 89 17 04 | 11 | | | | | | 5 | | |
| 6 | | 543 | 440 | | | 90 31 52 | 11 | | | | | | 6 | | |
| 7 | X | 544 | 0 | | | 90 | 5A | | | | | | 7 | | |
| 8 | | 545 | 440 | | | 88 37 01 | 11 | | | | | | 8 | | |
| 9 | | 546 | 880 | | | 89 4 03 | 11 | | | | | | 9 | | |
| 10 | | 547 | 1320 | | | 89 25 07 | 11 | | | | | | 10 | | |
| 11 | | 548 | 1760 | | | 89 14 53 | 11 | | | | | | 11 | | |
| 12 | ⊙ | 549 | 2200 | | | 89 26 10 | 11 | | +16.8 | | | | 12 | | |
| 13 | | | | | | 290 33 47 | 11 | | +16.7 | | | | 13 | | |
| 14 | | | | | | | | | | | | | 14 | | |
| 15 | Δ | SP 549 | 2205 | | | 89 56 58 | 11 | | +9.0 | | | | 15 | | |
| 16 | | | | | | 270 03 10 | 11 | | +8.9 | | | | 16 | | |
| 17 | | | | | | | | | | | | | 17 | | |

WORKED BY MTO CHECKED BY 1ST _____ 2ND _____

SYMBOLS Δ = BACKSIGHT ⊕ = INSTRUMENT SET-UP SS = SIDESHOT ⊙ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Teshkeguk STATE/COUNTY ALASKA BOOK NO. A2 PAGE 48 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT WEGS DATE 11 DY 2 MO 81 YR
 SURVEYOR M. O'BRADY INSTRUMENT DESC/SERIAL NO. T-2 Wild CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙ | STATION | VERTICAL | | | | | | ELEVATION | | L/R OR D/I | RIGHT TURNED HORIZONTAL ANGLE | LINE | REMARKS |
|------|---|---------|----------|---|---------------------|---------------|-----------|----------------------|-----------|-----|------------|-------------------------------|------|---------|
| | | | DISTANCE | | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | INST | ROD | | | | |
| | | | SLOPE | <input type="checkbox"/> FEET <input type="checkbox"/> METERS HORIZ | | | | | | | | | | |
| 1 | | SP 550 | 1760 | | 89 56 24 | 11 | | | | | | 1 | | |
| 2 | | 551 | 1320 | | 89 49 31 | 11 | | | | | | 2 | | |
| 3 | | 552 | 880 | | 89 38 21 | 11 | | | | | | 3 | | |
| 4 | | 553 | 440 | ✓ | 89 11 25 | 11 | | | | | | 4 | | |
| 5 | Δ | SP 554 | -0- | | 90 | 5.3 | | | | | | 5 | | |
| 6 | | 555 | 440 | | 89 34 25 | 11 | | | | | | 6 | | |
| 7 | | 556 | 880 | | 89 48 48 | 11 | | | | | | 7 | | |
| 8 | ⊙ | 557 | 1320 | | 90 01 56 | 11 | -11.7 | | | | | 8 | | |
| 9 | | | | | 269 58 25 | 11 | -11.6 | 138.3 | | | | 9 | | |
| 10 | | | | | | | | | | | | 10 | | |
| 11 | | | | | | | | | | | | 11 | | |
| 12 | | | | | | | | | | | | 12 | | |
| 13 | | | | | | | | | | | | 13 | | |
| 14 | | | | | | | | | | | | 14 | | |
| 15 | | | | | | | | | | | | 15 | | |
| 16 | | | | | | | | | | | | 16 | | |
| 17 | | | | | | | | | | | | 17 | | |

WORKED BY MTO CHECKED BY 1ST _____ 2ND _____

SYMBOLS Δ = BACKSIGHT ⊠ = INSTRUMENT SET-UP SS = SIDESHOT ⊙ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA HARRISON Bay STATE/COUNTY Alaska BOOK NO. 42 PAGE 49 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 13 DY 2 MO 81 YR
 SURVEYOR M. O'GRADY INSTRUMENT DESC/SERIAL NO. T-2 WITH CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ◎ | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | | | |
|------|---|---------|----------|---|---------------------|---------------|-----------|----------------------|------------|-------|---------|----------|-------------------------------|-----|
| | | | DISTANCE | <input checked="" type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | LR OR DI | RIGHT TURNED HORIZONTAL ANGLE | |
| | | | | SLOPE | | | | | HORIZ | INST | | | | ROD |
| 1 | | | | | | | | | | | | 1 | | |
| 2 | Δ | SP 557 | 3080 | | 89 46 12 | 11 | | | | 138.3 | | | 2 | |
| 3 | | | | | 270 13 52 | 11 | | -1.6 | | | | | 3 | |
| 4 | | 558 | 2640 | | 90 18 13 | 11 | | | | | | | 4 | |
| 5 | | 559 | 2200 | | 90 32 56 | 11 | | | | | | | 5 | |
| 6 | | 560 | 1760 | | 90 38 15 | 11 | | | | | | | 6 | |
| 7 | | 561 | 1320 | | 90 33 40 | 11 | | | | | | | 7 | |
| 8 | | 562 | 880 | | 90 41 15 | 11 | | | | | | | 8 | |
| 9 | | 563 | 440 | | 90 11 09 | 11 | | | | | | | 9 | |
| 10 | Δ | 564 | -0- | | 90 | 5.3 | | | 136.7 | | | | 10 | |
| 11 | | 565 | 440 | | 89 45 26 | 11 | | | | | | | 11 | |
| 12 | | 566 | 880 | | 89 21 17 | 11 | | | | | | | 12 | |
| 13 | | 567 | 1320 | | 89 25 57 | 11 | | | | | | | 13 | |
| 14 | ◎ | 568 | 1760 | | 89 34 08 | 11 | | | | | | | 14 | |
| 15 | | | | | 270 48 | | | +2.3 | | 139.0 | | | 15 | |
| 16 | | | | | 270 25 51 | 11 | | | | | | | 16 | |
| 17 | | | | | | | | | | | | | 17 | |

WORKED BY MTO CHECKED BY 1ST _____ 2ND _____

SYMBOLS

Δ = BACKSIGHT

⊕ = INSTRUMENT SET-UP

SS = SIDESHOT

◎ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Harrison Bay STATE/COUNTY Alaska BOOK NO. #2 PAGE 50 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT W365 DATE 13 DY 2 MO 81 YR
 SURVEYOR M. O'LAADY INSTRUMENT DESC/SERIAL NO. T-2 W: 12 CREW NO. 1186

| LINE | | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | | |
|------|--|---------|----------|---|---------------------|---------------|-----------|----------------------|------------|------|---------|----------|-------------------------------|
| | | | DISTANCE | <input checked="" type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | LR OR DI | RIGHT TURNED HORIZONTAL ANGLE |
| | | | | SLOPE | | | | | HORIZ | INST | | | |
| 1 | | 568 | 1760 | | 88 26 11 | 11 | | -31.1 | | | | 1 | |
| 2 | | | | | 271 34 00 | 11 | | | | | | 2 | |
| 3 | | pt 569 | 1320 | | 88 26 48 | 4.0 | | | | | | 3 | |
| 4 | | off 570 | 880 | → 370' | 90° | 4.7 | | | | | | 4 | |
| 5 | | off 571 | 490 | → 370' | 90° | 4.7 | | | | | | 5 | |
| 6 | | 572 | 90- | | 90° | 5.2 | | 101.9 | | | | 6 | |
| 7 | | off 572 | 370' | | 90° | 4.7 | | | | | | 7 | |
| 8 | | | | | | | | | | | | 8 | |
| 9 | | SP 573 | 440 | | 89 16 17 | 11 | | | | | | 9 | |
| 10 | | 574 | 880 | | 89 36 33 | 11 | | | | | | 10 | |
| 11 | | 575 | 1320 | | 89 41 29 | 11 | | | | | | 11 | |
| 12 | | 576 | 1760 | | 89 21 28 | 11 | | | | | | 12 | |
| 13 | | 577 | 2800 | | 89 23 56 | 11 | | | | | | 13 | |
| 14 | | 578 | 2640 | | 89 07 52 | 11 | | +29.2 | 131.1 | | | 14 | |
| 15 | | | | | 270 52 13 | 11 | | | | | | 15 | |
| 16 | | | | | | | | | | | | 16 | |
| 17 | | | | | | | | | | | | 17 | |

WORKED BY MTO CHECKED BY 1ST _____ 2ND _____

SYMBOLS

= BACKSIGHT

= INSTRUMENT SET-UP

= SIDESHOT

= FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Harrison Bay STATE/COUNTY Alaska BOOK NO. A 2 PAGE 51 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 13 DY 2 MO 81 YR
 SURVEYOR N. O'GRADY INSTRUMENT DESC/SERIAL NO. T-2 Wild CREW NO. 1186

| LINE | | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | | |
|------|----------|---------------|----------|--|---------------------|---------------|-----------|----------------------|------------|------|---------|------------|-------------------------------|
| | | | DISTANCE | <input type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | L/R OR D/I | RIGHT TURNED HORIZONTAL ANGLE |
| | | | | SLOPE | | | | | HORIZ | INST | | | |
| 1 | | SP 578 | 2690 | | 89 31 18 | 11 | | -11.2 | | | | 1 | |
| 2 | | | | | 270 28 37 | 11 | | | | | | 2 | |
| 3 | | | | | | | | | | | | 3 | |
| 4 | | Well Location | 1300 | | 89 07 29 | 11 | | | | | | 4 | |
| 5 | | (Pad) | | | | | | | | | | 5 | |
| 6 | | | | | | | | | | | | 6 | |
| 7 | | SP 579 | 2200 | | 89 29 32 | 11 | | | | | | 7 | |
| 8 | | 580 | 1760 | | 89 26 50 | 11 | | | | | | 8 | |
| 9 | | 581 | 1320 | | 89 27 56 | 11 | | | | | | 9 | |
| 10 | | 582 | 880 | | 89 20 24 | 11 | | | | | | 10 | |
| 11 | | 583 | 440 | | 88 57 11 | 11 | | | | | | 11 | |
| 12 | | 584 | -0- | | 90 | 5.2 | | | 119.9 | | | 12 | |
| 13 | | 585 | 440 | | 90 16 38 | 11 | | | | | | 13 | |
| 14 | | 586 | 880 | | 90 18 29 | 11 | | | | | | 14 | |
| 15 | | 587 | 1320 | | 90 07 19 | 11 | | | | | | 15 | |
| 16 | | 588 | 1760 | | 90 20 51 | 11 | | | | | | 16 | |
| 17 | | | | | | | | | | | | 17 | |

WORKED BY MTO CHECKED BY 1ST 2ND

SYMBOLS = BACKSIGHT = INSTRUMENT SET-UP = SIDESHOT = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Harrison Bay STATE/COUNTY Alaska BOOK NO. A2 PAGE 52 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 13 DY 2 MO 81 YR
 SURVEYOR M. O'GRADY INSTRUMENT DESC/SERIAL NO. T-2 W:K CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙ | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | | |
|------|---|---------|----------|--|-------|---------------------|---------------|-----------|----------------------|-----------|---------|---|-----|
| | | | DISTANCE | <input type="checkbox"/> FEET <input type="checkbox"/> METERS | | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | LR OR DR RIGHT TURNED HORIZONTAL ANGLE | |
| | | | | SLOPE | HORIZ | | | | | INST | | | ROD |
| 1 | | SP 589 | 2200 | | | 89 46 58 | 11 | | | | | 1 | |
| 2 | ⊙ | SP 590 | 2600 | | | 89 48 43 | 11 | -2.2 | 117.3 | | | 2 | |
| 3 | | | | | | 270 11 20 | 11 | | | | | 3 | |
| 4 | | | | | | | | | | | | 4 | |
| 5 | A | SP 590 | 2200 | | | 89 38 24 | 11 | -2.9 | | | | 5 | |
| 6 | | | | | | 270 21 58 | 11 | -3.0 | | | | 6 | |
| 7 | | 591 | 1760 | | | 89 31 30 | 11 | | | | | 7 | |
| 8 | | 592 | 1320 | | | 89 58 56 | 11 | | | | | 8 | |
| 9 | | 593 | 880 | | | 89 27 42 | 11 | | | | | 9 | |
| 10 | | 594 | 440 | | | 89 41 40 | 11 | | | | | 10 | |
| 11 | Δ | 595 | -0- | | | 90 | 5.2 | | 114.8 | | | 11 | |
| 12 | | 596 | 940 | | | 89 23 07 | 11 | | | | | 12 | |
| 13 | | 597 | 880 | | | 89 45 08 | 11 | | | | | 13 | |
| 14 | | 598 | 1320 | | | 89 49 41 | 11 | | | | | 14 | |
| 15 | | 599 | 1760 | | | 89 47 25 | 11 | | | | | 15 | |
| 16 | | 600 | 2200 | | | 89 43 38 | 11 | | | | | 16 | |
| 17 | | | | | | | | | | | | 17 | |

WORKED BY MTO CHECKED BY 1ST _____ 2ND _____

SYMBOLS

Δ = BACKSIGHT

⊠ = INSTRUMENT SET-UP

SS = SIDESHOT

⊙ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA HARRISON BAY STATE/COUNTY ALASKA BOOK NO. A 2 PAGE 53 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 13 DY 2 MO 81 YR
 SURVEYOR M. O'GRADY INSTRUMENT DESC/SERIAL NO. T-2 Wild CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙ | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | | | |
|------|---|---------|----------|--|---------------------|---------------|-----------|----------------------|------------|-------|---------|-----------|-------------------------------|------|
| | | | DISTANCE | <input type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | L/R OR DJ | RIGHT TURNED HORIZONTAL ANGLE | LINE |
| | | | | SLOPE | | | | | HORIZ | INST | | | | |
| 1 | ⊙ | SP601 | 2690 | | 89 44 03 | 11 | | +1.4 | | | | 1 | | |
| 2 | | | | | 270 15 57 | 11 | | | 116.2 | | | 2 | | |
| 3 | | | | | | | | | | | | 3 | | |
| 4 | Δ | SP601 | 2200 | | 90 16 50 | 11 | | +17.8 | | | | 4 | | |
| 5 | | | | | 269 19 01 | 11 | | | | | | 5 | | |
| 6 | | 602 | 1760 | | 90 17 45 | 11 | | | | | | 6 | | |
| 7 | | 603 | 1320 | | 90 25 13 | 11 | | | | | | 7 | | |
| 8 | | 604 | 880 | | 89 46 00 | 11 | | | | | | 8 | | |
| 9 | | 605 | 440 | | 89 42 38 | 11 | | | | | | 9 | | |
| 10 | Δ | 606 | -0- | | 90 | 5.2 | | | 134.1 | | | 10 | | |
| 11 | | 607 | 410 | | 91 30 33 | 4.0 | | | | | | 11 | | |
| 12 | | 608 | 880 | | 90 18 58 | 11 | | | | | | 12 | | |
| 13 | | 609 | 1320 | | 89 56 56 | 11 | | | | | | 13 | | |
| 14 | ⊙ | 610 | 1760 | | 89 32 53 | 11 | | +2.9 | | 137.0 | | 14 | | |
| 15 | | | | | 270 27 04 | 11 | | | | | | 15 | | |
| 16 | | | | | | | | | | | | 16 | | |
| 17 | | | | | | | | | | | | 17 | | |

WORKED BY MNO CHECKED BY 1ST _____ 2ND _____

SYMBOLS

Δ = BACKSIGHT

⊏ = INSTRUMENT SET-UP

SS = SIDESHOT

⊙ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Harrison Bay STATE/COUNTY Alaska BOOK NO. 42 PAGE 54 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 14 BY Z MO 81 YR
 SURVEYOR M. O'BRADY INSTRUMENT DESC/SERIAL NO. T-2 Wild CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙ | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | | | |
|------|---|------------|----------|---|---------------------|---------------|-----------|----------------------|------------|------|---------|----------|-------------------------------|------|
| | | | DISTANCE | <input checked="" type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | LR OR DI | RIGHT TURNED HORIZONTAL ANGLE | LINE |
| | | | | SLOPE | | | | | HORIZ | INST | | | | |
| 1 | Δ | SP 610 | 1320 | | 89 09 26 | 11 | | -8.5 | | | | 1 | | |
| 2 | | | | | 270 50 31 | 11 | | | | | | 2 | | |
| 3 | | 611 | 800 | | 89 16 11 | 11 | | | | | | 3 | | |
| 4 | | 612 | 440 | | 88 56 42 | 11 | | | | | | 4 | | |
| 5 | ∧ | 613 | 0 | | 90 | 5.3 | | | 128.6 | | | 5 | | |
| 6 | | | | | | | | | | | | 6 | | |
| 7 | ⊙ | TP 613+275 | 275' | | 89 18 36 | 11 | | -7.7 | | | | 7 | | |
| 8 | | | | | 270 41 25 | 11 | | | 120.9 | | | 8 | | |
| 9 | | | | | | | | | | | | 9 | | |
| 10 | Δ | TP 613+275 | 1485 | | 89 09 34 | 11 | | -10.8 | | | | 10 | | |
| 11 | | | | | 270 50 38 | 11 | | | | | | 11 | | |
| 12 | | 614 | 1320 | | 89 30 13 | 11 | | | | | | 12 | | |
| 13 | | off 615 | 880 | | 90 | 5.7 | | | | | | 13 | | |
| 14 | | off 616 | 440 | | 90 | 5.7 | | | | | | 14 | | |
| 15 | ∧ | TP 617 | 0 | | 90 | 5.3 | | | 110.0 | | | 15 | | |
| 16 | | off 617 | 890' | | 90 | 5.7 | | | | | | 16 | | |
| 17 | | | | | | | | | | | | 17 | | |

WORKED BY MTO CHECKED BY 1ST _____ 2ND _____

SYMBOLS Δ = BACKSIGHT ∧ = INSTRUMENT SET-UP SS = SIDESHOT ⊙ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Harrison Bay STATE/COUNTY Alaska BOOK NO. A 2 PAGE 55 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 4 DY 2 MO 81 YR
 SURVEYOR N. O'GRADY INSTRUMENT DESC/SERIAL NO. T-2 Wild CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙ | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | | |
|------|---|---------|----------|--|---------------------|---------------|-----------|----------------------|------------|------|---------|----------|-------------------------------|
| | | | DISTANCE | <input type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | LR OR DR | RIGHT TURNED HORIZONTAL ANGLE |
| | | | | SLOPE | | | | | HORIZ | INST | | | |
| 1 | | alc 618 | 440 | | 90 | 5.7 | | | | | | 1 | |
| 2 | | alc 619 | 880 | | 90 | 5.7 | | | | | | 2 | |
| 3 | | SP 620 | 1320 | | 89 44 54 | 11 | | | | | | 3 | |
| 4 | | 621 | 1760 | | 89 18 03 | 11 | | | | | | 4 | |
| 5 | ⊙ | 622 | 2200 | | 89 38 36 | 11 | +2.8 | | | | | 5 | |
| 6 | | | | | 89 21 24 | 11 | | | 112.8 | | | 6 | |
| 7 | | | | | | | | | | | | 7 | |
| 8 | Δ | 622 | 1520 | | 90 36 30 | 11 | +25.0 | | | | | 8 | |
| 9 | | | | | 89 23 40 | 11 | | | | | | 9 | |
| 10 | | 623 | 880 | | 90 48 42 | 11 | | | | | | 10 | |
| 11 | | 624 | 440 | | 90 03 51 | 11 | | | | | | 11 | |
| 12 | Δ | 625 | -0- | | 90 | 5.3 | | | 139.7 | | | 12 | |
| 13 | | 626 | 440 | | 88 54 08 | 11 | | | | | | 13 | |
| 14 | | 627 | 880 | | 89 08 52 | 11 | | | | | | 14 | |
| 15 | | 628 | 1320 | | 89 26 20 | 11 | | | | | | 15 | |
| 16 | | 629 | 1760 | | 89 36 50 | 11 | | | | | | 16 | |
| 17 | | | | | | | | | | | | 17 | |

WORKED BY WTO CHECKED BY 1ST _____ 2ND _____

SYMBOLS Δ = BACKSIGHT Δ = INSTRUMENT SET-UP SS = SIDESHOT ⊙ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Harrison Bay STATE/COUNTY Alaska BOOK NO. 42 PAGE 56 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 14 DY 3 MO 81 YR
 SURVEYOR A. O'GRADY INSTRUMENT DESC/SERIAL NO. T-2 Wild CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙ | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | | | |
|------|---|---------|----------|---|---------------------|---------------|-----------|----------------------|------------|------|---------|----------|-------------------------------|------|
| | | | DISTANCE | <input checked="" type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | LR OR DI | RIGHT TURNED HORIZONTAL ANGLE | LINE |
| | | | | SLOPE | | | | | HORIZ | INST | | | | |
| 1 | ⊙ | SP 630 | 2200 | | 89 29 45 | 11 | | +8.5 | | | | 1 | | |
| 2 | | | | | 270 30 18 | 11 | | | 146.2 | | | 2 | | |
| 3 | | | | | | | | | | | | 3 | | |
| 4 | Δ | SP 630 | 1760 | | 89 15 09 | 11 | | -12. | | | | 4 | | |
| 5 | | | | | 270 44 49 | 11 | | | | | | 5 | | |
| 6 | | SP 631 | 1520 | | 89 14 16 | 11 | | | | | | 6 | | |
| 7 | | 632 | 880 | | 89 26 11 | 11 | | | | | | 7 | | |
| 8 | | 633 | 940 | | 89 07 52 | 11 | | | | | | 8 | | |
| 9 | ⊙ | 634 | 0 | | 90 | 5.3 | | | 134.2 | | | 9 | | |
| 10 | | 635 | 440 | | 91 22 11 | 11. | | | | | | 10 | | |
| 11 | | 636 | 880 | | 91 38 38 | 11 | | | | | | 11 | | |
| 12 | | 637 | 1320 | | 91 24 42 | 11 | | | | | | 12 | | |
| 13 | | 638 | 1760 | | 91 03 05 | 11 | | | | | | 13 | | |
| 14 | | 639 | 2200 | | 90 40 25 | 11 | | | | | | 14 | | |
| 15 | | 640 | 2640 | | 90 16 22 | 11 | | | | | | 15 | | |
| 16 | | 641 | 3080 | | 90 13 22 | 11 | | | | | | 16 | | |
| 17 | | | | | | | | | | | | 17 | | |

WORKED BY ATO CHECKED BY 1ST _____ 2ND _____

SYMBOLS Δ = BACKSIGHT ⊙ = INSTRUMENT SET-UP SS = SIDESHOT ⊙ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Harrison Bay STATE/COUNTY Alaska BOOK NO. A2 PAGE 57 OF
 LINE/LOOP NO. B-31 TYPE SURVEY Vert CLIENT FUSGS DATE A DY Z MO 31 YR
 SURVEYOR M. O'GRADY INSTRUMENT DESC/SERIAL NO. T2 WIL CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ○ | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | | | |
|------|---|---------|----------|---|---------------------|---------------|-----------|----------------------|------------|------|---------|----------|-------------------------------|------|
| | | | DISTANCE | <input checked="" type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | LR OR DR | RIGHT TURNED HORIZONTAL ANGLE | LINE |
| | | | | SLOPE | | | | | HORIZ | INST | | | | |
| 1 | ○ | SP 6A2 | 3520 | | 90 08 50 | 11 | | -19.8 | | | | 1 | | |
| 2 | | | | | 269 51 16 | 11 | | | 114.4 | | | 2 | | |
| 3 | | | | | | | | | | | | 3 | | |
| 4 | Δ | SP 6A2 | 2200 | | 89 29 19 | 11 | | -8.7 | | | | 4 | | |
| 5 | | | | | 270 26 38 | 11 | | | | | | 5 | | |
| 6 | | 6A3 | 1760 | | 89 58 14 | 11 | | | | | | 6 | | |
| 7 | | 6A4 | 1320 | | 90 20 46 | 11 | | | | | | 7 | | |
| 8 | | 6A5 | 880 | | 90 18 23 | 11 | | | | | | 8 | | |
| 9 | | 6A6 | 440 | | 89 51 15 | 11 | | | | | | 9 | | |
| 10 | Δ | 6A7 | 0. | | 90 5.5 | | | | 165.7 | | | 10 | | |
| 11 | | 6A8 | 440 | | 89 26 52 | 11 | | | | | | 11 | | |
| 12 | | 6A9 | 880 | | 89 54 36 | 11 | | | | | | 12 | | |
| 13 | | 650 | 1320 | | 89 26 46 | 11 | | | | | | 13 | | |
| 14 | | 651 | 1760 | | 89 36 32 | 11 | | | | | | 14 | | |
| 15 | | 652 | 2200 | | 89 25 34 | 11 | | | | | | 15 | | |
| 16 | ○ | 653 | 2640 | | 89 16 03 | 11 | | +22.9 | 128.5 | | | 16 | | |
| 17 | | | | | 270 43 48 | 11 | | | | | | 17 | | |

WORKED BY MNO CHECKED BY 1ST _____ 2ND _____

SYMBOLS Δ = BACKSIGHT ∇ = INSTRUMENT SET-UP SS = SIDESHOT ○ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Harrison Bay STATE/COUNTY ALASKA BOOK NO. 42 PAGE 58 OF
 LINE/LOOP NO. 18-B1 TYPE SURVEY Vert CLIENT USGS DATE 14 DY 2 MO 81 YR
 SURVEYOR M. O'GRADY INSTRUMENT DESC/SERIAL NO. T-2 wild CREW NO. 1186

| LINE | SS O | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | | | |
|------|-----------------|---------|-------------|---|---------------------|---------------|-----------|----------------------|------------|------|---------|----------|-------------------------------|------|
| | | | DISTANCE | <input checked="" type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | LR OR DR | RIGHT TURNED HORIZONTAL ANGLE | LINE |
| | | | | SLOPE | | | | | HORIZ | INST | | | | |
| 1 | | SP 653 | 3520 | | 89 46 55 | 11 | | -2.7 | | | | 1 | | |
| 2 | | | | | 270 13 06 | 11 | | | | | | 2 | | |
| 3 | | 654 | 3080 | | 89 53 05 | 11 | | | | | | 3 | | |
| 4 | | 655 | 2640 | | 89 56 39 | 11 | | | | | | 4 | | |
| 5 | | 656 | 2200 | | 90 07 28 | 11 | | | | | | 5 | | |
| 6 | | 657 | 1760 | | 89 58 48 | 11 | | | | | | 6 | | |
| 7 | | off 658 | 1320 → 450' | | 90 53 21 | 11 | | | | | | 7 | | |
| 8 | | 659 | 880 | | 91 20 45 | 11 | | | | | | 8 | | |
| 9 | | 660 | 440 | | 91 12 28 | 11 | | | | | | 9 | | |
| 10 | | 661 | 0 | | 90 | 5.3 | | | 12.5 ft | | | 10 | | |
| 11 | | 662 | 440 | | 88 53 02 | 11 | | | | | | 11 | | |
| 12 | | 663 | 880 | | 89 24 02 | 11 | | | | | | 12 | | |
| 13 | | 664 | 1320 | | 89 49 50 | 11 | | | | | | 13 | | |
| 14 | | 665 | 1760 | | 90 00 16 | 11 | | | | | | 14 | | |
| 15 | | 666 | 2200 | | 90 03 20 | 15 | | -17.0 | | | | 15 | | |
| 16 | | | | | 269 56 43 | 15 | | | 108.8 | | | 16 | | |
| 17 | | | | | | | | | | | | 17 | | |

WORKED BY MTB CHECKED BY 1ST _____ 2ND _____

SYMBOLS

= BACKSIGHT

= INSTRUMENT SET-UP

SS = SIDESHOT

= FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Harrison Bay STATE/COUNTY Alaska BOOK NO. 42 PAGE 59 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 14 DY 2 MO 8 YR
 SURVEYOR M. O'GRADY INSTRUMENT DESC/SERIAL NO. T-2 Wilh CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙ | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | |
|------|---|-----------|----------|---------|---------------------|---------------|-----------|----------------------|------------|-----|---------|-------------------------------|
| | | | DISTANCE | | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | RIGHT TURNED HORIZONTAL ANGLE |
| | | | SLOPE | HORIZ | | | | | INST | ROD | | |
| 1 | Δ | SP 666 | 1760 | | 89 05 35 | 11 | | -16.9 | | | 1 | |
| 2 | | | | | 210 51 25 | 11 | | | | | 2 | |
| 3 | | 667 | 1320 | | 89 29 32 | 11 | | | | | 3 | |
| 4 | | 668 | 880 | | 89 38 00 | 11 | | | | | 4 | |
| 5 | | 669 | 410 | | 89 05 28 | 11 | | | | | 5 | |
| 6 | Δ | SP 670 | -0- | | 90 | 52 | | 91.9 | | | 6 | |
| 7 | | off 670 | 0 | 60' 75' | 90 | 52 | | | | | 7 | |
| 8 | | off 671 | 440 | 260' | 90 | 4.2 | | | | | 8 | |
| 9 | | 672 | 880 | | 89 22 36 | 11 | | | | | 9 | |
| 10 | ⊙ | 673 | 1320 | | 88 32 55 | 11 | | 22.5 | | | 10 | |
| 11 | | | | | 271 27 01 | 11 | | | 114.4 | | 11 | |
| 12 | | | | | | | | | | | 12 | |
| 13 | Δ | SP 673 | 2260 | | 89 26 03 | 11 | | -10.8 | | | 13 | |
| 14 | | | | | 210 34 00 | 11 | | | | | 14 | |
| 15 | Δ | SP 678 | -0- | | 90 | 5.5 | | 103.6 | | | 15 | |
| 16 | ⊙ | Barr Mark | | 3224.85 | 89 39 16 | 8.8 | | +10.9 | | | 16 | |
| 17 | | Blk 3 | | | 270 20 51 | 8.8 | | +16.9 | 114.5 | | 17 | |

Barr Mark Elev.
 113.4
 114.5 - 113.4 = 1.1
 +1E

WORKED BY MNO CHECKED BY 1ST _____ 2ND _____

SYMBOLS Δ = BACKSIGHT Δ = INSTRUMENT SET-UP SS = SIDESHOT ⊙ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Harrison Bay STATE/COUNTY Alaska BOOK NO. 42 PAGE 60 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 1 2 81 YR
 SURVEYOR M. O'BRADY INSTRUMENT DESC/SERIAL NO. T-2 CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙ | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | | |
|------|---|----------------|----------------|---------|---------------------|---------------|-----------|----------------------|------------|------|---------|----------|-------------------------------|
| | | | DISTANCE | | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | LR OR DI | RIGHT TURNED HORIZONTAL ANGLE |
| | | | SLOPE | HORIZ | | | | | INST | ROD | | | |
| 1 | Δ | Barr Mark | | 3229.85 | 89 39 16 | 5.8 | | -10.9 | | | | 1 | Barr Marker |
| 2 | | | | | 270 20 57 | 89 | | | | | | 2 | Elev. 113.4 |
| 3 | | 673 | 2200 | | 89 26 03 | 11 | | | | | | 3 | |
| 4 | | | | | 270 34 00 | 11 | | | | | | 4 | |
| 5 | | 674 | 1760 | | 89 27 28 | 11 | | | | | | 5 | |
| 6 | | 675 | 1320 | | 89 28 49 | 11 | | | | | | 6 | |
| 7 | | 676 | 880 | | 89 28 13 | 11 | | | | | | 7 | |
| 8 | | 677 | 440 | | 88 51 00 | 11 | | | | | | 8 | |
| 9 | Δ | 678 | -0- | | 90 | 5.2 | | | 102.5 | | | 9 | |
| 10 | ⊙ | 679 | 440 | | 90 04 36 | 11 | | | | | | 10 | |
| 11 | | 680 | 880 | | 90 06 18 | 11 | | -118 | | 90.7 | | 11 | |
| 12 | | | | | 268 53 39 | 11 | | | | | | 12 | |
| 13 | | | | | | | | | | | | 13 | |
| 14 | Δ | SP 679 | 1760 | | 88 58 18 | 11 | | -20.7 | | | | 14 | |
| 15 | | | | | 271 01 12 | 11 | | | | | | 15 | |
| 16 | | SP 680 | 1320 | | 89 42 01 | 11 | | | | | | 16 | |
| 17 | | | | | | | | | | | | 17 | |

WORKED BY MTO CHECKED BY 1ST 2ND

SYMBOLS Δ = BACKSIGHT ⊠ = INSTRUMENT SET-UP SS = SIDESHOT ⊙ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Harrison Bay STATE/COUNTY Alaska BOOK NO. A2 PAGE 61 OF
 LINE/LOOP NO. 1881 TYPE SURVEY Vert CLIENT USGS DATE 14 DY 2 MO 81 YR
 SURVEYOR M. O'Grady INSTRUMENT DESC/SERIAL NO. T-2 Wild CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> \odot | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | | |
|------|--|---------|----------|--|---------------------|---------------|-----------|----------------------|------------|------|---------|-----------|-------------------------------|
| | | | DISTANCE | <input type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | L/R OR DI | RIGHT TURNED HORIZONTAL ANGLE |
| | | | | SLOPE | | | | | HORIZ | INST | | | |
| 1 | | off 681 | | | 90 | 5.2 | | | | | | 1 | |
| 2 | | off 682 | 440 | 760 South | 90 | 5.2 | | | | | | 2 | |
| 3 | Δ | 683 | -0- | 160 South | 90 | 5.2 | | 70.1 | | | | 3 | |
| 4 | | off 683 | | 175 North | 90 | 3.2 | | | | | | 4 | |
| 5 | | | | | | | | | | | | 5 | |
| 6 | | SP 684 | 440 | | 88 49 39 | 11 | | | | | | 6 | |
| 7 | | 685 | 880 | | 88 41 18 | 11 | | | | | | 7 | |
| 8 | \odot | 686 | 1320 | | 89 09 41 | 11 | +8.4 | | | | | 8 | |
| 9 | | | | | 270 50 10 | 11 | | | 78.5 | | | 9 | |
| 10 | | | | | | | | | | | | 10 | |
| 11 | Δ | 686 | 2200 | | 90 20 41 | 11 | +24.1 | | | | | 11 | |
| 12 | | | | | 269 39 16 | 11 | | | | | | 12 | |
| 13 | | 687 | 1760 | | 90 40 41 | 11 | | | | | | 13 | |
| 14 | | 688 | 1320 | | 91 25 20 | 11 | | | | | | 14 | |
| 15 | | 689 | 880 | | 92 09 36 | 11 | | | | | | 15 | |
| 16 | | 690 | 440 | | 93 17 01 | 11 | | | | | | 16 | |
| 17 | | | | | | | | | | | | 17 | |

WORKED BY MTO CHECKED BY 1ST _____ 2ND _____

SYMBOLS Δ = BACKSIGHT ∇ = INSTRUMENT SET-UP SS = SIDESHOT \odot = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Harrison Bay STATE/COUNTY ALASKA BOOK NO. A 2 PAGE 12 OF
 LINE/LOOP NO. B-81 TYPE SURVEY Vert CLIENT USGS DATE 14 DY 2 MO. 81 YR
 SURVEYOR M. OGRADY INSTRUMENT DESC/SERIAL NO. T-2 Wild CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ○ | STATION | VERTICAL | | | | | | | HORIZONTAL | | REMARKS | |
|------|---|--------------|----------|-------|---------------------|---------------|-----------|----------------------|-----------|------------|------------|---------|-------------------------------|
| | | | DISTANCE | | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | L/R OR D/I | | RIGHT TURNED HORIZONTAL ANGLE |
| | | | SLOPE | HORIZ | | | | | INST | ROD | | | |
| 1 | Δ | 691 | 0 - | | 90 | 5.2 | | | 108.6 | | | 1 | |
| 2 | | 692 | 440 | | 90 56 35 | 11 | | | | | | 2 | |
| 3 | | 693 | 880 | | 90 37 47 | 11 | | | | | | 3 | |
| 4 | | 694 | 1320 | | 90 26 00 | 11 | | | | | | 4 | |
| 5 | | 695 | 1760 | | 90 18 52 | 11 | | | | | | 5 | |
| 6 | ○ | TP695 + 275' | 2035 | | 89 29 13 | 11 | ↓ 7.3 | | 109.9 | | | 6 | |
| 7 | | | | | 270 30 43 | 11 | | | | | | 7 | |
| 8 | | | | | | | | | | | | 8 | |
| 9 | | | | | | | | | | | | 9 | |
| 10 | | | | | | | | | | | | 10 | |
| 11 | | | | | | | | | | | | 11 | |
| 12 | | | | | | | | | | | | 12 | |
| 13 | | | | | | | | | | | | 13 | |
| 14 | | | | | | | | | | | | 14 | |
| 15 | | | | | | | | | | | | 15 | |
| 16 | | | | | | | | | | | | 16 | |
| 17 | | | | | | | | | | | | 17 | |

WORKED BY WMO CHECKED BY 1ST _____ 2ND _____

SYMBOLS Δ = BACKSIGHT ∇ = INSTRUMENT SET-UP SS = SIDESHOT ○ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Harrison Dam STATE/COUNTY Alaska BOOK NO. 42 PAGE 63 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 15 DY 2 MO 81 YR
 SURVEYOR M. O'Grady INSTRUMENT DESC/SERIAL NO. T-2 wild CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙ | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | | |
|------|---|------------|----------|---|---------------------|---------------|-----------|----------------------|------------|------|---------|-----------|-------------------------------|
| | | | DISTANCE | <input checked="" type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | L/R OR DI | RIGHT TURNED HORIZONTAL ANGLE |
| | | | | SLOPE | | | | | HORIZ | INST | | | |
| 1 | Δ | TP 165+25 | 2805 | | 89 57 51 | 11 | | +9.1 | | | | 1 | |
| 2 | | | | | 276 02 02 | 11 | | | | | | 2 | |
| 3 | | SP 166 | 2160 | | 90 06 03 | 11 | | | | | | 3 | |
| 4 | | 697 | 2200 | | 90 37 38 | 11 | | | | | | 4 | |
| 5 | | 698 | 1760 | | 90 56 30 | 11 | | | | | | 5 | |
| 6 | | 699 | 1320 | | 90 57 01 | 11 | | | | | | 6 | |
| 7 | | 700 | 880 | | 91 02 43 | 11 | | | | | | 7 | |
| 8 | | 701 | 440 | | 91 22 35 | 11 | | | | | | 8 | |
| 9 | Δ | 702 | 0 | | 90 | 5.4 | | | 119.0 | | | 9 | |
| 10 | | 703 | 440 | | 87 54 07 | 11 | | | | | | 10 | |
| 11 | | 704 | 880 | | 88 27 15 | 11 | | | | | | 11 | |
| 12 | | 705 | 1320 | | 88 46 01 | 11 | | | | | | 12 | |
| 13 | ⊙ | TP 165+165 | 1485 | | 88 49 30 | 11 | | +19.5 | | | | 13 | |
| 14 | | | | | 271 10 26 | 11 | | | 138.5 | | | 14 | |
| 15 | | | | | | | | | | | | 15 | |
| 16 | Δ | TP 165+165 | 2475 | | 88 52 05 | 11 | | -38.0 | | | | 16 | |
| 17 | | | | | 271 08 08 | 11 | | | | | | 17 | |

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SYMBOLS Δ = BACKSIGHT ⊕ = INSTRUMENT SET-UP SS = SIDESHOT ⊙ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Harrison Bay STATE/COUNTY Alaska BOOK NO. A2 PAGE 4 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE BY 2 MO 81 YR
 SURVEYOR M. O'GRADY INSTRUMENT DESC/SERIAL NO. T-2 wild CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙ | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | | |
|------|---|---------|----------|-------|---------------------|---------------|-----------|----------------------|------------|-----|---------|------------|-------------------------------|
| | | | DISTANCE | | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | L/R OR D/I | RIGHT TURNED HORIZONTAL ANGLE |
| | | | SLOPE | HORIZ | | | | | INST | ROD | | | |
| 1 | | 706 | 2200 | | 89 50 09 | 11 | | | | | | 1 | |
| 2 | | opp 707 | 1760 | 450 | 90 | 4.6 | | | | | | 2 | |
| 3 | | opp 708 | 1320 | 450 | 90 | 4.6 | | | | | | 3 | |
| 4 | | opp 709 | 880 | 450 | 90 | 4.6 | | | | | | 4 | |
| 5 | | opp 710 | 440 | 450 | 90 | 4.6 | | | | | | 5 | |
| 6 | Δ | 711 | -0- | | 90 | 5.2 | | 100.4 | | | | 6 | |
| 7 | | opp 711 | | 450 | 90 | 4.6 | | | | | | 7 | |
| 8 | | 712 | 440 | | 89 16 20 | 11 | | | | | | 8 | |
| 9 | | 713 | 880 | | 89 38 18 | 11 | | | | | | 9 | |
| 10 | | 714 | 1320 | | 89 44 46 | 11 | | | | | | 10 | |
| 11 | | 715 | 1760 | | 89 47 45 | 11 | | | | | | 11 | |
| 12 | | 716 | 2200 | | 89 51 01 | 11 | | | | | | 12 | |
| 13 | ⊙ | SP 717 | 2640 | | 89 52 38 | 11 | | -5.2 | 95.2 | | | 13 | |
| 14 | | | | | 270 07 19 | 11 | | | | | | 14 | |
| 15 | | | | | | | | | | | | 15 | |
| 16 | Δ | 717 | 2200 | | 89 51 05 | 11 | | +5.2 | | | | 16 | |
| 17 | | | | | 270 09 10 | 11 | | | | | | 17 | |

WORKED BY MNO CHECKED BY 1ST _____ 2ND _____

SYMBOLS

Δ = BACKSIGHT

⊎ = INSTRUMENT SET-UP

SS = SIDESHOT

⊙ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Harrison Bay STATE/COUNTY Alaska BOOK NO. 42 PAGE 65 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 15 BY 2 MO 81 YR
 SURVEYOR M. O'GRADY INSTRUMENT DESC/SERIAL NO. T-2 Wild CREW NO. 1126

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙ | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | |
|------|---|-----------|----------|-------|---------------------|---------------|-----------|----------------------|------------|-----|---------|-------------------------------|
| | | | DISTANCE | | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | RIGHT TURNED HORIZONTAL ANGLE |
| | | | SLOPE | HORIZ | | | | | INST | ROD | | |
| 1 | | SP 718 | 1760 | | 89 46 10 | 11 | | | | | 1 | |
| 2 | | 719 | 1320 | | 89 33 49 | 11 | | | | | 2 | |
| 3 | | 720 | 880 | | 89 38 32 | 11 | | | | | 3 | |
| 4 | | off 721 | 440 | 480' | 90 | 4.7 | | | | | 4 | |
| 5 | ⊕ | INSTR 722 | -0- | | 90 | 5.3 | | 100.3 | | | 5 | |
| 6 | | off 722 | 440 | 480' | 90 | 4.7 | | | | | 6 | |
| 7 | | off 723 | 880 | 480' | 90 | 4.7 | | | | | 7 | |
| 8 | | off 724 | 1320 | 480' | 90 | 4.7 | | | | | 8 | |
| 9 | | off 725 | 1760 | 480 | 90 | 4.7 | | | | | 9 | |
| 10 | | SP 726 | 2200 | | 89 48 04 | 11 | | | | | 10 | |
| 11 | ⊙ | SP 727 | 2620 | | 89 34 33 | 11 | +8.7 | 109.0 | | | 11 | |
| 12 | | | | | 270 25 25 | 11 | | | | | 12 | |
| 13 | | | | | | | | | | | 13 | |
| 14 | ⊕ | SP 727 | 1760 | | 89 44 15 | 11 | +2.9 | | | | 14 | |
| 15 | | | | | 270 15 58 | 11 | | | | | 15 | |
| 16 | | 728 | 1320 | | 89 39 42 | 11 | | | | | 16 | |
| 17 | | | | | | | | | | | 17 | |

WORKED BY MJO CHECKED BY 1ST _____ 2ND _____
 SYMBOLS Δ = BACKSIGHT ⊕ = INSTRUMENT SET-UP SS = SIDESHOT ⊙ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Harrison Bay STATE/COUNTY Alaska BOOK NO. 42 PAGE 66 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT Uses DATE 15 BY Z MO 81 YR
 SURVEYOR V. O'GRADY INSTRUMENT DESC/SERIAL NO. T-2 Wild CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙ | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | | | |
|------|---|---------|----------|-------|---------------------|---------------|-----------|----------------------|------------|-----|---------|-----------|-------------------------------|------|
| | | | DISTANCE | | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | L/R OR DI | RIGHT TURNED HORIZONTAL ANGLE | LINE |
| | | | SLOPE | HORIZ | | | | | INST | ROD | | | | |
| 1 | | SP 729 | 880 | | 89 18 18 | 11 | | | | | | 1 | | |
| 2 | | 730 | 490 | | 88 36 10 | 11 | | | | | | 2 | | |
| 3 | ⊗ | 731 | -0- | | 90 | 53 | | 111.8 | | | | 3 | | |
| 4 | | 732 | 440 | | 89 39 30 | 11 | | | | | | 4 | | |
| 5 | | 733 | 880 | | 89 53 20 | 11 | | | | | | 5 | | |
| 6 | | 734 | 1320 | | 90 02 22 | 11 | | | | | | 6 | | |
| 7 | | 735 | 1760 | | 90 08 35 | 11 | | | | | | 7 | | |
| 8 | | 736 | 2200 | | 90 10 05 | 11 | | | | | | 8 | | |
| 9 | ⊙ | 737 | 2640 | | 90 11 37 | 11 | -19.8 | | | | | 9 | | |
| 10 | | | | | 264 48 25 | 11 | | | 92.0 | | | 10 | | |
| 11 | | | | | | | | | | | | 11 | | |
| 12 | ⊗ | SP 737 | 2200 | | 89 33 27 | 11 | -6.1 | | | | | 12 | | |
| 13 | | | | | 270 26 31 | 11 | | | | | | 13 | | |
| 14 | | 738 | 1760 | | 89 36 36 | 11 | | | | | | 14 | | |
| 15 | | 739 | 1320 | | 89 32 51 | 11 | | | | | | 15 | | |
| 16 | | 740 | 880 | | 89 22 59 | 11 | | | | | | 16 | | |
| 17 | | | | | | | | | | | | 17 | | |

WORKED BY MJD CHECKED BY 1ST _____ 2ND _____

SYMBOLS Δ = BACKSIGHT ⊗ = INSTRUMENT SET-UP SS = SIDESHOT ⊙ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Harrison Bay STATE/COUNTY Alaska BOOK NO. #2 PAGE 69 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert. CLIENT US69 DATE 15 BY 2 MO 81 YR
 SURVEYOR M. OGRADY INSTRUMENT DESC/SERIAL NO. T-2 wild CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙ | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | |
|------|---|------------|----------|--|---------------------|---------------|-----------|----------------------|------------|------|---------|-------------------------------|
| | | | DISTANCE | <input type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | RIGHT TURNED HORIZONTAL ANGLE |
| | | | | SLOPE | | | | | HORIZ | INST | | |
| 1 | | SP 741 | 440 | | 88 36 35 | 11 | | | | | | 1 |
| 2 | Δ | SP 742 | -0- | | 90 | 5.3 | | 86.0 | | | | 2 |
| 3 | | 743 | 440 | | 89 51 16 | 11 | | | | | | 3 |
| 4 | | 744 | 880 | | 89 56 18 | 11 | | | | | | 4 |
| 5 | | 745 | 1320 | | 89 58 36 | 11 | | | | | | 5 |
| 6 | | 746 | 1760 | | 90 05 48 | 11 | | | | | | 6 |
| 7 | | 747 | 2200 | | 90 05 36 | 11 | | | | | | 7 |
| 8 | ⊙ | 748 | 2640 | | 90 04 09 | 11 | -14.0 | | | | | 8 |
| 9 | | | | | 269 55 41 | 11 | | 71.8 | | | | 9 |
| 10 | | | | | | | | | | | | 10 |
| 11 | Δ | SP 749 | 880 | | 89 35 54 | 11 | ±4.8 | | | | | 11 |
| 12 | | | | | 270 24 07 | 4 | | | | | | 12 |
| 13 | | off 749 | 440 | | 90 | 4.7 | | | | | | 13 |
| 14 | Δ | Inline 750 | -0- | | 90 | 5.3 | | 76.7 | | | | 14 |
| 15 | | off 750 | 590 | | 90 | 4.7 | | | | | | 15 |
| 16 | | off 751 | 440 | | 90 | 4.7 | | | | | | 16 |
| 17 | | 752 | 880 | | 89 35 21 | 11 | | | | | | 17 |

WORKED BY MTO CHECKED BY 1ST _____ 2ND _____

SYMBOLS Δ = BACKSIGHT Δ = INSTRUMENT SET-UP SS = SIDESHOT ⊙ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA HARRISON Bay STATE/COUNTY ALASKA BOOK NO. 42 PAGE 68 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 15 DY 2 MO 31 YR
 SURVEYOR M. O'BRADY INSTRUMENT DESC/SERIAL NO. T-2 Wild CREW NO. 1186

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙ | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | | |
|------|---|-----------|----------|--|---------------------|---------------|-----------|----------------------|------------|------|---------|----------|-------------------------------|
| | | | DISTANCE | <input type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | LR OR DI | RIGHT TURNED HORIZONTAL ANGLE |
| | | | | SLOPE | | | | | HORIZ | INST | | | |
| 1 | | SP 753 | 1320 | | 89 44 40 | 11 | | | | | | 1 | |
| 2 | | 754 | 1760 | | 89 48 07 | 11 | | | | | | 2 | |
| 3 | | 755 | 2200 | | 89 39 56 | 11 | | | | | | 3 | |
| 4 | ⊙ | 756 | 2690 | | 89 40 32 | 11 | +4.1 | | | | | 4 | |
| 5 | | | | | 270 19 25 | 11 | | | 80.7 | | | 5 | |
| 6 | | | | | | | | | | | | 6 | |
| 7 | Δ | SP 756 | 2640 | | 89 43 00 | 11 | -2.2 | | | | | 7 | |
| 8 | | | | | 270 16 59 | 11 | | | | | | 8 | |
| 9 | | 757 | 2200 | | 89 42 45 | 11 | | | | | | 9 | |
| 10 | | 758 | 1760 | | 89 43 30 | 11 | | | | | | 10 | |
| 11 | | 759 | 1320 | | 89 47 21 | 11 | | | | | | 11 | |
| 12 | | 760 | 880 | | 89 57 07 | 11 | | | | | | 12 | |
| 13 | | 761 | 440 | | 89 44 25 | 11 | | | | | | 13 | |
| 14 | Δ | 762 | -0- | | 90 | 3.4 | | | | 78.6 | | 14 | |
| 15 | | | | | | | | | | | | 15 | |
| 16 | ⊙ | Barr Mark | 200' | | 90 | 5.8 | | | | 72.8 | | 16 | Elev 71.4 |
| 17 | | 81465 | | | | | | | | | | 17 | 71A-72B = 1A tie |

WORKED BY M/O CHECKED BY 1ST _____ 2ND _____
 SYMBOLS Δ = BACKSIGHT Δ = INSTRUMENT SET-UP SS = SIDESHOT ⊙ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA HARRISON BAY STATE/COUNTY ALASKA BOOK NO. A 2 PAGE 69 OF 787
 LINE/LOOP NO. 18-81 TYPE SURVEY VERT CLIENT USGS DATE 15 DY 2 MO 81 YR
 SURVEYOR M. O'GRADY INSTRUMENT DESC/SERIAL NO. T-2 Wild CREW NO. 1186

769
 482
 287

| LINE | <input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ○ | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | | |
|------|---|-----------|----------|-------|---------------------|---------------|-----------|----------------------|------------|-----|---------|----------|-------------------------------|
| | | | DISTANCE | | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | LR OR DI | RIGHT TURNED HORIZONTAL ANGLE |
| | | | SLOPE | HORIZ | | | | | INST | ROD | | | |
| 1 | Δ | BATT MARK | 200 | | 90 | 5.8 | | | | | | 1 | 71.4 |
| 2 | | | | | | | | | | | | 2 | |
| 3 | ⊥ | SP 762 | 0 | | 90 | 5.4 | | | 77.2 | | | 3 | |
| 4 | | 763 | 440 | | 89 55 01 | 11 | | | | | | 4 | |
| 5 | | 764 | 880 | | 89 39 43 | 11 | | | | | | 5 | |
| 6 | | 765 | 1320 | | 89 45 52 | 11 | | | | | | 6 | |
| 7 | | 766 | 1760 | | 89 49 00 | 11 | | | | | | 7 | |
| 8 | | 767 | 2200 | | 89 51 18 | 11 | | | | | | 8 | |
| 9 | | 768 | 2640 | | 89 52 20 | 11 | | | | | | 9 | |
| 10 | ○ | SP 769 | 3080 | | 89 53 25 | 11 | | 49 | | | | 10 | E.O.L. |
| 11 | | | | | 270 06 30 | 11 | | | 72.3 | | | 11 | |
| 12 | | | | | | | | | | | | 12 | |
| 13 | Δ | SP 769 | 2640 | | 90 00 03 | 11 | | | | | | 13 | |
| 14 | | | | | 270 00 03 | 11 | | | | | | 14 | |
| 15 | | T5770 | 2200 | | 89 59 00 | 11 | | | 72.9 | | | 15 | |
| 16 | | 771 | 1760 | | 89 58 02 | 11 | | | 73.3 | | | 16 | |
| 17 | | | | | | | | | | | | 17 | |

WORKED BY MFO CHECKED BY 1ST _____ 2ND _____

SYMBOLS Δ = BACKSIGHT ⊥ = INSTRUMENT SET-UP SS = SIDESHOT ○ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Harrison Bay STATE/COUNTY ALASKA BOOK NO. #2 PAGE 10 OF
 LINE/LOOP NO. 18-81 TYPE SURVEY Vert CLIENT USGS DATE 15 DAY 2 MO 81 YR
 SURVEYOR M. O'GRADY INSTRUMENT DESC/SERIAL NO. T-2 Wild CREW NO. 1186

| LINE | SS | STATION | VERTICAL | | | | | | HORIZONTAL | | REMARKS | | | |
|------|------------|---------|----------|---|---------------------|---------------|-----------|----------------------|------------|------|---------|------------|-------------------------------|------|
| | | | DISTANCE | <input checked="" type="checkbox"/> FEET <input type="checkbox"/> METERS | VERTICAL ANGLE OBS. | ROD RDG OR HI | ELEV DIFF | FINAL ELEVATION DIFF | ELEVATION | | | L/R OR D/I | RIGHT TURNED HORIZONTAL ANGLE | LINE |
| | | | | SLOPE | | | | | HORIZ | INST | | | | |
| 1 | | SP 772 | 1320 | | 89 56 16 | 11 | | | | | | | 1 | |
| 2 | | TS 773 | 880 | | 89 48 35 | 11 | | | | | | | 2 | |
| 3 | | " 774 | 440 | | 89 05 58 | 11 | | | | | | | 3 | |
| 4 | | " 775 | -0- | | 90 | 5.4 | | 83.2 | 77.8 | | | | 4 | |
| 5 | | " 776 | 440 | | 89 23 51 | 11 | | | 76.8 | | | | 5 | |
| 6 | | " 777 | 880 | | 89 44 46 | 11 | | | 76.1 | | | | 6 | |
| 7 | | " 778 | 1320 | | 89 45 47 | " | | | 77.7 | | | | 7 | |
| 8 | | " 779 | 1760 | | 89 43 40 | 11 | | | 80.6 | | | | 8 | |
| 9 | | " 780 | 2200 | | 90 11 58 | 11 | | | 64.6 | | | | 9 | |
| 10 | | " 781 | 2690 | | 90 05 38 | 11 | | | 68.0 | | | | 10 | |
| 11 | | | | | | | | | | | | | 11 | |
| 12 | | | | | | | | | | | | | 12 | |
| 13 | | | | | | | | | | | | | 13 | |
| 14 | | | | | | | | | | | | | 14 | |
| 15 | | | | | | | | | | | | | 15 | |
| 16 | | | | | | | | | | | | | 16 | |
| 17 | | | | | | | | | | | | | 17 | |

WORKED BY MTO CHECKED BY 1ST _____ 2ND _____

SYMBOLS = BACKSIGHT = INSTRUMENT SET-UP = SIDESHOT = FORESIGHT