

# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA KILLIK RIVER STATE/COUNTY AK. BOOK NO. \_\_\_\_\_ PAGE 1 OF \_\_\_\_\_  
 LINE/LOOP NO. 745 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 11 / 1 / 80 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						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												1		
2	⊙	BM. 79358								2442.3		2	IRON-PIPE	
3												3	2766 / 745	
4												4		
5												5		
6	Δ				15.0		+5.0	2447.3				6		
7		1.	440		3.6			2443.7	/		E	7		
8		2.	0		5.0			2442.3	✓		-	8	BM. 79358	
9		3.	440		2.9			2444.4	✓		W	9		
10		4.	880	00 - 40	5.0		+15.5	2462.8	✓			10		
11		5.	1320	87 - 30	5.8		+51.7	2499.0	✓			11		
12		6.	1760	86 - 20	8.2		+104.1	2551.4	✓			12		
13	⊙	7.	2200	85 - 40	6.1		+159.7	2606.8	✓		2607	13	2607.4	
14	⚬		✓	274 - 30	72.7		+159.4					14		
15												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 2 OF \_\_\_\_\_  
 LINE/LOOP NO. 745 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 11 DY 1 MO 80 YR  
 SURVEYOR L. L. MAJ. 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 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	⊕	7									2606.8		2607.4	1	
2	Δ		1160		100-00	+11.7	+210.1	2816.7			2820.4		2820.4	2	
3	⊕		✓		259-50	+9.1	+209.6							3	
4		8	715		259-40	+14.1	-140.3				2676.4		2678.0	4	
5		9	275		259-40	+5.3	-53.8				2762.9		2765.7	5	E
6			0		-	+5.2					2811.5		2815.2	6	-
7		10	165		82-00	+2.0	+16.7				2853.4		2857.3	7	W
8		11	605		82-00	+2.6	+80.8				2897.5			8	HILL
9		12	1045		81-00	+9.4	+152.1				2978.8		2978.5	9	
10		13	1480		80-00	+10.0	+243.1				3059.8			10	Rock
11	⊕		1680		79-30	+6.0	+295.0				3111.6		<del>3111.6</del> 3112	11	3120.5
12	⊕		✓		280-40	+10.9	+294.7							12	
13	Δ		720		94-00	+9.9	+60.0				3171.6		3180.7	13	
14	⊕		✓		266-20	+14.1	+60.1							14	
15		14	440		266-20	+7.0	-35.1				3136.5		3145.5	15	E
16		15	0		-	+5.3					3166.3			16	-
17		16	440		26-14-40	+7.0	+21.8				3193.4		3202.5	17	W

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 3 OF \_\_\_\_\_  
 LINE/LOOP NO. 745 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 11 BY 1 MO 80 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1196

LINE	<input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙	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 										
1									3171.6			1		
2		<u>17</u>	<u>880</u>		<u>84-50</u>	<u>7.3</u>	<u>+70.6</u>		<u>3242.2</u>			2		
3		<u>18</u>	<u>1320</u>		<u>84-50</u>	<u>7.2</u>	<u>+111.2</u>		<u>3282.8</u>		<u>3292.4</u>	3		
4	⊙		<u>1380</u>		<u>84-50</u>	<u>6.9</u>	<u>+116.9</u>		<u>3288.5</u>		<u>3289.1</u>	4		
5	✓		<u>✓</u>		<u>275-20</u>	<u>70.8</u>	<u>+116.9</u>					5		
6	Δ		<u>175</u>		<u>-</u>	<u>+5.6</u>	<u>+5.6</u>		<u>3294.1</u>		<u>3298.1</u>	6		
7	✓		<u>✓</u>		<u>271-40</u>	<u>+10.7</u>	<u>+5.6</u>					7		
8		<u>BM 79359</u>	<u>0</u>		<u>-</u>	<u>5.0</u>	<u>-5.0</u>		<u>3289.1</u>			8		
9									<u>3288.2</u>			9		
10									<u>+0.9</u>		<u>TIE</u>	10		
11												11		
12	⊙	<u>19</u>	<u>225</u>		<u>77-00</u>	<u>12.7</u>	<u>-39.9</u>	<u>✓</u>	<u>3254.2</u>		<u>3255.1</u>	12		
13	✓		<u>✓</u>		<u>262-30</u>	<u>10.7</u>	<u>-39.8</u>					13		
14												14		
15												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 KILLIK RIVER STATE/COUNTY AK. BOOK NO. \_\_\_\_\_ PAGE 4 OF \_\_\_\_\_  
 LINE/LOOP NO. 745 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 11 1 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				
			SLOPE 	HORIZ 										
1		19.								3254.2			1	
2			2060		80-00	7.1	- 342.7	2911.3					2	
3			✓		279-50	3.5	- 243.1						3	
4		20.	1600		279-40	6.8	+ 258.1			3169.4			4	
5		21.	1155		279-00	5.1	+ 173.4			3084.7			5	
6		22.	715		276-20	4.0	+ 74.4			2985.7			6	
7		23.	275		275-00	5.5	+ 18.4			2929.7			7	
8		→	0		-	5.4				2905.9			8	
9		24.	165		74-10	74.0	- 26.0			2885.3			9	
10		25.	605		94-00	7.5	- 49.6			2861.7			10	
11			910		90-30	8.1	- 16.0			2895.3	<del>2895.4</del>		11	TOP of
12			✓		269-40	70.7	- 16.0				2885.2		12	HILL.
13			1380		84-10	+4.5	- 135.0	2760.3					13	
14			✓		276-00	+8.4	- 135.1						14	
15		26.	1300		274-30	-6.5	+ 95.2			2855.5			15	SKIP / 11 SET.
16		27	800		-	2.6				2757.5			16	
17		28.	440		-	0.7				2751.6			17	

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

GSI AREA KILLIK RIVER STATE/COUNTY AK BOOK NO. \_\_\_\_\_ PAGE 5 OF \_\_\_\_\_  
 LINE/LOOP NO. 745 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 17 DY 1 MO 90 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1126

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									2760.3			E	1	
2		29.	0			-	5.4					-	2	
3		30.	440			89 - 00	7.6	+ 0.1				W.	3	
4		31.	880			87 - 00	7.0	+ 2.4					4	
5		32.	1320			87 - 00	11.4	+ 11.6					5	
6		33.	1760			88 - 50	9.3	+ 26.54					6	
7			✓			271 - 20	14.6	+ 26.3					7	
8			1820			91 - 00	19.7	+ 32.7	2819.3	✓			8	
9			✓			269 - 10	13.2	+ 32.4					9	
10		34.	880			268 - 40	13.7	- 34.2		✓			10	
11		35.	440			269 - 50	13.9	- 15.2					11	E
12		36.	0			-	5.3						12	-
13		TP.	280			-	5.0						13	W
14		37.	440			-	7.2	- 7.2					14	
15			✓			270 - 20	9.6	- 7.0					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 4 OF \_\_\_\_\_  
 LINE/LOOP NO. 745 TYPE SURVEY \_\_\_\_\_ CLIENT RUSKY DATE 17 DY 1 MO 80 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1181

LINE	<input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ○	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	○	37								2812.2			1		
2	Δ		1320		89 - 05	5.2	- 17.8	18.2	2794.2				2		
3	CK		✓		271 - 10	7.7	- 18.1						3		
4		38	820		270 - 20	3.3	+ 1.8			2796.0			4		
5		39	440		-	2.8				2791.4			E 5		
6		40	0		-	3.2				2789.0			- 6		
7		41	440		90 - 50	7.7	- 16.1			2778.1			W 7		
8		42	880		90 - 50	7.4	- 22.2			2772.0			8		
9	○	43	1320		90 - 40	11.6	- 27.0	8		2767.4		2767	9		
10	CK		✓		269 - 10	7.5	- 26.7						10		
11	Δ		605		91 - 05	10.2	+ 20.7	7	2788.1				11		
12	CK		✓		269 - 20	13.6	+ 20.6						12		
13		44	165		269 - 05	14.4	- 17.3			2770.8			E 13		
14			0		-	3.2				2782.9			- 14		
15		45	275		-	10.2				2777.9			W 15		
16		46	715		-	6.2				2781.9			16		
17													17		

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

GSI AREA KILLIK RIVER STATE/COUNTY \_\_\_\_\_ BOOK NO. \_\_\_\_\_ PAGE 7 OF \_\_\_\_\_  
 LINE/LOOP NO. 745 TYPE SURVEY \_\_\_\_\_ CLIENT HDSKY DATE 17 DY 1 MO 80 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1126

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									2788.1			1		
2		47	1155.			-	7.3	- 7.3		2778.1		2	W.	
3			✓			270 - 10	72.5	- 7.1				3		
4			1320			89 - 20	78.9	- 6.5	✓	2772.4		4		
5			✓			270 - 50	72.6	- 6.6				5		
6		48	880			270 - 50	7.3	+ 4.5		2776.7		6		
7		49	440			-	3.2			2769.2		7	E.	
8		50	0			-	3.2			2767.2	✓	8	-	
9		51	440			92 - 00	3.0	- 12.3		2754.1		9	W.	
10		52	880			92 - 00	2.6	- 37.3		2735.1		10		
11		53	1320			92 - 00	10.1	- 56.1		2716.3		11		
12		54	1760			91 - 30	73.0	- 59.1	SP	2713.4		12	2712.9	
13			✓			248 - 20	7.7	- 59.9	SP			13		
14			1320			92 - 00	7.0	+ 53.0	✓	2766.4		14		
15			✓			248 - 20	14.5	+ 52.7				15		
16		55	880			267 - 00	7.8	- 55.8		2710.6		16		
17												17		

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

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# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA KILLIK RIVER STATE/COUNTY AK BOOK NO. \_\_\_\_\_ PAGE 8 OF \_\_\_\_\_  
 LINE/LOOP NO. 745 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 19 DY 1 MO 80 YR  
 SURVEYOR L. LITMAN INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ 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 DI		RIGHT TURNED HORIZONTAL ANGLE	
				SLOPE					HORIZ	INST				ROD
1									2766.4			1		
2		56	440		264-30	5.7	-	47.7		2718.7		E	2	
3		57	0		-	5.2				2761.2		-	3	
4		58	440		86-00	4.3	+	26.3		2792.7		W	4	Rocky.
5		59	220		84-30	7.8	+	82.2		2848.6			5	knobs.
6			1260		83-30	5.3	+	136.4		2902.9	2902.4		6	
7			✓		276-40	7.7	+	136.6					7	
8			770		72-00	78.0	+	34.9	2937.8			E	8	
9			✓		268-20	72.5	+	34.9					9	
10		60	715		268-20	72.0	-	32.8		2905.0			10	
11		61	275		-	71.4				2926.4			11	
12		BM. 79490	165		-	7.3	-	7.3		2930.5		E	12	
13			✓		271-10	70.7	-	7.3					13	
14									2930.0	2930.5			14	
15									+0.5		VERTICAL		15	
16											TIE.		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. 745 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 19 DY 1 MO 80 YR  
 SURVEYOR L L JMAN 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 DJ	RIGHT TURNED HORIZONTAL ANGLE
				SLOPE 	HORIZ 					INST	ROD			
1													1	
2		BM 79490								2930.0			2	
3													3	
4			165			+7.3		+7.3	2937.3				4	
5			✓		271-10	+10.7		+7.3					E. 5	
6			0			5.2				2932.1			- 6	
7		62	165			9.0				2928.3			W. 7	ROCK HILLS
8			475		92-00	71.5		-28.1		2909.3	<del>2908.8</del>		8	
9			✓		267-40	79.7		-28.0	✓				9	
10			185		86-40	+1.5		-9.2	2900.1				10	
11			✓		274-30	+3.3		-9.2					11	
12		55-63	55		274-30	5.0		-0.7		2899.4			E. 12	
13			0			5.2				2894.9			- 13	
14		64	385		97-00	7.2		-53.8		2846.3			W. 14	
15		65	825		97-00	73.2		-113.0		2787.2	2786.2		15	
16			✓		212-50	70.6		-112.7					16	
17													17	

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

GSI AREA KILLICK RIVER STATE/COUNTY AK BOOK NO. \_\_\_\_\_ PAGE 10 OF \_\_\_\_\_  
 LINE/LOOP NO. 745 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 19 BY 1 MO 8 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 DI		RIGHT TURNED HORIZONTAL ANGLE	LINE
				SLOPE 					HORIZ 	INST				
1		25							2787.2			1		
2			1760		81-30	+3.0	-254.3	2532.9			2529.9	2		
3			✓		278-40	+7.9	-254.3	2525.0				3		
4		66	1320		278-00	10.0	+171.9		2704.8			4		
5		67	880		276-40	2.7	+92.8		2631.7			5		
6		68	440		275-00	10.7	+27.5		2560.4			E 6		
7		69	0		-	5.4			2527.5			- 7		
8		70	440		-	73.6			2519.3			W. 8	ITERIAK. CREEK.	
9		71	880		-	10.6			2522.3			9		
10		72	1320		89-00	10.6	+12.4	✓	2545.3		2522.4	10		
11		73	1760		88-00	11.0	+50.4		2583.3			11		
12		74	2200		87-30	5.9	+90.0		2622.9			12		
13		75	2640		87-00	5.6	+132.4		2665.5		2664	13		
14			✓		273-10	72.7	+132.9					14		
15												15		
16												16		
17												17		

WORKED BY C.J.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 11 OF \_\_\_\_\_  
 LINE/LOOP NO. 745 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 19 BY 1 MO 80 YR  
 SURVEYOR L. LITMAN 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 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	$\odot$	75.								2665.5			1		
2	$\Delta$		1485			95-10	71.8	+145.0	2910.3				2		
3	CK		✓			27-40	7.2	+144.6					3		
4		76.	1045			264-40	14.6	-111.3		2699.0			4		
5		77.	605			263-30	8.2	-76.2		2734.1			5		
6		78.	165			263-30	3.5	-22.1		2788.2			E 6		
7		—	—			—	5.2			2905.1			— 7		
8		79.	275			86-30	2.4	+10.4		2820.7			W. 8		
9		80.	715			86-30	13.7	+29.9		2840.2			9		
10	$\odot$		880			97-00	10.6	+35.4		2845.7		2843.7	10		
11	CK		✓			273-10	13.1	+35.4					11		
12	$\Delta$		1980			93-50	8.8	+140.7	2986.6				12		
13	CK		✓			266-20	11.4	+140.8					13		
14		81.	1705			266-00	13.0	-131.6		2855.0			14		
15		82.	1265			265-00	2.0	-111.8		2874.8			15		
16		83.	825			265-00	9.4	-81.0		2905.6			16		
17		84	385			265-00	13.0	-46.4		2940.2			E 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 KILLIK RIVER STATE/COUNTY AK BOOK NO. \_\_\_\_\_ PAGE 12 OF \_\_\_\_\_  
 LINE/LOOP NO. 745 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 17 BY 1 MO 80 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1186

LINE	  	STATION	VERTICAL						ELEVATION		LR 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															
2															
3		85.	55.												
4		BM. 79361	255												
5			✓												
6															
7															
8															
9															
10			240												
11			✓												
12		96.													
13		87.	440												
14			715												
15			✓												
16															
17															

WORKED BY L.J.L. 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 13 OF \_\_\_\_\_  
 LINE/LOOP NO. 745 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 20 DY 1 MO 80 YR  
 SURVEYOR L. C. MAN 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	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	⊙								2911.1			1		
2	Δ		1480		85-20	76.0	-114.0	2797.0				2		
3	CK		✓		275-05	74.3	-114.2					3		
4		88	1320		274-10	73.1	+92.6	2889.6				4		
5		89	880		274-00	78.2	+53.0	2850.0				5		
6		90	440		274-00	79.5	+21.1	2818.1			E	6		
7		91	0		-	5.2		2791.9			-	7		
8		92	440		94-00	75.0	-35.6	2761.4			W	8		
9		93	880		94-00	72.0	-73.2	2723.8				9		
10	⊙	94	1320		94-16	73.5	-109.2	2687.9			2687.5	10		
11	CK		✓		265-50	73.3	-109.0					11		
12	Δ		1040		89-00	78.9	79.2	-8.9	2678.9			12		
13	CK		✓		270-50	75.8	75.6	+6.0	-7.1			13		
14		95	605		267-00	78.3	-18.9	2660.0				14		
15		96	165		264-00	73.0	-30.2	2648.7				15		
16		96	70		-	10.8		2668.1			E	16	offset	
17		-	0		-	5.2		2673.7			-	17		

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

# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA KILLICK RIVER STATE/COUNTY AK BOOK NO. \_\_\_\_\_ PAGE 14 OF \_\_\_\_\_  
 LINE/LOOP NO. 745 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 20 DY 1 MO 8 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESO/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	ROD				
1									2678.9				1		
2	⊙		110		29-00	3.0	- 1.1		2677.8		2672.2	W	2		
3	Δ		✓		272-20	3.5	- 1.0						3		
4	Δ		146		"	40.2	+ 8.2		2686.0				4		
5	Δ		✓		269-00	45.6	+ 8.1						5		
6		4.745/764	0		-	5.2	- 5.2		2680.8				6	IRON-PIPE.	
7													7		
8		SP. 724	90		89-00	7.4	+ 0.2		2686.2			S	8	LN. 764.	
9									2686.9		PAGE 26	CV	9	764.	
10		SP. 723	350		92-00	12.6	- 24.8		2661.2			N	10	LN 764.	
11									2661.9		PAGE 26	CV	11	64.	
12		97.	20		-	3.9			2682.1			W	12	LN - 745.	
13		99.	460		-	3.8			2676.2				13		
14	⊙	99.	900		-	3.2	- 3.2		2682.9		2682.9	1	14		
15	Δ		✓		270-20	8.2	- 3.0						15		
16													16		
17													17		

WORKED BY L.D.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 15 OF \_\_\_\_\_  
 LINE/LOOP NO. 745 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 20 DY 1 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				
				SLOPE 	HORIZ 										
1		99									2682.9			1	
2			880		91-20	79.5	+ 30.0	2712.8						2	
3			✓		269-05	+14.5	+ 29.9 ✓							3	
4		100	440		269-00	79.3	- 17.0				2695.8		E	4	
5		101	0		-	5.4					2707.4		-	5	
6		102	440		-	3.0					2709.8		W	6	
7		103	880		-	4.5	- 4.5				2702.4		2707.4	7	
8			✓		270-30	72.0	- 4.3							8	
9			1760		88-50	71.0	- 25.8	2682.4						9	
10			✓		271-00	+4.6	- 26.1							10	
11		104	1320		271-00	4.0	+ 19.0				2701.4			11	
12		105	880		271-00	6.8	+ 8.6				2691.0			12	
13		106	440		270-40	3.5	+ 1.6				2684.0		E	13	
14		107	0		-	3.2					2677.2		-	14	
15		108	440		91-40	7.0	- 19.8				2662.6		W	15	
16		109	880		91-40	6.4	- 32.0				2650.4			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 16 OF \_\_\_\_\_  
 LINE/LOOP NO. 745 TYPE SURVEY \_\_\_\_\_ CLIENT MUSKY DATE 20 DY 1 MO 80 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1196

LINE	<input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ⊙	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	ELEVATION						
			SLOPE 	HORIZ 					INST	ROD					
1														1	
2	⊙	110	1320		91-40	74.1	- 52.5		2630.1		2628.9	W		2	
3	Δ		✓		268-20	73.8	- 52.2							3	
4	Δ		2200		88-40	72.7	- 44.5	2585.4						4	
5	Δ		✓		271-30	72.7	- 44.9							5	
6		111	1760		271-00	72.2	+ 23.5		2608.9					6	
7		112	1320		270-30	72.1	- 0.6		2584.8					7	
8		113	880		268-00	73.6	- 34.3		2551.1					8	Rocky Valley Creek
9														9	
10		114	440		266-00	73.0	- 39.6		2545.8			E		10	
11		115			-	73.6			2579.8					11	
12		116	440		89-00	72.0	+ 1.7		2587.1			W		12	
13	⊙	117	880		89-20	71.0	- 0.8		2584.7		2583.3			13	
14	Δ		✓		270-30	72.3	- 0.6							14	
15														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 KILUIK RIVER STATE/COUNTY AK BOOK NO. \_\_\_\_\_ PAGE 17 OF \_\_\_\_\_  
 LINE/LOOP NO. 745 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 20 DY 1 MO 80 YR  
 SURVEYOR C. LYMAN INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1191

LINE	<input type="checkbox"/> Δ <input type="checkbox"/> SS <input type="checkbox"/> ○	STATION	VERTICAL						ELEVATION		L/R OR D/I	HORIZONTAL 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	○	117							2574.7			1		
2	Δ		980		98-30	7.07	-12.3	2572.3				2		
3	CK		✓		271-40	7.81	-12.5					3		
4		118	440		271-40	7.8	+8.0		2580.3			E 4		
5		119	0		-	5.2			2567.1			- 5		
6	○	BM 80098	172		-	7.8	-7.8		2562.5			W 6		
7	CK		✓		269-00	6.8	-7.8					7		
8									2560.9			8		
9									+1.6		VERTICAL	9		
10											TIE	10		
11												11		
12												12		
13												13		
14												14		
15												15		
16												16		
17												17		

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

# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA KILGILK RIVER STATE/COUNTY AK BOOK NO. \_\_\_\_\_ PAGE 18 OF \_\_\_\_\_  
 LINE/LOOP NO. 745 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 24 BY 1 MO 00 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		BM. 20092											1	
2													2	PAGES 18-39 WORK COMPLETE WITH NO TIES OR ADJUSTMENTS UNTIL FINAL TIE
3												3		
4			710		88-00	79.6	- 15.2	2545.6				4		
5			✓		271-40	+5.3	- 15.3	✓				5		
6		120	440		271-40	4.4	+ 8.4		2554.0			F. 6		
7		121	0		-	5.2			2540.9			- 7		
8		122.1	410		71-30	7.4	- 18.9		2526.7			W. 8		
9		123	800		71-30	7.3	- 32.3		2512.3			9		
10		124	1320		71-30	71.1	- 45.6		2500.0			10		
11		125	1760		71-30	7.7	- 56.0	7	2489.9		2490.2	11		
12			✓		268-40	14.6	- 53.6					12		
13			1760		88-30	+7.0	- 39.1		2450.7			13		
14			✓		271-40	71.9	- 37.3					14		
15		126	1320		271-40	7.2	+ 29.2		2479.7			15		
16		127	800		271-40	7.7	+ 15.9		2466.6			16		
17		128	440		271-40	6.5	+ 6.3		2457.0			E. 17		

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

## HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA KILLIK RIVER STATE/COUNTY AK BOOK NO. \_\_\_\_\_ PAGE 19 OF \_\_\_\_\_  
 LINE/LOOP NO. 745 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 24 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	
1									2450.7			E	1	
2		129	0		-	5.2				2445.5		-	2	
3		130	440		91-20	6.8	-17.0			2433.7		W	3	
4		131	880		91-20	7.3	-27.8			2422.9			4	
5		132	1320		91-20	6.0	-36.7			2414.0			5	
6		133	1760		91-10	7.4	-48.2 <sup>41</sup>			2402.6		2403.2	6	
7			✓		268-40	7.0	-47.9 <sup>41</sup>						7	
8			1760		88-05	7.1	-52.3 <sup>41</sup>		2358.2				8	
9			✓		272-10	7.7	-52.6 <sup>41</sup>						9	
10		134	1720		272-20	7.7	+40.0 <sup>2</sup>			2390.0			10	
11		±.745/762	✓		88-05	6.4	+39.6 <sup>2</sup>						11	IRON-PIPE
12													12	
13													13	
14		135	880		88-05	4.0	+25.9 <sup>41</sup>			2376.1			14	
15		136	440		88-05	4.7	+10.6			2360.8		E	15	
16		137	0		-	5.2				2345.0		-	16	
17		138	440		92-05	7.5	-22.8			2327.4		W	17	

TI-23471B

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 20 OF \_\_\_\_\_  
 LINE/LOOP NO. 745 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 24 DY 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							HORIZONTAL		REMARKS	
			DISTANCE	<input type="checkbox"/> FEET <input type="checkbox"/> METERS	VERTICAL ANGLE OBS.	ROD RDG OR HI	ELEV DIFF	FINAL ELEVATION DIFF	ELEVATION		LR OR DI		RIGHT TURNED HORIZONTAL ANGLE
				SLOPE					HORIZ	INST			
1												1	
2	$\odot$	139	000		92-10	74.0	-47.2		2303.0		2303.0	2	
3	$\checkmark$				267-30	8.8	-47.1					3	
4	$\Delta$	1320			87-30	75.5	-52.0	2257.9				4	
5	$\checkmark$				272-40	79.3	-52.0					5	
6		140	000		260-30	6.1	-29.1		2221.9			6	CRACK
7		141	440		267-40	12.8	-30.7		2220.3			7	E
8		142	0		-	5.2			2245.8			8	-
9		143	440		00-00	3.4	+9.9		2260.9			9	W
10		144	000		00-30	7.0	+16.0		2267.0			10	
11		145	1320		00-30	5.0	+29.5		2280.5			11	
12	$\odot$	146	1760		00-10	10.3	+46.0		2297.7		2297.9	12	
13	$\checkmark$				271-40	5.0	+46.2					13	
14												14	
15												15	
16												16	
17												17	

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



# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA KILLIK RIVER STATE/COUNTY AK. BOOK NO. \_\_\_\_\_ PAGE 21 OF \_\_\_\_\_  
 LINE/LOOP NO. 745 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 24 DY 1 MO 80 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1186

LINE	SYMBOL	STATION	VERTICAL						ELEVATION		L/R OR DI	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	○	146							2292.2		20	1			
2	△		2640		93-50	40.5	+186.6	2483.5				2			
3	⊗		✓		266-15	40.0	+186.3					3			
4		147	2200		265-50	9.0	-168.4		2315.1			4			
5		148	1760		265-20	8.0	-150.7		2332.8			5			
6		149	1320		264-30	7.4	-133.3		2350.2			6			
7		150	880		264-30	7.5	-105.0		2378.5			7	6.0 300 ST		
8		151	440		264-30	5.0	-47.0		2436.5		E.	8			
9		152	0		-	5.2			2478.3		-	9			
10	⊗	153	440		27-30	5.9	+13.3		2496.8		2498 W.	10			
11	⊗		✓		273-00	7.6	+13.4					11			
12	△		165		-	8.6	+8.6	2505.4				12			
13	⊗		✓		271-00	11.5	+8.6					13	E		
14			0		-	5.2			2500.2		-	14			
15		154	275		-	8.0			2498.6		2499 A W	15			
16	⊗	BM-79362	502		-	7.6	-7.6		2497.8		2497.8	16			
17	⊗		302		270-20	7.4	-7.6	BAR	2503.9		2500.0	17	REIP. ELEV. PAGE 22		

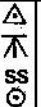









WORKED BY L.J.L. CHECKED BY 1ST \_\_\_\_\_ 2ND \_\_\_\_\_  
 SYMBOLS    △ = BACKSIGHT    ⊗ = INSTRUMENT SET-UP    ⊗ = SIDESHOT    ⊙ = FORESIGHT

VALUE -6.15 -2.2

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HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA KILLIK RIVER STATE/COUNTY AK BOOK NO. \_\_\_\_\_ PAGE 22 OF \_\_\_\_\_  
 LINE/LOOP NO. 745 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		VERTICAL ANGLE OBS.	ROD RDG OR HI	ELEV DIFF	FINAL ELEVATION DIFF	INST	ROD				
			SLOPE 	HORIZ 										
1		BM. 20078								2560.9			1	
2													2	
3						5.2							3	
4													4	
5													5	
6		BM. 79342	15219.07		90-15-00	6.0		60.9		2500.0			6	W
7		OK	✓		269-45-40	✓							7	
8													8	
9				MEAN	90-14-40								9	
10													10	
11													11	
12													12	
13													13	
14													14	
15													15	
16													16	
17													17	

TI-29471B

WORKED BY \_\_\_\_\_ CHECKED BY 1ST \_\_\_\_\_ 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. 745 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 27 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			RIGHT TURNED HORIZONTAL ANGLE	LINE
				SLOPE					HORIZ	INST			
1		BM 79362							2503.9	2503.7	1		
2											2		
3											3		
4			850		86-40	+9.6	-39.7	2464.1		2458.1	4		
5			✓		273-10	+7.0	-39.9				5		
6		155.	440		273-05	5.4	+17.4		2481.5		E	6	
7		156	0		-	5.3			2458.7		-	7	
8		157.	440		93-05	5.7	-28.7		2435.4		W	8	
9		158.	880		93-05	6.0	-52.0		2412.1			9	
10		159.	1320		93-05	5.2	-74.2		2389.7			10	
11		160.	1760		93-05	6.3	-98.3		2365.8			11	
12		161.	2205		93-05	8.3	-120.3		2343.8			12	
13		162	2640		92-50	8.8	-139.1		2325.3	2319.2	13	320.7	
14			✓		267-17-40	14.0	-138.5				14		
15											15		
16											16		
17											17		

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

## HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA \_\_\_\_\_ STATE/COUNTY \_\_\_\_\_ BOOK NO. \_\_\_\_\_ PAGE 24 OF \_\_\_\_\_  
 LINE/LOOP NO. 745 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 27 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	HORIZ										
1		112.							2325.3			1			
2			2200		89-28-38	+14.0	-6.1	2319.0		2312.9		2			
3	CK		✓		270-20-00	+2.3	-6.5					3			
4		163.	1760		269-30	4.1	-19.5		2299.5			4			
5		144.	1320		268-30	71.7	-46.2		2272.8			5			
6		165.	880		268-05	73.3	-44.0		2275.0			6			
7		166.	440		268-05	7.5	-24.8		2294.2		E	7			
8		167.	0		-	5.3			2313.7		-	8			
9		168.	440		00-00	74.1	+1.2		2320.2		W	9			
10		169.	000		00-00	72.6	+17.1		2336.1			10			
11		170.	1720		00-00	7.5	+41.5		2360.5			11			
12		171.	1760		00-00	7.9	+59.5		2378.5			12			
13			1920		07-50	7.3	+65.2		2384.5	2378.5		13	2380.3 B		
14	CK		✓		272-20	72.4	+15.7					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 25 OF \_\_\_\_\_  
 LINE/LOOP NO. 745 TYPE SURVEY \_\_\_\_\_ CLIENT AKS&Y DATE 27 DY 1 MO 80 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1186

LINE	  	STATION	VERTICAL						ELEVATION		LR 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 										
1									2384.5			1		
2			275		-	+14.1	+14.1	2398.6			2392.5	2		
3			✓		268-30	+6.8	+14.0					3	E	
4		172	0		-	3.3			2393.3			4	-	
5		BM. 79363	435		89-30	2.8	+1.0	✓	2399.6			5	W	
6			✓		271-05	6.5	+1.1				2393.6	6	2395.4 C	
7									2397.0			7		
8									+0.2		VERTICAL	8	TIE..	
9												9		
10												10		
11			885		88-00	10.3	-20.6	2398.4				11		
12			✓		271-40	5.0	-20.7				2372.9	12		
13		173	880		88-00	10.0	+20.7		2399.1			13		
14		174	440		272-00	4.4	+10.9		2389.3			14	E	
15		175	0		-	5.3			2373.1			15	-	
16		176	440		-	74.6			2363.8			16	W	
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 26 OF \_\_\_\_\_  
 LINE/LOOP NO. 745 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 27 09 1 MO 80 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1184

LINE	  	STATION	VERTICAL					ELEVATION		UP OR DN	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									2378.4			1		
2		177	880		-	7.0			2369.4		W	2		
3		178	1320		-	7.8			2370.6			3		
4		179	1760		-	7.0			2371.4			4		
5		180	2200		-	6.2			2372.2			5		
8		181	2640		-	7.7	- 7.7		2371.1		2365.7		2368.0	
7			✓		270 - 10	74.6	- 6.9					7		
8			1760		89 - 00	74.8	- 15.9	2355.0			2349.5	8		
9			✓		270 - 50	79.3	- 16.3					9		
10		182	1320		270 - 50	5.5	+ 13.7		2369.7			10		
11		183	880		270 - 50	7.1	+ 5.7		2360.7			11		
12		184	440		270 - 50	11.1	- 4.7		2350.3		E	12		
13		185	0		-	5.2			2349.8		-	13		
14		186	440		-	6.9			2354.1		W	14		
15		187	880		89 - 20	6.9	+ 3.3		2358.3			15		
16		188	1320		89 - 20	5.2	+ 10.2		2365.2			16		
17												17		

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

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

# HORIZONTAL AND VERTICAL SURVEY NOTES

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GSI AREA \_\_\_\_\_ STATE/COUNTY AK BOOK NO. \_\_\_\_\_ PAGE 27 OF \_\_\_\_\_  
 LINE/LOOP NO. 745 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 27 DY 1 MO 80 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1186

LINE	  	STATION	VERTICAL						ELEVATION		LR 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									2355.0			1			
2		189	1760		8.7	+ 11.8			2366.8			2			
3		190	<del>2200</del>		9.9	+ 9.3			2364.6		2359.2	3	2361.9		
4			✓		14.0	+ 9.9						4			
5			700		4.3	- 7.9	✓		2356.4		2351.3	5			
6			✓		4.3	- 8.0						6			
7		191	260		4.0	+ 0.5			2357.2			7	E		
8		B.M. 80099	0		5.2	- 5.2			2351.5		2346.1	8			
9									2345.9		SKIP BACK TIE				
10									+ 5.6		VERTICAL	10	TIE		
11												11			
12		192	180		9.0				2347.7			12	✓ Rocks.		
13		193	620		10.1	- 20.9			2335.8		2330.4	13	2333.1		
14			✓		4.7	- 20.9						14			
15												15			
16												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. \_\_\_\_\_ PAGE 28 OF \_\_\_\_\_  
 LINE/LOOP NO. 745 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 27 DY 1 MO 80 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1186












LINE	  	STATION	VERTICAL						ELEVATION		LR OR DR	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		193.							2335.8			1		
2			1320		87-30	+8.1	- 49.4	2286.2			2280.7 -	2		
3			✓		272-20	+3.7	- 49.8					3		
4		194.	880		272-20	11.1	+ 24.7		2310.9			4		
5		195.	440		272-00	5.0	+ 10.3		2296.5			E 5		
6		196.	0		-	5.2			2281.0			- 6		
7		197.	440		91-00	7.8	- 17.5		2268.7			W. 7		
8		198.	880		71-00	70.0	- 25.4		2260.8			8		
9		199.	1320		91-00	9.3	- 32.3		2253.9			9		
10		200.	1760		91-00	7.7	- 38.4		2247.8			10		
11		201.	2200		91-00	5.4	- 43.8		2242.4			11		
12		202	2640		90-50	70.3	- 48.7		2237.8			12		
13			✓		269-15-40	14.0	- 48.0				2232.4 -	13	22356	
14												14		
15												15		
16												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. \_\_\_\_\_ PAGE 29 OF \_\_\_\_\_  
 LINE/LOOP NO. 745 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 27 DY 1 MO 8 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			UR OR DI	RIGHT TURNED HORIZONTAL ANGLE	LINE
				SLOPE 					HORIZ 	INST				
1		202							2237.8			1		
2			2200		90-20	+10.1	+22.9	2260.4		2254.9		2		
3			✓		29-30	+3.1	+22.3					3		
4		203	1760		269-30	11.1	-26.5		2233.9			4		
5		204	1320		219-00	3.2	-28.2		2232.2			5		
6		205	800		269-00	7.5	-22.9		2237.5			6		
7		206	440		-	14.7			2245.7		E	7		
8		207	0		-	2.0			2254.4		-	8		
9		208	440		89-00	2.1	+1.6		2262.0		W	9		
10		209	800		89-00	3.7	+9.7		2270.1			10		
11		210	1320		89-00	3.7	+19.3		2279.7			11		
12		211	1760		89-00	7.5	+29.2		2289.6			12		
13		212	2200		88-40	8.7	+42.5		2303.1			13		
14			✓		271-30	14.6	+43.0 <sup>42+</sup>			2297.8		2301.3	14	
15												15		
16												16		
17												17		

TI-23471B

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SYMBOLS

 = BACKSIGHT

 = INSTRUMENT SET-UP

 = SIDESHOT

 = FORESIGHT

# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA \_\_\_\_\_ STATE/COUNTY AK. BOOK NO. \_\_\_\_\_ PAGE 30 OF \_\_\_\_\_  
 LINE/LOOP NO. 745 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 27 BY 1 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		212.								2303.1			1	
2			1320		92-30	+11.4	+68.9	2371.8			2366.5		2	
3	CK		✓		267-20	+4.2	+61.5						3	
4		213.	880		267-20	8.5	-49.4			2322.4			4	
5		<del>214</del>	440		267-20	8.7	-27.1			2344.7		E	5	
6		215.	0		-	5.2				2366.6		-	6	
7		216.	440		86-30	6.7	+20.1			2391.9		W.	7	
8		<del>217</del>	880		86-30	7.4	+46.2			2418.1			8	
9	CK		✓		273-25-10	6.0	+46.4				2413.0	-	9	2416.6
10													10	
11													11	
12													12	
13													13	
14													14	
15													15	
16													16	
17													17	

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








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

HOWARD PASS.

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA KILLIK RIVER STATE/COUNTY AK BOOK NO. \_\_\_\_\_ PAGE 31 OF \_\_\_\_\_  
 LINE/LOOP NO. 745 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 25 DY 1 MO 20 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 DR		RIGHT TURNED HORIZONTAL ANGLE	LINE
				SLOPE 					HORIZ 	INST				
1		217							2418.1			1		
2												2		
3			165		70.3	+10.3		2428.4			2423.3	3		
4			✓		270-30	+11.8	+10.4				E.	4		
5			0		-	5.3			2423.1		-	5	TP	
6		RM. 79364	1285		87.00	2.8	+10.4		2488.7		2483.7 S	6		
7			✓		273-10	10.6	+10.3 ✓					7		
8									2488.4			8		
9									+0.3		VERTICAL	9	TIE.	
10		218	275		-	5.0	-8.0		2420.4		W	10		
11			✓		270-30	10.5	-8.1				2415.2	11	2418.9	
12			440		86-30	+6.3	-20.5	2399.9				12		
13			✓		274-00	+10.1	-20.5				2394.7 E	13		
14		219	0		-	5.4			2394.5		-	14		
15		220	440		94-00	9.6	-40.2		2359.7		W	15		
16		221	880		94-00	10.2	-71.4		2328.5			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 32 OF \_\_\_\_\_  
 LINE/LOOP NO. 745 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 2<sup>nd</sup> DY 1 MO 8<sup>th</sup> 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	
														
1									2377.9				1	
2		222	1320		93-30	11.3	- 91.7		2308.2				2	
3		223	1760		93-10	11.0	- 108.1		2291.8				3	
4		224	2205		93-05	2.4	- 121.4		2278.6		2273.3 -		4	2277.3
5			✓		267-10	12.6	- 121.2						5	
6			800		85-05	12.0	- 64.4	2214.1					6	
7			✓		275-10	14.4	- 64.5				2208.5		7	
8		225	440		275-10	7.0	+ 32.5		2246.6				8	
9		226	0		-	5.3			2208.8				9	
10		227	440		17-30	10.6	- 67.5		2146.6				10	
11		228	800		98-20	9.0	- 135.2		2078.9				11	
12		229	1320		98-30	12.8	- 205.8		2008.3				12	
13		230	1760		98-30	10.7	- 266.0		1948.1				13	
14		231	2205		98-05	10.9	- 314.1		1900.2		18918 -		14	1896.2
15			✓		222-05-44	14.0	- 313.7						15	
16							316.7	16W					16	
17													17	

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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 33 OF \_\_\_\_\_  
 LINE/LOOP NO. 745 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 2 DY 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						HORIZONTAL			REMARKS	
			DISTANCE		VERTICAL ANGLE OBS.	ROD RDG OR HI	ELEV DIFF	ELEVATION		LR OR DR	RIGHT TURNED HORIZONTAL ANGLE		LINE
			SLOPE	<input type="checkbox"/> FEET <input type="checkbox"/> METERS HORIZ				INST	ROD				
1	$\odot$	231							1700.2			1	
2	$\Delta$		2200		96-30	7.6	-126.5	1773.2			1764.8	2	
3	CK				273-40	+13.4	-126.8					3	
4		232	1760		273-00	4.0	+88.0		1861.6			4	
5		233	1320		273-00	10.6	+58.4		1832.0			5	
6		234	0000		273-00	10.6	+35.8		1809.4			6	
7		235	440		272-00	7.7	+13.6		1777.2			7	E
8		236	0		-	5.4			1768.2			8	-
9		237	440		93-10	6.0	-30.3		1743.3			9	W
10		238	0000		93-10	8.6	-57.1		1716.5			10	
11		239	1320		93-10	13.1	-85.9		1687.7			11	
12		240	1760		93-10	12.2	-109.3		1664.3			12	
13	$\odot$	241	2200		93-10	7.5	-128.8		1644.9			13	1630.1 - 1640.8
14	CK				247-00	13.5	-128.5					14	
15												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 34 OF \_\_\_\_\_  
 LINE/LOOP NO. 745 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 28 BY 1 MO 80 YR  
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. \_\_\_\_\_ CREW NO. 1124

LINE		STATION	VERTICAL							ELEVATION		L/R OR DIH	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		241.								1144.9			1		
2			2200		89-05	+ 7.6	- 30.8	1613.9		1605.0			2		
3			✓		271-10	+ 13.6	- 31.2						3		
4		242.	1760		271-05	+ 11.3	+ 17.4			1633.3			4		
5		243.	1320		-	4.4				1609.5			5		
6		244.	880		-	11.7				1602.2			6	NIGU RIVER	
7		245.	440		-	4.9				1609.0		E	7		
8		246.	0		-	5.3				1608.6		-	8		
9		247	440		-	6.7				1607.2		✓	9		
10		248	880		-	3.0				1610.9			10		
11		249.	1320		-	2.4				1611.5			11		
12		250.	1760		89-20	7.3	+ 11.2			1625.1			12		
13		251.	2200		87-30	3.8	+ 92.1			1706.0			13		
14		252	2640		87-00	8.3	+ 129.7	1743.9		1735.3			14	1740.4	
15			✓		273-08-13	14.0	+ 130.3						15		
16													16		
17													17		

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# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA HOWARD PASS. STATE/COUNTY AK. BOOK NO. \_\_\_\_\_ PAGE 35 OF \_\_\_\_\_  
 LINE/LOOP NO. 745 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 28 BY 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		L/R OR DIR		RIGHT TURNED HORIZONTAL ANGLE	LINE
				SLOPE 					HORIZ 	INST				
1		252							1743.9			1		
2			440		94-00	+7.2	+39.8	1783.7			1775.1	2		
3			✓		266-40	+14.2	+39.7					3	E.	
4		253	0		-	5.7			1778.3			4	-	
5		254	440		87-00	7.8	+11.2		1799.9			5	U.	
6		255	880		87-00	7.8	+39.2		1823.0		1814.5	6	1819.7	
7			✓		273-10	9.2	+39.3	✓				7		
8			1320		91-00	710.1	+33.1	1856.0			1847.4	8		
9			✓		268-50	+6.0	+32.9					9		
10		256	880		269-00	7.0	-22.4		1833.6			10		
11		257	440		-	75.0			1841.0			11	E	
12		258	0		-	5.3			1850.7			12	-	
13		259	440		89-00	4.0	+11.3		1867.3			13	W.	
14		260	880		87-30	6.4	+31.9		1887.9			14		
15		261	1320		87-30	2.0	+55.5		1911.5			15		
16												16		
17												17		

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# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA \_\_\_\_\_ STATE/COUNTY AK BOOK NO. \_\_\_\_\_ PAGE 36 OF \_\_\_\_\_  
 LINE/LOOP NO. 745 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 28 BY 1 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		VERTICAL ANGLE OBS.	ROD RDG OR HI	ELEV DIFF	ELEVATION		LR OR DI	RIGHT TURNED HORIZONTAL ANGLE		LINE
			SLOPE	<input type="checkbox"/> FEET <input type="checkbox"/> METERS HORIZ				INST	ROD				
1												1	
2		262	1760		07-20	0.8	+81.0		1856.0			2	
3	$\odot$	263	2208		07-10	7.6	+99.0		1955.2		1946.9	3	1952.5
4	$\nabla$				272-57-25	14.0	+99.3					4	
5	$\Delta$		1320		91-40	+10.7	+49.3	2004.3			1996.0	5	
6	$\nabla$		<del>880</del> ✓		268-30	+14.4	+48.9					6	
7		264	880		268-05	4.3	-35.0				1969.3	7	
8		265	470		268-05	7.3	-22.6				1981.7	8	
9		266	0		-	3.5					1998.8	9	
10	$\odot$	267	440		07-00	6.0	+17.0		2021.3			10	
11	$\nabla$		✓		273-30	7.8	+17.0				2013.0	11	2010.7
12												12	
13												13	
14												14	
15												15	
16												16	
17												17	

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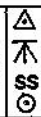











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SYMBOLS  $\Delta$  = BACKSIGHT  $\nabla$  = INSTRUMENT SET-UP SS = SIDESHOT  $\odot$  = FORESIGHT



# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA HOWARD PASS STATE/COUNTY AK BOOK NO. \_\_\_\_\_ PAGE 37 OF \_\_\_\_\_  
 LINE/LOOP NO. 745 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 29 DY 1 MO 20 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 DI		RIGHT TURNED HORIZONTAL ANGLE	LINE
				SLOPE 					HORIZ 	INST				
1		267							20 21.3			1		
2												2		
3			1320		93-30	+12.2	+ 92.6	2113.8			2105.7		3	
4					266-20	+0.2	+ 92.4						4	
5		268	000		266-20	10.2	- 66.4				2047.4		5	
6		269	440		266-20	7.2	- 37.3				2076.5		E 6	
7		270	0		-	5.3					2108.5		7	
8		271	440		86-00	5.0	+ 25.6				2139.4		W 8	
9			605		86-00	5.3	+ 36.8				2150.6		9	
10					274-20	8.7	+ 36.9					2142.6	10	2148.4
11			1155		91-00	10.0	+ 29.0	2179.5					11	
12					269-10	+12.0	+ 28.8					2171.5	12	
13		272	000		269-00	7.4	- 22.8				2156.7		13	
14		273	440		-	15.0					2164.5		14	2106.0
15		TP 15	325		-	11.3	- 11.3				2168.2		E 15	IRON PIPE
16													16	
17		274	0		-	5.2	- 5.2				2174.3		- 17	LAST SP WEST

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

# HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA Howard Pass. STATE/COUNTY AK. BOOK NO. \_\_\_\_\_ PAGE 38 OF \_\_\_\_\_  
 LINE/LOOP NO. 745 TYPE SURVEY \_\_\_\_\_ CLIENT Husky DATE 29 DY 1 MO 90 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 DI		RIGHT TURNED HORIZONTAL ANGLE	LINE
				SLOPE					HORIZ	INST				
1												1		
2		TS. # 12	124.5		98-50	-5.0	+20.8		2200.3			W	2	
3													3	
4			770		-	+2.1	+6.1	2206.4				E	4	
5		TS. # 19	0		-	-5.2			2201.2				5	
6												W	6	
7		TS. # 24	550		92-43-50	-4.0	-30.2		2176.2			W	7	
8													8	
9													9	
10		TS. # 41	2420		92-49	-4.0	-122.8		2083.6			W	10	
11													11	
12		TS. # 46	2970		91-57-10	-6.0	-107.1		2099.3			W	12	
13													13	
14													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 HOWARD. PASS. STATE/COUNTY AK. BOOK NO. \_\_\_\_\_ PAGE 39 OF 39  
 LINE/LOOP NO. 745 TYPE SURVEY \_\_\_\_\_ CLIENT HUSKY DATE 29 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		BM 79365.								2193.6		2193.6	1	BARR. 3M.	
2													2		
3			1120		90-20	+10.2			2210.2			2197.5	3		
4			✓		269-50	+13.3						NW	4		
5			0										5		
6			1000			4.6				2205.7		2209.1 SE.	6		
7			✓		270-20	10.1							7		
8			960		88-40	+8.7			2192.8			2199.7	8		
9			✓		271-00	+3.0						NW	9		
10			0										10		
11		TP. 18.	1330		90-30	14.3				2166.2		2185.9 SE.	11	IRON - PIPE.	
12			✓		269-20	10.2							12		
13										2168.2		RE: PAGE 37	13		
14										-2.0		VERTICAL.	14	TIE.	
15													15		
16													16		
17													17		

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