

Gunnar Þorbergsson
81/06



ORKUSTOFNUN
Raforkudeild

GREINARGERÐASAFN

ENDURREIKNAD PRIHYRNINGANET
LANDMÆLINGA ISLANDS A AUSTFJÖRDUM

Gunnar Þorbergsson

GP-81/06

April 1981

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Greinarserd

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Net mælt 1933-34 og 1956 tenst neti Orkustofnunar

Tilfni

Vesna málinda Vegaserdar ríkisins á Austfjörðum, fór Þórhallur Olafsson umdæmistzknifráðsinsur Þess á leit við Orkustofnun, að Prihyrningsanet mælt af Geodztisk Institut á Austfjörðum væri endurreiknað. Þórhalli var kunnust um að nokkrir punktar í netinu höfðu verið endur-
mældir og reiknadir sem hluti af neti Orkustofnunar.

AdalPrihyrningsanet

Sumrin 1955 og 1956 mældu málinsamenn frá Geodztisk Institut adalPri-
hyrningsanet Þad, sem adrar Prihyrningsamzlinar á Islandi stöðjast við. Í netinu voru 36 punktar, og eru Smjörfjöll (173), Sandfell (180) og Afréttartindur (188) Þeirra austastir. Fimm punktar í adalnetinu voru settir á Jökulis og eru Þvi slataðir. Einn Þeirra var á Snæfelli. Geodztisk Institut reiknadi út ör adalneti Þessu og umreiknadi eldri Prihyrningsanet frá árunum 1900 - 1939 inn í Þad <1>.

Net Orkustofnunar

Annarar gráðu Prihyrningsanet Orkustofnunar á Norðausturlandi <2> nær milli Gzsafjalla (161), Herdubreidar (2010), Haussneybbu (165), Smjör-
fjalla (173), Sandfells (180) og Afréttartinds (188), en Þessir punktar eru allir (fyrstu gráðu punktar) í adalPrihyrningsanetinu. Medal annarrar gráðu punkta í neti Orkustofnunar og Þeirra austastir eru Beinaseitarfjall (177), Gashheidarhnökur (178) og Kistufell (183).

Net LMI á Austfjörðum

Netid var mælt af málinsamönnum frá Geodztisk Institut sumrin 1933 og 1934 <4>. Wild-taki voru notud við málinsarnar. Vördur voru hláðnar í punktunum og stöðvar voru hjálzær (stillt var upp nokkra metra frá vörðu og mald stefna og fjarlægð til vördunnar). Jafnframt málinsum í adalneti 1956, var mælt í nokkrum fleiri punktum í netinu á Austfjörðum. Þá var að Jafnadi taki stillt upp yfir bolta og signöl reist í punktunum.

Útreikningsar 1981

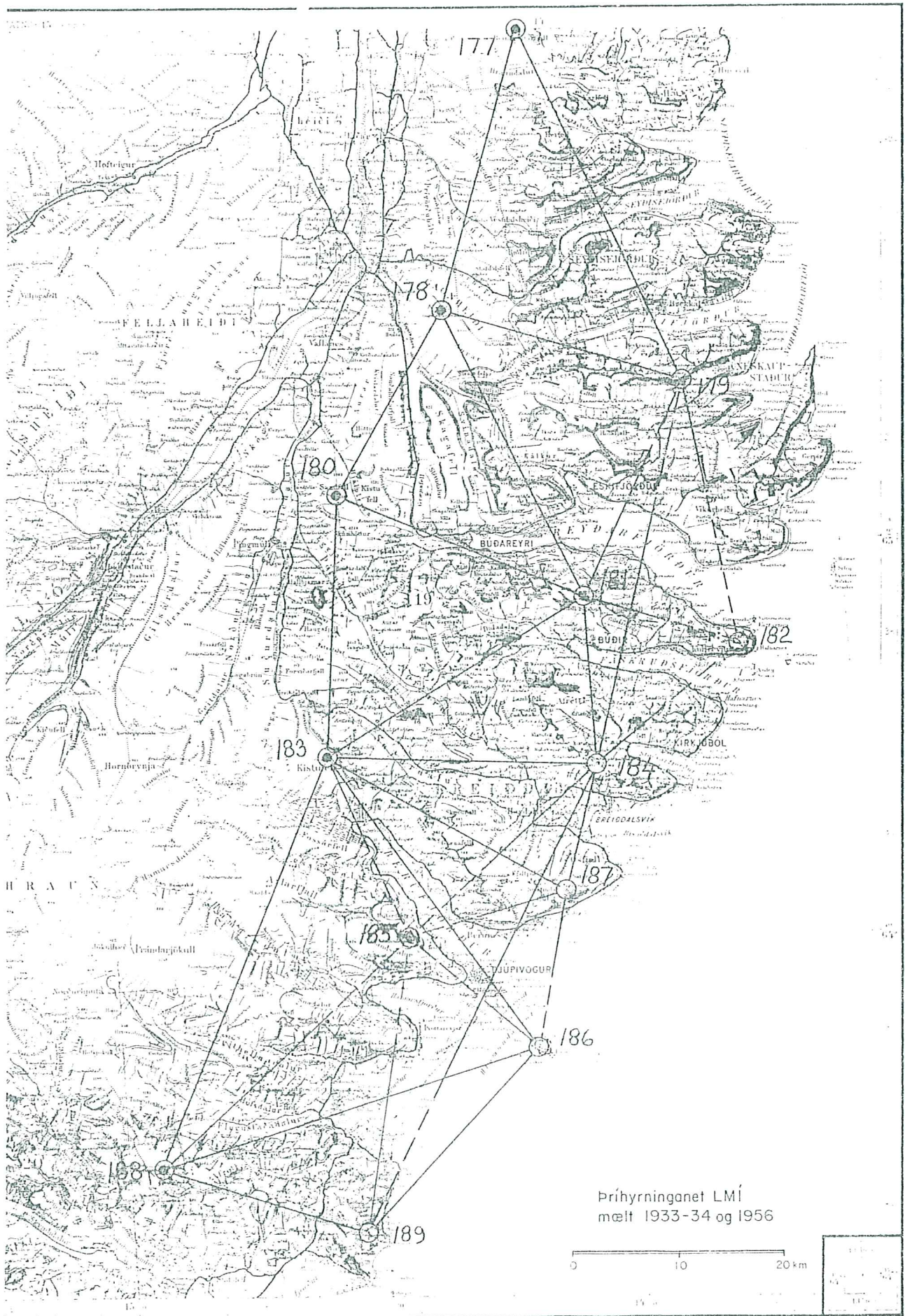
Prihýrningsanetið er sént á bls. 3. Fimm vestustu punkturnir eru í neti Orkustofnunar (eða aðalPrihýrningsanetinu) og eru því þekktir. Hinir átta voru reiknadir út frá þessum þekktu punktum samkvæmt málningum Geodætisk Institut árin 1933, 1934 og 1936.

Nidurstöður málninganna, samkvæmt málbókum hjá Landmálningum Íslands, eru á bls. 4. Hnit þekktra punkta og náðarsildi fyrir hnit óþekktra punkta (samkvæmt hnitalista Landmálninga Íslands) eru á bls. 5. Nidurstöður Jöfnunar eru á bls. 6. Samkvæmt þeim er meðalskekkja málðrar stefnu 2,7 semlar sekúndur (stærsta leiðréttins var 13 sekúndur). Leiðréttingar hnita eru mest hátt á þriðja metra. Meðalskekkjur hnita eru 20 - 50 cm.

Sydsti punkturinn í netinu, Krossanesfjall (189), er lakari en hinir samkvæmt þessum útreikningum og ætti að reyna að komast hjá að nota hann. Þess skal þó setið að netið heldur áfram lengra til suðurs frá Krossanesfjalli og áfram vestur með ströndinni. Áskilest hefði verið að endur-reikna einnis þann hluta netsins, allt að Þverártindsess (2026), sem er fyrstu stráðu punktur miðja vesu milli Hornafjardar og Örfafjökuls. Við það hefði Krossanesfjall styrkst. Ur því varð þó ekki í þetta sinn.

Heimildir

- <1> Asúst Bödvarsson: Greinargerð frá Landmálningum Íslands.
Tímarit VFI 1971, bls. 18 - 21.
- <2> Landmálningar og kortagerð Orkustofnunar.
Tímarit VFI 1971, bls. 37 - 41.
- <3> Gunnar Þorberðsson: Notkun tölvu við landmálningar.
Tímarit VFI 1971, bls. 93 - 94.
- <4> N.E.Nörlund: Íslands Kortlæsnings.
Köbenhavn 1944. Bls. 70 - 72.
- <5> Landmálningar Íslands: Keilukóordinatar. Landsnet.
Handrit. Mars 1966.



Príhyrninganet LMÍ
mælt 1933-34 og 1956

0 10 20 km

INPUT GTRIO

177	179	178	177	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	1912040	0	191	0	9993	890233.6
178	177	178	177	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	1912040	0	191	0	9994	3492023.0
179	178	177	177	181	182	184	185	186	187	189	180	185	186	187	188	189	190	191	1912040	0	191	0	9992	2459171.8
179	178	181	2774425.0	0.0	175	830312.6	0.0	0.0	173	1323617.8	174	1733001.8	173	3092500.3	0.0	0.0	174	3333130.5	0.0	0.0	0.0	0.0	9993	890233.6
180	178	181	825337.7	183	1521026.4	180	1854333.3	0.0	173	1323617.8	174	1733001.8	173	3092500.3	0.0	0.0	174	3333130.5	0.0	0.0	0.0	0.0	9994	3492023.0
181	182	184	683446.8	180	1854333.3	180	1854333.3	0.0	180	1945521.0	173	3092500.3	173	3092500.3	0.0	0.0	174	3333130.5	0.0	0.0	0.0	0.0	9992	2459171.8
181	184	183	622502.5	180	1854333.3	180	1854333.3	0.0	180	1945521.0	173	3092500.3	173	3092500.3	0.0	0.0	174	3333130.5	0.0	0.0	0.0	0.0	9992	2459171.8
181	182	178	2265406.7	175	912945.3	175	912945.3	0.0	173	1323617.8	174	1733001.8	173	3092500.3	0.0	0.0	174	3333130.5	0.0	0.0	0.0	0.0	9993	890233.6
181	180	178	411001.5	175	912945.3	175	912945.3	0.0	173	1323617.8	174	1733001.8	173	3092500.3	0.0	0.0	174	3333130.5	0.0	0.0	0.0	0.0	9993	890233.6
183	180	181	555935.3	164	894116.0	164	894116.0	0.0	185	1533750.5	188	1995203.6	188	1995203.6	0.0	0.0	188	1995203.6	0.0	0.0	0.0	0.0	9994	3492023.0
183	180	181	555947.5	184	894129.6	184	894129.6	0.0	2040	1450411.0	188	1995147.0	188	1995147.0	0.0	0.0	188	1995147.0	0.0	0.0	0.0	0.0	9994	3492023.0
183	188	186	3021749.5	186	3021749.5	186	3021749.5	0.0	183	1005451.3	183	2855250.8	183	2855250.8	0.0	0.0	183	2855250.8	0.0	0.0	0.0	0.0	9991	1464409.6
183	180	187	1173208.2	187	1173208.2	187	1173208.2	0.0	183	1005451.3	183	2855250.8	183	2855250.8	0.0	0.0	183	2855250.8	0.0	0.0	0.0	0.0	9991	1464409.6
184	181	179	164912.8	182	541022.0	182	541022.0	0.0	183	1005451.3	183	2855250.8	183	2855250.8	0.0	0.0	183	2855250.8	0.0	0.0	0.0	0.0	9992	487209.4
184	181	185	2315432.0	183	2760559.0	183	2760559.0	0.0	189	1562150.3	189	1562150.3	189	1562150.3	0.0	0.0	189	1562150.3	0.0	0.0	0.0	0.0	9992	487209.4
184	182	187	1435534.5	189	1562150.3	189	1562150.3	0.0	185	874449.5	185	874449.5	185	874449.5	0.0	0.0	185	874449.5	0.0	0.0	0.0	0.0	9993	2155208.7
186	189	188	292746.5	185	874449.5	185	874449.5	0.0	185	874449.5	185	874449.5	185	874449.5	0.0	0.0	185	874449.5	0.0	0.0	0.0	0.0	9993	2155208.7
187	184	186	1755445.5	185	2402202.0	185	2402202.0	0.0	183	2855250.8	183	2855250.8	183	2855250.8	0.0	0.0	183	2855250.8	0.0	0.0	0.0	0.0	9993	3898013.7
188	185	183	3345711.3	186	2483426.9	186	2483426.9	0.0	189	2833126.0	189	2833126.0	189	2833126.0	0.0	0.0	189	2833126.0	0.0	0.0	0.0	0.0	9993	3898013.7
188	N191	183	1974313.7	186	2483426.9	186	2483426.9	0.0	189	2833126.0	189	2833126.0	189	2833126.0	0.0	0.0	189	2833126.0	0.0	0.0	0.0	0.0	9993	3898013.7
188	N191	189	2833126.0	186	2483426.9	186	2483426.9	0.0	191	2981122.1	190	3171709.4	190	3171709.4	0.0	0.0	190	3171709.4	0.0	0.0	0.0	0.0	9994	1921511.1
189	188	185	801754.4	186	1153525.6	186	1153525.6	0.0	191	2981122.1	190	3171709.4	190	3171709.4	0.0	0.0	190	3171709.4	0.0	0.0	0.0	0.0	9994	1921511.1
N191	188	189	414012.0	189	414012.0	189	414012.0	0.0	191	2981122.1	190	3171709.4	190	3171709.4	0.0	0.0	190	3171709.4	0.0	0.0	0.0	0.0	9994	1921511.1
		9993																						0.0
		9992	0	3.0	5.0	10.0	10.0																	0.0
		9999																						0.0

PRIHRYNINGANET LMI A AUSTFJÖRDUM

PRIHYRNINGANET LMI A AUSTFJØRDUM		ADJUSTED COORDINATES	
CORRECTION	MEAN ERROR	NUMBER	Y-NORTH X-WEST
-0.207	0.283	179	523136.693 302627.798 *
-0.155	0.200	181	502731.545 312134.843 *
-0.151	0.279	182	498051.149 297513.963 *
-0.405	0.255	184	486841.595 311121.096 *
-0.185	0.263	185	470835.815 329064.326 *
0.454	0.432	186	459986.954 316914.075 *
1.292	0.353	187	474877.492 314198.221 *
1.662	0.257	189	442989.162 333342.636 *
MAX CORR	MAX ERR	ERROR IN DIRECTION	2.736 SEC 8.444 CC
2.836	0.498		

PRIHYRNINGANET LMI A AUSTFJÖRDUM

ADJUSTED DIRECTIONS AND DISTANCES

STAT	NUMB	GRADS	ERROR	NAME	D	M	SEC	NUMB	DISTANCE	NAME
177	ECC	-2.496	-0.141	177	245	54	49.2	179	36774.51	179
	179	273.23742	-7.86	179	285	41	13.2	178	27626.07	178
	178	317.42999	-0.90	178	18	31	1.6	173	35815.52	173
	173	20.57458	8.76	173						
178	ECC	-1.165	-3.300	178	105	40	39.3	177	27628.67	177
	177	117.41952	8.20	177	197	14	25.5	179	23531.41	179
	179	219.15600	-3.20	179	244	39	27.0	181	30294.56	181
	181	271.84166	-3.31	181	300	36	4.2	180	20098.57	180
	180	334.00130	-3.95	180	55	5	41.5	173	46302.12	173
	173	61.21651	2.26	173						
179	ECC	-1.839	2.370	179	17	14	50.5	178	23533.19	178
	178	19.16373	3.69	178	65	55	12.7	177	36777.55	177
	177	73.24467	1.46	177	258	28	18.4	182	25600.15	182
	182	287.19085	-5.15	182						
179				179	17	14	28.9	178	23534.91	178
	178	19.15708	-0.54	178	294	58	53.6	181	22511.20	181
	181	327.75728	0.54	181						
180				180	120	35	28.0	178	20097.89	178
	178	133.99012	6.19	178	203	29	8.3	181	25293.70	181
	181	226.09516	-1.93	181	272	45	57.8	183	24908.49	183
	183	303.07339	-4.26	183						
181	ECC	2.643	3.454	181	197	45	22.6	182	15355.65	182
	182	219.72920	11.11	182	266	20	16.1	184	15925.11	184
	184	295.93088	-9.44	184	23	29	0.1	180	25289.48	180
	180	26.09261	-1.67	180						
181	ECC	2.644	3.455	181	266	20	16.1	184	15925.11	184
	184	295.93088	-6.84	184	328	45	14.1	183	28536.14	183
	183	365.28214	6.84	183						

PRIHYRNINGANET LMI A AUSTFJÖRDUM

ADJUSTED DIRECTIONS AND DISTANCES

STAT	NUMB	GRADS	ERROR	NAME	D	M	SEC	NUMB	DISTANCE	NAME
181	ECC	2.643	3.454	181						
	182	219.72920	-7.87	182	197	45	22.6	182	15355.85	182
	178	71.84081	7.87	178	64	39	24.2	178	30293.56	178
181				181						
	180	26.09525	-0.15	180	23	29	8.6	180	25293.70	180
	178	71.83662	-1.89	178	64	39	10.7	178	30297.43	178
	179	127.75716	2.04	179	114	58	53.2	179	22511.20	179
183	ECC	-2.553	-0.878	183						
	180	103.07084	3.55	180	92	45	49.5	180	24911.00	180
	181	165.28567	1.19	181	148	45	25.6	181	28538.30	181
	184	202.72415	1.32	184	182	27	6.2	184	25436.53	184
	185	273.77181	1.56	185	246	23	40.7	185	18654.70	185
	188	325.14714	-7.62	188	292	37	56.7	188	41737.69	188
183				183						
	180	103.07340	1.28	180	92	45	57.8	180	24908.49	180
	181	165.29156	3.27	181	148	45	44.7	181	28537.72	181
	184	202.73044	3.68	184	182	27	26.6	184	25437.52	184
	188	325.14441	-8.23	188	292	37	47.9	188	41739.71	188
183				183						
	188	325.14441	-3.16	188	292	37	47.9	188	41739.71	188
	186	261.02942	3.16	186	234	55	35.3	186	34145.61	186
183				183						
	180	103.07340	13.19	180	92	45	57.8	180	24908.49	180
	187	233.67116	-13.19	187	210	18	14.5	187	25872.10	187
184	ECC	2.059	0.619	184						
	181	95.94593	5.67	181	86	21	4.8	181	15920.16	181
	179	114.63589	-2.55	179	103	10	20.3	179	37273.73	179
	182	156.13879	-3.12	182	140	31	29.7	182	17628.92	182

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PRIHYRNINGANET LMI A AUSTFJÖRDUM

ADJUSTED DIRECTIONS AND DISTANCES

STAT	NUMB	GRADS	ERROR	NAME	D	M	SEC	NUMB	DISTANCE	NAME
184	ECC	2.059	0.619	184						
	181	95.94593	8.28	181	86	21	4.8	181	15920.16	181
	185	353.62370	-4.02	185	318	15	40.8	185	24045.54	185
	183	2.72465	-4.26	183	2	27	7.9	183	25436.81	183
184	ECC	-0.336	-2.981	184						
	182	156.12384	-0.56	182	140	30	41.3	182	17627.66	182
	187	316.04153	3.14	187	284	26	14.6	187	12353.90	187
	189	329.86179	-2.58	189	296	52	32.2	189	49162.34	189
186	ECC	2.610	2.898	186						
	189	348.90480	-6.08	189	314	0	51.5	189	23639.29	189
	188	381.64094	-1.79	188	343	28	36.7	188	37215.62	188
	185	46.40113	-1.78	185	41	45	39.7	185	16284.94	185
	183	61.03017	9.65	183	54	55	37.7	183	34141.81	183
187				187						
	184	116.02636	-5.50	184	104	25	25.4	184	12353.48	184
	186	311.48484	-5.36	186	280	20	10.9	186	15136.18	186
	185	383.10018	3.20	185	344	47	24.6	185	15405.72	185
	183	33.67036	7.65	183	30	18	12.0	183	25872.10	183
188	ECC	0.742	-2.492	188						
	185	152.97270	-2.70	185	137	40	31.5	185	31824.88	185
	183	125.14231	2.70	183	112	37	41.1	183	41738.07	183
188				188						
	183	125.14538	-3.23	183	112	37	51.0	183	41739.71	183
	186	181.64943	-2.93	186	163	29	4.2	186	37217.66	186
	189	220.48158	6.16	189	198	26	0.3	189	20294.56	189
189	ECC	0.207	-5.456	189						
	188	20.47385	-7.78	188	18	25	35.3	188	20299.67	188
	185	109.69314	4.28	185	98	43	25.8	185	28172.36	185
	186	148.90655	3.51	186	134	0	57.2	186	23635.49	186

MAXIMUM ERROR DIRECTION 13.2 CC DISTANCE 0.0 CC LOCATION 0.0 CC