

# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA HOWARD PASS STATE/COUNTY AK BOOK NO. \_\_\_\_\_ PAGE 1 OF \_\_\_\_\_  
 LINE/LOOP NO. 762 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 25 DY 1 MO 20 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1196

LINE	  	STATION	VERTICAL						ELEVATION		L/R OR DI	HORIZONTAL RIGHT TURNED HORIZONTAL ANGLE	LINE	REMARKS
			DISTANCE		VERTICAL ANGLE OBS.	ROD RDG OR HI	ELEV DIFF	FINAL ELEVATION DIFF	INST	ROD				
			SLOPE 	HORIZ 										
1		6-745-SP-174	Refer. Page 19.		270	+7.0	-4.5		2370.0		2390.1	1	IRON-PIPE	
2		762-SP-17										2		
3												3		
4												4		
5			1320		89-30	+7.0	-4.5		2385.3			5		
6			✓		270-40	+10.5	-4.9					6		
7		16	000		270-40	2.7	+3.5		2388.7			7		
8		15	440		270-40	4.7	+0.4		2385.7			8	N	
9		14	0		-	3.2			2380.1			9	-	
10		13	440		92-30	2.8	-22.0		2363.3			10	S	
11		12	000		92-30	4.5	-42.8		2342.5			11		
12		11	1320		91-00	5.1	-28.1		2357.2			12		
13		10	1760		91-00	5.1	-35.8		2349.4		2349.8	13		
14			✓		269-10	9.9	-35.5					14		
15												15		
16												16		
17												17		

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

## HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA HOWARD PASS STATE/COUNTY AK. BOOK NO. \_\_\_\_\_ PAGE 2 OF \_\_\_\_\_  
 LINE/LOOP NO. 762 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 25 DAY 1 MO 80 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1186

LINE	<input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙	STATION	VERTICAL						ELEVATION		L/R OR DI	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	⊙	10.							2349.6			1			
2	Δ		1320		91-00	+0.5	+31.5	2381.0				2			
3	CK		✓		269-10	+12.1	+31.3					3			
4		9.	380		269-00	5.1	-20.5	2360.5				4			
5		5.	440		268-30	13.5	-25.0	2356.0				N 5			
6		7.	0		-	5.2		2375.8				- 6			
7		6.	440		89-00	4.7	+3.0	2384.0				S 7			
8		5.	580		89-00	5.4	+10.0	2391.0				8			
9	⊙	4	1320		89-00	8.3	+14.7	2395.9		2396.2		9			
10	CK		✓		271-10	11.9	+15.0					10			
11	Δ		495		-	14.2	+14.2	2410.1				11			
12	CK		✓		269-30	19.8	+14.1					12			
13		3.	55		-	8.6		2401.5				N 13			
14		-	0		-	5.2		2404.9				- 14			
15		2.	395		88-00	4.5	+9.3	2419.4				S 15			
16												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. \_\_\_\_\_ PAGE 3 OF \_\_\_\_\_  
 LINE/LOOP NO. 762 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 25 DY 1 MO 80 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1186

LINE	  	STATION	VERTICAL						ELEVATION		L/R OR DI	HORIZONTAL		REMARKS
			DISTANCE		VERTICAL ANGLE OBS.	ROD RDG OR HI	ELEV DIFF	FINAL ELEVATION DIFF	INST	ROD		RIGHT TURNED HORIZONTAL ANGLE	LINE	
			SLOPE 	<input type="checkbox"/> FEET <input type="checkbox"/> METERS HORIZ 										
1									2410.2				1	
2		B.M.	710		96-00	6.9	+42.5		2452.6		5		2	
3		80097	/		274-20	10.9	+42.6						3	
4									2452.1		2452.8		4	
5									+0.5		VERTICAL		5	TIE.
6													6	
7		1	835		273-40	7.0	+46.3		2456.4		5		7	FIRST SP.
8													8	SOUTH END.
9													9	LN-762.
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 HOWARD PASS STATE/COUNTY AK BOOK NO. \_\_\_\_\_ PAGE 4 OF \_\_\_\_\_  
 LINE/LOOP NO. 762 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 25 DY 1 MO 80 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		LR OR DI		RIGHT TURNED HORIZONTAL ANGLE	LINE
				SLOPE 					HORIZ 	INST				
1		743 - SP. 134										1	IRON - PIPE	
2		762 - SP. 17										2		
3												3		
4			1320		89-30	+2.3		-5.2				4		
5			✓		270-50	+13.0		-5.4				5		
6		16.	800		270-50	8.4		+4.4				6		
7		19.	440		270-50	5.8		+0.6				7	S.	
8		20.	0		-	3.2						8	-	
9		21.	440		90-30	11.2		-15.0				9	N.	
10		22.	800		90-40	14.2		-24.4				10		
11		23.	1320		90-40	1.7		-22.1				11		
12		24.	1760		90-30	6.1		-21.5				12		
13		25.	2200		90-10	9.7		-16.1				13		
14			✓		269-57-16	14.0		-15.7				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 5 OF \_\_\_\_\_  
 LINE/LOOP NO. 762 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKMA DATE 25 BY 1 MO 80 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1186

LINE	  	STATION	VERTICAL						ELEVATION		L/R OR DI	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		25.											1	
2			220		89-30	+9.5	+1.8	2370.4	2369.8				2	
3			✓		270-40	+12.0	+1.8						3	
4		26.	440		-	7.9			2368.7			S	4	
5		27.	0		-	5.2			2365.4			-	5	
6		28.	440		-	73.6			2357.0			N	6	
7		29.	880		90-30	12.2	-19.8		2350.7				7	
8		30.	1320		90-30	9.8	-21.3		2349.3				8	
9		31.	1760		90-30	6.3	-21.7		2349.1				9	
10			✓		269-40	11.1	-21.3						10	
11			1760		-	+8.7	+8.7	2357.7					11	
12			✓		270-10	+13.6	+8.5						12	
13		32.	1320		-	10.8			2346.9				13	
14		33.	880		-	9.0			2348.7				14	
15		34.	440		-	8.1			2349.6			S	15	
16		35.	0		-	5.2			2352.5			-	16	
17		36.	440		-	7.8			2355.9			N	17	

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## HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA HOWARD. PASS. STATE/COUNTY AK. BOOK NO. \_\_\_\_\_ PAGE 6 OF \_\_\_\_\_  
 LINE/LOOP NO. 762 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY. DATE 25 DY 1 MO 80 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1186

LINE	  	STATION	VERTICAL						ELEVATION		LR 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	INST					ROD
				SLOPE 	HORIZ 										
1		37	880		89-00	9.0	+ 6.4		2364.1			N.	1		
2		38.	1320		89-00	9.5	+ 13.5		2371.2				2		
3		BM. 79395	1440		89-00	10.9	+ 14.2		2372.7				3		
4			✓		270-50	6.4	+ 14.5		2378.3				4		
5									- 6.2			VERTICAL	5	TE.	
6													6		
7													7		
8			765		89-00	9.9	- 3.4	2368.6					8		
9			✓		270-50	7.6	- 3.5						9		
10		39.	440		270-50	5.0	+ 1.4		2370.0			S.	10		
11		40.	0		-	5.2			- 2363.4			-	11		
12		41.	440		91-40	4.9	- 17.7		2350.9			N.	12		
13		42.	880		91-40	5.2	- 30.8		2337.8				13		
14		43.	1320		91-40	7.8	- 43.2		2325.4				14		
15		44	1760		91-30	7.8	- 55.9		2312.9				15		
16			✓		268-40	14.6	- 55.5						16		
17													17		

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# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA \_\_\_\_\_ STATE/COUNTY AK. BOOK NO. \_\_\_\_\_ PAGE 7. OF \_\_\_\_\_  
 LINE/LOOP NO. 762. TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY. DATE 25-DY 1 MO 80 YR  
 SURVEYOR L. LYMAN. INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1186.

LINE	  	STATION	VERTICAL						ELEVATION		L/R OR DI	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		44.								2312.9			1		
2			440		87-00	+2.2	-16.8	2296.1	✓				2		
3			✓		272-40	+3.6	-11.8						3	S.	
4		45.	0		-	8.2				2290.9			4	-	
5		46.	440		94-40	+0.7	-46.4	2249.7	✓				5	N	
6		47.	880		94-30	+5.5	-74.3	2221.8	✓				6	STEEP BNK.	
7			✓		266-00	+8.0	-74.2						7		
8			880		86-30	+7.5	-46.1	2175.7					8		
9			✓		274-00	+15.0	-46.2						9		
10		48.	440		-	3.1				2172.6			10	SMALL - CRK.	
11		49.	0		-	5.2				2170.5			11		
12		50.	440		88-00	+6.3	+9.0	2174.8					12		
13			✓		272-10	+7.4	+9.2						13		
14													14		
15													15		
16													16		
17													17		

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# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA \_\_\_\_\_ STATE/COUNTY AK. BOOK NO. \_\_\_\_\_ PAGE 5 OF \_\_\_\_\_  
 LINE/LOOP NO. 762 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY. DATE 26 DY 1 MO 20 YR  
 SURVEYOR L. LITMAN 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 										
1		50.							2184.8			1		
2			440		91-30	+12.4	+23.9	✓	2208.7			2		
3			✓		268-00	+8.5	+23.8					3	S.	
4		51.	0		-	-5.3			2203.4			4	-	
5		52.	440		89-00	-3.9	+1.8		2210.5			5	N.	
6		53.	880		89-20	-10.6	-0.4		2208.3			6		
7		54.	1320		89-30	-11.2	+0.3	✓	2207.2			7		
8			✓		270-30	-14.0	+0.6					8		
9			1760		90-50	+13.0	+38.6	✓	2247.7			9		
10			✓		269-00	+7.6	+38.3	✓				10		
11		55.	1320		269-00	-14.8	-37.8		2209.9			11		
12		56.	880		267-30	-5.2	-46.5		2201.2			12		
13		57.	440		267-00	-12.8	-35.3		2212.4			13	S.	
14		58.	0		-	-3.2			2242.5			14	-	
15		59.	440		88-00	-5.3	+10.0		2257.7			15	N.	
16		60.	880		88-00	-13.5	+17.2		2264.9			16		
17												17		

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## HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA \_\_\_\_\_ STATE/COUNTY AK. BOOK NO. \_\_\_\_\_ PAGE 9 OF \_\_\_\_\_  
 LINE/LOOP NO. 762 TYPE SURVEY \_\_\_\_\_ CLIENT MUSKY DATE 26 BY 1 MO 80 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									2247.7			1			
2		61	1320		88-23-32	14.0	+ 23.0		2270.9			2			
3			✓		271-37-24	14.0	+ 23.4					3			
4			2200		91-00	11.6	+ 50.0		2320.8			4			
5			✓		269-04-10	14.0	+ 49.7					5			
6		62	1760		269-04-10	13.3	- 41.9		2278.9			6			
7		63	1320		269-00	8.3	- 31.3		2289.5			7			
8		64	800		269-00	7.1	- 21.5		2299.3			8			
9		65	440		-	13.0			2307.8			9	S		
10		66	0		-	5.3			2315.5			10	-		
11		67	440		88-20	7.8	+ 6.0		2326.8			11	N		
12		68	800		88-20	4.8	+ 20.8		2341.6			12			
13		69	1320		88-20	3.7	+ 32.7		2353.5			13			
14		70	1760		88-20	3.3	+ 45.9		2366.7			14			
15		71	2200		88-10	10.9	+ 59.4		2380.5			15			
16			✓		271-55-37	14.0	+ 59.9					16			
17												17			

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

## HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA KILLIK RIVER STATE/COUNTY AK BOOK NO. \_\_\_\_\_ PAGE 10 OF \_\_\_\_\_  
 LINE/LOOP NO. 762 TYPE SURVEY \_\_\_\_\_ CLIENT AUSKY DATE 26 DY 1 MO 80 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1186

LINE	  	STATION	VERTICAL						ELEVATION		L/R OR DI	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		71							2370.5			1			
2			1760		92-30	+14.5	+91.2	2471.6				2			
3			✓		267-20	+9.2	+91.0					3			
4		72	1320		267-20	7.7	-69.0		2402.6			4			
5		73			267-20	4.5	-45.4		2426.2			5			
6		74	440		267-20	5.3	-25.7		2445.9		S.	6			
7		75	0		-	5.3			2466.3		-	7			
8		76	440		00-20	7.0	+11.0		2482.6		N.	8			
9		77			00-20	2.3	+23.3		2494.9			9			
10		BM 80096	1120		00-20	2.9	+29.7		2501.4			10			
11			✓		272-10	12.4	+29.7					11			
12									2501.0			12			
13									+0.4		VERTICAL	13			
14											TIE	14			
15												15			
16												16			
17												17			



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Howard Pass.

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA KIUKUK RIVER STATE/COUNTY AK BOOK NO. \_\_\_\_\_ PAGE 11 OF \_\_\_\_\_  
 LINE/LOOP NO. 762 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 26 BY 1 MO 80 YR  
 SURVEYOR L LYMAN INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1186

LINE	<input type="checkbox"/> $\Delta$ <input type="checkbox"/> SS <input type="checkbox"/> $\odot$	STATION	VERTICAL						ELEVATION		L/R OR DI	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	$\odot$	BM 80096							2501.0			1		
2											2501.1	2		
3												3		
4	$\Delta$		11.00		-	711.3	+ 11.3	2512.3				4		
5	$\odot$		✓		270 - 10	714.5	+ 11.3					5		
6		78	880		-	7.0			2505.3			6		
7		79	440		-	8.0			2507.3			7		
8		80	0		-	8.3			2507.0			8		
9		81	440		-	8.4			2508.9			9		
10		82	000		-	9.0			2502.5			10		
11		83	1320		-	11.5			2500.8			11		
12		84	1760		-	13.7			2498.6			12		
13		85	2200		90 - 10	12.3	- 18.7		2493.6			13		
14	$\odot$	86	2640		90 - 17	14.0	- 27.1		2485.5		2485.7	14		
15	$\odot$		✓		269 - 43 - 47	14.0	- 26.5					15		
16												16		
17												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 HOWARD PASS STATE/COUNTY AK BOOK NO. \_\_\_\_\_ PAGE 12 OF \_\_\_\_\_  
 LINE/LOOP NO. 762 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 26 DY 1 MO 80 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1186

LINE	  	STATION	VERTICAL						ELEVATION		LR OR DI	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		86							2485.5				1	
2			000		87-00	+11.2	-34.8	2450.6					2	
3			✓		272-50	+0.5	-34.9 ✓						3	
4		87	440		272-50	7.6	+20.1		2470.7			S	4	
5		88	0		-	5.3			2445.3			-	5	
6		89	440		94-30	10.7	-45.1		2405.5			N.	6	
7		90	000		94-30	4.4	-73.2		2377.4				7	
8		91	1320		93-30	13.3	-93.7		2356.9				8	
9		92	1760		93-10	13.0	-110.1		2340.5				9	
10		93	2200		93-00	8.3	-123.3		2327.6			2327.9	10	
11			✓		267-10	14.2	-122.8						11	
12			000		87-00	+2.7	-12.7 ✓	2314.9					12	
13			✓		271-30	+10.2	-12.8						13	
14		94	440		271-00	7.2	+0.5		2315.4			S	14	
15		95	0		-	5.3			2309.6			-	15	
16		96	440		92-00	6.2	-21.5		2293.4			N.	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 Howard. Pass. STATE/COUNTY AK. BOOK NO. \_\_\_\_\_ PAGE 13. OF \_\_\_\_\_  
 LINE/LOOP NO. 762. TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY. DATE 26 DY 1 MO 80 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	LINE
			SLOPE	HORIZ					INST	ROD			
1													
2		<del>93-97</del>	870.		92-00	3.6	-34.3		2314.9				
3		98.	1320		91-40	7.8	-46.2		2280.6		N		
4		79.	1760		91-40	10.3	-61.5.3		2268.7				
5			✓		268-10	4.8	-61.1		2253.6	2254.0			
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
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 HOWARD PASS STATE/COUNTY AK. BOOK NO. \_\_\_\_\_ PAGE 14 OF \_\_\_\_\_  
 LINE/LOOP NO. 762 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY. DATE 1 DY 2 MO 80 YR  
 SURVEYOR L. LYMAN. INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1121

LINE	 SS  FS	STATION	VERTICAL						ELEVATION		LR OR DI	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		99							2253.6				1	
2			1760		87-20	7.9	- 71.9	2181.6					2	
3			✓		272-50	+14.8	- 72.1						3	
4		105	1320		272-30	6.8	+ 50.7		2232.3				4	
5		101	880		272-30	6.6	+ 31.7		2213.3				5	
6		102	440		272-30	6.1	+ 13.1		2194.7			5	6	
7		103	0		-	5.6			2176.0			-	7	
8		104	440		93-05	8.6	- 31.6		2150.0			N	8	
9		105	880		93-20	12.2	- 43.3		2118.3				9	
10		106	1320		93-30	13.7	- 94.1		2087.5				10	
11		107	1760		92-05	12.2	- 73.6		2108.0				11	
12		108	2205		88-30	11.7	+ 45.9		2227.5			2228.0	12	
13			✓		271-33-48	14.0	+ 46.0						13	
14			660		71-30	12.8	+ 30.1	2257.6					14	
15			✓		268-40	+14.8	+ 30.2						15	
16		109	180		-	3.8			2253.8			5	16	
17		TP	0		-	5.2			2252.4			-	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 HOWARD PASS. STATE/COUNTY AK. BOOK NO. \_\_\_\_\_ PAGE 15 OF \_\_\_\_\_  
 LINE/LOOP NO. 762 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 1 DY 2 MO 80 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1176











LINE		STATION	VERTICAL						ELEVATION		L/R OR DIR	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										2257.6				1	
2		110	260		92-00	74.1	-	23.2		2234.4				2	
3			310		92-00	71.6	-	22.4		2235.2		2235.0		3	
4			✓		267-30	8.9	-	22.4						4	
5			020		85-30	79.4	-	54.7	2180.5					5	
6			✓		274-40	71.8	-	54.7						6	
7		111	440		273-00	74.8	+	18.2		2198.7			5	7	
8		112	0		-	5.3				2175.2			-	8	
9		113	440		92-00	74.0	-	29.3		2151.2			N	9	
10		114	800		93-00	73.3	-	53.3		2127.2				10	
11		115	1320		92-10	73.3	-	63.2		2117.3				11	
12		116	1760		91-10	70.2	-	46.0		2134.5				12	
13		117	2200		91-00	72.8	-	41.2		2139.3				13	
14			2365		90-50	70.8	-	45.2		2135.4		2136.0		14	
15			✓		269-14-54	74.0	-	45.0						15	
16														16	
17														17	

TI-25471B

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

## HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA HOWARD PASS. STATE/COUNTY AK. BOOK NO. \_\_\_\_\_ PAGE 16 OF \_\_\_\_\_  
 LINE/LOOP NO. 762 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 1 DY 2 MO 80 YR  
 SURVEYOR L. LITMAN 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	LINE
				SLOPE 					HORIZ 	INST				
1									2135.4			1		
2			1595		87-00	70.0	- 73.4	2062.1				2		
3			✓		273-10	74.7	- 73.3					3		
4		118	1320		272-20	74.4	+ 49.3		2111.4			4		
5		119	880		272-20	72.2	+ 29.6		2091.7			5		
6		120	440		272-20	72.4	+ 11.5		2073.6			5	6	
7		121	0		-	75.3			2056.8			-	7	
8		122	440		91-00	70.3	- 18.0		2044.1			N	8	
9		123	800		91-00	79.4	- 24.8		2037.3				9	
10		124	1320		91-00	77.5	- 30.5		2031.6				10	
11		BM. 80094	<del>15682</del> 1562		91-00	75.3	- 32.6		2029.6				11	
12			✓		269-10	77.0	- 32.5						12	IRON-PIPE.
13		743 - SP. 505							2030.2				13	
14		762 - SP. 124 + 242							- 0.6				14	
15													15	
16													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 WILLIK RIVER STATE/COUNTY AK BOOK NO. \_\_\_\_\_ PAGE 17 OF \_\_\_\_\_  
 LINE/LOOP NO. 762 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 1 DY 2 MO 80 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1186

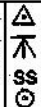


LINE	   	STATION	VERTICAL						ELEVATION		L/R OR DI	RIGHT TURNED HORIZONTAL ANGLE	LINE	REMARKS	
			DISTANCE	<input type="checkbox"/> FEET <input type="checkbox"/> METERS		VERTICAL ANGLE OBS.	ROD RDG OR HI	ELEV DIFF	FINAL ELEVATION DIFF	INST					ROD
1		BM 80094								2030.2		2030.5	1		
2													2		
3			1080		89-05	+2.9	-9.9 ✓	2020.3					3		
4			✓		271-10	+2.2	-9.8						4		
5		125	880		271-05	7.3	+8.1			2028.4		2028.7	5		
6		126	440		271-05	4.6	+3.1			2023.4			6	S.	
7		127	0		-	5.3				2015.0			7	-	
8		128	440		-	13.4				2006.9			8	N.	
9		129	880		90-40	8.5	-12.7			2001.6			9		
10		130	1320		90-40	6.0	-21.4			1998.9			10		
11		131	1760		90-40	8.3	-28.8			1991.6		1992.2	11		
12			✓		269-30	13.3	-28.7 ✓						12		
13			440		80-00	+5.5	-9.8	1981.8					13		
14			✓		272-10	+6.0	-9.8 ✓						14	S.	
15		132	0		-	5.3				1976.5			15	-	
16		133	440		93-00	7.0	-30.0			1951.8			16	N.	
17													17		





TI-284718

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

# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA KILLIK RIVER STATE/COUNTY AK BOOK NO. \_\_\_\_\_ PAGE 18 OF \_\_\_\_\_  
 LINE/LOOP NO. 762 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 1 DY 2 MO 80 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO \_\_\_\_\_ CREW NO. 1186

LINE		STATION	VERTICAL						ELEVATION		LR OR DR	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
															
1										1981.8			1		
2		134	0:00		93-00	7.2	- 53.2			1928.6		N	2		
3		135	1020		93-00	8.2	- 77.2			1904.6			3		
4	o	136	1760		93-00	12.2	- 104.2			1877.7		1878.6	4		
5	ck		✓		267-04	14.0	- 103.9						5		
6	Δ		1050		93-20	12.3	+ 73.2			1950.7			6		
7	ck		✓		266-30	9.1	+ 73.1						7		
8		137	605		265-30	7.5	- 56.8			1894.1			8		
9		138	115		-	15.0				1935.9			S. 9		
10			0		-	5.2				1945.7			- 10		
11		139	275		-	4.7				1946.2			N 11		
12		140	715		-	7.0				1944.9			12		
13		141	1155		-	12.2				1938.7			13		
14	o	142	1595		90-08-10	14.0	- 17.8			1933.2		1934.4	14		
15	ck		✓		269-50	13.0	- 17.6						15		
16													16		
17													17		

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

# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA KILLIK RIVER STATE/COUNTY AK BOOK NO. \_\_\_\_\_ PAGE 19 OF \_\_\_\_\_  
 LINE/LOOP NO. 762 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 4 DY 2 MO 90 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1186

LINE	<input type="checkbox"/> $\Delta$ <input type="checkbox"/> $\nearrow$ <input type="checkbox"/> SS <input type="checkbox"/> $\odot$	STATION	VERTICAL						ELEVATION		L/R OR DI	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	$\odot$	142								1933.2			1		
2	$\Delta$		000		09-00	+9.0	-6.4	1927.0					2		
3	CK		✓		271-10	+11.8	-6.1						3		
4		143	440		271-00	-5.7	+2.0			1929.0		S	4		
5		144	0		-	-5.3				1921.7		-	5		
6		145	440		-	-7.1				1919.9		N	6		
7	$\odot$	146	000		09-40	-5.2	-0.1			1926.9	1928.4		7		
8	CK		✓		270-40	-10.3	-0.1						8		
9	$\Delta$		000		-	+12.0	+12.0	1938.8					9		
10	CK		✓		269-40	+6.7	+11.8						10		
11		147	440		-	-8.5				1930.3		S	11		
12		148	0		-	-5.3				1933.5		-	12		
13		149	440		-	-9.4				1929.4		N	13		
14	$\odot$	150	000		10-30	-12.0	-19.7			1919.2	1921.0		14		
15	CK		✓		269-20	-9.3	-19.5						15		
16													16		
17													17		

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

# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA \_\_\_\_\_ STATE/COUNTY AK BOOK NO. \_\_\_\_\_ PAGE 20 OF \_\_\_\_\_  
 LINE/LOOP NO. 762 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 4 BY 2 MO 80 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ 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	⊙	150							1919.2			1		
2	Δ		1485		90-10	+11.2	+15.5	1934.8				2		
3	ck.		✓		269-40	+7.0	+15.6					3		
4		151	1045		269-00	73.3	-31.5		1903.3			4		
5		152	605		266-50	73.8	-47.2		1887.6			5		
6		153	165		-	72.7			1922.1		S	6		
7	K		0		-	73.2			1929.6		-	7		
8		154	275		-	72.7			1932.1		N	8		
9		155	715		89-20	73.4	+2.9		1937.7			9		
10		156	1155		89-20	72.7	+6.7		1941.5			10		
11	⊙	157	1595		89-20	73.2	+9.4		1944.2		1946.3	11		
12	ck.		✓		270-50	73.7	+9.5					12		
13	Δ		1760		92-00	70.4	+71.8	2015.9				13		
14	ck.		✓		267-50	+5.2	+71.7					14		
15		158	1320		267-30	70.4	-69.9		1948.0			15		
16		159	880		267-30	75.0	-53.3		1962.6			16		
17		160	440		267-30	72.3	-25.5		1970.4			6	17	

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

# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA \_\_\_\_\_ STATE/COUNTY AK BOOK NO. \_\_\_\_\_ PAGE 21 OF \_\_\_\_\_  
 LINE/LOOP NO. 762 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 4 DY 2 MO 80 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		LR OR DI		RIGHT TURNED HORIZONTAL ANGLE	LINE
				SLOPE 					HORIZ 	INST				
1									2015.9				1	
2		161.	0		5.3					2010.6			2	
3		162.	440		7.7	+ 15.3				2031.2			3	
4		163.	880		8.2	+ 37.8				2053.7			4	
5		164.	1320		4.0	+ 103.0				2118.9			5	
6	$\odot$		1980		5.7	+ 110.2				2126.0	2128		6	
7	$\nabla$		✓		9.7	+ 110.1							7	
8	$\Delta$		1090		5.0	- 64.6		2061.5					8	
9	$\nabla$		✓		8.2	- 64.5							9	
10		165.	710		2.0	+ 5.6				2067.1			10	
11		166.	275.		10.7	- 48.6				2012.9			11	S.
12			0		5.3					2056.2			12	-
13		167.	165.		9.5					2052.0			13	N
14		168.	605.		8.2	+ 0.8				2062.3			14	
15		169.	1045.		8.0	+ 63.9				2125.4			15	
16	$\odot$	BM. 79397	1115		7.6	+ 70.0				2131.5			16	
17	$\nabla$		✓		4.4	+ 70.0				2133.5			17	

WORKED BY L.J.L. CHECKED BY 1ST \_\_\_\_\_ 2ND \_\_\_\_\_  
 - 2.0 VERTICAL TIE.

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

# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA KILLIK RIVER STATE/COUNTY AK BOOK NO. \_\_\_\_\_ PAGE 22 OF \_\_\_\_\_  
 LINE/LOOP NO. 762 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 5 DY 2 MO 90 YR  
 SURVEYOR L. LITMAN 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 DI		RIGHT TURNED HORIZONTAL ANGLE	LINE
				SLOPE 					HORIZ 	INST				
1		B.M. 79397							2133.5			1		
2												2		
3			212.0		87-05	+2.0	-108.8	2024.6			212.5	3		
4			✓		273-10	+7.9	-109.0					4		
5		170	176.0		271-10	5.3	+30.5		2055.1		2055.7	5		
6		171	132.0		-	7.7			2016.9			6		
7		172	220		269-05	12.3	-27.7		1996.9			7		
8		173	440		269-05	13.3	-21.0		2003.6			5	8	
9		174	0		-	5.2			2019.4			-	9	
10		175	440		-	2.6			2018.0			N	10	
11			715		88-20	3.4	+15.4		2040.0		2041.2		11	
12			✓		272-05	9.5	+15.4						12	
13			1925		86-40	+7.2	-104.5	1935.4					13	
14			✓		273-30	+12.7	-104.6						14	
15		176	176.0		273-30	13.4	+93.8		2029.2				15	
16		177	132.0		272-30	5.7	+51.8		1987.2				16	
17		178	880		272-05	7.4	+23.3		1958.7				17	

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

# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA \_\_\_\_\_ STATE/COUNTY AK. BOOK NO. \_\_\_\_\_ PAGE 23 OF \_\_\_\_\_  
 LINE/LOOP NO. 762 TYPE SURVEY \_\_\_\_\_ CLIENT Husky DATE 5 DY 2 MO 80 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1186

LINE	△ ↑ SS ⊙	STATION	VERTICAL						ELEVATION		L/R OR D/I	HORIZONTAL RIGHT TURNED HORIZONTAL ANGLE	LINE	REMARKS	
			DISTANCE	□ FEET □ METERS		VERTICAL ANGLE OBS.	ROD RDG OR HI	ELEV DIFF	FINAL ELEVATION DIFF	INST					ROD
				▲ SLOPE	▲ HORIZ										
1										1935.4			1		
2		179	440		272-00	-0.5	+6.8			1942.2		5.4	2		
3		180	0		-	5.3				1930.1		-	3		
4		181	440		91-30	-7.0	-19.5			1916.9		N 5	4		
5		182	880		91-30	-6.5	-29.5			1905.9			5		
6		183	1320		91-30	-6.3	-40.8			1894.6			6		
7		184	1760		91-30	-5.0	-51.1			1884.3			7		
8	⊙	185	2200		91-30	-5.3	-62.9			1872.7		1874.5	8		
9	ck.		✓		268-40	-7.4	-62.6			18			9		
10	△		2200		86-30	-15.0	-119.1		1753.5				10		
11	ck.		✓		273-20	+0.4	-119.3						11		
12		186	1760		273-20	-2.8	+99.4			1852.9			12		
13		187	1320		273-20	-9.5	+67.1			1820.6			13		
14		188	880		272-05	-10.1	+20.6			1774.1			14		
15		189	440		-	-9.4				1744.1			5. 15	ICE. Rd.	
16		190	0		-	5.3				1748.2			16		
17		191	440		85-05	-11.8	+26.4			1779.9			N 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. \_\_\_\_\_ PAGE 24 OF \_\_\_\_\_  
 LINE/LOOP NO. 762 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 5 DY 2 MO 80 YR  
 SURVEYOR L. LTMAN. INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1126

LINE	   	STATION	VERTICAL						ELEVATION		LR OR DI	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									1753.5				1	
2		192	280	85-00	7.8	+69.6			1823.1				2	
3		193	1320	84-50	4.7	+113.7			1867.2				3	
4			1595	84-50	2.3	+134.8			1888.3		1890.7		4	
5			✓	275-20	72.8	+174.8							5	
6			605	92-00	+12.3	+33.4		1921.7					6	
7			✓	267-30	+7.0	+33.4							7	
8		194	440	267-30	4.4	-23.6			1898.1				8	S
9		195	0	-	5.2				1916.5				9	-
10		196	440	89-00	7.3	+0.4			1922.1				10	N
11		197	280	89-00	11.8	+3.6			1925.3				11	
12		198	1320	89-20	11.4	+4.0			1925.7				12	
13		199	1760	89-00	5.2	+25.5			1947.2				13	
14		200	2200	88-00	7.5	+69.2			1990.9				14	
15		201	2640	87-50	4.9	+94.8			2016.5				15	
16		B.M.	2995	87-40	11.4	+110.4			2032.4				16	
17		80506	✓	272-12	4.0	+110.9			2034.8				17	

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

- 2.4 VERTICAL TIE



## HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA KILLIK RIVER STATE/COUNTY AK BOOK NO. \_\_\_\_\_ PAGE 25 OF \_\_\_\_\_  
 LINE/LOOP NO. 742 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 5 DY 2 MO 80 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1181

LINE	  	STATION	VERTICAL						ELEVATION		LR OR DR	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		BM.								2034.8			1		
2		80506.											2		
3			1245		84-00	79.1	-182.7	1852.0					3		
4			✓		276-10	74.2	-182.8						4		
5		202	1760		276-10	79.4	+178.6	2030.6					5		
6		203	1320		274-40	3.8	+103.2	1955.2					6		
7		204	880		274-00	2.5	+58.7	1910.7					7		
8		205	440		274-00	7.4	+23.2	1875.2			5		8		
9		206	0		-	3.3		1846.7			-		9		
10		207	440		92-20	72.0	-29.9	1822.1			N		10		
11		208	880		92-20	73.0	-48.8	1803.2					11		
12		209	1320		92-20	72.2	-65.9	1786.1					12		
13		210	1760		92-20	6.0	-77.6	1774.4					13		
14		211	2200		92-00	9.7	-86.4	1765.6					14		
15		212	2640		91-50	72.4	-96.8	1755.4					15		
16			✓		268-00	4.4	-96.5						16		
17													17		

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

SYMBOLS

= BACKSIGHT

= INSTRUMENT SET-UP

= SIDESHOT

= FORESIGHT

# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA \_\_\_\_\_ STATE/COUNTY AK BOOK NO. \_\_\_\_\_ PAGE 26 OF \_\_\_\_\_  
 LINE/LOOP NO. 762 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 5 DY 2 MO 80 YR  
 SURVEYOR L. LITMAN INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1186

LINE	<input type="checkbox"/> $\Delta$ <input type="checkbox"/> SS <input type="checkbox"/> $\odot$	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
				SLOPE 	HORIZ 										
1	$\odot$	212							1755.4			1			
2	$\Delta$		2640		89-00	+13.2	-32.7	32	1722.4			2			
3	CK		✓		271-00	+13.0	-33.1					3			
4		213	2200		271-00	+13.2	+25.2		1747.6			4			
5		214	1760		271-00	+12.6	+18.1		1740.5			5			
6		215	1320		271-00	+12.1	+10.9		1733.3			6			
7		216	000		271-00	+10.1	+5.3		1727.7			7			
8		217	440		270-20	+2.3	+0.3		1722.7			S. 8			
9		218	0		-	+3.3			1717.1			- 9			
10		217	440		-	+2.2			1714.2			N. 10			
11		220	000		-	+10.3			1712.1			11			
12		221	1320		89-40	+2.0	-0.3		1722.1			12			
13		222	1760		88-40	+9.5	+31.4		1753.8			13			
14		223	2200		87-40	+7.7	+81.8		1804.2			14			
15	$\odot$		2260		87-30	+6.0	+92.5		1815.0			15	TP. 11.		
16	CK		✓		272-40	+12.3	+92.7					16	TOP. of		
17												17	STEEP. CLIFF.		

TI-23471B

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

SYMBOLS

$\Delta$  = BACKSIGHT

$\nabla$  = INSTRUMENT SET-UP

SS = SIDESHOT

$\odot$  = FORESIGHT

## HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA KILLIK RIVER STATE/COUNTY AK BOOK NO. \_\_\_\_\_ PAGE 27 OF \_\_\_\_\_  
 LINE/LOOP NO. \_\_\_\_\_ TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 5 BY 2 MO 8 YR  
 SURVEYOR C. 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 DI	RIGHT TURNED HORIZONTAL ANGLE	LINE
				SLOPE 	HORIZ					INST	ROD				
1													1		
2			1740			81-20	+3.0	- 250.2	1564.8				2		
3			✓			278-50	+7.9	- 250.1					3		
4		224	1320			274-30	7.0	+ 96.2					4		
5		225	880			272-30	2.7	+ 35.6					5		
6		226	440			271-30	4.1	+ 7.4					5	6	
7		227	0			-	5.3						-	7	
8		228	440			90-40	7.6	- 12.7					N.	8	
9		229	880			90-40	8.7	- 18.9						9	
10		230	1320			90-30	8.0	- 19.5						10	
11		231	1760			90-30	3.1	- 18.5						11	
12		232	2250			90-20	3.7	- 16.5						12	
13			✓			269-50	9.9	- 11.3						13	
14			880			71-30	+8.5	+ 31.5	1579.9					14	
15			✓			268-40	+11.0	+ 21.5						15	
16		233	440			268-40	-11.2	- 21.4					5	16	
17		234	0			-	3.2						-	17	

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

# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA KILLIK RIVER STATE/COUNTY AK BOOK NO. \_\_\_\_\_ PAGE 20 OF \_\_\_\_\_  
 LINE/LOOP NO. 762 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 5 DY 2 MO 80 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1126

LINE	<input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ○	STATION	VERTICAL						ELEVATION		L/R OR DIA	RIGHT TURNED HORIZONTAL ANGLE	LINE	REMARKS
			DISTANCE		VERTICAL ANGLE OBS.	ROD RDG OR HI	ELEV DIFF	FINAL ELEVATION DIFF	INST	ROD				
			SLOPE	HORIZ										
1									1579.9			1		
2	○	235	440		89-05	2.8	+4.9		1584.8		N	2		
3	Δ		✓		271-30	6.5	+5.0					3		
4												4		
5	Δ		0				+6.2		1591.0			5		
6		235										6		
7	○	TS. # 12	1265		90-13-50	4.0	-9.1		1581.9			7		
8		247										8		
9	Δ	259	1320		89-25-50	4.0	-9.1	1572.8			S	9		
10		TS. # 24	0			3.5			1567.3		-	10		
11	○	TS. # 30	660		91-21-40	3.0	-12.7		1554.1		N	11		
12		205										12		
13	Δ		0				+5.6		1559.7			13		
14		271	660		92-12-35	4.5	-29.9		1529.8		N	14		
15		283										15		
16		TS. # 48	1990		91-39-25	4.5	-61.7		1498.0		N	16		
17												17		

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

# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA KILLIK RIVER STATE/COUNTY AK BOOK NO. \_\_\_\_\_ PAGE 29 OF \_\_\_\_\_  
 LINE/LOOP NO. 762 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 5 BY 2 MO 80 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1186

LINE	<input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ○	STATION	VERTICAL						ELEVATION		LR OR DR	HORIZONTAL RIGHT TURNED HORIZONTAL ANGLE	LINE	REMARKS
			DISTANCE		VERTICAL ANGLE OBS.	ROD RDG OR HI	ELEV DIFF	FINAL ELEVATION DIFF	INST	ROD				
			SLOPE 	HORIZ 										
1												1		
2	○	235										2	CAST. SP.	
3												3	NORTH- END.	
4												4		
5	Δ											5		
6												6		
7												7		
8	○	TP. 11	5175.15		87-22-07	7.0		+229.5		1814.3		8		
9	CK		✓		272-32-02	7.0						9		
10					2-32-00							10		
11	Δ		○									11		
12												12		
13	○	BM. 20506	9331.65		88-30-52	6.0		+220.7		2035.0		13		
14	CK		✓		271-20-45	6.0						14		
15					1-20-53					2034.8		15		
16										+0.2		16		
17		NOTE: 1 COMPUTED BY									VERTICAL	17	TIE.	

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