

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA MISHÉGUK. MTN. STATE/COUNTY AK. BOOK NO. _____ PAGE 1 OF _____
 LINE/LOOP NO. 737 TYPE SURVEY _____ CLIENT HUSKY DATE 24 DY 2 MO 80 YR
 SURVEYOR L. L. MAN. INSTRUMENT DESC/SERIAL NO. _____ CREW NO. 1186

LINE	 	STATION	VERTICAL						ELEVATION		L/R OR DJ	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													1	
2		87.80127							1190.8				2	
3		SP 122											3	
4													4	
5													5	
6			1320		87-20	70.3	- 4.6	93	1186.0				6	
7			✓		270-50	74.2	- 5.0						7	
8		121	200		270-50	70.5	+ 2.3		1189.3				8	
9		120	440		271-00	7.1	+ 0.6		1186.6				9	E.
10		119	0		-	5.3			1180.7				10	
11		118	440		-	70.2			1175.8				11	W
12		117	200		90-20	72.2	- 17.3		1168.7				12	
13		116	1320		90-40	71.6	- 27.0		1159.2				13	
14			✓		269-10	7.4	- 20.6						14	
15													15	
16													16	
17													17	

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 MISHAEGOK. MTN. STATE/COUNTY AK. BOOK NO. _____ PAGE 2 OF _____
 LINE/LOOP NO. 737 TYPE SURVEY _____ CLIENT HUSKY DATE 24 DY 2 MO 80 YR
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. _____ CREW NO. 1186

LINE	 	STATION	VERTICAL						ELEVATION		LR 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	FEET <input type="checkbox"/> METERS <input type="checkbox"/>										
1									1159.2	✓		1		
2			3080		+11.8	+11.8	1170.2			✓		2		
3			✓	270-03-23	+14.0	+11.0						3		
4		115.	2640	269-40	9.0	-24.4		1146.2		✓		4		
5		114.	2200	269-00	8.7	-47.1		1123.5		✓		5		
6		113.	1760	268-50	7.6	-46.4		1124.2				6		
7		112.	1320	268-50	9.1	-36.0		1134.6		✓		7		
8		111.	880	269-00	6.4	-21.8		1148.8				8		
9		110.	440	-	7.7			1155.9		✓		9	F.	
10		109.	0	-	5.2			1165.4				10	-	
11		108.	440	89-30	4.2	-0.4		1170.2				11	W.	
12		107.	880	89-00	7.4	+1.0		1171.7		✓		12		
13			✓	271-00	14.2	+1.2						13		
14												14		
15												15		
16												16		
17												17		

WORKED BY L.J.L. CHECKED BY 1ST [Signature] 2ND _____

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

HORIZONTAL AND VERTICAL SURVEY NOTES

3

GSI AREA _____ STATE/COUNTY _____ BOOK NO. _____ PAGE 3 OF _____
 LINE/LOOP NO. 737 TYPE SURVEY _____ CLIENT HUSKY DATE 24 DY 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		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	⊙									1171.7			1		
2	Δ		680		9.0 - 10	+13.8	+11.4	1187.9					2		
3	CK		✓		269 - 30	+8.4	+16.1						3		
4		106	440		269 - 30	-7.2	-13.0			1174.9	✓		E 4		
5		105	0		-	5.2				1182.7			- 5		
6		104	440		-	5.2				1182.7			W 6		
7		103	0		-	6.5				1181.4	✓		7		
8	⊙	102	1320		-	4.1	-4.1	1184.0			✓		8		
9	CK		✓		270 - 10	7.5	-3.7						9		
10	Δ		0		-	+8.6	+8.6	1182.4			✓		10		
11	CK		✓		270 - 10	+10.9	+8.3						11		
12		101	440		-	3.1				1187.3			E 12		
13		105	0		-	3.3	-5.3			1187.1			- 13		
14						4							14		
15		T.S. # 12	1265		29 - 30	7.2	+3.9			1196.4			W 15		
16	⊙	T.S. # 24	2585		29 - 20	-4.2	+19.9			1212.3	✓		16		
17													17		

WORKED BY L.J.C. CHECKED BY 1ST [Signature] 2ND _____

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

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA _____ STATE/COUNTY _____ BOOK NO. _____ PAGE 4 OF _____
 LINE/LOOP NO. 737 TYPE SURVEY _____ CLIENT MUSKY DATE 24 DY 2 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				
1		TS. # 24											1	
2			1100		90-20-44	+4.2	+ 10.8	1223.1	1212.3	✓			2	
3		TS. # 34 <u>WR</u>	0		-	5.2			1217.9				3	
4		TS. # 36 <u>WR</u>	220		91-46-50	4.0	- 10.8		1212.3	✓		<u>W.</u>	4	
5									1212.3				5	
6													6	
7													7	
8													8	
9													9	
10													10	
11													11	
12													12	
13													13	
14													14	
15													15	
16													16	
17													17	

WORKED BY L. J. C. CHECKED BY 1ST [Signature] 2ND _____
SYMBOLS = BACKSIGHT = INSTRUMENT SET-UP = SIDESHOT = FORESIGHT

HORIZONTAL VERTICAL SURVEY NOTES

GSI AREA _____ STATE/COUNTY AK. BOOK NO. _____ PAGE 5 OF _____
 LINE/LOOP NO. 737 TYPE SURVEY _____ CLIENT HUSKY DATE 24 BY 2 MO 00 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		150								1187.1		RE: PAGE 3	1	3	
2													2		
3						5.2			1192.3				3		
4													4		
5													5		
6		BM. 80127	9648.15		89-59-40	5.3	+ 4.19		1191.2			F	6		
7					270-01-17	5.3							7		
8		(SP. 122)							1190.8				8		
9				MEAN	89-55-49				+0.4			VERTICAL	9		
10					89-59-11							TIE	10		
11			EDM. SLOPE	REDUCTION									11		
12													12		
13													13		
14													14		
15													15		
16													16		
17													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

6

GSI AREA MISHEGUK MTN. STATE/COUNTY AK. BOOK NO. _____ PAGE 6. OF _____
 LINE/LOOP NO. 737 TYPE SURVEY _____ CLIENT HUSKY. DATE 24 DY 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		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	⊙	BM. 20127							1190.8	✓		1		
2		SP. 122										2		
3												3		
4	Δ		1320		29-30	+9.5	- 2.0	1182.8	✓			4		
5	CK		✓		270-40	+13.4	- 2.0					5		
6		123.	880		270-40	8.6	+1.6		1190.4	✓		6		
7		124.	440		270-40	7.0	- 0.9		1187.7			7	3	
8		125.	0		-	5.3			1183.5			8	1	
9		126.	440		91-00	5.2	- 12.9		1175.9			9	11	
10		127.	880		91-00	7.0	- 22.4		1166.4			10		
11		128.	1320		91-05	10.4	- 33.4		1155.4			11		
12		129.	1760		71-00	11.6	- 42.3		1146.5			12		
13		130.	2200		71-00	14.4	- 52.8		1136.0	✓		13		
14	⊙	131.	2640		91-10	8.4	- 62.1		1126.7	✓		14		
15	CK		✓		268-57-2	14.0	- 62.1					15		
16												16		
17												17		

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

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

HORIZONTAL AND VERTICAL SURVEY NOTES

7

GSI AREA _____ STATE/COUNTY AK BOOK NO. _____ PAGE 7 OF _____
 LINE/LOOP NO. 737 TYPE SURVEY _____ CLIENT HUSKY DATE 24 DY 2 MO 80 YR
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. _____ 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										
1		131							1126.7			1		
2			2205		89-40	+6.9	- 5.9	1120.9				2		
3			✓		270-30	+13.5	- 5.7					3		
4		132	1760		270-30	12.4	+ 3.0		1123.9			4		
5		133	1320		270-30	9.8	+ 1.7		1122.6			5		
6		134	880		270-30	7.3	+ 0.4		1121.3	✓		6		
7		135	440		-	7.9			1119.0			7	W	
8		136	0		-	5.2			1115.7			8	W	
9		137	440		-	7.7			1106.2			9	E	
10		138	880		-	9.8			1111.1			10		
11		139	1320		-	9.5			1111.4			11		
12		140	1760		-	72.1	- 12.1		1108.8	✓		12		
13			✓		269-50	7.1	- 12.2					13		
14												14		
15												15		
16												16		
17												17		

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

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

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA _____ STATE/COUNTY AK BOOK NO. _____ PAGE 8 OF _____
 LINE/LOOP NO. 737 TYPE SURVEY _____ CLIENT HUSKY DATE 24 DY 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		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	⊙	140								1108.8	✓		1		
2	Δ		2205		89-30	+8.3	-10.9	1098.1	✓			2			
3	OK		✓		270-40	+15.0	-10.6					3			
4		141	1760		270-10	+3.2	+1.9	1100.0	✓			4			
5		142	1320		269-30	+9.5	-21.0	1077.1				5			
6		143	880		269-30	+10.7	-18.4	1079.7				6	CREEK		
7		144	440		-	+10.3		1087.8				7	W		
8		145	0		-	+5.2		1092.9				8	-		
9		146	440		89-20	+5.4	-0.3	1097.8				9	TR		
10		147	880		89-20	+7.8	+3.4	1101.5				10			
11		148	1320		89-20	+10.5	+4.9	1103.0				11			
12		149	1760		89-20	+12.0	+8.5	1106.6				12			
13		150	2205		89-20	+13.8	+11.8	1109.9	✓			13			
14	⊙	151	2640		89-30	+8.7	+14.3	1112.3	✓			14			
15	OK		✓		270-36-30	+14.0	+14.0					15			
16												16			
17												17			

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

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

HORIZONTAL AND VERTICAL SURVEY NOTES

9

GSI AREA MISHEGUK MTN. STATE/COUNTY AK. BOOK NO. _____ PAGE 9 OF _____
 LINE/LOOP NO. 737 TYPE SURVEY _____ CLIENT HUSKY DATE 24 BY 2 MO 80 YR
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. _____ CREW NO. 1186

LINE	 	STATION	VERTICAL						HORIZONTAL		LINE	REMARKS		
			DISTANCE		VERTICAL ANGLE OBS.	ROD RDG OR HI	ELEV DIFF	FINAL ELEVATION DIFF	ELEVATION				LR OR RI	RIGHT TURNED HORIZONTAL ANGLE
			SLOPE	<input type="checkbox"/> FEET <input type="checkbox"/> METERS HORIZ					INST	ROD				
1		151.							1112.3			1		
2			2640		70-40	+9.1	+39.2	1152.3		✓		2		
3			✓		269-26	+4.0	+40.1					3		
4		152.	2205		269-20	10.4	-36.0	1116.3				4		
5		153.	1760		269-20	8.8	-29.3	1123.0				5		
6		154.	1320		269-20	7.6	-22.0	1130.3				6		
7		155.	800		269-20	6.0	-16.2	1136.1				7		
8		156.	440		-	71.3		1141.0				8		
9		157.	0		-	5.3		1147.0				9		
10		158.	440		89-00	7.4	+0.3	1152.6				10	F.	
11		159.	800		89-00	9.3	+6.1	1158.4				11		
12		160	1320		89-00	10.4	+12.6	1164.9				12		
13		161.	1760		89-00	11.1	+19.6	1171.9				13		
14		162.	2205		89-00	12.4	+26.0	1178.3				14		
15		163.	2640		89-00	13.7	+32.4	1184.7		✓		15		
16		BM 20126	3027		89-00	13.7	+31.1	1191.4		✓		16	163 + 387	
17			✓		270-50	4.9	+39.1					17		

1191.9

TI-23471B

WORKED BY L.J.L. CHECKED BY 1ST L.J.L. 2ND 0.5 VERTICAL TIE
 SYMBOLS = BACKSIGHT = INSTRUMENT SET-UP = SIDESHOT = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

10

GSI AREA _____ STATE/COUNTY AK. BOOK NO. _____ PAGE 10 OF _____
 LINE/LOOP NO. 737 TYPE SURVEY _____ CLIENT HUCKY DATE 25 DY 2 MO 20 YR
 SURVEYOR L. C. MAN. 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		BM. 20126							1191.9	✓		1
2												2
3			1°10		90-40	73.4	+34.5	1226.4	✓			3
4			✓		269-10	70.2	+34.5					4
5		164	1760		269-20	72.7	-33.2		1193.2			5
6		165	1320		269-20	70.5	-25.9		1200.5			6
7		166	000		269-40	72.4	-17.5		1208.9			7
8		167	440		269-40	70.8	-21.0		1205.4		W	8
9		168	0		-	5.2			1221.2		-	9
10		169	440		09-00	7.4	+0.3		1226.7		E	10
11		170	000		09-00	9.6	+5.0		1232.2			11
12		171	1320		09-00	4.6	+18.4		1244.8			12
13		172	1760		00-50	3.0	+30.8		1257.2			13
14		173	2200		00-50	4.5	+40.3		1266.7	✓		14
15		174	2640		00-50	4.0	+48.9	✓	1275.3	✓	-800	15
16			✓		271-20	72.6	+48.8					16
17												17

WORKED BY L.C.L. CHECKED BY 1ST [Signature] 2ND _____
 SYMBOLS = BACKSIGHT = INSTRUMENT SET-UP = SIDESHOT = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

11

GSI AREA _____ STATE/COUNTY AK. BOOK NO. _____ PAGE 11 OF _____
 LINE/LOOP NO. 737 TYPE SURVEY _____ CLIENT Husk's DATE 25 BY 2 MO 10 YR
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. _____ CREW NO. 1186

LINE	<input type="checkbox"/> Δ <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										
1	\odot	174.							1295.3				1	
2	Δ		2255.		90-50	+9.3	+41.3	1316.6					2	
3	ck.				269-00	+3.0	+41.4						3	
4		175.	1760		269-20	-11.8	-32.3	1284.3					4	
5		176.	1320		269-20	-9.7	-25.1	1291.5					5	
6		177.	500		269-20	-10.0	-20.2	1296.4					6	
7		178.	440		-	72.2		1304.4				W	7	
8		179.	0		-	5.3		1311.3				-	8	
9		180.	440		89-00	72.4	-4.9	1311.7				E.	9	
10		181.	500		89-30	-9.7	-2.0	1314.6					10	
11		182.	1320		89-00	72.6	+10.4	1327.0					11	
12		183.	1760		89-00	7.8	+28.9	1345.5					12	
13	\odot	184	2200		80-40	72.2	+39.0	1355.6				-0.50	13	
14	ck.				271-10	5.9	+38.9						14	
15													15	
16													16	
17													17	

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

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

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA _____ STATE/COUNTY AK. BOOK NO. _____ PAGE 12 OF _____
 LINE/LOOP NO. 737 TYPE SURVEY _____ CLIENT MUSKY DATE 25 DAY 2 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						HORIZONTAL		REMARKS		
			DISTANCE		VERTICAL ANGLE OBS.	ROD RDG OR HI	ELEV DIFF	FINAL ELEVATION DIFF	ELEVATION			RIGHT TURNED HORIZONTAL ANGLE	LINE
			SLOPE	<input type="checkbox"/> FEET <input type="checkbox"/> METERS HORIZ					INST	ROD			
1	⊙	184-							1355.6			1	
2	Δ		880		90-20	10.5	+15.6	1371.3				2	
3	Δ		✓		269-20	5.5	+15.7 ✓					3	
4		185-	440		-	10.1			1361.2			4	
5		186-			-	5.3			1366.0			5	
6		187-	440		-	3.0			1366.3			6	
7		188-	880		-	4.0			1367.3			7	
8		189-	1320		-	3.3			1368.0			8	
9		190-	1760		89-40	8.5	+1.7		1373.0			9	
10		191-	2205		89-40	4.6	+8.2		1379.5			10	
11	⊙	192	2640		89-30	4.0	+19.0		1390.3	✓	-0.40	11	
12	Δ		✓		270-40	11.7	+12.0					12	
13												13	
14												14	
15												15	
16												16	
17												17	

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

HORIZONTAL AND VERTICAL SURVEY NOTES

13

GSI AREA _____ STATE/COUNTY AK BOOK NO. _____ PAGE 13 OF _____
 LINE/LOOP NO. 737 TYPE SURVEY _____ CLIENT HUSKY DATE 25 DY 2 MO 80 YR
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. _____ CREW NO. 1184

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		192							1390.3	✓		1		
2			0000		90 - 10	+12.4	+15.0	1405.3		✓		2		
3			✓		269 - 56	+14.0	+15.0					3		
4		193	440		-	4.0			1401.3		W	4		
5		194	0		-	3.3			1400.0		-	5		
6		195	440		96 - 30	14.2	-18.0		1387.3		E	6		
7		196	0000		90 - 30	13.0	-20.7		1384.6			7		
8		197	1320		90 - 30	7.7	-21.2		1374.0	✓	-0.80	8		
9			✓		269 - 20	6.1	-21.5					9		
10			0000		90 - 20	11.1	+16.2	1400.2		✓		10		
11			✓		269 - 30	+8.4	+16.3					11		
12		198	440		-	6.3			1391.9		W	12		
13		199	0		-	3.3			1394.9		-	13		
14		200	440		-	7.5			1392.7		E	14		
15		201	0000		-	9.8			1390.4			15		
16		202	1320		-	14.3			1385.9			16		
17												17		

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

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA MISHEGUK. MTN. STATE/COUNTY AK. BOOK NO. _____ PAGE 14 OF _____
 LINE/LOOP NO. 737 TYPE SURVEY _____ CLIENT HUSKY DATE 25 BY 2 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
			SLOPE	<input type="checkbox"/> FEET <input type="checkbox"/> METERS HORIZ					INST	ROD		
1												
2		203.	1760	-	72.0			1388.2		E		
3		R.M. 80125	2174	-	70.3	- 10.3		1389.9		- 1.0	(A)	
4			✓	269-50	71.1	- 10.4						
5								1388.9				
6								+ 1.0		VERTICAL.	TIE.	
7												
8			1346	-	+14.1	+ 14.1		1403.0		✓		
9			✓	269-50	+10.2	+ 14.1						
10		2-4	1320	-	74.8			1388.2				
11		205.	800	-	73.2			1389.8				
12		206.	440	-	79.7			1393.3		W		
13		207.	0	-	83.3			1397.7		W		
14		208.	440	-	73.1			1399.9		E		
15		209.	800	-	77.2			1401.8				
16		210.	1320	89-50	73.4	+ 0.4		1403.4		✓		
17												

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

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA _____ STATE/COUNTY AK. BOOK NO. _____ PAGE 15. OF _____
 LINE/LOOP NO. 737 TYPE SURVEY _____ CLIENT Husky. DATE 25. DY 2 MO 80 YR
 SURVEYOR L. LTMAN. INSTRUMENT DESC/SERIAL NO. _____ CREW NO. 1186.

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										
1													1	
2		211	1760		89-50	-4.3	+0.8		1403.8				F.	2
3		212	2200		89-50	4.2	+2.2		1405.2					3
4					270-20	70.6	+2.2							4
5			2640		91-10	+13.5	+67.2	1472.5						5
6					268-40	+5.9	+67.3							6
7		213	2200		268-20	7.8	-30.8		1401.7					7
8		214	1760		267-30	73.1	-89.8		1382.7					8
9		215	1320		267-30	7.3	-63.8		1408.7					9
10		216	800		267-30	75.0	-53.3		1419.2					10
11		217	440		267-30	76.5	-25.7		1446.8				W	11
12		218	0		-	3.2			1467.3				-	12
13		219	440		80-5	70.4	+6.9		1479.4				E.	13
14		220	800		88-30	70.2	+12.8		1485.3					14
15		221	1320		80-30	78.0	+24.5		1499.0					15
16		222	1760		80-10	79.4	+46.9		1519.4					16
17														17

WORKED BY L.J.L. CHECKED BY 1ST M.M. 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. 737 TYPE SURVEY _____ CLIENT HUSKY DATE 25 DY 2 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										
1													1	
2		223	2250		00-10	7.0	+64.3		1536.8				2	E
3		224	2640		00-00	11.5	+80.6		1553.1	✓			3	
4			✓		271-50	8.8	+80.6						4	
5			000		92-00	18.5	+39.2	1592.3		✓			5	
6			✓		265-20	13.7	+39.3						6	
7		225	440		260-20	7.7	-20.5		1571.8				7	W
8		226	0		-	7.0			1586.3				8	-
9		227	440		00-00	3.5	+11.8		1604.1				9	E
10		P.M. 00124	515		00-00	3.5	+14.5 ✓		1606.8	✓			10	
11			✓		272-20	6.8	+14.4						11	
12									1606.9	✓			12	
13									-0.1		VERTICAL		13	
14											TIE		14	
15													15	
16													16	
17													17	

WORKED BY L.J.L. CHECKED BY 1ST [Signature] 2ND _____

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

HORIZONTAL AND VERTICAL SURVEY NOTES

17

GSI AREA _____ STATE/COUNTY AK. BOOK NO. _____ PAGE 17 OF _____
 LINE/LOOP NO. 737 TYPE SURVEY _____ CLIENT HUSKY DATE 25 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 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	⊙	BM 50124								1606.9	✓		1		
2													2		
3	Δ		2120		91-30	75.0	+ 70.5	1677.3					3		
4	CK		✓		268-20	+0.7	+ 70.3						4		
5		228	1760		268-20	8.0	- 59.2			1618.1			5		
6		229	1720		268-20	78.0	- 51.4			1625.9			6		
7		230	880		268-20	7.8	- 35.4			1641.9			7		
8		231	440		268-20	10.3	- 23.1			1654.2		W	8		
9		232	0		-	3.4				1671.9		-	9		
10		233	440		88-05	10.3	+ 5.0			1682.3		E	10		
11		234	880		88-05	12.2	+ 18.5			1695.8			11		
12		235	1320		88-05	8.4	+ 37.6			1714.9			12		
13		236	1760		88-05	7.6	+ 51.8			1729.1			13		
14		237	2200		88-10	9.1	+ 41.2			1738.5	✓		14		
15	⊙	238	2640		88-10	3.0	+ 81.4			1758.7	✓	0.7	15		
16	CK	✓	✓		272-05	10.7	+ 81.4						16		
17													17		

WORKED BY L. L. CHECKED BY 1ST [Signature] 2ND _____

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

HORIZONTAL AND VERTICAL SURVEY NOTES

GSI AREA _____ STATE/COUNTY AK BOOK NO. _____ PAGE 18 OF _____
 LINE/LOOP NO. 737 TYPE SURVEY _____ CLIENT HUSKY DATE 25 DY 2 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		238							1758.7		✓	-0.7	1	
2			2640		91-40	+8.2	+85.0	1843.7			✓		2	
3			✓		268-27-20	+14.0	+85.1						3	
4		239	2200		268-30	11.5	-69.1		1774.6				4	
5		240	1760		268-30	11.0	-57.1		1786.6				5	
6		241	1320		268-30	9.6	-44.1		1799.6				6	
7		242	880		268-30	10.1	-33.1		1810.6				7	
8		243	440		267-30	11.7	-15.5		1828.2				8	W
9		244	0		-	5.3			1838.4				9	-
10		245	440		88-20	2.5	+6.3		1850.0				10	E
11		246	880		88-20	7.3	+18.3		1862.0				11	
12		247	1320		88-10	4.2	+38.0		1881.7				12	
13		248	1760		88-10	9.3	+49.0		1890.7				13	
14		249	2200		88-10	10.2	+60.1		1903.8				14	
15		250	2640		88-10	7.1	+77.3		1920.7		✓	-1.2	15	
16			✓		272-00	15.0	+77.1						16	
17													17	

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

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

HORIZONTAL AND VERTICAL SURVEY NOTES

19

GSI AREA _____ STATE/COUNTY AK. BOOK NO. _____ PAGE 19 OF _____
 LINE/LOOP NO. 737 TYPE SURVEY _____ CLIENT HUSKY- DATE 26 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 BR	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	⊙	250							1920.9	✓	-12	1		
2	Δ		1760		92-10	+12.4	+78.7	1999.9		✓		2		
3	CK		✓		267-40	+7.5	+79.1					3		
4		251	1320		267-40	70.6	-64.3	1935.6				4		
5		252	870		267-00	79.5	-55.5	1944.4				5		
6		253	440		267-00	70.2	-33.2	1966.7			W	6		
7		254	0		-	5.3		1994.6			-	7		
8	⊙	255	440		88-40	5.4	+4.8	2004.7		✓	-17	E	8	
9	CK		✓		272-00	10.6	+4.7					9		
10	Δ		880		91-00	+0.9	+24.3	2029.0		✓		10		
11	CK		✓		269-20	+14.1	+24.3					11		
12		256	440		269-00	75.0	-22.7	2006.3			W	12		
13		257	0		-	5.3		2023.7			-	13		
14		258	440		89-00	79.5	-1.8	2027.2			E	14		
15		259	880		89-00	7.4	+13.0	2042.0				15		
16		260	1320		87-30	71.4	+46.1	2075.1				16	SIDE-HILL	
17												17		

WORKED BY L. J. L. CHECKED BY 1ST [Signature] 2ND _____
 SYMBOLS Δ = BACKSIGHT ⊕ = INSTRUMENT SET-UP SS = SIDESHOT ⊙ = FORESIGHT

HORIZONTAL AND VERTICAL SURVEY NOTES

20

GSI AREA _____ STATE/COUNTY AK. BOOK NO. _____ PAGE 20 OF _____
 LINE/LOOP NO. 737 TYPE SURVEY _____ CLIENT HUSKY DATE 26 DY 2 MO 80 YR
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. _____ CREW NO. 1186

LINE	<input type="checkbox"/> ∇ <input type="checkbox"/> SS <input type="checkbox"/> \odot	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 	<input type="checkbox"/> FEET <input type="checkbox"/> METERS HORIZ 										
1														
2		261	1760	87-00	9.0	+ 83.0			2112.0				E	2
3	\odot	262	2205	86-50	9.2	+ 112.1			2141.1	/	-2-2			3
4	∇		✓	273-17-20	74.0	+ 112.0								4
5	∇		1320	72-00	+13.0	+ 59.0		2200.2		/				5
6	∇		✓	267-50	+9.2	+ 59.1								6
7		263	890	268-00	74.1	- 44.8			2155.4					7
8		264	440	268-00	74.8	- 30.1			2170.1				W	8
9		265	.	-	5.0				2195.2				-	9
10		266	440	-	2.2				2198.0				E	10
11	\odot		620	89-00	70.4	+ 0.4			2200.6	/	-2-7			11
12	∇		✓	270-40	7.8	+ 0.4								12
13	∇		1595	89-20	+11.0	- 35.4		2165.3		/				13
14	∇		✓	271-46	+14.0	- 35.1								14
15		267	1320	271-30	74.1	+ 20.4			2185.7					15
16		268	880	271-00	72.2	+ 3.2			2168.5					16
17														17

WORKED BY L.J.L. CHECKED BY 1ST [Signature] 2ND _____

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

HORIZONTAL AND VERTICAL SURVEY NOTES

21

GSI AREA MISHEGUK MTN. STATE/COUNTY AK. BOOK NO. _____ PAGE 21 OF _____
 LINE/LOOP NO. 737 TYPE SURVEY _____ CLIENT HUSKY DATE 26 .DY 2 MO 80 YR
 SURVEYOR L. LYMAN INSTRUMENT DESC/SERIAL NO. _____ CREW NO. 1186

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										
1									2115.3				1	
2		269	440		271-00	-6.1	+1.6		2166.9				2	
3		270	0		-	5.1			2160.2				3	
4		271	440		-	7.2	-7.2		2158.1	✓	-3.2	E	4	
5	CK		✓		270-30	11.1	-7.3						5	
6			880		87-44-25	+14.0	-20.7	2137.5		✓			6	
7	CK		✓		272-11-10	+13.0	-20.5						7	
8		272	440		272-00	4.7	+10.6		2148.1		-3.7	W	8	→ Top page - 23, line - 1
9		273	0		-	5.1			2132.4	✓	-3.7	-	9	2128.7
10		274	440		92-20	72.1	-30.0		2107.5	✓	-3.7	E	10	2103.8
11	CK		✓		267-30	10.9	-20.1						11	
12			440		87-00	+4.7	-18.3	2089.2		✓			12	
13	CK		✓		274-00	+12.4	-18.2						13	
14		275	0		-	5.2			2084.0		-3.7	-	14	2080.3
15		276	440		94-30	72.4	-46.8		2042.4	✓	-3.7	E	15	LAST SP. 2087
16	CK		✓		265-00	8.5	-46.7						16	EAST
17													17	

WORKED BY L.J.L. CHECKED BY 1ST [Signature] 2ND _____

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

VERTICAL AND HORIZONTAL SURVEY NOTES

22

GSI AREA _____ STATE/COUNTY AK. BOOK NO. _____ PAGE 22 OF _____
 LINE/LOOP NO. 737 TYPE SURVEY _____ CLIENT HUSKY. DATE 27 BY 2 MO 80 YR
 SURVEYOR L. L. MAN. 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		RIGHT TURNED HORIZONTAL ANGLE		LINE
				SLOPE					HORIZ	INST			
1	⊙	276							2042.4	✓		1	
2												2	
3	Δ		0		-	5.2	+5.2	2047.6		✓		3	
4		T.S. # 1 (287)	605		95-10	5.0	-59.3		1988.3		-3.7 E	4	1984.6
5												5	
6	⊙	T.S. # 12 (288)	1925		89-07-54	4.2	+25.0		2072.6	✓	-3.7	6	2068.9
7												7	
8	Δ		1320		90-21-30	6.0	+14.3	2086.9		✓		8	W
9		T.S. # 24 (306)	0		-	3.2			2081.7		-3.7	9	2078.0
10		T.S. # 36 (312)	1320		90-39	4.5	-19.5		2067.4		-3.7 E	10	
11	⊙	T.S. # 40 (324)	2640		90-40	4.5	-35.2		2051.7	✓	-3.7	11	
12												12	
13												13	
14												14	
15												15	
16												16	
17												17	

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

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

HORIZONTAL AND VERTICAL SURVEY NOTES

23

GSI AREA _____ STATE/COUNTY AK BOOK NO. _____ PAGE 23 OF _____
 LINE/LOOP NO. 737 TYPE SURVEY _____ CLIENT HUSKY DATE 27 DY 2 MO 80 YR
 SURVEYOR L. LTMAN 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		272									2148.1	✓	-37	1	Refer. PAGE 21.
2														2	
3			990		95-20	+11.3	+102.9	103.0	2251.1	✓				3	2251.5
4			✓		264-30	+9.6	+103.1						SE	4	
5			0											5	
6			1760		82-40	9.6	+213.2	115.0	2464.3				-2.2 NW	6	2466.5
7			✓		277-10	4.7	+213.2							7	
8			850		91-00	+13.6	+28.4	✓ 2492.9					S.	8	2495.0
9			✓		268-40	+8.9	+28.7							9	2490.0
10		BM. 20122	0		-	5.2	-5.2		2489.7	✓			2489.8 -	10	IRON-PIPE.
11		BM. 2711							2485.1	✓			2485.1	11	
12									+2.6				2487.7	12	Vertical Tie
13		LINE. 127X												13	
14		SP. 1040 + 97												14	
15		PTY. 1186												15	
16		1978.												16	
17														17	

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

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