

# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA UTUKOK RIVER STATE/COUNTY AK BOOK NO. 1 PAGE 175 OF       
 LINE/LOOP NO. 630 TYPE SURVEY      CLIENT      DATE 21 DY 2 MO 79 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO.      CREW NO. 1186

LINE	  	STATION	VERTICAL						ELEVATION		L/R OR D/I	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				
1		BM 79221											1	4605/630 (708.69)
2		500											2	
3													3	
4			1210		88-00	8.7	-	33.5	695.2				4	
5		499	330		88-00	5.4	+	6.1	681.3		S.		5	
6			0		-	5.2			670.0		-		6	
7		498	550		92-00	7.7	-	26.9	648.3		N.		7	
8		497	1430		92-00	5.4	-	55.3	619.9				8	
9		496	2310		91-42-10	14.0	-	82.6	592.6				9	
10			3190		89-30-22	15.0	-	12.5	580.1				10	
11		495	2310		90-04	15.0	-	17.7	562.4				11	
12		494	1430		-1/2	10.4	-	7.1	544.9				12	
13		493	550		-	10.6			569.5		S.		13	
14			0		-	5.2			574.9		-		14	
15		492	330		-	7.9			572.2		N.		15	
16			880		90-30	14.2	-	21.9	552.2				16	
17													17	

WORKED BY L. L. CHECKED BY 1ST      2ND       
 SYMBOLS = BACKSIGHT = INSTRUMENT SET-UP = SIDESHOT = FORESIGHT

# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA \_\_\_\_\_ STATE/COUNTY AK BOOK NO. 1 PAGE 176 OF \_\_\_\_\_  
 LINE/LOOP NO. 130 TYPE SURVEY \_\_\_\_\_ CLIENT \_\_\_\_\_ DATE 21 DY 2 MO 77 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. WILD T2 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 DJI	RIGHT TURNED HORIZONTAL ANGLE
				SLOPE					HORIZ	INST			
1									558.2			1	
2			2090		00-20	7.7	- 53.1	505.1				2	
3		491	1760		00-20	10.0	+ 41.2		546.3			3	
4		490	000		00-20	10.7	+ 14.9		520.0	S.		4	
5		409.	0		-	5.5			499.6	-		5	
6		400.	000		90-30	12.4	- 20.1		485.0	N.		6	
7		407.	1760		90-30	11.7	- 27.1		478.0			7	
8		406	2640		90-24-10	14.0	- 32.6		472.5			8	
9			2640		89-30-16	15.0	- 7.8	464.7				9	
10		405.	1760		89-30	10.3	+ 5.1		469.8			10	
11		404.	000		09-30	7.4	+ 0.3		465.0	S.		11	
12		403.	0		-	5.2			459.5	-		12	
13		402.	000		-	10.5			454.2	N.		13	
14		401.	1760		-	13.7			451.0			14	
15		400	2640		90-02-26	14.0	- 15.9		448.8			15	
16												16	
17												17	

WORKED BY L.J.L. CHECKED BY 1ST \_\_\_\_\_ 2ND \_\_\_\_\_

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

# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA \_\_\_\_\_ STATE/COUNTY AK BOOK NO. 1 PAGE 177 OF \_\_\_\_\_  
 LINE/LOOP NO. 630 TYPE SURVEY \_\_\_\_\_ CLIENT \_\_\_\_\_ DATE 21 DY 2 MO 79 YR  
 SURVEYOR C. LYMAN INSTRUMENT DESC/SERIAL NO. T5 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			RIGHT TURNED HORIZONTAL ANGLE
				SLOPE					HORIZ	INST		
1		480							448.8			
2			352.0		89-49-16	14.0	+ 3.0	451.8				
3		479	264.0		-	3.8			448.0		FLAT	
4		478	176.0		-	5.0			446.8		TUNDRA	
5		477	88.0		-	7.0			444.8	S		
6		476	0		-	5.2			446.6	T		
7		475	88.0		-	8.5			443.3	N		
8		474	176.0		-	9.8			442.0			
9		473	264.0		89-56	14.0	- 10.9		440.9			
10			88.0		89-05	14.0	- 1.4	439.5		S		
11		472	0		-	5.3			434.2	-		
12		471	88.0		90-40	14.0	- 24.2		418.3	N		
13		470	176.0		91-05	12.0	- 42.7		396.8			
14		469	264.0		90-46-10	14.0	- 49.4		390.1			
15		468	352.0		90-21	15.0	- 36.5		403.0			
16												
17												





WORKED BY C. J. G. CHECKED BY 1ST \_\_\_\_\_ 2ND \_\_\_\_\_

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

# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA \_\_\_\_\_ STATE/COUNTY AK BOOK NO. 1 PAGE 178 OF \_\_\_\_\_  
 LINE/LOOP NO. 630 TYPE SURVEY \_\_\_\_\_ CLIENT \_\_\_\_\_ DATE 22 DY 2 MO 79 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. WILD T2 CREW NO. 1186

LINE	 SS 	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		460							403.0			1	
2			000		90-10	13.1	+ 15.7	418.7				2	
3		467	0		-	5.2			413.5			3	
4		466	000		-	0.1	- 8.1		410.6			4	
5			1430		-	10.0	+ 10.8	421.4				5	
6		465	550		-	5.7			415.7	S.		6	
7			0		-	5.2			416.2	-		7	
8		464	330		-	5.6			415.8	N.		8	
9			110		-	9.6	- 9.6		411.8			9	TP.
10			2310		00-05	14.0	- 63.2	348.6				10	
11		463	1760		00-20	5.7	+ 45.5		394.1			11	
12		462	000		00-20	10.4	+ 15.2		363.8	S.		12	
13		461	0		-	5.2			343.4	-		13	
14		460	000		90-40	13.0	- 23.2		325.4	N.		14	
15		459	1760		90-44-20	14.0	- 36.7		311.9			15	
16												16	
17												17	

WORKED BY L. J. L. CHECKED BY 1ST \_\_\_\_\_ 2ND \_\_\_\_\_  
 SYMBOLS  = BACKSIGHT  = INSTRUMENT SET-UP  = SIDESHOT  = FORESIGHT

# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA \_\_\_\_\_ STATE/COUNTY AK BOOK NO. 1 PAGE 179 OF \_\_\_\_\_  
 LINE/LOOP NO. 630 TYPE SURVEY \_\_\_\_\_ CLIENT \_\_\_\_\_ DATE 22 DY 2 MO 79 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 181

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/B		RIGHT TURNED HORIZONTAL ANGLE
				SLOPE					HORIZ	INST			
1		459.								311.9			1
2			1760		89-00	12.7	- 18.0	293.9					2
3		458	800		89-00	12.0	+ 3.4			297.3	S.		3
4		457	0		-	5.2				288.7	-		4
5		456.	800		-	11.2				282.7	N.		5
6		455.	1760		-	12.6				281.3			6
7		454.	2640		90-08-20	14.0	- 20.4			293.5			7
8			2640		89-35-20	6.0	- 12.9	260.6					8
9		453	1760		89-30	11.2	+ 4.2			264.8			9
10		452	800		89-30	5.2	+ 2.5			263.1	S.		10
11		451	0		-	5.2				255.4	-		11
12		450.	800		91-00	6.0	- 21.4			239.2	N.		12
13		449.	1760		91-00	5.5	- 36.2			224.4			13
14		448	2640		90-20-20	14.0	- 29.6			231.0			14
15													15
16													16
17													17

WORKED BY L.J.L. CHECKED BY 1ST \_\_\_\_\_ 2ND \_\_\_\_\_  
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# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA \_\_\_\_\_ STATE/COUNTY AK BOOK NO. \_\_\_\_\_ PAGE 180 OF \_\_\_\_\_  
 LINE/LOOP NO. 630 TYPE SURVEY \_\_\_\_\_ CLIENT \_\_\_\_\_ DATE 22 DY 2 MO 75 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1196

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 DJI	RIGHT TURNED HORIZONTAL ANGLE
				SLOPE					HORIZ	INST			
1		448							231.0			1	
2			1760		09-30	14.0	- 1.4	229.6				2	
3		447	000		09-30	7.2	+ 0.5		230.1		S.	3	
4		446	0		-	5.2			224.4		-	4	
5		445	000		-	13.0			216.6		N.	5	
6		444	1760		-	14.2			215.4			6	
7		443	2640		-	14.2	- 14.2		215.4			7	
8			1760		09-50-20	14.0	+ 9.1	224.5				8	FLAT.
9		442	000		-	7.6			216.9		S.	9	TUNORA
10		441	0		-	5.2			219.3		-	10	
11		440	000		-	8.5			216.0		N.	11	
12		439	1760		-	7.7			216.8			12	
13		438	2640		09-41-30	14.0	+ 0.2		224.7			13	
14			1760		09-21-40	14.0	- 5.6	219.1				14	
15		437	000		09-30	6.8	+ 0.9		220.0		S.	15	
16		436	0		-	5.2			213.9		-	16	
17		435	000		-	12.3			206.8		N.	17	

WORKED BY L. J. L. CHECKED BY 1ST \_\_\_\_\_ 2ND \_\_\_\_\_

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# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA \_\_\_\_\_ STATE/COUNTY AK BOOK NO. 1 PAGE 181 OF \_\_\_\_\_  
 LINE/LOOP NO. 130 TYPE SURVEY \_\_\_\_\_ CLIENT \_\_\_\_\_ DATE 22 DY 2 MO 99 YR  
 SURVEYOR L. LTMAN. INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ 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			LR OR DR	RIGHT TURNED HORIZONTAL ANGLE
				SLOPE 					HORIZ 	INST			
1								219.1				1	
2		434	1760		90-10	12.0	- 17.1		202.0	N.		2	
3		433	2140		90-03-50	14.0	- 16.9		202.2			3	
4		BM 79451	3167		-	10.7	- 10.7		208.4	-		4	
5									212.9			5	
6							VERTICAL TIE	- 4.5				6	
7												7	
8			353		-	1.9	+ 1.9	214.8		S.		8	
9		432	0		-	5.2			209.6	-		9	
10		431	000		90-40	13.2	- 23.4		191.4	N.		10	
11		430	1760		90-30	11.6	- 27.0		187.8			11	
12		429	2640		90-15	14.0	- 25.5		189.3			12	
13			2640		89-55-10	14.0	+ 10.3	199.6				13	
14		428	1760		-	9.2			190.4			14	
15		427	380		-	5.3			194.3	S.		15	
16		426	0		-	5.2			194.4	-		16	
17		425	000		-	12.2			187.4	N.		17	

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# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA UTUKOK RIVER STATE/COUNTY AK BOOK NO. 1 PAGE 1P2 OF       
 LINE/LOOP NO. 630 TYPE SURVEY      CLIENT      DATE 22 DY 2 MO 79 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO.      CREW NO. 1186

LINE	<input type="checkbox"/> Δ <input type="checkbox"/> ⚓ <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 D/H	RIGHT TURNED HORIZONTAL ANGLE	
				SLOPE	HORIZ					INST				ROD
1									199.6			1		
2		424	1760			90-20	12.3	- 22.5		197.1	N.	2		
3	⊙	423	2640			90-22-13	14.0	- 31.1		188.5		3		
4	Δ		2640			89-31-30	14.0	- 7.9	160.6			4		
5		422	1760			-	0.5			160.1		5		
6		421	880			-	4.0			151.6	S.	6		
7		420	0			-	5.2			155.4	-	7		
8		419	880			-	13.5			147.1	N.	8		
9		418	1760			+ 1/2	10.7	+ 1.8 - 1.9		158.7		9		
10	⊙	417	2640			89-50	8.8	- 1.1		159.5		10		
11	Δ		2640			89-44-30	14.0	+ 2.1	161.6			11		
12		416	1760			-	6.2			155.4		12		
13		415	880			-	6.8			154.8	S.	13	LAKE.	
14		414	0			-	5.2			156.4	-	14		
15		413	880			-	4.7			156.9	N.	15		
16		412	1760			+ 1/2	9.5	+ 1.8 - 0.7		160.9		16		
17	⊙	411	2640			89-40	13.7	+ 1.7		163.3		17		

WORKED BY L. L. CHECKED BY 1ST      2ND       
 SYMBOLS    Δ = BACKSIGHT    ⚓ = INSTRUMENT SET-UP    SS = SIDESHOT    ○ = FORESIGHT



# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA UTUKOK RIVER STATE/COUNTY AK. BOOK NO. 1 PAGE 183 OF       
 LINE/LOOP NO. 630 TYPE SURVEY      CLIENT      DATE 22 DY 2 MO 79 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO.      CREW NO. 1186

LINE		STATION	VERTICAL						HORIZONTAL		REMARKS	
			DISTANCE		VERTICAL ANGLE OBS.	ROD RDG OR HI	ELEV DIFF	FINAL ELEVATION DIFF.	ELEVATION			RIGHT TURNED HORIZONTAL ANGLE
			SLOPE	<input type="checkbox"/> FEET <input type="checkbox"/> METERS HORIZ					INST	ROD		
1	⊙	411.							163.3			
2	△		1430		90-50	11.3	+ 32.1	175.4				
3		410	550		91-40	10.8	- 26.8		168.6	S		
4	⊗	-	0		-	5.2			190.2	-		
5		409.	330		89-10	4.3	+ 0.5		175.9	N		
6		408.	1210		89-10	5.0	+ 12.6		208.0			
7	⊙	407	2090		89-50	14.7	+ 21.8		217.2			
8	△		880		89-30	6.0	- 1.7	215.5		S		
9		406	0		-	5.2			210.3	-		
10	⊙	B.M. 79450	889		-	7.8	- 9.8		205.7	N		
11									203.0			(203.78)
12							VERTICAL		1.9			
13							TIE					
14	△		951		89-20	12.0	+ 0.9	204.7				
15		405.	880		89-30	2.7	- 1.0		203.7	S		
16		404	0		-	5.2			199.5	-		
17		403.	880		-	7.4			197.3	N		

WORKED BY L. J. L. CHECKED BY 1ST      2ND       
 SYMBOLS    △ = BACKSIGHT    ⊗ = INSTRUMENT SET-UP    ⊙ = SIDESHOT    ⊙ = FORESIGHT

# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA \_\_\_\_\_ STATE/COUNTY AK. BOOK NO. 1 PAGE 124 OF \_\_\_\_\_  
 LINE/LOOP NO. 630 TYPE SURVEY \_\_\_\_\_ CLIENT \_\_\_\_\_ DATE 22 DY 2 MO 79 YR  
 SURVEYOR L. LYMAN. INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1181

LINE	<input type="checkbox"/> Δ <input type="checkbox"/> T <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 D/I		RIGHT TURNED HORIZONTAL ANGLE
				SLOPE					HORIZ	INST			
1												1	
2	○	402	1760		09-52-10	14.0	- 10.0		194.7		N.	2	
3	Δ		1210		09-00	14.3	- 6.8	187.9				3	
4		401	350		-	1.5			186.4		S	4	
5		-	0		-	5.2			182.7		-	5	
6		400	550		91-00	10.5	- 20.1		167.8		N.	6	
7	○	399.	1430		90-23-55	14.0	- 23.9		114.0			7	FIRST SP.
8	Δ		0		-	5.2	+ 5.2	169.2				8	NORTH.
9												9	
10		12 T.S.	2530		90-02-35	4.0	- 5.9		163.3		N.	10	
11												11	
12		24 T.S.	5170		09-55-15	4.0	+ 3.1		172.3		N.	12	
13												13	
14		36 T.S.	7810		09-52-50	6.0	+ 10.3		179.5		N.	14	
15												15	
16		48 T.S.	10450		09-51-50	6.0	+ 18.8		188.0		N.	16	
17												17	

WORKED BY L. J. L. CHECKED BY 1ST \_\_\_\_\_ 2ND \_\_\_\_\_  
 SYMBOLS Δ = BACKSIGHT T = INSTRUMENT SET-UP SS = SIDESHOT ○ = FORESIGHT

# HORIZONTAL AND VERTICAL SURVEY NOTES

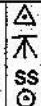









GSI AREA UTUKOK RIVER STATE/COUNTY AK BOOK NO. 1 PAGE 185 OF       
 LINE/LOOP NO. 630 TYPE SURVEY      CLIENT      DATE 22 DY 2 MO 79 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO.      CREW NO. 1186

LINE	  	STATION	VERTICAL						ELEVATION		L/R OR DJI	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	RIGHT TURNED HORIZONTAL ANGLE		LINE
				SLOPE	HORIZ										
1		OLD IRON								175.7			1		
2		PIPE								177.0			2		
3		SP. 545											3		
4		LINE 68W						VERTICAL	TIE	1.3			4		
5													5		
6													6		
7			970			-	11.6	+ 11.6	187.3		W		7		
8			0								-		8		
9		SP. 402	1840			89-20	140	+ 7.4	194.7		F.		9	RE: PAGE 184.	
10													10		
11													11		
12													12		
13													13		
14													14		
15													15		
16													16		
17													17		

WORKED BY L. J. L. CHECKED BY 1ST      2ND       
 SYMBOLS = BACKSIGHT = INSTRUMENT SET-UP = SIDESHOT = FORESIGHT

# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA \_\_\_\_\_ STATE/COUNTY AK. BOOK NO. \_\_\_\_\_ PAGE 105 OF \_\_\_\_\_  
 LINE/LOOP NO. 630 TYPE SURVEY \_\_\_\_\_ CLIENT \_\_\_\_\_ DATE 23 DY 4 MO 75 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1182

LINE		STATION	VERTICAL						ELEVATION		L/R OR D/I	HORIZONTAL	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					RIGHT TURNED HORIZONTAL ANGLE
			SLOPE	HORIZ											
1		BM. 79221.											1	IRON - PIPE.	
2		500.											2	630/605.	
3													3	(708.64)	
4													4		
5			1760		92.00	11.0	+ 73.2	781.9					5		
6		501	000		93.05	6.3	- 52.3					N	6		
7		502	0		-	5.2						-	7		
8		503	000		00.30	6.0	+ 11.2					S.	8		
9		504	1760		00.00	3.2	+ 58.2						9		
10		505	2640		07.10	13.5	+ 116.8						10		
11		506	3520		06.40	11.5	+ 192.8						11		
12			3850		06.20-23	15.0	+ 221.4						12	TP.	
13					273.31-22	15.0	+ 221.1						13		
14			550		90.30	13.1	+ 18.4	1021.6				N	14		
15		507	0		-	5.2						-	15		
16		508	000		09.20	11.5	- 1.3					S.	16		
17			1650		89.20	5.1	+ 14.1						17		

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

# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA UTUKOK RIVER STATE/COUNTY AK BOOK NO. 1 PAGE 187 OF       
 LINE/LOOP NO. 630 TYPE SURVEY      CLIENT      DATE 23 DY 2 MO 79 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO.      CREW NO. 1186

LINE	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	STATION	VERTICAL						HORIZONTAL		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 D/I	RIGHT TURNED HORIZONTAL ANGLE
				SLOPE					HORIZ	INST			
1									1035.7			1	
2			1870		90-10	13.3	+ 18.7	1054.4				2	
3		509	1760		90-30	12.3	- 27.7		1026.7			3	
4		510	880		91-30	8.4	- 31.4		1023.0		N	4	
5		511	0		-	5.2			1049.2		-	5	
6		512	880		86-40	9.6	+ 41.5		1095.9		S	6	
7			1560		93-40	10.7	+ 110.3	1206.2				7	
8		513	690		97-10	13.4	- 98.8		1107.4		N	8	
9			0		-	5.2			1201.0		-	9	Rock - RIDGE.
10		514	190		-	6.6			1199.6		S	10	
11		515	1070		88-30	7.6	+ 18.4		1224.6			11	TP.
12			880		85-65	10.3	- 66.1	1158.5				12	
13		516	0		-	5.2			1153.3			13	Rock.
14		517	880		94-30	13.3	- 82.1		1076.4			14	
15		518	1760		94-30	11.4	- 149.1		1009.4			15	
16		519	2640		94-16-50	14.0	- 210.5		948.0			16	
17												17	

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

# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA \_\_\_\_\_ STATE/COUNTY AK BOOK NO. 1 PAGE 188 OF \_\_\_\_\_  
 LINE/LOOP NO. 630 TYPE SURVEY \_\_\_\_\_ CLIENT \_\_\_\_\_ DATE 24 DY 2 MO 79 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1186


LINE	<input type="checkbox"/> Δ <input type="checkbox"/> T <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 L/R OR DJI	
			SLOPE	HORIZ						INST			ROD
1	⊙	519							948.0			1	
2	Δ		2140		89-20	12.6	- 18.1	929.9				2	
3		520	1760		90-40	13.1	- 33.6		896.3			3	
4		521	880		92-20	14.2	- 50.0		877.9	N		4	
5		522	0		-	5.2			924.7	-		5	
6		523	880		85-30	6.2	+ 62.6		992.5	S		6	
7	⊙		1270		82-20	8.2	+ 172.9		1102.8			7	RIDGE
8	Δ		103		-	10.7	+ 10.7	1113.5				8	
9			0		-	5.2			1108.3			9	Rock RIDGE
10	⊙	BM 79453	12.5		-	6.1	- 6.1		1107.4			10	
11									1109.6			11	(1109.58)
12								VERTICAL TIE	- 2.2			12	
13												13	
14	Δ		1600		88-10	7.3	- 43.9	1065.7				14	
15		524	1430		88-10	6.1	+ 39.6		1105.3			15	
16		525	550		88-10	9.7	+ 7.9		1073.6	N		16	
17	X		0		-	5.2			1060.5	-		17	


WORKED BY L. J. L. CHECKED BY 1ST \_\_\_\_\_ 2ND \_\_\_\_\_

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

# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA \_\_\_\_\_ STATE/COUNTY AK BOOK NO. 1 PAGE 189 OF \_\_\_\_\_  
 LINE/LOOP NO. 630 TYPE SURVEY \_\_\_\_\_ CLIENT \_\_\_\_\_ DATE 27 DY 2 MO 77 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ 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									1065.7			1	
2		526	330		92-30	7.0	- 21.4		1044.3		S.	2	
3		527	1210		92-30	7.0	- 59.7		1006.0			3	
4	⊙		1760		92-20	13.7	- 85.3		980.4			4	
5	△		2970		87-10	6.4	- 140.2	840.2				5	
6		528	2640		87-30	11.0	+ 104.0		944.2			6	
7		529	1760		89-20	5.0	+ 15.5		855.7			7	
8		530	880		90-20	12.1	- 17.2		823.0		N	8	
9		531	0		-	5.2			835.0		-	9	
10		532	880		89-00	5.6	+ 9.8		850.0		S.	10	
11	⊙		970		89-00	9.3	+ 8.0		848.2			11	
12	△		2520		87-10	11.0	- 113.4	734.8				12	
13		533	1760		89-00	3.0	+ 27.7		762.5			13	
14		534	880		91-00	10.3	- 25.7		709.1		N	14	
15		535	0		-	5.2			729.6		-	15	
16		536	880		88-30	4.0	+ 19.0		753.8		S.	16	
17												17	

WORKED BY L.J.L. CHECKED BY 1ST \_\_\_\_\_ 2ND \_\_\_\_\_  
 SYMBOLS    △ = BACKSIGHT     = INSTRUMENT SET-UP    ss = SIDESHOT    ⊙ = FORESIGHT

# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA \_\_\_\_\_ STATE/COUNTY AK BOOK NO. 1 PAGE 190 OF \_\_\_\_\_  
 LINE/LOOP NO. 630 TYPE SURVEY \_\_\_\_\_ CLIENT \_\_\_\_\_ DATE 24 DY 2 MO 77 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1186













LINE	  	STATION	VERTICAL						ELEVATION		L/R OR DIA	HORIZONTAL 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									734.8			1		
2		537	1760		06-40	5.2	+	97.0	831.8		S	2		
3		538	2640		06-36-30	14.0	+	141.9	876.7			3		
4			550		90-10	14.8	+	16.4	893.1		✓	4		
5			0		-	5.2	=		887.9		-	5		
6		539	330		-	11.4			881.7		S	6		
7		540	1210		90-40	5.0	-	19.1	874.0			7		
8		BM. 79454	1235		90-30	9.0	-	19.8	873.3			8		
9									873.9			9	873.98	
10								VERTICAL				10		
11								TIE.	-0.6			11		
12			0		-	5.2	+	5.2	879.1			12		
13		BM. 2540	1980		09-10	11.4	+	17.4	896.5		✓	13		
14									897.7			14		
15								VERTICAL	-1.2			15		
16			305		93-30	11.7	-	30.3	848.8		S	16		
17												17		





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



# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA UTUKOK RIVER. STATE/COUNTY AK. BOOK NO. 1 PAGE 191 OF       
 LINE/LOOP NO. 630 TYPE SURVEY      CLIENT      DATE 24 DY 2 MO 77 YR  
 SURVEYOR L. LYMAN. INSTRUMENT DESC/SERIAL NO.      CREW NO. 1186

LINE		STATION	VERTICAL						ELEVATION		L/R OR D/I	HORIZONTAL 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												1		
2			1320			87-00	6.6	- 62.4	776.4			2		
3		541	770			-	4.4		781.8	N		3	Rock.	
4			0			-	5.2		781.2	-		4	RIDGE	
5		542	110			-	11.0		775.4	S.		5		
6			660			93-00	9.7	- 44.2	742.2			6		
7			2060			87-40	10.2	- 73.6	668.6			7		
8		543	1750			88-20	7.1	+ 43.3	711.9			8		
9		544	800			75-00	14.5	- 70.9	577.7			9	GULLEY.	
10		545	0			-	5.2		663.4			10		
11			430			88-10	12.4	+ 1.3	669.9			11		
12			250			86-00	5.0	- 12.4	657.5	N		12		
13			0			-	5.2		652.3	-		13		
14		546	200			96-00	10.0	- 30.8	626.7	S.		14	NORTH - SIDE	
15												15	KOKOLIK.	
16												16	RIVER.	
17												17	STEEP BANK.	

WORKED BY L. J. L. CHECKED BY 1ST      2ND       
**SYMBOLS**  = BACKSIGHT  = INSTRUMENT SET-UP  = SIDESHOT  = FORESIGHT

# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA \_\_\_\_\_ STATE/COUNTY AK. BOOK NO. 1 PAGE 192 OF \_\_\_\_\_  
 LINE/LOOP NO. 630 TYPE SURVEY \_\_\_\_\_ CLIENT \_\_\_\_\_ DATE 25 BY 2 MO 79 YR  
 SURVEYOR L. LTMAN. INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1186

LINE	<input type="checkbox"/> $\Delta$ <input type="checkbox"/> $\nabla$ <input type="checkbox"/> SS <input type="checkbox"/> $\odot$	STATION	VERTICAL						ELEVATION		L/R OR D/I	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	RIGHT TURNED HORIZONTAL ANGLE		LINE
				SLOPE	HORIZ										
1	$\odot$	546							426.7			1			
2	$\Delta$		2620		86-00	12.2	-170.1	456.6				2			
3		547	1760		-	6.3			450.3			3	K. KOLIK.		
4		548	880		-	8.7			447.9	N		4	RIVER.		
5		549	0		-	5.2			451.4	-		5	VALLEY		
6		K. KOLIK	330		-	13.2			443.4	S		6	RIVER. KE.		
7		RIVER.										7			
8		550	880		89-30	4.0	+3.7		460.3			8			
9	$\odot$	551	1760		89-22-36	14.0	+5.1		461.7			9			
10	$\Delta$		2640		90-05-16	14.0	+18.0	479.7				10			
11		552	1760		-112	11.1	-8.8	-19.9	459.8			11			
12		553	880		-	13.0			466.7	N		12			
13		554	0		-	5.2			474.5	-		13			
14		555	880		-	4.8			474.9	S		14			
15		556	1760		-	2.4			477.3			15			
16		557	2640		89-00	10.4	+35.7		515.4			16			
17												17			

TI-23471B

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 SYMBOLS  $\Delta$  = BACKSIGHT  $\nabla$  = INSTRUMENT SET-UP SS = SIDESHOT  $\odot$  = FORESIGHT

# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA \_\_\_\_\_ STATE/COUNTY AK. BOOK NO. 1 PAGE 173 OF \_\_\_\_\_  
 LINE/LOOP NO. 630 TYPE SURVEY \_\_\_\_\_ CLIENT \_\_\_\_\_ DATE 25 DY 2 MO 79 YR  
 SURVEYOR L. LTMAN. INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ 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			
1									479.7			1	
2			3170		88-45	14.0	+ 55.6		535.3	S		2	
3			1210		90-30	12.4	+ 23.0	558.3				3	
4		558	880		90-30	8.0	- 15.7		542.6	N		4	
5		559	0		-	5.2			553.1	-		5	
6		560	880		-	0.6			557.7	S		6	
7		561	1860		89-40	14.4	- 4.2		554.1			7	
8			2530		89-30	14.5	- 7.6	546.5				8	
9		562	1650		-1/2	14.6	-8.3	-22.9	523.6			9	
10		563	770		90-40	13.5	-22.5		524.0	N		10	
11			0		-	5.2			541.3	-		11	
12		564	110		90-34-20	4.0	- 5.1		541.4	S		12	
13		565	990		89-00	11.7	+ 5.6		552.1			13	
14		566	1070		89-12-20	14.0	+ 11.9		558.4			14	
15												15	
16												16	
17												17	

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

# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA UTUKOK RIVER STATE/COUNTY AK. BOOK NO. 1 PAGE 194 OF       
 LINE/LOOP NO. 130 TYPE SURVEY      CLIENT      DATE 25 BY 2 MO 79 YR  
 SURVEYOR L. LYMAN. INSTRUMENT DESC/SERIAL NO. WILD T2. CREW NO. 1184

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			RIGHT TURNED HORIZONTAL ANGLE
				SLOPE					HORIZ	INST		
1		566							558.4			
2			1760		90-30	12.0	+ 27.4	585.8				
3		567	880		90-30	12.3	- 20.0		565.8	N		
4		568	0		-	5.2			580.6	-		
5		B.M. 79455	680		89-00	9.7	+ 2.2		588.0	S.		
6									593.1			
7							VERTICAL					
8							TIE		- 5.1			
9			1760		90-27-20	14.0	+ 29.6	622.7				
10		569	1760		90-30	11.0	- 26.4		596.3			
11		570.	880		90-30	10.0	- 17.7		605.0	N		
12		571.	0		-	5.2			617.5	-		
13		572.	880		88-40	8.5	+ 12.0		634.7	S.		
14		573.	1760		88-40	8.5	+ 32.4		655.1			
15		574.	2640		88-27-50	14.0	+ 56.7		679.4			
16												
17												

WORKED BY L. L. CHECKED BY 1ST      2ND       
 SYMBOLS = BACKSIGHT = INSTRUMENT SET-UP = SIDESHOT = FORESIGHT

# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA \_\_\_\_\_ STATE/COUNTY AK BOOK NO. 1 PAGE 175 OF \_\_\_\_\_  
 LINE/LOOP NO. 630 TYPE SURVEY \_\_\_\_\_ CLIENT \_\_\_\_\_ DATE 26 DY 2 MO 77 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. WILD T2 CREW NO. 1186

LINE	  	STATION	VERTICAL						HORIZONTAL		LIR OR DII	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		574							679.4		1		
2			2640		92-05-16	14.0	+ 110.1	789.5			2		
3			✓		267-54-34	14.0	+ 110.2				3		
4		575	1760		92-20	12.3	- 83.9		705.6		4		
5		576	880		92-20	10.0	- 45.8		743.7	N	5		
6		577	0		-	5.2			784.3	-	6		
7		578	880		86-05	11.3	+ 49.9		839.4	S	7		
8		579	1760		86-05	9.3	+ 113.2		902.7		8		
9		580	2640		86-05	5.7	+ 178.0		967.5		9		
10		✓	✓		274-10	13.3	+ 178.0				10		
11			2640		97-30	11.4	+ 353.0	1320.5			11		
12			✓		262-33-44	14.0	+ 352.9				12		
13		581	1760		98-05	7.5	- 250.1		1070.4		13		
14		582	880		98-30	12.6	- 141.2		1179.3		14	NORTH-SIDE	
15		583	0		-	5.2			1315.3		15	ARCHIMEDES RIDGE.	
16			550		80-30	8.7	+ 80.8	+ 80.9	1401.4		16		
17					279-20	7.0	+ 81.0				17		

WORKED BY L.J.L. CHECKED BY 1ST \_\_\_\_\_ 2ND \_\_\_\_\_  
 SYMBOLS = BACKSIGHT = INSTRUMENT SET-UP = SIDESHOT = FORESIGHT

# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA \_\_\_\_\_ STATE/COUNTY AK BOOK NO. 1 PAGE 196 OF \_\_\_\_\_  
 LINE/LOOP NO. 630 TYPE SURVEY \_\_\_\_\_ CLIENT \_\_\_\_\_ DATE 26 BY 2 MO 79 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1186

LINE	<input type="checkbox"/> $\Delta$ <input type="checkbox"/> $\nabla$ <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 DJI	RIGHT TURNED HORIZONTAL ANGLE
				SLOPE					HORIZ	INST			
1	$\odot$								1401.4			1	
2	$\Delta$		330		96.00	13.7	+ 48.0	1449.4				2	
3		5°4	0		-	5.2		1444.2				3	
4	$\odot$	5°5	090		77.00	7.5	+ 187.6	1637.2				4	
5	CK		✓		2°2-40	2.3	+ 188.1	1677.8				5	
6	$\Delta$		330		93.00	13.2	+ 30.4	1667.6				6	
7			0		-	5.2		1662.4				7	TP.
8		5°6	550		°9-30	7.9	- 3.1	1664.5				8	
9	$\odot$	BM. 79257	865		°9-30	3.0	+ 4.5	1672.1				9	TOP of
10								1677.6				10	ARCHIMEDES.
11												11	RIDGE.
12							VERTICAL					12	(1677.57)
13							TIE.					13	
14												14	
15												15	
16												16	
17												17	

WORKED BY \_\_\_\_\_ CHECKED BY 1ST \_\_\_\_\_ 2ND \_\_\_\_\_

SYMBOLS  $\Delta$  = BACKSIGHT  $\nabla$  = INSTRUMENT SET-UP SS = SIDESHOT  $\odot$  = FORESIGHT

# HORIZONTAL AND VERTICAL SURVEY NOTES

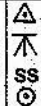









GSI AREA \_\_\_\_\_ STATE/COUNTY AK BOOK NO. 1 PAGE 197 OF \_\_\_\_\_  
 LINE/LOOP NO. 630 TYPE SURVEY \_\_\_\_\_ CLIENT \_\_\_\_\_ DATE 26 DY 2 MO 77 YR  
 SURVEYOR L. LYMAN. INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1186





LINE	<input type="checkbox"/> SS <input type="checkbox"/> FS <input type="checkbox"/> BS	STATION	VERTICAL						HORIZONTAL		L/R OR D/B	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	<input checked="" type="checkbox"/>	BM 79257								1677.6			1	
2													2	
3													3	
4	<input checked="" type="checkbox"/>		290		86-00	7.1	-17.1	1160.5			N		4	
5			0		-	5.2				1655.3	-		5	R-OK
6		507	280		96-30	11.9	-43.4			1617.1	S.		6	
7		500	1150		97-30	12.5	-161.3			1499.2			7	
8	<input checked="" type="checkbox"/>		1700		97-30	10.4	-230.4	230.5		1480.0			8	1428.0
9	<input checked="" type="checkbox"/>		✓		262.37-04	14.0	-230.6						9	
10	<input checked="" type="checkbox"/>		2090		93-20	7.7	-233.1	1196.9					10	
11	<input checked="" type="checkbox"/>		✓		276-50	14.1	-232.8						11	
12		509	1760		84-00	5.1	+177.4			1374.3			12	
13		590	800		85-40	5.0	+61.3			1258.2	N		13	
14		591	0		-	5.2				1191.7	-		14	
15		592	800		92-30	5.6	-43.9			1153.0	S.		15	
16	<input checked="" type="checkbox"/>	593	1760		91-30	7.0	-53.1			1143.8			16	1140-2
17													17	

WORKED BY L.G.L. CHECKED BY 1ST \_\_\_\_\_ 2ND \_\_\_\_\_  
 SYMBOLS  = BACKSIGHT     = INSTRUMENT SET-UP    SS = SIDESHOT     = FORESIGHT

# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA \_\_\_\_\_ STATE/COUNTY AK BOOK NO. 1 PAGE 198 OF \_\_\_\_\_  
 LINE/LOOP NO. 130 TYPE SURVEY \_\_\_\_\_ CLIENT \_\_\_\_\_ DATE 26 BY 2 MO 79 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. WILD T2 CREW NO. 1182

LINE		STATION	VERTICAL						ELEVATION		L/R OR D/I	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		RIGHT TURNED HORIZONTAL ANGLE	LINE	
				 SLOPE  HORIZ										
1		593.							1143.8			1		
2			176.0		91-40	13.8	+ 65.0	1208.8				2		
3		594	880		93-30	8.5	- 62.1		1146.7	N		3		
4		595.	0		-	5.2			1203.6	-		4		
5		596.	880		87-40	14.0	+ 21.8		1230.6	S.		5	1226.9	
6			330		87-40	6.5	- 6.9	1223.7		N		6		
7			0		-	5.2			1218.5	-		7		
8		597	550		93-00	6.3	- 35.0		1188.7	S.		8		
9		598.	1430		93-00	6.3	- 81.0		1142.7			9		
10		599	2310		93-01-54	14.0	- 136.0		1087.7			10	1083.7	
11			1430		86-00	3.0	- 96.5	991.2				11		
12		605	550		86-00	3.3	+ 35.0		1026.2	N		12		
13		-	0		-	5.2			986.0	-		13		
14		601.	330		94-00	7.3	- 30.3		960.9	S.		14		
15		602.	1210		94-20	13.6	- 104.8		986.4			15	881.8	
16												16		
17												17		

WORKED BY L. L. LYMAN CHECKED BY 1ST \_\_\_\_\_ 2ND \_\_\_\_\_  
 SYMBOLS  = BACKSIGHT  = INSTRUMENT SET-UP  = SIDESHOT  = FORESIGHT



# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA UTULOK RIVER STATE/COUNTY AK BOOK NO. 1 PAGE 199 OF       
 LINE/LOOP NO. 630 TYPE SURVEY      CLIENT      DATE 27 DY 2 MO 79 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO.      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			RIGHT TURNED HORIZONTAL ANGLE	LINE
				SLOPE					HORIZ	INST			
1		602							886.4			1	
2			440		06-05	4.9	-	25.7	860.7			2	
3			0		-	5.2			855.5			3	
4		603	440		90-05	11.2	-	71.8	788.9			4	
5		604	1330		96-20	12.5	-	158.3	702.4			5	CREEK 696.7
6			1760		95-30	13.7	+	181.6	884.0			6	
7		605	880		96-00	12.5	-	104.0	780.0	N		7	
8		606	0		-	5.2			878.8	-		8	
9		607	880		84-20	3.6	+	82.7	966.9	S		9	
10			1210		84-05	14.5	+	111.3	995.3			10	991.0
11			880		93-05	9.1	+	55.1	1050.4			11	
12		608	550 <sup>320</sup>		91-30	12.7	-	21.3	1029.1	N		12	
13			0		-	5.2			1045.2	-		13	
14		609	550		88-00	4.3	+	14.7	1065.3	S		14	
15			160		87-40	6.5	+	20.3	1070.7			15	1066.4
16												16	
17												17	

WORKED BY L. J. L. CHECKED BY 1ST      2ND       
 SYMBOLS = BACKSIGHT = INSTRUMENT SET-UP = SIDESHOT = FORESIGHT

# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA \_\_\_\_\_ STATE/COUNTY AK BOOK NO. 1 PAGE 200 OF \_\_\_\_\_  
 LINE/LOOP NO. 630 TYPE SURVEY \_\_\_\_\_ CLIENT \_\_\_\_\_ DATE 27 BY 2 MO 79 YR  
 SURVEYOR L. LYMAN. INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1182.

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			RIGHT TURNED HORIZONTAL ANGLE
				SLOPE					HORIZ	INST		
1									1070.7			
2			1940		91-05	11.8	+ 45.7	1116.4				
3		610	1170		93-30	10.8	- 82.1		1034.3			
4		611	305		96-05	12.0	- 43.2		1073.2	N		
5			0		-	5.2			1111.2	-	ROCK BLUFF.	
6		612	570		91-20	11.5	- 24.8		1091.6	S		
7		613	1450		97-05	10.1	+ 65.7		1182.1		1177.7	
8			1210		96-05	9.3	+ 185.1	1317.2				
9		614	330		96-00	6.0	- 40.3		1276.9	N		
10			0		-	5.2			1312.0	-		
11		615	550		85-00	3.6	+ 44.2		1361.4	S		
12			1105		84-50	2.6	+ 90.1		1407.3		1403.9	
13			334		90-30	13.6	+ 16.5	1423.8				
14		616	4		-	5.2			1418.6	N		
15		BM 79456	0		-	5.2	- 5.2		1418.6	-		
16									1415.2		(1415.2)	
17							VERTICAL		+ 3.4			

WORKED BY L. J. L. CHECKED BY 1ST \_\_\_\_\_ 2ND \_\_\_\_\_  
**SYMBOLS** = BACKSIGHT = INSTRUMENT SET-UP = SIDESHOT = FORESIGHT

# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA \_\_\_\_\_ STATE/COUNTY AK. BOOK NO. 1 PAGE 201 OF \_\_\_\_\_  
 LINE/LOOP NO. 230 TYPE SURVEY \_\_\_\_\_ CLIENT \_\_\_\_\_ DATE 27 DY 2 MO 79 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. WILD T2 CREW NO. 1186

LINE	<input type="checkbox"/> $\Delta$ <input type="checkbox"/> $\nabla$ <input type="checkbox"/> SS	STATION	VERTICAL							HORIZONTAL		REMARKS	
			DISTANCE	<input type="checkbox"/> FEET <input type="checkbox"/> METERS		VERTICAL ANGLE OBS.	ROD RDG OR HI	ELEV DIFF	ELEVATION		LIR OR DIR		RIGHT TURNED HORIZONTAL ANGLE
				SLOPE	HORIZ				INST	ROD			
1	$\odot$	BM 79456							1415.2			1	
2											N.	2	
3	$\nabla$		0		-	5.2	+ 5.2	1420.4			-	3	
4	$\odot$		460		93-40	12.7	- 42.1		1378.3		S	4	1378.3
5	$\Delta$	14	1460		79-30	5.7	- 255.9	55.9	1122.5			5	
6	OK		✓		20-40	9.9	- 255.7					6	
7		617	1060		80-30	8.1	+ 114.5		1207.0			7	
8		618	180		06-30	2.3	+ 8.7		1131.2		N	8	
9			0		-	5.2			1117.3		-	9	
10		619	700		97-30	12.1	- 102.7		1019.8		S	10	
11	$\odot$	620	1500		76-20	10.9	- 184.1		938.4			11	932.6
12	$\Delta$		3190		07-00	9.5	- 157.2	781.2				12	
13	OK		✓		273-05	14.0	- 157.3					13	
14		621	2310		07-30	5.1	+ 95.6		876.8			14	
15		622	1430		00-05	7.7	+ 42.2		823.4			15	
16		623	550		91-05	10.2	- 19.8		761.4		N.	16	CREEK.
17		0	0		-	5.2			776.0		-	17	

WORKED BY L.J.L. CHECKED BY 1ST \_\_\_\_\_ 2ND \_\_\_\_\_  
**SYMBOLS**     $\Delta$  = BACKSIGHT     $\nabla$  = INSTRUMENT SET-UP    SS = SIDESHOT     $\odot$  = FORESIGHT

# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA \_\_\_\_\_ STATE/COUNTY AK BOOK NO. 1 PAGE 202 OF \_\_\_\_\_  
 LINE/LOOP NO. 630 TYPE SURVEY \_\_\_\_\_ CLIENT \_\_\_\_\_ DATE 27 DY 2 MO 79 YR  
 SURVEYOR C. LYMAN INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1186

LINE	<input type="checkbox"/> Δ <input type="checkbox"/> ⊕ <input type="checkbox"/> SS	STATION	VERTICAL						ELEVATION		L/R OR D/I	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		RIGHT TURNED HORIZONTAL ANGLE	LINE	
				SLOPE										
1									781.2				1	
2		624	330		09-00	5.0	+ 0.8		782.0		S		2	
3		625	1210		89-00	1.0	+ 19.3		800.5				3	
4	⊙	626	2090		00-28-30	14.0	+ 41.6		822.8				4	816.5
5	Δ		2640		91-20	11.9	+ 73.3	896.1					5	
6		627	1760		91-40	12.6	- 63.8		832.3		✓		6	
7		628	000		92-00	6.3	- 37.0		859.1		✓		7	
8		629	0		-	5.2			890.9		-		8	
9											✓		9	
10		SP. 974	1700		90-30	12.3	- 27.1		869.0		✓		10	OLD IRON
11		LINE 86X							866.0				11	PIPE
12								VERTICAL TIE	+ 3.0				12	PT. 1186 1978
13													13	
14		630	000		07-20	9.6	+ 31.3		927.4		S		14	
15	⊙	631	1760		07-00	10.1	+ 81.9		978.0				15	971.6
16													16	
17													17	

WORKED BY C. J. L. CHECKED BY 1ST \_\_\_\_\_ 2ND \_\_\_\_\_  
**SYMBOLS**    Δ = BACKSIGHT    ⊕ = INSTRUMENT SET-UP    SS = SIDESHOT    ⊙ = FORESIGHT

# HORIZONTAL AND VERTICAL SURVEY NOTES











GSI AREA \_\_\_\_\_ STATE/COUNTY AK. BOOK NO. \_\_\_\_\_ PAGE 203 OF \_\_\_\_\_  
 LINE/LOOP NO. 630 TYPE SURVEY \_\_\_\_\_ CLIENT \_\_\_\_\_ DATE 27 DY 2 MO 79 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. WILD. T2 CREW NO. 1186





LINE	  	STATION	VERTICAL						ELEVATION		L/R OR D/I	HORIZONTAL		REMARKS
			DISTANCE		VERTICAL ANGLE OBS.	ROD RDG OR HI	ELEV DIFF	FINAL ELEVATION DIFF	INST	ROD		RIGHT TURNED HORIZONTAL ANGLE	LINE	
			SLOPE	HORIZ										
1		631.							978.0			1		
2			2140		92-30	13.4	+128.4	1106.4				2		
3		632	1760		93-00	4.1	-96.1		1010.3			3		
4		633.	0.0		92-20	11.3	-47.1		1059.3		N	4		
5		634	0		-	5.2			1101.2		-	5		
6		635.	0.0		06-00	6.1	+55.1		1161.5		S.	6		
7		636.	1760		04-30	0.0	+159.9		1266.3			7		
8			2090		02-40	6.0	+257.8		1364.2			8	1360.0	
9												9		
10												10		
11												11		
12												12		
13												13		
14												14		
15												15		
16												16		
17												17		

WORKED BY L. J. L. CHECKED BY 1ST \_\_\_\_\_ 2ND \_\_\_\_\_  
**SYMBOLS**    = BACKSIGHT    = INSTRUMENT SET-UP    = SIDESHOT    = FORESIGHT

# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA MISHEGUK MTN. STATE/COUNTY AK BOOK NO. 1 PAGE 233 OF       
 LINE/LOOP NO. 630 TYPE SURVEY      CLIENT      DATE 22 BY 3 MO 77 YR       
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO.      CREW NO. 1186

LINE	  	STATION	VERTICAL						ELEVATION		L/R OR DJ	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		RIGHT TURNED HORIZONTAL ANGLE	LINE	
				SLOPE 										
1		636 + 330								1364.2			1	STEEP. ROCK
2													2	RIDGE.
3													3	
4			550		95.00	8.0	+ 55.8	1420.0					4	
5		637	0		-	5.2				1414.8			5	
6		638	880		80 - 30	10.0	+ 133.2			1553.2			6	
7			1260		80 - 20	5.0	+ 203.6			1623.6			7	1622.5
8			480		95 - 30	9.6	+ 55.4	1679.0			N		8	
9			0		-	5.2				1673.8			9	TP. 638 + 845'
10													10	
11													11	
12		639	35		-	6.8				1672.2		S.	12	
13			365		94 - 00	5.7	- 31.1			1647.9			13	1646.9
14			1980		86 - 00	0.8	- 137.0	1510.9					14	
15		640	1430		87 - 30	5.2	+ 57.1			1568.0			15	
16		641	550		91 - 00	10.5	- 20.1			1490.8		N.	16	
17			0		-	5.2							17	

WORKED BY L. J. L. CHECKED BY 1ST      2ND       
 SYMBOLS  = BACKSIGHT  = INSTRUMENT SET-UP  = SIDESHOT  = FORESIGHT

# HORIZONTAL AND VERTICAL SURVEY NOTES












GSI AREA MISHEGUK MTN. STATE/COUNTY AK. BOOK NO. 1 PAGE 234 OF       
 LINE/LOOP NO. 630 TYPE SURVEY      CLIENT      DATE 22 DY 3 MO 72 YR  
 SURVEYOR L. LYMAN. INSTRUMENT DESC/SERIAL NO. WILD T2 CREW NO. 1186





LINE	<input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙	STATION	VERTICAL						ELEVATION		L/R OR DIA	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		RIGHT TURNED HORIZONTAL ANGLE	LINE		
				SLOPE											HORIZ
1													1		
2	⊙		130			-	6.3	-	6.3		1504.6	S.		2	1503.2
3	Δ		535			84-00	3.3	-	52.3	1452.3				3	
4		642	330			84-00	12.0	+	22.3		1474.6	N		4	
5			0			-	5.2				1447.1	-		5	
6		643.	550			97-00	13.0	-	79.5		1372.8	S.		6	
7		644.	1430			96-00	11.7	-	160.4		1291.7			7	
8	⊙	645.	2310			95-40	8.6	-	235.6		1216.7			8	1213.8
9	Δ		1430			93-00	6.1	+	80.8	1297.5				9	
10		646	550			93-00	11.3	-	40.0		1257.5	N		10	
11			0			-	5.2				1292.3	-		11	
12		647.	330			88-00	4.6	+	6.7		1304.4	S.		12	
13	⊙		440			88-00	9.9	+	5.4		1302.9			13	1300.2
14	Δ		440			87-00	4.4	-	18.6	1284.3		N		14	
15			0			-	5.2				1279.1	-		15	
16		648.	330			97-00	10.7	-	50.6		1233.7	S.		16	
17														17	

WORKED BY L.J.L. CHECKED BY 1ST      2ND       
 SYMBOLS    Δ = BACKSIGHT    ⊠ = INSTRUMENT SET-UP    SS = SIDESHOT    ⊙ = FORESIGHT

# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA \_\_\_\_\_ STATE/COUNTY AK BOOK NO. 1 PAGE 235 OF \_\_\_\_\_  
 LINE/LOOP NO. 670 TYPE SURVEY \_\_\_\_\_ CLIENT \_\_\_\_\_ DATE 22 DY 3 MO 77 YR  
 SURVEYOR C. LYMAN INSTRUMENT DESC/SERIAL NO. WILD T2 CREW NO. 1181










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		RIGHT TURNED HORIZONTAL ANGLE		
				SLOPE 	HORIZ 					INST			ROD	
1									1284.3			1		
2		649.	1210			97-00	6.6	-	153.0		1131.3	5.	2	
3		650	2090			96-30	14.9	-	250.0		1034.3		3	
4			2420			96-20	11.3	-	276.6		1007.7		4	1003.2
5			1430			84-30	5.6	-	130.8	876.9			5	
6		651.	000			85-00	14.6	+	61.8		938.7	N	6	
7		652	0			-	5.2				871.7	-	7	CREEK
8		653.	000			89-20	5.0	+	5.2		882.1	5.	8	
9		654.	1760			87-00	11.7	+	80.3		757.2		9	
10			2310			86-20	7.0	+	140.4		1017.3		10	1012.5
11			1210			91-30	11.2	+	42.9	1060.2			11	
12		655	000			92-00	7.0	-	37.7		1022.5	N.	12	
13		656	0			-	5.2				1055.0	-	13	
14		657.	000			89-00	1.2	+	9.2		1069.4	5.	14	
15			1430			89-00	1.0	+	24.0		1084.2		15	1079.2
16													16	
17													17	

WORKED BY C.J.L. CHECKED BY 1ST \_\_\_\_\_ 2ND \_\_\_\_\_  
 SYMBOLS  = BACKSIGHT  = INSTRUMENT SET-UP  = SIDESHOT  = FORESIGHT



# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA MUHEGUK MTN. STATE/COUNTY AK. BOOK NO. 1 PAGE 234 OF       
 LINE/LOOP NO. 630 TYPE SURVEY      CLIENT      DATE 22 BY 3 MO 19 YR       
 SURVEYOR L. LTMAN. INSTRUMENT DESC/SERIAL NO. WILD T2. 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		RIGHT TURNED HORIZONTAL ANGLE		LINE
				SLOPE 					HORIZ 	INST			
1													
2			12.00		91-10	13.6	+ 38.0	1122.2					
3		650	0:00		92-20	11.4	- 47.2	1075.0		N			
4		659	0		-	5.2		1117.0		-			
5		660	0:00		90-30	8.6	- 16.3	1105.9		S.			
6		661	1760		89-30	14.2	+ 1.2	1123.4					1118.3
7			1430		-	4.2	+ 4.2	1127.6					
8		662	550		-	12.0		1115.6		N			
9			0		-	5.2		1122.4		-			
10		663	330		-	4.6		1123.0		S.			
11		664	1210		88-30	5.6	+ 26.1	1153.7					
12		665	2090		87-50	2.0	+ 76.2	1203.8					
13		666	2970		87-10	5.3	+ 141.3	1268.9					1264.0
14			2640		93-20	7.1	+ 160.3	1429.2					
15		667	1760		93-30	11.0	- 118.2	1311.0					
16		668	880		95-00	3.0	- 79.4	1349.8		N.			
17		669	0		-	5.2		1424.0		-			

WORKED BY L.L. CHECKED BY 1ST      2ND     

SYMBOLS

 = BACKSIGHT

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 = FORESIGHT

# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA MISHEGUK. MTN. STATE/COUNTY AK BOOK NO. 1 PAGE 237 OF       
 LINE/LOOP NO. 630 TYPE SURVEY      CLIENT      DATE 22 DY 3 MO 79 YR  
 SURVEYOR L. LYMAN. INSTRUMENT DESC/SERIAL NO. WILD T2 CREW NO. 1186.

LINE		STATION	VERTICAL						HORIZONTAL		REMARKS			
			DISTANCE		VERTICAL ANGLE OBS.	ROD RDG OR HI	ELEV DIFF	FINAL ELEVATION DIFF	ELEVATION			UR OR DI	RIGHT TURNED HORIZONTAL ANGLE	
			SLOPE	<input type="checkbox"/> FEET <input type="checkbox"/> METERS HORIZ					INST	ROD				
1									1429.2			1		
2	⊙	670.	000		03-40	0.4	+	28.1		1517.3	S.		2	1513.1
3	△		615		93-40	14.4	+	53.6	1570.7		N		3	
4		TP.	0		-	5.2				1568.7	-		4	TP.
5		671.	265		95-40	11.4	-	37.4		1533.5	S		5	
6	⊙		605		95-30	11.7	-	68.9		1502.0			6	1497.6
7	△		1165		02-30	3.2	-	139.2	1362.8				7	
8		672	550		03-05	9.7	+	56.8		1419.6	N		8	
9			0		-	5.2				1357.6	-		9	
10		673.	330		96-30	12.7	-	49.8		1313.0	S.		10	
11		674.	1210		95-05	4.4	-	109.5		1253.3			11	
12	⊙	675.	2090		93-40	12.1	-	145.5		1217.3			12	1211.4
13	△		1760		00-05	11.2	-	49.8	1167.5				13	
14		676	000		00-05	11.1	+	19.6		1127.1	N		14	
15		677	0		-	5.2				1162.3	-		15	
16	⊙	678	000		00-00	2.7	+	28.0		1195.5	S.		16	≠ 609. 1189.5
17													17	

WORKED BY L. L. CHECKED BY 1ST      2ND       
**SYMBOLS**    △ = BACKSIGHT    = INSTRUMENT SET-UP    ⊙ = SIDESHOT    ⊙ = FORESIGHT

## HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA MISHEGOK MTN. STATE/COUNTY AK BOOK NO. 1 PAGE 238 OF       
 LINE/LOOP NO. 630 TYPE SURVEY      CLIENT      DATE 23 BY 3 MO 79 YR       
 SURVEYOR L. LTMAN. INSTRUMENT DESC/SERIAL NO. WILD T2 CREW NO. 1186

LINE	<input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙	STATION	VERTICAL						ELEVATION		L/R OR DI	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	⊙	678 -										1	609	
2									1195.5			2	IRON-PIPE	
3												3		
4												4		
5	Δ		2530		94-00	4.1	+187.2	1382.7				5		
6		679	1650		95-05	10.7	-154.0	1228.7				6		
7		680	770		97-05	5.8	-101.9	1280.8		N		7		
8		-	0		-	5.2		1377.5		-		8		
9		681	110		96-30	4.8	+1.9	1384.6		S		9		
10	⊙	682	990		92-00	2.3	+134.1	1516.8				10		
11	Δ		1200		94-00	7.2	+90.7	1607.5				11		
12		683	330		98-30	12.4	-60.6	1546.9		N		12	BROKEN	
13			0		-	5.2		1602.3		-		13	Rock	
14		684	550		87-10	4.8	+22.4	1629.9		S		14	VERY	
15		685	1430		85-20	4.0	+112.0	1719.5				15	ROUGH	
16	⊙	686	2310		85-17-30	14.0	+170.0	1777.5				16	CST. SP.	
17										5' BOOST		17	SOUTH-END	

WORKED BY L.J.L. CHECKED BY 1ST      2ND     

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