ORKUSTOFNUN

Landmælingar

Lega og hæð stöðva í línustæði milli Hvalfjarðar og Varmahlíðar.

Nóvember 1973

Lega og hæð stöðva í línustæði milli Hvalfjarðar og Varmahlíðar.

Inngangur

Línustæðið var mælt sumarið 1973 á vegum Orkustofnunar og undir stjórn Birgis Jónssonar, en Guðmundur Hannesson valdi línustæðið og hafði umsjón með verkinu. Orkustofnun hafði ekki mælingamönnum á að skipa til að gera mælingarnar, og Finnbogi Jónsson og Sigurjón Páll Ísaksson voru ráðnir til þess. Þórhallur Ólafsson tók við af Finnboga síðla sumars. Wild RDS mælitæki voru fengin að láni hjá Landsvirkjun og hjá Rafmagnsveitum Ríkisins.

Jarðfræðilegar athuganir og aðrar athuganir voru gerðar á línustæðinu, en þessi greinargerð fjallar aðeins um landmælingar í línustæðinu og niðurstöður þeirra.

Lega línustæðisins

Nokkrir kílómetrar í endum línustæðisins eru ómældir, og liggur línustæðið frá Akranesvegamótum, undir Hafnarfjalli, yfir Borgarfjörð frá Skeljabrekku að Brekkukoti og þaðan í beina línu að Hafþórsstöðum í Norðurárdal, inn dalinn og yfir Holtavörðuheiði, út Hrútafjörð að Reykjum, þaðan að Auðunarstöðum í Víðidal, áfram að Öxl í Vatnsdal og þaðan að Laxárvatnsvirkjun.

Frá Laxárvatnsvirkjun liggur línustæðið vestan Laxárvatns og austan Svínavatns, um Bólstaðarhlíð, yfir Vatnsskarð og endar skammt austan minnisvarða á austurbrún Skagafjarðar.

Umferðarstefna

Umferðarstefna í línunni er frá Suðurlandi til Norðurlands, og eru horn í hornpunktum, línulengdir og afstaða punkta utan línu gefin upp í samræmi við það. Línan beygir til hægri eða vinstri í hornpunktum og punktar utan línu eru hægra eða vinstra megin línunnar, og er þá miðað við að horft sé í umferðarstefnu línunnar.

Línulengdir

Línulengdin vex frá 9298 m við Akranesvegamót að 186691 m við Laxárvatnsvirkjun. Í þeim hluta línunnar, sem er milli Laxárvatnsvirkjunar og Varmahlíðar, er línulengdin mæld frá Laxárvatnsvirkjun og er 40369 m þar sem mæling endar.

Hornpunktar

Í töflu I er að finna skrá yfir hornpunkta í línunni. Gefið er nafn punkts, stefnubreyting (pósitív til hægri, negatív til vinstri), línulengd í punktinum og lausleg staðarlýsing. Hornin eru gefin upp í nýgráðum.

Hæðir

Hæðir nokkurra punkta í línustæðinu voru ákveðnar með mælingu úr þekktum hæðarpunktum skammt utan línunnar. Í töflu II er að finna skrá yfir þessa punkta og hæðir þeirra. Hæðir eru í metrum yfir meðalsjávarborð.

Mælistöðvar

Skrá yfir mælistöðvar er að finna í töflu III, sem er úttak úr tölvu IBM 1620 samkvæmt forriti GTREDU. Niðurstöður mælinga milli stöðva ásamt línulengdum og hæðum eru gefnar.

Aukalína Z

Á Holtavörðuheiði var mæld aukalína með stöðvum Z1-Z44. Stöð Z1 er í línunni NS25-NS58 og er 424 metra handan við stöð NS58. Stöð Z44 er í bilinu NS113-NS114, rétt við NS113, og er 183 metra frá NS114. Leiðin Z1-Z44 er 26 metrum lengri en hin leiðin, sem áður var mæld.

Mælibækur

Sjálfar mælingarnar er að finna í 31 mælibók, og hefur línulengd og hæð verið reiknuð og skráð þar fyrir hvern mælipunkt.

Punktar utan línu

Auk mælipunkta í línunni hafa verið mældir inn punktar 7 m utan línunnar. Þeir eru auðkenndir í mælibókunum með stöfunum VHP eða HHP eftir því hvort punkturinn er vinstra eða hægra megin línunnar (þegar horft er í stefnu vaxandi línulengdar).

Tafla I Hornpunktar

Hæll	Horn (nýgr.)	Línulengd (m)	Staðarlýsing
HH76	(endi)	9.298	Við Akranesvegamót, vestan vegar
HH23	46,77^{g}	19.247	Milli Hafnar og Ölvers í Melasveit
HH8	29,37^{g}	23.220	Skammt suður af landsnetspunkti 3300
BH279	34,34^{g}	25.001	Í Hafnarskógi, sunnan vegar
BH216	-45,57^{g}	34.157	Skammt suður af Innri-Skeljabrekku
BH181	23,47^{g}	40.564	Á Selholti, vestan Heggsstaða
BH118	-43,67^{g}	56.262	Um 1 km NNV við Brekkukot
GR39	59,48^{g}	71.396	Milli Hóls og Hafþórsstaða
GR0	-50,44^{g}	79.942	Skammt sunnan við Hellisá
NS25	35,49^{g}	85.732	Á móts við Fornahvamm
NS58	-43,11^{g}	92.096	Í Heiðarsporði, vestan Norðurár
NS76	-21,90^{g}	95.406	Sunnan Hæðarsteins á Holtavörðuheiði
NS139	23,75^{g}	108.465	Vestan vegar, næst Grænumýrartungu
HR36	-9,93^{g}	116.081	Skammt norðan við Staðarskála
HR60	-11,07^{g}	121.458	Milli Oddsstaða og Brautarholts
NS234	84,16^{g}	129.348	NA við Reyki í Hrútafirði
NS264	-22,55^{g}	136.066	Sunnan Álfhólsvatns í Miðfirði
NS338	-8,12^{g}	152.845	Vestan Auðunarstaða í Víðidal
NS441	-17,55^{g}	175.112	Í túni við bæinn Öxl í Vatnsdal
RH1	143,64^{g}	186.691	Við Laxárvatnsvirkjun
RH1	143,64^{g}	0.000	Línulengd núll
HS1	-35,30^{g}	5.490	Við suðurenda Laxárvatns
HS70	-75,05^{g}	20.658	1 km NV við Ytri-Löngumýri
HS93	51,63^{g}	24.721	Um 1,5 km austan Ártúns í Langadal
HS126	-41,54^{g}	32.071	Rúma 2 km SV við Vatnshlíðarvatn
HS167	(endi)	40.369	Norðaustan við minnisvarða Stephans G.
Z1	-60,51^{g}	92.520	Í Heiðarsporði austan við Norðurá
Z44	-4,51^{g}	103.199	Austan fjárgæslukofa á Holtavörðuh.

Tafla II Hæðarpunktar

Punktur í línu		Hæðarpunktur utan línustæðis		
Hæll	Hæð	Punktur	Hæð	Lýsing
HH54	58,06	3250	41,33	Punktur frá LMÍ austan þjóðvegar í Leirársveit
HH7	52,11	3300	47,36	Punktur frá LMÍ við þjóðveg undir Hafnarfjalli
BH142	11,54	FLOK	18,70	Bolti frá OS í stöpli við Flókadalsá sunnan Hvítár
NS278	6,66	5222	32,76	Bolti og skjöldur frá OS í kirkjutröppum að Melstað
NS388	89,42	9433/31	73,88	Ómerktur hæðarpunktur frá OS á vegi milli hliðstólpa við útihús við Enniskot
RH2	85,87	FM-LV	95,87	Fastmerki frá OS í stíflu við úrrennsli úr Laxárvatni
HS70	182,11	A12	186,90	Hæll frá OS í vegkanti á milli Svínavatns og Löngumýrar
HS123	433,43	A07	429,20	Hæll frá OS við veg á háhæð vestan við Vatnsskarðsvatn
HS165	223,73	A03	240,50	Rauðmálaður blettur frá OS á stalli minnisvarða á brún vestan Skagafjarðar

Hæðir eru í metrum yfir meðalsjávarborð

Tafla III Mælistöðvar

Skrá yfir mælistöðvar er á blaðsíðu 07-40. Við útreikninga var línunni skipt í búta og hæðum jafnað í hverjum búti fyrir sig. Línubútarnir ná því milli punktanna, sem hæðir voru úkveðnar á með mælingu úr þekktum punktum utan línunnar. Línubútarnir eru sem hér segir:

DISTANCE	DIFF/%	ANGLE	S-I	DIFF/%		NAME	[illegible]	[illegible]
79942.0	153.88					GR0	79942.0	153.88
29903.0	.19							
244.0	-10.50	10275.0	0.0	-10.54		GR1	79698.0	143.33
309.0	5.30	9893.0	0.0	5.19	-	GR2	79389.0	138.14
181.5	-2.40	10084.0	0.0	-2.39		GR3	79207.5	135.74
250.0	-2.80	10072.0	0.0	-2.82	-	GR4	78957.5	138.57
128.0	0.00	9997.0	0.0	.06		GR5	78829.5	138.63
340.0	-1.30	10023.0	0.0	-1.22	-	GR6	78489.5	139.86
138.0	2.40	9892.0	0.0	2.34		GR7	78351.5	142.21
133.0	3.50	9834.0	0.0	3.46	-	GR8	78218.5	138.74
343.0	-7.00	10130.0	0.0	-7.00		GR9	77875.5	131.74
217.0	-2.40	10072.0	0.0	-2.45	-	-	77658.5	134.19
123.0	4.00	9799.0	0.0	3.88		GR10	77535.5	138.08
231.0	2.00	9946.0	0.0	1.95	-	GR11	77304.5	136.12
244.5	5.00	9873.0	0.0	4.87		GR12	77060.0	141.00
175.0	-6.30	10198.0	0.0	-5.44	*-	GR13	76885.0	146.44
208.0	3.40	9868.0	0.0	4.31	*	GR14	76677.0	150.76
368.0	3.20	9945.0	0.0	3.17	-	GR15	76309.0	147.58
398.5	6.00	9904.0	0.0	6.00		GR16	75910.5	153.59
194.0	-3.00	10096.0	0.0	-2.92	-	GR18	75716.5	156.52
275.0	1.10	9975.0	0.0	1.07		GR19	75441.5	157.60
284.0	3.20	9927.0	0.0	3.25	-	-	75157.5	154.35
104.0	.30	9982.0	0.0	.29		GR21	75053.5	154.64
241.0	-3.70	10097.0	0.0	-3.67	-	GR22	74812.5	158.32
176.0	-2.90	10068.0	1.0	-2.88		GR23	74636.5	155.44
253.0	1.30	9966.0	0.0	1.35	-	GR24	74383.5	154.09
255.0	-1.80	10046.0	0.0	-1.84		GR25	74128.5	152.25
164.0	.40	9984.0	0.0	.41	-	GR26	73964.5	151.84
214.0	1.60	9950.0	0.0	1.68		GR27	73750.5	153.52
182.0	2.10	9926.0	0.0	2.11	-	GR28	73568.5	151.40
271.5	-8.10	10191.0	0.0	-8.14		GR29	73297.0	143.26
210.0	3.50	9894.0	0.0	3.49	-	GR30	73087.0	139.76
296.5	-3.70	10077.0	0.0	-3.58		GR32	72790.5	136.18
162.0	-.30	10012.0	0.0	-.30	-	GR33	72628.5	136.48
216.0	-7.80	10229.0	0.0	-7.77		GR34	72412.5	128.71
154.5	2.90	9882.0	0.0	2.86	-	GR35	72258.0	125.85
164.0	-9.20	10359.0	0.0	-9.25		GR36	72094.0	116.59
204.5	7.50	9769.0	0.0	7.42	-	GR37	71889.5	109.17
221.5	-14.80	10424.0	0.0	-14.77		GR38	71668.0	94.40
272.0	18.50	9569.0	0.0	18.44	-	GR39	71396.0	75.96

DISTANCE	DIFF/M	ANGLE	S-I	DIFF/S		MAP	Easting	Elevation
122.0	7.80	9594.0	0.0	7.79		GR40	71274.0	83.75
223.5	-16.20	10459.0	0.0	-16.14	-	GR41	71050.5	99.89
211.0	10.10	9697.0	0.0	10.05		GR42	70839.5	109.94
122.0	-11.30	10588.0	0.0	-11.30	-	GR43	70717.5	121.24
271.0	9.50	9778.0	0.0	9.45		GR44	70446.5	130.70
221.5	-15.80	10453.0	0.0	-15.78	-	GR45	70225.0	146.49
136.5	22.20	8977.0	0.0	22.12		GR46	70088.5	168.62
230.5	-27.30	10747.0	0.0	-27.17	-	GR47	69858.0	195.79
268.5	11.20	9738.0	0.0	11.05		GR48	69589.5	206.85
181.0	-21.30	10746.0	0.0	-21.30	-	GR49	69408.5	228.15
280.0	22.40	9490.0	0.0	22.47		GR50	69128.5	250.64
135.0	-6.70	10318.0	0.0	-6.74	-	GR51	68993.5	257.39
217.5	11.80	9655.0	0.0	11.79		GR52	68776.0	269.19
69.0	2.60	9763.0	0.0	2.56	-	GR53	68707.0	266.62
232.5	-18.70	10513.0	0.0	-18.77		GR54	68474.5	247.84
268.0	6.30	9852.0	0.0	6.23	-	GR55	68206.5	241.61
102.0	-.80	10051.0	0.0	-.81		GR56	68104.5	240.79
58.0	8.60	9062.0	0.0	8.60	-	-	68046.5	232.19
242.0	-28.80	10753.0	0.0	-28.75		GR57	67804.5	203.43
162.5	-27.00	11049.0	0.0	-27.02	-	GR58	67642.0	230.45
216.0	-8.00	10235.0	0.0	-7.97		GR59	67426.0	222.48
230.0	5.80	9835.0	0.0	5.96	-	GR60	67196.0	216.52
97.0	-3.50	10238.0	0.0	-3.62		GR61	67099.0	212.89
75.0	7.30	9377.0	0.0	7.36	-	GR62	67024.0	205.53
31.5	-5.40	11086.0	0.0	-5.42		-	66992.5	200.10
241.0	-12.30	10324.0	0.0	-12.27		GR63	66751.5	187.83
101.0	7.50	9529.0	0.0	7.48	-	GR64	66650.5	180.34
192.0	-18.90	10626.0	0.0	-18.94		GR65	66458.5	161.40
118.0	12.40	9340.0	0.0	12.27	-	GR66	66340.5	149.12
223.0	-16.80	10479.0	0.0	-16.81		GR67	66117.5	132.31
164.5	9.80	9622.0	0.0	9.77	-	GR68	65953.0	122.54
119.5	-2.90	10167.0	0.0	-3.13	*	GR69	65833.5	119.40
265.0	3.10	9927.0	0.0	3.03	-	GR70	65568.5	116.36
69.0	-5.00	10458.0	0.0	-4.97		GR71	65499.5	111.39
180.0	22.80	9193.0	0.0	22.94	-	GR72	65319.5	88.45
143.0	-11.90	10441.0	2.0	-11.92		GR73	65176.5	76.53
148.5	9.90	9580.0	0.0	9.81	-	GR74	65028.0	66.72
101.0	-9.40	10593.0	0.0	-9.43		GR75	64927.0	57.29
223.0	21.60	9383.0	0.0	21.68	-	GR76	64704.0	35.61
110.0	.60	9965.0	0.0	.60		GR77	64594.0	36.21

DISTANCE	DIFF/M	ANGLE	S-I	DIFF/C		NAME	LENGTH	ELEVATION
210.0	-5.20	10153.0	0.0	-5.04	-	GR78	64384.0	41.26
227.0	.40	9991.0	0.0	.32		GR79	64157.0	41.59
221.0	0.00	10000.0	0.0	0.00	-	BH80	63936.0	41.59
259.5	.50	9987.0	0.0	.52		BH81	63676.5	42.12
262.5	.20	9996.0	0.0	.16	-	BH82	63414.0	41.96
241.0	-.30	10005.0	0.0	-.18		BH83	63173.0	41.77
234.0	.40	9992.0	0.0	.29	-	BH86	62939.0	41.47
237.0	-.30	10004.0	0.0	-.14		BH84	62702.0	41.33
275.5	-1.00	10021.0	0.0	-.90	-	BH85	62426.5	42.24
253.0	-1.40	10035.0	0.0	-1.39		BH87	62173.5	40.85
125.5	1.10	9943.0	0.0	1.12	-	BH88	62048.0	39.73
354.0	-2.40	10042.0	0.0	-2.33		BH89	61694.0	37.39
241.0	-13.50	10357.0	0.0	-13.52	-	BH90	61453.0	50.92
208.0	5.30	9836.0	0.0	5.35		BH91	61245.0	56.28
211.0	-4.20	10129.0	0.0	-4.27	-	BH92	61034.0	60.56
155.5	-1.30	10050.0	0.0	-1.22		BH93	60878.5	59.34
143.0	2.00	9910.0	0.0	2.02	-	BH94	60735.5	57.32
283.5	-1.30	10027.0	0.0	-1.20		BH95	60452.0	56.12
173.0	-5.30	10196.0	0.0	-5.32	-	BH96	60279.0	61.45
366.0	-.20	10004.0	0.0	-.22		BH98	59913.0	61.22
113.0	-26.00	11437.0	0.0	-25.94	-	BH99	59800.0	87.17
186.0	3.50	9884.0	0.0	3.38		BH100	59614.0	90.56
178.5	-2.40	10084.0	0.0	-2.35	-	BH101	59435.5	92.92
41.0	5.70	9120.0	0.0	5.70		BH102	59394.5	98.62
142.0	2.80	9873.0	0.0	2.83	-	BH103	59252.5	95.79
226.0	-5.20	10146.0	0.0	-5.18		BH104	59026.5	90.61
55.0	3.50	9595.0	0.0	3.50	-	BH105	58971.5	87.10
253.0	-22.90	10573.0	0.0	-22.83		BH106	58718.5	64.27
190.5	14.90	9504.0	0.0	14.87	-	BH107	58528.0	49.40
180.5	-6.80	10242.0	0.0	-6.86		BH108	58347.5	42.54
271.5	7.50	9826.0	0.0	7.42	-	BH109	58076.0	35.12
218.0	-2.20	10063.0	0.0	-2.15		BH110	57858.0	32.96
216.0	-.60	10017.0	0.0	-.57	-	BH111	57642.0	33.54
208.5	-3.30	10098.0	0.0	-3.20		BH112	57433.5	30.33
146.0	7.40	9677.0	0.0	7.41	-	BH113	57287.5	22.92
209.5	3.40	9896.0	0.0	3.42		BH114	57078.0	26.34
230.0	-9.20	10254.0	0.0	-9.18	-	BH115	56848.0	35.52
277.0	28.00	9359.0	0.0	27.98		BH116	56571.0	63.51
66.0	-5.80	10557.0	0.0	-5.78	-	BH117	56505.0	69.30
243.5	2.50	9936.0	0.0	2.44		BH118	56261.5	71.75

DISTANCE	DIFF/M	ANGLE	S-T	DIFF/S		NAME	DEPTH	ELEVATI
141.0	.70	9969.0	0.0	.68	-	BH119	56120.5	71.06
183.0	-24.00	10829.0	0.0	-23.96		BH120	55937.5	47.10
267.5	5.50	9869.0	0.0	5.50	-	BH121	55670.0	41.60
348.0	-2.80	10049.0	0.0	-2.67		BH122	55322.0	38.92
296.0	4.10	9915.0	0.0	3.95	-	BH123	55026.0	34.97
231.0	-1.30	10032.0	0.0	-1.16		BH124	54795.0	33.81
233.5	2.00	9949.0	0.0	1.87	-	BH125	54561.5	31.94
287.5	-3.80	10083.0	0.0	-3.74		BH126	54274.0	28.19
198.0	-1.50	10047.0	0.0	-1.46	-	BH127	54076.0	29.66
265.0	-4.20	10100.0	0.0	-4.16		BH128	53811.0	25.50
238.0	.80	9981.0	0.0	.71	-	BH129	53573.0	24.79
231.5	-.20	10004.0	0.0	-.14		BH130	53341.5	24.64
235.0	0.00	10000.0	0.0	0.00	-	BH131	53106.5	24.65
253.5	-.80	10018.0	0.0	-.71		BH132	52853.0	23.93
270.5	1.00	9978.0	0.0	.93	-	BH133	52582.5	23.00
235.0	-2.50	10064.0	0.0	-2.36		BH134	52347.5	20.64
235.0	-.70	10017.0	0.0	-.62	-	BH135	52112.5	21.26
186.0	-5.90	10202.0	0.0	-5.90		-	51926.5	15.36
194.0	.10	9996.0	0.0	.12	-	BH136	51732.5	15.24
284.0	1.00	9981.0	0.0	.84		BH137	51448.5	16.09
290.0	0.00	9996.0	0.0	.18	-	BH138	51158.5	15.91
297.5	0.00	10006.0	0.0	-.28	*	BH139	50861.0	15.63
165.0	1.10	9956.0	0.0	1.14	-	BH140	50696.0	14.49
242.0	-3.00	10076.0	0.0	-2.88		BH141	50454.0	11.61
180.0	1.10	9961.0	0.0	1.10	-	-	50274.0	10.50
235.0	1.10	9972.0	0.0	1.03		BH142	50039.0	11.54

DISTANCE	DIFF/M	ANGLE	G-T	DIFF/C		NAME	LENGTH	ELEVATION
50039.0	11.54					BH142	50039.0	11.54
26560.5	-.08							
181.0	-.70	10023.0	0.0	-.65	-	BH143	49858.0	12.19
174.0	3.00	9888.0	0.0	3.06		BH144	49684.0	15.25
279.0	-2.40	10056.0	0.0	-2.45	-	BH145	49405.0	17.70
237.5	.50	9981.0	0.0	.70	*	BH146	49167.5	18.41
298.0	-2.20	10045.0	0.0	-2.10	-	BH147	48869.5	20.52
211.0	.20	9995.0	0.0	.16		BH148	48658.5	20.68
244.5	-.70	10015.0	0.0	-.57	-	BH149	48414.0	21.26
233.0	-.50	10009.0	0.0	-.32		BH150	48181.0	20.93
255.0	1.80	9956.0	0.0	1.76	-	BH151	47926.0	19.16
253.0	3.80	9900.0	0.0	3.97		BH152	47673.0	23.14
248.5	7.90	9798.0	0.0	7.88	-	BH153	47424.5	15.25
221.0	-.50	10014.0	0.0	-.48		BH154	47203.5	14.76
231.0	.60	9982.0	0.0	.65	-	BH155	46972.5	14.11
241.5	-.50	10009.0	0.0	-.34		BH156	46731.0	13.77
308.5	1.40	9973.0	0.0	1.30	-	BH157	46422.5	12.46
263.0	-.30	10002.0	0.0	-.08	*	BH158	46159.5	12.37
254.5	0.00	9999.0	0.0	.03	-	BH159	45905.0	12.33
251.5	-.60	10009.0	0.0	-.35	*	BH160	45653.5	11.98
253.0	.50	9988.0	0.0	.47	-	BH161	45400.5	11.50
246.0	-1.10	10024.0	0.0	-.92		BH162	45154.5	10.57
265.0	.90	9978.0	0.0	.91	-	BH163	44889.5	9.65
246.5	-.20	10005.0	0.0	-.19		BH164	44643.0	9.46
244.0	.60	9982.0	0.0	.68	-	BH165	44399.0	8.77
223.5	-1.20	10034.0	0.0	-1.19		BH166	44175.5	7.57
232.0	2.40	9935.0	0.0	2.36	-	BH167	43943.5	5.21
191.0	1.40	9950.0	0.0	1.50		BH168	43752.5	6.70
252.5	-1.30	10033.0	0.0	-1.30	-	BH169	43500.0	8.01
234.0	.40	9982.0	0.0	.66	*	BH170	43266.0	8.67
234.5	.50	9987.0	0.0	.47	-	BH171	43031.5	8.19
232.5	0.00	9999.0	0.0	.03		BH172	42799.0	8.23
233.0	.50	9987.0	0.0	.47	-	BH173	42566.0	7.75
235.5	-1.10	10029.0	0.0	-1.07		BH174	42330.5	6.68
261.0	-.70	10014.0	0.0	-.57	-	BH175	42069.5	7.25
222.0	-.20	10006.0	0.0	-.20		BH176	41847.5	7.04
238.5	.20	9995.0	0.0	.18	-	BH177	41609.0	6.86
256.5	.40	9989.0	0.0	.44		BH178	41352.5	7.30
249.0	-.40	10007.0	0.0	-.27	-	BH179	41103.5	7.57
240.0	.80	9976.0	0.0	.90		BH180	40863.5	8.47

DISTANCE	DIFF/M	ANGLE	I-I	DIFF/C		NAME	LENGTH	ELEVATION
300.0	-12.50	10266.0	0.0	-12.54	-	BH181	40563.5	21.02
155.5	3.80	9848.0	0.0	3.71	-	BH182	40408.0	17.30
275.0	-5.70	10126.0	0.0	-5.44	*	BH183	40133.0	11.86
257.0	-3.30	10083.0	0.0	-3.35	-	BH184	39876.0	15.21
146.0	7.20	9642.0	1.0	7.21		BH185	39730.0	22.43
69.0	.30	9972.0	0.0	.30	-	BH186	39661.0	22.12
238.0	-5.40	10144.0	0.0	-5.38		BH187	39423.0	16.74
223.0	-8.70	10247.0	0.0	-8.65	-	BH188	39200.0	25.39
303.0	-6.00	10141.0	0.0	-6.71	*	BH189	38897.0	18.68
266.0	-.90	10021.0	0.0	-.87	-	BH190	38631.0	19.56
234.0	.40	9990.0	0.0	.36		BH191	38397.0	19.92
234.5	-.40	10025.0	0.0	-.92	*-	BH192	38162.5	20.84
218.0	17.40	9490.0	0.0	17.50		-	37944.5	38.35
143.0	-6.90	10311.0	0.0	-6.99	-	BH194	37801.5	45.34
258.0	-8.60	10212.0	0.0	-8.59		BH195	37543.5	36.74
130.5	-.30	10012.0	0.0	-.24	-	BH196	37413.0	36.99
271.0	-2.70	10065.0	0.0	-2.76		BH197	37142.0	34.22
160.5	1.70	9933.0	0.0	1.68	-	BH201	36981.5	32.53
301.0	-11.00	10234.0	0.0	-11.06		BH202	36680.5	21.46
330.5	5.30	9900.0	0.0	5.19	-	BH204	36350.0	16.27
388.0	-6.50	10109.0	0.0	-6.64		BH207	35962.0	9.62
40.0	-2.30	10375.0	0.0	-2.35	-	BH208	35922.0	11.98
142.0	-9.10	10408.0	0.0	-9.11		BH209	35780.0	2.87
226.0	0.00	9998.0	0.0	.07	-	BH210	35554.0	2.79
226.0	-.30	10004.0	0.0	-.14		BH211	35328.0	2.65
253.0	-1.70	10043.0	0.0	-1.70	-	BH212	35075.0	4.36
246.0	.20	9995.0	0.0	.19		BH213	34829.0	4.55
222.0	-5.00	10143.0	0.0	-4.98	-	BH214	34607.0	9.54
305.0	-17.20	10359.0	0.0	-17.21	-	BH215	34302.0	26.76
145.5	20.00	9132.0	0.0	19.96		BH216	34156.5	46.72
31.0	-5.20	11062.0	0.0	-5.21	-	BH217	34125.5	51.94
24.0	.60	9851.0	0.0	.56		BH218	34101.5	52.50
148.0	-8.10	10350.0	0.0	-8.14	-	BH219	33953.5	60.64
88.5	1.40	9903.0	0.0	1.34		BH220	33865.0	61.99
234.5	4.10	9892.0	0.0	3.97	-	BH222	33630.5	58.01
267.0	-.70	10016.0	0.0	-.67		BH224	33363.5	57.34
321.0	4.70	9908.0	0.0	4.63	-	BH226	33042.5	52.70
136.0	-4.50	10208.0	0.0	-4.44		BH227	32906.5	48.26
154.0	10.00	9588.0	0.0	9.98	-	BH228	32752.5	38.27
202.0	-14.30	10451.0	0.0	-14.33		BH229	32550.5	23.94

101.0	1.60	9839.0	1.0	1.55	-	BH230	32449.5	22.38
225.0	-5.60	10160.0	0.0	-5.65		BH231	32224.5	16.73
163.0	-3.90	10153.0	0.0	-3.91	-	BH232	32061.5	20.65
198.0	5.50	9823.0	0.0	5.50		BH233	31863.5	26.15
161.0	-4.80	10189.0	0.0	-4.78	-	BH234	31702.5	30.93
59.5	.50	9951.0	0.0	.45		BH237	31643.0	31.39
245.0	-6.00	10157.0	0.0	-6.04	-	BH235	31398.0	37.43
139.0	9.00	9591.0	0.0	8.94		BH239	31259.0	46.37
117.0	3.00	9842.0	0.0	2.90	-	BH240	31142.0	43.47
320.0	-23.00	10458.0	0.0	-23.06		BH241	30822.0	20.41
92.5	-12.50	10853.0	0.0	-12.46	-	BH242	30729.5	32.88
54.5	8.00	9063.0	0.0	8.07		BH243	30675.0	40.96
77.0	-.60	10046.0	0.0	-.55	-	BH244	30598.0	41.51
321.5	6.90	9865.0	0.0	6.81		BH246	30276.5	48.33
93.0	-2.30	10157.0	0.0	-2.29	-	BH247	30183.5	50.62
212.5	3.90	9886.0	0.0	3.80		BH249	29971.0	54.43
221.0	-3.40	10098.0	0.0	-3.40	-	BH250	29750.0	57.83
210.0	3.90	9883.0	0.0	3.85		BH251	29540.0	61.69
180.0	-11.40	10405.0	0.0	-11.46	-	BH252	29360.0	73.16
95.0	2.30	9845.0	0.0	2.31		BH253	29265.0	75.47
156.0	-6.60	10267.0	0.0	-6.54	-	BH254	29109.0	82.01
182.5	-.10	10003.0	0.0	-.08		BH255	28926.5	81.93
138.0	-.40	10017.0	0.0	-.36	-	BH256	28788.5	82.30
96.0	-.50	10032.0	0.0	-.48		BH257	28692.5	81.81
107.0	2.60	9847.0	0.0	2.57	-	BH258	28585.5	79.24
236.0	1.90	9951.0	0.0	1.81		BH259	28349.5	81.06
230.0	2.20	9938.0	0.0	2.24	-	BH260	28119.5	78.82
231.0	-2.30	10065.0	0.0	-2.35		BH261	27888.5	76.46
223.0	-1.30	10038.0	0.0	-1.33	-	BH262	27665.5	77.79
185.0	5.70	9802.0	0.0	5.75		BH263	27480.5	83.54
247.5	-1.00	10038.0	0.0	-1.47	*-	BH265	27233.0	85.02
253.0	-4.00	10105.0	0.0	-4.17		BH266	26980.0	80.84
215.0	-5.90	10174.0	0.0	-5.87	-	BH268	26765.0	86.72
220.0	.30	9932.0	2.0	.35		BH270	26545.0	87.07
152.0	1.90	9920.0	0.0	1.91	-	BH271	26393.0	85.16
84.0	2.00	9845.0	0.0	2.04		BH272	26309.0	87.21
198.5	9.50	9698.0	0.0	9.42	-	BH273	26110.5	77.78
177.0	-11.00	10395.0	0.0	-10.99		BH274	25933.5	66.78
210.0	8.00	9761.0	0.0	7.88	-	BH275	25723.5	58.90
182.0	1.20	9923.0	1.0	1.20		BH276	25541.5	60.10

DISTANCE	[illegible]/M	ANGLE	[illegible]	[illegible]/C	NAME	LENGTH	ELEVATION
156.0	.10	9953.0	1.0	.15	- BH277	25285.5	59.45
169.0	-.80	9958.0	2.0	-.88	BH278	25216.5	59.06
216.0	0.00	9998.0	0.0	.06	- BH279	25000.5	58.99
105.0	-1.30	10079.0	0.0	-1.30	HH1	24895.5	57.69
66.0	-.70	10064.0	0.0	-.66	- HH2	24829.5	58.35
190.0	.40	9986.0	0.0	.41	HH3	24639.5	58.77
320.0	2.20	9957.0	0.0	2.16	- HH4	24319.5	56.61
335.0	1.40	9972.0	0.0	1.47	HH5	23984.5	58.08
282.0	1.80	9959.0	0.0	1.81	- HH6	23702.5	56.26
224.0	-4.10	10118.0	0.0	-4.15	HH7	23478.5	52.11

DISTANCE	DIFF/A	AZIMUTH	S-T	DIFF/C	NAME	ELEVATION	ELEVATION
23478.5	52.11				HH7	23478.5	52.11
9523.5	.95						
258.5	2.70	9932.0	0.0	2.76	- HH8	23220.0	49.37
343.5	.80	9985.0	0.0	.80	HH9	22876.5	50.21
242.0	-.50	10012.0	0.0	-.45	- HH10	22634.5	50.69
210.0	1.00	9968.0	0.0	1.05	HH11	22424.5	51.77
235.0	1.20	9968.0	0.0	1.18	- HH12	22189.5	50.61
265.0	-.50	10011.0	0.0	-.45	HH13	21924.5	50.18
110.0	-1.30	10077.0	0.0	-1.33	- HH14	21814.5	51.52
317.0	-2.20	10043.0	0.0	-2.14	HH15	21497.5	49.41
191.0	.50	9983.0	0.0	.51	- HH16	21306.5	48.92
233.0	-3.40	10093.0	0.0	-3.40	HH17	21073.5	45.54
377.5	1.20	9979.0	0.0	1.24	- HH18	20696.0	44.33
285.0	-.10	10003.0	0.0	-.13	HH19	20411.0	44.23
329.0	1.80	9966.0	0.0	1.75	- HH20	20082.0	42.50
376.0	-1.20	10018.0	0.0	-1.06	HH21	19706.0	41.48
216.0	-.30	10008.0	0.0	-.27	- HH22	19490.0	41.77
243.0	3.70	9902.0	0.0	3.74	HH23	19247.0	45.54
156.5	-4.20	10171.0	0.0	-4.20	- HH24	19090.5	49.76
91.5	1.80	9872.0	0.0	1.83	HH25	18999.0	51.61
147.0	-1.10	10047.0	0.0	-1.08	- -	18852.0	52.71
238.0	5.50	9852.0	0.0	5.53	HH27	18614.0	58.26
183.0	-.40	10013.0	0.0	-.37	- HH28	18431.0	58.65
216.5	2.60	9920.0	0.0	2.72	HH29	18214.5	61.40
199.0	1.50	9955.0	0.0	1.40	- HH30	18015.5	60.01
201.0	-5.30	10166.0	0.0	-5.24	HH31	17814.5	54.79
239.0	.40	9989.0	0.0	.41	- HH32	17575.5	54.40
149.5	0.00	9998.0	0.0	.04	HH33	17426.0	54.46
243.5	-.20	9989.0	.5	-.07	- HH34	17182.5	54.56
214.0	.80	9977.0	0.0	.77	HH35	16968.5	55.36
235.0	-3.34	0.0	0.0	-3.34	*- HH36	16733.5	58.72
137.0	-1.20	9986.0	1.5	-1.19	- -	16596.5	59.93
33.5	-.40	10067.0	0.0	-.35	HH37	16563.0	59.59
215.0	-.30	9965.0	1.5	-.31	- HH38	16348.0	59.92
135.0	-1.30	9964.0	2.0	-1.23	HH39	16213.0	58.70
131.0	-6.90	10339.0	0.0	-6.98	- -	16082.0	65.70
164.0	8.40	9676.0	0.0	8.35	HH41	15918.0	74.07
117.0	1.80	9900.0	0.0	1.83	- HH42	15801.0	72.24
138.0	-2.00	10093.0	0.0	-2.01	HH43	15663.0	70.24
191.0	-13.80	10459.0	0.0	-13.79	- HH45	15472.0	84.05

DISTANCE	DIFF/A	[illegible]	S-I	DIFF/C	NAME	LENGTH	ELEVATION
259.5	13.50	9671.0	0.0	13.42	- HH46	15212.5	70.66
199.0	-1.90	10057.0	0.0	-1.78	HH47	15013.5	68.89
163.0	3.50	9863.0	0.0	3.50	- HH48	14850.5	65.40
207.0	-1.10	10031.0	0.0	-1.00	HH49	14643.5	64.41
134.5	1.00	9954.0	0.0	.97	- HH50	14509.0	63.46
248.0	-6.60	10170.0	0.0	-6.62	HH52	14261.0	56.86
169.0	-.90	10028.0	0.0	-.74	- HH53	14092.0	57.62
137.0	.40	9980.0	0.0	.43	HH54	13955.0	56.06

DISTANCE	DIFF/N	ANGLE	S-I	DIFF/C		NAME	LENGTH	ELEVATION
13955.0	58.06					HH54	13955.0	58.06
4657.0	0.00							
274.5	13.60	9666.0	0.0	13.55	-	HH55	13680.5	44.50
220.0	-8.90	10198.0	1.0	-7.84	*	HH56	13460.5	36.66
223.0	5.10	9857.0	0.0	5.00	-	HH57	13237.5	31.65
278.5	-5.70	10130.0	0.0	-5.68		HH58	12959.0	25.96
247.0	4.60	9882.0	0.0	4.57	-	HH59	12712.0	21.38
243.0	-4.50	10107.0	0.0	-4.08	*	HH60	12469.0	17.30
351.0	-2.40	10042.0	0.0	-2.31	-	HH63	12118.0	19.61
223.5	-9.80	10278.0	0.0	-9.76		HH64	11894.5	9.85
251.0	-6.60	10172.0	0.0	-6.78	-	HH65	11643.5	16.63
156.5	3.40	9824.0	1.0	3.32		HH66	11487.0	19.96
243.5	10.70	9723.0	0.0	10.60	-	HH67	11243.5	9.36
212.0	1.60	9951.0	0.0	1.63		HH68	11031.5	10.99
166.0	-3.30	10128.0	0.0	-3.33	-	HH69	10865.5	14.33
267.0	-6.20	10148.0	0.0	-6.20		HH70	10598.5	8.12
374.5	1.40	9977.0	0.0	1.35	-	HH72	10224.0	6.77
215.0	-2.20	10063.0	0.0	-2.12		HH73	10009.0	4.64
322.0	-4.90	10093.0	0.0	-4.70	-	HH74	9687.0	9.34
389.0	15.00	9752.0	0.0	15.16		HH76	9298.0	24.50

DISTANCE	DIFF/M	ANGLE	S-I	DIFF/C		NAME	LENGTH	ELEVATION
79942.0	153.88					GRO	79942.0	153.88
12153.5	-.07							
58.0	-1.90	10204.0	0.0	-1.85		NS1	80000.0	152.02
210.0	1.30	9958.0	0.0	1.38	-	NS2	80210.0	150.63
67.0	-1.00	10099.0	0.0	-1.04		NS3	80277.0	149.59
232.0	12.20	9669.0	0.0	12.07	-	NS4	80509.0	137.51
208.0	4.40	9865.0	0.0	4.41		NS5	80717.0	141.92
227.0	-7.00	10198.0	0.0	-7.06	-	NS6	80944.0	148.98
248.0	11.50	9709.0	0.0	11.34		NS7	81192.0	160.33
260.0	-10.50	10265.0	0.0	-10.82	*-	NS8	81452.0	171.15
166.0	-.50	10020.0	0.0	-.52		NS9	81618.0	170.63
294.0	-6.60	10144.0	0.0	-6.65	-	NS10	81912.0	177.28
234.0	4.10	9893.0	0.0	3.93		NS11	82146.0	181.21
253.0	6.20	9844.0	0.0	6.20	-	NS12	82399.0	175.01
300.0	1.10	9980.0	0.0	.94		NS13	82699.0	175.95
329.0	1.50	9969.0	0.0	1.60	-	NS14	83028.0	174.35
343.0	5.20	9911.0	0.0	4.79	*	NS15	83371.0	179.14
153.0	-11.60	10486.0	0.0	-11.70	-	-	83524.0	190.84
136.5	6.70	9688.0	0.0	6.69		NS16	83660.5	197.54
166.5	-6.30	10246.0	0.0	-6.43	-	NS17	83827.0	203.97
278.0	-2.00	10047.0	0.0	-2.05		NS18	84105.0	201.92
218.0	-7.00	10204.0	0.0	-6.98	-	NS19	84323.0	208.91
197.0	6.10	9801.0	0.0	6.15		NS20	84520.0	215.06
231.5	-2.10	10061.0	0.0	-2.21	-	NS21	84751.5	217.28
251.5	15.80	9605.0	0.0	15.62		NS22	85003.0	232.90
208.5	10.50	9685.0	0.0	10.32	-	NS23	85211.5	222.58
266.5	6.70	9845.0	0.0	6.48	*	NS24	85478.0	229.07
253.5	-.90	10022.0	0.0	-.87	-	NS25	85731.5	229.94
210.5	6.70	9802.0	0.0	6.54		NS26	85942.0	236.49
242.5	-12.10	10324.0	0.0	-12.35	*-	NS27	86184.5	248.84
198.0	1.50	9973.0	0.0	.83	*	NS28	86382.5	249.68
181.0	3.40	9883.0	0.0	3.32	-	NS29	86563.5	246.35
194.0	-6.70	10220.0	0.0	-6.70		NS30	86757.5	239.64
117.0	2.40	9872.0	0.0	2.35	-	NS31	86874.5	237.29
251.0	-9.00	10232.0	0.0	-9.15		NS32	87125.5	228.14
241.5	3.90	9902.0	0.0	3.71	-	NS33	87367.0	224.42
157.0	-3.30	10136.0	0.0	-3.35		NS34	87524.0	221.06
176.0	2.80	9901.0	0.0	2.73	-	NS35	87700.0	218.32
89.0	-4.80	10344.0	0.0	-4.81		NS36	87789.0	213.51
177.5	8.50	9699.0	0.0	8.39	-	NS37	87966.5	205.11
271.5	-3.30	10078.0	0.0	-3.32		NS38	88238.0	201.78

DISTANCE	DIFF/M	ANGLE	S-1	DIFF/C		NAME	LENGTH	ELEVATION
223.0	-.90	10022.0	0.0	-.77	-	NS39	88461.0	202.55
210.0	2.10	9942.0	0.0	1.91		NS40	88671.0	204.46
279.0	-6.50	10149.0	0.0	-6.53	-	NS41	88950.0	210.99
179.0	-2.80	10098.0	0.0	-2.75		NS42	89129.0	208.24
197.0	-7.50	10244.0	0.0	-7.55	-	NS43	89326.0	215.79
246.0	13.10	9664.0	0.0	12.99		NS44	89572.0	228.78
37.0	.60	9904.0	0.0	.55	-	NS45	89609.0	228.23
260.0	-22.40	10551.0	0.0	-22.55		NS46	89869.0	205.66
251.0	-2.30	10057.0	0.0	-2.24	-	NS47	90120.0	207.91
238.0	5.50	9859.0	0.0	5.27	*	NS48	90358.0	213.18
176.0	-2.10	10081.0	0.0	-2.23	-	NS49	90534.0	215.42
217.0	2.70	9923.0	0.0	2.62		NS50	90751.0	218.04
199.5	-8.00	10257.0	0.0	-8.05	-	NS51	90950.5	226.10
278.5	-3.80	10086.0	0.0	-3.76		NS52	91229.0	222.34
153.0	-.50	10020.0	0.0	-.48	-	NS53	91382.0	222.82
222.0	6.30	9822.0	0.0	6.20		NS54	91604.0	229.02
102.0	-3.40	10214.0	0.0	-3.43	-	NS55	91706.0	232.45
180.0	1.70	9942.0	0.0	1.63		NS56	91886.0	234.09
82.5	-1.80	10141.0	0.0	-1.82	-	NS57	91968.5	235.92
127.0	.90	9955.0	0.0	.89		NS58	92095.5	236.82

DISTANCE	DIFF/M	ANGLE	S-I	DIFF/C		NAME	LENGTH	ELEVATION
92095.5	236.62					NS56	92095.5	236.82
11260.5	.10							
141.0	-6.90	10312.0	0.0	-6.91	-	NS59	92236.5	243.73
206.5	11.00	9660.0	0.0	11.03		NS60	92443.0	254.77
225.0	-9.50	10269.0	0.0	-9.51	-	NS61	92668.0	264.29
100.0	6.40	9596.0	0.0	6.35		NS62	92768.0	270.64
117.0	-5.10	10278.0	0.0	-5.11	-	NS63	92885.0	275.76
219.5	9.90	9711.0	0.0	9.97		NS64	93104.5	285.73
168.0	-1.70	10063.0	0.0	-1.66	-	NS65	93272.5	287.39
203.5	12.10	9624.0	0.0	12.03		NS66	93476.0	299.43
206.0	-14.00	10433.0	0.0	-14.03	-	NS67	93682.0	313.46
156.0	-3.80	10157.0	0.0	-3.84		NS68	93838.0	309.62
169.0	2.30	9915.0	0.0	2.25	-	NS69	94007.0	307.36
243.0	4.40	9884.0	0.0	4.42		NS70	94250.0	311.79
150.0	4.60	9804.0	0.0	4.61	-	NS71	94400.0	307.17
246.5	6.30	9837.0	0.0	6.31		NS72	94646.5	313.49
132.5	-6.90	10335.0	0.0	-6.97	-	NS73	94779.0	320.47
288.5	1.30	9973.0	0.0	1.22		NS74	95067.5	321.69
166.0	-8.80	10337.0	0.0	-8.79	-	NS75	95233.5	330.49
172.5	2.80	9897.0	0.0	2.79		NS76	95406.0	333.28
223.5	-2.30	10062.0	0.0	-2.17		NS77	95629.5	331.11
193.0	-7.00	10231.0	0.0	-7.00	-	NS78	95822.5	338.12
194.0	7.40	9756.0	0.0	7.43		NS79	96016.5	345.56
82.0	-8.50	10657.0	0.0	-8.49	-	NS80	96098.5	354.05
227.0	17.80	9502.0	0.0	17.79		NS81	96325.5	371.85
205.0	-1.20	10037.0	0.0	-1.19	-	NS82	96530.5	373.04
240.0	2.40	9937.0	0.0	2.37		NS83	96770.5	375.42
257.0	-.20	10005.0	0.0	-.20	-	NS84	97027.5	375.62
232.0	1.00	9972.0	0.0	1.02		NS85	97259.5	376.64
212.0	2.60	9906.0	0.0	3.13	*-	NS86	97471.5	373.52
167.0	5.20	9800.0	0.0	5.24		NS87	97638.5	378.77
198.0	-5.70	10180.0	0.0	-5.59	-	NS88	97836.5	384.37
203.0	3.20	9902.0	0.0	3.12		NS89	98039.5	387.49
192.0	12.80	9576.0	0.0	12.80	-	NS90	98231.5	374.69
225.0	-4.50	10127.0	0.0	-4.48		NS91	98456.5	370.20
183.0	5.30	9819.0	0.0	5.20	-	NS92	98639.5	365.00
208.0	-5.50	10167.0	0.0	-5.45		NS93	98847.5	359.54
214.5	-2.10	10061.0	0.0	-2.05	-	NS94	99062.0	361.60
300.0	-5.00	10111.0	0.0	-5.23	*	NS95	99362.0	356.37
253.5	6.20	9845.0	0.0	6.17	-	NS96	99615.5	350.20
205.0	-4.20	10131.0	0.0	-4.21		NS97	99820.5	345.98

DISTANCE	DIFF/M	ANGLE	S-I	DIFF/C		NAME	LENGTH	ELEVATION
237.0	8.10	9784.0	0.0	8.04	-	NS98	100057.5	337.94
229.0	-7.50	10209.0	0.0	-7.52		NS99	100286.5	330.42
271.0	10.00	9764.0	0.0	10.05	-	NS100	100557.5	320.38
251.0	-2.30	10057.0	0.0	-2.24		NS101	100808.5	318.13
241.0	-1.10	10029.0	0.0	-1.09	-	NS102	101049.5	319.23
342.5	-7.00	10128.0	0.0	-6.88		NS104	101392.0	312.35
195.0	5.20	9832.0	0.0	5.14	-	NS105	101587.0	307.20
169.0	-.70	10024.0	0.0	-.63		NS106	101756.0	306.56
208.0	3.00	9910.0	0.0	2.94	-	NS107	101964.0	303.63
195.0	-4.60	10152.0	0.0	-4.65		NS108	102159.0	298.97
243.5	11.40	9705.0	0.0	11.29	-	NS109	102402.5	287.68
93.5	-3.80	10259.0	0.0	-3.80		NS110	102496.0	283.88
232.0	9.10	9750.0	0.0	9.11	-	NS111	102728.0	274.76
209.0	-4.80	10148.0	0.0	-4.85		NS112	102937.0	269.91
235.0	5.80	9844.0	0.0	5.75	-	NS113	103172.0	264.15
184.0	-2.10	10062.0	0.0	-1.79	*	NS114	103356.0	262.36

DISTANCE	DIFF/M	ANGLE	S-1	DIFF/C		NAME	LENGTH	ELEVATION
92095.5	236.82					NS58	92095.5	236.82
11286.0	-.09							
424.0	-17.00	10392.0	0.0	-26.14	*-	ZZ1	92519.5	262.95
275.0	11.70	9732.0	0.0	11.58		ZZ2	92794.5	274.53
368.0	-5.40	10091.0	0.0	-5.26		ZZ3	93162.5	269.27
233.0	-11.60	10320.0	0.0	-11.72	-	ZZ4	93395.5	280.99
235.0	20.90	9434.0	0.0	20.94		ZZ5	93630.5	301.94
102.5	-6.80	10423.0	0.0	-6.82	-	ZZ6	93733.0	308.76
275.0	9.50	9782.0	0.0	9.42		ZZ7	94008.0	318.18
207.0	-11.90	10364.0	0.0	-11.84	-	ZZ8	94215.0	330.02
286.0	.80	9979.0	0.0	.94		ZZ9	94501.0	330.96
56.5	.50	9940.0	0.0	.53	-	ZZ10	94557.5	330.43
78.5	-3.00	10247.0	0.0	-3.04		ZZ11	94636.0	327.38
328.0	6.80	9868.0	0.0	6.80	-	ZZ12	94964.0	320.58
267.5	-2.00	10044.0	0.0	-1.84		ZZ14	95231.5	318.73
160.0	-4.90	10187.0	0.0	-4.70	-	ZZ13	95391.5	323.43
339.5	.30	9998.0	0.0	.10		ZZ15	95731.0	323.53
151.0	2.50	9894.0	0.0	2.51	-	ZZ16	95882.0	321.01
233.0	.60	9986.0	0.0	.51		ZZ17	96115.0	321.53
129.5	-1.60	10073.0	0.0	-1.48	-	ZZ18	96244.5	323.01
311.5	.30	9998.0	0.0	.09	*	ZZ19	96556.0	323.10
359.5	-.60	10010.0	0.0	-.56	-	ZZ20	96915.5	323.67
157.5	.80	9973.0	0.0	.66		ZZ21	97073.0	324.33
459.0	-3.30	10044.0	0.0	-3.17	-	ZZ22	97532.0	327.50
235.0	5.30	9857.0	0.0	5.27		ZZ23	97767.0	332.78
230.0	2.20	9883.0	2.0	2.22	-	ZZ24	97997.0	330.55
237.5	-1.50	10040.0	0.0	-1.49		ZZ25	98234.5	329.06
251.5	2.40	9939.0	0.0	2.40	-	ZZ26	98486.0	326.64
245.5	5.70	9854.0	0.0	5.63		ZZ27	98731.5	332.27
288.0	.20	10000.0	0.0	0.00	-	ZZ28	99019.5	332.27
243.0	9.20	9707.0	1.0	10.19	*	ZZ29	99262.5	342.46
287.0	0.00	10007.0	0.0	-.31	*-	ZZ30	99549.5	342.77
307.5	6.00	9877.0	0.0	5.94		ZZ31	99857.0	348.71
222.0	10.20	9706.0	0.0	10.25	-	ZZ32	100079.0	338.45
218.5	-5.60	10162.0	0.0	-5.56		ZZ33	100297.5	332.89
246.0	9.80	9746.0	0.0	9.82	-	ZZ34	100543.5	323.07
293.0	-9.10	10196.0	0.0	-9.02		ZZ35	100836.5	314.04
273.0	3.60	9917.0	0.0	3.55	-	ZZ36	101109.5	310.48
417.5	-6.30	10096.0	0.0	-6.29		ZZ38	101527.0	304.18
234.0	1.90	9963.0	0.0	1.36	*-	ZZ39	101761.0	302.82
248.5	.20	9995.0	0.0	.19		ZZ40	102009.5	303.01

DISTANCE	DIFF/M	ANGLE	S-1	DIFF/C		NAME	LENGTH	ELEVATION
217.5	7.30	9787.0	0.0	7.27	-	ZZ41	102227.0	295.73
324.5	-12.30	10240.0	0.0	-12.23		ZZ42	102551.5	283.49
317.0	10.50	9794.0	0.0	10.26	*-	ZZ43	102868.5	273.22
330.5	-9.30	10175.0	0.0	-9.08	*	ZZ44	103199.0	264.13
182.5	-1.90	10062.0	0.0	-1.77		NS114	103381.5	262.36

DISTANCE	DIFF/M	ANGLE	S-I	DIFF/C		NAME	LENGTH	ELEVATION
103356.0	262.36					NS114	103356.0	262.36
36077.0	-.23							
249.0	3.00	9923.0	0.0	3.01	-	NS115	103605.0	259.34
270.5	-8.50	10201.0	0.0	-8.54		NS116	103875.5	250.80
258.0	1.10	9972.0	0.0	1.13	-	NS117	104133.5	249.66
280.0	-6.10	10138.0	0.0	-6.07		NS118	104413.5	243.59
260.5	5.10	9877.0	0.0	5.03	-	NS119	104674.0	238.55
175.5	-3.20	10113.0	0.0	-3.11		NS120	104849.5	235.44
167.5	5.40	9799.0	0.0	5.29	-	NS121	105017.0	230.14
193.0	-2.20	10070.0	0.0	-2.12		NS122	105210.0	228.02
234.5	.70	9982.0	0.0	.66	-	NS123	105444.5	227.36
250.0	-3.40	10084.0	0.0	-3.29		NS124	105694.5	224.06
196.0	.70	9979.0	0.0	.64	-	NS125	105890.5	223.41
132.0	-1.10	10050.0	0.0	-1.03		NS126	106022.5	222.37
217.0	3.00	9916.0	0.0	2.86	-	NS127	106239.5	219.51
94.0	-4.40	10293.0	0.0	-4.32		NS128	106333.5	215.18
270.0	8.00	9813.0	0.0	7.93	-	NS129	106603.5	207.24
144.0	-3.60	10159.0	0.0	-3.59		NS130	106747.5	203.64
179.5	4.60	9840.0	0.0	4.51	-	NS131	106927.0	199.13
217.5	-11.50	10334.0	0.0	-11.42		NS132	107144.5	187.71
97.0	3.50	9774.0	0.0	3.44	-	NS133	107241.5	184.26
188.0	-10.40	10352.0	0.0	-10.40		NS134	107429.5	173.85
240.5	7.60	9798.0	0.0	7.63	-	NS135	107670.0	166.22
180.0	-6.20	10221.0	0.0	-6.25		NS136	107850.0	159.97
207.0	7.60	9769.0	0.0	7.51	-	NS137	108057.0	152.45
181.0	-8.50	10298.0	0.0	-8.47		NS138	108238.0	143.97
227.0	-.20	10003.0	0.0	-.10	-	NS139	108465.0	144.08
379.5	-15.60	10265.0	0.0	-15.80	*	HR2	108844.5	128.27
233.0	15.20	9588.0	0.0	15.10	-	HR3	109077.5	113.17
151.0	-7.60	10323.0	0.0	-7.66		HR4	109228.5	105.50
192.0	9.90	9672.0	0.0	9.90	-	HR5	109420.5	95.60
252.5	-6.10	10154.0	0.0	-6.10		HR6	109673.0	89.48
246.5	19.90	9486.0	0.0	19.94	-	HR7	109919.5	69.54
93.0	-7.20	10494.0	0.0	-7.23		HR8	110012.5	62.31
177.0	11.70	9582.0	0.0	11.63	-	HR9	110189.5	50.67
158.0	-9.70	10388.0	0.0	-9.64		HR10	110347.5	41.02
115.0	3.30	9817.0	0.0	3.30	-	HR11	110462.5	37.72
137.0	-1.30	10062.0	0.0	-1.33		HR12	110599.5	36.38
252.0	1.50	9960.0	0.0	1.58	-	HR13	110851.5	34.80
222.0	-1.00	10028.0	0.0	-.97		HR14	111073.5	33.82

DISTANCE	DIFF/M	ANGLE	S-I	DIFF/C	NAME	LENGTH	ELEVATION
127.0	-1.30	10062.0	0.0	-1.23	- HR15	111200.5	35.05
283.5	2.60	9944.0	0.0	2.49	HR16	111484.0	37.55
303.5	2.90	9941.0	0.0	2.81	- HR17	111787.5	34.73
189.5	1.10	9967.0	0.0	.98	HR18	111977.0	35.71
278.0	-5.80	10133.0	0.0	-5.80	- HR19	112255.0	41.52
280.0	-.40	10008.0	0.0	-.35	HR20	112535.0	41.17
232.5	-1.00	10025.0	0.0	-.91	- HR21	112767.5	42.08
150.0	3.00	9876.0	0.0	2.92	HR22	112917.5	45.00
231.0	12.80	9648.0	0.0	12.78	- HR23	113148.5	32.21
217.0	-3.20	10093.0	0.0	-3.17	HR24	113365.5	29.04
143.0	5.90	9739.0	0.0	5.86	- HR25	113508.5	23.17
250.0	-9.70	10250.0	0.0	-9.82	HR26	113758.5	13.35
252.0	1.70	9956.0	0.0	1.74	- HR27	114010.5	11.61
320.0	-3.00	10061.0	0.0	-3.06	HR28	114330.5	8.54
261.0	2.30	9945.0	0.0	2.25	- HR29	114591.5	6.28
267.0	-1.40	10033.0	0.0	-1.38	HR30	114858.5	4.90
220.0	-1.80	10052.0	0.0	-1.79	- HR31	115078.5	6.69
395.0	-.30	10005.0	0.0	-.31	HR33	115473.5	6.38
204.0	-8.70	10273.0	0.0	-8.75	- HR34	115677.5	15.13
163.0	.80	9969.0	0.0	.79	HR35	115840.5	15.92
240.0	-5.40	10143.0	0.0	-5.39	- HR36	116080.5	21.31
268.5	-1.80	10042.0	0.0	-1.77	- HR37	116349.0	23.08
244.0	-3.20	10084.0	0.0	-3.21	HR38	116593.0	19.86
221.5	1.30	9963.0	0.0	1.28	- HR39	116814.5	18.57
240.5	0.00	10002.0	0.0	-.07	HR40	117055.0	18.50
227.5	1.30	9965.0	0.0	1.25	- HR41	117282.5	17.24
168.0	3.90	9851.0	0.0	3.93	HR42	117450.5	21.18
131.0	.70	9965.0	0.0	.72	- HR43	117581.5	20.45
269.0	.60	9986.0	0.0	.59	HR44	117850.5	21.04
240.5	2.70	9929.0	0.0	2.68	- HR45	118091.0	18.36
225.0	.40	9987.0	0.0	.45	HR46	118316.0	18.82
245.0	-2.70	10068.0	0.0	-2.61	- HR47	118561.0	21.43
274.0	-2.80	10063.0	0.0	-2.71	HR48	118835.0	18.72
226.5	-2.20	10061.0	0.0	-2.17	- HR49	119061.5	20.89
233.0	6.80	9813.0	0.0	6.84	HR50	119294.5	27.73
273.5	3.10	9927.0	0.0	3.13	- HR51	119568.0	24.60
208.0	1.10	9966.0	0.0	1.11	HR52	119776.0	25.71
217.5	-7.00	10204.0	0.0	-6.97	- HR53	119993.5	32.68
297.5	1.10	9979.0	0.0	.98	HR54	120291.0	33.66
253.0	-3.80	10096.0	0.0	-3.81	- HR55	120544.0	37.47
145.0	-1.30	10054.0	0.0	-1.22	HR56	120689.0	36.24

DISTANCE	DIFF/M	ANGLE	S-I	DIFF/C		NAME	LENGTH	ELEVATION
182.5	-5.20	10183.0	0.0	-5.24	-	HR57	120871.5	41.49
244.0	3.80	9901.0	0.0	3.79		HR58	121115.5	45.28
161.0	-5.20	10204.0	0.0	-5.16	-	HR59	121276.5	50.44
181.0	8.40	9706.0	0.0	8.36		HR60	121457.5	58.80
275.0	1.00	9978.0	0.0	.95		NS200	121732.5	59.75
309.0	-5.80	10119.0	0.0	-5.77	-	NS201	122041.5	65.53
145.0	2.70	9882.0	0.0	2.68		NS202	122186.5	68.21
305.0	-12.50	10261.0	0.0	-12.51	-	NS203	122491.5	80.72
165.0	7.20	9723.0	0.0	7.18		NS204	122656.5	87.90
230.0	-10.40	10288.0	0.0	-10.41	-	NS205	122886.5	98.31
168.0	2.10	9923.0	0.0	2.03		NS206	123054.5	100.35
238.0	-3.10	10082.0	0.0	-3.06	-	NS207	123292.5	103.41
187.0	-1.00	10032.0	0.0	-.93		NS208	123479.5	102.47
217.0	3.90	9887.0	0.0	3.85	-	NS209	123696.5	98.62
245.0	-4.70	10121.0	0.0	-4.65		NS210	123941.5	93.96
251.0	-3.20	10079.0	0.0	-3.11	-	NS211	124192.5	97.07
254.0	-.40	10009.0	0.0	-.35		NS212	124446.5	96.71
253.0	-9.70	10246.0	0.0	-9.78	-	NS213	124699.5	106.49
183.0	3.00	9896.0	0.0	2.98		NS214	124882.5	109.48
274.0	-2.00	10045.0	0.0	-1.93	-	NS215	125156.5	111.41
263.0	4.40	9895.0	0.0	4.33		NS216	125419.5	115.75
202.0	-3.40	10108.0	0.0	-3.42	-	NS217	125621.5	119.17
270.0	11.70	9727.0	0.0	11.58		NS218	125891.5	130.76
187.0	-3.90	10130.0	0.0	-3.81	-	NS219	126078.5	134.58
294.0	3.30	9930.0	0.0	3.23		NS220	126372.5	137.81
244.5	-3.30	10084.0	0.0	-3.22	-	NS221	126617.0	141.03
282.5	8.30	9816.0	0.0	8.16		NS222	126899.5	149.20
193.0	-4.10	10134.0	0.0	-4.06	-	NS223	127092.5	153.26
149.0	7.30	9693.0	0.0	7.19		NS224	127241.5	160.45
208.0	-.60	10019.0	0.0	-.62	-	NS225	127449.5	161.07
231.0	-1.60	10042.0	0.0	-1.52		NS226	127680.5	159.54
219.0	-.70	10018.0	0.0	-.61	-	NS227	127899.5	160.16
189.0	-1.20	10037.0	0.0	-1.09		NS228	128088.5	159.06
186.0	-1.00	10033.0	0.0	-.96	-	NS229	128274.5	160.02
314.0	-13.20	10267.0	0.0	-13.17		NS230	128588.5	146.85
235.0	13.90	9627.0	0.0	13.78	-	NS231	128823.5	133.06
204.0	-11.70	10366.0	0.0	-11.74		NS232	129027.5	121.32
181.0	9.40	9673.0	0.0	9.30	-	NS233	129208.5	112.01
139.0	-6.60	10304.0	0.0	-6.64		NS234	129347.5	105.37
216.0	6.40	9801.0	0.0	6.75	*	NS235	129563.5	112.12

DISTANCE	DIFF/M	ANGLE	S-I	DIFF/C		NAME	LENGTH	ELEVATION
187.0	-13.60	10461.0	0.0	-13.56	-	NS236	129750.5	125.68
185.0	2.60	9913.0	0.0	2.52		NS237	129935.5	128.21
285.0	0.00	10001.0	0.0	-.04	-	NS238	130220.5	128.25
370.0	-10.50	10180.0	0.0	-10.46		NS239	130590.5	117.79
201.0	-3.20	10102.0	0.0	-3.22	-	NS240	130791.5	121.01
211.0	5.60	9830.0	0.0	5.63		NS241	131002.5	126.64
248.0	-1.10	10030.0	0.0	-1.16	-	NS242	131250.5	127.81
219.0	6.50	9812.0	0.0	6.46		NS243	131469.5	134.28
273.0	-11.50	10268.0	0.0	-11.49	-	NS244	131742.5	145.77
144.5	4.70	9795.0	0.0	4.65		NS245	131887.0	150.43
344.0	-5.30	10097.0	0.0	-5.24	-	NS247	132231.0	155.67
173.0	-2.90	10106.0	0.0	-2.88		NS248	132404.0	152.79
217.0	13.30	9614.0	0.0	13.17	-	NS249	132621.0	139.61
254.0	-6.80	10171.0	0.0	-6.82		NS250	132875.0	132.78
213.5	7.80	9768.0	0.0	7.78	-	NS251	133088.5	125.00
246.0	-8.60	10222.0	0.0	-8.58		NS252	133334.5	116.42
216.5	16.50	9518.0	0.0	16.42	-	NS253	133551.0	99.99
197.0	-1.50	10051.0	0.0	-1.57		NS254	133748.0	98.41
202.0	2.00	9936.0	0.0	2.03	-	NS255	133950.0	96.38
294.0	-5.50	10119.0	0.0	-5.49		NS256	134244.0	90.88
196.5	.40	9991.0	0.0	.27	-	NS257	134440.5	90.60
237.0	2.70	9928.0	0.0	2.68		NS258	134677.5	93.28
250.0	7.70	9807.0	0.0	7.58	-	NS259	134927.5	85.70
274.0	4.80	9889.0	0.0	4.77		NS260	135201.5	90.47
129.0	-1.00	10048.0	0.0	-.97	-	NS261	135330.5	91.45
245.0	-10.00	10260.0	0.0	-10.01		NS262	135575.5	81.43
226.0	.80	9978.0	0.0	.78	-	NS263	135801.5	80.65
264.0	-4.50	10106.0	0.0	-4.39	-	NS264	136065.5	85.05
221.0	-4.10	10118.0	0.0	-4.09		NS265	136286.5	80.95
187.0	5.20	9824.0	0.0	5.17	-	NS266	136473.5	75.77
345.0	-9.00	10166.0	0.0	-8.99		NS267	136818.5	66.77
284.0	-4.30	10097.0	0.0	-4.32	-	NS268	137102.5	71.10
293.5	-6.30	10137.0	0.0	-6.31		NS269	137396.0	64.78
397.5	2.30	9966.0	0.0	2.12	-	NS271	137793.5	62.66
307.5	-8.60	10178.0	0.0	-8.59		NS272	138101.0	54.05
260.0	6.10	9853.0	0.0	6.00	-	NS273	138361.0	48.05
210.0	-5.20	10155.0	0.0	-5.11		NS274	138571.0	42.93
204.0	5.40	9833.0	0.0	5.35	-	NS276	138775.0	37.58
158.0	-12.10	10488.0	0.0	-12.13		NS275	138933.0	25.44
278.0	19.00	9568.0	0.0	18.89	-	NS277	139211.0	6.55
222.0	0.00	9997.0	0.0	.10		NS278	139433.0	6.65

DISTANCE	DIFF/M	ANGLE	S-I	DIFF/C		NAME	LENGTH	ELEVATION
139433.0	6.66					NS278	139433.0	6.66
24523.0	1.12							
229.5	-3.70	10101.0	0.0	-3.64	-	NS279	139662.5	10.31
143.0	.50	9979.0	0.0	.47		NS280	139805.5	10.79
260.0	-1.90	10043.0	0.0	-1.75	-	NS281	140065.5	12.55
250.0	16.80	9572.0	0.0	16.83		NS282	140315.5	29.40
59.0	-3.90	10417.0	0.0	-3.87	-	NS283	140374.5	33.27
305.0	13.40	9721.0	0.0	13.37		NS284	140679.5	46.66
243.0	-17.60	10462.0	0.0	-17.66	-	NS285	140922.5	64.34
252.0	20.90	9471.0	0.0	20.98		NS286	141174.5	85.34
143.0	-16.60	10736.0	0.0	-16.60	-	NS287	141317.5	101.95
187.0	14.60	9504.0	0.0	14.59		NS288	141504.5	116.56
178.5	-8.60	10308.0	0.0	-8.64	-	NS289	141683.0	125.21
227.5	7.70	9784.0	0.0	7.72		NS290	141910.5	132.94
154.5	-3.80	10157.0	0.0	-3.81	-	NS291	142065.0	136.76
211.0	-1.30	10038.0	0.0	-1.25		NS292	142276.0	135.51
254.5	-1.10	10027.0	0.0	-1.07	-	NS293	142530.5	136.60
211.5	.50	9987.0	0.0	.43		NS294	142742.0	137.04
177.0	-1.00	10036.0	0.0	-1.00	-	NS295	142919.0	138.05
213.5	-2.70	10080.0	0.0	-2.68		NS296	143132.5	135.38
285.5	11.60	9745.0	0.0	11.44	-	NS297	143418.0	123.95
100.0	-.20	10015.0	0.0	-.23		-	143518.0	123.72
181.0	3.50	9876.0	0.0	3.52	-	NS298	143699.0	120.20
249.0	-1.80	10045.0	0.0	-1.76		NS299	143948.0	118.45
203.5	-.60	10016.0	0.0	-.51	-	NS300	144151.5	118.97
208.0	-1.10	10030.0	0.0	-.98		NS301	144359.5	118.00
231.5	2.40	9935.0	0.0	2.36	-	NS302	144591.0	115.65
263.0	-1.90	10041.0	0.0	-1.69	*	NS303	144854.0	113.96
206.0	2.70	9918.0	0.0	2.65	-	-	145060.0	111.32
23.5	-1.40	10382.0	0.0	-1.41		NS304	145083.5	109.91
240.0	3.80	9896.0	0.0	3.92	-	NS305	145323.5	106.00
254.5	-2.20	10053.0	0.0	-2.11		NS306	145578.0	103.89
255.0	-1.10	10025.0	0.0	-1.00	-	NS307	145833.0	104.91
199.5	2.10	9933.0	0.0	2.09		NS308	146032.5	107.01
287.0	-3.70	10080.0	0.0	-3.60	-	NS309	146319.5	110.63
242.5	1.00	9975.0	0.0	.95		NS310	146562.0	111.60
273.0	1.70	9961.0	0.0	1.67	-	NS311	146835.0	109.94
301.5	2.50	9946.0	0.0	2.55		NS312	147136.5	112.51
233.0	-2.50	10067.0	0.0	-2.45	-	NS313	147369.5	114.97
166.5	8.00	9696.0	0.0	7.95		NS314	147536.0	122.94

DISTANCE	DIFF/M	ANGLE	S-I	DIFF/C		NAME	LENGTH	ELEVATION
262.5	7.30	9825.0	0.0	7.21	-	NS315	147798.5	115.73
263.0	-.90	10021.0	0.0	-.86		NS316	148061.5	114.87
217.0	1.20	9963.0	0.0	1.26	-	NS317	148278.5	113.62
341.0	-7.80	10146.0	0.0	-7.82		NS318	148619.5	105.82
412.5	4.20	9935.0	0.0	4.21	-	NS319	149032.0	101.62
251.0	-4.60	10117.0	0.0	-4.61		NS320	149283.0	97.02
202.0	-9.10	10287.0	0.0	-9.11	-	NS321	149485.0	106.14
251.5	-3.10	10080.0	0.0	-3.16		NS322	149736.5	103.00
309.0	8.00	9837.0	0.0	7.91	-	NS323	150045.5	95.10
121.0	-3.20	10166.0	0.0	-3.15		NS324	150166.5	91.95
122.0	6.50	9665.0	0.0	6.42	-	NS325	150288.5	85.53
247.0	-14.00	10359.0	0.0	-13.94		NS326	150535.5	71.59
184.0	-1.50	10050.0	0.0	-1.44	-	NS327	150719.5	73.05
274.0	7.30	9832.0	0.0	7.23		NS328	150993.5	80.29
123.0	-2.80	10143.0	0.0	-2.76	-	NS329	151116.5	83.06
143.0	1.60	9929.0	0.0	1.59		NS330	151259.5	84.66
277.5	-9.20	10211.0	0.0	-9.20	-	NS331	151537.0	93.88
230.5	27.70	9237.0	0.0	27.75		NS332	151767.5	121.64
182.0	-7.50	10263.0	0.0	-7.52	-	NS333	151949.5	129.18
225.0	-11.10	10312.0	0.0	-11.03		NS334	152174.5	118.15
210.0	13.70	9588.0	0.0	13.60	-	NS335	152384.5	104.55
288.5	-3.70	10080.0	0.0	-3.62		NS336	152673.0	100.94
154.0	-23.70	10973.0	0.0	-23.72	-	NS337	152827.0	124.67
18.0	.30	9909.0	0.0	.25		NS338	152845.0	124.93
72.0	.30	9975.0	0.0	.28	-	NS339	152917.0	124.65
290.0	-6.50	10142.0	0.0	-6.46		NS340	153207.0	118.19
132.0	9.90	9526.0	0.0	9.84	-	NS341	153339.0	108.35
187.5	-12.70	10430.0	0.0	-12.68		NS342	153526.5	95.67
283.5	22.10	9506.0	0.0	22.04	-	NS343	153810.0	73.64
327.0	-26.50	10513.0	0.0	-26.40		NS344	154137.0	47.25
320.0	4.60	9911.0	0.0	4.47	-	NS345	154457.0	42.79
222.0	5.80	9832.0	0.0	5.85		NS346	154679.0	48.66
190.0	2.90	9903.0	0.0	2.89	-	NS347	154869.0	45.78
228.0	5.10	9858.0	0.0	5.08		NS348	155097.0	50.87
250.0	13.40	9661.0	0.0	13.32	-	NS349	155347.0	37.56
217.0	-2.30	10069.0	0.0	-2.35		NS350	155564.0	35.22
240.0	.40	9992.0	0.0	.30	-	NS351	155804.0	34.93
240.0	-1.30	10029.0	0.0	-1.09	*	NS352	156044.0	33.84
108.5	.20	9991.0	0.0	.15	-	NS353	156152.5	33.70
152.5	-1.30	10053.0	0.0	-1.26		NS354	156305.0	32.43

DISTANCE	DIFF/M	ANGLE	S-I	DIFF/C		NAME	LENGTH	ELEVATION
118.0	-1.70	10090.0	0.0	-1.66	-	NS356	156423.0	34.11
232.5	1.60	9958.0	0.0	1.53		NS355	156655.5	35.65
205.0	-.50	10012.0	0.0	-.38	-	NS357	156860.5	36.05
233.5	0.00	10001.0	0.0	-.03		NS358	157094.0	36.02
256.0	-2.30	10055.0	0.0	-2.21	-	NS359	157350.0	38.24
195.5	3.50	9889.0	0.0	3.40		NS360	157545.5	41.66
168.0	-7.00	10265.0	0.0	-6.99	-	NS361	157713.5	48.67
198.0	1.60	9950.0	0.0	1.55		NS362	157911.5	50.23
243.0	-5.10	10133.0	0.0	-5.07	-	NS363	158154.5	55.32
242.5	2.70	9930.0	0.0	2.66		NS364	158397.0	58.00
297.0	-1.40	10029.0	0.0	-1.35	-	NS365	158694.0	59.36
279.5	1.70	9963.0	0.0	1.62		NS366	158973.5	61.00
267.0	-6.80	10161.0	0.0	-6.75	-	NS367	159240.5	67.77
257.0	5.80	9860.0	0.0	5.65		NS368	159497.5	73.43
233.0	-2.50	10068.0	0.0	-2.48	-	NS369	159730.5	75.93
193.0	4.20	9862.0	0.0	4.18		NS370	159923.5	80.12
185.5	-3.20	10109.0	0.0	-3.17	-	NS371	160109.0	83.31
227.0	2.30	9939.0	0.0	2.17		NS372	160336.0	85.49
221.0	1.50	9957.0	0.0	1.49	-	NS373	160557.0	84.01
240.0	-2.60	10068.0	0.0	-2.56		NS374	160797.0	81.46
188.0	2.30	9922.0	0.0	2.30	-	NS375	160985.0	79.16
125.0	-2.10	10108.0	0.0	-2.12		NS376	161110.0	77.05
294.0	4.50	9902.0	0.0	4.52	-	NS377	161404.0	72.54
270.0	6.10	9857.0	0.0	6.06		NS378	161674.0	78.61
234.5	-2.40	10065.0	0.0	-2.39	-	NS379	161908.5	81.02
227.0	4.00	9889.0	0.0	3.95		NS380	162135.5	84.99
213.0	-.80	10024.0	0.0	-.80	-	NS381	162348.5	85.80
190.0	-1.40	10045.0	0.0	-1.34		NS382	162538.5	84.47
228.0	3.10	9915.0	0.0	3.04	-	NS383	162766.5	81.43
253.5	-.40	10010.0	0.0	-.39		NS384	163020.0	81.05
226.0	-2.90	10082.0	0.0	-2.91	-	NS385	163246.0	83.97
251.0	2.90	9922.0	0.0	3.07		NS386	163497.0	87.05
254.0	-3.10	10078.0	0.0	-3.11	-	NS387	163751.0	90.18
205.0	-.80	10024.0	0.0	-.77		NS388	163956.0	89.41

DISTANCE	DIFF/M	ANGLE	S-I	DIFF/C		NAME	LENGTH	ELEVATION
163956.0	89.42					NS388	163956.0	89.42
22734.5	.64							
260.0	7.10	9829.0	0.0	6.98	-	NS389	164216.0	82.44
146.0	-4.30	10186.0	0.0	-4.26		NS390	164362.0	78.17
220.0	6.00	9828.0	0.0	5.94	-	NS391	164582.0	72.23
171.0	.80	9970.0	0.0	.80		NS392	164753.0	73.05
253.0	8.40	9790.0	0.0	8.34	-	NS393	165006.0	64.70
129.5	-3.90	10193.0	0.0	-3.92		NS394	165135.5	60.78
113.0	7.00	9611.0	0.0	6.91	-	NS395	165248.5	53.87
337.5	-5.00	10093.0	0.0	-4.93		NS396	165586.0	48.95
134.0	1.80	9916.0	0.0	1.76	-	NS397	165720.0	47.18
330.0	.60	9991.0	0.0	.46		NS398	166050.0	47.66
189.5	-13.70	10458.0	0.0	-13.65	-	NS399	166239.5	61.32
180.0	5.10	9821.0	0.0	5.06		NS400	166419.5	66.39
232.0	-1.10	10032.0	0.0	-1.16	-	NS401	166651.5	67.56
273.0	-.40	10007.0	0.0	-.30		NS402	166924.5	67.27
196.5	0.00	9998.0	0.0	.06	-	NS403	167121.0	67.21
211.0	-1.40	10041.0	0.0	-1.35		NS404	167332.0	65.86
276.5	1.60	9964.0	0.0	1.56	-	NS405	167608.5	64.31
173.0	-2.90	10105.0	0.0	-2.85		NS406	167781.5	61.46
130.0	-2.60	10127.0	0.0	-2.59	-	NS407	167911.5	64.05
90.0	-.20	10015.0	0.0	-.21		NS408	168001.5	63.84
181.0	-1.90	10066.0	0.0	-1.87	-	NS409	168182.5	65.73
226.0	1.90	9949.0	0.0	1.81		NS410	168408.5	67.54
247.0	-1.60	10041.0	0.0	-1.59	-	NS411	168655.5	69.14
254.5	-6.80	10171.0	0.0	-6.83		NS412	168910.0	62.31
275.0	1.70	9962.0	0.0	1.64	-	NS413	169185.0	60.68
206.0	-4.10	10126.0	0.0	-4.07		NS414	169391.0	56.60
244.0	3.80	9905.0	0.0	3.64	-	NS415	169635.0	52.97
205.0	-.10	10004.0	0.0	-.12		NS416	169840.0	52.85
120.0	-.90	10047.0	0.0	-.88	-	NS417	169960.0	53.74
220.0	-1.30	10038.0	0.0	-1.31		NS418	170180.0	52.43
196.0	3.60	9883.0	0.0	3.60	-	NS419	170376.0	48.83
230.0	-2.20	10060.0	0.0	-2.16		NS420	170606.0	46.67
226.0	3.70	9897.0	0.0	3.65	-	NS421	170832.0	43.02
199.0	-5.00	10160.0	0.0	-5.00		NS422	171031.0	38.02
240.5	4.60	9877.0	0.0	4.64	-	NS423	171271.5	33.38
228.0	-3.30	10093.0	0.0	-3.33		NS424	171499.5	30.06
240.0	7.60	9798.0	0.0	7.61	-	NS425	171739.5	22.45
244.0	-5.40	10113.0	1.0	-5.33		NS426	171983.5	17.12

DISTANCE	DIFF/M	ANGLE	S-I	DIFF/C		NAME	LENGTH	ELEVATION
246.0	5.00	9870.0	0.0	5.02	-	NS427	172229.5	12.11
264.0	-4.50	10109.0	0.0	-4.52		NS428	172493.5	7.59
133.0	5.70	9724.0	0.0	5.76	-	NS429	172626.5	1.83
171.5	0.00	0.0	0.0	0.00	*-	NS430	172798.0	1.83
240.0	-.60	10014.0	0.0	-.52		NS431	173038.0	1.31
234.0	.10	9996.0	0.0	.14	-	NS432	173272.0	1.17
229.0	-.10	10003.0	0.0	-.10		NS433	173501.0	1.07
202.0	.10	9995.0	0.0	.15	-	NS434	173703.0	.92
225.0	0.00	9985.0	.5	.03		NS435	173928.0	.95
225.0	-.40	10008.0	0.0	-.28	-	NS436	174153.0	1.24
217.5	-.20	10004.0	0.0	-.13		NS437	174370.5	1.11
189.5	-.30	10008.0	0.0	-.23	-	NS438	174560.0	1.35
241.5	22.40	9409.0	0.0	22.48		NS439	174801.5	23.85
117.0	-16.20	10871.0	0.0	-16.10	-	NS440	174918.5	39.96
193.0	15.20	9500.0	0.0	15.18		NS441	175111.5	55.15
310.0	-12.00	10246.0	0.0	-11.98	-	NS442	175421.5	67.14
209.5	9.80	9686.0	.5	9.84		NS443	175631.0	76.99
201.5	-11.50	10364.0	0.0	-11.53	-	NS444	175832.5	88.53
191.0	18.60	9381.0	0.0	18.63		NS445	176023.5	107.17
142.0	-23.50	11044.0	0.0	-23.49	-	NS446	176165.5	130.67
200.0	-6.60	10210.0	0.0	-6.59		NS447	176365.5	124.07
218.0	.10	9996.0	0.0	.13	-	NS448	176583.5	123.94
155.0	8.80	9598.0	1.0	8.80		NS449	176738.5	132.75
192.0	5.40	9819.0	0.0	5.46	-	NS450	176930.5	127.29
199.5	-13.40	10427.0	0.0	-13.40		NS451	177130.0	113.90
258.0	11.70	9709.0	0.0	11.80	-	NS452	177388.0	102.10
187.0	-6.60	10225.0	0.0	-6.61		NS453	177575.0	95.50
258.0	-11.00	10272.0	0.0	-11.02	-	NS454	177833.0	106.54
21.0	.50	9852.0	0.0	.48		-	177854.0	107.02
214.5	7.90	9763.0	0.0	7.98	-	NS455	178068.5	99.04
93.0	1.70	9881.0	0.0	1.73		NS456	178161.5	100.78
313.0	-1.50	10030.0	0.0	-1.47	-	NS457	178474.5	102.27
185.0	3.90	9866.0	0.0	3.89		NS458	178659.5	106.17
237.0	-12.30	10332.0	0.0	-12.37	-	NS459	178896.5	118.54
154.0	2.30	9903.0	0.0	2.34		NS460	179050.5	120.89
208.5	-2.00	10061.0	0.0	-1.99	-	NS461	179259.0	122.90
216.5	-1.30	10038.0	0.0	-1.29		NS462	179475.5	121.61
222.5	1.20	9968.0	0.0	1.11	-	NS463	179698.0	120.50
211.5	-2.00	10059.0	0.0	-1.96		NS464	179909.5	118.55
202.0	9.80	9689.0	0.0	9.87	-	NS465	180111.5	108.68
198.0	-4.00	10128.0	0.0	-3.98		NS466	180309.5	104.70

DISTANCE	DIFF/M	ANGLE	S-I	DIFF/C		NAME	LENGTH	ELEVATION
183.5	3.00	9895.0	0.0	3.02	-	NS467	180493.0	101.68
191.0	-1.30	10041.0	0.0	-1.23		NS468	180684.0	100.45
206.0	2.20	9931.0	0.0	2.23	-	NS469	180890.0	98.23
188.0	3.70	9872.0	0.0	3.78	-	NS470	181078.0	94.45
201.0	-3.60	10113.0	0.0	-3.56		NS471	181279.0	90.89
207.5	-4.50	10136.0	0.0	-4.43	-	NS472	181486.5	95.33
205.0	3.80	9884.0	0.0	3.73		NS473	181691.5	99.07
211.0	-.90	10023.0	0.0	-.76	-	NS474	181902.5	99.84
199.0	1.20	9958.0	0.0	1.31		NS475	182101.5	101.16
217.5	2.00	9940.0	0.0	2.04	-	NS476	182319.0	99.11
203.0	-1.50	10049.0	0.0	-1.56		NS477	182522.0	97.56
210.0	2.30	9930.0	0.0	2.30	-	NS478	182732.0	95.25
204.5	-.20	10005.0	0.0	-.16		NS479	182936.5	95.10
196.0	.10	9996.0	0.0	.12	-	NS480	183132.5	94.98
202.5	-.40	9996.0	.5	-.37		NS481	183335.0	94.61
127.0	..70	9964.0	0.0	.71	-	NS482	183462.0	93.90
242.5	-1.50	10037.0	0.0	-1.40		NS483	183704.5	92.50
199.0	-1.40	10046.0	0.0	-1.43	-	NS484	183903.5	93.94
198.0	7.80	9747.0	0.0	7.87		NS485	184101.5	101.82
90.0	-4.00	10282.0	0.0	-3.98	-	-	184191.5	105.81
156.0	1.30	9947.0	0.0	1.29		NS486	184347.5	107.11
177.5	7.90	9715.0	0.0	7.95	-	NS487	184525.0	99.17
206.0	-7.30	10225.0	0.0	-7.28		NS488	184731.0	91.89
207.0	.40	9988.0	0.0	.39	-	NS489	184938.0	91.50
208.0	-1.50	10041.0	0.0	-1.33		NS490	185146.0	90.17
174.0	1.60	9906.0	1.0	1.56	-	NS491	185320.0	88.60
195.0	-3.80	10125.0	0.0	-3.82		NS492	185515.0	84.78
159.0	-3.00	10119.0	0.0	-2.97	-	NS493	185674.0	87.76
244.0	-9.60	10251.0	0.0	-9.62		NS494	185918.0	78.14
215.5	-2.00	10060.0	0.0	-2.03	-	NS495	186133.5	80.18
275.5	-1.40	10030.0	0.0	-1.29		-	186409.0	78.89
281.5	.70	9986.0	0.0	.61	-	RH1	186690.5	78.28

DISTANCE	DIFF/M	ANGLE	S-I	DIFF/C		NAME	LENGTH	ELEVATION
0.0	78.28					RH1	0.0	78.28
20658.0	.07							
213.0	7.50	9773.0	0.0	7.59		RH2	213.0	85.87
248.0	-7.50	10192.0	0.0	-7.48	-	RH3	461.0	93.36
239.0	10.20	9730.0	0.0	10.14		RH4	700.0	103.50
175.0	-8.30	10303.0	0.0	-8.33	-	RH5	875.0	111.84
184.5	2.50	9914.0	0.0	2.49		RH6	1059.5	114.33
283.0	-5.10	10115.0	0.0	-5.11	-	RH7	1342.5	119.44
223.0	-1.00	10027.0	0.0	-.94		RH8	1565.5	118.50
245.0	10.50	9728.0	0.0	10.47	-	RH9	1810.5	108.02
237.0	-8.30	10224.0	0.0	-8.34		RH10	2047.5	99.68
235.0	4.20	9885.0	0.0	4.24	-	RH11	2282.5	95.44
238.5	1.00	9972.0	0.0	1.04		RH12	2521.0	96.49
226.5	-1.90	10050.0	0.0	-1.77	-	RH13	2747.5	98.27
244.0	.40	9993.0	0.0	.26		RH14	2991.5	98.54
228.0	-3.10	10086.0	0.0	-3.08	-	RH15	3219.5	101.62
259.5	2.60	9937.0	0.0	2.56		RH16	3479.0	104.19
156.0	1.30	9949.0	0.0	1.24	-	RH17	3635.0	102.94
217.0	-2.50	10073.0	0.0	-2.48		RH18	3852.0	100.45
234.0	2.80	9924.0	0.0	2.79	-	RH19	4086.0	97.66
157.5	-1.00	10038.0	0.0	-.94		RH20	4243.5	96.72
232.0	-1.20	10033.0	0.0	-1.20	-	RH21	4475.5	97.92
224.0	.90	9974.0	0.0	.91		RH22	4699.5	98.84
213.5	-1.70	10047.0	0.0	-1.57	-	RH23	4913.0	100.41
220.0	2.20	9936.0	0.0	2.21		RH24	5133.0	102.63
114.0	-3.90	10216.0	0.0	-3.86	-	RH25	5247.0	106.50
243.0	7.10	9815.0	0.0	7.06		HS1	5490.0	113.56
199.0	4.60	9854.0	0.0	4.56		HS2	5689.0	118.12
247.0	7.80	9802.0	0.0	7.68		HS3	5936.0	125.81
274.0	0.00	9997.0	0.0	.12	-	HS4	6210.0	125.68
151.0	6.50	9727.0	0.0	6.47		HS5	6361.0	132.16
162.5	-8.90	10347.0	0.0	-8.86	-	HS6	6523.5	141.03
134.0	-21.40	11010.0	0.0	-21.43		HS7	6657.5	119.59
290.0	7.10	9848.0	0.0	6.92	-	HS8	6947.5	112.67
225.0	9.70	9726.0	0.0	9.68		HS9	7172.5	122.36
143.0	-4.20	10187.0	0.0	-4.20	-	HS10	7315.5	126.56
211.0	0.00	9998.0	0.0	.06		HS11	7526.5	126.63
106.0	-.90	10057.0	0.0	-.94	-	HS12	7632.5	127.57
223.0	.30	9990.0	0.0	.35		HS13	7855.5	127.93
116.0	-.40	10020.0	0.0	-.36	-	HS14	7971.5	128.29
208.0	.80	9978.0	0.0	.71		HS15	8179.5	129.01

DISTANCE	DIFF/M	ANGLE	S-I	DIFF/C		NAME	LENGTH	ELEVATION
205.0	8.20	9749.0	0.0	8.08	-	HS16	8384.5	120.92
207.5	0.00	10000.0	0.0	0.00		HS17	8592.0	120.92
138.0	-5.50	10253.0	0.0	-5.48	-	HS18	8730.0	126.41
241.0	2.10	9947.0	0.0	2.00		HS19	8971.0	128.42
269.0	-10.00	10237.0	0.0	-10.01	-	HS20	9240.0	138.44
213.0	5.10	9849.0	0.0	5.05		HS21	9453.0	143.49
301.5	-13.30	10278.0	0.0	-13.17	-	HS22	9754.5	156.67
112.0	3.50	9802.0	0.0	3.48		HS23	9866.5	160.15
233.0	1.70	9955.0	0.0	1.64	-	HS24	10099.5	158.51
190.0	-1.30	10042.0	0.0	-1.25		HS25	10289.5	157.25
252.0	2.90	9927.0	0.0	2.88	-	HS26	10541.5	154.37
345.0	-1.40	10025.0	0.0	-1.35		HS27	10886.5	153.01
231.5	-2.10	10056.0	0.0	-2.03	-	HS28	11118.0	155.05
362.5	6.50	9887.0	0.0	6.43		HS29	11480.5	161.49
260.0	-10.00	10244.0	0.0	-9.97	-	HS30	11740.5	171.46
192.0	11.00	9638.0	0.0	10.92		HS31	11932.5	182.39
239.5	-14.10	10375.0	0.0	-14.12	-	HS32	12172.0	196.51
229.0	9.80	9730.0	0.0	9.71		HS33	12401.0	206.23
243.0	-14.50	10381.0	0.0	-14.56	-	HS34	12644.0	220.79
218.5	14.50	9572.0	0.0	14.71	*	HS35	12862.5	235.50
196.0	-5.90	10194.0	0.0	-5.97	-	HS36	13058.5	241.48
161.0	4.70	9812.0	0.0	4.75		HS37	13219.5	246.24
105.5	3.50	9787.0	0.0	3.53	-	HS38	13325.0	242.70
211.0	-8.20	10248.0	0.0	-8.22		HS39	13536.0	234.48
233.0	10.00	9726.0	0.0	10.03	-	HS40	13769.0	224.45
277.5	-11.00	10251.0	0.0	-10.94		HS41	14046.5	213.50
278.5	12.60	9710.0	0.0	12.69	-	HS42	14325.0	200.81
308.0	-6.70	10133.0	0.0	-6.43	*	HS43	14633.0	194.37
307.5	8.30	9829.0	0.0	8.26	-	HS44	14940.5	186.11
255.0	-11.50	10285.0	0.0	-11.42		HS45	15195.5	174.69
262.5	7.60	9814.0	0.0	7.67	-	HS46	15458.0	167.02
262.5	-7.00	10169.0	0.0	-6.97		HS47	15720.5	160.05
178.0	3.50	9875.0	0.0	3.49	-	HS48	15898.5	156.56
212.5	-1.50	10036.0	0.0	-1.20	*	HS49	16111.0	155.35
201.5	1.60	9950.0	0.0	1.58	-	HS50	16312.5	153.77
262.5	-5.10	10121.0	0.0	-4.98		HS51	16575.0	148.78
190.0	2.20	9925.0	0.0	2.23	-	HS52	16765.0	146.55
257.5	-1.30	10033.0	0.0	-1.33		HS53	17022.5	145.21
114.0	.70	9964.0	0.0	.64	-	HS54	17136.5	144.57
267.0	-.80	10013.0	0.0	-.54	*	HS55	17403.5	144.02

DISTANCE	DIFF/M	ANGLE	S-I	DIFF/C		NAME	LENGTH	ELEVATION
217.0	-.50	10015.0	0.0	-.51	-	HS56	17620.5	144.53
279.5	2.40	9940.0	0.0	2.63	*	HS57	17900.0	147.17
149.0	-2.80	10121.0	0.0	-2.83	-	HS58	18049.0	150.00
187.0	2.80	9903.0	0.0	2.84		HS59	18236.0	152.85
246.0	-1.90	10045.0	0.0	-1.73	-	HS60	18482.0	154.59
127.0	2.90	9842.0	0.0	3.15	*	HS61	18609.0	157.75
185.0	-.70	10025.0	0.0	-.72	-	HS62	18794.0	158.47
235.0	5.20	9852.0	0.0	5.46	*	HS63	19029.0	163.94
256.5	-3.50	10085.0	0.0	-3.42	-	HS64	19285.5	167.36
269.0	3.40	9919.0	0.0	3.42		HS65	19554.5	170.79
281.0	-2.40	10052.0	0.0	-2.29	-	HS66	19835.5	173.08
187.0	.90	9963.0	0.0	1.08		HS67	20022.5	174.17
229.5	-2.50	10070.0	0.0	-2.52	-	HS68	20252.0	176.70
208.0	2.50	9923.0	0.0	2.51		HS69	20460.0	179.21
198.0	-2.90	10093.0	0.0	-2.89	-	HS70	20658.0	182.11

DISTANCE	DIFF/M	ANGLE	S-I	DIFF/C		NAME	LENGTH	ELEVATION
20658.0	182.11					HS70	20658.0	182.11
10563.0	.76							
281.0	-8.90	10199.0	0.0	-6.78		HS71	20939.0	173.34
187.0	6.80	9768.0	0.0	6.81	-	HS72	21126.0	166.53
268.0	-11.00	10250.0	0.0	-10.52	*	HS73	21394.0	156.02
244.5	11.20	9706.0	0.0	11.29	-	HS74	21638.5	144.74
196.0	-16.10	10521.0	0.0	-16.07		HS75	21834.5	128.68
199.0	15.10	9517.0	0.0	15.12	-	HS76	22033.5	113.57
233.0	-31.10	10846.0	0.0	-31.14		HS77	22266.5	82.44
261.0	-1.40	10033.0	0.0	-1.35	-	HS78	22527.5	83.81
236.0	32.60	9125.0	0.0	32.64		HS79	22763.5	116.47
184.0	-38.40	11307.0	0.0	-38.31	-	HS80	22947.5	154.80
82.0	11.40	9115.0	0.0	11.47		HS81	23029.5	166.28
244.0	-22.00	10569.0	0.0	-21.86	-	HS82	23273.5	188.16
68.0	3.90	9637.0	0.0	3.88		HS83	23341.5	192.05
235.0	-6.30	10170.0	0.0	-6.27	-	HS84	23576.5	198.34
121.5	2.40	9871.0	0.0	2.46		HS86	23698.0	200.81
207.0	8.50	9736.0	0.0	8.58	-	HS88	23905.0	192.24
159.0	-9.00	10357.0	0.0	-8.92		HS89	24064.0	183.32
56.5	5.60	9369.0	0.0	5.61	-	HS90	24120.5	177.71
144.5	-28.40	11231.0	0.0	-28.29		HS91	24265.0	149.42
273.5	43.10	9005.0	0.0	43.09	-	HS92	24538.5	106.35
182.0	-9.20	10324.0	0.0	-9.27		HS93	24720.5	97.09
221.0	-9.90	10286.0	0.0	-9.93	-	HS94	24941.5	107.04
208.5	2.70	9915.0	0.0	2.78		HS95	25150.0	109.84
315.0	-2.00	10041.0	0.0	-2.02	-	HS96	25465.0	111.89
135.0	5.00	9763.0	0.0	5.02		HS97	25600.0	116.93
330.0	9.70	9809.0	0.0	9.90	*-	HS98	25930.0	107.05
262.0	-8.80	10215.0	0.0	-8.85		HS99	26192.0	98.22
240.0	-.40	10009.0	0.0	-.33	-	HS100	26432.0	98.57
161.0	.60	9976.0	0.0	.60		HS101	26593.0	99.19
104.0	-1.00	10059.0	0.0	-.96	-	HS102	26697.0	100.16
294.0	18.00	9612.0	0.0	17.94		HS103	26991.0	118.12
225.5	-30.90	10868.0	0.0	-30.93	-	HS104	27216.5	149.08
152.0	25.80	8926.0	0.0	25.88		HS105	27368.5	174.98
115.5	-24.60	11337.0	0.0	-24.61	-	HS106	27484.0	199.61
66.0	18.90	8225.0	0.0	18.89		HS107	27550.0	218.50
120.0	-15.20	10802.0	0.0	-15.19	-	HS108	27670.0	233.71
282.5	39.30	9122.0	0.0	39.21		HS109	27952.5	272.94
134.5	-16.20	10763.0	0.0	-16.19	-	HS110	28087.0	289.15
202.0	17.80	9440.0	0.0	17.81		HS111	28289.0	306.98

DISTANCE	DIFF/M	ANGLE	S-I	DIFF/C		NAME	LENGTH	ELEVATION
318.0	-5.50	10108.0	0.0	-5.39	-	HS112	28607.0	312.40
272.5	15.50	9642.0	0.0	15.34		HS113	28879.5	327.76
290.0	-14.50	10317.0	0.0	-14.45	-	HS114	29169.5	342.23
339.5	14.70	9726.0	0.0	14.62		HS115	29509.0	356.87
201.0	-19.40	10613.0	0.0	-19.41	-	HS116	29710.0	376.30
198.0	16.90	9457.0	0.0	16.92		HS117	29908.0	393.25
107.0	-11.60	10690.0	0.0	-11.64	-	HS118	30015.0	404.90
249.0	33.40	9149.0	0.0	33.48		HS119	30264.0	438.40
283.0	20.00	9554.0	0.0	19.85	-	HS120	30547.0	418.56
186.0	0.00	10001.0	0.0	-.02		HS121	30733.0	418.55
277.0	-.60	10014.0	0.0	-.60	-	HS122	31010.0	419.17
211.0	14.20	9571.0	0.0	14.24		HS123	31221.0	433.43

DISTANCE	DIFF/M	ANGLE	S-I	DIFF/C		NAME	LENGTH	ELEVATION
31221.0	433.43					HS123	31221.0	433.43
8970.5	.08							
231.0	6.70	9816.0	0.0	6.67	-	HS124	31452.0	426.75
301.0	-25.90	10546.0	0.0	-25.87		HS125	31753.0	400.87
318.0	11.70	9768.0	0.0	11.59	-	HS126	32071.0	389.28
190.5	-18.00	10598.0	0.0	-17.94		HS127	32261.5	371.34
207.0	-7.00	10215.0	0.0	-6.99	-	HS128	32468.5	378.33
132.0	6.90	9667.0	0.0	6.91		HS129	32600.5	385.24
181.5	7.30	9742.0	0.0	7.35	-	HS131	32782.0	377.89
223.0	-17.90	10508.0	0.0	-17.83		HS132	33005.0	360.05
281.0	21.00	9524.0	0.0	21.04	-	HS133	33286.0	339.01
198.0	-5.60	10181.0	0.0	-5.63		HS134	33484.0	333.38
234.0	8.40	9772.0	0.0	8.38	-	HS135	33718.0	325.00
318.5	-6.60	10131.0	0.0	-6.55		HS136	34036.5	318.44
307.0	-4.10	10084.0	0.0	-4.05	-	HS137	34343.5	322.50
282.0	-1.90	10043.0	0.0	-1.90		HS138	34625.5	320.60
355.0	5.10	9909.0	0.0	5.07	-	HS139	34980.5	315.52
217.5	-11.50	10337.0	0.0	-11.52		HS140	35198.0	304.00
295.0	17.50	9623.0	0.0	17.49	-	HS141	35493.0	286.51
157.5	-2.00	10078.0	0.0	-1.92		HS142	35650.5	284.59
340.0	2.70	9951.0	0.0	2.61	-	HS144	35990.5	281.97
161.5	5.10	9801.0	0.0	5.04		HS145	36152.0	287.02
183.0	.10	9997.0	0.0	.08	-	HS146	36335.0	286.94
162.0	-2.60	10102.0	0.0	-2.59		HS147	36497.0	284.34
316.0	7.30	9854.0	0.0	7.24	-	HS148	36813.0	277.10
231.5	-3.70	10100.0	0.0	-3.63		HS149	37044.5	273.46
138.0	1.20	9947.0	0.0	1.14	-	HS150	37182.5	272.32
241.0	-3.30	10085.0	0.0	-3.21		HS151	37423.5	269.10
236.5	3.90	9897.0	0.0	3.82	-	HS152	37660.0	265.28
311.5	-11.90	10242.0	0.0	-11.84		HS154	37971.5	253.43
270.0	9.40	9781.0	0.0	9.29	-	HS155	38241.5	244.14
123.5	-3.80	10195.0	0.0	-3.78		HS156	38365.0	240.36
218.0	4.30	9877.0	0.0	4.21	-	HS158	38583.0	236.15
281.5	-4.60	10104.0	0.0	-4.59		HS159	38864.5	231.55
179.0	2.20	9923.0	0.0	2.16	-	HS160	39043.5	229.39
274.5	-1.20	10025.0	0.0	-1.07		HS161	39318.0	228.31
291.0	-2.80	10060.0	0.0	-2.74	-	HS164	39609.0	231.06
260.5	-1.40	10035.0	0.0	-1.43		HS162	39869.5	229.63
205.0	0.00	9999.0	0.0	.03	-	-	40074.5	229.60
117.0	-5.90	10319.0	0.0	-5.86		HS165	40191.5	223.73

DISTANCE	DIFF/M	ANGLE	S-I	DIFF/C	NAME	LENGTH	ELEVATION
138.5	9.20	9578.0	0.0	9.19	- HS166	40330.0	214.54
38.5	-.20	10026.0	0.0	-.15	HS167	40368.5	214.38

Viðauki I

Á blaðsíðum 42-50 er sýnt úttak úr tölvu IBM 1620 með niðurstöðum útreikninga vegna mælinga úr þekktum punktum utan línunnar í punkta í línunni.
Yfirlit yfir mælingarnar er sem hér segir:

DISTANCE	DIFF/M	ANGLE	S-I	DIFF/C		NAME	LENGTH	ELEVATION
0.0	58.06					HH54	0.0	58.06
0.0	0.00							
193.5	9.30	9692.0	0.0	9.36	-	-	193.5	48.69
129.5	-3.40	10166.0	0.0	-3.37		X2	323.0	45.31
232.0	5.50	9848.0	0.0	5.54	-	-	555.0	39.77
327.0	1.10	9977.0	0.0	1.18		X1	882.0	40.95
301.5	-1.20	10021.0	0.0	-.99	*-	-	1183.5	41.94
234.0	-.70	10017.0	0.0	-.62		3250	1417.5	41.32

DISTANCE	DIFF/M	ANGLE	S-I	DIFF/C	NAME	LENGTH	ELEVATION
0.0	52.11				HH7	0.0	52.11
0.0	0.00						
125.0	2.80	9854.0	0.0	2.86	- -	125.0	49.24
68.0	-1.90	10177.0	0.0	-1.89	3300	193.0	47.35

DISTANCE	DIFF/M	ANGLE	S-I	DIFF/C	NAME	LENGTH	ELEVATION
0.0	18.70				FLOK	0.0	18.70
0.0	0.00						
91.0	2.50	9824.0	0.0	2.51	- -	91.0	16.18
287.0	-4.70	10103.0	0.0	-4.64	BH142	378.0	11.53

DISTANCE	DIFF/M	ANGLE	S-I	DIFF/C		NAME	LENGTH	ELEVATION
0.0	6.66					NS278	0.0	6.66
0.0	0.00							
222.0	0.00	9997.0	0.0	.10	-	NS277	222.0	6.55
244.5	-.60	10014.0	0.0	-.53		A1	466.5	6.01
267.0	.70	9985.0	0.0	.62	-	-	733.5	5.38
295.0	15.80	9660.0	0.0	15.77		A2	1028.5	21.15
152.5	-3.00	10124.0	0.0	-2.97	-	-	1181.0	24.12
226.0	8.70	9757.0	0.0	8.63		5222	1407.0	32.76

DISTANCE	DIFF/M	ANGLE	S-I	DIFF/C		NAME	LENGTH	ELEVATION
0.0	89.42					NS388	0.0	89.42
0.0	0.00							
264.0	.80	9981.0	0.0	.78	-	-	264.0	88.63
295.0	-4.70	10100.0	0.0	-4.63		X2	559.0	83.99
167.0	8.90	9661.0	0.0	8.90	-	-	726.0	75.09
262.5	-2.00	10046.0	0.0	-1.89		X1	988.5	73.19
278.0	-2.20	10049.0	0.0	-2.13	-	-	1266.5	75.33
228.0	-1.50	10041.0	0.0	-1.46		943331	1494.5	73.87

DISTANCE	DIFF/M	ANGLE	S-I	DIFF/C		NAME	LENGTH	ELEVATION
0.0	85.87					RH2	0.0	85.87
0.0	0.00							
188.0	-5.70	10190.0	0.0	-5.61	-	X1	188.0	91.48
252.0	5.10	9869.0	0.0	5.18		M1	440.0	96.66
130.0	-.70	10035.0	0.0	-.71	-	X2	570.0	97.38
114.5	-1.50	10084.0	0.0	-1.51		FM-LV	684.5	95.87

DISTANCE	DIFF/M	ANGLE	S-I	DIFF/C	NAME	LENGTH	ELEVATION
0.0	182.11				HS70	0.0	182.11
0.0	0.00						
228.0	4.70	9866.0	0.0	4.79	A12	228.0	186.90

DISTANCE	DIFF/M	ANGLE	S-I	DIFF/C	NAME	LENGTH	ELEVATION
0.0	433.43				HS123	0.0	433.43
0.0	0.00						
137.0	1.80	9918.0	0.0	1.76	- -	137.0	431.66
149.5	-2.50	10105.0	0.0	-2.46	A07	286.5	429.19

DISTANCE	DIFF/M	ANGLE	S-I	DIFF/C	NAME	LENGTH	ELEVATION
0.0	223.73				HS165	0.0	223.73
0.0	0.00						
156.0	-8.00	10328.0	0.0	-8.04	- -	156.0	231.77
187.0	8.70	9703.0	0.0	8.73	A03	343.0	240.50

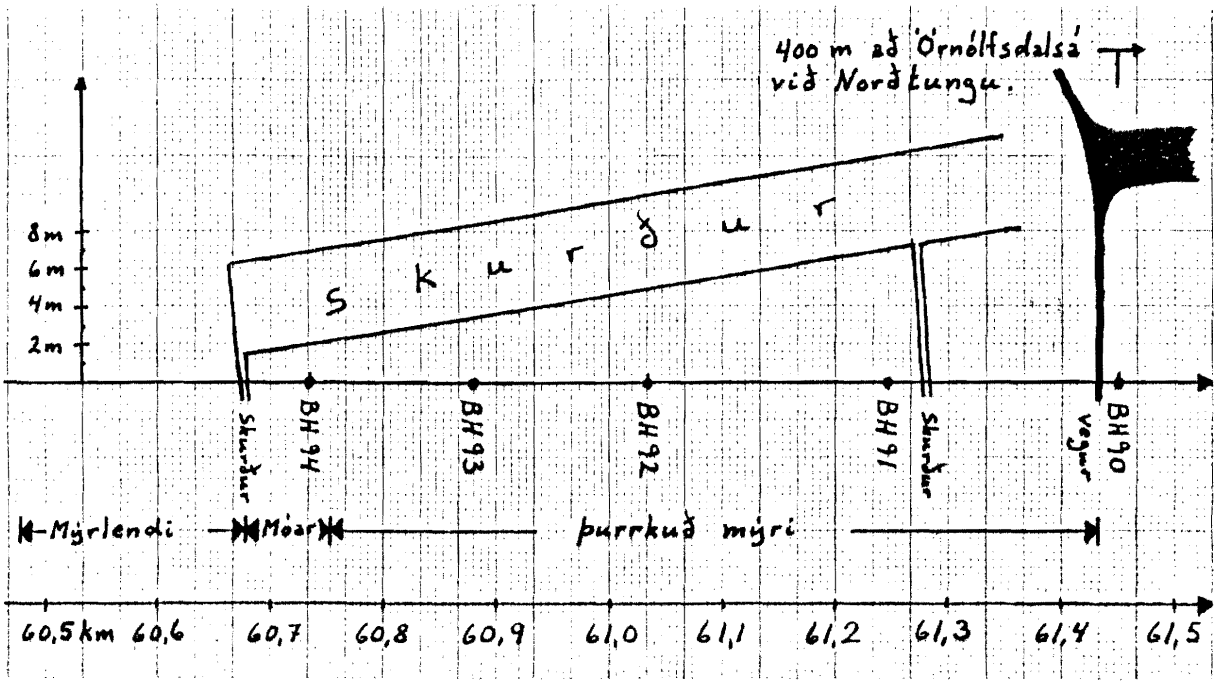
Viðauki II

Eftirtalin atriði þarf að athuga nánar.

1. Við Ölver í Melasveit fer línan yfir enda skeiðvallar á milli HH26 og HH27. Það mun standa til að framlengja völlinn í vestur, yfir línustæðið, setja á hann sveig, og kemur hann þá að öllum líkindum aftur yfir línustæðið á milli HH26 og HH25. Það þyrfti að athuga hvar hlaupabrautin kemur nákvæmlega, til þess að staur verði ekki settur í hana.

2. Hornið við Skeljabrekku lendir á óheppilegum stað utan í Brekkufjalli, (öfugum megin í mel sem þar er). Hornhællinn er nr. BH216. Ef línukaflanum á milli Selholts og Skeljabrekku verður hnikað til, í því skyni að lagfæra þetta, þá þarf að gæta þess að línan fari ekki út af mjórri klettaborg sem er við Andakílsá.

3. Skammt sunnan við Norðtungu í Borgarfirði liggur línan á talsvert löngum kafla nær samsíða skurði sem þar er.



Eins og sést á myndinni er skurðurinn í minna en 6m fjarlægð frá línunni á u.þ.b. 500m kafla. Þetta þarf að athuga gaumgæfilega, vegna þess að eins og línan liggur núna, þá hljóta staurar að lenda í skurðinum. Kemur þá tvennt til greina: að færa línuna eða skurðinn.
Óvíst er að myndin sé rétt í smáatriðum.

4. Á Holtavörðuheiði voru mældar tvær leiðir, NS og Z. Slæmt skyggni var á heiðinni þegar það línustæði var valið sem kallað er Z. Seinna þegar línan var leiðrétt kom í ljós að nyrðra hornið, Z44, lenti í mýri. Ef línuendinn verður hins vegar færður vestur um 2-3 metra, þá ætti hornið að færast norður á nálægan mel. Sú tilfærsla ætti ekki að koma að sök hvað langsniðsmælingu snertir, því að lítill hliðarhalli mun vera þarna.

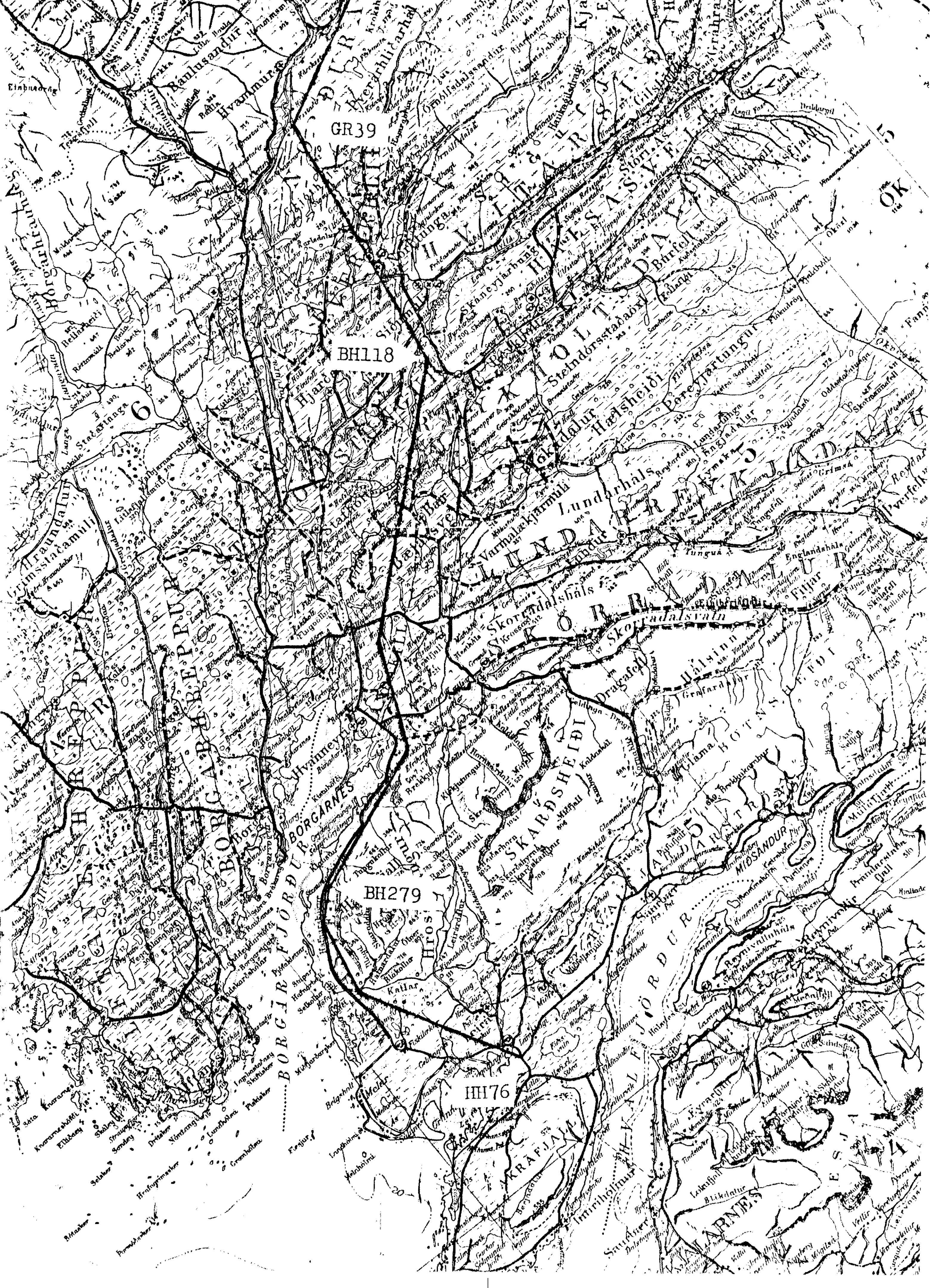
5. Í Hrútafirði var þjóðveginum breytt eftir að mælt var fyrir línunni. Þessar breytingar urðu í landi Oddsstaða og Brautarholts, u.þ.b. milli HR53 og NS200.
Nýi vegurinn er nær línunni en sá gamli, og hefur vegagerðin skafið mikið úr melum í nánd við hann. Hugsanlegt er að línustæðið hafi breyst eitthvað við þetta, og gæti það haft áhrif á staursetningu. Þó held ég að línan sleppi við sjálfan veginn.

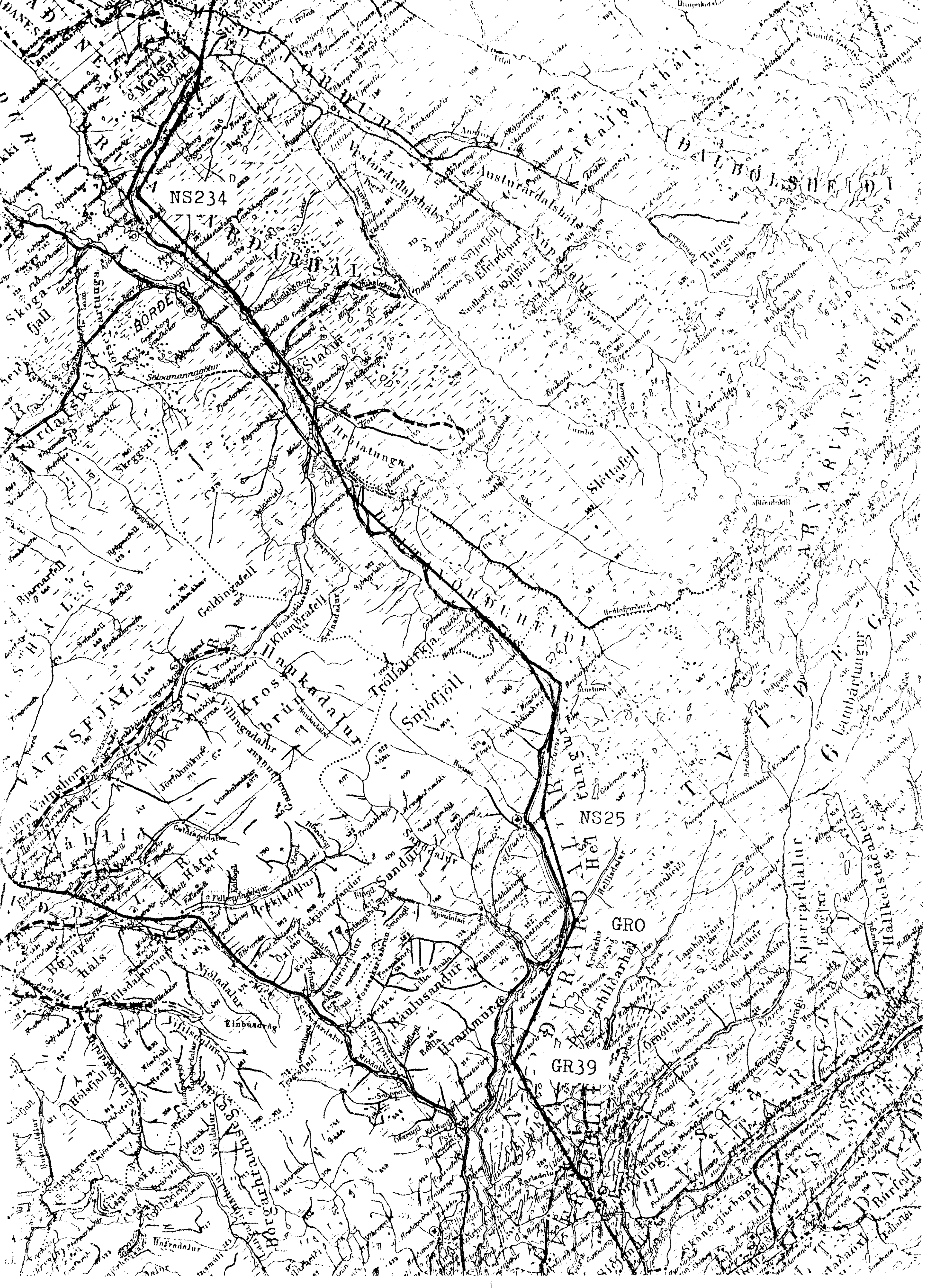
6. Skammt frá Víðihlíð í V. Hún. er horn, sem var á klettabrún. Hornhællinn er nr. NS338. Vegna mistaka var það fært 12m inn á klettinn. Sökum þess að allmikill bratti er frá horninu niður að næsta staurastæði sem lendir í djúpu dragi, þá er hætt við að rafstrengirnir verði of nálægt brúninni, ef þessu verður ekki breytt. Verði línukaflanum frá NS338 til NS441 hnikað til um 1.5m þá færist hornið 12m til baka. Það kemur að sjálfsögðu í ljós á langsniðsteikningunni hvort þetta getur blessast eins og það er.

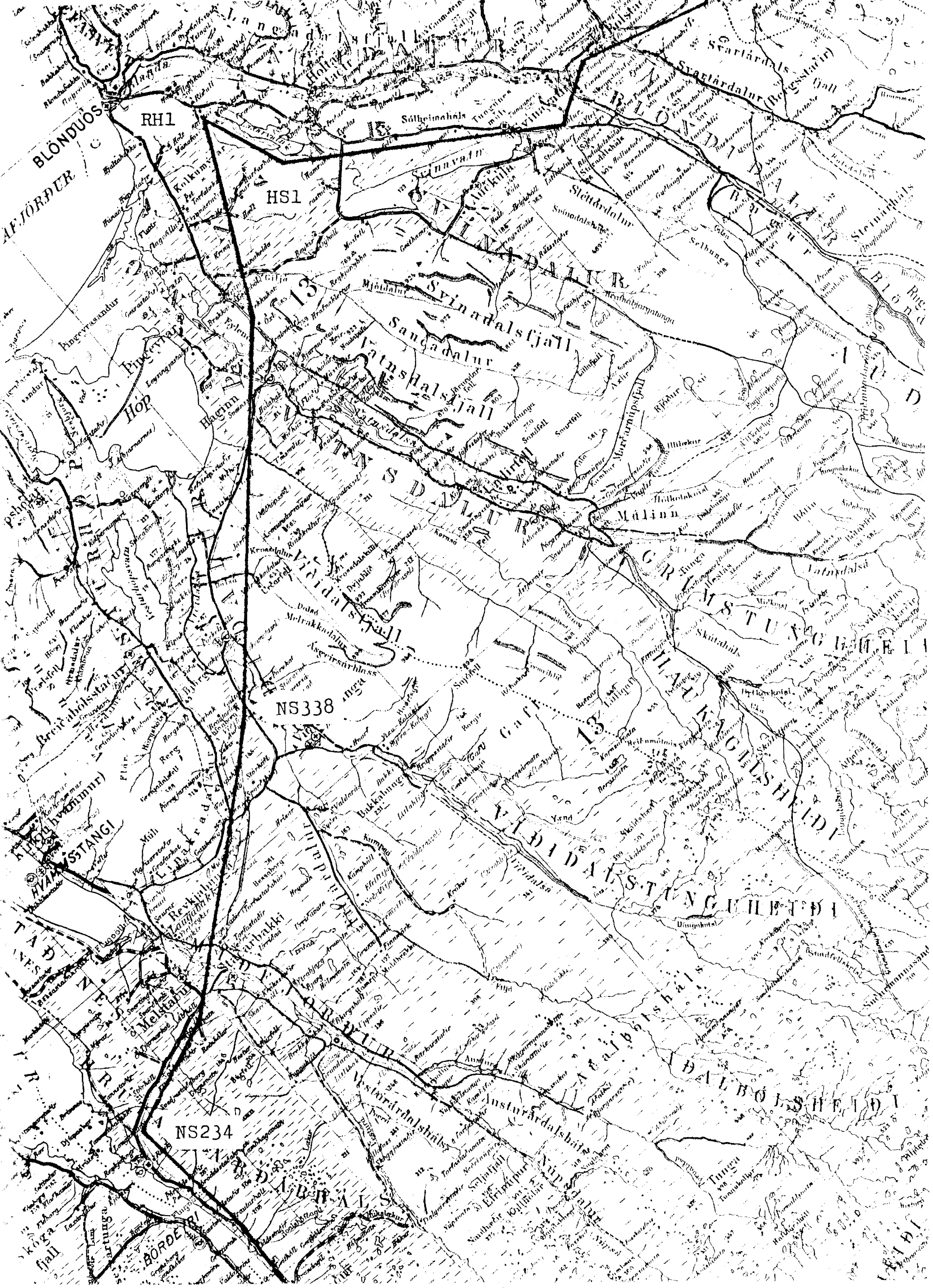
7. Þegar kemur austur fyrir Vatnsdalshóla er um tvær leiðir að velja. Önnur, sú sem mæld var, liggur í beina línu yfir Hnausakvísl á milli Sveinsstaða og Steinness, og að horni við bæinn Öxl í Vatnsdal. Þaðan í beina línu að Laxárvatnsvirkjun. Sá meinlegi galli er á þessu línustæði að það lendir alveg ofan í Þrístapa, sem er þekktur sögustaður í Vatnsdalshólum. Þar fór fram síðasta aftaka á Íslandi árið 1830.
Hann er á milli NS421 og NS422.
Birgir Jónsson skrifaði Jóni Ísberg sýslumanni á Blönduósi um málið, en hann mótmælti þessu harðlega. Birgir bar þetta einnig undir Þór Magnússon þjóðminjavörð. Hann taldi að á þessum stað færi línan allt of nálægt Þrístapanum.

Hin leiðin sem til greina kemur, hefur hvorki verið hæluð né mæld, en línustæði var valið þar í sumar.
Verði sú leið farin, yrði sett horn við NS413 (minnir mig). Þaðan lægi línan norður fyrir Þingeyrar og að horni á móts við Akur. Farið yrði yfir Húnavatnið þar sem það er mjóst og áfram í beina línu að Laxárvatnsvirkjun.
Vegna þess sem sagt var um ókosti fyrri leiðarinnar, þá er æskilegt að Þingeyralínan verði könnuð, og jafnframt athugað hvort aðrir kostir en þessir tveir koma til greina.

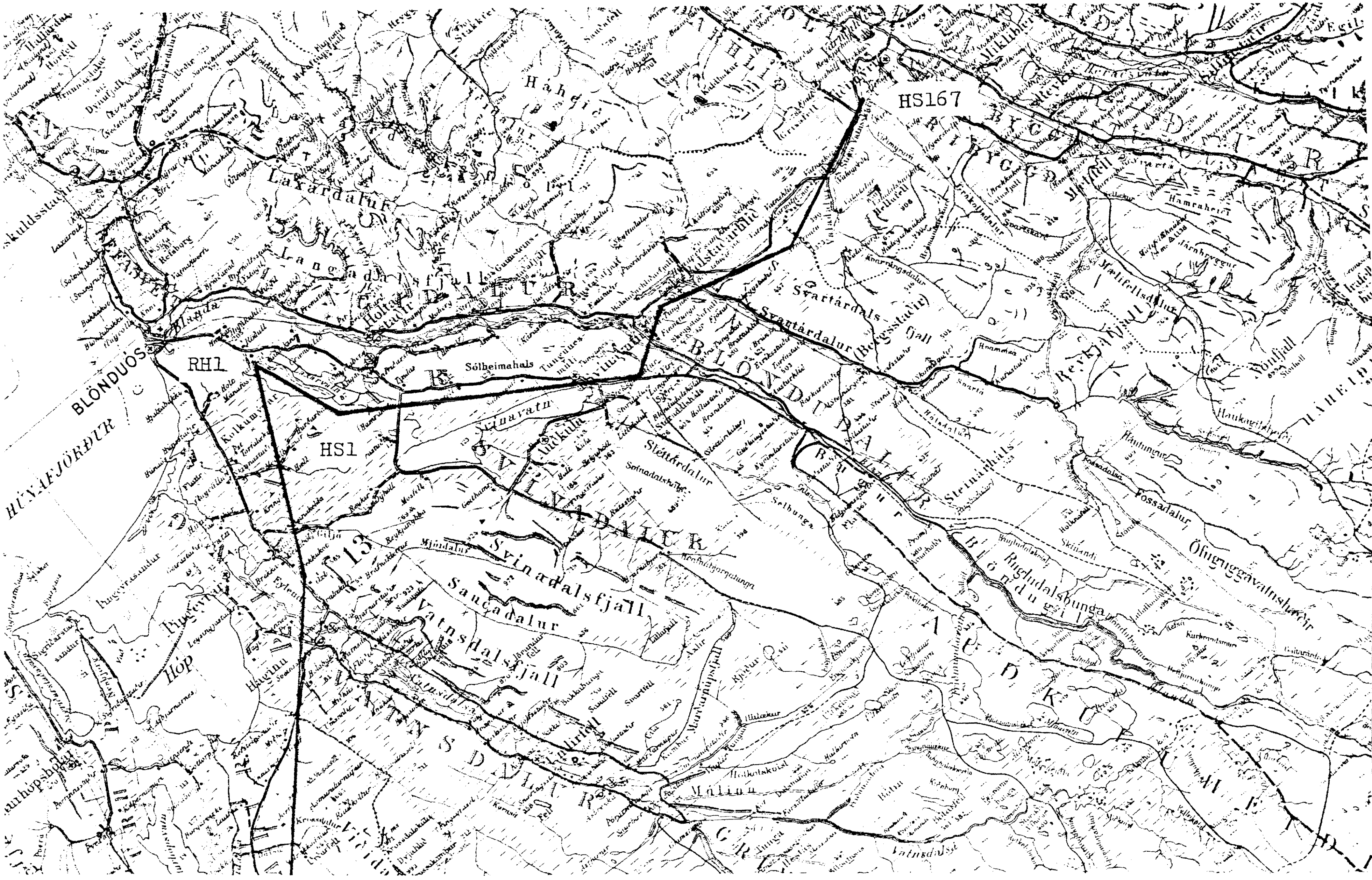
8. Í túni við bæinn Sólheima við Svínavatn fer línan yfir heygalta, á milli HS43 og HS44. Þetta mun vera gamalt hefðbundið heystæði, því að það var afgirt. Ljóst er að það verður ónothæft eftir að línan er komin í gagnið. E.t.v. væri því rétt að samið yrði við bóndann um að færa það áður en framkvæmdir hefjast.


GR39
BH118
BH279
HH76
BORGARNES
Skorradalsvatn
Skorradalsháls
Lundarháls
Dragafell
MIÐSANDUR


NS234
NS25
GRO
GR39
Staður
Hrútatunga
Sléttafell
Tunga
Geldingafell
Snjófjöll
Tröllakirkja
Hvammur
Kjarrárdalur
Lambártungur
Melstaður
Skóga
fjall



BLÖNDUÓS
RH1
HS1
NS338
NS234
HVAMMSTANGI
Svínadalur
Vatnsdalur
Víðidalur
Víðidalsfjall
Hóp
Melstaður

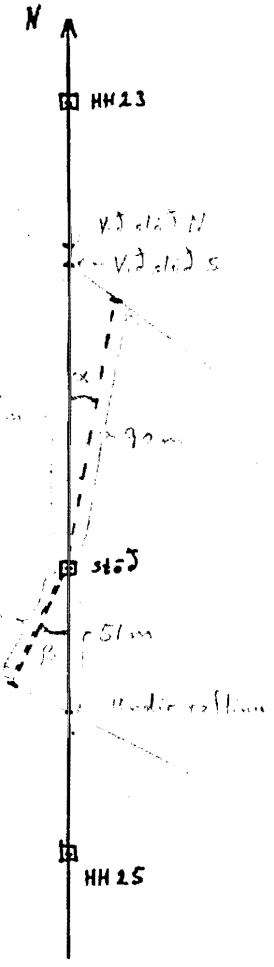


HS167
HS1
RH1
BLÖNDUÓS
HÚNAFJÖRÐUR
Laxárdalur
Svartárdalur
Svartárdals-fjall
Sólheimahals
Sléttárdalur
Svínadalsfjall
Sauðadalur
Vatnsdalsfjall
Fossadalur
Rugludalsbunga
Hop

B Y G G Þ A R L Í N A, (stefnumælingar).

Þegar mælt var fyrir byggðarlínu sl. sumar (1973), var ekki haft samræmi í því, hvernig stefnur voru mældar. Það er auðvitað til óþæginda fyrir teiknarana.
Æskilegt hefði verið að reikna út hornin, sem skurðir, vegir og línur mynda við byggðarlínuna. Það hefði mátt gera þegar unnið var úr mælingunum, en okkur var sagt að það væri óþarfi.

Hér fara á eftir dæmi um það, hvernig S.(P.)Í. mældi og skráði stefnur. Það skal tekið fram, að fjarlægð frá stöð, er skráð þar sem stendur " Athugasemdir ", í mælibókum frá síðari hluta sumarsins.



Stöð: HH24

P.		Aths.		Hæð	Fjarl.	Lár. horn
HH23	-	156,5	-	45,5	19.247	Melur
		---		---	---	---
		114	-	46,6	.205	Við slóð N
		106	-	46,7	.197	Við slóð S
		90	-	Stefna slóðar		L 347,12/351,08
		---		---	---	---
		Stöð		49,8	19.091	Kjarr
		---		---	---	---
		51	-	50,4	.040	Undir raflínu
		44		Stefna raflínu		L 147,14/167,76
		---		---	---	---
HH25	-	91,5	-	51,6	18.999	Kjarr

Undirstrikuðu upplýsingarnar eru notaðar til að teikna stefnuna.
Hornið α, sjá mynd, er 351,08 − 347,12 =+3,96 nýgráður.
Hornið β, er 167,76 − 147,14 = +20,62 nýgráður. Af því bæði hornin eru pósitíf, þá víkur stefnupunkturinn réttsælis út frá línunni.
Sá fyrri til hægri, sá síðari til vinstri.