

STADIA SURVEY NOTES

AREA Ikpikpuk RIVER STATE Alaska PAGE No. 1
 LINE No. U-4 PARTY No. 1173 DATE Day 2 Mo. 2 Yr. 78 BOOK No. _____
 SURVEYOR R. Juppich RODMAN K. Barr WEATHER Wind 15-25 mph -25° P.T.S. No. _____

LINE	Bearing or Sight	Stadia Distance	BEAMAN OR VERNIER			ROD READING			Angular Elev. Diff.	Final Elev. Diff.	ELEVATIONS		▲ BS ○ FS - SS	Station	FINAL ELEVATIONS						
			Level	Inclined	Angle or Factor	Hair Read	Reading	Correction			Center Hair	INST.			ROD.						
		0	✓					5.0		+5.0	1057.3	1046.25	✓	(
		0	✓					5.0					Δ	78074	=SR	135					
		0	✓					5.0		-5.0		1046.3	τ	78074							
		880	89	15	39			10.0		+0.9		1052.0	○	136							
		✓ 2310	90	56	29			10.0					○								
		✓ 263	90	02	15			10.0		+98.9	1100.9		Δ								
		1430	91	35	00			21.0		-60.5		1040.4		137							
		550	90	43	40			10.0		-12.0		1083.9		138							
		0	✓					5.0		-5.0		1095.9	τ	138+550							
		330	89	14	50			10.0		-5.7		1095.2		139							
		1100	90	38	24			10.0		-22.7		1079.1	○	139+770							
		✓ 263	90	18	38			10.0					○								
		2640	87	50	00			10.0		-88.7	989.4		Δ								
		✓ 272	87	06	44			10.0					Δ								
		2530	87	49	22			10.0		+86.2		1075.6		140							
		1650	87	50	18			10.0		+52.3		1041.7		141							
		770	88	24	36			10.0		+11.4		1000.8		142							
		0	✓					5.0		-5.0		984.4	τ	142+770							

WORKED BY _____ CHECKED BY _____ 2nd _____

STADIA SURVEY NOTES

AREA IkpiqpuK RIVER STATE Alaska PAGE No. 2
 LINE No. U-4 PARTY No. 1173 DATE Day 2 Mo. 2 Yr. 78 BOOK No. _____
 SURVEYOR R. Tippisch RODMAN K Barr WEATHER 20 mph wind -20° P.T.S. No. _____

LINE	Bearing or Sight	Stadia Distance	BEAMAN OR VERNIER			ROD READING				Angular Elev. Diff.	Final Elev. Diff.	ELEVATIONS		Station	FINAL ELEVATIONS
			Level	Inclined	Angle or Factor	Hair Read	Reading	Correction	Center Hair			INST.	ROD		
		110	90	05	21			10.0		-10.2		979.2	143	* 50-	
		990	92	21	23			10.0		-5.7		983.7	144		839.01
		1870	91	03	23			10.0		-44.4		945.0	145		
		2750	90	39	40			10.0		-41.6		947.8	146		
		3080	90	34	05			10.0		-41.7		947.2	0	146+330	
		✓ 269	22	58				10.0				0	0		
		3300	88	42	00			10.0		-23.5	883.7	Δ	Δ		
		✓ 271	14	37				10.0				Δ	Δ		
		2250	88	48	38			10.0		+47.2		930.9	147		
		1870	89	40	22			10.0		+0.8		884.5	148		
		990	93	02	38			10.0		+62.5		821.2	149		
		110	90	49	28			10.0		-11.6		872.1	150		
		0	✓					5.0		+5.0		878.7	π 150+110		
		170	90	25	12			10.0		+5.6		868.1	151		
		1650	90	38	15			10.0		+28.3		855.4	152		
		2570	89	19	41			10.0		+19.8		903.5	153		
		3410	89	22	50			15.0		+20.7		903.9	0	154	
		✓ 270	34	17				15.0				0	0		

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AREA Itkikpak RIVER STATE Alaska PAGE No. 3
 LINE No. U-4 PARTY No. 1173 DATE Day 2 Mo. 2 Yr. 78 BOOK No. _____
 SURVEYOR R Ippisch RODMAN K Barr WEATHER 20 mph. wind -20° P.T.S. No. _____

LINE	Bearing or Sight	Stadia Distance	BEAMAN OR VERNIER			ROD READING				Angular Elev. Diff.	Final Elev. Diff.	ELEVATIONS		Station	FINAL ELEVATIONS	
			Level	Inclined	Angle or Factor	Hair Read	Reading	Correction	Center Hair			INST.	ROD			▲ BS ○ FS - SS
		2090	88	18	46			15.0			-45.7	858.2		Δ	154	
	✓	271	38	08				15.0						Δ		
		1210	88	14	44			10.0			-27.1		885.3		155	
		330	87	17	00			10.0			-5.6		863.8		156	
	0	✓						5.0			-5.0		853.2	π	156+330	
		550	94	57	06			24.0			-21.5		786.7		157	
		880	91	40	11			16.0			-35.6		822.6		157+330	
		1430	89	38	20			10.0			-11.5		856.3	0	158	
	✓	270	19	02				10.0						0		
		1430	88	09	39			10.0			-34.8	821.7		Δ		
	✓	271	44	39				10.0						Δ		
		550	91	02	05			10.0			-19.9		801.8		159	
		440	92	10	21			10.0			-26.7		795.0		159+116	
	0	✓						5.0			-5.0		816.7	π	159+550	
		330	91	10	47			10.0			-16.8		804.9		160	
		660	92	08	44			10.0			-34.7		787.0		160+330	
		1210	88	59	40			10.0			+16.3		833.0		161	
		1540	89	19	18			10.0			+9.8		831.2	0	161+330	
	✓	270	42	17				10.0						0		

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2nd

STADIA SURVEY NOTES

AREA Ikpikpak RIVER STATE Alaska PAGE No. 4
 LINE No. U-4 PARTY No. 1173 DATE Day 4 Mo. 2 Yr. 78 BOOK No. _____
 SURVEYOR R. Ippisch RODMAN K Bass WEATHER HAZE, -30° P.T.S. No. _____

LINE	Bearing or Sight	Stadia Distance	BEAMAN OR VERNIER			ROD READING			Angular Elev. Diff.	Final Elev. Diff.	ELEVATIONS		▲ BS ○ FS - SS	Station	FINAL ELEVATIONS											
			Level	Inclined	Angle or Factor	Hoir Read	Reading	Correction			Center Hoir	INST.			ROD											
		1760	91	23	10			10.0	+53.3	884.5		△	164+330													
	✓	268	33	47				10.0				-△														
		1210	94	05	56			4.5	-91.0		793.5		162													
		660	96	27	47			10.0	-84.3		800.2		162+550													
		330	95	52	44			10.0	-43.8		840.7		163													
	○	✓						5.0	-5.0		879.5		163+330													
		550	88	19	00			10.0	+6.0		890.4		164													
	✓	271	38	26				10.0																		
		1430	90	03	12			10.0	+11.7	902.1																
	✓	269	54	36				10.0																		
		550	90	30	38			10.0	-14.9		887.2		165													
	○	✓						5.0	-5.0		897.1		165+550													
		330	89	29	24			10.0	-7.1		895.0		166													
		1210	90	00	32			10.0	-10.2		891.9		167													
		209m	89	54	04			10.0	-6.9	-6.9	894.9		168													
	✓	270	04	04				10.0																		
		1760	89	40	19			10.0	+0.7	895.6																
	✓	276	16	17				10.0																		
		880	89	31	27			10.0	-2.7		892.9		169													

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AREA Ikpikruk RIVER STATE Alaska PAGE No. 5
 LINE No. U-4 PARTY No. 1173 DATE Day 4 Mo. 2 Yr. 78 BOOK No. _____
 SURVEYOR R Ippisch RODMAN K Barr WEATHER HAZE -30° P.T.S. No. _____

LINE	Bearing or Sight	Stadia Distance	BEAMAN OR VERNIER			ROD READING				Angular Elev. Diff.	Final Elev. Diff.	ELEVATIONS		Station	FINAL ELEVATIONS
			Level	Inclined	Angle or Factor	Hair Read	Reading	Correction	Center Hair			INST.	ROD		
		0	✓					5.0			-5.0	890.6	π	770	PIPE
		880	90	24	36			10.0			-16.3	879.3		171	
		1760	90	23	57			10.0			-22.2	873.4		172	
		2640	90	32	52			10.0			-36.1	859.1	○	173	
		✓ 269	24	36				10.0					○		
		2640	89	39	29			10.0			-5.0	854.1	Δ		
		✓ 270	18	05				10.0					Δ		
		1760	89	39	23			10.0			+0.6	854.7		174	
		880	89	19	17			10.0			+0.4	854.5		175	
		0	✓					5.0			-5.0	849.1	π	176	
		880	91	39	17			10.0			-35.7	818.3	○	177	
		✓ 268	18	16				10.0					○		
		2640	87	42	25			10.0			-90.3	728.0	Δ		
		✓ 272	39	12				10.0					Δ		
		1760	88	33	36			10.0			+34.3	762.3		178	
		880	90	22	28			10.0			-15.7	712.3		179	
		550	92	23	36			10.0			-33.0	695.0		179.330	
		0	✓					5.0			-5.0	723.0	π	180	
		880	88	08	02			10.0			+13.7	746.7		181	

WORKED BY _____

CHECKED BY _____

2nd

STADIA SURVEY NOTES

AREA Ikpikpak RIVER STATE Alaska PAGE No. 6
 LINE No. 1-4 PARTY No. 1173 DATE Day 4 Mo. 2 Yr. 78 BOOK No. _____
 SURVEYOR R. Ippisch RODMAN K Barr WEATHER Fog -30° P.T.S. No. _____

LINE	Bearing or Sight	Stadia Distance	BEAMAN OR VERNIER			ROD READING				Angular Elev. Diff.	Final Elev. Diff.	ELEVATIONS		▲ BS ○ FS - SS	Station	FINAL ELEVATIONS
			Level	Inclined	Angle or Factor	Hair Read	Reading	Correction	Center Hair			INST.	ROD			
		1760	88	19	19			15.0		+ 36.0		763.8	○	182		
	✓	271	38	23				15.0					○			
		2648	87	04	30			15.0		- 119.0	644.8		△			
	✓	272	53	17				15.0					△			
		1760	87	58	57			10.0		+ 52.0		696.8		183		
		880	89	32	16			10.0		- 2.9		641.9		184		
	○	✓						5.0		- 5.0		639.8	π	185		
		880	90	23	18			10.0		- 15.0		629.9		186		
		1760	90	10	14			10.0		- 15.2		629.6		187		
		2640	90	11	28			10.0		- 19.5		624.8	○	188		
	✓	269	46	16				10.0					○			
		2640	89	46	42			10.0		+ 0.5	625.3		△			
	✓	270	11	09				10.0					△			
		1760	89	45	22			10.0		- 2.4		622.9		189		
		880	89	37	57			10.0		- 4.2		620.8		190		REFER P. 8 FOR TIE
	○	✓						5.0		- 5.0		620.3	π	191		
		880	90	03	36			10.0		- 10.9		614.4		192		
		1760	90	02	42			10.0		- 11.3		614.0		193		

WORKED BY _____ CHECKED BY _____ 2nd

STADIA SURVEY NOTES

AREA IKPIKPUK RIVER STATE Alaska PAGE No. 7
 LINE No. U-4 PARTY No. 1173 DATE Day 4 Mo. 2 Yr. 78 BOOK No. _____
 SURVEYOR R Ippisch RODMAN K Barr WEATHER Fog -30° P.T.S. No. _____

LINE	Bearing or Sight	Stadia Distance	BEAMAN OR VERNIER			ROD READING				Angular Elev. Diff.	Final Elev. Diff.	ELEVATIONS		Station	FINAL ELEVATIONS
			Level	Inclined	Angle or Factor	Hair Read	Reading	Correction	Center Hair			INST.	ROD		
												625.3			
		2640	90	02	02			10.0		-12.2		613.1	0	194	
	✓	269	55	54				10.0					0		
		1760	89	52	38			10.0		+6.9		620.0	Δ		
	✓	270	05	00				10.0					Δ		
		820	89	41	23			10.0		-5.2		614.8		195	
	0	✓						5.0		-5.0		615.0	π	196	PIPE (E.O.L)
		880	90	11	50			10.0		-13.0		607.0	0	751	
		1760	89	33	20			10.0		-3.7		603.3	Δ		
		820	90	07	50			10.0		-12.0		591.3		TS 2	
	0	✓						5.0		-5.0		598.3	π	TS 3	

WORKED BY _____ CHECKED BY _____ 2nd _____

STADIA SURVEY NOTES

AREA Ikpikpak RIVER STATE Alaska PAGE No. 8
 LINE No. U-4 PARTY No. 1173 DATE Day 5 Mo. 2 Yr. 78 BOOK No. _____
 SURVEYOR R Ippisch RODMAN K Barr WEATHER clear P.T.S. No. _____

LINE	Bearing or Sight	Stadia Distance	BEAMAN OR VERNIER			ROD READING				Angular Elev. Diff.	Final Elev. Diff.	ELEVATIONS		Station	FINAL ELEVATIONS
			Level	Inclined	Angle or Factor	Hair Read	Reading	Correction	Center Hair			INST.	ROD		
		1620	90	14	04			5.0			+12.9		620.8		(
	✓	269	40	36				5.0					Δ	TP0	
	0	✓						5.0		-5.0			+	TP1	
		1320	89	49	22			5.0		+1.3			632.1	○	TP2
	✓	270	08	26				5.0					○		
		2080	93	21	11			15.0		+137.32			Δ		
	✓	266	36	23				15.0					Δ		
	0	✓						5.0		-5.0			+	TP3	
		1320	90	52	16			15.0		-35.5			733.7	○	TP4
	✓	269	05	28				15.0					○		
		1920	94	23	15			15.0		+163.6			Δ		
	✓	265	32	53				15.0					Δ		
	0	✓						5.0		-5.0			892.2	+	TBM 78078

ELEVATIONS ADJUSTED FROM
 S.P. 135 TO TBM 78078
 APPROX 4.5 METER RAIN

WORKED BY _____ CHECKED BY _____ 2nd _____

STADIA SURVEY NOTES

AREA IkpikpuK RIVER STATE Alaska PAGE No. 9
 LINE No. U-4 PARTY No. 1173 DATE Day 8 Mo. 2 Yr. 78 BOOK No. _____
 SURVEYOR R Tppisch RODMAN K Barr WEATHER Clear wind P.T.S. No. _____

LINE	Bearing or Sight	Stadia Distance	BEAMAN OR VERNIER			ROD READING				Angular Elev. Diff.	Final Elev. Diff.	ELEVATIONS		▲ BS ○ FS - SS	Station	FINAL ELEVATIONS
			Level	Inclined	Angle or Factor.	Hair Read	Reading	Correction	Center Hair			INST.	ROD			
		550	86	38	30			10.0			-21.8	1024.5	1046.3	Δ	135	= TRM 78074
		✓ 270	15		41			10.0						Δ		
		0	✓					5.0			-5.0		1019.5	π	134+380	
		330	94	07	15			10.0			-33.7		990.8		124	
		1210	94	52	15			10.0			-113.1		911.4		123	
		1540	94	52	32			10.0			-121.3		883.6	○	122+550	
		✓ 265	05		34			10.0						○		
		2860	85	54	02			10.0			-193.8	689.8		Δ		
		✓ 274	03		52			10.0						Δ		
		2310	86	35	15			10.0			+127.6		817.4		132	
		1430	87	44	52			10.0			+46.2		736.0		131	
		550	88	29	56			10.0			+4.0		694.2		130	
		0	✓					5.0			-5.0		684.8	π	123+330	
		330	92	03	23			10.0			-21.8		668.0		129	
		1210	92	36	42			10.0			-65.1		624.7		128	
		2090	92	18	04			10.0			-93.0		596.0		127	
		2970	92	03	46			10.0			-112.5		572.8	○	126	
		✓ 267	54		24			10.0						○		

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AREA Ikpiikut RIVER STATE Alaska PAGE No. 10
 LINE No. U-4 PARTY No. 1173 DATE Day 8 Mo. 2 Yr. 78 BOOK No. _____
 SURVEYOR R Ippisch RODMAN K Barr WEATHER Clear, wind P.T.S. No. _____

LINE	Bearing or Sight	Stadia Distance	BEAMAN OR VERNIER			ROD READING			Angular Elev. Diff.	Final Elev. Diff.	ELEVATIONS		Station	FINAL ELEVATIONS
			Level	Inclined	Angle or Factor	Hoir Read	Reading	Correction			Center Hoir	INST.		
		1656	88	03	18			10.0	-45.6	527.2		Δ 126		
	✓	271	54	54			10.0					Δ		
		770	94	21	36			41.5	-63.0		464.2	Δ 125		
	0	✓						5.0	-5.0		522.2	Δ 124+110		
	110	86	23	36			10.0		-3.1		524.1	Δ 124		
	990	86	51	25			10.0		+44.3		571.5	Δ 123		
	1870	86	19	41			10.0		+109.8		637.0	Δ 122		
	2200	86	22	20			10.0		+129.6		656.2	Δ 121+550		
	✓	273	35	36			10.0					Δ		
	2520	89	34	28			10.0		-15.4	640.8		Δ		
	✓	270	23	33			10.0					Δ		
	2970	89	38	06			10.0		+9.1		649.9	Δ 121		
	2090	91	25	59			10.0		-62.2		578.6	Δ 120		
	1540	93	09	05			10.0		-94.6		546.2	Δ 119+230		
	1210	93	13	40			10.0		-78.1		562.7	Δ 119		
	330	93	23	02			10.0		-29.5		611.3	Δ 118		
	0	✓					5.0		-5.0		635.8	Δ 117+550		
	550	85	19	48			10.0		+34.8		675.6	Δ 117		

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STADIA SURVEY NOTES

AREA Ikpikpak RIVER STATE Alaska PAGE No. 12
 LINE No. U-4 PARTY No. 1173 DATE Day 8 Mo. 2 Yr. 78 BOOK No. _____
 SURVEYOR R Ippisch RODMAN K Barr WEATHER Clear, wind P.T.S. No. _____

LINE	Bearing or Sight	Stadia Distance	BEAMAN OR VERNIER			ROD READING				Angular Elev. Diff.	Final Elev. Diff.	ELEVATIONS		Station	FINAL ELEVATIONS
			Level	Inclined	Angle or Factor	Hair Read	Reading	Correction	Center Hair			INST.	ROD		
		0	✓					5.0		+5.0	1026.5	1021.5			
		0	✓					5.0					Δ	111+590	= TBM 78073
		0	✓					5.0		-5.0		1021.5	π	111+502	
		592	92	28	29			10.0		-35.6		990.9		111	
		1472	93	00	33			10.0		-87.8		938.9	○	110	
		✓	2.66	56	44			10.0					○		
		2090	86	33	18			10.0		-114.8	874.4		Δ		
		✓	2.73	24	03			10.0					Δ		
		1210	86	25	48			10.0		+65.0		889.4		109	
		330	85	23	05			10.0		+16.6		841.0		108	
		0	✓					5.0		-5.0		819.4	π	107+550	
		550	95	21	52			10.0		-61.4		763.0		107	
		880	95	25	27			21.0	HA	-104.2		720.2		106+550	
		1430	93	04	26			10.0		-86.6		737.8		106	
		2310	91	57	12			10.0		-88.6		735.8		105	
		2640	91	59	56			10.0		-103.0		721.4	○	104+550	
		✓	2.67	57	23			10.0					○		

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STADIA SURVEY NOTES

AREA Ikpikpak RIVER STATE Alaska PAGE No. 13
 LINE No. 04 PARTY No. 1173 DATE Day 8 Mo. 2 Yr. 78 BOOK No. _____
 SURVEYOR R Tppisch RODMAN K Barr WEATHER Clear, wind P.T.S. No. _____

LINE	Bearing or Sight	Stadia Distance	BEAMAN OR VERNIER			ROD READING				Angular Elev. Diff.	Final Elev. Diff.	ELEVATIONS		Station	FINAL ELEVATIONS
			Level	Inclined	Angle or Factor	Hair Read	Reading	Correction	Center Hair			INST.	ROD		
		880	87	06	53				10.0		-34.1	687.7		Δ	104+550
		✓ 272		51	10				10.0					Δ	
		440	87	48 12					10.0		+6.9	694.8		Δ	104+110
		330	87	52	15				10.0		+2.3	690.2		π	104
		0	✓						5.0		-5.0	682.9		π	103+550
		550	95	12	14				10.0		-59.9	628.0			103
		1430	95	57	08				10.0		-158.2	529.7			102
		1980	95	51	56				10.0		-212.3	475.6			101+330
		2310	94	39	24				10.0		-197.4	490.5			101
		3190	92	41	29				10.0		-16.8	527.3	0		100
		✓ 267		16	21				10.0				0		
		3190	87	45	40				10.0		-113.7	413.9		Δ	
		✓ 272		12	00				10.0					Δ	
		2310	88	00	04				10.0		+70.7	484.6			99
		1430	88	08	56				10.0		+36.2	450.4			98
		550	88	47	05				10.0		+1.7	415.6			97
		0	✓						5.0		-5.0	408.9		π	96+330
		330	90	22	10				10.0		-12.1	401.8			96

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STADIA SURVEY NOTES

AREA Ikpikput RIVER STATE Alaska PAGE No. 14
 LINE No. U-4 PARTY No. 1173 DATE Day 8 Mo. 2 Yr. 78 BOOK No. _____
 SURVEYOR R Ippisch RODMAN K Barr WEATHER Clear, Wind P.T.S. No. _____

LINE	Bearing or Sight	Stadia Distance	BEAMAN OR VERNIER			ROD READING				Angular Elev. Diff.	Final Elev. Diff.	ELEVATIONS		Station	FINAL ELEVATIONS
			Level	Inclined	Angle or Factor	Hair Read	Reading	Correction	Center Hair			INST.	ROD		
		1420	91	29	28			10.0		-47.2		366.7		95	
		1540	91	49	00			10.0		-58.8		355.4		94+770	
		2420	90	35	45			10.0		-35.0		378.2		941	
	2640	2970	90	25	25			10.0		-30.2		383.7	0	93+330	
		✓ 269	32	20				10.0					0		
		2970	89	31	13			10.0		-14.2	362.9		Δ		
		✓ 270	26	56				10.0					Δ		
		2640	90	53	48			4.5		-45.7		324.0		93	
		1760	91	02	50			10.0		-42.1		327.6		92	
		880	90	57	14			10.0		-24.6		345.2		91	
		0	✓					5.0		-5.0		364.7	X	90	
		880	86	36	17			10.0		+42.1		411.8		89	
		1760	85	25	17			10.0		+130.6		500.3		88	
	2310	2490	83	43	53			10.0		+241.7		611.4	0	87+330	
		✓ 276	14	10				10.0					0		
		330	90	44	44			10.0		+144	626.0		Δ		
		✓ 269	13	12				10.0					Δ		

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STADIA SURVEY NOTES

AREA Ikpikpuk RIVER STATE Alaska PAGE No. 15
 LINE No. U-4 PARTY No. 1173 DATE Day 8 Mo. 2 Yr. 78 BOOK No. _____
 SURVEYOR R. Ippisch RODMAN K Barr WEATHER Clear, wind P.T.S. No. _____

LINE	Bearing or Sight	Stadia Distance	BEAMAN OR VERNIER			ROD READING				Angular Elev. Diff.	Final Elev. Diff.	ELEVATIONS		Station	FINAL ELEVATIONS
			Level	Inclined	Angle or Factor	Hair Read	Reading	Correction	Center Hair			INST.	ROD		
		0 ✓						5.0			-5.0	620.0	▲	87	
		880	91	55	31			10.0			-39.9	586.1	○	86	
		✓ 269	01	45				10.0					○		
		1760	89	12	58			10.0			-13.5	572.7	▲		
		✓ 270	44	30				10.0					▲		
		880	93	11	43			21.0	HR		-70.0	502.7	▲	85	
		0 ✓						5.0			-5.0	567.7	▲	84	
		550	90	25	16			10.0			-14.3	558.4	○	83+330	
		✓ 269	32	00				10.0					○		
		1540	91	39	27			10.0			+55.1	613.5	▲		
		✓ 268	18	00				10.0					▲		
		1210	92	51	31			10.0			-70.3	543.2	▲	83	
		330	96	08	58			10.0			-45.3	568.2	▲	82	
		0 ✓						5.0			-5.0	608.5	▲	81+550	
		440	82	48	07			12.0			+4.8	618.3	○	81+110	
		✓ 272	10	47				12.0					○		

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AREA Ekpikuk RIVER STATE Alaska PAGE No. 16
 LINE No. U-4 PARTY No. 1173 DATE Day 8 Mo. 2 Yr. 78 BOOK No. _____
 SURVEYOR R Ippisch RODMAN K Barr WEATHER Clear, wind P.T.S. No. _____

LINE	Bearing or Sight	Stadia Distance	BEAMAN OR VERNIER			ROD READING				Angular Elev. Diff.	Final Elev. Diff.	ELEVATIONS		Station	FINAL ELEVATIONS
			Level	Inclined	Angle or Factor	Hoir Read	Reading	Correction	Center Hoir			INST.	ROD		
		1540	87	58	53			15.0		-38.8	579.6		Δ	81+110	
	✓	271	58	52				15.0					Δ		
		1430	88	11	22			10.0		+35.2	614.8			81	
		550	94	06	52			10.0		-42.5	530.1			80	
	0	✓						5.0		-5.0	574.6		κ	79+330	
		330	88	24	48			15.0		-5.9	573.7		○	79	
		660	89	43	16			15.0		-11.8	567.8		○	78+550	
	✓	270	16	08				15.0					○		
		1980	90	17	52			15.0		+26.9	594.7		Δ		
	✓	269	36	22				15.0					Δ		
		1430	92	18	45			10.0		-67.7	527.0			78	
		1100	94	02	10			10.0		-87.4	507.3			77+550	
		550	94	03	17			10.0		-48.9	545.8			77	
	0	✓						5.0		-5.0	580.7		κ	76+330	
		330	88	05	47			10.0		70.8	598.5		○	76	
	✓	271	51	03				10.0					○		

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AREA Ikpikpuk RIVER STATE Alaska PAGE No. 17
 LINE No. U-4 PARTY No. 1173 DATE Day 9 Mo. 2 Yr. 78 BOOK No. _____
 SURVEYOR R Ippisch RODMAN K Barr WEATHER -42° 15-20 mph wind P.T.S. No. _____

LINE	Bearing or Sight	Stadia Distance	BEAMAN OR VERNIER			ROD READING				Angular Elev. Diff.	Final Elev. Diff.	ELEVATIONS		Station	FINAL ELEVATIONS				
			Level	Inclined	Angle or Factor	Hair Read	Reading	Correction	Center Hair			INST.	ROD		Δ BS 0 FS - SS				
		1430	88	37	52			10.0			-23.7	572.3		Δ	76				
	✓	271	19	30				10.0						Δ					
		550	92	33	27			10.0			-34.5		537.8		75				
	0	✓						5.0			-5.0		567.3	π	74+330				
		330	88	46	52			10.0			-3.0		569.3		74				
		880	90	18	10			17.0	H.R.		-21.6		550.7		73+330				
		1210	89	40	40			10.0			-3.2		569.1		72				
		2090	88	10	2.8			10.0			+56.7		629.0		72		71-72	(1760')	
		2860	87	37	24			10.0			+107.9		680.2	0	71+990		72-73	(880')	
	✓	272	20	36				10.0						0					
		440	90	07	18			10.0			+11.1	691.6		Δ					
	✓	269	50	33				10.0						Δ					
	0	✓						5.0			-5.0		686.6	π	71+330				
		550	89	07	55			10.0			-40.0		651.6		71				
		1760	92	46	02			10.0			-74.9		596.7		70+550				
		2310	91	36	18			10.0			-75.6		616.2	0	70				
	✓	268	21	23				10.0						0					

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STADIA SURVEY NOTES

AREA Ikpikpak RIVER STATE Alaska PAGE No. 18
 LINE No. U-4 PARTY No. 1173 DATE Day 9 Mo. 2 Yr. 78 BOOK No.
 SURVEYOR R Ippisch RODMAN K Barr WEATHER -42° wind P.T.S. No.

LINE	Bearing or Sight	Stadia Distance	BEAMAN OR VERNIER			ROD READING				Angular Elev. Diff.	Final Elev. Diff.	ELEVATIONS		Station	FINAL ELEVATIONS
			Level	Inclined	Angle or Factor	Hoir Read	Reading	Correction	Center Hair			INST.	ROD		
		1760	91	46	53°			10.0			765.3	681.5		Δ	70
	✓	268	10	43				10.0						Δ	
	0	✓						5.0			-5.0	676.5		Δ	69
		333	90	24	35°			10.0			-12.5	669.0		0	68+1420
	✓	269	32	57				10.0						0	
		1825	88	03	48			10.0			-56.0	618.3		Δ	
	✓	271	53	18				10.0						Δ	
		1165	91	30	22			10.0			-40.6	572.7			68+780
		395	91	15	10			10.0			-18.6	599.7			68
	0	✓						5.0			-5.0	613.3		Δ	67+1365
								10.0			-81.4			Δ	67
		1265	92	58	34			10.0				536.9		0	
	✓	266	58	42				10.0						0	
		2140	89	09	50			10.0			-20.5	516.4		Δ	
	✓	270	47	30				10.0						Δ	
		1370	91	11	42			10.0			-27.3	479.1			66+990
		380	94	11	11			10.0			-37.7	478.7			66

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STADIA SURVEY NOTES

AREA IKPIKPUK, RIVER STATE or PROVINCE ALASKA PAGE No. 19
 LINE No.(s) U-4 PARTY No. 1173 DATE 9 Day 2 Mo. 78 Yr. BOOK No. _____
 SURVEYOR R. IAPISON RODMAN K. BARK WEATHER: -42° WINDY P.T.S. No. _____

LINE	Bearing of Sight	Stadia Distance	BEAMAN OR VERNIER			ROD READING				Angular Elev. Diff.	Final Elev. Diff.	ELEVATIONS		A.B.S. OF S. - S.S.	Station	REMARKS
			Level	Inclined	Angle or Factor	Hair Read	Reading	Correction	Center Hair			INST.	ROD			
1																
2		0	✓						5.0		-5.0	511.4	π	65+1380		
3												511.4	π	TBM 78071		
4																
5												+3.2		MISTIE - RAW		
6												511.4				
7		0	✓						5.0		+5.0	516.4	Δ	TBM 78071 = 65+1380		
8		0	✓						5.0				Δ			
9		0	✓						5.0		-5.0	511.4	π	65+1380		
10		1380		92	21	54			10.0		-66.9	449.5		65		
11		2590		88	58	34			10.0		+35.3	552.4	⊙	64+550		
12			✓	270	58	32			10.0				⊙			
13																
14		2310		90	26	04			10.0		+28.2	581.0	Δ			
15			✓	269	31	27			10.0				Δ			
16		1760		91	18	42			10.0		-50.2	530.8		64		
17		1430		92	08	16			10.0		-63.3	517.7		63+1430		
18		770		93	07	51			10.0		+52.0	529.0		63+770		
19		0	✓						5.0		-5.0	576.0	π	63		
20																

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STADIA SURVEY NOTES

AREA Ikpikpuk RIVER STATE or PROVINCE Alaska PAGE No. 20
 LINE No.(s) U-4 PARTY No. 1173 DATE 10 Day 2 Mo. 78 Yr. BOOK No. _____
 SURVEYOR R Ippisch RODMAN K Barr WEATHER: Clear -30° wind P.T.S. No. _____

LINE	Bearing of Sight	Stadia Distance	BEAMAN OR VERNIER			ROD READING				Angular Elev. Diff.	Final Elev. Diff.	ELEVATIONS		AB.S. OF S. - S.S.	Station	REMARKS
			Level	Inclined	Angle or Factor	Hair Read	Reading	Correc-tion	Center Hair			INST.	ROD			
1																
2		1064	83	20	02				10.0	+113.1		694.1	0	62+696		
3	✓	276	37	15					10.0				0			
4																
5		1796	88	12	48				10.0	-45.4	649.3		Δ			
6	✓	271	44	38					10.0				Δ			
7		1100	88	25	29				10.0	+20.3		669.6		62		
8		330	95	15	16				10.0	-40.2		609.1		61+990		
9	-5	✓							5.0	-5.0		644.3	π	61+660		
10		660	87	08	28				10.0	+22.9		672.2		61		
11		2420	86	57	45				10.0	+117.4		766.7	0	60		
12	✓	272	59	32					10.0				0			
13																
14		2310	89	57	06				10.0	+8.8	775.7		Δ			
15	✓	270	00	14					10.0				Δ			
16		550	91	12	24				10.0	-21.6		754.1		59		
17	0	✓							5.0	-5.0		770.7	π	58+1210		
18		741	89	08	13				10.0				0	58+469 = 78070		
19	✓	270	48	52					10.0	+0.9			0			
20																776.62 = TRM 78070

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-1.8 mistie Raw

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STADIA SURVEY NOTES

AREA IKPIK RIVER STATE or PROVINCE ALASKA PAGE No. 21
 LINE No.(s) U-4 PARTY No. 1173 DATE 10 Day 2 Mo. 78 Yr. BOOK No. _____
 SURVEYOR R. IPPISCH RODMAN K. BARR WEATHER: -30° WINDY P.T.S. No. _____

LINE	Bearing of Sight	Stadia Distance	BEAMAN OR VERNIER			ROD READING				Angular Elev. Diff.	Final Elev. Diff.	ELEVATIONS		Station	REMARKS
			Level	Inclined	Angle or Factor	Hair Read	Reading	Correc-tion	Center Hair			INST.	ROD		
1												776.62	= TBM	78070	
2		0	✓					5.0		+5.0	781.6		Δ	78070 = S.P. 58 + 469	
3		0	✓					5.0					Δ		
4		0	✓					5.0		-5.0		776.6	π	58 + 469	
5		496	91	10	16			10.0		-20.1		761.5		58	
6		1459	92	02	10			10.0		-61.8		719.8		57 + 170	
7		2229	90	58	02			10.0		-47.5		734.1		57	
8		2779	90	49	01			10.0		-50.7		731.2	o	56 + 1210	
9		✓ 269	08	02				10.0					o		
10															
11		1620	86	51	50			10.0		-78.0	653.5		Δ		
12		✓ 273	05	26				10.0					Δ		
13		410	89	41	04			15.0		-12.7		640.8		56	
14		0	✓					5.0		-5.0		648.5	π	55 + 1350	
15		1350	94	59	42			10.0		-127.5		526.0		55	
16		2560	93	35	11			10.0		-176.1		482.4	o	54 + 550	
17		✓ 266	21	50				10.0					o		
18															
19		2310	88	57	52			10.0		-30.9	451.7		Δ		
20		✓ 270	59	12				10.0					Δ		

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STADIA SURVEY NOTES

AREA IKPIK PAK RIVER STATE or PROVINCE Alaska PAGE No. 22
 LINE No.(s) U-4 PARTY No. 1173 DATE 10 Day 2 Mo. 78 Yr. BOOK No. _____
 SURVEYOR L. IPPISCH RODMAN K Barr WEATHER: -30, wind P.T.S. No. _____

LINE	Bearing of Sight	Stadia Distance	BEAMAN OR VERNIER			ROD READING				Angular Elev. Diff.	Final Elev. Diff.	ELEVATIONS		▲B.S. OF.S. -S.S.	Station	REMARKS
			Level	Inclined	Angle or Factor	Hair Read	Reading	Correc-tion	Center Hair			INST.	ROD			
1																
2		1760	89	02	26				10.0		+19.5		471.2		54	
3		0	✓						5.0		-5.0		446.7	π	53	
4		1760	88	12	13				10.0		+44.3		496.0	0	52	
5		✓	271	44	17				10.0					0		
6																
7		1093	90	34	57				10.0		+21.6	517.6		Δ		
8		✓	269	21	55				10.0					Δ		
9		0	✓						5.0		-5.0		512.6	π	51+667 = 78069	
10													512.6	TBM	78069	512.58
11																
12													50.8		MISTIE - RAW	
13													512.6	TBM	78069	
14		0	✓						5.0		+5.0	517.6		Δ	51+667 = 78069	
15		0	✓						5.0					Δ		
16		0	✓						5.0		-5.0		512.6	π	51+667	
17		667	90	47	30				10.0		-18.2		494.4		51	
18		2427	90	58	40				10.0		-52.5		465.4	0	50	
19		✓	268	58	19				10.0					0		
20																

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STADIA SURVEY NOTES

AREA Ikpikpuk RIVER STATE or PROVINCE Alaska PAGE No. 23
 LINE No.(s) U-4 PARTY No. 1173 DATE 10 Day 2 Mo. 78 Yr. BOOK No. _____
 SURVEYOR R Ippisch RODMAN K Barr WEATHER: -30° wind P.T.S. No. _____

LINE	Bearing of Sight	Stadia Distance	BEAMAN OR VERNIER			ROD READING				Angular Elev. Diff.	Final Elev. Diff.	ELEVATIONS		Abs. of S. - S.S.	Station	REMARKS
			Level	Inclined	Angle or Factor	Hair Read	Reading	Correc-tion	Center Hair			INST.	ROD			
1																
2		1870	88	22	58			10.0		-42.1	423.5		Δ	50		
3		✓	271	34	10			10.0					Δ			
4		110	85	44	42			10.0		-1.8		421.7		49		
5		0	✓					5.0		-5.0		418.5	π	48+1650		
6		660	93	34	56			1.0		-42.2		381.3		48+930		
7		1650	88	16	46			4.5		+45.1		468.6		48		
8		1980	88	15	54			10.0		+49.4		472.6	0	47+430		
9		✓	271	40	51			10.0					0			
10																
11		2420	89	45	20			10.0		+0.6	473.4		Δ			
12		✓	270	11	44			10.0					Δ			
13		990	90	54	10			4.5		-20.1		453.3		47		
14		660	92	09	22			1.0		-25.8		447.6		46+3030		
15		0	✓					5.0		-5.0		468.4	π	46+770		
16		770	85	01	12			10.0		+56.9		530.3		46		
17		1980	85	17	39			10.0		+151.5		624.9	0	45+550		
18		✓	274	38	59			10.0					0			
19																
20																

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STADIA SURVEY NOTES

AREA Ikpihpuk RIVER STATE or PROVINCE Alaska PAGE No. 24
 LINE No.(s) U-4 PARTY No. 1173 DATE 10 Day 2 Mo. 78 Yr. BOOK No. _____
 SURVEYOR R Ippisch RODMAN K Barr WEATHER: -30 wind P.T.S. No. _____

LINE	Bearing of Sight	Stadia Distance	BEAMAN OR VERNIER			ROD READING			Angular Elev. Diff.	Final Elev. Diff.	ELEVATIONS		Station	REMARKS
			Level	Inclined	Angle or Factor	Hair Read	Reading	Correction			Center Hair	INST.		
1														
2		335	90	28	34			10.0	+12.9	637.8		Δ	45+530	
3		✓	269	28	00			10.0				Δ		
4		0	✓					5.0	-5.0		632.8	π	45+215 = (TBM 78068)	
5											632.8	TBM 78068	632.83	
6													-0.5 Mistie Row	
7														
8		0	✓					5.0	+5.0	637.7		Δ	45+215	
9		0	✓					5.0				Δ		
10		0	✓					5.0	-5.0		632.7	π	45+215	
11		215	90	26	30			10.0	-11.7		626.0	0	45	
12		✓	269	30	40			12.0				0		
13														
14		2310	87	14	41			10.0	-100.2	525.2		Δ		
15		✓	272	42	26			10.0				Δ		
16		550	88	07	46			10.0	+8.0		533.2		44	
17		0	✓					5.0	-5.0		520.2	π	43+1210	
18		440	91	51	35			10.0	-24.3		500.9		43+770	
19		1210	88	25	38			10.0	+23.2		548.4		48	
20														

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STADIA SURVEY NOTES

AREA Ikpikpuk RIVER STATE or PROVINCE Alaska PAGE No. 25
 LINE No.(s) U-4 PARTY No. 1173 DATE 16 Day 2 Mo. 28 Yr. BOOK No. _____
 SURVEYOR R Tappisch RODMAN K Barr WEATHER: Clear, -30 P.T.S. No. _____

LINE	Bearing of Sight	Stadia Distance	BEAMAN OR VERNIER			ROD READING				Angular Elev. Diff.	Final Elev. Diff.	ELEVATIONS		B.S. OF.S. - S.S.	Station	REMARKS
			Level	Inclined	Angle or Factor	Hair Read	Reading	Correc-tion	Center Hair			INST.	ROD			
1																
2		1540	88	33	01				10.0	+28.3		553.5	0	42+1430		
3		✓	271	23	58				10.0				0			
4																
5		1430	87	52	08				10.0	-42.6	510.0		Δ			
6		✓	272	04	48				10.0				Δ			
7		0	✓						5.0	-5.0		505.0	π	42		
8		990	91	43	08				10.0	-39.7		470.3		41+770		
9		1760	90	23	34				10.0	-22.0		488.0		41		
10		2310	90	17	10				10.0			487.5	0	40+1210		
11		✓	269	39	34				10.0	-22.5			0			
12																
13		2166	90	38	58				13.5	+39.8	527.3		Δ			
14		✓	269	15	18				13.5				Δ			
15		956	90	33	28				25.0	by -34.3		493.0		40		
16		647.0	90	23	45				15.0	-19.5		507.8		INT = 39+1+51-4-4 4-44.9 = 353+389-4-9		
17		997	89	39	20				10.0	-4.0		523.3	25	253+490 = LINE 4-9		
18		0	✓						5.0	-5.0		522.3	π	39+804 (TBM 78045)		
19		0	✓						5.0	-5.0		522.3	0	39+804 522.3		
20															-1.6 Mistie Row	

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STADIA SURVEY NOTES

AREA Ikpikpuk RIVER STATE or PROVINCE Alaska PAGE No. 26
 LINE No.(s) U-4 PARTY No. 1173 DATE 11 Day 2 Mo. 78 Yr. BOOK No. _____
 SURVEYOR R Teppich RODMAN K Barr WEATHER: FOG -18° P.T.S. No. _____

LINE	Bearing of Sight	Stadia Distance	BEAMAN OR VERNIER			ROD READING				Angular Elev. Diff.	Final Elev. Diff.	ELEVATIONS		Station	REMARKS
			Level	Inclined	Angle or Factor	Hair Read	Reading	Correc-tion	Center Hair			INST.	ROD		
1												522.3			
2		0	✓						5.0	+5.0	527.2		Δ	39+804	(78045)
3		0	✓						5.0				Δ		
4		0	✓						5.0	-5.0	522.2		⊥	39+804	(78045)
5		474	93	45	41				10.0	-41.2	486.0		0	39+330	522.30
6		✓	266	12	00				10.0				0		
7															
8		1320	88	09	57				10.0	-31.7	454.4		Δ		
9		✓	271	46	58				10.0				Δ		
10		990	89	21	27				10.0	+1.1		455.5		39	
11		0	✓						5.0	-5.0		449.4	⊥	38+770	
12		770	87	13	16				10.0	+22.3		481.7		38	
13		1760	87	02	40				10.0	+80.0		534.4	0	37+770	
14		✓	272	54	20				10.0				0		
15															
16		440	88	32	22				10.0	-1.0	533.3		Δ		
17		✓	271	24	37				10.0				Δ		
18		0	✓						5.0	-5.0		528.3	⊥	37+330	
19		330	92	43	30				10.0	-25.7		507.6		37	
20		1760	93	29	39				10.0	-117.2		416.1		36+330	

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STADIA SURVEY NOTES

AREA IkpiqpuK RIVER STATE or PROVINCE Alaska PAGE No. 27
 LINE No.(s) U-4 PARTY No. 1173 DATE 11 Day 2 Mo. 78 Yr. BOOK No. _____
 SURVEYOR R Ippisch RODMAN K Barr WEATHER: -18 P.T.S. No. _____

LINE	Bearing of Sight	Stadia Distance	BEAMAN OR VERNIER			ROD READING				Angular Elev. Diff.	Final Elev. Diff.	ELEVATIONS		A.B.S. OF S. - S.S.	Station	REMARKS
			Level	Inclined	Angle or Factor	Hair Read	Reading	Correction	Center Hair			INST.	ROD			
1																
2		2090	92	51	17			10.0		-114.0		419.3		36		
3		2640	91	54	06			10.0		-98.6		434.7	0	35+12.10		
4		✓ 268	02	58				10.0					0			
5																
6		1980	89	55	28			10.0		+8.4	442.9		Δ			
7		✓ 270	01	11				10.0					Δ			
8		770	90	18	48			10.0		-14.2		428.7		75		
9		0	✓					5.0		-5.0		437.9	κ	34+990		
10		990	90	58	20			10.0		-26.8		416.1		84		
11		2750	90	37	36			10.0		-41.1		401.8	0	33		
12		✓ 269	19	22				10.0					0			
13																
14		2970	89	53	05			10.0		+5.2	406.9		Δ			
15		✓ 270	03	52				10.0					Δ			
16		1980	91	10	38			10.0		-50.6		356.3		32+720		
17		1540	91	22	48			1.0		-58.0		368.9		32+330		
18		1210	92	47	25			4.5		-63.4		343.5		72		
19		1100	94	02	10			1.0		-78.4		328.5		31+1650		
20		0	✓					5.0		-5.0		401.9	κ	31+550		

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STADIA SURVEY NOTES

AREA Ik pikpok RIVER STATE or PROVINCE Alaska PAGE No. 28
 LINE No.(s) U-4 PARTY No. 1173 DATE 11 Day 2 Mo. 78 Yr. BOOK No. _____
 SURVEYOR R Tippisch RODMAN K Barr WEATHER: -18 P.T.S. No. _____

LINE	Bearing of Sight	Stadia Distance	BEAMAN OR VERNIER			ROD READING				Angular Elev. Diff.	Final Elev. Diff.	ELEVATIONS		B.S. OF.S. - S.S.	Station	REMARKS
			Level	Inclined	Angle or Factor	Hair Read	Reading	Correc-tion	Center Hair			INST.	ROD			
1																
2		550	87	04	10				10.0	+18.1		425.0		31		
3		880	87	45	10				10.0	+24.1		431.0	0	30+1430		
4		✓	272	11	52				10.0				0			
5																
6		242.0	90	54	01				10.0	+42.1	480.1		Δ			
7		✓	219	02	40				10.0				Δ			
8		990	93	01	19				10.0	-62.2		417.9		30		
9		0	✓						5.0	-5.0		475.1	κ	29+770		
10		770	86	41	07				10.0	+34.5		514.6		29		
11		880	86	56	12				10.0	+36.6		516.7	0	28+1650		
12		✓	273	00	14				10.0				0			
13																
14		1100	88	27	06				10.0	-19.2	497.4		Δ			
15		✓	271	29	23				10.0				Δ			
16		0	✓						5.0	-5.0		492.4	κ	28+550		
17		550	91	52	38				10.0	-28.0		469.4		28		
18		1980	92	23	04				15.0	-27.3		400.1		29+330		
19		2310	91	45	27				10.0	-81.9		415.5	0	27		
20		✓	268	10	59				10.0				0			

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2nd _____

STADIA SURVEY NOTES

AREA Ikpikpak RIVER STATE or PROVINCE Alaska PAGE No. 29
 LINE No.(s) J-4 PARTY No. 1173 DATE 11 Day 2 Mo. 78 Yr. BOOK No. _____
 SURVEYOR R Ippisch RODMAN K Barr WEATHER: -18° P.T.S. No. _____

LINE	Bearing of Sight	Stadia Distance	BEAMAN OR VERNIER			ROD READING			Angular Elev. Diff.	Final Elev. Diff.	ELEVATIONS		ABS. OF S. S.S.	Station	REMARKS
			Level	Inclined	Angle or Factor	Hair Read	Reading	Correction			Center Hair	INST.			
1															
2		2530	92	37	14			10.0	+126.7	542.2		Δ	27		
3		✓	267	19	37			10.0				Δ			
4		770	92	17	33			10.0	-40.8		501.4		26		
5		0	✓					5.0	-5.0		537.2	κ	25+990		
6		660	89	24	48			10.0	-3.5		538.7	0	25+330		
7		✓	270	31	56			10.0				0			
8															
9		2640	88	01	31			10.0	-79.8	458.8		Δ			
10		✓	271	55	10			10.0				Δ			
11		2310	88	05	50			10.0	+66.8		525.6		25		
12		550	89	07	48			10.0	-1.6		457.2		24		
13		0	✓					5.0	-5.0		453.8	κ	23+1210		
14		1210	89	23	40			10.0	+2.8		461.6		23		
15		2880	89	24	07			10.0	+185		477.6	0	22+90		
16		✓	270	32	34			10.0				0	=TBM 28065		
17											477.6	TBM 28085	477.56		
18															
19															
20															

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STADIA SURVEY NOTES

AREA Ikpikpak RIVER STATE or PROVINCE Alaska PAGE No. 30
 LINE No.(s) U-41 PARTY No. 1173 DATE 11 Day 2 Mo. 78 Yr. BOOK No. _____
 SURVEYOR R Ippisch RODMAN K Bari WEATHER: -18 P.T.S. No. _____

LINE	Bearing of Sight	Stadia Distance	BEAMAN OR VERNIER			ROD READING				Angular Elev. Diff.	Final Elev. Diff.	ELEVATIONS		A.B.S. OF S. - S.S.	Station	REMARKS
			Level	Inclined	Angle or Factor	Hair Read	Reading	Correc-tion	Center Hair			INST.	ROD			
1																
2		2620	89	01	13			10.0		-33.7	443.7		477.6	Δ	22+90	
3		✓ 270	88	55	38			10.0						Δ		
4		2530	88	59	13			10.0		+ 34.9			478.9	κ	22	
5		270	89	06	32			10.0		+ 2.0			445.7	○	21	
6		0	✓					5.0		- 5.0			438.7	κ	20+990	
7		990	89	47	52			10.0		- 6.5			437.2	○	20	
8		2750	90	05	52			10.0		-15.8			427.9	○	19	
9		✓ 269	50	55				10.0						○		
10																
11		2530	89	29	47			10.0		-11.1	416.7			Δ		
12		✓ 270	26	49				10.0						Δ		
13		770	89	37	45			10.0		-5.0			411.7		18	
14		0	✓					5.0		-5.0			411.7	κ	17+990	
15		990	89	35	11			10.0		-2.8			413.9		17	
16		1980	89	37	05			10.0		+2.3			419.0	○	16+770	
17		✓ 270	19	34				10.0						○		
18																
19		2530	88	46	46			10.0		-42.7	376.3			Δ		
20		✓ 271	09	35				10.0						Δ		

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STADIA SURVEY NOTES

AREA Ikpikpuk RIVER STATE or PROVINCE Alaska PAGE No. 31
 LINE No.(s) U-4 PARTY No. 1173 DATE 11 Day 2 Mo. 78 Yr. BOOK No. _____
 SURVEYOR R Ippisch RODMAN K Barr WEATHER: -18 P.T.S. No. _____

LINE	Bearing of Sight	Stadia Distance	BEAMAN OR VERNIER			ROD READING				Angular Elev. Diff.	Final Elev. Diff.	ELEVATIONS		AB.S. OF S. - S.S.	Station	REMARKS
			Level	Inclined	Angle or Factor	Hair Read	Reading	Correc-tion	Center Hair			INST.	ROD			
1												376.3				
2		1760	89	25	38			4.5		+13.2		389.5		16		
3		1210	92	37	52			1.0		-56.5		319.8		15+1210		
4		0	✓					5.0		-5.0		371.3	π	15		
5		770	87	27	36			10.0				400.0	0	14+990		
6		✓	272	28	47			10.0		+23.7			0			
7																
8		1760	90	14	58			10.0		+18.5	418.4		Δ			
9		✓	269	41	41			10.0					Δ			
10		1100	93	11	28			15.0		-76.2		342.2		14+330		
11		770	93	11	15			10.0		-52.8		365.6		14		
12		0	✓					5.0		-5.0		413.4	π	13+990		
13		990	88	48	46			10.0		+10.1		428.5	0	13		
14		✓	271	08	10			10.0					0			
15																
16		2066	89	58	21			10.0		+9.2	438.4		Δ			
17		✓	269	58	20			10.0					Δ			
18		1516	90	25	53			10		-21.4		417.0		10+1210		
19		306	90	09	15			4.5		-5.5		433.1		12		
20		0	✓					5.0		-5.0		433.4	π	11+1454	(TBM 78064	

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433.4 -0.3 Mistie Raw US-40
2nd

STADIA SURVEY NOTES

AREA Ikpikpuk RIVER STATE or PROVINCE Alaska PAGE No. 32
 LINE No.(s) U-4 PARTY No. 1178 DATE 11 Day 2 Mo. 78 Yr. BOOK No. _____
 SURVEYOR R Tappin RODMAN K Barr WEATHER: -18° P.T.S. No. _____

LINE	Bearing of Sight	Stadia Distance	BEAMAN OR VERNIER			ROD READING				Angular Elev. Diff.	Final Elev. Diff.	ELEVATIONS		ABS. OF S. - S.S.	Station	REMARKS
			Level	Inclined	Angle or Factor	Hair Read	Reading	Correction	Center Hair			INST.	ROD			
1												433.4				
2		0	✓					5.0		+5.0	438.2		Δ	11+1454		
3		0	✓					5.0					Δ			
4		0	✓					5.0		-5.0		433.2	κ	11+1454		
5		1454	90	18	28			10.0		-18.5		419.7	○	11		
6		✓	269	38	00			10.0					○			
7																
8		990	88	47	46			10.0		-10.0	409.7		Δ			
9		✓	271	06	22			10.0					Δ			
10		660	88	42	22			10.0		+4.9		414.6		10+1400		
11		330	95	12	00			21.0	hr	-50.9		358.8		10+1400		
12		0	✓					5.0		-5.0		404.7	κ	10+770		
13		770	88	22	40			10.0		+11.4		421.1	○	10		
14		✓	271	33	56			10.0					○			
15													○			
16		990	90	01	40			10.0		+10.9	432.0		Δ			
17		✓	269	55	11			10.0					Δ			
18		0	✓					5.0		-5.0		427.0	κ	9+770		
19		440	91	00	18			10.0		-17.9		414.1	○	9+330		
20		✓	268	56	13			10.0					○			

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STADIA SURVEY NOTES

AREA Ikpikpak RIVER STATE or PROVINCE Alaska PAGE No. 33
 LINE No.(s) U-4 PARTY No. 1173 DATE 13 Day 2 Mo. 78 Yr. BOOK No. _____
 SURVEYOR R. Tippisch RODMAN K. Burt WEATHER: -20 P.T.S. No. _____

LINE	Bearing of Sight	Stadia Distance	BEAMAN OR VERNIER			ROD READING				Angular Elev. Diff.	Final Elev. Diff.	ELEVATIONS		Abs. of S. - S.S.	Station	REMARKS
			Level	Inclined	Angle or Factor	Hair Read	Reading	Correc-tion	Center Hair			INST.	ROD			
1												414.1				
2		2090	88	15	21			10.0		-52.7	361.2		Δ	9+330		
3		✓	271	41	21			10.0					Δ			
4		1760	89	15	13			10.0		+13.0		374.2		9		
5		0	✓					5.0		-5.0		356.2	π	8		
6		1760	89	50	14			10.0		-5.7		355.5	0	7		
7		✓	270	06	52			10.0					0			
8																
9		2310	90	31	51			10.0		+32.4	387.7		Δ			
10		✓	269	24	48			10.0					Δ			
11		550	92	13	10			10.0		-31.3		356.4		6		
12		0	✓					5.0		-5.0		382.7	π	5+1210		
13		1210	90	51	56			10.0		-28.2		359.5		5		
14		2970	90	46	57			10.0		-57.8		335.9	0	4		
15		✓	269	09	50			10.0					0			
16																
17		1430	90	46	59			10.0		+30.2	366.0		Δ			
18		✓	269	09	45			10.0					Δ			
19		440	95	42	03			10.0		-53.7		312.3		3+770		
20		0	✓					5.0		-5.0		361.0	π	3+330		

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STADIA SURVEY NOTES

AREA Ikpikpak RIVER STATE or PROVINCE Alaska PAGE No. 34
 LINE No.(s) 11-4 PARTY No. 1173 DATE 13 Day 2 Mo. 7A Yr. BOOK No. _____
 SURVEYOR R. Tappin RODMAN K. Barr WEATHER: -2.0 P.T.S. No. _____

LINE	Bearing of Sight	Stadia Distance	BEAMAN OR VERNIER			ROD READING				Angular Elev. Diff.	Final Elev. Diff.	ELEVATIONS		A.B.S. OF S. - S.S.	Station	REMARKS
			Level	Inclined	Angle or Factor	Hair Read	Reading	Correc-tion	Center Hair			INST.	ROD			
1												366.0				
2		330	88	14	18			10.0		-0.0		366.0	0	3		
3		✓	271	42	13			10.0					0			
4																
5		2200	90	33	35			10.0		+32.3		398.1		Δ		
6		✓	269	-23	32			10.0						Δ		
7		770	92	52	02			10.0		-48.5		349.6			2+330	
8		440	92	27	02			10.0		-28.8		369.3			2	
9		0	✓					5.0		-5.0		393.1	K		1+1320	
10		1320	90	15	51			10.0		-16.1		382.0			1	
11		1843	90	19	36			10.0		-26.4		376.7	0		TRM	78062
12		✓	269	36	50			10.0					0			S.P.1 - 523
13												376.74			TRM	78062
14																-10 Mistie Row
15												376.7				
16		4730	88	39	20			10.0		-101.4		275.3		Δ		
17		3520	89	09	50			15.0		+36.6		311.9			TS 1	
18		1760	89	52	57			10.0		-6.3		268.9			TS 2	
19		0	✓					5.0		-5.0		270.3	K		TS 3	
20		1760	89	38	50			28.0		-10.1		265.2			TS 4	

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STADIA SURVEY NOTES

AREA Ikpikpak River STATE or PROVINCE Alaska PAGE No. 35
 LINE No.(s) U-4 PARTY No. 1173 DATE 13 Day 7 Mo. 78 Yr. BOOK No. _____
 SURVEYOR R. Tippisch RODMAN K. Bass WEATHER: -20 P.T.S. No. _____

LINE	Bearing of Sight	Stadia Distance	BEAMAN OR VERNIER			ROD READING				Angular Elev. Diff.	Final Elev. Diff.	ELEVATIONS		A.B.S. OF S. - S.S.	Station	REMARKS
			Level	Inclined	Angle or Factor	Hair Read	Reading	Correc-tion	Center Hair			INST.	ROD			
1																
2		3520	89	48	15				10.0	+2.3		277.5		TS5		
3		5280	89	53	00				10.6	+1.3		276.6		TS6		
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																

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