

UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

Gravity Survey Data of the International Falls CUSMAP Area,
International Falls, Minnesota, and Ontario, Canada

by

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Open-File Report 87-327

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This report is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards. Any use of trade names is for descriptive purposes only and does not imply endorsement by the USGS.

The U. S. Geological Survey, Branch of Geophysics presents the following gravity data as part of the International Falls CUSMAP (Conterminous United States Mineral Assessment Program) project. These compiled data will be used to produce a complete (terrain-corrected) Bouguer gravity anomaly map of the International Falls $1^{\circ} \times 2^{\circ}$ quadrangle (Figure 1). The observed gravity values were collected and compiled primarily by the Minnesota Geological Survey in cooperation with the USGS, and were supplemented with data collected by the author and data from the U.S. Department of Defense gravity data base. 1905 observed gravity values, which are relative to the International Gravity Standardization Net, 1971, (Morelli, 1974), were processed by the author using the 1967 gravity formula (International Association of Geodesy, 1967) and a reduction density of 2.67 g/cm^3 . Terrain corrections, to a radial distance of 167 km around each station, and complete Bouguer anomaly values were calculated using a computer program by Godson (unpublished, 1978), in conjunction with U.S. Department of Defense digital terrain data. The principal facts of the gravity data including: station identification, location, and elevation; the observed and theoretical gravity values; corrections for terrain effects, Bouguer slab, and Earth curvature; and the free air and complete Bouguer anomalies are given in Appendix A.

LOCATION DIAGRAM

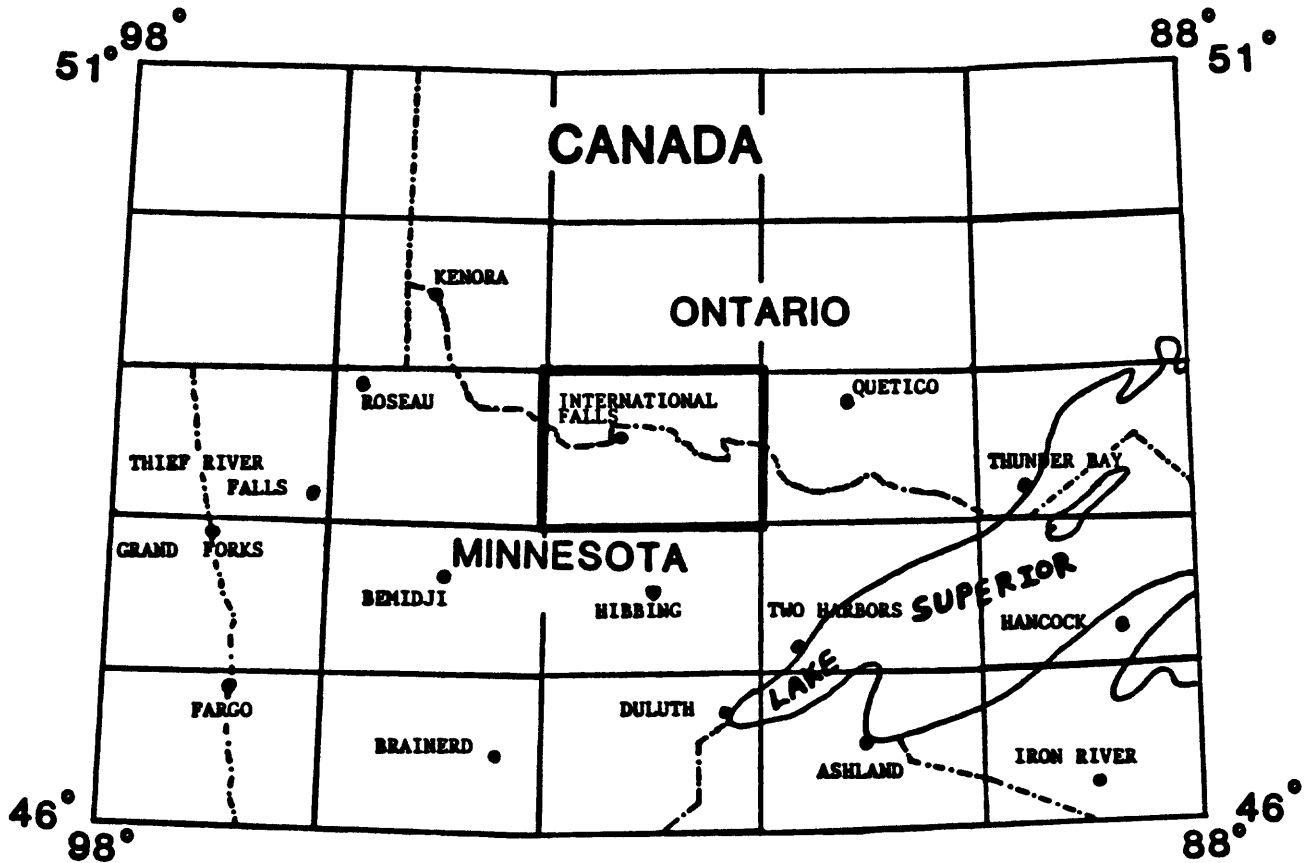


Figure 1. Location of the International Falls 1° x 2° quadrangle.

Selected References and Gravity Data Sources

- Chandler, V. W., Jirsa, M. A., and Ikola, R. J.; 1985, Simple Bouguer Gravity Map of Minnesota, Hibbing Sheet: Minnesota Geological Survey Miscellaneous Map Series Map M-56, scale 1:250,000.
- Chandler, V. W., Mills, S. J., and Ferderer, R. J., 1987, Simple Bouguer Gravity Map of Minnesota, International Falls sheet: Minnesota Geological Survey, Miscellaneous Map Series M-62, scale 1:250,000.
- Defense Mapping Agency, 1974, World Relative Gravity Reference Network, North America, Part 2: St. Louis, Missouri, Aerospace Center, DMAAC Reference Publication 25, with supplement updating gravity values to the International Gravity Standardization Net 1971, 1635 p.
- Geological Survey of Canada, 1981, Lake of the Woods, Manuscript Map No. 48090 for Gravity Map of Canada 1980: Energy, Mines and Resources Canada, Geophysics Division, scale 1:1,000,000.
- Godson, R. H., 1978, Bouguer: U.S. Geological Survey unpublished computer program description.
- International Association of Geodesy, 1967, Systeme geodesique de reference 1967: International Geodesy Publication Special No. 3, 115 p.
- McGinnis L., Durfee G., and Ikola R. J., 1973, Simple Bouguer Gravity Map of Minnesota, Roseau Sheet: Minnesota Geological Survey, Miscellaneous Map Series Map M-12, scale 1:250,000.
- Morelli, Carlo, ed., 1974, The International Gravity Standardization Net, 1971: International Association of Geodesy Special Publication 4, 194 p.
- Plouff, D., 1977, Preliminary documentation for a FORTRAN program to compute gravity terrain corrections based on topography digitized on a geographic grid: U.S. Geological Survey Open-File Report 77-535, 43 p.

Appendix A: Principal Facts of Gravity Data

Explanation of headings

IDENTIFICATION

Proj	Project name.
Sta-id	Gravity station identification number.

LOCATION

Latitude	North latitude in degrees, decimal minutes.
Longitude	West longitude in degrees, decimal minutes.
Ele	Station elevation in feet.
St	State or Province where station is located.

GRAVITY

Observed	Observed gravity in milliGals.
Theoretical	Theoretical gravity in milliGals.

CORRECTIONS

Terrain	Terrain correction, 167 km radius, in milliGals.
Bouguer	Bouguer slab correction in milliGals.
Curv	Curvature correction in milliGals.
Special	Not used.

ANOMALIES

Free air	Free air anomaly in milliGals.
Complete-Bouguer	Complete Bouguer anomaly in milliGals for designated density.

BOUGUER GRAVITY DATA

International Falls CUSMAP Gravity Data

Meter used:

STATION IDENTIFICATION proj sta-id	L O C A T I O N S		G R A V I T Y		C O R R E C T I O N S		A N O M A L I E S	
	LATITUDE deg min	LONGITUDE deg min	ELE (in ft)	ST OBSERVED	THEORETICAL	TERRAIN BOUGUER CURV 2.67 g/cc	SPECIAL FREE AIR	COMPLETE-BOUGUER 2.67 g/cc
IFCUSMAP 4555	47 56.90	-93 55.20	1292.00	mn 980763.21	980885.49	0.03 -44.07 -0.52	0.00 -0.79	-45.35
IFCUSMAP 4555	47 55.40	-93 56.00	1293.00	mn 980763.92	980883.24	0.03 -44.10 -0.52	0.00 2.26	-42.33
IFCUSMAP 4555	47 55.90	-93 56.00	1284.00	mn 980764.82	980883.99	0.02 -43.79 -0.52	0.00 1.64	-42.68
IFCUSMAP 4555	47 57.70	-93 56.70	1300.00	mn 980766.21	980886.70	0.02 -44.34 -0.52	0.00 1.84	-43.04
IFCUSMAP 2094	47 55.20	-93 56.90	1288.00	mn 980765.30	980882.94	0.02 -43.93 -0.52	0.00 3.48	-40.95
IFCUSMAP 4555	47 55.20	-93 57.00	1284.00	mn 980765.82	980882.94	0.02 -43.79 -0.52	0.00 3.69	-40.63
IFCUSMAP 4555	47 59.10	-93 59.50	1306.00	mn 980777.11	980888.80	0.02 -44.54 -0.53	0.00 11.19	-33.89
IFCUSMAP 4555	47 55.90	-94 4.20	1318.00	mn 980770.01	980883.99	0.03 -44.95 -0.53	0.00 10.03	-35.45
IFCUSMAP 4555	47 56.80	-94 4.20	1341.00	mn 980770.51	980885.34	0.06 -45.74 -0.54	0.00 11.34	-34.90
IFCUSMAP 4555	47 57.00	-94 4.80	1337.00	mn 980772.42	980885.64	0.05 -45.60 -0.54	0.00 12.58	-33.54
IFCUSMAP 4555	47 55.90	-94 5.00	1331.00	mn 980769.51	980883.99	0.04 -45.40 -0.54	0.00 10.74	-35.18
IFCUSMAP 2094	47 55.90	-94 6.00	1344.00	mn 980769.10	980883.99	0.06 -45.84 -0.54	0.00 11.50	-34.82
IFCUSMAP 4555	47 55.20	-94 6.10	1322.00	mn 980768.42	980882.94	0.03 -45.09 -0.53	0.00 9.87	-35.75
IFCUSMAP 4555	47 55.90	-94 6.10	1340.00	mn 980769.51	980883.99	0.05 -45.70 -0.54	0.00 11.60	-34.62
IFCUSMAP 4555	47 57.80	-94 6.10	1348.00	mn 980776.21	980886.84	0.07 -45.98 -0.54	0.00 16.19	-30.28
IFCUSMAP 4555	47 59.20	-94 6.20	1304.00	mn 980787.92	980888.95	0.02 -44.48 -0.53	0.00 21.67	-23.34
IFCUSMAP 4555	47 58.30	-94 6.20	1321.00	mn 980779.82	980887.59	0.03 -45.06 -0.53	0.00 16.53	-29.06
IFCUSMAP 4555	47 58.70	-94 7.40	1319.00	mn 980786.61	980888.20	0.03 -44.99 -0.53	0.00 22.52	-23.00
IFCUSMAP 4555	47 57.80	-94 7.40	1340.00	mn 980777.71	980886.84	0.05 -45.70 -0.54	0.00 16.95	-29.27
IFCUSMAP 4555	47 55.90	-94 7.40	1342.00	mn 980770.11	980883.99	0.05 -45.77 -0.54	0.00 12.38	-33.91
IFCUSMAP 4555	47 58.30	-94 7.40	1351.00	mn 980779.01	980887.59	0.08 -46.08 -0.54	0.00 18.51	-28.05
IFCUSMAP 4555	47 56.50	-94 7.40	1345.00	mn 980773.61	980884.89	0.05 -45.87 -0.54	0.00 15.26	-31.13
IFCUSMAP 2094	47 58.30	-94 7.70	1344.00	mn 980779.71	980887.59	0.06 -45.84 -0.54	0.00 18.54	-27.80
IFCUSMAP 4555	47 58.70	-94 8.70	1328.00	mn 980785.42	980888.20	0.04 -45.29 -0.53	0.00 22.16	-23.65
IFCUSMAP 4555	47 57.80	-94 8.70	1341.00	mn 980777.32	980886.84	0.04 -45.74 -0.54	0.00 16.66	-29.61
IFCUSMAP 4555	47 59.60	-94 6.70	1303.00	mn 980784.61	980889.55	0.03 -44.44 -0.53	0.00 17.66	-27.31
IFCUSMAP 4555	47 57.80	-94 10.00	1344.00	mn 980777.21	980886.84	0.04 -45.84 -0.54	0.00 16.82	-29.55
IFCUSMAP 4555	47 55.10	-94 10.00	1346.00	mn 980767.82	980882.79	0.05 -45.91 -0.54	0.00 11.67	-34.76
IFCUSMAP 4555	47 55.50	-94 10.30	1343.00	mn 980769.51	980883.39	0.04 -45.81 -0.54	0.00 12.47	-33.86
IFCUSMAP 4555	47 58.60	-94 11.30	1331.00	mn 980780.01	980888.05	0.04 -45.40 -0.54	0.00 17.18	-28.74
IFCUSMAP 4555	47 57.70	-94 11.30	1356.00	mn 980774.71	980886.70	0.05 -46.25 -0.54	0.00 15.52	-31.22
IFCUSMAP 4555	47 56.20	-94 11.30	1357.00	mn 980770.32	980884.45	0.05 -46.28 -0.55	0.00 13.47	-33.30
IFCUSMAP 4555	47 56.90	-94 11.30	1365.00	mn 980771.32	980885.49	0.06 -46.56 -0.55	0.00 14.25	-32.82
IFCUSMAP 4555	47 55.10	-94 11.30	1365.00	mn 980769.42	980882.79	0.06 -46.56 -0.55	0.00 15.06	-32.01
IFCUSMAP 4555	47 55.50	-94 11.30	1358.00	mn 980772.42	980883.39	0.05 -46.32 -0.55	0.00 16.81	-30.04
IFCUSMAP 2094	47 55.50	-94 12.40	1385.00	mn 980770.50	980883.39	0.07 -47.24 -0.56	0.00 17.39	-30.35
IFCUSMAP 4555	47 59.20	-94 12.50	1324.00	mn 980782.11	980888.95	0.06 -45.16 -0.53	0.00 17.74	-27.92
IFCUSMAP 4555	47 56.00	-94 12.50	1381.00	mn 980769.92	980884.14	0.06 -47.10 -0.55	0.00 15.72	-31.91
IFCUSMAP 4555	47 58.60	-94 12.50	1355.00	mn 980777.51	980888.05	0.06 -46.22 -0.54	0.00 16.87	-29.83
IFCUSMAP 4555	47 55.10	-94 12.50	1387.00	mn 980770.92	980882.79	0.07 -47.31 -0.56	0.00 18.63	-29.19

BOUGUER GRAVITY DATA

International Falls CUSMAP Gravity Data

Meter used:

STATION IDENTIFICATION proj sta-id	L O C A T I O N S		G R A V I T Y		C O R R E C T I O N S		A N O M A L I E S	
	LATITUDE deg min	LONGITUDE deg min	ELE (in ft)	ST OBSERVED	THEORETICAL	TERRAIN BOUGUER CURV 2.67 g/cc	SPECIAL FREE AIR	COMPLETE-BOUGUER 2.67 g/cc
IFCUSHAP 4555	47 57.50	-94 13.90	1382.00	mn 980770.71	980886.39	0.08 -47.14 -0.55	0.00 14.35	-33.29
IFCUSHAP 4555	47 56.00	-94 13.90	1405.00	mn 980768.82	980884.14	0.07 -47.92 -0.56	0.00 16.87	-31.57
IFCUSHAP 4555	47 58.60	-94 13.90	1364.00	mn 980775.82	980888.05	0.07 -46.52 -0.55	0.00 16.11	-30.92
IFCUSHAP 4555	47 59.50	-94 13.90	1294.00	mn 980782.92	980889.40	0.03 -44.13 -0.52	0.00 15.20	-29.43
IFCUSHAP 4555	47 56.90	-94 13.90	1387.00	mn 980769.32	980885.49	0.07 -47.31 -0.56	0.00 14.32	-33.50
IFCUSHAP 4555	47 55.10	-94 15.10	1419.00	mn 980774.32	980882.79	0.08 -48.40 -0.57	0.00 24.96	-23.93
IFCUSHAP 4555	47 56.00	-94 15.10	1414.00	mn 980769.51	980884.14	0.08 -48.23 -0.57	0.00 18.39	-30.35
IFCUSHAP 4555	47 58.60	-94 15.20	1371.00	mn 980776.51	980888.05	0.09 -46.76 -0.55	0.00 17.44	-29.80
IFCUSHAP 4555	47 56.40	-94 16.20	1412.00	mn 980768.51	980884.74	0.08 -48.16 -0.56	0.00 16.60	-32.07
IFCUSHAP 4555	47 58.60	-94 16.40	1361.00	mn 980776.92	980888.05	0.09 -46.42 -0.55	0.00 16.93	-29.97
IFCUSHAP 2094	47 56.50	-94 17.40	1400.00	mn 980768.71	980884.89	0.07 -47.75 -0.56	0.00 15.55	-32.72
IFCUSHAP 4555	47 58.70	-94 17.70	1321.00	mn 980778.92	980888.20	0.05 -45.06 -0.53	0.00 15.03	-30.54
IFCUSHAP 4555	47 57.60	-94 17.90	1387.00	mn 980772.71	980886.55	0.09 -47.31 -0.56	0.00 16.66	-31.14
IFCUSHAP 4555	47 56.40	-94 18.70	1403.00	mn 980769.82	980884.74	0.08 -47.85 -0.56	0.00 17.09	-31.28
IFCUSHAP 4555	47 59.50	-94 18.80	1298.00	mn 980779.92	980889.40	0.05 -44.27 -0.52	0.00 12.66	-32.12
IFCUSHAP 4555	47 57.60	-94 18.90	1387.00	mn 980772.92	980886.55	0.09 -47.31 -0.56	0.00 16.87	-30.93
IFCUSHAP 4555	47 57.10	-94 20.50	1399.00	mn 980771.61	980885.79	0.11 -47.72 -0.56	0.00 17.45	-30.74
IFCUSHAP 4555	47 56.40	-94 21.00	1402.00	mn 980769.42	980884.74	0.09 -47.82 -0.56	0.00 16.59	-31.73
IFCUSHAP 4555	47 57.40	-94 21.10	1386.00	mn 980773.32	980886.24	0.11 -47.27 -0.56	0.00 17.48	-30.27
IFCUSHAP 4555	47 59.80	-94 22.00	1292.00	mn 980782.11	980889.84	0.09 -44.07 -0.52	0.00 13.75	-30.75
IFCUSHAP 2094	47 56.50	-94 22.50	1397.00	mn 980769.80	980884.89	0.10 -47.65 -0.56	0.00 16.27	-31.84
IFCUSHAP 4555	47 56.40	-94 22.50	1398.00	mn 980770.21	980884.74	0.10 -47.68 -0.56	0.00 16.92	-31.22
IFCUSHAP 4555	47 59.80	-94 23.10	1280.00	mn 980784.01	980889.84	0.05 -43.66 -0.52	0.00 14.60	-29.55
IFCUSHAP 4555	47 56.40	-94 23.80	1398.00	mn 980768.11	980884.74	0.10 -47.68 -0.56	0.00 14.82	-33.32
IFCUSHAP 4555	47 56.90	-94 25.10	1378.00	mn 980770.71	980885.49	0.09 -47.00 -0.55	0.00 14.79	-32.67
IFCUSHAP 4555	47 58.60	-94 26.30	1337.00	mn 980781.61	980888.05	0.10 -45.60 -0.54	0.00 19.37	-26.70
IFCUSHAP 4555	47 57.70	-94 26.30	1357.00	mn 980776.01	980886.70	0.06 -46.28 -0.55	0.00 16.91	-29.86
IFCUSHAP 4555	47 56.40	-94 26.30	1376.00	mn 980771.01	980884.74	0.09 -46.93 -0.55	0.00 15.65	-31.74
IFCUSHAP 4555	47 55.10	-94 26.30	1320.00	mn 980774.82	980882.79	0.04 -45.02 -0.53	0.00 16.24	-29.31
IFCUSHAP 2094	47 56.60	-94 26.70	1357.00	mn 980771.71	980885.04	0.05 -46.28 -0.55	0.00 14.30	-32.49
IFCUSHAP 4555	47 56.60	-94 26.90	1360.00	mn 980773.32	980885.04	0.06 -46.39 -0.55	0.00 16.25	-30.66
IFCUSHAP 4555	47 57.30	-94 27.00	1351.00	mn 980774.51	980886.09	0.05 -46.08 -0.54	0.00 15.51	-31.08
IFCUSHAP 4555	47 57.80	-94 27.60	1337.00	mn 980777.92	980886.84	0.05 -45.60 -0.54	0.00 16.88	-29.24
IFCUSHAP 4555	47 58.60	-94 27.60	1337.00	mn 980779.61	980888.05	0.10 -45.60 -0.54	0.00 17.37	-28.70
IFCUSHAP 4555	47 56.00	-94 27.60	1358.00	mn 980771.61	980884.14	0.05 -46.32 -0.55	0.00 15.25	-31.60
IFCUSHAP 4555	47 58.10	-94 28.50	1326.00	mn 980780.51	980887.30	0.06 -45.23 -0.53	0.00 17.97	-27.76
IFCUSHAP 4555	47 56.00	-94 29.00	1335.00	mn 980773.82	980884.14	0.04 -45.53 -0.54	0.00 15.21	-30.82
IFCUSHAP 4555	47 56.40	-94 29.00	1325.00	mn 980776.11	980884.74	0.04 -45.19 -0.53	0.00 16.03	-29.68
IFCUSHAP 4555	47 57.70	-94 29.20	1315.00	mn 980781.42	980886.70	0.05 -44.85 -0.53	0.00 18.46	-26.90
IFCUSHAP 4555	47 58.10	-94 29.20	1317.00	mn 980780.92	980887.30	0.07 -44.92 -0.53	0.00 17.55	-27.86

BOUGUER GRAVITY DATA

International Falls CUSMAP Gravity Data

Meter used:

STATION IDENTIFICATION proj sta-id	L O C A T I O N S				G R A V I T Y		C O R R E C T I O N S		A M O N A L I E S		
	LATITUDE deg min	LONGITUDE deg min	ELE (in ft)	ST OBSERVED	THEORETICAL	TERRAIN BOUGUER CURV	SPECIAL	FREE AIR	COMPLETE-BOUGUER		
						2.67 g/cc			2.67 g/cc		
IFCUSMAP 2094	47 59.30	-94 29.80	1272.00	mn 980780.00	980889.09	0.05	-43.38	-0.51	0.00	10.54	-33.32
IFCUSMAP 4555	47 55.10	-94 30.20	1319.00	mn 980773.61	980882.79	0.04	-44.99	-0.53	0.00	14.93	-30.58
IFCUSMAP 2094	48 28.60	-93 56.20	1134.00	mn 980823.30	980933.03	-0.02	-38.68	-0.46	0.00	-3.06	-42.04
IFCUSMAP 2094	48 28.70	-93 56.90	1135.00	mn 980823.60	980933.19	-0.02	-38.71	-0.46	0.00	-2.81	-42.03
IFCUSMAP 2094	48 13.10	-93 57.00	1202.00	mn 980805.10	980909.80	-0.01	-41.00	-0.49	0.00	8.40	-33.12
IFCUSMAP 2094	48 35.40	-93 57.30	1167.00	mn 980845.21	980943.22	0.05	-39.80	-0.48	0.00	11.73	-28.50
IFCUSMAP 2094	48 4.70	-93 57.70	1235.00	mn 980787.80	980897.20	-0.01	-42.12	-0.50	0.00	6.81	-35.86
IFCUSMAP 2094	48 16.20	-93 59.90	1218.00	mn 980810.50	980914.45	0.02	-41.54	-0.49	0.00	10.60	-31.42
IFCUSMAP 2094	48 13.00	-94 0.20	1198.00	mn 980804.71	980909.65	-0.01	-40.86	-0.49	0.00	7.73	-33.63
IFCUSMAP 42772356	48 29.10	-94 0.40	1140.00	mn 980828.11	980933.78	-0.02	-38.88	-0.47	0.00	1.59	-37.80
IFCUSMAP 2094	48 29.00	-94 0.40	1136.00	mn 980827.71	980933.63	-0.03	-38.75	-0.46	0.00	0.92	-38.33
IFCUSMAP 3325	2 48 37.70	-94 0.50	1117.00	mn 980847.03	980946.66	-0.03	-38.10	-0.46	0.00	5.41	-33.18
IFCUSMAP 2094	48 37.80	-94 0.50	1118.00	mn 980847.90	980946.81	-0.03	-38.13	-0.46	0.00	6.22	-32.40
IFCUSMAP 4555	48 13.10	-94 0.60	1201.00	mn 980806.11	980909.80	-0.01	-40.96	-0.49	0.00	9.32	-32.17
IFCUSMAP 3325	3 48 37.70	-94 0.90	1119.00	mn 980847.21	980946.66	-0.03	-38.17	-0.46	0.00	5.78	-32.88
IFCUSMAP 4555	48 2.50	-94 0.90	1257.00	mn 980789.42	980893.90	0.00	-42.87	-0.51	0.00	13.80	-29.61
IFCUSMAP 3325	29 48 36.80	-94 0.90	1134.00	mn 980844.10	980945.32	-0.03	-38.68	-0.46	0.00	5.49	-33.71
IFCUSMAP 2094	48 2.40	-94 1.20	1256.00	mn 980787.80	980893.75	0.00	-42.84	-0.51	0.00	12.23	-31.14
IFCUSMAP 42772355	48 29.10	-94 1.30	1140.00	mn 980828.61	980933.78	-0.02	-38.88	-0.47	0.00	2.09	-37.30
IFCUSMAP 4555	48 13.10	-94 1.50	1193.00	mn 980805.32	980909.80	-0.01	-40.69	-0.49	0.00	7.79	-33.43
IFCUSMAP 3325	4 48 37.70	-94 1.60	1129.00	mn 980847.76	980946.66	-0.03	-38.51	-0.46	0.00	7.34	-31.69
IFCUSMAP 42772390	48 16.80	-94 1.70	1222.00	mn 980810.71	980915.35	0.01	-41.68	-0.50	0.00	10.34	-31.85
IFCUSMAP 4555	48 1.60	-94 2.20	1259.00	mn 980788.32	980892.55	0.00	-42.94	-0.51	0.00	14.23	-29.25
IFCUSMAP 2094	48 16.90	-94 2.20	1223.00	mn 980809.60	980915.50	0.01	-41.71	-0.50	0.00	9.14	-33.08
IFCUSMAP 3325	28 48 38.30	-94 2.20	1087.00	mn 980849.12	980947.56	-0.04	-37.07	-0.45	0.00	3.85	-33.74
IFCUSMAP 3325	5 48 37.70	-94 2.20	1142.00	mn 980848.57	980946.66	0.00	-38.95	-0.47	0.00	9.30	-30.12
IFCUSMAP 4555	48 0.30	-94 2.30	1310.00	mn 980786.21	980890.59	0.04	-44.68	-0.53	0.00	18.86	-26.33
IFCUSMAP 4555	48 13.00	-94 2.80	1191.00	mn 980805.01	980909.65	-0.01	-40.62	-0.48	0.00	7.43	-33.71
IFCUSMAP 42772361	48 29.00	-94 2.80	1135.00	mn 980829.21	980933.63	-0.03	-38.71	-0.46	0.00	2.38	-36.86
IFCUSMAP 3325	6 48 37.60	-94 2.90	1126.00	mn 980849.96	980946.52	-0.03	-38.40	-0.46	0.00	9.35	-29.55
IFCUSMAP 3325	32 48 36.80	-94 3.50	1148.00	mn 980850.87	980945.32	-0.01	-39.15	-0.47	0.00	13.49	-26.14
IFCUSMAP 3325	30 48 38.40	-94 3.50	1096.00	mn 980851.14	980947.71	-0.04	-37.38	-0.45	0.00	6.50	-31.38
IFCUSMAP 3325	7 48 37.70	-94 3.50	1130.00	mn 980850.28	980946.66	-0.02	-38.54	-0.46	0.00	9.96	-29.10
IFCUSMAP 3325	31 48 35.90	-94 3.50	1152.00	mn 980851.75	980943.97	-0.02	-39.29	-0.47	0.00	16.19	-23.62
IFCUSMAP 4555	48 0.80	-94 3.60	1310.00	mn 980786.21	980891.34	0.03	-44.68	-0.53	0.00	18.11	-27.09
IFCUSMAP 2094	48 29.00	-94 3.80	1136.00	mn 980829.90	980933.63	-0.03	-38.75	-0.46	0.00	3.10	-36.14
IFCUSMAP 42772387	48 17.50	-94 3.90	1224.00	mn 980811.11	980916.40	0.00	-41.75	-0.50	0.00	9.87	-32.40
IFCUSMAP 4555	48 13.20	-94 3.90	1191.00	mn 980804.61	980909.95	-0.01	-40.62	-0.48	0.00	6.73	-34.42
IFCUSMAP 42772360	48 29.00	-94 4.10	1140.00	mn 980830.51	980933.63	-0.03	-38.88	-0.47	0.00	4.14	-35.27
IFCUSMAP 3325	8 48 37.60	-94 4.10	1133.00	mn 980849.40	980946.52	-0.02	-38.64	-0.46	0.00	9.50	-29.65

BOUGUER GRAVITY DATA

International Falls CUSMAP Gravity Data

Meter used:

STATION IDENTIFICATION proj sta-id	L O C A T I O N S			G R A V I T Y		C O R R E C T I O N S			A N O M A L I E S		
	LATITUDE deg min	LONGITUDE deg min	ELE (in ft)	ST OBSERVED	THEORETICAL	TERRAIN BOUGUER CURV	SPECIAL	FREE AIR	COMPLETE-BOUGUER	2.67 g/cc	
IFCUSHAP 4555	48 0 20	-94 4 40	1318.00	mn 980785.71	980890.45	0.03	-44.95	-0.53	0.00	19.28	-26.20
IFCUSHAP 3325	20 48 35.10	-94 4 70	1141.00	mn 980854.75	980942.77	-0.02	-38.92	-0.47	0.00	19.33	-20.10
IFCUSHAP 3325	21 48 34.20	-94 4 70	1123.00	mn 980853.28	980941.42	-0.02	-38.30	-0.46	0.00	17.49	-21.30
IFCUSHAP 2094	48 13.20	-94 4 70	1191.00	mn 980804.00	980909.95	-0.01	-40.62	-0.48	0.00	6.12	-35.03
IFCUSHAP 283	48 34.60	-94 4 75	1133.00	mn 980854.54	980942.02	-0.02	-38.64	-0.46	0.00	19.05	-20.08
IFCUSHAP 281	48 34.21	-94 4 75	1126.00	mn 980852.93	980941.44	-0.02	-38.40	-0.46	0.00	17.37	-21.52
IFCUSHAP 287	48 35.92	-94 4 75	1158.00	mn 980853.35	980944.00	0.00	-39.50	-0.47	0.00	18.24	-21.73
IFCUSHAP 268	48 30.90	-94 4 75	1139.00	mn 980834.93	980936.48	-0.03	-38.65	-0.47	0.00	5.55	-33.79
IFCUSHAP 277	48 32.96	-94 4 75	1137.00	mn 980847.99	980939.56	-0.03	-38.78	-0.46	0.00	15.34	-23.93
IFCUSHAP 270	48 31.33	-94 4 75	1138.00	mn 980836.53	980937.13	-0.03	-38.81	-0.47	0.00	6.41	-32.90
IFCUSHAP 266	48 30.46	-94 4 75	1140.00	mn 980833.76	980935.82	-0.03	-38.88	-0.47	0.00	5.13	-34.25
IFCUSHAP 267	48 30.68	-94 4 75	1139.00	mn 980834.54	980936.15	-0.03	-38.85	-0.47	0.00	5.49	-33.85
IFCUSHAP 275	48 32.43	-94 4 75	1138.00	mn 980842.79	980938.77	-0.03	-38.81	-0.47	0.00	11.02	-28.29
IFCUSHAP 280	48 33.81	-94 4 75	1130.00	mn 980851.80	980940.84	-0.02	-38.54	-0.46	0.00	17.22	-21.81
IFCUSHAP 279	48 33.57	-94 4 75	1135.00	mn 980850.03	980940.48	-0.03	-38.71	-0.46	0.00	16.28	-22.93
IFCUSHAP 286	48 35.49	-94 4 75	1158.00	mn 980854.32	980943.35	-0.02	-39.50	-0.47	0.00	19.86	-20.13
IFCUSHAP 264	48 30.03	-94 4 76	1140.00	mn 980832.68	980935.18	-0.03	-38.88	-0.47	0.00	4.69	-34.68
IFCUSHAP 291	48 36.96	-94 4 76	1160.00	mn 980847.91	980945.55	0.03	-39.56	-0.47	0.00	11.43	-28.58
IFCUSHAP 265	48 30.25	-94 4 76	1140.00	mn 980833.36	980935.51	-0.03	-38.88	-0.47	0.00	5.05	-34.33
IFCUSHAP 289	48 36.35	-94 4 76	1158.00	mn 980850.75	980944.64	0.02	-39.50	-0.47	0.00	15.00	-24.95
IFCUSHAP 278	48 33.29	-94 4 76	1135.00	mn 980848.86	980940.06	-0.03	-38.71	-0.46	0.00	15.52	-23.68
IFCUSHAP 274	48 32.22	-94 4 76	1138.00	mn 980841.30	980938.46	-0.03	-38.81	-0.47	0.00	9.84	-29.47
IFCUSHAP 285	48 35.29	-94 4 76	1151.00	mn 980854.52	980943.05	-0.02	-39.26	-0.47	0.00	19.70	-20.05
IFCUSHAP 282	48 34.39	-94 4 76	1124.00	mn 980854.23	980941.71	-0.02	-38.34	-0.46	0.00	18.21	-20.61
IFCUSHAP 269	48 31.12	-94 4 76	1139.00	mn 980835.48	980936.81	-0.03	-38.85	-0.47	0.00	5.76	-33.58
IFCUSHAP 273	48 32.00	-94 4 76	1139.00	mn 980839.79	980938.13	-0.03	-38.85	-0.47	0.00	8.76	-30.58
IFCUSHAP 276	48 32.75	-94 4 76	1138.00	mn 980846.00	980939.25	-0.03	-38.81	-0.47	0.00	13.76	-25.55
IFCUSHAP 284	48 35.05	-94 4 76	1144.00	mn 980854.54	980942.70	-0.02	-39.02	-0.47	0.00	19.41	-20.09
IFCUSHAP 293	48 37.43	-94 4 76	1140.00	mn 980847.30	980946.26	-0.01	-38.88	-0.47	0.00	8.23	-31.12
IFCUSHAP 272	48 31.79	-94 4 76	1139.00	mn 980838.32	980937.81	-0.03	-38.85	-0.47	0.00	7.61	-31.74
IFCUSHAP 271	48 31.56	-94 4 76	1139.00	mn 980837.18	980937.47	-0.03	-38.85	-0.47	0.00	6.81	-32.53
IFCUSHAP 292	48 37.21	-94 4 76	1160.00	mn 980846.87	980945.93	0.04	-39.56	-0.47	0.00	10.01	-29.99
IFCUSHAP 262	48 29.60	-94 4 77	1140.00	mn 980831.41	980934.53	-0.03	-38.88	-0.47	0.00	4.07	-35.31
IFCUSHAP 259	48 28.96	-94 4 77	1135.00	mn 980831.30	980933.57	-0.03	-38.71	-0.46	0.00	4.45	-34.75
IFCUSHAP 261	48 29.37	-94 4 77	1140.00	mn 980830.78	980934.19	-0.03	-38.88	-0.47	0.00	3.79	-35.59
IFCUSHAP 288	48 36.11	-94 4 77	1158.00	mn 980851.93	980944.28	0.02	-39.50	-0.47	0.00	16.54	-23.41
IFCUSHAP 260	48 29.13	-94 4 77	1140.00	mn 980833.83	980933.83	-0.03	-38.88	-0.47	0.00	4.39	-34.99
IFCUSHAP 263	48 29.83	-94 4 77	1141.00	mn 980832.21	980934.88	-0.03	-38.92	-0.47	0.00	4.62	-34.79
IFCUSHAP 290	48 36.78	-94 4 77	1160.00	mn 980848.64	980945.29	0.04	-39.56	-0.47	0.00	12.43	-27.57
IFCUSHAP 3325	25 48 30.70	-94 4 80	1139.00	mn 980834.67	980936.18	-0.03	-38.85	-0.47	0.00	5.60	-33.75

BOUGUER GRAVITY DATA

International Falls CUSHAP Gravity Data

Meter used:

STATION		L O C A T I O N S		G R A V I T Y		C O R R E C T I O N S		A M O N A L I E S	
IDENTIFICATION	sta-id	LATITUDE	LONGITUDE	ELE	SI OBSERVED	THEORETICAL	TERRAIN BOUGUER CURV	SPECIAL	FREE COMPLETE-BOUGUER
proj		deg	min	(in ft)			2.67 g/cc	AIR	2.67 g/cc
IFCUSHAP	3325	22 48 33.30	-94 4.80	1134.00	mn	980848.89	980940.08	0.00	15.52
IFCUSHAP	3325	24 48 31.60	-94 4.80	1139.00	mn	980837.22	980937.53	0.00	6.80
IFCUSHAP	295	48 37.99	-94 4.80	1143.00	mn	980848.06	980947.10	0.00	8.44
IFCUSHAP	3325	18 48 36.80	-94 4.80	1160.00	mn	980848.67	980945.32	0.00	12.44
IFCUSHAP	3325	9 48 37.60	-94 4.80	1148.00	mn	980846.74	980946.52	0.00	8.17
IFCUSHAP	3325	23 48 32.50	-94 4.80	1137.00	mn	980844.14	980938.88	0.00	12.19
IFCUSHAP	3325	26 48 30.00	-94 4.80	1141.00	mn	980832.64	980935.13	0.00	4.81
IFCUSHAP	3325	19 48 35.90	-94 4.80	1158.00	mn	980853.39	980943.97	0.00	18.32
IFCUSHAP	2094	48 33.60	-94 4.80	1132.00	mn	980850.80	980940.52	0.00	16.73
IFCUSHAP	2094	48 34.20	-94 4.80	1124.00	mn	980853.90	980941.42	0.00	18.17
IFCUSHAP	3325	17 48 38.50	-94 4.80	1100.00	mn	980850.96	980947.86	0.00	6.54
IFCUSHAP	296	48 38.21	-94 4.81	1124.00	mn	980848.50	980947.43	0.00	6.76
IFCUSHAP	297	48 38.58	-94 4.81	1085.00	mn	980852.74	980947.98	0.00	6.78
IFCUSHAP	294	48 37.62	-94 4.87	1164.00	mn	980845.96	980946.55	0.00	8.86
IFCUSHAP	42772359	48 29.00	-94 4.90	1133.00	mn	980831.32	980933.63	0.00	4.31
IFCUSHAP	4555	48 1.20	-94 4.90	1305.00	mn	980784.92	980891.95	0.00	15.76
IFCUSHAP	42772354	48 29.70	-94 4.90	1140.00	mn	980832.21	980934.68	0.00	4.79
IFCUSHAP	2094	48 37.80	-94 5.00	1164.00	mn	980846.50	980946.81	0.00	9.14
IFCUSHAP	4555	48 13.20	-94 5.30	1188.00	mn	980805.21	980909.95	0.00	6.97
IFCUSHAP	35570612	48 37.80	-94 5.80	1167.00	mn	980845.10	980946.81	0.00	8.02
IFCUSHAP	3325	10 48 37.60	-94 5.90	1166.00	mn	980844.29	980946.52	0.00	7.48
IFCUSHAP	42772385	48 18.10	-94 6.00	1227.00	mn	980811.82	980917.30	0.00	9.96
IFCUSHAP	3325	33 48 37.00	-94 6.00	1181.00	mn	980844.92	980945.62	0.00	10.36
IFCUSHAP	3325	27 48 38.50	-94 6.10	1109.00	mn	980849.26	980947.86	0.00	5.71
IFCUSHAP	42772392	48 15.10	-94 6.10	1207.00	mn	980808.71	980912.80	0.00	9.47
IFCUSHAP	42772391	48 15.80	-94 6.10	1211.00	mn	980809.71	980913.85	0.00	9.73
IFCUSHAP	3325	34 48 35.90	-94 6.10	1167.00	mn	980850.82	980945.97	0.00	16.58
IFCUSHAP	42772389	48 16.80	-94 6.20	1221.00	mn	980810.11	980915.35	0.00	9.64
IFCUSHAP	42772358	48 29.00	-94 6.20	1139.00	mn	980832.21	980933.63	0.00	5.75
IFCUSHAP	4555	48 1.90	-94 6.30	1286.00	mn	980786.82	980893.00	0.00	14.81
IFCUSHAP	2094	48 17.90	-94 6.30	1226.00	mn	980811.71	980917.00	0.00	9.99
IFCUSHAP	4555	48 13.20	-94 6.50	1190.00	mn	980805.21	980909.95	0.00	7.24
IFCUSHAP	4555	48 14.10	-94 6.50	1200.00	mn	980806.71	980911.30	0.00	8.33
IFCUSHAP	4555	48 12.50	-94 6.50	1194.00	mn	980803.32	980908.90	0.00	6.78
IFCUSHAP	42772364	48 28.50	-94 6.60	1131.00	mn	980833.01	980932.88	0.00	6.56
IFCUSHAP	3325	36 48 35.90	-94 7.30	1173.00	mn	980844.44	980943.97	0.00	15.85
IFCUSHAP	3325	35 48 36.80	-94 7.30	1182.00	mn	980844.79	980945.32	0.00	10.62
IFCUSHAP	3325	11 48 37.60	-94 7.30	1139.00	mn	980846.36	980946.52	0.00	6.98
IFCUSHAP	42772368	48 27.70	-94 7.50	1132.00	mn	980831.32	980931.69	0.00	6.16
IFCUSHAP	4555	48 2.60	-94 7.50	1277.00	mn	980789.21	980894.05	0.00	15.33
IFCUSHAP	3325	10 48 37.60	-94 7.50	1166.00	mn	980844.29	980946.52	0.00	7.48
IFCUSHAP	3325	33 48 37.00	-94 7.50	1181.00	mn	980844.92	980945.62	0.00	10.36
IFCUSHAP	3325	27 48 38.50	-94 7.50	1109.00	mn	980849.26	980947.86	0.00	5.71
IFCUSHAP	42772392	48 15.10	-94 7.50	1207.00	mn	980808.71	980912.80	0.00	9.47
IFCUSHAP	42772391	48 15.80	-94 7.50	1211.00	mn	980809.71	980913.85	0.00	9.73
IFCUSHAP	3325	34 48 35.90	-94 7.50	1167.00	mn	980850.82	980945.97	0.00	16.58
IFCUSHAP	42772389	48 16.80	-94 7.50	1221.00	mn	980810.11	980915.35	0.00	9.64
IFCUSHAP	42772358	48 29.00	-94 7.50	1139.00	mn	980832.21	980933.63	0.00	5.75
IFCUSHAP	4555	48 1.90	-94 7.50	1286.00	mn	980786.82	980893.00	0.00	14.81
IFCUSHAP	2094	48 17.90	-94 7.50	1226.00	mn	980811.71	980917.00	0.00	9.99
IFCUSHAP	4555	48 13.20	-94 7.50	1190.00	mn	980805.21	980909.95	0.00	7.24
IFCUSHAP	4555	48 14.10	-94 7.50	1200.00	mn	980806.71	980911.30	0.00	8.33
IFCUSHAP	4555	48 12.50	-94 7.50	1194.00	mn	980803.32	980908.90	0.00	6.78
IFCUSHAP	42772364	48 28.50	-94 7.50	1131.00	mn	980833.01	980932.88	0.00	6.56
IFCUSHAP	3325	36 48 35.90	-94 7.50	1173.00	mn	980844.44	980943.97	0.00	15.85
IFCUSHAP	3325	35 48 36.80	-94 7.50	1182.00	mn	980844.79	980945.32	0.00	10.62
IFCUSHAP	3325	11 48 37.60	-94 7.50	1139.00	mn	980846.36	980946.52	0.00	6.98
IFCUSHAP	42772368	48 27.70	-94 7.50	1132.00	mn	980831.32	980931.69	0.00	6.16
IFCUSHAP	4555	48 2.60	-94 7.50	1277.00	mn	980789.21	980894.05	0.00	15.33

International Falls CUSMAP Gravity Data

STATION		LOCATIONS		GRAVITY CORRECTIONS		ANOMALIES	
IDENTIFICATION		LATITUDE	LONGITUDE	ELE	ST OBSERVED THEORETICAL TERRAIN BOUGUER CURV	SPECIAL	FREE COMPLETE-BOUGUER
proj	sta-id	deg	min	deg	min	(in ft)	AIR
						2.67 g/cc	2.67 g/cc

STATION		L O C A T I O N S		G R A V I T Y		C O R R E C T I O N S		S P E C I A L		A N O M A L I E S		
IDENTIFICATION		LATITUDE		E L E		T E R R A I N		S P E C I A L		A N O M A L I E S		
proj	sta-id	deg	min	deg	min	(in ft)	ST	THEORETICAL	TERRAIN BOUGUER	CURV	AIR	
									2.67 g/cc		2.67 g/cc	
IFCUSHAP	42772384	48	18.30	-94	7.50	1227.00	mn	980812.21	0.01	-41.85	-0.50	10.05
IFCUSHAP	42772388	48	16.80	-94	7.60	1216.00	mn	980810.51	0.00	-41.47	-0.49	9.58
IFCUSHAP	4555	48	1.50	-94	8.20	1287.00	mn	980783.82	0.04	-43.90	-0.52	12.50
IFCUSHAP	42772365	48	28.00	-94	8.30	1135.00	mn	980831.61	-0.03	-38.71	-0.46	6.28
IFCUSHAP	4555	48	2.60	-94	8.50	1273.00	mn	980790.32	0.03	-43.42	-0.51	15.97
IFCUSHAP	2094	48	0.80	-94	8.60	1314.00	mn	980785.30	0.10	-44.82	-0.53	17.51
IFCUSHAP	3325	42	48	38.60	-94	8.70	1091.00	mn	980855.78	-0.04	-37.21	10.45
IFCUSHAP	3325	37	48	36.80	-94	8.70	1145.00	mn	980851.33	0.00	-39.05	13.67
IFCUSHAP	42772386	48	17.90	-94	8.80	1223.00	mn	980811.32	0.00	-41.71	-0.50	9.39
IFCUSHAP	2094	48	18.30	-94	8.80	1228.00	mn	980812.00	0.00	-41.88	-0.50	9.87
IFCUSHAP	2094	48	28.00	-94	9.20	1137.00	mn	980831.90	-0.03	-38.78	-0.46	6.69
IFCUSHAP	4555	48	1.70	-94	9.30	1299.00	mn	980877.32	0.11	-44.31	-0.52	16.85
IFCUSHAP	42772383	48	18.50	-94	9.40	1227.00	mn	980811.92	0.00	-41.85	-0.50	9.46
IFCUSHAP	3325	38	48	36.80	-94	9.40	1137.00	mn	980856.82	-0.02	-38.78	18.42
IFCUSHAP	2094	48	12.70	-94	9.90	1188.00	mn	980804.40	0.00	-40.52	-0.48	6.90
IFCUSHAP	IFR-26	48	25.92	-94	3.50	1165.00	mn	980826.58	-0.02	-39.73	-0.48	7.11
IFCUSHAP	IFR-25	48	26.36	-94	4.58	1160.00	mn	980827.73	-0.02	-39.56	-0.47	7.12
IFCUSHAP	IFR-24	48	26.42	-94	5.58	1149.00	mn	980828.30	-0.03	-39.19	-0.47	6.57
IFCUSHAP	IFR-27	48	27.45	-94	6.08	1140.00	mn	980830.02	-0.03	-38.88	-0.47	5.91
IFCUSHAP	IFR-28	48	32.34	-94	6.09	1144.00	mn	980848.10	-0.01	-39.02	-0.47	17.03
IFCUSHAP	IFR-22	48	31.18	-94	7.35	1148.00	mn	980837.91	-0.02	-39.15	-0.47	8.95
IFCUSHAP	IFR-21	48	29.82	-94	7.36	1147.00	mn	980834.02	-0.03	-39.12	-0.47	7.02
IFCUSHAP	IFR-20	48	34.41	-94	7.36	1139.00	mn	980858.50	-0.03	-38.65	-0.47	23.87
IFCUSHAP	IFR-19	48	35.04	-94	7.36	1151.00	mn	980855.32	-0.02	-39.26	-0.47	20.87
IFCUSHAP	IFR-29	48	32.28	-94	7.38	1151.00	mn	980849.63	0.00	-39.26	-0.47	19.31
IFCUSHAP	IFR-23	48	28.95	-94	7.39	1146.00	mn	980832.85	-0.03	-39.09	-0.47	7.05
IFCUSHAP	IFR-31	48	31.57	-94	7.40	1148.00	mn	980843.37	-0.01	-39.15	-0.47	13.83
IFCUSHAP	IFR-30	48	32.31	-94	8.69	1153.00	mn	980852.37	0.01	-39.33	-0.47	22.19
IFCUSHAP	IFR-18	48	34.19	-94	8.87	1149.00	mn	980857.16	-0.02	-39.19	-0.47	23.79
IFCUSHAP	IFR-32	48	31.64	-94	8.94	1153.00	mn	980848.29	0.00	-39.33	-0.47	19.12
IFCUSHAP	3325	40	48	35.90	-94	10.10	1150.00	mn	980859.28	-0.02	-39.22	23.53
IFCUSHAP	3325	39	48	36.80	-94	10.10	1127.00	mn	980857.28	-0.03	-38.44	17.93
IFCUSHAP	3325	12	48	37.60	-94	10.10	1110.00	mn	980852.67	-0.03	-37.86	10.59
IFCUSHAP	3325	41	48	35.00	-94	10.10	1145.00	mn	980860.68	-0.02	-39.05	25.73
IFCUSHAP	3325	43	48	38.80	-94	10.10	1083.00	mn	980854.42	-0.04	-36.94	7.94
IFCUSHAP	IFR-16	48	33.70	-94	10.10	1160.00	mn	980857.62	0.01	-39.56	-0.47	26.02
IFCUSHAP	IFR-15	48	34.17	-94	10.11	1144.00	mn	980856.54	-0.02	-39.02	-0.47	22.73
IFCUSHAP	2094	48	37.70	-94	10.20	1111.00	mn	980853.21	-0.03	-37.89	-0.46	11.10
IFCUSHAP	2094	48	35.60	-94	10.20	1158.00	mn	980861.10	-0.01	-39.50	-0.47	26.48
IFCUSHAP	42772367	48	27.80	-94	10.30	1139.00	mn	980832.32	-0.03	-38.85	-0.47	7.66

BOUGUER GRAVITY DATA

International Falls CUSMAP Gravity Data

Meter used:

STATION IDENTIFICATION proj sta-id	L O C A T I O N S			G R A V I T Y		C O R R E C T I O N S		A N O M A L I E S	
	LATITUDE deg min	LONGITUDE deg min	ELE (in ft)	ST OBSERVED	THEORETICAL	TERRAIN BOUGUER CURV 2.67 g/cc	SPECIAL AIR	FREE AIR	COMPLETE-BOUGUER 2.67 g/cc
IFCUSMAP 3325	13 48 37.60	-94 11.10	1106.00	mn 980852.10	980946.52	-0.03	0.00	9.58	-28.62
IFCUSMAP 522	48 27.98	-94 11.32	1142.00	mn 980833.12	980932.11	-0.03	0.00	8.39	-31.06
IFCUSMAP 521	48 27.97	-94 11.33	1144.00	mn 980833.00	980932.09	-0.03	0.00	8.48	-31.04
IFCUSMAP 523	48 27.99	-94 11.33	1140.00	mn 980833.28	980932.12	-0.03	0.00	8.36	-31.02
IFCUSMAP 520	48 27.95	-94 11.34	1142.00	mn 980833.19	980932.06	-0.03	0.00	8.51	-30.94
IFCUSMAP 520	48 27.95	-94 11.34	1142.00	mn 980833.18	980932.06	-0.03	0.00	8.50	-30.95
IFCUSMAP 520	48 27.95	-94 11.34	1142.00	mn 980833.16	980932.06	-0.03	0.00	8.48	-30.97
IFCUSMAP 524	48 28.01	-94 11.34	1141.00	mn 980834.26	980932.15	-0.03	0.00	9.40	-30.01
IFCUSMAP 534	48 28.14	-94 11.35	1141.00	mn 980833.24	980932.34	-0.03	0.00	8.19	-31.23
IFCUSMAP 546	48 27.87	-94 11.35	1141.00	mn 980832.82	980931.94	-0.03	0.00	8.17	-31.24
IFCUSMAP 527	48 28.05	-94 11.35	1143.00	mn 980833.04	980932.21	-0.03	0.00	8.30	-31.18
IFCUSMAP 537	48 28.18	-94 11.35	1141.00	mn 980833.35	980932.41	-0.03	0.00	8.23	-31.18
IFCUSMAP 542	48 27.93	-94 11.35	1141.00	mn 980833.11	980932.03	-0.03	0.00	8.37	-31.05
IFCUSMAP 533	48 28.13	-94 11.35	1141.00	mn 980833.20	980932.33	-0.03	0.00	8.16	-31.25
IFCUSMAP 545	48 27.89	-94 11.35	1141.00	mn 980832.86	980931.97	-0.03	0.00	8.18	-31.23
IFCUSMAP 536	48 28.17	-94 11.35	1141.00	mn 980833.17	980932.39	-0.03	0.00	8.07	-31.34
IFCUSMAP 526	48 28.03	-94 11.35	1143.00	mn 980833.00	980932.18	-0.03	0.00	8.30	-31.18
IFCUSMAP 543	48 27.91	-94 11.35	1140.00	mn 980833.03	980932.00	-0.03	0.00	8.23	-31.15
IFCUSMAP 528	48 28.06	-94 11.35	1143.00	mn 980833.07	980932.23	-0.03	0.00	8.32	-31.16
IFCUSMAP 540	48 28.22	-94 11.35	1141.00	mn 980833.52	980932.47	-0.03	0.00	8.34	-31.07
IFCUSMAP 530	48 28.09	-94 11.35	1142.00	mn 980832.99	980932.27	-0.03	0.00	8.10	-31.35
IFCUSMAP 539	48 28.21	-94 11.35	1141.00	mn 980833.46	980932.45	-0.03	0.00	8.30	-31.12
IFCUSMAP 529	48 28.08	-94 11.35	1144.00	mn 980833.03	980932.26	-0.03	0.00	8.34	-31.17
IFCUSMAP 538	48 28.20	-94 11.35	1141.00	mn 980833.39	980932.44	-0.03	0.00	8.24	-31.17
IFCUSMAP 531	48 28.10	-94 11.35	1142.00	mn 980833.05	980932.29	-0.03	0.00	8.14	-31.31
IFCUSMAP 532	48 28.12	-94 11.35	1141.00	mn 980833.20	980932.31	-0.03	0.00	8.18	-31.23
IFCUSMAP 541	48 27.94	-94 11.35	1141.00	mn 980833.18	980932.05	-0.03	0.00	8.42	-30.99
IFCUSMAP 544	48 27.90	-94 11.35	1140.00	mn 980832.96	980931.98	-0.03	0.00	8.17	-31.21
IFCUSMAP 535	48 28.16	-94 11.35	1141.00	mn 980833.27	980932.38	-0.03	0.00	8.19	-31.23
IFCUSMAP 525	48 28.02	-94 11.35	1142.00	mn 980833.15	980932.16	-0.03	0.00	8.37	-31.08
IFCUSMAP IFR-17	48 33.30	-94 11.40	1162.00	mn 980857.66	980940.08	0.03	0.00	26.84	-13.24
IFCUSMAP 42772381	48 18.80	-94 11.40	1218.00	mn 980813.32	980918.34	0.00	0.00	9.58	-32.48
IFCUSMAP IFR-14	48 36.35	-94 11.42	1132.00	mn 980852.34	980944.64	-0.03	0.00	14.15	-24.96
IFCUSMAP 3325 44	48 38.90	-94 11.50	1096.00	mn 980851.85	980948.46	-0.04	0.00	5.59	-31.97
IFCUSMAP 42772366	48 27.80	-94 11.60	1143.00	mn 980832.92	980931.84	-0.03	0.00	8.63	-30.88
IFCUSMAP 42772369	48 27.20	-94 11.60	1148.00	mn 980831.92	980930.94	-0.03	0.00	8.93	-30.72
IFCUSMAP 42772362	48 28.70	-94 11.70	1162.00	mn 980833.82	980933.19	-0.01	0.00	9.96	-30.18
IFCUSMAP 42772370	48 26.60	-94 11.70	1147.00	mn 980830.82	980930.04	-0.03	0.00	8.63	-30.99
IFCUSMAP 2094	48 26.00	-94 12.00	1151.00	mn 980828.80	980929.14	-0.02	0.00	7.97	-31.81
IFCUSMAP 42772371	48 26.10	-94 12.20	1155.00	mn 980629.32	980929.29	-0.02	0.00	8.71	-31.20

BOUGUER GRAVITY DATA

International Falls CUSMAP Gravity Data

Meter used:

STATION IDENTIFICATION		LOCALITY		GRAVITY		CORRECTIONS		ANOMALIES	
proj	sta-id	LATITUDE	LONGITUDE	ELE	ST OBSERVED	THEORETICAL	TERRAIN BOUGUER CURV	SPECIAL	FREE COMPLETE-BOUGUER
		deg	min	(in ft)			2.67 g/cc	AIR	2.67 g/cc
IFCUSMAP	4272372	48 25.40	-94 12.20	1159.00	mn 980827.71	980928.24	-0.02	-39.53	-0.47
IFCUSMAP	4272373	48 24.30	-94 12.30	1168.00	mn 980823.82	980926.59	-0.01	-39.84	-0.48
IFCUSMAP	4272373	48 24.80	-94 12.40	1160.00	mn 980826.21	980927.34	-0.02	-39.56	-0.47
IFCUSMAP	4272376	48 22.00	-94 12.40	1182.00	mn 980816.51	980923.14	0.00	-40.31	-0.48
IFCUSMAP	2094	48 20.40	-94 12.50	1193.00	mn 980814.90	980920.74	-0.01	-40.69	-0.49
IFCUSMAP	4272380	48 18.80	-94 12.60	1213.00	mn 980812.82	980918.34	0.00	-41.37	-0.49
IFCUSMAP	2094	48 23.50	-94 12.60	1170.00	mn 980820.60	980925.39	-0.01	-39.91	-0.48
IFCUSMAP	4272357	48 29.00	-94 12.60	1169.00	mn 980836.51	980933.63	0.00	-39.87	-0.48
IFCUSMAP	IFR-60	48 27.24	-94 12.67	1149.00	mn 980832.69	980931.00	-0.02	-39.19	-0.47
IFCUSMAP	4272379	48 19.60	-94 12.70	1202.00	mn 980813.01	980919.55	-0.01	-41.00	-0.49
IFCUSMAP	3325	45 48 38.90	-94 12.70	1099.00	mn 980848.69	980948.46	-0.03	-37.48	-0.45
IFCUSMAP	4272378	48 20.30	-94 12.70	1190.00	mn 980815.51	980920.59	-0.01	-40.59	-0.48
IFCUSMAP	3325	14 48 37.60	-94 12.70	1111.00	mn 980849.28	980946.52	-0.03	-37.89	-0.46
IFCUSMAP	4272377	48 21.10	-94 12.70	1186.00	mn 980816.42	980921.80	-0.01	-40.45	-0.48
IFCUSMAP	IFR-13	48 36.77	-94 12.73	1126.00	mn 980850.37	980945.27	-0.03	-38.40	-0.46
IFCUSMAP	4272375	48 22.70	-94 12.80	1177.00	mn 980818.21	980924.20	0.01	-40.14	-0.48
IFCUSMAP	IFR-59	48 24.88	-94 13.21	1169.00	mn 980825.42	980927.46	0.00	-39.87	-0.48
IFCUSMAP	2094	48 18.70	-94 13.30	1214.00	mn 980812.40	980918.20	0.00	-41.41	-0.49
IFCUSMAP	IFR-61	48 27.24	-94 13.34	1154.00	mn 980833.27	980931.00	-0.02	-39.36	-0.47
IFCUSMAP	4272382	48 18.60	-94 13.80	1214.00	mn 980813.92	980918.05	0.00	-41.41	-0.49
IFCUSMAP	3325	15 48 37.60	-94 14.00	1117.00	mn 980845.14	980946.52	-0.03	-38.10	-0.46
IFCUSMAP	IFR-8	48 36.42	-94 14.04	1133.00	mn 980848.37	980944.75	-0.02	-38.64	-0.46
IFCUSMAP	3325	46 48 38.90	-94 14.10	1096.00	mn 980845.73	980948.46	-0.04	-37.38	-0.45
IFCUSMAP	4555	48 0.00	-94 14.10	1298.00	mn 980783.32	980890.15	0.04	-44.27	-0.52
IFCUSMAP	3325	16 48 38.50	-94 14.10	1103.00	mn 980845.36	980947.86	-0.03	-37.62	-0.45
IFCUSMAP	4272363	48 28.50	-94 14.20	1161.00	mn 980841.32	980932.88	-0.02	-39.60	-0.47
IFCUSMAP	IFR-58	48 24.83	-94 14.48	1174.00	mn 980825.10	980927.38	0.00	-40.04	-0.48
IFCUSMAP	4555	48 0.60	-94 14.60	1284.00	mn 980786.01	980891.05	0.04	-43.79	-0.52
IFCUSMAP	2094	48 0.50	-94 14.60	1282.00	mn 980786.60	980890.90	0.03	-43.73	-0.52
IFCUSMAP	4555	48 5.40	-94 14.80	1248.00	mn 980792.11	980898.25	0.04	-42.57	-0.51
IFCUSMAP	4272336	48 28.40	-94 15.30	1167.00	mn 980845.61	980932.73	0.00	-39.80	-0.48
IFCUSMAP	IFR-12	48 33.32	-94 15.32	1132.00	mn 980852.98	980940.10	-0.02	-38.61	-0.46
IFCUSMAP	IFR-11	48 35.05	-94 15.34	1132.00	mn 980853.66	980942.70	-0.01	-38.61	-0.46
IFCUSMAP	IFR-10	48 35.91	-94 15.35	1143.00	mn 980848.36	980943.98	-0.01	-38.98	-0.47
IFCUSMAP	IFR-9	48 36.34	-94 15.36	1132.00	mn 980846.54	980944.63	-0.01	-38.61	-0.46
IFCUSMAP	3325	48 48 38.50	-94 15.40	1103.00	mn 980846.57	980947.86	-0.03	-37.62	-0.45
IFCUSMAP	3325	56 48 40.20	-94 15.40	1100.00	mn 980852.58	980950.41	0.00	-37.52	-0.45
IFCUSMAP	3325	47 48 39.40	-94 15.40	1086.00	mn 980849.11	980949.21	-0.04	-37.04	-0.45
IFCUSMAP	3325	69 48 41.10	-94 15.50	1099.00	mn 980851.83	980951.76	0.00	-37.48	-0.45
IFCUSMAP	4272349	48 18.50	-94 15.50	1215.00	mn 980813.82	980917.90	0.00	-41.44	-0.49
IFCUSMAP	3325	45 48 38.90	-94 12.70	1099.00	mn 980848.69	980948.46	-0.03	-37.48	-0.45
IFCUSMAP	4272378	48 20.30	-94 12.70	1190.00	mn 980815.51	980920.59	-0.01	-40.59	-0.48
IFCUSMAP	3325	14 48 37.60	-94 12.70	1111.00	mn 980849.28	980946.52	-0.03	-37.89	-0.46
IFCUSMAP	4272377	48 21.10	-94 12.70	1186.00	mn 980816.42	980921.80	-0.01	-40.45	-0.48
IFCUSMAP	IFR-13	48 36.77	-94 12.73	1126.00	mn 980850.37	980945.27	-0.03	-38.40	-0.46
IFCUSMAP	4272375	48 22.70	-94 12.80	1177.00	mn 980818.21	980924.20	0.01	-40.14	-0.48
IFCUSMAP	IFR-59	48 24.88	-94 13.21	1169.00	mn 980825.42	980927.46	0.00	-39.87	-0.48
IFCUSMAP	2094	48 18.70	-94 13.30	1214.00	mn 980812.40	980918.20	0.00	-41.41	-0.49
IFCUSMAP	IFR-61	48 27.24	-94 13.34	1154.00	mn 980833.27	980931.00	-0.02	-39.36	-0.47
IFCUSMAP	4272382	48 18.60	-94 13.80	1214.00	mn 980813.92	980918.05	0.00	-41.41	-0.49
IFCUSMAP	3325	15 48 37.60	-94 14.00	1117.00	mn 980845.14	980946.52	-0.03	-38.10	-0.46
IFCUSMAP	IFR-8	48 36.42	-94 14.04	1133.00	mn 980848.37	980944.75	-0.02	-38.64	-0.46
IFCUSMAP	3325	46 48 38.90	-94 14.10	1096.00	mn 980845.73	980948.46	-0.04	-37.38	-0.45
IFCUSMAP	4555	48 0.00	-94 14.10	1298.00	mn 980783.32	980890.15	0.04	-44.27	-0.52
IFCUSMAP	3325	16 48 38.50	-94 14.10	1103.00	mn 980845.36	980947.86	-0.03	-37.62	-0.45
IFCUSMAP	4272363	48 28.50	-94 14.20	1161.00	mn 980841.32	980932.88	-0.02	-39.60	-0.47
IFCUSMAP	IFR-58	48 24.83	-94 14.48	1174.00	mn 980825.10	980927.38	0.00	-40.04	-0.48
IFCUSMAP	4555	48 0.60	-94 14.60	1284.00	mn 980786.01	980891.05	0.04	-43.79	-0.52
IFCUSMAP	2094	48 0.50	-94 14.60	1282.00	mn 980786.60	980890.90	0.03	-43.73	-0.52
IFCUSMAP	4555	48 5.40	-94 14.80	1248.00	mn 980792.11	980898.25	0.04	-42.57	-0.51
IFCUSMAP	4272336	48 28.40	-94 15.30	1167.00	mn 980845.61	980932.73	0.00	-39.80	-0.48
IFCUSMAP	IFR-12	48 33.32	-94 15.32	1132.00	mn 980852.98	980940.10	-0.02	-38.61	-0.46
IFCUSMAP	IFR-11	48 35.05	-94 15.34	1132.00	mn 980853.66	980942.70	-0.01	-38.61	-0.46
IFCUSMAP	IFR-10	48 35.91	-94 15.35	1143.00	mn 980848.36	980943.98	-0.01	-38.98	-0.47
IFCUSMAP	IFR-9	48 36.34	-94 15.36	1132.00	mn 980846.54	980944.63	-0.01	-38.61	-0.46
IFCUSMAP	3325	48 48 38.50	-94 15.40	1103.00	mn 980846.57	980947.86	-0.03	-37.62	-0.45
IFCUSMAP	3325	56 48 40.20	-94 15.40	1100.00	mn 980852.58	980950.41	0.00	-37.52	-0.45
IFCUSMAP	3325	47 48 39.40	-94 15.40	1086.00	mn 980849.11	980949.21	-0.04	-37.04	-0.45
IFCUSMAP	3325	69 48 41.10	-94 15.50	1099.00	mn 980851.83	980951.76	0.00	-37.48	-0.45
IFCUSMAP	4272349	48 18.50	-94 15.50	1215.00	mn 980813.82	980917.90	0.00	-41.44	-0.49

BOUGUER GRAVITY DATA

International Falls CUSMAP Gravity Data

Meter used:

STATION		L O C A T I O N S		G R A V I T Y		C O R R E C T I O N S		A N O M A L I E S	
IDENTIFICATION	proj sta-ld	LATITUDE	LONGITUDE	ELE	ST OBSERVED	THEORETICAL	TERRAIN BOUGUER CURV	SPECIAL	FREE
		deg min	deg min	(in ft)			2.67 g/cc	AIR	COMPLETE-BOUGUER
IFCUSHAP	2094	48 18.30	-94 15.60	1213.00	mn	980812.60	0.00	-41.37	-0.49
IFCUSHAP	4555	48 5.50	-94 15.90	1239.00	mn	980792.71	0.01	-42.26	-0.50
IFCUSHAP	IFR-54	48 24.75	-94 15.91	1179.00	mn	980825.70	0.01	-40.21	-0.48
IFCUSHAP	2094	48 5.10	-94 16.00	1250.00	mn	980792.21	0.03	-42.63	-0.51
IFCUSHAP	IFR-57	48 25.47	-94 16.36	1175.00	mn	980829.10	0.00	-40.08	-0.48
IFCUSHAP	42772335	48 28.40	-94 16.60	1158.00	mn	980848.71	-0.02	-39.50	-0.47
IFCUSHAP	3325 55	48 35.90	-94 16.60	1129.00	mn	980849.32	-0.02	-38.51	-0.46
IFCUSHAP	IFR- 6	48 35.06	-94 16.64	1125.00	mn	980851.18	-0.03	-38.37	-0.46
IFCUSHAP	IFR- 5	48 36.34	-94 16.64	1129.00	mn	980846.73	-0.02	-38.51	-0.46
IFCUSHAP	IFR- 4	48 37.48	-94 16.65	1113.00	mn	980842.44	-0.03	-37.96	-0.46
IFCUSHAP	3325 59	48 41.10	-94 16.70	1096.00	mn	980852.49	-0.02	-37.38	-0.45
IFCUSHAP	42772350	48 18.10	-94 16.70	1215.00	mn	980811.51	0.00	-41.44	-0.49
IFCUSHAP	3325 49	48 39.40	-94 16.70	1098.00	mn	980847.40	-0.02	-37.45	-0.45
IFCUSHAP	3325 58	48 40.20	-94 16.70	1099.00	mn	980850.03	-0.02	-37.48	-0.45
IFCUSHAP	2094	48 40.30	-94 16.80	1099.00	mn	980850.80	-0.02	-37.48	-0.45
IFCUSHAP	IFR-56	48 24.76	-94 16.86	1180.00	mn	980826.71	0.01	-40.25	-0.48
IFCUSHAP	3325 60	48 42.00	-94 16.90	1096.00	mn	980855.15	-0.02	-37.38	-0.45
IFCUSHAP	4555	48 5.30	-94 17.30	1246.00	mn	980792.01	0.04	-42.50	-0.51
IFCUSHAP	42772347	48 25.50	-94 17.80	1165.00	mn	980831.42	-0.02	-39.73	-0.48
IFCUSHAP	42772348	48 24.60	-94 17.80	1170.00	mn	980828.32	0.00	-39.91	-0.48
IFCUSHAP	42772346	48 26.30	-94 17.80	1160.00	mn	980837.32	-0.02	-39.56	-0.47
IFCUSHAP	42772343	48 28.00	-94 17.80	1152.00	mn	980850.11	-0.02	-39.29	-0.47
IFCUSHAP	42772345	48 27.20	-94 17.80	1154.00	mn	980842.42	-0.02	-39.36	-0.47
IFCUSHAP	3325 50	48 39.40	-94 17.90	1102.00	mn	980847.96	-0.03	-37.59	-0.45
IFCUSHAP	3325 54	48 35.90	-94 17.90	1116.00	mn	980844.94	-0.03	-38.06	-0.46
IFCUSHAP	42772351	48 17.90	-94 17.90	1215.00	mn	980810.82	0.00	-41.44	-0.49
IFCUSHAP	3325 57	48 40.20	-94 17.90	1104.00	mn	980850.04	-0.03	-37.65	-0.45
IFCUSHAP	IFR-55	48 24.38	-94 17.90	1184.00	mn	980826.82	0.02	-40.38	-0.48
IFCUSHAP	3325 51	48 38.50	-94 17.90	1105.00	mn	980849.57	-0.03	-37.69	-0.45
IFCUSHAP	3325 53	48 36.90	-94 17.90	1112.00	mn	980845.21	-0.03	-37.93	-0.46
IFCUSHAP	3325 52	48 37.70	-94 17.90	1109.00	mn	980846.25	-0.03	-37.82	-0.45
IFCUSHAP	IFR- 7	48 36.39	-94 17.95	1119.00	mn	980844.52	-0.03	-38.17	-0.46
IFCUSHAP	3325 61	48 42.00	-94 18.00	1097.00	mn	980856.28	-0.02	-37.42	-0.45
IFCUSHAP	4555	48 5.20	-94 19.00	1241.00	mn	980791.21	0.03	-42.33	-0.50
IFCUSHAP	35570613	48 41.60	-94 19.00	1096.00	mn	980855.79	-0.02	-37.38	-0.45
IFCUSHAP	42772342	48 28.00	-94 19.20	1143.00	mn	980853.82	-0.02	-38.98	-0.47
IFCUSHAP	3325 62	48 42.00	-94 19.30	1086.00	mn	980859.29	-0.03	-37.04	-0.45
IFCUSHAP	2094	48 17.10	-94 19.80	1213.00	mn	980809.80	0.00	-41.37	-0.49
IFCUSHAP	2094	48 42.00	-94 19.90	1087.00	mn	980860.71	-0.02	-37.07	-0.45
IFCUSHAP	42772352	48 17.50	-94 19.90	1212.00	mn	980809.61	0.00	-41.34	-0.49

International Falls CUSMAP Gravity Data

STATION		LOCATIONS		GRAVITY		CORRECTIONS		ANOMALIES	
IDENTIFICATION	LONGITUDE	LATITUDE	LONGITUDE	ST OBSERVED	THEORETICAL	TERRAIN BOUGUER	CURV	SPECIAL	FREE COMPLETE-BOUGUER
proj	sta-id	deg	min	deg	min	(in ft)		AIR	
							2.67 g/cc		2.67 g/cc

STATION		L O C A T I O N S		G R A V I T Y		C O R R E C T I O N S		A N O M A L I E S			
IDENTIFICATION	proj	sta-id	LATITUDE	LONGITUDE	ELE	ST OBSERVED	THEORETICAL	TERRAIN BOUGUER	SPECIAL	FREE	COMPLETE-BOUGUER
			deg	min	(in ft)			2.67 g/cc		AIR	2.67 g/cc
IFCUSHAP 4555			48 4.90	-94 20.00	1238.00	mn	980788.71	980897.50	0.01	-42.22	-0.50
IFCUSHAP 42772353			48 16.80	-94 20.40	1212.00	mn	980810.21	980915.35	0.00	-41.34	-0.49
IFCUSHAP 42772341			48 28.00	-94 20.50	1146.00	mn	980845.21	980932.13	-0.02	-39.09	-0.47
IFCUSHAP IFR- 2			48 37.64	-94 20.53	1105.00	mn	980845.45	980946.58	-0.03	-37.69	-0.45
IFCUSHAP IFR- 3			48 35.93	-94 20.53	1100.00	mn	980840.91	980944.02	-0.03	-37.52	-0.45
IFCUSHAP IFR- 1			48 39.38	-94 20.53	1100.00	mn	980848.83	980949.18	-0.03	-37.52	-0.45
IFCUSHAP 3325 63			48 42.00	-94 20.60	1089.00	mn	980862.53	980953.10	-0.02	-37.14	-0.45
IFCUSHAP 4555			48 4.90	-94 21.30	1231.00	mn	980788.11	980897.50	0.01	-41.99	-0.50
IFCUSHAP IFR-35			48 28.33	-94 21.82	1158.00	mn	980855.63	980932.63	-0.01	-39.50	-0.47
IFCUSHAP IFR-34			48 28.99	-94 21.84	1146.00	mn	980858.08	980933.62	-0.01	-39.09	-0.47
IFCUSHAP 3325 64			48 42.00	-94 21.90	1086.00	mn	980864.53	980953.10	-0.02	-37.04	-0.45
IFCUSHAP 2094			48 4.60	-94 22.50	1221.00	mn	980787.00	980897.05	-0.01	-41.64	-0.50
IFCUSHAP 4555			48 4.80	-94 22.50	1219.00	mn	980787.71	980897.35	-0.01	-41.58	-0.50
IFCUSHAP 2094			48 37.90	-94 22.50	1096.00	mn	980843.40	980946.96	-0.02	-37.38	-0.45
IFCUSHAP 2094			48 15.10	-94 22.90	1207.00	mn	980808.10	980912.80	0.00	-41.17	-0.49
IFCUSHAP 2094			48 12.50	-94 22.90	1193.00	mn	980803.50	980908.90	-0.01	-40.69	-0.49
IFCUSHAP 4555			48 8.10	-94 22.90	1200.00	mn	980795.51	980902.30	-0.01	-40.93	-0.49
IFCUSHAP IFR-53			48 16.80	-94 22.91	1209.00	mn	980810.13	980915.35	0.00	-41.24	-0.49
IFCUSHAP 4555			48 12.40	-94 23.00	1192.00	mn	980803.82	980908.75	-0.01	-40.66	-0.49
IFCUSHAP 42772344			48 27.50	-94 23.00	1155.00	mn	980847.61	980931.38	-0.02	-39.39	-0.47
IFCUSHAP 4555			48 13.30	-94 23.00	1194.00	mn	980806.11	980910.10	-0.01	-40.72	-0.49
IFCUSHAP 4555			48 14.10	-94 23.00	1197.00	mn	980807.61	980911.30	-0.01	-40.83	-0.49
IFCUSHAP 4555			48 14.90	-94 23.00	1207.00	mn	980808.21	980912.50	0.00	-41.17	-0.49
IFCUSHAP 42772334			48 28.40	-94 23.00	1155.00	mn	980854.01	980932.73	-0.02	-39.39	-0.47
IFCUSHAP 4555			48 8.90	-94 23.00	1194.00	mn	980797.71	980903.50	-0.01	-40.72	-0.49
IFCUSHAP 2094			48 16.80	-94 23.00	1208.00	mn	980809.71	980915.35	0.00	-41.20	-0.49
IFCUSHAP IFR-37			48 25.53	-94 23.09	1189.00	mn	980836.18	980928.44	0.02	-40.55	-0.48
IFCUSHAP IFR-36			48 26.38	-94 23.10	1180.00	mn	980839.25	980929.71	0.02	-40.25	-0.48
IFCUSHAP 3325 78			48 37.70	-94 23.10	1099.00	mn	980843.82	980946.66	-0.03	-37.48	-0.45
IFCUSHAP 3325 75			48 38.50	-94 23.10	1091.00	mn	980844.85	980947.86	-0.03	-37.21	-0.45
IFCUSHAP IFR-33			48 28.99	-94 23.12	1150.00	mn	980856.29	980933.62	-0.02	-39.22	-0.47
IFCUSHAP IFR-52			48 16.71	-94 23.19	1211.00	mn	980810.12	980915.21	0.00	-41.30	-0.49
IFCUSHAP 3325 65			48 42.00	-94 23.20	1096.00	mn	980862.92	980953.10	-0.02	-37.38	-0.45
IFCUSHAP 3325 74			48 39.40	-94 23.20	1098.00	mn	980850.32	980949.21	-0.03	-37.45	-0.45
IFCUSHAP 3325 68			48 40.70	-94 23.60	1110.00	mn	980852.60	980951.16	-0.01	-37.86	-0.45
IFCUSHAP IFR-51			48 17.09	-94 23.83	1209.00	mn	980810.96	980915.78	0.00	-41.24	-0.49
IFCUSHAP 42772333			48 28.50	-94 24.10	1161.00	mn	980848.61	980932.88	-0.01	-39.60	-0.47
IFCUSHAP 4555			48 4.70	-94 24.10	1236.00	mn	980787.11	980897.20	0.01	-42.16	-0.50
IFCUSHAP 4555			48 12.40	-94 24.20	1192.00	mn	980804.11	980908.75	-0.01	-40.66	-0.49
IFCUSHAP 3325 66			48 42.00	-94 24.50	1100.00	mn	980863.48	980953.10	0.00	-37.52	-0.45
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BOUGUER GRAVITY DATA

International Falls CUSMAP Gravity Data

Meter used:

STATION		L O C A T I O N S				G R A V I T Y		C O R R E C T I O N S		A N O M A L I E S						
IDENTIFICATION		LATITUDE		LONGITUDE		ELE		TERRAIN BOUGUER CURV		SPECIAL FREE						
proj	sta-id	deg	min	deg	min	(in ft)		2.67 g/cc		AIR	COMPLETE-BOUGUER					
IFCUSMAP	3325	67	48	41.10	-94	24.50	1082.00	mn	980855.55	980951.76	-0.04	-36.90	-0.44	0.00	5.53	-31.86
IFCUSMAP	3325	73	48	39.80	-94	24.50	1094.00	mn	980849.49	980949.80	-0.03	-37.31	-0.45	0.00	2.58	-35.22
IFCUSMAP	IFR-50	48	17.52	-94	24.56		1208.00	mn	980812.43	980916.43	0.00	-41.20	-0.49	0.00	9.59	-32.10
IFCUSMAP	4555	48	8.10	-94	24.80		1199.00	mn	980794.01	980902.30	0.00	-40.89	-0.49	0.00	4.53	-36.88
IFCUSMAP	4555	48	7.40	-94	24.90		1205.00	mn	980791.71	980901.25	-0.01	-41.10	-0.49	0.00	3.83	-37.79
IFCUSMAP	2094	48	42.10	-94	25.20		1098.00	mn	980864.60	980953.25	0.02	-37.45	-0.45	0.00	14.61	-23.28
IFCUSMAP	IFR-49	48	17.95	-94	25.29		1206.00	mn	980812.78	980917.07	0.00	-41.13	-0.49	0.00	9.11	-32.51
IFCUSMAP	4555	48	12.40	-94	25.40		1193.00	mn	980803.82	980908.75	-0.01	-40.69	-0.49	0.00	7.33	-33.88
IFCUSMAP	4555	48	5.60	-94	25.50		1214.00	mn	980789.82	980898.55	-0.01	-41.41	-0.49	0.00	5.51	-36.43
IFCUSMAP	2094	48	4.70	-94	25.50		1235.00	mn	980787.71	980897.20	0.01	-42.12	-0.50	0.00	6.72	-35.92
IFCUSMAP	4555	48	6.50	-94	25.50		1213.00	mn	980790.82	980899.90	-0.01	-41.37	-0.49	0.00	5.07	-36.84
IFCUSMAP	4555	48	4.70	-94	25.50		1235.00	mn	980787.92	980897.20	0.01	-42.12	-0.50	0.00	6.93	-35.71
IFCUSMAP	2094	48	12.50	-94	25.60		1194.00	mn	980803.30	980908.90	-0.01	-40.72	-0.49	0.00	6.69	-34.54
IFCUSMAP	3325	71	48	42.10	-94	25.60	1091.00	mn	980865.04	980953.25	-0.01	-37.21	-0.45	0.00	14.46	-23.24
IFCUSMAP	42772331	48	29.90	-94	25.70		1159.00	mn	980837.11	980934.98	0.04	-39.53	-0.47	0.00	11.18	-28.81
IFCUSMAP	42772340	48	28.30	-94	25.70		1168.00	mn	980835.61	980932.59	0.00	-39.84	-0.48	0.00	12.85	-27.46
IFCUSMAP	42772332	48	29.10	-94	25.70		1163.00	mn	980837.51	980933.78	0.03	-39.67	-0.47	0.00	13.15	-26.99
IFCUSMAP	3325	79	48	40.20	-94	25.80	1091.00	mn	980850.36	980950.41	-0.03	-37.21	-0.45	0.00	2.62	-35.09
IFCUSMAP	3325	72	48	41.10	-94	25.80	1078.00	mn	980856.25	980951.76	-0.03	-36.77	-0.44	0.00	5.87	-31.38
IFCUSMAP	3325	80	48	39.40	-94	25.80	1095.00	mn	980848.89	980949.21	-0.03	-37.35	-0.45	0.00	2.65	-35.18
IFCUSMAP	3325	119	48	30.70	-94	25.80	1128.00	mn	980833.99	980936.18	-0.03	-38.47	-0.46	0.00	3.96	-35.03
IFCUSMAP	3325	82	48	37.70	-94	25.80	1098.00	mn	980843.82	980946.66	-0.02	-37.45	-0.45	0.00	0.41	-37.51
IFCUSMAP	3325	81	48	38.50	-94	25.80	1099.00	mn	980847.43	980947.86	-0.03	-37.48	-0.45	0.00	2.92	-35.05
IFCUSMAP	IFR-48	48	18.38	-94	26.02		1205.00	mn	980813.25	980917.72	0.00	-41.10	-0.49	0.00	8.84	-32.75
IFCUSMAP	IFR-47	48	18.84	-94	26.67		1205.00	mn	980814.52	980918.41	0.00	-41.10	-0.49	0.00	9.42	-32.17
IFCUSMAP	4555	48	4.50	-94	26.70		1241.00	mn	980787.61	980896.90	0.02	-42.33	-0.50	0.00	7.48	-35.36
IFCUSMAP	4555	48	12.40	-94	26.70		1191.00	mn	980802.92	980908.75	-0.01	-40.62	-0.48	0.00	6.25	-34.90
IFCUSMAP	4555	48	5.60	-94	26.80		1214.00	mn	980789.71	980898.55	-0.01	-41.41	-0.49	0.00	5.40	-36.54
IFCUSMAP	3325	117	48	33.20	-94	26.80	1112.00	mn	980831.60	980939.92	-0.03	-37.93	-0.46	0.00	-3.71	-42.14
IFCUSMAP	4555	48	6.50	-94	26.80		1201.00	mn	980790.71	980899.90	-0.01	-40.96	-0.49	0.00	3.82	-37.67
IFCUSMAP	3325	120	48	30.70	-94	27.00	1128.00	mn	980829.58	980936.18	-0.01	-38.47	-0.46	0.00	-0.45	-39.43
IFCUSMAP	4555	48	0.40	-94	27.00		1268.00	mn	980781.51	980890.75	0.05	-43.25	-0.51	0.00	10.05	-33.68
IFCUSMAP	4555	48	1.30	-94	27.00		1250.00	mn	980782.61	980892.09	0.05	-42.63	-0.51	0.00	8.05	-35.04
IFCUSMAP	3325	110	48	34.80	-94	27.10	1115.00	mn	980835.42	980942.32	-0.03	-38.03	-0.46	0.00	-2.04	-40.56
IFCUSMAP	3325	83	48	40.20	-94	27.10	1086.00	mn	980853.85	980950.41	-0.03	-37.04	-0.45	0.00	5.65	-31.90
IFCUSMAP	3325	84	48	39.40	-94	27.10	1088.00	mn	980849.94	980949.21	-0.03	-37.11	-0.45	0.00	3.12	-34.50
IFCUSMAP	3325	76	48	41.40	-94	27.10	1086.00	mn	980863.10	980952.20	-0.01	-37.04	-0.45	0.00	13.10	-24.43
IFCUSMAP	42772339	48	28.30	-94	27.20		1162.00	mn	980825.92	980932.59	0.00	-39.63	-0.47	0.00	2.66	-37.47
IFCUSMAP	IFR-46	48	19.20	-94	27.55		1206.00	mn	980816.09	980918.95	0.01	-41.13	-0.49	0.00	10.55	-31.06
IFCUSMAP	4555	48	2.40	-94	27.60		1253.00	mn	980783.42	980893.75	0.04	-42.74	-0.51	0.00	7.49	-35.71

BOUGUER GRAVITY DATA

International Falls CUSMAP Gravity Data

Meter used:

STATION IDENTIFICATION proj sta-id	L O C A T I O N S				G R A V I T Y		C O R R E C T I O N S		A N O M A L I E S		
	LATITUDE deg min	LONGITUDE deg min	ELE (in ft)	ST OBSERVED	THEORETICAL	TERRAIN BOUGUER CURV 2.67 g/cc	SPECIAL	FREE AIR	COMPLETE-BOUGUER 2.67 g/cc		
IFCUSHAP 2094	48 34.30	-94 27.70	1117.00	mn	980835.80	980941.57	-0.03	-38.10	-0.46	0.00	-0.73
IFCUSHAP 4555	48 12.50	-94 28.00	1192.00	mn	980802.71	980908.90	-0.01	-40.66	-0.49	0.00	5.98
IFCUSHAP IFR-45	48 18.50	-94 28.05	1206.00	mn	980814.12	980917.90	0.00	-41.13	-0.49	0.00	9.62
IFCUSHAP 4555	48 6.50	-94 28.10	1202.00	mn	980790.51	980899.90	-0.01	-41.00	-0.49	0.00	3.71
IFCUSHAP 2094	48 30.50	-94 28.10	1132.00	mn	980828.50	980935.88	-0.02	-38.61	-0.46	0.00	-0.86
IFCUSHAP 4555	48 4.50	-94 28.20	1233.00	mn	980787.51	980896.90	0.00	-42.05	-0.50	0.00	6.63
IFCUSHAP 42772338	48 28.30	-94 28.30	1159.00	mn	980820.21	980932.59	-0.01	-39.53	-0.47	0.00	-3.32
IFCUSHAP IFR-44	48 19.74	-94 28.32	1204.00	mn	980817.32	980919.76	0.01	-41.06	-0.49	0.00	10.77
IFCUSHAP 3325	86 48 40.30	-94 28.40	1091.00	mn	980862.15	980950.55	-0.03	-37.21	-0.45	0.00	14.27
IFCUSHAP 3325	116 48 32.30	-94 28.40	1123.00	mn	980833.29	980938.58	-0.03	-38.30	-0.46	0.00	0.34
IFCUSHAP 3325	85 48 41.10	-94 28.40	1089.00	mn	980865.10	980951.76	-0.01	-37.14	-0.45	0.00	15.83
IFCUSHAP 3325	77 48 41.70	-94 28.40	1085.00	mn	980866.35	980952.65	-0.01	-37.01	-0.45	0.00	15.73
IFCUSHAP 3325	118 48 30.70	-94 28.40	1131.00	mn	980827.21	980936.18	-0.02	-38.58	-0.46	0.00	-2.54
IFCUSHAP 3325	87 48 39.40	-94 28.40	1094.00	mn	980854.07	980949.21	-0.03	-37.31	-0.45	0.00	7.75
IFCUSHAP 4555	48 3.00	-94 28.40	1236.00	mn	980785.61	980894.65	0.01	-42.16	-0.50	0.00	7.27
IFCUSHAP 3325	111 48 34.20	-94 28.40	1118.00	mn	980833.90	980941.42	-0.03	-38.13	-0.46	0.00	-2.39
IFCUSHAP 4555	48 9.40	-94 29.10	1179.00	mn	980800.01	980904.25	-0.02	-40.21	-0.48	0.00	6.70
IFCUSHAP IFR-43	48 20.24	-94 29.15	1203.00	mn	980817.67	980920.51	0.01	-41.03	-0.49	0.00	10.28
IFCUSHAP 4555	48 12.50	-94 29.20	1191.00	mn	980802.42	980908.90	-0.01	-40.62	-0.48	0.00	5.60
IFCUSHAP 4555	48 6.50	-94 29.30	1205.00	mn	980790.61	980899.90	-0.01	-41.10	-0.49	0.00	4.08
IFCUSHAP 4555	48 4.30	-94 29.40	1229.00	mn	980786.51	980896.60	0.00	-41.92	-0.50	0.00	5.47
IFCUSHAP 3325	89 48 41.10	-94 29.70	1089.00	mn	980866.49	980951.76	-0.02	-37.14	-0.45	0.00	17.22
IFCUSHAP 42772337	48 28.30	-94 29.70	1154.00	mn	980818.92	980932.59	-0.01	-39.36	-0.47	0.00	-5.07
IFCUSHAP 3325	88 48 40.30	-94 29.70	1091.00	mn	980862.03	980950.55	-0.03	-37.21	-0.45	0.00	14.15
IFCUSHAP 3325	90 48 41.70	-94 29.80	1081.00	mn	980868.26	980952.65	-0.01	-36.87	-0.44	0.00	17.26
IFCUSHAP IFR-42	48 20.62	-94 29.80	1200.00	mn	980819.45	980921.08	0.01	-40.93	-0.49	0.00	11.21
IFCUSHAP 4555	48 4.80	-94 29.90	1211.00	mn	980787.71	980897.35	-0.01	-41.30	-0.49	0.00	4.23
IFCUSHAP 2094	48 41.60	-94 30.20	1081.00	mn	980869.50	980952.50	-0.01	-36.87	-0.44	0.00	18.65
IFCUSHAP 11	47 48.00	-92 42.70	1330.00	mn	980742.10	980872.13	0.01	-45.36	-0.54	0.00	-4.96
IFCUSHAP 11	47 49.30	-93 14.10	1385.00	mn	980759.40	980874.08	0.05	-47.24	-0.56	0.00	15.56
IFCUSHAP 11	47 53.90	-93 13.30	1300.00	mn	980769.30	980880.99	0.00	-44.34	-0.52	0.00	10.56
IFCUSHAP 11	47 53.90	-93 14.10	1309.00	mn	980768.60	980880.99	0.01	-44.65	-0.53	0.00	10.70
IFCUSHAP 11	47 54.80	-93 14.40	1296.00	mn	980766.80	980882.34	0.00	-44.20	-0.52	0.00	6.33
IFCUSHAP 11	47 55.40	-93 15.60	1322.00	mn	980772.50	980883.24	0.01	-45.09	-0.53	0.00	13.57
IFCUSHAP 11	47 56.00	-93 15.60	1303.00	mn	980772.50	980884.14	0.01	-44.44	-0.53	0.00	10.88
IFCUSHAP 11	47 56.80	-93 17.60	1350.00	mn	980768.50	980885.34	0.06	-46.04	-0.54	0.00	10.10
IFCUSHAP 11	47 57.10	-93 15.60	1303.00	mn	980767.70	980885.79	0.02	-44.44	-0.53	0.00	4.43
IFCUSHAP 11	47 57.10	-93 16.60	1332.00	mn	980771.30	980885.79	0.03	-45.43	-0.54	0.00	10.76
IFCUSHAP 11	47 57.10	-93 17.40	1342.00	mn	980770.30	980885.79	0.04	-45.77	-0.54	0.00	10.70
IFCUSHAP 11	47 57.50	-93 18.00	1348.00	mn	980770.20	980886.39	0.04	-45.98	-0.54	0.00	10.57

BOUGUER GRAVITY DATA

International Falls CUSMAP Gravity Data

Meter used:

STATION IDENTIFICATION proj sta-id	L O C A T I O N S				G R A V I T Y		C O R R E C T I O N S		A N O M A L I E S		
	LATITUDE deg min	LONGITUDE deg min	ELE (in ft)	ST OBSERVED	THEORETICAL	TERRAIN BOUGUER CURV 2.67 g/cc	SPECIAL	FREE AIR	COMPLETE-BOUGUER 2.67 g/cc		
IFCUSMAP 11	47 58.00	-93 18.29	1327.00	mn 980772.00	980887.14	0.02	-45.26	-0.53	0.00	9.64	-36.14
IFCUSMAP 11	47 58.40	-93 18.60	1310.00	mn 980772.00	980887.74	0.01	-44.68	-0.53	0.00	7.44	-37.76
IFCUSMAP 11	48 9.39	-93 35.50	1249.00	mn 980785.80	980904.23	-0.01	-42.60	-0.51	0.00	-0.99	-44.10
IFCUSMAP 11	48 10.20	-93 35.50	1248.00	mn 980789.90	980905.45	-0.01	-42.57	-0.51	0.00	1.81	-41.28
IFCUSMAP 11	48 11.10	-93 33.00	1230.00	mn 980792.20	980906.80	-0.01	-41.95	-0.50	0.00	1.05	-41.41
IFCUSMAP 11	48 11.10	-93 34.30	1234.00	mn 980792.00	980906.80	-0.01	-42.09	-0.50	0.00	1.23	-41.37
IFCUSMAP 11	48 11.10	-93 35.50	1247.00	mn 980793.30	980906.80	0.00	-42.53	-0.51	0.00	3.76	-39.28
IFCUSMAP 11	48 11.20	-93 36.90	1244.00	mn 980795.50	980906.95	0.01	-42.43	-0.50	0.00	5.53	-37.40
IFCUSMAP 11	48 11.20	-93 38.20	1226.00	mn 980797.60	980906.95	-0.01	-41.82	-0.50	0.00	5.93	-36.39
IFCUSMAP 11	48 11.20	-93 40.80	1223.00	mn 980797.80	980906.95	-0.01	-41.71	-0.50	0.00	5.85	-36.37
IFCUSMAP 11	48 11.20	-93 42.10	1233.00	mn 980798.30	980906.95	0.00	-42.05	-0.50	0.00	7.29	-35.26
IFCUSMAP 11	48 12.00	-93 35.50	1223.00	mn 980798.80	980908.15	-0.01	-41.71	-0.50	0.00	5.65	-36.57
IFCUSMAP 11	48 12.90	-93 35.50	1208.00	mn 980802.20	980909.50	-0.02	-41.20	-0.49	0.00	6.29	-35.42
IFCUSMAP 11	48 19.40	-93 49.70	1180.00	mn 980815.10	980919.25	-0.02	-40.25	-0.48	0.00	6.81	-33.94
IFCUSMAP 11	48 19.40	-93 50.50	1183.00	mn 980815.60	980919.25	-0.02	-40.35	-0.48	0.00	7.60	-33.26
IFCUSMAP 11	48 19.40	-93 51.80	1189.00	mn 980816.50	980919.25	-0.01	-40.55	-0.48	0.00	9.06	-31.99
IFCUSMAP 11	48 20.29	-93 50.50	1174.00	mn 980816.60	980920.58	0.00	-40.04	-0.48	0.00	6.42	-34.11
IFCUSMAP 11	48 20.90	-93 50.40	1168.00	mn 980816.40	980921.49	-0.01	-39.84	-0.48	0.00	4.74	-35.59
IFCUSMAP 11	48 21.20	-93 48.50	1157.00	mn 980816.30	980921.95	-0.03	-39.46	-0.47	0.00	3.15	-36.82
IFCUSMAP 11	48 21.20	-93 50.40	1167.00	mn 980816.60	980921.95	-0.02	-39.80	-0.48	0.00	4.39	-35.91
IFCUSMAP 11	48 21.20	-93 51.80	1169.00	mn 980817.00	980921.95	-0.01	-39.87	-0.48	0.00	4.98	-35.38
IFCUSMAP 11	48 21.60	-93 26.60	1131.00	mn 980817.30	980922.55	-0.03	-38.58	-0.46	0.00	1.11	-37.96
IFCUSMAP 11	48 21.80	-93 23.20	1137.00	mn 980816.00	980922.84	-0.04	-38.78	-0.46	0.00	0.07	-39.21
IFCUSMAP 11	48 22.00	-93 50.40	1156.00	mn 980817.60	980923.14	-0.03	-39.43	-0.47	0.00	3.16	-36.77
IFCUSMAP 11	48 22.50	-93 24.00	1178.00	mn 980814.80	980923.89	-0.03	-40.18	-0.48	0.00	1.67	-39.02
IFCUSMAP 11	48 22.50	-93 27.90	1136.00	mn 980817.80	980923.89	-0.03	-38.75	-0.46	0.00	0.72	-38.52
IFCUSMAP 11	48 22.90	-93 23.50	1175.00	mn 980814.60	980924.49	-0.03	-40.08	-0.48	0.00	0.60	-39.99
IFCUSMAP 11	48 22.90	-93 49.70	1148.00	mn 980818.80	980924.49	-0.03	-39.15	-0.47	0.00	2.26	-37.40
IFCUSMAP 11	48 23.00	-93 25.00	1172.00	mn 980815.90	980924.64	-0.03	-39.97	-0.48	0.00	1.47	-39.02
IFCUSMAP 11	48 23.70	-93 49.70	1144.00	mn 980819.30	980925.70	-0.03	-39.02	-0.47	0.00	1.18	-38.33
IFCUSMAP 11	48 24.50	-93 25.20	1153.00	mn 980815.20	980926.89	-0.02	-39.33	-0.47	0.00	-3.28	-43.09
IFCUSMAP 11	48 24.70	-93 27.40	1172.00	mn 980814.60	980927.19	-0.02	-39.97	-0.48	0.00	-2.38	-42.85
IFCUSMAP 11	48 24.70	-93 49.70	1139.00	mn 980818.80	980927.19	-0.03	-38.85	-0.47	0.00	-1.28	-40.63
IFCUSMAP 11	48 24.80	-93 47.80	1135.00	mn 980819.20	980927.34	-0.03	-38.71	-0.46	0.00	-1.41	-40.62
IFCUSMAP 11	48 25.10	-93 30.80	1131.00	mn 980816.50	980927.79	-0.04	-38.58	-0.46	0.00	-4.94	-44.02
IFCUSMAP 11	48 25.20	-93 24.10	1135.00	mn 980816.60	980927.94	-0.04	-38.71	-0.46	0.00	-4.61	-43.83
IFCUSMAP 11	48 25.20	-93 26.30	1164.00	mn 980815.70	980927.94	-0.01	-39.70	-0.47	0.00	-2.78	-42.97
IFCUSMAP 11	48 25.40	-93 27.50	1161.00	mn 980818.70	980928.24	0.00	-39.60	-0.47	0.00	-3.37	-43.44
IFCUSMAP 11	48 25.90	-93 26.70	1150.00	mn 980814.70	980928.99	-0.03	-39.22	-0.47	0.00	-6.15	-45.87
IFCUSMAP 11	48 26.00	-93 29.80	1144.00	mn 980815.20	980929.14	-0.04	-39.02	-0.47	0.00	-6.36	-45.89

BOUGUER GRAVITY DATA

International Falls CUSMAP Gravity Data

Meter used:

STATION IDENTIFICATION proj sta-ld	L O C A T I O N S		G R A V I T Y		C O R R E C T I O N S TERRAIN BOUGUER CURV 2.67 g/cc	SPECIAL FREE AIR	A N O M A L I E S COMPLETE-BOUGUER 2.67 g/cc		
	LATITUDE deg min	LONGITUDE deg min	ELE (in ft)	ST OBSERVED					
IFCUSHAP 11	48 26.20	-93 38.20	1118.00	mn	980818.40	980929.44	0.00	-5.91	-44.55
IFCUSHAP 11	48 26.50	-93 22.60	1120.00	mn	980816.40	980929.89	0.00	-8.17	-46.88
IFCUSHAP 11	48 26.50	-93 31.60	1125.00	mn	980815.50	980929.89	0.00	-8.60	-47.48
IFCUSHAP 11	48 26.70	-93 17.40	1174.00	mn	980814.10	980930.19	0.00	-5.69	-46.19
IFCUSHAP 11	48 26.80	-93 18.60	1172.00	mn	980815.50	980930.34	0.00	-4.63	-45.04
IFCUSHAP 11	48 26.90	-93 26.40	1142.00	mn	980814.60	980930.48	0.00	-8.50	-47.95
IFCUSHAP 11	48 27.70	-93 23.20	1134.00	mn	980815.10	980931.69	0.00	-9.96	-49.14
IFCUSHAP 11	48 27.70	-93 25.70	1128.00	mn	980815.20	980931.69	0.00	-10.42	-49.41
IFCUSHAP 11	48 27.70	-93 30.40	1128.00	mn	980814.50	980931.69	0.00	-11.12	-50.11
IFCUSHAP 11	48 27.80	-93 41.60	1122.00	mn	980817.60	980931.84	0.00	-8.73	-47.50
IFCUSHAP 11	48 28.40	-93 48.50	1108.00	mn	980819.60	980932.73	0.00	-8.94	-47.24
IFCUSHAP 11	48 28.50	-93 25.70	1114.00	mn	980815.10	980932.88	0.00	-13.03	-51.53
IFCUSHAP 11	48 28.60	-93 40.80	1120.00	mn	980819.00	980933.03	0.00	-8.71	-47.42
IFCUSHAP 11	48 28.60	-93 48.40	1106.00	mn	980820.60	980933.03	0.00	-8.43	-46.66
IFCUSHAP 11	48 28.80	-93 42.30	1112.00	mn	980820.00	980933.34	0.00	-8.77	-47.20
IFCUSHAP 11	48 28.80	-93 48.40	1103.00	mn	980821.70	980933.34	0.00	-7.92	-46.04
IFCUSHAP 11	48 29.20	-93 48.40	1101.00	mn	980823.80	980933.94	0.00	-6.61	-44.66
IFCUSHAP 11	48 29.50	-93 28.80	1134.00	mn	980813.80	980934.38	0.00	-13.96	-53.14
IFCUSHAP 11	48 29.50	-93 48.40	1103.00	mn	980825.50	980934.38	0.00	-5.17	-43.29
IFCUSHAP 11	48 29.80	-93 48.40	1102.00	mn	980827.90	980934.84	0.00	-3.30	-41.39
IFCUSHAP 11	48 30.10	-93 48.40	1101.00	mn	980830.00	980935.28	0.00	-1.76	-39.81
IFCUSHAP 11	48 30.30	-93 48.40	1097.00	mn	980831.70	980935.58	0.00	-0.72	-38.64
IFCUSHAP 11	48 30.50	-93 48.40	1093.00	mn	980834.00	980935.88	0.00	0.90	-36.88
IFCUSHAP 11	48 30.80	-93 48.40	1090.00	mn	980835.70	980936.33	0.00	1.86	-35.81
IFCUSHAP 11	48 31.00	-93 48.40	1095.00	mn	980834.90	980936.63	0.00	1.24	-36.61
IFCUSHAP 11	48 31.30	-93 48.70	1084.00	mn	980835.70	980937.08	0.00	0.55	-36.92
IFCUSHAP 11	48 31.40	-93 48.70	1096.00	mn	980835.40	980937.23	0.00	1.23	-36.65
IFCUSHAP 11	48 31.60	-93 49.20	1101.00	mn	980834.00	980937.53	0.00	0.00	-38.06
IFCUSHAP 11	48 32.00	-93 49.20	1098.00	mn	980833.10	980938.13	0.00	-1.78	-39.73
IFCUSHAP 11	48 32.30	-93 49.10	1101.00	mn	980834.60	980938.58	0.00	-0.45	-38.51
IFCUSHAP 11	48 32.50	-93 49.10	1101.00	mn	980835.70	980938.88	0.00	0.35	-37.70
IFCUSHAP 11	48 32.70	-93 49.10	1103.00	mn	980841.20	980939.18	0.00	5.74	-32.39
IFCUSHAP 11	48 33.09	-93 49.10	1104.00	mn	980845.70	980939.76	0.00	9.76	-28.40
IFCUSHAP 11	48 33.40	-93 49.10	1102.00	mn	980846.40	980940.23	0.00	9.80	-28.29
IFCUSHAP 11	48 33.59	-93 49.10	1102.00	mn	980848.10	980940.51	0.00	11.22	-26.87
IFCUSHAP 11	48 33.80	-93 49.10	1106.00	mn	980849.30	980940.82	0.00	12.48	-25.74
IFCUSHAP 11	48 34.00	-93 49.10	1101.00	mn	980849.30	980941.13	0.00	11.70	-26.35
IFCUSHAP 11	48 34.20	-93 49.10	1095.00	mn	980850.20	980941.42	0.00	11.75	-26.09
IFCUSHAP 11	48 34.50	-93 49.10	1102.00	mn	980850.50	980941.88	0.00	12.26	-25.83
IFCUSHAP 11	48 34.70	-93 49.10	1103.00	mn	980851.30	980942.17	0.00	12.84	-25.27

BOUGUER GRAVITY DATA

International Falls CUSMAP Gravity Data

Meter used:

STATION IDENTIFICATION proj sta-id	L O C A T I O N S		G K A V I T Y		C O R R E C T I O N S		A N O M A L I E S	
	LATITUDE deg min	LONGITUDE deg min	ELE (in ft)	ST OBSERVED	THEORETICAL	TERRAIN BOUGUER CURV 2.67 g/cc	SPECIAL FREE AIR	COMPLETE-BOUGUER 2.67 g/cc
IFCUSMAP 11	48 34.90	-93 49.10	1105.00	mn 980852.00	980942.47	-0.04	13.43	-24.75
IFCUSMAP 11	48 35.09	-93 49.00	1105.00	mn 980853.60	980942.76	-0.04	14.74	-23.44
IFCUSMAP 11	48 35.40	-93 49.10	1105.00	mn 980854.00	980943.22	-0.04	14.68	-23.50
IFCUSMAP 11	48 35.59	-93 49.20	1102.00	mn 980854.50	980943.51	-0.04	14.62	-23.46
IFCUSMAP 11	48 35.70	-93 49.30	1103.00	mn 980854.50	980943.67	-0.04	14.54	-23.57
IFCUSMAP 11	48 36.00	-93 49.30	1107.00	mn 980856.20	980944.12	-0.04	16.17	-22.08
IFCUSMAP 11	48 36.09	-93 24.50	1170.00	mn 980827.60	980944.25	0.02	-6.63	-47.00
IFCUSMAP 11	48 36.09	-93 24.50	1124.00	mn 980831.30	980944.25	-0.05	-7.26	-46.11
IFCUSMAP 11	48 36.20	-93 49.40	1117.00	mn 980856.50	980944.42	-0.04	17.11	-21.48
IFCUSMAP 11	48 36.50	-93 49.60	1117.00	mn 980857.40	980944.87	-0.04	17.56	-21.03
IFCUSMAP 11	48 36.70	-93 49.70	1110.00	mn 980859.40	980945.16	-0.04	18.61	-19.74
IFCUSMAP 11	48 36.80	-93 49.80	1113.00	mn 980860.10	980945.32	-0.04	19.44	-19.02
IFCUSMAP 11	48 37.20	-93 50.10	1125.00	mn 980860.90	980945.91	-0.02	20.77	-18.08
IFCUSMAP 11	48 37.59	-93 50.40	1106.00	mn 980859.60	980946.50	-0.04	17.10	-21.11
IFCUSMAP 1	48 29.70	-94 4.90	1141.00	mn 980832.10	980934.68	-0.03	4.71	-34.70
IFCUSMAP 1	48 29.10	-94 1.30	1141.00	mn 980828.50	980933.78	-0.02	2.01	-37.39
IFCUSMAP 1	48 29.10	-94 0.40	1141.00	mn 980828.00	980933.78	-0.02	1.51	-37.89
IFCUSMAP 1	48 29.00	-94 6.20	1140.00	mn 980832.10	980933.63	-0.03	5.66	-33.72
IFCUSMAP 1	48 29.00	-94 4.90	1134.00	mn 980831.20	980933.63	-0.03	4.19	-34.98
IFCUSMAP 1	48 29.00	-94 4.10	1141.00	mn 980830.40	980933.63	-0.03	4.06	-35.35
IFCUSMAP 1	48 29.00	-94 2.80	1136.00	mn 980829.10	980933.63	-0.03	2.28	-36.96
IFCUSMAP 1	48 18.10	-94 6.00	1228.00	mn 980811.70	980917.30	0.00	9.87	-32.51
IFCUSMAP 1	48 17.50	-94 3.90	1225.00	mn 980811.00	980916.40	0.00	9.79	-32.49
IFCUSMAP 1	48 16.79	-94 1.70	1223.00	mn 980810.60	980915.34	0.02	10.27	-31.92
IFCUSMAP 1	48 13.20	-94 5.30	1188.00	mn 980805.10	980909.95	0.00	6.86	-34.14
IFCUSMAP 1	48 13.20	-94 3.90	1192.00	mn 980804.50	980909.95	-0.01	6.64	-34.51
IFCUSMAP 1	48 13.10	-94 1.50	1194.00	mn 980805.20	980909.80	-0.01	7.68	-33.54
IFCUSMAP 1	48 13.10	-94 0.60	1202.00	mn 980806.00	980909.80	-0.01	9.23	-32.27
IFCUSMAP 1	48 13.00	-94 2.80	1192.00	mn 980804.90	980909.65	-0.01	7.34	-33.81
IFCUSMAP 1	48 2.50	-94 0.90	1258.00	mn 980789.30	980893.90	0.00	13.70	-29.72
IFCUSMAP 1	48 1.60	-94 2.20	1260.00	mn 980788.20	980892.55	0.00	14.14	-29.35
IFCUSMAP 1	48 1.20	-94 4.90	1306.00	mn 980784.80	980891.95	0.03	15.66	-29.38
IFCUSMAP 1	48 0.80	-94 3.60	1311.00	mn 980786.10	980891.34	0.03	18.03	-27.18
IFCUSMAP 1	48 0.30	-94 2.30	1311.00	mn 980786.10	980890.59	0.04	18.78	-26.42
IFCUSMAP 1	48 0.20	-94 4.40	1319.00	mn 980785.60	980890.45	0.03	19.19	-26.30
IFCUSMAP 1	47 57.00	-94 4.80	1338.00	mn 980772.30	980885.64	0.05	12.48	-33.65
IFCUSMAP 1	47 56.80	-94 4.19	1342.00	mn 980770.40	980885.34	0.06	11.25	-35.00
IFCUSMAP 1	47 55.90	-94 5.00	1332.00	mn 980769.40	980883.99	0.04	10.66	-35.27
IFCUSMAP 1	47 55.90	-94 4.19	1319.00	mn 980769.90	980883.99	0.03	9.94	-35.55
IFCUSMAP 1	47 54.70	-94 4.19	1333.00	mn 980765.50	980882.19	0.05	8.66	-37.29

BOUGUER GRAVITY DATA

International Falls CUSMAP Gravity Data

Meter used:

STATION IDENTIFICATION proj sta-id	L O C A T I O N S		G R A V I T Y		C O R R E C T I O N S		A N O M A L I E S	
	LATITUDE deg	LONGITUDE min deg	ELE (in ft)	ST OBSERVED	THEORETICAL	TERRAIN BOUGUER CURV 2.67 g/cc	SPECIAL AIR	COMPLETE-BOUGUER 2.67 g/cc
IFCUSMAP 1	47 54.70	-94 3.50	1316.00	MN 980765.90	980882.19	0.03	7.46	-37.93
IFCUSMAP 1	47 59.10	-93 59.50	1307.00	MN 980777.00	980888.80	0.02	11.11	-33.98
IFCUSMAP 1	47 58.20	-93 52.00	1244.00	MN 980768.30	980887.45	0.01	-2.16	-45.09
IFCUSMAP 1	47 58.00	-93 49.10	1236.00	MN 980769.20	980887.14	-0.01	-1.72	-44.39
IFCUSMAP 1	47 57.70	-93 56.70	1301.00	MN 980766.10	980886.70	0.02	1.74	-43.14
IFCUSMAP 1	47 57.30	-93 52.80	1244.00	MN 980766.20	980886.09	-0.01	-2.91	-45.86
IFCUSMAP 1	47 56.90	-93 55.20	1292.00	MN 980763.10	980885.49	0.03	-0.90	-45.46
IFCUSMAP 1	47 56.90	-93 54.50	1280.00	MN 980763.90	980885.49	0.02	-1.24	-45.39
IFCUSMAP 1	47 56.90	-93 46.70	1248.00	MN 980770.60	980885.49	-0.01	2.46	-40.62
IFCUSMAP 1	47 56.80	-93 46.30	1253.00	MN 980769.80	980885.34	-0.01	2.28	-40.98
IFCUSMAP 1	47 56.70	-93 45.40	1258.00	MN 980768.10	980885.20	0.00	1.20	-42.21
IFCUSMAP 1	47 55.90	-93 56.00	1285.00	MN 980764.70	980883.99	0.02	1.54	-42.78
IFCUSMAP 1	47 55.40	-93 56.00	1293.00	MN 980763.80	980883.24	0.03	2.15	-42.45
IFCUSMAP 1	47 55.20	-93 57.00	1285.00	MN 980765.70	980882.94	0.02	3.60	-40.73
IFCUSMAP 1	47 55.20	-93 45.60	1275.00	MN 980764.20	980882.94	0.03	1.16	-42.82
IFCUSMAP 2	48 16.29	-92 0.20	1186.00	MN 980784.90	980914.59	-0.03	-18.17	-59.13
IFCUSMAP 2	48 17.70	-92 0.60	1186.00	MN 980787.10	980916.70	-0.05	-18.08	-59.06
IFCUSMAP 2	48 14.90	-91 58.80	1186.00	MN 980783.90	980912.50	-0.03	-17.08	-58.05
IFCUSMAP 2	48 0.90	-91 58.00	1457.00	MN 980737.20	980891.50	0.10	-17.29	-67.47
IFCUSMAP 2	48 14.00	-91 55.50	1218.00	MN 980780.60	980911.15	-0.01	-16.01	-58.06
IFCUSMAP 2	48 13.80	-91 58.20	1218.00	MN 980780.60	980910.85	-0.02	-15.71	-57.77
IFCUSMAP 2	48 10.80	-91 57.00	1296.00	MN 980770.80	980906.35	0.00	-13.68	-58.41
IFCUSMAP 2	48 4.10	-91 59.90	1411.00	MN 980744.90	980896.30	0.05	-18.72	-67.36
IFCUSMAP 2	48 4.80	-91 59.70	1411.00	MN 980746.80	980897.35	0.06	-17.87	-66.50
IFCUSMAP 2	48 3.90	-91 58.90	1411.00	MN 980745.20	980896.00	0.05	-18.12	-66.76
IFCUSMAP 2	48 3.30	-91 58.60	1411.00	MN 980744.20	980895.10	0.06	-18.22	-66.85
IFCUSMAP 2	48 14.20	-91 54.30	1247.00	MN 980779.40	980911.45	-0.01	-14.79	-57.84
IFCUSMAP 2	48 0.60	-91 55.20	1452.00	MN 980741.90	980891.05	0.06	-12.61	-62.65
IFCUSMAP 2	48 12.50	-92 4.50	1199.00	MN 980780.00	980908.90	-0.03	-16.15	-57.57
IFCUSMAP 2	48 13.40	-92 7.00	1240.00	MN 980779.00	980910.25	0.01	-14.65	-57.43
IFCUSMAP 2	48 11.10	-92 6.90	1228.00	MN 980775.60	980906.80	-0.01	-15.73	-58.13
IFCUSMAP 2	48 9.80	-92 4.50	1257.00	MN 980769.80	980904.85	0.02	-16.86	-60.22
IFCUSMAP 2	48 3.30	-92 4.50	1393.00	MN 980742.30	980895.10	0.06	-21.81	-69.82
IFCUSMAP 2	48 2.00	-92 1.70	1424.00	MN 980737.50	980893.15	0.05	-21.74	-70.83
IFCUSMAP 2	48 6.20	-92 2.50	1420.00	MN 980749.90	980899.45	0.07	-16.02	-64.95
IFCUSMAP 2	48 6.10	-92 3.70	1371.00	MN 980752.60	980899.30	0.04	-17.78	-65.05
IFCUSMAP 2	48 5.30	-92 5.50	1445.00	MN 980745.70	980898.10	0.10	-16.52	-66.28
IFCUSMAP 2	48 4.80	-92 6.60	1390.00	MN 980747.20	980897.35	0.03	-19.44	-67.38
IFCUSMAP 2	48 11.30	-92 1.00	1252.00	MN 980774.20	980907.10	-0.02	-15.17	-58.40
IFCUSMAP 2	48 4.00	-92 0.80	1411.00	MN 980743.80	980896.15	0.04	-19.67	-68.32

ROUGUER GRAVITY DATA

International Falls CUSMAP Gravity Data

Meter used:

STATION IDENTIFICATION proj sta-id	L O C A T I O N S		G R A V I T Y		C O R R E C T I O N S		A N O M A L I E S	
	LATITUDE deg min	LONGITUDE deg min	ELE (in ft)	ST OBSERVED	THEORETICAL	TERRAIN BOUGUER CURV 2.67 g/cc	SPECIAL AIR	COMPLETE-BOUGUER 2.67 g/cc
IFCUSHAP 2	48 4.90	-92 0.70	1411.00	mn 980746.60	980897.50	0.05	-48.13	-0.56
IFCUSHAP 2	48 3.30	-92 0.00	1411.00	mn 980742.70	980895.10	0.07	-48.13	-0.56
IFCUSHAP 2	48 6.60	-92 5.60	1339.00	mn 980756.30	980900.05	0.04	-45.67	-0.54
IFCUSHAP 2	48 7.40	-92 6.00	1322.00	mn 980759.40	980901.25	0.04	-45.09	-0.53
IFCUSHAP 2	48 6.70	-92 6.70	1385.00	mn 980753.30	980900.20	0.05	-47.24	-0.56
IFCUSHAP 2	48 6.00	-92 7.60	1429.00	mn 980748.70	980899.15	0.07	-48.74	-0.57
IFCUSHAP 2	48 5.10	-92 8.00	1348.00	mn 980751.20	980897.80	0.10	-45.98	-0.54
IFCUSHAP 2	48 7.70	-92 8.10	1339.00	mn 980760.20	980901.70	0.18	-45.67	-0.54
IFCUSHAP 2	48 7.70	-92 10.70	1348.00	mn 980760.60	980901.70	0.06	-45.98	-0.54
IFCUSHAP 2	48 4.30	-92 7.90	1342.00	mn 980749.40	980896.60	0.10	-45.77	-0.54
IFCUSHAP 2	48 4.50	-92 8.70	1396.00	mn 980747.20	980896.90	0.08	-47.61	-0.56
IFCUSHAP 2	48 5.60	-92 9.10	1416.00	mn 980749.50	980898.55	0.09	-48.30	-0.57
IFCUSHAP 2	48 6.30	-92 9.20	1444.00	mn 980750.00	980899.60	0.09	-49.25	-0.58
IFCUSHAP 2	48 5.80	-92 0.70	1395.00	mn 980750.30	980898.85	0.05	-47.58	-0.56
IFCUSHAP 2	47 57.00	-91 55.30	1379.00	mn 980741.40	980885.64	0.04	-47.03	-0.55
IFCUSHAP 2	47 58.00	-91 54.90	1423.00	mn 980743.80	980887.14	0.05	-48.53	-0.57
IFCUSHAP 2	47 59.00	-91 54.60	1446.00	mn 980745.60	980888.65	0.06	-49.32	-0.58
IFCUSHAP 2	47 59.90	-91 55.00	1446.00	mn 980743.10	980889.99	0.06	-49.32	-0.58
IFCUSHAP 2	47 55.20	-91 57.10	1378.00	mn 980743.20	980882.94	0.05	-47.00	-0.55
IFCUSHAP 2	47 55.10	-91 58.20	1421.00	mn 980737.00	980882.79	0.11	-48.47	-0.57
IFCUSHAP 2	47 55.40	-91 55.50	1351.00	mn 980748.80	980883.24	0.05	-46.08	-0.54
IFCUSHAP 2	47 56.00	-91 55.30	1488.00	mn 980739.00	980884.14	0.22	-50.75	-0.59
IFCUSHAP 2	48 15.20	-91 59.90	1185.00	mn 980784.30	980912.95	-0.04	-40.42	-0.48
IFCUSHAP 2	48 18.79	-92 3.70	1185.00	mn 980789.30	980918.34	-0.04	-40.42	-0.48
IFCUSHAP 2	48 16.00	-92 1.50	1186.00	mn 980785.10	980914.15	-0.01	-40.45	-0.48
IFCUSHAP 2	48 16.90	-92 1.10	1185.00	mn 980786.20	980915.50	-0.04	-40.42	-0.48
IFCUSHAP 2	48 18.00	-92 1.20	1186.00	mn 980787.80	980917.15	-0.05	-40.45	-0.48
IFCUSHAP 2	48 17.70	-92 2.60	1185.00	mn 980787.20	980916.70	-0.04	-40.42	-0.48
IFCUSHAP 2	48 18.79	-92 2.40	1184.00	mn 980788.80	980918.34	0.00	-40.38	-0.48
IFCUSHAP 2	48 15.10	-92 1.20	1185.00	mn 980784.20	980912.80	-0.01	-40.42	-0.48
IFCUSHAP 2	48 14.40	-91 59.80	1187.00	mn 980784.20	980911.75	0.00	-40.49	-0.48
IFCUSHAP 2	48 14.30	-92 1.20	1186.00	mn 980784.40	980911.60	-0.02	-40.45	-0.48
IFCUSHAP 2	47 54.90	-93 36.40	1316.00	mn 980767.40	980882.49	0.02	-44.88	-0.53
IFCUSHAP 2	47 56.20	-93 35.59	1296.00	mn 980768.60	980884.45	0.01	-44.20	-0.52
IFCUSHAP 2	47 55.70	-93 36.40	1315.00	mn 980770.60	980883.69	0.03	-44.85	-0.53
IFCUSHAP 2	47 55.70	-93 45.50	1268.00	mn 980763.80	980883.69	0.01	-43.25	-0.51
IFCUSHAP 2	47 57.50	-93 45.10	1241.00	mn 980770.80	980886.39	-0.01	-42.33	-0.50
IFCUSHAP 2	48 1.10	-93 45.60	1243.00	mn 980779.90	980891.80	0.00	-42.40	-0.50
IFCUSHAP 2	47 59.20	-93 44.80	1244.00	mn 980773.40	980888.95	-0.01	-42.43	-0.50
IFCUSHAP 2	47 57.00	-93 35.50	1283.00	mn 980765.60	980885.64	0.01	-43.76	-0.52
IFCUSHAP 2	47 55.70	-93 45.50	1268.00	mn 980763.80	980883.69	0.01	-43.25	-0.51
IFCUSHAP 2	47 57.50	-93 45.10	1241.00	mn 980770.80	980886.39	-0.01	-42.33	-0.50
IFCUSHAP 2	48 1.10	-93 45.60	1243.00	mn 980779.90	980891.80	0.00	-42.40	-0.50
IFCUSHAP 2	47 59.20	-93 44.80	1244.00	mn 980773.40	980888.95	-0.01	-42.43	-0.50
IFCUSHAP 2	47 57.00	-93 35.50	1283.00	mn 980765.60	980885.64	0.01	-43.76	-0.52
IFCUSHAP 2	47 55.70	-93 45.50	1268.00	mn 980763.80	980883.69	0.01	-43.25	-0.51
IFCUSHAP 2	47 57.50	-93 45.10	1241.00	mn 980770.80	980886.39	-0.01	-42.33	-0.50
IFCUSHAP 2	48 1.10	-93 45.60	1243.00	mn 980779.90	980891.80	0.00	-42.40	-0.50
IFCUSHAP 2	47 59.20	-93 44.80	1244.00	mn 980773.40	980888.95	-0.01	-42.43	-0.50
IFCUSHAP 2	47 57.00	-93 35.50	1283.00	mn 980765.60	980885.64	0.01	-43.76	-0.52
IFCUSHAP 2	47 55.70	-93 45.50	1268.00	mn 980763.80	980883.69	0.01	-43.25	-0.51
IFCUSHAP 2	47 57.50	-93 45.10	1241.00	mn 980770.80	980886.39	-0.01	-42.33	-0.50
IFCUSHAP 2	48 1.10	-93 45.60	1243.00	mn 980779.90	980891.80	0.00	-42.40	-0.50
IFCUSHAP 2	47 59.20	-93 44.80	1244.00	mn 980773.40	980888.95	-0.01	-42.43	-0.50
IFCUSHAP 2	47 57.00	-93 35.50	1283.00	mn 980765.60	980885.64	0.01	-43.76	-0.52
IFCUSHAP 2	47 55.70	-93 45.50	1268.00	mn 980763.80	980883.69	0.01	-43.25	-0.51
IFCUSHAP 2	47 57.50	-93 45.10	1241.00	mn 980770.80	980886.39	-0.01	-42.33	-0.50
IFCUSHAP 2	48 1.10	-93 45.60	1243.00	mn 980779.90	980891.80	0.00	-42.40	-0.50
IFCUSHAP 2	47 59.20	-93 44.80	1244.00	mn 980773.40	980888.95	-0.01	-42.43	-0.50
IFCUSHAP 2	47 57.00	-93 35.50	1283.00	mn 980765.60	980885.64	0.01	-43.76	-0.52
IFCUSHAP 2	47 55.70	-93 45.50	1268.00	mn 980763.80	980883.69	0.01	-43.25	-0.51
IFCUSHAP 2	47 57.50	-93 45.10	1241.00	mn 980770.80	980886.39	-0.01	-42.33	-0.50
IFCUSHAP 2	48 1.10	-93 45.60	1243.00	mn 980779.90	980891.80	0.00	-42.40	-0.50
IFCUSHAP 2	47 59.20	-93 44.80	1244.00	mn 980773.40	980888.95	-0.01	-42.43	-0.50
IFCUSHAP 2	47 57.00	-93 35.50	1283.00	mn 980765.60	980885.64	0.01	-43.76	-0.52
IFCUSHAP 2	47 55.70	-93 45.50	1268.00	mn 980763.80	980883.69	0.01	-43.25	-0.51
IFCUSHAP 2	47 57.50	-93 45.10	1241.00	mn 980770.80	980886.39	-0.01	-42.33	-0.50
IFCUSHAP 2	48 1.10	-93 45.60	1243.00	mn 980779.90	980891.80	0.00	-42.40	-0.50
IFCUSHAP 2	47 59.20	-93 44.80	1244.00	mn 980773.40	980888.95	-0.01	-42.43	-0.50
IFCUSHAP 2	47 57.00	-93 35.50	1283.00	mn 980765.60	980885.64	0.01	-43.76	-0.52
IFCUSHAP 2	47 55.70	-93 45.50	1268.00	mn 980763.80	980883.69	0.01	-43.25	-0.51
IFCUSHAP 2	47 57.50	-93 45.10	1241.00	mn 980770.80	980886.39	-0.01	-42.33	-0.50
IFCUSHAP 2	48 1.10	-93 45.60	1243.00	mn 980779.90	980891.80	0.00	-42.40	-0.50
IFCUSHAP 2	47 59.20	-93 44.80	1244.00	mn 980773.40	980888.95	-0.01	-42.43	-0.50
IFCUSHAP 2	47 57.00	-93 35.50	1283.00	mn 980765.60	980885.64	0.01	-43.76	-0.52
IFCUSHAP 2	47 55.70	-93 45.50	1268.00	mn 980763.80	980883.69	0.01	-43.25	-0.51
IFCUSHAP 2	47 57.50	-93 45.10	1241.00	mn 980770.80	980886.39	-0.01	-42.33	-0.50
IFCUSHAP 2	48 1.10	-93 45.60	1243.00	mn 980779.90	980891.80	0.00	-42.40	-0.50
IFCUSHAP 2	47 59.20	-93 44.80	1244.00	mn 980773.40	980888.95	-0.01	-42.43	-0.50
IFCUSHAP 2	47 57.00	-93 35.50	1283.00	mn 980765.60	980885.64	0.01	-43.76	-0.52
IFCUSHAP 2	47 55.70	-93 45.50	1268.00	mn 980763.80	980883.69	0.01	-43.25	-0.51
IFCUSHAP 2	47 57.50	-93 45.10	1241.00	mn 980770.80	980886.39	-0.01	-42.33	-0.50
IFCUSHAP 2	48 1.10	-93 45.60	1243.00	mn 980779.90	980891.80	0.00	-42.40	-0.50
IFCUSHAP 2	47 59.20	-93 44.80	1244.00	mn 980773.40	980888.95	-0.01	-42.43	-0.50
IFCUSHAP 2	47 57.00	-93 35.50	1283.00	mn 980765.60	980885.64	0.01	-43.76	-0.52
IFCUSHAP 2	47 55.70	-93 45.50	1268.00	mn 980763.80	980883.69	0.01	-43.25	-0.51
IFCUSHAP 2	47 57.50	-93 45.10	1241.00	mn 980770.80	980886.39	-0.01	-42.33	-0.50
IFCUSHAP 2	48 1.10	-93 45.60	1243.00	mn 980779.90	980891.80	0.00	-42.40	-0.50
IFCUSHAP 2	47 59.20	-93 44.80	1244.00	mn 980773.40	980888.95	-0.01	-42.43	-0.50
IFCUSHAP 2	47 57.00	-93 35.50	1283.00	mn 980765.60	980885.64	0.01	-43.76	-0.52
IFCUSHAP 2	47 55.70	-93 45.50	1268.00	mn 980763.80	980883.69	0.01	-43.25	-0.51
IFCUSHAP 2	47 57.50	-93 45.10	1241.00	mn 980770.80	980886.39	-0.01	-42.33	-0.50
IFCUSHAP 2	48 1.10	-93 45.60	1243.00	mn 980779.90	980891.80	0.00	-42.40	-0.50
IFCUSHAP 2	47 59.20	-93 44.80	1244.00	mn 980773.40	980888.95	-0.01	-42.43	-0.50
IFCUSHAP 2	47 57.00	-93 35.50	1283.00	mn 980765.60	980885.64	0.01	-43.76	-0.52
IFCUSHAP 2	47 55.70	-93 45.50	1268.00	mn 980763.80	980883.69	0.01	-43.25	-0.51
IFCUSHAP 2	47 57.50	-93 45.10	1241.00	mn 980770.80	980886.39	-0.01	-42.33	-0.50
IFCUSHAP 2	48 1.10	-93 45.60	1243.00	mn 980779.90	980891.80	0.00	-42.40	-0.50
IFCUSHAP 2	47 59.20	-93 44.80	1244.00	mn 980773.40	980888.95	-0.01	-42.43	-0.50
IFCUSHAP 2	47 57.00	-93 35.50	1283.00	mn 980765.60	980885.64	0.01	-43.76	-0.52
IFCUSHAP 2	47 55.70	-93 45.50	1268.00	mn 980763.80	980883.69	0.01	-43.25	-0.51
IFCUSHAP 2	47 57.50	-93 45.10	1241.00	mn 980770.80	980886.39	-0.01	-42.33	-0.50
IFCUSHAP 2	48 1.10	-93 45.60	1243.00	mn 980779.90	980891.80	0.00	-42.40	-0.50
IFCUSHAP 2	47 59.20	-93 44.80	1244.00	mn 980773.40	980888.95	-0.01	-42.43	-0.50
IFCUSHAP 2	47 57.00	-93 35.50	1283.00	mn 980765.60	980885.64	0.01	-43.76	-0.52
IFCUSHAP 2	47 55.70	-93 45.50	1268.00	mn 980763.80	980883.69	0.01	-43.25	-0.51
IFCUSHAP 2	47 57.50	-93 45.10	1241.00	mn 980770.80	980886.39	-0.01	-42.33	-0.50
IFCUSHAP 2	48 1.10							

BOUGUER GRAVITY DATA

International Falls CUSMAP Gravity Data

Meter used:

STATION		L O C A T I O N S		G R A V I T Y		C O R R E C T I O N S		A N O M A L I E S					
IDENTIFICATION		LATITUDE LONGITUDE		ST OBSERVED THEORETICAL		TERRAIN BOUGUER CURV		SPECIAL FREE COMPLETE-BOUGUER					
proj	sta-id	deg	min	ELE	(in ft)		2.67 g/cc		AIR	2.67 g/cc			
IFCUSMAP	2	47 57.80	-93 35.50	1275.00	mn	980769.70	980886.84	0.01	-43.49	-0.52	0.00	2.75	-41.24
IFCUSMAP	2	47 58.70	-93 35.50	1282.00	mn	980769.70	980888.20	0.01	-43.73	-0.52	0.00	2.06	-42.18
IFCUSMAP	2	47 59.50	-93 35.50	1287.00	mn	980770.80	980889.40	0.00	-43.90	-0.52	0.00	2.43	-41.99
IFCUSMAP	2	47 55.80	-93 37.59	1293.00	mn	980766.70	980883.84	0.03	-44.10	-0.52	0.00	4.45	-40.15
IFCUSMAP	2	47 56.60	-93 39.80	1273.00	mn	980764.80	980885.04	0.01	-43.42	-0.51	0.00	-0.53	-44.46
IFCUSMAP	2	47 56.90	-93 40.59	1271.00	mn	980768.20	980885.49	0.01	-43.35	-0.51	0.00	2.23	-41.63
IFCUSMAP	2	47 57.50	-93 41.40	1268.00	mn	980770.10	980886.39	0.01	-43.25	-0.51	0.00	2.94	-40.81
IFCUSMAP	2	47 57.70	-93 42.70	1265.00	mn	980769.70	980886.70	0.01	-43.15	-0.51	0.00	1.96	-41.69
IFCUSMAP	2	47 58.00	-93 43.70	1253.00	mn	980770.40	980887.14	-0.01	-42.74	-0.51	0.00	1.07	-42.18
IFCUSMAP	2	47 58.00	-93 45.00	1249.00	mn	980770.90	980887.14	-0.01	-42.60	-0.51	0.00	1.21	-41.91
IFCUSMAP	2	48 38.30	-94 2.20	1088.00	mn	980849.10	980947.56	-0.04	-37.11	-0.45	0.00	3.84	-33.75
IFCUSMAP	2	48 36.80	-94 0.90	1135.00	mn	980844.10	980945.32	-0.03	-38.71	-0.46	0.00	5.51	-33.69
IFCUSMAP	2	48 38.40	-94 3.50	1096.00	mn	980851.10	980947.71	-0.04	-37.38	-0.45	0.00	6.45	-31.42
IFCUSMAP	2	48 35.90	-94 3.50	1153.00	mn	980851.70	980943.97	-0.02	-39.33	-0.47	0.00	16.14	-23.67
IFCUSMAP	2	48 36.80	-94 3.50	1148.00	mn	980850.90	980945.32	-0.01	-39.15	-0.47	0.00	13.54	-26.10
IFCUSMAP	2	48 37.00	-94 6.00	1181.00	mn	980844.90	980945.62	0.07	-40.28	-0.48	0.00	10.34	-30.35
IFCUSMAP	2	48 35.90	-94 6.10	1167.00	mn	980850.80	980943.97	0.04	-39.80	-0.48	0.00	16.57	-23.67
IFCUSMAP	2	48 37.70	-94 0.50	1117.00	mn	980847.00	980946.66	-0.03	-38.10	-0.46	0.00	5.36	-33.22
IFCUSMAP	2	48 37.70	-94 0.90	1119.00	mn	980847.20	980946.66	-0.03	-38.17	-0.46	0.00	5.76	-32.99
IFCUSMAP	2	48 37.70	-94 1.60	1130.00	mn	980847.70	980946.66	-0.03	-38.54	-0.46	0.00	7.29	-31.75
IFCUSMAP	2	48 37.70	-94 2.20	1142.00	mn	980848.50	980946.66	0.00	-38.95	-0.47	0.00	9.22	-30.20
IFCUSMAP	2	48 30.00	-94 4.80	1141.00	mn	980832.60	980935.13	-0.03	-38.92	-0.47	0.00	4.76	-34.65
IFCUSMAP	2	48 37.59	-94 2.90	1126.00	mn	980849.90	980946.50	-0.03	-38.40	-0.46	0.00	9.28	-29.62
IFCUSMAP	2	48 37.70	-94 3.50	1131.00	mn	980850.30	980946.66	-0.02	-38.58	-0.46	0.00	9.99	-29.07
IFCUSMAP	2	48 37.59	-94 4.10	1134.00	mn	980849.40	980946.50	-0.02	-38.68	-0.46	0.00	9.53	-29.63
IFCUSMAP	2	48 37.59	-94 4.80	1148.00	mn	980846.70	980946.50	0.00	-39.15	-0.47	0.00	8.15	-31.47
IFCUSMAP	2	48 37.59	-94 5.90	1167.00	mn	980844.30	980946.50	0.04	-39.80	-0.48	0.00	7.54	-32.70
IFCUSMAP	2	48 38.50	-94 4.80	1100.00	mn	980850.90	980947.86	-0.04	-37.52	-0.45	0.00	6.48	-31.53
IFCUSMAP	2	48 37.59	-94 4.80	1148.00	mn	980846.70	980946.50	0.00	-39.15	-0.47	0.00	8.15	-31.47
IFCUSMAP	2	48 36.80	-94 4.80	1160.00	mn	980848.60	980945.32	0.04	-39.56	-0.47	0.00	12.36	-27.64
IFCUSMAP	2	48 35.90	-94 4.80	1158.00	mn	980853.30	980943.97	0.00	-39.50	-0.47	0.00	18.22	-21.75
IFCUSMAP	2	48 35.09	-94 4.69	1142.00	mn	980854.70	980942.76	-0.02	-38.95	-0.47	0.00	19.33	-20.11
IFCUSMAP	2	48 34.20	-94 4.69	1123.00	mn	980853.20	980941.42	-0.02	-38.30	-0.46	0.00	17.38	-21.41
IFCUSMAP	2	48 33.30	-94 4.80	1135.00	mn	980848.80	980940.08	-0.03	-38.71	-0.46	0.00	15.46	-23.75
IFCUSMAP	2	48 32.50	-94 4.80	1137.00	mn	980844.10	980938.88	-0.03	-38.78	-0.46	0.00	12.14	-27.14
IFCUSMAP	2	48 31.60	-94 4.80	1139.00	mn	980837.20	980937.53	-0.03	-38.85	-0.47	0.00	6.78	-32.57
IFCUSMAP	2	48 30.70	-94 4.80	1139.00	mn	980834.60	980936.18	-0.03	-38.85	-0.47	0.00	5.53	-33.82
IFCUSMAP	2	48 38.50	-94 6.10	1109.00	mn	980849.20	980947.86	-0.04	-37.82	-0.45	0.00	5.61	-32.70
IFCUSMAP	2	47 55.20	-92 19.29	1394.00	mn	980732.80	980882.94	0.05	-47.55	-0.56	0.00	-19.06	-67.11
IFCUSMAP	2	47 55.30	-92 18.20	1394.00	mn	980733.00	980883.09	0.08	-47.55	-0.56	0.00	-19.01	-67.03

BOUGUER GRAVITY DATA

International Falls CUSMAP Gravity Data

Meter used:

STATION IDENTIFICATION proj sta-id	L O C A T I O N S			G R A V I T Y		C O R R E C T I O N S		A N O M A L I E S	
	LATITUDE deg min	LONGITUDE deg min	ELE (in ft)	ST OBSERVED	THEORETICAL	TERRAIN BOUGUER CURV 2.67 g/cc	SPECIAL	FREE AIR	COMPLETE-BOUGUER 2.67 g/cc
1FCUSMAP 2	47 56.20	-92 18.00	1394.00	mn 980733.40	980884.45	0.05 -47.55 -0.56	0.00	-19.96	-68.01
1FCUSMAP 2	47 57.00	-92 17.79	1394.00	mn 980733.80	980885.64	0.05 -47.55 -0.56	0.00	-20.76	-68.81
1FCUSMAP 2	47 57.90	-92 16.90	1394.00	mn 980735.60	980886.99	0.13 -47.55 -0.56	0.00	-20.31	-68.29
1FCUSMAP 2	47 58.80	-92 17.00	1394.00	mn 980737.70	980888.34	0.11 -47.55 -0.56	0.00	-19.56	-67.56
1FCUSMAP 2	47 59.00	-92 18.60	1394.00	mn 980738.50	980888.65	0.07 -47.55 -0.56	0.00	-19.06	-67.10
1FCUSMAP 2	47 57.20	-92 57.40	1310.00	mn 980747.00	980885.95	0.00 -44.68 -0.53	0.00	-15.76	-60.97
1FCUSMAP 2	47 58.70	-92 57.40	1346.00	mn 980748.10	980888.20	0.03 -45.91 -0.54	0.00	-13.52	-59.94
1FCUSMAP 2	47 59.60	-92 57.50	1353.00	mn 980748.90	980889.55	0.03 -46.15 -0.54	0.00	-13.42	-60.08
1FCUSMAP 2	47 58.70	-92 56.30	1352.00	mn 980747.10	980888.20	0.07 -46.11 -0.54	0.00	-13.96	-60.55
1FCUSMAP 2	47 58.70	-92 55.00	1357.00	mn 980747.10	980888.20	0.04 -46.28 -0.55	0.00	-13.49	-60.28
1FCUSMAP 2	48 0.00	-92 55.00	1362.00	mn 980749.80	980890.15	0.03 -46.45 -0.55	0.00	-12.27	-59.24
1FCUSMAP 2	47 57.00	-92 51.00	1318.00	mn 980745.40	980885.64	0.01 -44.95 -0.53	0.00	-16.30	-61.78
1FCUSMAP 2	47 57.00	-92 52.30	1323.00	mn 980745.90	980885.64	0.01 -45.12 -0.53	0.00	-15.33	-60.98
1FCUSMAP 2	47 57.10	-92 53.60	1352.00	mn 980745.10	980885.79	0.03 -46.11 -0.54	0.00	-13.56	-60.19
1FCUSMAP 2	47 56.20	-92 53.60	1341.00	mn 980745.60	980884.45	0.02 -45.74 -0.54	0.00	-12.74	-59.00
1FCUSMAP 2	47 56.30	-92 52.30	1334.00	mn 980744.60	980884.59	0.01 -45.50 -0.54	0.00	-14.55	-60.58
1FCUSMAP 2	47 55.30	-92 52.30	1322.00	mn 980745.10	980883.09	0.01 -45.09 -0.53	0.00	-13.68	-59.29
1FCUSMAP 2	47 58.70	-92 49.60	1482.00	mn 980735.20	980888.20	0.38 -50.55 -0.59	0.00	-13.64	-64.39
1FCUSMAP 2	47 59.60	-92 49.80	1323.00	mn 980746.90	980889.55	0.01 -45.12 -0.53	0.00	-18.24	-63.89
1FCUSMAP 2	47 57.90	-92 49.80	1339.00	mn 980745.20	980886.99	0.02 -45.67 -0.54	0.00	-15.88	-62.07
1FCUSMAP 2	47 57.90	-92 52.30	1332.00	mn 980746.80	980886.99	0.02 -45.43 -0.54	0.00	-14.94	-60.89
1FCUSMAP 2	47 58.00	-92 53.60	1337.00	mn 980747.50	980887.14	0.02 -45.60 -0.54	0.00	-13.92	-60.04
1FCUSMAP 2	47 57.90	-92 54.90	1339.00	mn 980747.40	980886.99	0.05 -45.67 -0.54	0.00	-13.68	-59.84
1FCUSMAP 2	47 58.00	-92 56.20	1324.00	mn 980747.20	980887.14	0.02 -45.16 -0.53	0.00	-15.44	-61.11
1FCUSMAP 2	47 58.00	-92 57.40	1307.00	mn 980747.60	980887.14	0.00 -44.58 -0.53	0.00	-16.64	-61.75
1FCUSMAP 2	47 58.00	-92 58.80	1326.00	mn 980747.70	980887.14	0.02 -45.23 -0.53	0.00	-14.76	-60.50
1FCUSMAP 2	47 55.00	-92 56.50	1330.00	mn 980746.60	980882.64	0.01 -45.36 -0.54	0.00	-15.54	-60.23
1FCUSMAP 2	47 59.30	-93 6.50	1311.00	mn 980755.70	980889.09	0.01 -44.71 -0.53	0.00	-10.97	-56.86
1FCUSMAP 2	47 59.30	-93 5.60	1307.00	mn 980754.00	980889.09	0.01 -44.58 -0.53	0.00	-10.12	-55.35
1FCUSMAP 2	47 57.30	-93 4.90	1285.00	mn 980756.20	980886.09	0.03 -43.83 -0.52	0.00	-12.19	-57.29
1FCUSMAP 2	47 57.20	-93 6.20	1217.00	mn 980762.80	980885.95	0.00 -41.51 -0.49	0.00	-9.06	-53.38
1FCUSMAP 2	47 57.70	-93 7.20	1284.00	mn 980756.90	980886.70	0.03 -43.79 -0.52	0.00	-8.70	-50.71
1FCUSMAP 2	47 57.70	-93 8.60	1278.00	mn 980758.60	980886.70	0.02 -43.59 -0.52	0.00	-9.05	-53.34
1FCUSMAP 2	47 57.70	-93 10.00	1285.00	mn 980759.30	980886.70	0.04 -43.83 -0.52	0.00	-7.93	-52.01
1FCUSMAP 2	47 57.30	-93 10.00	1283.00	mn 980759.60	980886.09	0.04 -43.76 -0.52	0.00	-6.56	-50.87
1FCUSMAP 2	47 56.10	-93 10.00	1287.00	mn 980762.40	980884.29	0.02 -43.90 -0.52	0.00	-5.85	-50.09
1FCUSMAP 2	47 55.20	-93 10.00	1281.00	mn 980765.20	980882.94	-0.01 -43.69 -0.52	0.00	-0.87	-45.27
1FCUSMAP 2	47 55.60	-93 1.30	1301.00	mn 980758.20	980883.54	0.00 -44.37 -0.52	0.00	2.72	-41.50
1FCUSMAP 2	47 56.40	-93 1.30	1303.00	mn 980752.40	980884.74	0.00 -44.44 -0.53	0.00	-3.01	-47.91
1FCUSMAP 2								-9.82	-54.79

BOUGUER GRAVITY DATA

International Falls CUSMAP Gravity Data

Meter used:

STATION IDENTIFICATION proj sta-ld	L O C A T I O N S		G R A V I T Y		C O R R E C T I O N S		A N O M A L I E S	
	LATITUDE deg min	LONGITUDE deg min	ELE (in ft)	ST OBSERVED	THEORETICAL	TERRAIN BOUGUER CURV 2.67 g/cc	SPECIAL FREE AIR	COMPLETE-BOUGUER 2.67 g/cc
IFCUSHAP 2	47 57.30	-93 1.30	1306.00	mn 980750.20	980886.09	0.03 -44.54 -0.53	0.00 -13.08	-58.13
IFCUSHAP 2	47 58.10	-93 1.30	1305.00	mn 980748.60	980887.30	0.02 -44.51 -0.53	0.00 -15.98	-61.00
IFCUSHAP 2	47 59.10	-93 1.40	1288.00	mn 980752.80	980888.80	0.02 -43.93 -0.52	0.00 -14.88	-59.31
IFCUSHAP 2	47 59.30	-93 2.09	1313.00	mn 980752.70	980889.09	0.01 -44.78 -0.53	0.00 -12.93	-58.23
IFCUSHAP 2	47 59.30	-93 3.50	1316.00	mn 980753.50	980889.09	0.01 -44.88 -0.53	0.00 -11.84	-57.25
IFCUSHAP 2	47 59.40	-93 4.50	1331.00	mn 980753.90	980889.24	0.03 -45.40 -0.54	0.00 -10.18	-56.09
IFCUSHAP 2	47 57.30	-93 2.60	1300.00	mn 980752.60	980886.09	0.03 -44.34 -0.52	0.00 -11.25	-56.08
IFCUSHAP 2	47 57.40	-93 3.90	1292.00	mn 980755.20	980886.24	0.04 -44.07 -0.52	0.00 -9.55	-54.10
IFCUSHAP 2	48 0.20	-93 6.70	1324.00	mn 980756.40	980890.45	0.01 -45.16 -0.53	0.00 -9.54	-55.23
IFCUSHAP 2	48 1.10	-91 55.20	1453.00	mn 980742.80	980891.80	0.06 -49.56 -0.58	0.00 -12.37	-62.44
IFCUSHAP 2	48 2.00	-91 55.50	1542.00	mn 980738.30	980893.15	0.16 -52.59 -0.61	0.00 -9.85	-62.89
IFCUSHAP 2	48 3.20	-91 55.50	1426.00	mn 980746.90	980894.95	0.11 -48.64 -0.57	0.00 -13.96	-63.05
IFCUSHAP 2	48 3.90	-91 55.80	1523.00	mn 980742.10	980896.00	0.18 -51.95 -0.60	0.00 -10.69	-63.06
IFCUSHAP 2	48 4.60	-91 57.00	1486.00	mn 980744.30	980897.05	0.08 -50.68 -0.59	0.00 -13.02	-64.21
IFCUSHAP 2	48 5.10	-91 58.20	1432.00	mn 980747.40	980897.80	0.06 -48.84 -0.57	0.00 -15.74	-65.10
IFCUSHAP 2	48 5.70	-91 59.30	1490.00	mn 980745.00	980898.70	0.18 -50.82 -0.59	0.00 -13.59	-64.82
IFCUSHAP 2	48 0.20	-91 56.20	1406.00	mn 980743.60	980890.45	0.10 -47.95 -0.56	0.00 -14.63	-63.05
IFCUSHAP 2	47 58.90	-92 0.00	1672.00	mn 980719.80	980888.49	0.55 -57.03 -0.65	0.00 -11.47	-68.61
IFCUSHAP 2	47 59.70	-91 57.40	1371.00	mn 980742.60	980889.70	0.16 -46.76 -0.55	0.00 -18.17	-65.33
IFCUSHAP 2	47 58.90	-91 58.40	1425.00	mn 980737.40	980888.49	0.10 -48.60 -0.57	0.00 -17.10	-66.17
IFCUSHAP 2	47 58.70	-91 59.40	1414.00	mn 980736.60	980888.20	0.19 -48.23 -0.57	0.00 -18.63	-67.23
IFCUSHAP 2	47 55.90	-92 6.90	1542.00	mn 980725.00	980883.99	0.12 -52.59 -0.61	0.00 -13.99	-67.08
IFCUSHAP 2	47 56.70	-92 6.50	1557.00	mn 980723.50	980885.20	0.15 -53.10 -0.62	0.00 -15.28	-68.85
IFCUSHAP 2	47 57.30	-92 7.20	1474.00	mn 980727.70	980886.09	0.33 -50.27 -0.59	0.00 -19.79	-70.32
IFCUSHAP 2	47 56.80	-92 5.70	1575.00	mn 980722.70	980885.34	0.15 -53.72 -0.62	0.00 -14.54	-68.73
IFCUSHAP 2	47 56.20	-92 9.10	1497.00	mn 980726.50	980884.45	0.14 -51.06 -0.59	0.00 -17.17	-68.69
IFCUSHAP 2	47 56.70	-92 10.50	1470.00	mn 980729.30	980885.20	0.10 -50.14 -0.58	0.00 -17.66	-68.29
IFCUSHAP 2	47 56.10	-92 8.30	1590.00	mn 980720.70	980884.29	0.15 -54.23 -0.63	0.00 -14.08	-68.79
IFCUSHAP 2	47 57.60	-92 6.90	1510.00	mn 980726.40	980886.55	0.13 -51.50 -0.60	0.00 -18.15	-70.13
IFCUSHAP 2	47 59.00	-92 6.80	1455.00	mn 980731.70	980888.65	0.17 -49.63 -0.58	0.00 -20.13	-70.16
IFCUSHAP 2	47 55.20	-92 6.60	1521.00	mn 980726.10	980882.94	0.10 -51.88 -0.60	0.00 -13.82	-66.20
IFCUSHAP 2	47 55.00	-91 59.00	1436.00	mn 980737.50	980882.64	0.08 -48.98 -0.57	0.00 -10.11	-59.58
IFCUSHAP 2	47 56.20	-92 49.70	1340.00	mn 980743.90	980884.45	0.02 -45.70 -0.54	0.00 -14.53	-60.76
IFCUSHAP 2	47 57.10	-92 49.70	1331.00	mn 980745.50	980885.79	0.01 -45.40 -0.54	0.00 -15.13	-61.06
IFCUSHAP 2	47 58.20	-92 47.20	1424.00	mn 980738.80	980887.45	0.17 -48.57 -0.57	0.00 -14.74	-63.71
IFCUSHAP 2	47 58.70	-92 45.60	1320.00	mn 980745.30	980888.20	0.09 -45.02 -0.53	0.00 -18.77	-64.23
IFCUSHAP 2	47 58.10	-92 48.50	1361.00	mn 980743.20	980887.30	0.03 -46.42 -0.55	0.00 -16.11	-63.05
IFCUSHAP 2	47 57.90	-92 51.00	1354.00	mn 980745.60	980886.99	0.02 -46.18 -0.54	0.00 -14.07	-60.78
IFCUSHAP 2	47 55.30	-92 43.20	1338.00	mn 980739.40	980883.09	0.07 -45.64 -0.54	0.00 -17.87	-63.98
IFCUSHAP 2	47 59.00	-92 30.10	1335.00	mn 980745.20	980888.65	0.06 -45.53 -0.54	0.00 -17.91	-63.92

International Falls CUSMAP Gravity Data

STATION		LOCATIONS		GHAULTY		CORRECTIONS		ANOMALIES	
IDENTIFICATION	LONGITUDE	LATITUDE	LONGITUDE	ST OBSERVED	THEORETICAL	TERRAIN BOUGUER CURV	SPECIAL	FREE	COMPLETE-BOUGUER
proj	sta-id	deg	min	deg	min	(in ft)		AIR	
								2.67 g/cc	2.67 g/cc

STATION IDENTIFICATION proj sta-id	L O C A T I O N S		ELE (in ft)	G K A V I T Y ST OBSERVED	C O D E THEORETICAL	T E R R A I N BOUGUER CURV 2.67 g/cc		SPECIAL AIR	A N O M A L I E S COMPLETE-BOUGUER 2.67 g/cc
	LATITUDE deg min	LONGITUDE deg min				TERRAIN BOUGUER	CURV		
IFCUSHAP 2	47 57.10	-92 37.30	1359.00	mn 980738.80	980885.79	0.04	-46.35 -0.55	0.00	-19.20 -66.06
IFCUSHAP 2	47 55.20	-92 39.50	1375.00	mn 980735.20	980882.94	0.04	-46.90 -0.55	0.00	-18.44 -65.85
IFCUSHAP 2	47 56.10	-92 40.59	1391.00	mn 980736.80	980884.29	0.06	-47.44 -0.56	0.00	-16.69 -64.63
IFCUSHAP 2	47 57.00	-92 39.80	1363.00	mn 980739.60	980885.64	0.04	-46.49 -0.55	0.00	-17.87 -64.87
IFCUSHAP 2	47 57.90	-92 40.20	1363.00	mn 980741.70	980886.99	0.05	-46.49 -0.55	0.00	-17.12 -64.11
IFCUSHAP 2	47 58.60	-92 40.20	1428.00	mn 980740.20	980888.05	0.12	-48.70 -0.57	0.00	-13.56 -62.72
IFCUSHAP 2	47 59.60	-92 39.70	1359.00	mn 980746.90	980889.55	0.02	-46.35 -0.55	0.00	-14.85 -61.73
IFCUSHAP 2	47 58.50	-92 39.00	1382.00	mn 980743.00	980887.89	0.03	-47.14 -0.55	0.00	-14.94 -62.60
IFCUSHAP 2	47 59.20	-92 37.09	1448.00	mn 980741.50	980888.95	0.08	-49.39 -0.58	0.00	-11.28 -61.17
IFCUSHAP 2	47 59.40	-92 36.50	1426.00	mn 980744.60	980889.24	0.05	-48.64 -0.57	0.00	-10.55 -59.71
IFCUSHAP 2	47 59.30	-92 34.80	1363.00	mn 980746.40	980889.09	0.12	-46.49 -0.55	0.00	-14.53 -61.44
IFCUSHAP 2	47 58.60	-92 34.30	1381.00	mn 980743.30	980888.05	0.10	-47.10 -0.55	0.00	-14.88 -62.44
IFCUSHAP 2	47 58.00	-92 32.90	1481.00	mn 980735.40	980887.14	0.14	-50.51 -0.59	0.00	-12.48 -63.44
IFCUSHAP 2	47 58.10	-92 31.10	1339.00	mn 980743.20	980887.30	0.06	-45.67 -0.54	0.00	-18.18 -64.33
IFCUSHAP 2	47 57.90	-92 28.80	1368.00	mn 980739.40	980886.99	0.04	-46.66 -0.55	0.00	-18.95 -66.12
IFCUSHAP 2	47 59.10	-92 28.10	1318.00	mn 980745.00	980888.80	0.07	-44.95 -0.53	0.00	-19.86 -65.27
IFCUSHAP 4	48 36.09	-93 24.50	1124.00	mn 980831.30	980944.25	-0.05	-38.34 -0.46	0.00	-7.26 -46.11
IFCUSHAP 4	48 35.70	-93 9.70	1138.00	mn 980826.80	980943.67	-0.04	-38.81 -0.47	0.00	-9.87 -49.18
IFCUSHAP 4	48 35.09	-93 10.20	1112.00	mn 980825.70	980942.76	-0.05	-37.93 -0.46	0.00	-12.49 -50.92
IFCUSHAP 4	48 35.70	-93 11.60	1125.00	mn 980828.80	980943.67	-0.04	-38.37 -0.46	0.00	-9.08 -47.95
IFCUSHAP 4	48 35.90	-93 13.30	1112.00	mn 980834.10	980943.97	-0.02	-37.93 -0.46	0.00	-5.30 -43.71
IFCUSHAP 4	48 36.80	-93 15.70	1126.00	mn 980834.90	980945.32	-0.05	-38.40 -0.46	0.00	-4.54 -43.46
IFCUSHAP 4	48 36.30	-93 17.10	1113.00	mn 980834.10	980944.57	-0.05	-37.96 -0.46	0.00	-5.82 -44.28
IFCUSHAP 4	48 36.30	-93 17.70	1116.00	mn 980833.40	980944.57	-0.04	-38.06 -0.46	0.00	-6.22 -44.79
IFCUSHAP 4	48 35.40	-93 17.10	1124.00	mn 980830.30	980943.22	-0.04	-38.34 -0.46	0.00	-7.22 -46.06
IFCUSHAP 4	48 35.40	-93 16.50	1121.00	mn 980829.50	980943.22	-0.04	-38.23 -0.46	0.00	-8.31 -47.04
IFCUSHAP 4	48 36.80	-93 20.00	1113.00	mn 980833.10	980945.32	-0.05	-37.96 -0.46	0.00	-7.56 -46.03
IFCUSHAP 4	48 36.50	-93 20.90	1122.00	mn 980832.00	980944.87	-0.05	-38.27 -0.46	0.00	-7.36 -46.14
IFCUSHAP 4	48 35.70	-93 21.00	1132.00	mn 980831.50	980943.67	-0.04	-38.61 -0.46	0.00	-5.73 -44.84
IFCUSHAP 4	48 36.09	-93 21.90	1120.00	mn 980831.50	980944.25	-0.05	-38.20 -0.46	0.00	-7.43 -46.14
IFCUSHAP 4	48 34.50	-93 18.50	1180.00	mn 980824.20	980941.88	-0.02	-40.25 -0.48	0.00	-6.72 -47.47
IFCUSHAP 4	48 34.09	-93 19.79	1180.00	mn 980822.70	980941.26	-0.02	-40.25 -0.48	0.00	-7.61 -48.35
IFCUSHAP 4	48 34.09	-93 20.40	1168.00	mn 980823.50	980941.26	-0.03	-39.84 -0.48	0.00	-7.93 -48.27
IFCUSHAP 4	48 34.09	-93 21.80	1173.00	mn 980823.90	980941.26	-0.03	-40.01 -0.48	0.00	-7.06 -47.57
IFCUSHAP 4	48 34.09	-93 22.50	1167.00	mn 980824.80	980941.26	-0.03	-39.80 -0.48	0.00	-6.72 -47.03
IFCUSHAP 4	48 30.20	-93 22.50	1138.00	mn 980816.90	980935.43	-0.02	-38.81 -0.47	0.00	-11.53 -50.83
IFCUSHAP 4	48 30.20	-93 23.30	1153.00	mn 980816.20	980935.43	0.00	-39.33 -0.47	0.00	-10.82 -50.61
IFCUSHAP 4	48 30.20	-93 21.20	1154.00	mn 980817.00	980935.43	0.01	-39.36 -0.47	0.00	-9.91 -49.74
IFCUSHAP 4	48 31.10	-93 22.50	1160.00	mn 980816.70	980936.78	-0.01	-39.56 -0.47	0.00	-11.00 -51.05
IFCUSHAP 4	48 32.00	-93 22.50	1147.00	mn 980818.00	980938.13	-0.04	-39.12 -0.47	0.00	-12.27 -51.90

BOUGUER GRAVITY DATA

International Falls CUSMAP Gravity Data

Meter used:

STATION IDENTIFICATION proj sta-ld	L O C A T I O N S		G R A V I T Y		C O R R E C T I O N S		A N O M A L I E S			
	LATITUDE deg min	LONGITUDE deg min	ELE ST OBSERVED (in ft)	THEORETICAL	TERRAIN BOUGUER CURV 2.67 g/cc	SPECIAL FREE AIR	COMPLETE-BOUGUER 2.67 g/cc			
IFCUSHAP 4	48 32.80	-93 22.50	1146.00 mn	980819.60	980939.33	-0.04	-39.09 -0.47	0.00	-11.96	-51.56
IFCUSHAP 4	48 33.70	-93 22.50	1188.00 mn	980821.40	980940.67	0.03	-40.52 -0.48	0.00	-7.56	-48.54
IFCUSHAP 4	48 32.09	-93 29.00	1165.00 mn	980815.70	980938.27	0.00	-39.73 -0.48	0.00	-13.01	-53.22
IFCUSHAP 4	48 31.60	-93 28.60	1173.00 mn	980814.50	980937.53	-0.01	-40.01 -0.48	0.00	-12.73	-53.22
IFCUSHAP 4	48 30.90	-93 27.50	1145.00 mn	980815.80	980936.48	-0.04	-39.05 -0.47	0.00	-13.01	-52.57
IFCUSHAP 4	48 36.09	-93 23.60	1116.00 mn	980832.00	980944.25	-0.05	-38.06 -0.46	0.00	-7.31	-45.88
IFCUSHAP 4	48 34.20	-93 23.60	1183.00 mn	980826.10	980941.42	-0.01	-40.35 -0.48	0.00	-4.08	-44.92
IFCUSHAP 4	48 33.30	-93 23.80	1162.00 mn	980820.90	980940.08	-0.03	-39.63 -0.47	0.00	-9.91	-50.04
IFCUSHAP 4	48 33.30	-93 25.10	1157.00 mn	980821.70	980940.08	-0.03	-39.46 -0.47	0.00	-9.59	-49.55
IFCUSHAP 4	48 33.90	-93 25.10	1179.00 mn	980825.70	980940.98	-0.01	-40.21 -0.48	0.00	-4.41	-45.11
IFCUSHAP 4	48 35.09	-93 25.10	1132.00 mn	980829.40	980942.76	-0.04	-38.61 -0.46	0.00	-6.92	-46.03
IFCUSHAP 4	48 32.00	-93 26.70	1180.00 mn	980815.30	980938.13	-0.01	-40.25 -0.48	0.00	-11.88	-52.61
IFCUSHAP 4	48 32.90	-93 26.40	1146.00 mn	980819.10	980939.48	-0.04	-39.09 -0.47	0.00	-12.61	-52.21
IFCUSHAP 4	48 33.30	-93 27.20	1126.00 mn	980823.20	980940.08	-0.04	-38.40 -0.46	0.00	-11.00	-49.90
IFCUSHAP 4	48 34.20	-93 26.40	1160.00 mn	980827.60	980941.42	0.00	-39.56 -0.47	0.00	-4.74	-44.78
IFCUSHAP 4	48 34.59	-93 26.70	1140.00 mn	980828.30	980942.01	-0.03	-38.88 -0.47	0.00	-6.52	-45.89
IFCUSHAP 4	48 35.50	-93 26.80	1119.00 mn	980830.10	980943.37	-0.05	-38.17 -0.46	0.00	-8.04	-46.72
IFCUSHAP 4	48 32.09	-93 30.30	1126.00 mn	980819.70	980938.27	-0.03	-38.40 -0.46	0.00	-12.69	-51.58
IFCUSHAP 4	48 31.70	-93 31.60	1121.00 mn	980820.00	980937.68	-0.04	-38.23 -0.46	0.00	-12.26	-51.00
IFCUSHAP 4	48 31.40	-93 32.90	1140.00 mn	980818.20	980937.23	-0.03	-38.88 -0.47	0.00	-11.84	-51.21
IFCUSHAP 4	48 31.40	-93 34.50	1111.00 mn	980821.00	980937.23	-0.05	-37.89 -0.46	0.00	-11.76	-50.16
IFCUSHAP 4	48 31.20	-93 35.50	1109.00 mn	980820.60	980936.93	-0.05	-37.82 -0.45	0.00	-12.05	-50.38
IFCUSHAP 4	48 30.70	-93 36.80	1106.00 mn	980820.80	980936.18	-0.05	-37.72 -0.45	0.00	-11.38	-49.60
IFCUSHAP 4	48 30.30	-93 34.50	1127.00 mn	980818.60	980935.58	-0.04	-38.44 -0.46	0.00	-11.00	-49.95
IFCUSHAP 4	48 30.30	-93 32.70	1128.00 mn	980817.10	980935.58	-0.04	-38.47 -0.46	0.00	-12.42	-51.39
IFCUSHAP 4	48 30.80	-93 46.80	1093.00 mn	980834.60	980936.33	-0.05	-37.28 -0.45	0.00	1.05	-36.73
IFCUSHAP 4	48 31.60	-93 53.00	1088.00 mn	980831.00	980937.53	-0.04	-37.11 -0.45	0.00	-4.23	-41.82
IFCUSHAP 4	48 31.60	-93 52.00	1090.00 mn	980830.80	980937.53	-0.04	-37.18 -0.45	0.00	-4.24	-41.90
IFCUSHAP 4	48 31.60	-93 50.40	1090.00 mn	980831.40	980937.53	-0.04	-37.18 -0.45	0.00	-3.64	-41.30
IFCUSHAP 4	48 31.60	-93 49.20	1101.00 mn	980834.00	980937.53	-0.05	-37.55 -0.45	0.00	0.00	-38.06
IFCUSHAP 4	48 30.90	-93 40.00	1107.00 mn	980825.70	980936.48	-0.05	-37.76 -0.45	0.00	-6.69	-44.95
IFCUSHAP 4	48 30.80	-93 42.00	1104.00 mn	980826.70	980936.33	-0.05	-37.65 -0.45	0.00	-5.81	-43.97
IFCUSHAP 4	48 30.80	-93 42.70	1094.00 mn	980827.30	980936.33	-0.05	-37.31 -0.45	0.00	-6.16	-43.97
IFCUSHAP 4	48 30.80	-93 44.00	1100.00 mn	980829.80	980936.33	-0.05	-37.52 -0.45	0.00	-3.09	-41.11
IFCUSHAP 4	48 30.30	-93 44.00	1102.00 mn	980826.00	980935.58	-0.04	-37.59 -0.45	0.00	-5.95	-44.03
IFCUSHAP 4	48 32.50	-93 50.40	1098.00 mn	980839.00	980938.88	-0.05	-37.45 -0.45	0.00	3.37	-34.58
IFCUSHAP 4	48 32.50	-93 49.10	1100.00 mn	980835.70	980938.88	-0.05	-37.52 -0.45	0.00	0.26	-37.76
IFCUSHAP 4	48 33.20	-93 49.10	1105.00 mn	980846.50	980939.92	-0.05	-37.69 -0.45	0.00	10.48	-27.72
IFCUSHAP 4	48 35.30	-93 49.00	1105.00 mn	980854.80	980943.07	-0.04	-37.69 -0.45	0.00	15.63	-22.55
IFCUSHAP 4	48 36.09	-93 49.30	1104.00 mn	980856.40	980944.25	-0.04	-37.65 -0.45	0.00	15.96	-22.19

BOUGUER GRAVITY DATA

International Falls CUSMAP Gravity Data

Meter used:

STATION IDENTIFICATION proj sta-id	L O C A T I O N S		G R A V I T Y		C O R R E C T I O N S		A M O M A L I E S	
	LATITUDE deg min	LONGITUDE deg min	ELE (in ft)	ST OBSERVED	THEORETICAL	TERRAIN BOUGUER CURV 2.67 g/cc	SPECIAL AIR	COMPLETE-BOUGUER 2.67 g/cc
IFCUSHAP 4	48 36.80	-93 49.80	1113.00	mn 980860.20	980945.32	-0.04	0.00	-18.92
IFCUSHAP 4	48 37.59	-93 50.40	1106.00	mn 980859.70	980946.50	-0.04	0.00	-21.01
IFCUSHAP 4	48 35.09	-93 51.10	1123.00	mn 980853.90	980942.76	-0.04	0.00	-22.06
IFCUSHAP 4	48 35.50	-93 51.70	1124.00	mn 980852.80	980943.37	-0.04	0.00	-23.71
IFCUSHAP 4	48 36.40	-93 51.70	1122.00	mn 980854.40	980944.72	-0.04	0.00	-23.58
IFCUSHAP 4	48 37.50	-93 51.70	1120.00	mn 980858.80	980946.37	-0.03	0.00	-20.94
IFCUSHAP 4	48 36.59	-93 53.70	1157.00	mn 980852.80	980945.00	0.03	0.00	-23.32
IFCUSHAP 4	48 37.70	-93 53.10	1101.00	mn 980856.80	980946.66	-0.04	0.00	-24.38
IFCUSHAP 4	48 37.70	-93 54.30	1110.00	mn 980855.20	980946.66	-0.04	0.00	-25.44
IFCUSHAP 4	48 37.70	-93 55.60	1121.00	mn 980853.20	980946.66	-0.02	0.00	-26.77
IFCUSHAP 4	48 28.10	-93 53.00	1143.00	mn 980818.90	980932.29	-0.02	0.00	-45.38
IFCUSHAP 4	48 28.10	-93 51.70	1132.00	mn 980818.50	980932.29	-0.03	0.00	-46.45
IFCUSHAP 4	48 28.40	-93 50.70	1123.00	mn 980819.40	980932.73	-0.04	0.00	-46.54
IFCUSHAP 4	48 27.70	-93 49.60	1119.00	mn 980818.90	980931.69	-0.04	0.00	-46.29
IFCUSHAP 4	48 28.10	-93 49.10	1117.00	mn 980819.20	980932.29	-0.04	0.00	-46.65
IFCUSHAP 4	48 28.40	-93 48.50	1108.00	mn 980819.80	980932.73	-0.05	0.00	-47.04
IFCUSHAP 4	48 30.10	-93 48.40	1099.00	mn 980830.30	980935.28	-0.05	0.00	-39.62
IFCUSHAP 4	48 35.50	-93 59.60	1144.00	mn 980843.70	980943.37	-0.03	0.00	-31.61
IFCUSHAP 4	48 34.80	-93 57.00	1136.00	mn 980842.30	980942.32	-0.02	0.00	-32.44
IFCUSHAP 4	48 35.30	-93 58.30	1151.00	mn 980844.70	980943.07	-0.02	0.00	-29.89
IFCUSHAP 4	48 36.00	-93 58.30	1167.00	mn 980844.40	980944.12	0.01	0.00	-30.25
IFCUSHAP 4	48 36.80	-93 58.30	1126.00	mn 980847.70	980945.32	-0.03	0.00	-30.64
IFCUSHAP 4	48 36.80	-93 59.60	1128.00	mn 980845.30	980945.32	-0.03	0.00	-32.92
IFCUSHAP 4	48 37.70	-93 59.60	1120.00	mn 980846.20	980946.66	-0.03	0.00	-33.84
IFCUSHAP 4	48 38.20	-93 59.60	1127.00	mn 980847.10	980947.41	-0.02	0.00	-33.26
IFCUSHAP 4	48 38.09	-93 58.30	1113.00	mn 980849.20	980947.25	-0.04	0.00	-31.85
IFCUSHAP 4	48 37.70	-93 58.30	1109.00	mn 980847.80	980946.66	-0.04	0.00	-32.91
IFCUSHAP 4	48 37.70	-93 57.80	1111.00	mn 980848.40	980946.66	-0.04	0.00	-32.19
IFCUSHAP 4	48 29.00	-93 59.60	1139.00	mn 980827.40	980933.63	-0.02	0.00	-38.46
IFCUSHAP 4	48 29.00	-93 58.80	1130.00	mn 980827.10	980933.63	-0.03	0.00	-39.31
IFCUSHAP 4	48 29.00	-93 57.70	1126.00	mn 980826.20	980933.63	-0.04	0.00	-40.46
IFCUSHAP 4	48 28.60	-93 56.90	1134.00	mn 980824.10	980933.03	-0.02	0.00	-41.47
IFCUSHAP 4	48 28.10	-93 55.50	1129.00	mn 980822.80	980932.29	-0.04	0.00	-42.33
IFCUSHAP 4	48 28.10	-93 54.30	1130.00	mn 980820.30	980932.29	-0.04	0.00	-44.78
IFCUSHAP 4	48 24.60	-93 49.70	1139.00	mn 980818.80	980927.04	-0.03	0.00	-40.48
IFCUSHAP 4	48 24.60	-93 48.80	1133.00	mn 980818.40	980927.04	-0.03	0.00	-41.24
IFCUSHAP 4	48 24.80	-93 47.80	1135.00	mn 980819.20	980927.34	-0.03	0.00	-40.62
IFCUSHAP 4	48 22.50	-93 46.50	1156.00	mn 980818.30	980923.89	-0.03	0.00	-36.82
IFCUSHAP 4	48 22.90	-93 46.50	1151.00	mn 980818.40	980924.49	-0.03	0.00	-37.62
IFCUSHAP 4	48 24.30	-93 46.40	1142.00	mn 980818.90	980926.59	-0.02	0.00	-39.74

BOUGUER GRAVITY DATA

International Falls CUSMAP Gravity Data

Meter used:

STATION IDENTIFICATION proj sta-id	L O C A T I O N S		G R A V I T Y		C O R R E C T I O N S TERRAIN BOUGUER CURV 2.67 g/cc	SPECIAL AIR	A N O M A L I E S FREE COMPLETE-BOUGUER 2.67 g/cc				
	LATITUDE deg min	LONGITUDE deg min	ELE (in ft)	ST OBSERVED THEORETICAL							
IFCUSHAP 4	48 24.60	-93 46.50	1138.00	mn 980818.90	980927.04	-0.03	-38.81	-0.47	0.00	-1.14	-40.45
IFCUSHAP 4	48 25.50	-93 47.20	1110.00	mn 980819.60	980928.39	-0.05	-37.86	-0.45	0.00	-4.41	-42.78
IFCUSHAP 4	48 26.60	-93 45.50	1117.00	mn 980818.30	980930.04	-0.05	-38.10	-0.46	0.00	-6.71	-45.31
IFCUSHAP 4	48 23.30	-93 46.50	1145.00	mn 980819.10	980925.09	-0.02	-39.05	-0.47	0.00	1.68	-37.86
IFCUSHAP 4	48 21.70	-93 45.30	1160.00	mn 980818.00	980922.70	-0.03	-39.56	-0.47	0.00	4.39	-35.68
IFCUSHAP 4	48 21.30	-93 46.60	1163.00	mn 980817.10	980922.09	-0.03	-39.67	-0.47	0.00	4.36	-35.81
IFCUSHAP 4	48 20.29	-93 46.60	1170.00	mn 980814.60	980920.58	-0.03	-39.91	-0.48	0.00	4.04	-36.37
IFCUSHAP 4	48 20.29	-93 47.90	1166.00	mn 980815.90	980920.58	-0.03	-39.77	-0.48	0.00	4.96	-35.31
IFCUSHAP 4	48 19.40	-93 47.90	1177.00	mn 980814.90	980919.25	-0.02	-40.14	-0.48	0.00	6.33	-34.31
IFCUSHAP 4	48 18.10	-93 47.90	1187.00	mn 980814.20	980917.30	-0.02	-40.49	-0.48	0.00	8.52	-32.47
IFCUSHAP 4	48 17.70	-93 49.20	1190.00	mn 980813.10	980916.70	-0.02	-40.59	-0.48	0.00	8.30	-32.79
IFCUSHAP 4	48 16.79	-93 47.90	1194.00	mn 980811.90	980915.34	-0.02	-40.72	-0.49	0.00	8.84	-32.39
IFCUSHAP 4	48 15.50	-93 47.90	1202.00	mn 980810.70	980913.40	-0.02	-41.00	-0.49	0.00	10.33	-31.18
IFCUSHAP 4	48 14.70	-93 47.90	1204.00	mn 980809.00	980912.20	-0.02	-41.06	-0.49	0.00	10.02	-31.56
IFCUSHAP 4	48 13.80	-93 47.80	1212.00	mn 980807.80	980910.85	-0.01	-41.34	-0.49	0.00	10.92	-30.92
IFCUSHAP 4	48 11.50	-93 48.60	1217.00	mn 980804.50	980907.40	-0.01	-41.51	-0.49	0.00	11.54	-30.47
IFCUSHAP 4	48 16.20	-93 53.20	1205.00	mn 980813.70	980914.45	-0.01	-41.10	-0.49	0.00	12.55	-29.04
IFCUSHAP 4	48 16.00	-93 54.50	1215.00	mn 980811.30	980914.15	-0.01	-41.44	-0.49	0.00	11.40	-30.54
IFCUSHAP 4	48 16.10	-93 55.70	1223.00	mn 980811.10	980914.30	0.00	-41.71	-0.50	0.00	11.81	-30.41
IFCUSHAP 4	48 16.29	-93 56.40	1227.00	mn 980811.00	980914.59	0.01	-41.85	-0.50	0.00	11.80	-30.54
IFCUSHAP 4	48 16.79	-93 58.30	1226.00	mn 980811.30	980915.34	0.01	-41.82	-0.50	0.00	11.24	-31.06
IFCUSHAP 4	48 16.79	-93 59.70	1222.00	mn 980811.10	980915.34	0.01	-41.68	-0.50	0.00	10.68	-31.49
IFCUSHAP 4	48 16.00	-93 59.40	1218.00	mn 980810.20	980914.15	0.01	-41.54	-0.49	0.00	10.59	-31.44
IFCUSHAP 4	48 13.20	-93 59.60	1202.00	mn 980806.10	980909.95	-0.01	-41.00	-0.49	0.00	9.18	-32.32
IFCUSHAP 4	48 13.10	-93 58.30	1201.00	mn 980806.10	980909.80	-0.01	-40.96	-0.49	0.00	9.23	-32.23
IFCUSHAP 4	48 13.00	-93 57.20	1202.00	mn 980805.70	980909.65	-0.01	-41.00	-0.49	0.00	9.08	-32.42
IFCUSHAP 4	48 12.90	-93 55.90	1171.00	mn 980807.70	980909.50	0.01	-39.94	-0.48	0.00	8.32	-32.09
IFCUSHAP 4	48 12.20	-93 55.60	1200.00	mn 980805.20	980908.45	0.00	-40.93	-0.49	0.00	9.59	-31.83
IFCUSHAP 4	48 12.10	-93 54.40	1202.00	mn 980804.80	980908.30	-0.01	-41.00	-0.49	0.00	9.53	-31.97
IFCUSHAP 4	48 12.60	-93 53.20	1209.00	mn 980805.90	980909.05	-0.01	-41.24	-0.49	0.00	10.53	-31.21
IFCUSHAP 4	48 12.10	-93 53.10	1201.00	mn 980804.40	980908.30	-0.02	-40.96	-0.49	0.00	9.03	-32.44
IFCUSHAP 4	48 11.70	-93 51.80	1212.00	mn 980803.80	980907.70	-0.01	-41.34	-0.49	0.00	10.07	-31.77
IFCUSHAP 4	48 11.70	-93 50.50	1211.00	mn 980803.80	980907.70	-0.02	-41.30	-0.49	0.00	9.97	-31.85
IFCUSHAP 4	48 11.70	-93 49.60	1211.00	mn 980804.40	980907.70	-0.02	-41.30	-0.49	0.00	10.57	-31.25
IFCUSHAP 4	48 12.10	-93 49.20	1217.00	mn 980805.00	980908.30	-0.01	-41.51	-0.49	0.00	11.14	-30.87
IFCUSHAP 4	48 12.10	-93 47.90	1227.00	mn 980805.50	980908.30	-0.01	-41.85	-0.50	0.00	12.58	-29.78
IFCUSHAP 4	48 11.90	-93 46.60	1222.00	mn 980804.50	980908.00	-0.01	-41.69	-0.50	0.00	11.41	-30.78
IFCUSHAP 4	48 11.40	-93 47.30	1227.00	mn 980803.80	980907.25	-0.01	-41.85	-0.50	0.00	11.93	-30.43
IFCUSHAP 4	48 11.20	-93 45.90	1195.00	mn 980804.40	980906.95	-0.01	-40.76	-0.49	0.00	9.82	-31.43
IFCUSHAP 4	48 14.90	-93 51.20	1227.00	mn 980811.20	980912.50	0.00	-41.85	-0.50	0.00	14.08	-28.27

BOUGUER GRAVITY DATA

International Falls CUSMAP Gravity Data

Meter used:

STATION IDENTIFICATION proj sta-id	L O C A T I O N S		ELE (in ft)	G R A V I T Y		C O R R E C T I O N S TERRAIN BOUGUER CURV 2.67 g/cc	SPECIAL FREE AIR	A N O M A L I E S COMPLETE-BOUGUER 2.67 g/cc			
	LATITUDE deg min	LONGITUDE deg min		ST OBSERVED	THEORETICAL						
IFCUSHAP 4	48 14.70	-93 50.50	1222.00	mn 980810.40	980912.20	-0.01	-41.68	-0.50	0.00	13.11	-29.08
IFCUSHAP 4	48 14.30	-93 49.70	1226.00	mn 980809.00	980911.60	-0.01	-41.82	-0.50	0.00	12.68	-29.64
IFCUSHAP 4	48 13.80	-93 49.20	1232.00	mn 980807.10	980910.85	0.01	-42.02	-0.50	0.00	12.09	-30.42
IFCUSHAP 4	48 14.00	-93 52.90	1220.00	mn 980808.60	980911.15	-0.01	-41.61	-0.50	0.00	12.17	-29.95
IFCUSHAP 4	48 14.00	-93 51.90	1218.00	mn 980808.90	980911.15	-0.01	-41.54	-0.49	0.00	12.29	-29.76
IFCUSHAP 4	48 13.90	-93 51.00	1223.00	mn 980810.10	980911.00	-0.01	-41.71	-0.50	0.00	14.11	-28.12
IFCUSHAP 4	48 13.40	-93 49.80	1225.00	mn 980808.50	980910.25	-0.01	-41.78	-0.50	0.00	13.44	-28.85
IFCUSHAP 4	48 13.40	-93 47.90	1232.00	mn 980806.90	980910.25	0.01	-42.02	-0.50	0.00	12.49	-30.02
IFCUSHAP 4	48 12.90	-93 47.90	1231.00	mn 980806.20	980909.50	-0.01	-41.99	-0.50	0.00	12.46	-30.04
IFCUSHAP 4	48 13.40	-93 46.20	1211.00	mn 980806.80	980910.25	-0.01	-41.30	-0.49	0.00	10.42	-31.39
IFCUSHAP 4	48 14.00	-93 45.60	1204.00	mn 980807.20	980911.15	-0.02	-41.06	-0.49	0.00	9.27	-32.31
IFCUSHAP 4	48 4.69	-93 58.30	1229.00	mn 980788.50	980897.19	0.00	-41.92	-0.50	0.00	6.89	-35.53
IFCUSHAP 4	48 5.60	-93 55.80	1256.00	mn 980788.90	980898.55	0.00	-42.84	-0.51	0.00	8.46	-34.89
IFCUSHAP 4	48 5.00	-93 56.40	1251.00	mn 980788.10	980897.65	0.00	-42.67	-0.51	0.00	8.08	-35.09
IFCUSHAP 4	48 5.60	-93 59.00	1229.00	mn 980790.80	980898.55	-0.01	-41.92	-0.50	0.00	7.82	-34.61
IFCUSHAP 4	48 5.60	-93 58.30	1227.00	mn 980791.20	980898.55	0.00	-41.85	-0.50	0.00	8.03	-34.32
IFCUSHAP 4	48 5.50	-93 57.00	1255.00	mn 980789.60	980898.40	0.00	-42.80	-0.51	0.00	9.21	-34.11
IFCUSHAP 4	48 6.20	-93 55.40	1259.00	mn 980789.50	980899.45	0.00	-42.94	-0.51	0.00	8.44	-35.01
IFCUSHAP 4	48 6.90	-93 53.80	1268.00	mn 980789.60	980900.50	0.02	-43.25	-0.51	0.00	8.34	-35.41
IFCUSHAP 4	48 7.30	-93 53.90	1263.00	mn 980790.40	980901.10	0.01	-43.08	-0.51	0.00	8.07	-35.51
IFCUSHAP 4	48 9.10	-93 55.70	1234.00	mn 980794.90	980903.80	-0.01	-42.09	-0.50	0.00	7.13	-35.47
IFCUSHAP 4	48 8.50	-93 55.60	1240.00	mn 980793.40	980902.90	0.00	-42.29	-0.50	0.00	7.10	-35.69
IFCUSHAP 4	48 7.90	-93 53.80	1251.00	mn 980791.30	980902.00	0.00	-42.67	-0.51	0.00	6.93	-36.25
IFCUSHAP 4	48 4.90	-93 46.60	1262.00	mn 980782.00	980897.50	0.05	-43.04	-0.51	0.00	3.17	-40.33
IFCUSHAP 4	48 5.50	-93 47.50	1264.00	mn 980783.20	980898.40	0.04	-43.11	-0.51	0.00	3.66	-39.92
IFCUSHAP 4	48 6.00	-93 49.20	1265.00	mn 980784.40	980899.15	0.05	-43.15	-0.51	0.00	4.21	-39.40
IFCUSHAP 4	48 6.30	-93 50.20	1268.00	mn 980785.60	980899.60	0.09	-43.25	-0.51	0.00	5.24	-38.44
IFCUSHAP 4	48 8.20	-93 52.60	1242.00	mn 980790.90	980902.45	0.00	-42.36	-0.50	0.00	5.24	-37.62
IFCUSHAP 4	48 10.40	-93 49.30	1227.00	mn 980800.10	980905.75	-0.01	-41.85	-0.50	0.00	9.73	-32.63
IFCUSHAP 4	48 10.80	-93 51.80	1213.00	mn 980802.10	980906.35	-0.01	-41.37	-0.49	0.00	9.81	-32.06
IFCUSHAP 4	48 10.80	-93 50.50	1219.00	mn 980801.80	980906.35	-0.01	-41.58	-0.50	0.00	10.08	-32.01
IFCUSHAP 4	48 12.10	-93 45.30	1227.00	mn 980803.40	980908.30	-0.01	-41.85	-0.50	0.00	10.48	-31.88
IFCUSHAP 4	48 12.10	-93 44.70	1232.00	mn 980902.40	980908.30	0.01	-42.02	-0.50	0.00	9.94	-32.57
IFCUSHAP 4	48 11.70	-93 44.70	1234.00	mn 980801.00	980907.70	0.01	-42.09	-0.50	0.00	9.33	-33.25
IFCUSHAP 4	48 14.70	-93 44.80	1195.00	mn 980808.70	980912.20	-0.02	-40.76	-0.49	0.00	8.87	-32.39
IFCUSHAP 4	48 9.60	-93 43.40	1236.00	mn 980794.20	980904.55	0.00	-42.16	-0.50	0.00	5.88	-36.78
IFCUSHAP 4	48 10.40	-93 43.40	1221.00	mn 980797.40	980905.75	-0.01	-41.64	-0.50	0.00	6.47	-35.69
IFCUSHAP 4	48 11.20	-93 43.40	1241.00	mn 980798.80	980906.95	0.01	-42.33	-0.50	0.00	8.55	-34.28
IFCUSHAP 4	48 11.20	-93 42.10	1233.00	mn 980798.30	980906.95	0.00	-42.05	-0.50	0.00	7.29	-35.26
IFCUSHAP 4	48 11.20	-93 39.50	1224.00	mn 980797.60	980906.95	-0.01	-41.75	-0.50	0.00	5.75	-36.51

International Falls CUSMAP Gravity Data

STATION IDENTIFICATION	L O C A T I O N S		G R A V I T Y		C O R R E C T I O N S		SPECIAL	FREE AIR	A N O M A L I E S					
	lat	lon	ele	st	terrain	bouguer								
proj	deg	min	deg	min	(in ft)									
4	48	11.20	-93	38.40	1226.00	mn	980798.00	980906.95	-0.01	-41.82	-0.50	0.00	6.33	-35.99
4	48	1.30	-93	44.70	1244.00	mn	980781.40	980892.09	0.01	-42.43	-0.50	0.00	6.28	-36.64
4	48	2.60	-93	44.20	1234.00	mn	980780.60	980894.95	0.00	-42.09	-0.50	0.00	2.58	-40.00
4	48	3.20	-93	43.40	1242.00	mn	980780.60	980894.95	0.00	-42.36	-0.50	0.00	2.44	-40.42
4	48	4.30	-93	42.40	1243.00	mn	980781.40	980896.60	0.01	-42.40	-0.50	0.00	1.69	-41.20
4	48	5.10	-93	40.80	1240.00	mn	980781.50	980897.80	0.01	-42.29	-0.50	0.00	0.30	-42.48
4	48	5.10	-93	42.00	1238.00	mn	980781.20	980897.80	0.00	-42.22	-0.50	0.00	-0.18	-42.91
4	48	6.10	-93	41.40	1246.00	mn	980781.30	980899.30	0.02	-42.50	-0.51	0.00	-0.83	-43.82
4	48	7.70	-93	42.70	1233.00	mn	980787.40	980901.70	-0.01	-42.05	-0.50	0.00	1.65	-40.92
4	48	8.10	-93	43.80	1235.00	mn	980789.50	980902.30	0.00	-42.12	-0.50	0.00	3.33	-39.29
4	48	8.60	-93	44.20	1239.00	mn	980791.50	980903.05	0.00	-42.26	-0.50	0.00	4.96	-37.80
4	48	9.50	-93	44.60	1236.00	mn	980795.30	980904.40	0.00	-42.16	-0.50	0.00	7.13	-35.53
4	48	10.70	-93	45.90	1226.00	mn	980801.10	980906.20	-0.01	-41.82	-0.50	0.00	10.18	-32.14
4	48	7.70	-93	38.59	1271.00	mn	980782.80	980901.70	0.02	-43.35	-0.51	0.00	0.62	-43.23
4	48	7.90	-93	39.50	1257.00	mn	980784.10	980902.00	0.00	-42.87	-0.51	0.00	0.29	-43.09
4	48	8.50	-93	40.09	1262.00	mn	980785.90	980902.90	0.00	-43.04	-0.51	0.00	1.67	-41.88
4	48	8.10	-93	37.90	1264.00	mn	980782.70	980902.30	0.00	-43.11	-0.51	0.00	-0.74	-44.36
4	48	8.60	-93	38.20	1258.00	mn	980784.00	980903.05	0.00	-42.91	-0.51	0.00	-0.75	-44.17
4	48	8.70	-93	39.50	1258.00	mn	980786.20	980903.20	0.00	-42.91	-0.51	0.00	1.30	-42.12
4	48	9.10	-93	39.50	1254.00	mn	980788.00	980903.80	0.00	-42.77	-0.51	0.00	2.12	-41.16
4	48	10.10	-93	39.50	1242.00	mn	980792.60	980905.30	-0.01	-42.36	-0.50	0.00	4.09	-38.79
4	48	10.50	-93	39.50	1240.00	mn	980794.30	980905.90	-0.01	-42.29	-0.50	0.00	5.00	-37.80
4	48	11.10	-93	35.50	1247.00	mn	980793.30	980906.80	0.00	-42.53	-0.51	0.00	3.76	-39.28
4	48	7.60	-93	37.40	1274.00	mn	980781.30	980901.55	0.02	-43.45	-0.52	0.00	-0.45	-44.40
4	48	7.40	-93	36.90	1277.00	mn	980780.60	980901.25	0.02	-43.55	-0.52	0.00	-0.57	-44.62
4	48	6.90	-93	34.50	1275.00	mn	980776.70	980900.50	0.02	-43.49	-0.52	0.00	-3.91	-47.89
4	48	7.20	-93	35.59	1268.00	mn	980776.60	980900.95	0.01	-43.25				

BOUGUER GRAVITY DATA

International Falls CUSMAP Gravity Data

Meter used:

STATION IDENTIFICATION proj sta-id	L O C A T I O N S		G R A V I T Y		C O R R E C T I O N S TERRAIN BOUGUER CURV 2.67 g/cc	SPECIAL AIR	A N O M A L I E S COMPLETE-BOUGUER 2.67 g/cc			
	LATITUDE deg min	LONGITUDE deg min	ELE (in ft)	ST OBSERVED THEORETICAL						
IFCUSHAP 4	48 5.80	-93 35.59	1264.00	mn 980777.20	980898.85	0.01	-43.11 -0.51	0.00	-2.79	-46.40
IFCUSHAP 4	48 12.00	-93 30.50	1196.00	mn 980794.40	980908.15	-0.03	-40.79 -0.49	0.00	-1.28	-42.59
IFCUSHAP 4	48 12.00	-93 31.70	1197.00	mn 980795.70	980908.15	-0.02	-40.83 -0.49	0.00	0.11	-41.23
IFCUSHAP 4	48 12.80	-93 31.80	1197.00	mn 980799.00	980909.35	-0.01	-40.83 -0.49	0.00	2.21	-39.11
IFCUSHAP 4	48 12.80	-93 30.90	1203.00	mn 980798.30	980909.35	-0.02	-41.03 -0.49	0.00	2.07	-39.47
IFCUSHAP 4	48 13.50	-93 30.80	1200.00	mn 980800.70	980910.40	-0.02	-40.93 -0.49	0.00	3.14	-38.30
IFCUSHAP 4	48 14.60	-93 31.10	1202.00	mn 980805.20	980912.05	-0.01	-41.00 -0.49	0.00	6.18	-35.32
IFCUSHAP 4	48 9.39	-93 28.20	1216.00	mn 980783.20	980904.23	-0.02	-41.47 -0.49	0.00	-6.69	-48.68
IFCUSHAP 4	48 9.39	-93 30.10	1216.00	mn 980785.00	980904.23	-0.02	-41.47 -0.49	0.00	-4.89	-46.88
IFCUSHAP 4	48 7.80	-93 30.10	1236.00	mn 980779.70	980901.85	-0.02	-42.16 -0.50	0.00	-5.92	-48.60
IFCUSHAP 4	48 10.70	-93 29.10	1200.00	mn 980787.30	980906.20	-0.03	-40.93 -0.49	0.00	-6.06	-47.51
IFCUSHAP 4	48 14.80	-93 26.60	1191.00	mn 980804.70	980912.35	0.00	-40.62 -0.48	0.00	4.35	-36.76
IFCUSHAP 4	48 13.70	-93 27.90	1190.00	mn 980800.30	980910.70	-0.03	-40.59 -0.48	0.00	1.50	-39.60
IFCUSHAP 4	48 13.70	-93 26.60	1196.00	mn 980799.10	980910.70	-0.02	-40.79 -0.49	0.00	0.87	-40.43
IFCUSHAP 4	48 12.80	-93 26.90	1188.00	mn 980795.30	980909.35	-0.03	-40.52 -0.48	0.00	-2.34	-43.37
IFCUSHAP 4	48 12.80	-93 28.50	1190.00	mn 980796.60	980909.35	-0.03	-40.59 -0.48	0.00	-0.85	-41.95
IFCUSHAP 4	48 12.80	-93 27.90	1192.00	mn 980795.70	980909.35	-0.03	-40.66 -0.49	0.00	-1.56	-42.73
IFCUSHAP 4	48 12.00	-93 27.80	1189.00	mn 980793.20	980908.15	-0.02	-40.55 -0.48	0.00	-3.14	-44.20
IFCUSHAP 4	48 12.10	-93 29.20	1197.00	mn 980793.90	980908.30	-0.02	-40.83 -0.49	0.00	-1.84	-43.18
IFCUSHAP 4	48 12.00	-93 28.50	1197.00	mn 980792.90	980908.15	-0.03	-40.83 -0.49	0.00	-2.69	-44.04
IFCUSHAP 4	48 11.40	-93 28.50	1200.00	mn 980790.60	980907.25	-0.03	-40.93 -0.49	0.00	-3.81	-45.26
IFCUSHAP 4	48 11.00	-93 28.50	1203.00	mn 980788.80	980906.65	-0.03	-41.03 -0.49	0.00	-4.73	-46.28
IFCUSHAP 4	48 9.89	-93 28.20	1213.00	mn 980785.10	980904.98	-0.02	-41.37 -0.49	0.00	-5.82	-47.71
IFCUSHAP 4	48 9.39	-93 30.10	1216.00	mn 980784.70	980904.23	-0.02	-41.47 -0.49	0.00	-5.19	-47.18
IFCUSHAP 4	48 9.10	-93 27.40	1237.00	mn 980780.80	980903.80	-0.01	-42.19 -0.50	0.00	-6.68	-49.38
IFCUSHAP 4	48 9.10	-93 26.60	1239.00	mn 980780.00	980903.80	-0.01	-42.26 -0.50	0.00	-7.29	-50.06
IFCUSHAP 4	48 9.20	-93 25.90	1243.00	mn 980779.90	980903.95	-0.01	-42.40 -0.50	0.00	-7.16	-50.08
IFCUSHAP 4	48 8.89	-93 24.00	1255.00	mn 980778.20	980903.48	-0.01	-42.80 -0.51	0.00	-7.28	-50.60
IFCUSHAP 4	48 8.80	-93 23.20	1257.00	mn 980776.90	980903.35	-0.01	-42.87 -0.51	0.00	-8.26	-51.65
IFCUSHAP 4	48 8.20	-93 21.40	1286.00	mn 980770.80	980902.45	0.01	-43.86 -0.52	0.00	-10.72	-55.09
IFCUSHAP 4	48 8.00	-93 20.50	1299.00	mn 980768.50	980902.15	0.01	-44.31 -0.52	0.00	-11.50	-56.32
IFCUSHAP 4	48 8.60	-93 20.60	1294.00	mn 980771.80	980903.05	0.01	-44.13 -0.52	0.00	-9.57	-54.22
IFCUSHAP 4	48 7.40	-93 18.90	1313.00	mn 980767.90	980901.25	0.02	-44.78 -0.53	0.00	-9.88	-55.18
IFCUSHAP 4	48 7.10	-93 18.10	1322.00	mn 980766.30	980900.80	0.02	-45.09 -0.53	0.00	-10.19	-55.79
IFCUSHAP 4	48 6.90	-93 17.40	1308.00	mn 980766.80	980900.50	0.01	-44.61 -0.53	0.00	-10.70	-55.83
IFCUSHAP 4	48 6.30	-93 16.10	1319.00	mn 980764.50	980899.60	0.01	-44.99 -0.53	0.00	-11.07	-56.58
IFCUSHAP 4	48 7.40	-93 20.60	1281.00	mn 980769.00	980901.25	0.00	-43.69 -0.52	0.00	-11.79	-56.00
IFCUSHAP 4	48 6.50	-93 20.40	1262.00	mn 980769.00	980899.90	-0.01	-43.04 -0.51	0.00	-12.23	-55.79
IFCUSHAP 4	48 6.10	-93 20.60	1260.00	mn 980768.10	980899.30	-0.01	-42.97 -0.51	0.00	-12.72	-56.21
IFCUSHAP 4	48 7.60	-93 18.20	1322.00	mn 980767.20	980901.55	0.02	-45.09 -0.53	0.00	-10.04	-55.64

BOUGUER GRAVITY DATA

International Falls CUSMAP Gravity Data

Meter used:

STATION IDENTIFICATION proj sta-id	L O C A T I O N S		ELE (in ft)	G R A V I T Y ST OBSERVED	THEORETICAL	C O R R E C T I O N S		SPECIAL FREE AIR	A N O M A L I E S	
	LATITUDE deg min	LONGITUDE deg min				TERRAIN BOUGUER CURV 2.67 g/cc	COMPLETE-BOUGUER 2.67 g/cc			
IFCUSHAP 4	48 9.30	-93 18.60	1258.00	mn 980775.10	980904.10	0.00	-42.91 -0.51	0.00	-10.70	-54.12
IFCUSHAP 4	48 8.70	-93 18.90	1264.00	mn 980772.80	980903.20	0.02	-43.11 -0.51	0.00	-11.54	-55.15
IFCUSHAP 4	48 8.10	-93 18.90	1310.00	mn 980768.70	980902.30	0.02	-44.68 -0.53	0.00	-10.41	-55.61
IFCUSHAP 4	48 5.20	-93 20.10	1264.00	mn 980765.80	980897.95	-0.01	-43.11 -0.51	0.00	-13.29	-56.92
IFCUSHAP 4	48 4.60	-93 20.20	1262.00	mn 980763.80	980897.05	0.00	-43.04 -0.51	0.00	-14.58	-58.13
IFCUSHAP 4	48 4.40	-93 19.70	1264.00	mn 980763.20	980896.75	0.00	-43.11 -0.51	0.00	-14.69	-58.31
IFCUSHAP 4	48 4.10	-93 18.20	1269.00	mn 980764.60	980896.30	0.03	-43.28 -0.51	0.00	-12.37	-56.14
IFCUSHAP 4	48 3.60	-93 17.40	1281.00	mn 980767.50	980895.55	0.01	-43.69 -0.52	0.00	-7.59	-51.79
IFCUSHAP 4	48 3.20	-93 16.70	1283.00	mn 980766.80	980894.95	0.02	-43.76 -0.52	0.00	-7.50	-51.76
IFCUSHAP 4	48 2.70	-93 16.60	1284.00	mn 980766.40	980894.20	0.00	-43.79 -0.52	0.00	-7.06	-51.37
IFCUSHAP 4	48 2.40	-93 15.50	1302.00	mn 980765.10	980893.75	0.01	-44.41 -0.53	0.00	-6.21	-51.14
IFCUSHAP 4	48 2.09	-93 15.30	1297.00	mn 980764.60	980893.28	0.00	-44.24 -0.52	0.00	-6.72	-51.48
IFCUSHAP 4	48 4.80	-93 17.60	1280.00	mn 980766.70	980897.35	0.02	-43.66 -0.52	0.00	-10.29	-54.45
IFCUSHAP 4	48 5.10	-93 17.20	1288.00	mn 980766.40	980897.80	0.01	-43.93 -0.52	0.00	-10.28	-54.72
IFCUSHAP 4	48 5.70	-93 16.50	1308.00	mn 980765.10	980898.70	0.01	-44.61 -0.53	0.00	-10.60	-55.73
IFCUSHAP 4	48 21.60	-93 39.40	1178.00	mn 980817.80	980922.55	-0.01	-40.18 -0.48	0.00	6.02	-34.65
IFCUSHAP 4	48 21.30	-93 40.80	1166.00	mn 980817.20	980922.09	-0.02	-39.77 -0.48	0.00	4.75	-35.52
IFCUSHAP 4	48 20.70	-93 41.70	1173.00	mn 980817.80	980921.20	-0.01	-40.01 -0.48	0.00	6.91	-33.59
IFCUSHAP 4	48 19.90	-93 42.90	1172.00	mn 980815.80	980920.00	-0.02	-39.97 -0.48	0.00	6.01	-34.46
IFCUSHAP 4	48 18.40	-93 40.59	1188.00	mn 980816.00	980917.75	-0.02	-40.52 -0.48	0.00	9.97	-31.06
IFCUSHAP 4	48 18.60	-93 42.10	1183.00	mn 980815.10	980918.05	-0.01	-40.35 -0.48	0.00	8.30	-32.55
IFCUSHAP 4	48 18.20	-93 44.00	1182.00	mn 980814.90	980917.45	0.01	-40.31 -0.48	0.00	8.59	-32.19
IFCUSHAP 4	48 19.10	-93 43.80	1166.00	mn 980815.50	980918.80	-0.02	-39.77 -0.48	0.00	6.35	-33.92
IFCUSHAP 4	48 21.60	-93 40.70	1164.00	mn 980818.40	980922.55	-0.02	-39.70 -0.47	0.00	5.31	-34.88
IFCUSHAP 4	48 21.60	-93 42.10	1169.00	mn 980818.00	980922.55	-0.02	-39.87 -0.48	0.00	5.38	-34.99
IFCUSHAP 4	48 21.60	-93 44.60	1160.00	mn 980818.20	980922.55	-0.03	-39.56 -0.47	0.00	4.74	-35.33
IFCUSHAP 4	48 22.10	-93 43.40	1157.00	mn 980819.50	980923.30	-0.03	-39.46 -0.47	0.00	5.00	-34.97
IFCUSHAP 4	48 22.50	-93 42.10	1150.00	mn 980818.90	980923.89	-0.03	-39.22 -0.47	0.00	3.15	-36.58
IFCUSHAP 4	48 22.50	-93 40.80	1141.00	mn 980818.70	980923.89	-0.04	-38.92 -0.47	0.00	2.10	-37.32
IFCUSHAP 4	48 23.40	-93 40.80	1134.00	mn 980818.90	980925.24	-0.04	-38.68 -0.46	0.00	0.29	-38.89
IFCUSHAP 4	48 23.40	-93 42.00	1122.00	mn 980819.70	980925.24	-0.03	-38.27 -0.46	0.00	-0.03	-38.79
IFCUSHAP 4	48 23.30	-93 39.50	1138.00	mn 980819.20	980925.09	-0.04	-38.81 -0.47	0.00	1.11	-38.21
IFCUSHAP 4	48 23.30	-93 38.09	1138.00	mn 980819.70	980925.09	-0.04	-38.81 -0.47	0.00	1.61	-37.71
IFCUSHAP 4	48 21.60	-93 38.09	1182.00	mn 980816.80	980922.55	-0.02	-40.31 -0.48	0.00	5.40	-35.42
IFCUSHAP 4	48 22.00	-93 36.80	1192.00	mn 980816.90	980923.14	-0.02	-40.66 -0.49	0.00	5.85	-35.32
IFCUSHAP 4	48 22.80	-93 35.80	1177.00	mn 980817.90	980924.34	-0.01	-40.14 -0.48	0.00	4.24	-36.40
IFCUSHAP 4	48 23.30	-93 34.59	1140.00	mn 980820.00	980925.09	-0.04	-38.88 -0.47	0.00	2.10	-37.29
IFCUSHAP 4	48 22.50	-93 34.70	1174.00	mn 980817.60	980923.89	-0.03	-40.04 -0.48	0.00	4.10	-36.45
IFCUSHAP 4	48 23.30	-93 33.70	1146.00	mn 980819.20	980925.09	-0.04	-39.09 -0.47	0.00	1.87	-37.72
IFCUSHAP 4	48 23.30	-93 33.00	1132.00	mn 980819.40	980925.09	-0.04	-38.61 -0.46	0.00	0.75	-38.36

BOUGUER GRAVITY DATA

International Falls CUSMAP Gravity Data

Meter used:

STATION IDENTIFICATION proj sta-id	L O C A T I O N S		G R A V I T Y		C O R R E C T I O N S		A M O N A L I E S	
	LATITUDE deg min	LONGITUDE deg min	ELE (in ft)	ST OBSERVED	THEORETICAL	TERRAIN BOUGUER CURV 2.67 g/cc	SPECIAL AIR	COMPLETE-BOUGUER 2.67 g/cc
IFCUSHAP 4	48 22.50	-93 33.00	1143.00	mn 980818.70	980923.89	-0.03	0.00	-37.19
IFCUSHAP 4	48 21.60	-93 33.00	1150.00	mn 980818.90	980922.55	-0.04	0.00	-35.24
IFCUSHAP 4	48 21.10	-93 31.60	1148.00	mn 980818.90	980921.80	-0.04	0.00	-34.61
IFCUSHAP 4	48 20.70	-93 33.00	1161.00	mn 980817.50	980921.20	-0.03	0.00	-34.63
IFCUSHAP 4	48 19.79	-93 33.00	1152.00	mn 980817.60	980919.83	-0.04	0.00	-33.71
IFCUSHAP 4	48 19.79	-93 32.30	1140.00	mn 980817.90	980919.83	-0.04	0.00	-34.13
IFCUSHAP 4	48 19.79	-93 31.10	1145.00	mn 980817.60	980919.83	-0.04	0.00	-34.12
IFCUSHAP 4	48 19.79	-93 30.30	1138.00	mn 980816.80	980919.83	-0.05	0.00	-35.36
IFCUSHAP 4	48 18.90	-93 33.09	1174.00	mn 980816.40	980918.50	-0.03	0.00	-32.25
IFCUSHAP 4	48 18.90	-93 31.80	1168.00	mn 980816.80	980918.50	-0.02	0.00	-32.20
IFCUSHAP 4	48 18.90	-93 30.50	1140.00	mn 980817.40	980918.50	-0.04	0.00	-33.29
IFCUSHAP 4	48 18.00	-93 30.50	1162.00	mn 980815.30	980917.15	-0.04	0.00	-32.73
IFCUSHAP 4	48 18.90	-93 34.90	1194.00	mn 980815.60	980918.50	-0.02	0.00	-31.85
IFCUSHAP 4	48 18.00	-93 36.20	1189.00	mn 980814.00	980917.15	-0.02	0.00	-32.40
IFCUSHAP 4	48 18.10	-93 37.70	1198.00	mn 980814.40	980917.30	-0.02	0.00	-31.61
IFCUSHAP 4	48 18.00	-93 33.09	1156.00	mn 980814.90	980917.15	-0.04	0.00	-33.48
IFCUSHAP 4	48 17.20	-93 32.40	1167.00	mn 980813.10	980915.95	-0.02	0.00	-33.41
IFCUSHAP 4	48 17.20	-93 33.09	1164.00	mn 980813.10	980915.95	-0.04	0.00	-33.61
IFCUSHAP 4	48 17.20	-93 34.40	1174.00	mn 980813.10	980915.95	-0.03	0.00	-33.00
IFCUSHAP 4	48 17.10	-93 35.09	1178.00	mn 980813.50	980915.80	-0.03	0.00	-32.22
IFCUSHAP 4	48 16.20	-93 33.09	1185.00	mn 980811.10	980914.45	-0.01	0.00	-32.83
IFCUSHAP 4	48 15.40	-93 33.09	1178.00	mn 980809.00	980913.25	-0.02	0.00	-34.16
IFCUSHAP 4	48 15.40	-93 31.80	1195.00	mn 980808.60	980913.25	-0.01	0.00	-33.53
IFCUSHAP 4	48 24.20	-93 35.59	1146.00	mn 980819.40	980926.44	-0.04	0.00	-38.87
IFCUSHAP 4	48 24.20	-93 36.80	1142.00	mn 980819.80	980926.44	-0.04	0.00	-38.71
IFCUSHAP 4	48 25.10	-93 36.90	1130.00	mn 980819.50	980927.79	-0.04	0.00	-41.08
IFCUSHAP 4	48 26.00	-93 36.90	1103.00	mn 980818.50	980929.14	-0.05	0.00	-45.05
IFCUSHAP 4	48 26.80	-93 36.90	1100.00	mn 980817.60	980930.34	-0.05	0.00	-47.32
IFCUSHAP 4	48 27.70	-93 36.80	1107.00	mn 980817.20	980931.69	-0.05	0.00	-48.66
IFCUSHAP 4	48 28.60	-93 36.80	1106.00	mn 980817.40	980933.03	-0.05	0.00	-49.86
IFCUSHAP 4	48 29.00	-93 37.30	1107.00	mn 980818.30	980933.63	-0.05	0.00	-49.50
IFCUSHAP 4	48 24.20	-93 38.09	1132.00	mn 980819.10	980926.44	-0.04	0.00	-40.01
IFCUSHAP 4	48 24.20	-93 39.40	1126.00	mn 980818.40	980926.44	-0.04	0.00	-41.07
IFCUSHAP 4	48 24.20	-93 40.70	1118.00	mn 980818.90	980926.44	-0.04	0.00	-41.04
IFCUSHAP 4	48 24.20	-93 42.90	1129.00	mn 980818.40	980926.44	-0.04	0.00	-40.89
IFCUSHAP 4	48 24.30	-93 44.60	1155.00	mn 980818.10	980926.59	-0.01	0.00	-39.76
IFCUSHAP 4	48 25.10	-93 44.70	1123.00	mn 980818.20	980927.79	-0.04	0.00	-42.79
IFCUSHAP 4	48 26.30	-93 44.50	1111.00	mn 980817.70	980929.59	-0.05	0.00	-45.82
IFCUSHAP 4	48 26.80	-93 43.40	1108.00	mn 980817.60	980930.34	-0.05	0.00	-46.84
IFCUSHAP 4	48 27.30	-93 43.10	1104.00	mn 980818.50	980931.09	-0.05	0.00	-46.93

BOUGUER GRAVITY DATA

International Falls CUSMAP Gravity Data

Meter used:

STATION IDENTIFICATION proj sta-id	L O C A T I O N S				G R A V I T Y		C O R R E C T I O N S		A N O M A L I E S		
	LATITUDE deg min	LONGITUDE deg min	ELE (in ft)	ST OBSERVED	THEORETICAL	TERRAIN BOUGUER CURV	SPECIAL	FREE AIR	COMPLETE-BOUGUER		
						2.67 g/cc				2.67 g/cc	
IFCUSMAP 4	48 28.10	-93 43.00	1108.00	mn 980818.30	980932.29	-0.05	-37.79	-0.45	0.00	-9.79	-48.09
IFCUSMAP 4	48 28.60	-93 43.40	1106.00	mn 980819.50	980933.03	-0.05	-37.72	-0.45	0.00	-9.53	-47.76
IFCUSMAP 4	48 29.40	-93 42.80	1104.00	mn 980821.30	980934.23	-0.05	-37.65	-0.45	0.00	-9.12	-47.28
IFCUSMAP 4	48 29.90	-93 44.00	1104.00	mn 980823.60	980934.98	-0.05	-37.65	-0.45	0.00	-7.57	-45.73
IFCUSMAP 4	48 28.60	-93 44.10	1105.00	mn 980819.80	980933.03	-0.05	-37.69	-0.45	0.00	-9.33	-47.52
IFCUSMAP 4	48 27.80	-93 44.00	1108.00	mn 980818.30	980931.84	-0.05	-37.79	-0.45	0.00	-9.34	-47.64
IFCUSMAP 4	48 26.80	-93 44.30	1111.00	mn 980818.10	980930.34	-0.05	-37.89	-0.46	0.00	-7.77	-46.17
IFCUSMAP 4	48 22.90	-93 37.50	1160.00	mn 980818.70	980924.49	-0.02	-39.56	-0.47	0.00	3.29	-36.77
IFCUSMAP 4	48 23.20	-93 36.00	1167.00	mn 980819.30	980924.95	-0.03	-39.80	-0.48	0.00	4.10	-36.21
IFCUSMAP 4	48 24.20	-93 34.30	1136.00	mn 980818.00	980926.44	-0.03	-38.75	-0.46	0.00	-1.63	-40.86
IFCUSMAP 4	48 25.10	-93 34.20	1118.00	mn 980817.30	980927.79	-0.05	-38.13	-0.46	0.00	-5.36	-44.00
IFCUSMAP 4	48 26.00	-93 34.20	1114.00	mn 980816.70	980929.14	-0.05	-38.00	-0.46	0.00	-7.68	-46.19
IFCUSMAP 4	48 26.20	-93 35.30	1100.00	mn 980817.50	980929.44	-0.04	-37.52	-0.45	0.00	-8.50	-46.51
IFCUSMAP 4	48 27.10	-93 35.50	1109.00	mn 980816.70	980930.79	-0.05	-37.82	-0.45	0.00	-9.81	-48.14
IFCUSMAP 4	48 27.90	-93 35.50	1108.00	mn 980816.20	980931.98	-0.05	-37.79	-0.45	0.00	-11.59	-49.89
IFCUSMAP 4	48 28.60	-93 35.50	1109.00	mn 980817.50	980933.03	-0.05	-37.82	-0.45	0.00	-11.26	-49.59
IFCUSMAP 4	48 29.50	-93 35.50	1113.00	mn 980818.80	980934.38	-0.05	-37.96	-0.46	0.00	-10.93	-49.40
IFCUSMAP 4	48 27.90	-93 34.90	1109.00	mn 980816.20	980931.98	-0.05	-37.82	-0.45	0.00	-11.51	-49.84
IFCUSMAP 4	48 28.60	-93 33.90	1112.00	mn 980815.70	980933.03	-0.05	-37.93	-0.46	0.00	-12.77	-51.20
IFCUSMAP 4	48 27.70	-93 33.59	1111.00	mn 980815.90	980931.69	-0.05	-37.89	-0.46	0.00	-11.32	-49.72
IFCUSMAP 4	48 26.90	-93 34.50	1112.00	mn 980816.00	980930.48	-0.05	-37.93	-0.46	0.00	-9.92	-48.35
IFCUSMAP 4	48 25.10	-93 32.90	1114.00	mn 980817.60	980927.79	-0.05	-38.00	-0.46	0.00	-5.43	-43.94
IFCUSMAP 4	48 24.20	-93 33.00	1112.00	mn 980818.20	980926.44	-0.05	-37.93	-0.46	0.00	-3.67	-42.11
IFCUSMAP 4	48 24.00	-93 32.20	1135.00	mn 980817.30	980926.14	-0.04	-38.71	-0.46	0.00	-2.11	-41.33
IFCUSMAP 4	48 23.30	-93 30.30	1149.00	mn 980818.60	980925.09	-0.04	-39.19	-0.47	0.00	1.55	-38.15
IFCUSMAP 4	48 24.20	-93 30.30	1140.00	mn 980816.50	980926.44	-0.04	-38.88	-0.47	0.00	-2.75	-42.14
IFCUSMAP 4	48 23.30	-93 31.70	1142.00	mn 980818.70	980925.09	-0.02	-38.95	-0.47	0.00	1.00	-38.44
IFCUSMAP 4	48 22.90	-93 31.30	1144.00	mn 980818.90	980924.49	-0.02	-39.02	-0.47	0.00	1.98	-37.52
IFCUSMAP 4	48 21.80	-93 30.30	1149.00	mn 980817.30	980922.84	-0.04	-39.19	-0.47	0.00	2.50	-37.20
IFCUSMAP 4	48 24.50	-93 20.00	1130.00	mn 980816.80	980926.89	-0.05	-38.54	-0.46	0.00	-3.84	-42.89
IFCUSMAP 4	48 24.20	-93 21.90	1136.00	mn 980816.60	980926.44	-0.04	-38.75	-0.46	0.00	-3.03	-42.27
IFCUSMAP 4	48 24.70	-93 18.70	1134.00	mn 980816.70	980927.19	-0.04	-38.68	-0.46	0.00	-3.86	-43.04
IFCUSMAP 4	48 24.80	-93 17.00	1152.00	mn 980815.10	980927.34	-0.04	-39.29	-0.47	0.00	-3.91	-43.72
IFCUSMAP 4	48 24.70	-93 15.40	1156.00	mn 980814.30	980927.19	-0.04	-39.43	-0.47	0.00	-4.19	-44.13
IFCUSMAP 4	48 27.10	-93 16.29	1149.00	mn 980814.10	980930.79	-0.04	-39.19	-0.47	0.00	-8.64	-48.34
IFCUSMAP 4	48 27.60	-93 17.29	1158.00	mn 980815.20	980931.54	-0.04	-39.50	-0.47	0.00	-7.44	-47.45
IFCUSMAP 4	48 28.00	-93 16.60	1151.00	mn 980815.70	980932.13	-0.04	-39.26	-0.47	0.00	-8.21	-47.98
IFCUSMAP 4	48 28.00	-93 15.90	1137.00	mn 980815.90	980932.13	-0.05	-38.78	-0.46	0.00	-9.32	-48.61
IFCUSMAP 4	48 28.50	-93 18.40	1123.00	mn 980816.90	980932.88	-0.05	-38.30	-0.46	0.00	-10.38	-49.20
IFCUSMAP 4	48 28.90	-93 17.40	1124.00	mn 980816.70	980933.48	-0.05	-38.34	-0.46	0.00	-11.09	-49.94

BOUGUER GRAVITY DATA

International Falls CUSMAP Gravity Data

Meter used:

STATION IDENTIFICATION proj sta-id	L O C A T I O N S		ELE (in ft)	G R A V I T Y ST OBSERVED THEORETICAL	C O R R E C T I O N S		A N O M A L I E S				
	LATITUDE deg min	LONGITUDE deg min			TERRAIN BOUGUER CURV 2.67 g/cc	SPECIAL FREE AIR	COMPLETE-BOUGUER 2.67 g/cc				
IFCUSHAP 4	48 29.30	-93 16.60	1114.00 mn	980817.30	980934.09	-0.04	-38.00	-0.46	0.00	-12.03	-50.52
IFCUSHAP 4	48 29.30	-93 15.90	1116.00 mn	980817.90	980934.09	-0.04	-38.06	-0.46	0.00	-11.24	-49.80
IFCUSHAP 4	48 29.40	-93 15.10	1126.00 mn	980817.10	980934.23	-0.04	-38.40	-0.46	0.00	-11.26	-50.16
IFCUSHAP 4	48 28.90	-93 19.79	1121.00 mn	980817.00	980933.48	-0.05	-38.23	-0.46	0.00	-11.07	-49.81
IFCUSHAP 4	48 29.80	-93 19.90	1117.00 mn	980817.40	980934.84	-0.05	-38.10	-0.46	0.00	-12.40	-51.01
IFCUSHAP 4	48 29.80	-93 20.50	1125.00 mn	980817.10	980934.84	-0.05	-38.37	-0.46	0.00	-11.94	-50.83
IFCUSHAP 4	48 29.40	-93 21.20	1145.00 mn	980816.40	980934.23	-0.02	-39.05	-0.47	0.00	-10.16	-49.71
IFCUSHAP 4	48 29.90	-93 22.50	1130.00 mn	980817.10	980934.98	-0.05	-38.54	-0.46	0.00	-11.63	-50.68
IFCUSHAP 4	48 29.50	-93 23.40	1122.00 mn	980816.60	980934.38	-0.05	-38.27	-0.46	0.00	-12.27	-51.05
IFCUSHAP 4	48 29.50	-93 24.40	1143.00 mn	980815.60	980934.38	-0.03	-38.98	-0.47	0.00	-11.30	-50.78
IFCUSHAP 4	48 29.50	-93 25.70	1132.00 mn	980815.30	980934.38	-0.05	-38.61	-0.46	0.00	-12.64	-51.76
IFCUSHAP 4	48 23.90	-93 22.40	1179.00 mn	980815.00	980925.99	-0.01	-40.21	-0.48	0.00	-0.12	-40.83
IFCUSHAP 4	48 23.80	-93 23.60	1154.00 mn	980816.40	980925.84	-0.04	-39.36	-0.47	0.00	-0.92	-40.80
IFCUSHAP 4	48 23.80	-93 25.20	1164.00 mn	980816.40	980925.84	-0.02	-39.70	-0.47	0.00	0.02	-40.18
IFCUSHAP 4	48 23.80	-93 27.50	1165.00 mn	980816.20	980925.84	-0.02	-39.73	-0.48	0.00	-0.09	-40.32
IFCUSHAP 4	48 24.10	-93 28.30	1158.00 mn	980816.40	980926.29	-0.02	-39.50	-0.47	0.00	-1.00	-40.99
IFCUSHAP 4	48 21.60	-93 29.50	1152.00 mn	980817.60	980922.55	-0.04	-39.29	-0.47	0.00	3.38	-36.42
IFCUSHAP 4	48 21.40	-93 29.10	1161.00 mn	980817.70	980922.24	-0.03	-39.60	-0.47	0.00	4.62	-35.48
IFCUSHAP 4	48 21.60	-93 27.90	1169.00 mn	980816.70	980922.55	-0.02	-39.87	-0.48	0.00	4.08	-36.29
IFCUSHAP 4	48 20.80	-93 27.90	1144.00 mn	980817.10	980921.34	-0.04	-39.02	-0.47	0.00	3.33	-36.20
IFCUSHAP 4	48 19.29	-93 27.60	1154.00 mn	980816.40	980919.08	-0.04	-39.36	-0.47	0.00	5.84	-34.04
IFCUSHAP 4	48 18.79	-93 26.60	1181.00 mn	980813.90	980918.34	-0.03	-40.28	-0.48	0.00	6.62	-34.17
IFCUSHAP 4	48 18.29	-93 26.60	1154.00 mn	980813.90	980917.59	-0.04	-39.50	-0.47	0.00	5.21	-34.80
IFCUSHAP 4	48 16.70	-93 26.60	1165.00 mn	980810.40	980915.20	-0.03	-39.73	-0.48	0.00	4.75	-35.49
IFCUSHAP 4	48 16.20	-93 26.60	1176.00 mn	980808.30	980914.45	-0.02	-40.11	-0.48	0.00	4.43	-36.18
IFCUSHAP 4	48 15.40	-93 26.60	1188.00 mn	980806.80	980913.25	0.00	-40.52	-0.48	0.00	5.26	-35.74
IFCUSHAP 4	48 18.00	-93 26.00	1160.00 mn	980812.90	980917.15	-0.04	-39.56	-0.47	0.00	4.83	-35.25
IFCUSHAP 4	48 18.00	-93 24.90	1180.00 mn	980812.10	980917.15	-0.03	-40.25	-0.48	0.00	5.91	-34.85
IFCUSHAP 4	48 18.00	-93 22.70	1191.00 mn	980809.70	980917.15	-0.03	-40.62	-0.48	0.00	4.55	-36.59
IFCUSHAP 4	48 17.90	-93 21.50	1192.00 mn	980808.00	980917.00	-0.03	-40.66	-0.49	0.00	3.09	-38.08
IFCUSHAP 4	48 17.00	-93 22.20	1228.00 mn	980805.60	980915.65	-0.01	-41.88	-0.50	0.00	5.42	-36.97
IFCUSHAP 4	48 15.50	-93 21.90	1220.00 mn	980801.60	980913.40	-0.02	-41.61	-0.50	0.00	2.92	-39.20
IFCUSHAP 4	48 18.90	-93 21.40	1158.00 mn	980811.80	980918.50	-0.04	-39.50	-0.47	0.00	2.20	-37.81
IFCUSHAP 4	48 19.79	-93 21.40	1141.00 mn	980813.20	980919.83	-0.04	-38.92	-0.47	0.00	0.66	-38.76
IFCUSHAP 4	48 20.80	-93 21.40	1149.00 mn	980814.40	980921.34	-0.04	-39.19	-0.47	0.00	1.10	-38.60
IFCUSHAP 4	48 21.50	-93 21.80	1142.00 mn	980814.80	980922.40	-0.04	-38.95	-0.47	0.00	-0.21	-39.66
IFCUSHAP 4	48 24.20	-93 16.10	1189.00 mn	980812.90	980926.44	0.00	-40.55	-0.48	0.00	-1.73	-42.77
IFCUSHAP 4	48 24.20	-93 17.40	1175.00 mn	980814.60	980926.44	-0.01	-40.08	-0.48	0.00	-1.35	-41.92
IFCUSHAP 4	48 24.20	-93 18.10	1137.00 mn	980815.90	980926.44	-0.05	-38.78	-0.46	0.00	-3.62	-42.92
IFCUSHAP 4	48 23.40	-93 15.40	1185.00 mn	980812.90	980925.24	-0.03	-40.42	-0.48	0.00	-0.91	-41.84

BOUGUER GRAVITY DATA

International Falls CUSMAP Gravity Data

Meter used:

STATION IDENTIFICATION proj sta-id	L O C A T I O N S		G R A V I T Y		C O R R E C T I O N S TERRAIN BOUGUER CURV 2.67 g/cc	SPECIAL AIR	A N O M A L I E S					
	LATITUDE deg min	LONGITUDE deg min	ELE (in ft)	ST OBSERVED			THEORETICAL	FREE COMPLETE-BOUGUER 2.67 g/cc				
IFCUSHAP 4	48 23.40	-93 16.10	1183.00	mn	980813.50	980925.24	-0.02	-40.35	-0.48	0.00	-0.50	-41.35
IFCUSHAP 4	48 22.50	-93 15.30	1249.00	mn	980808.90	980923.89	0.12	-42.60	-0.51	0.00	2.46	-40.53
IFCUSHAP 4	48 21.50	-93 16.10	1185.00	mn	980810.10	980922.40	-0.02	-40.42	-0.48	0.00	-0.86	-41.78
IFCUSHAP 4	48 20.80	-93 16.10	1176.00	mn	980810.80	980921.34	-0.02	-40.11	-0.48	0.00	0.03	-40.58
IFCUSHAP 4	48 20.29	-93 15.30	1219.00	mn	980808.10	980920.58	0.06	-41.58	-0.50	0.00	2.15	-39.87
IFCUSHAP 4	48 19.90	-93 16.10	1216.00	mn	980808.50	980920.00	0.06	-41.47	-0.49	0.00	2.85	-39.06
IFCUSHAP 4	48 19.00	-93 16.10	1206.00	mn	980807.50	980918.65	0.01	-41.13	-0.49	0.00	2.26	-39.36
IFCUSHAP 4	48 18.50	-93 15.50	1212.00	mn	980806.30	980917.90	0.02	-41.34	-0.49	0.00	2.37	-39.44
IFCUSHAP 4	48 17.70	-93 15.60	1180.00	mn	980804.70	980916.70	-0.01	-40.25	-0.48	0.00	-1.05	-41.78
IFCUSHAP 4	48 16.50	-93 15.70	1229.00	mn	980799.00	980914.90	0.03	-41.92	-0.50	0.00	-0.33	-42.72
IFCUSHAP 4	48 15.90	-93 15.70	1244.00	mn	980796.40	980914.00	0.01	-42.43	-0.50	0.00	-0.62	-43.55
IFCUSHAP 4	48 15.20	-93 15.70	1266.00	mn	980793.10	980912.95	0.01	-43.18	-0.51	0.00	-0.80	-44.49
IFCUSHAP 4	48 17.00	-93 15.50	1200.00	mn	980801.50	980915.65	0.00	-40.93	-0.49	0.00	-1.31	-42.72
IFCUSHAP 4	48 20.29	-93 16.60	1199.00	mn	980810.50	980920.58	0.03	-40.89	-0.49	0.00	2.67	-38.69
IFCUSHAP 4	48 20.29	-93 18.00	1153.00	mn	980812.20	980920.58	-0.04	-39.33	-0.47	0.00	0.03	-39.80
IFCUSHAP 4	48 20.29	-93 19.00	1176.00	mn	980811.60	980920.58	-0.02	-40.11	-0.48	0.00	1.60	-39.01
IFCUSHAP 4	48 20.29	-93 20.60	1154.00	mn	980813.30	980920.58	-0.04	-39.36	-0.47	0.00	1.24	-38.64
IFCUSHAP 4	48 22.20	-93 22.00	1169.00	mn	980815.00	980923.45	-0.03	-39.87	-0.48	0.00	1.48	-38.90
IFCUSHAP 4	48 22.90	-93 21.90	1179.00	mn	980814.30	980924.49	-0.03	-40.21	-0.48	0.00	0.67	-40.05
IFCUSHAP 4	48 23.50	-93 21.90	1160.00	mn	980815.70	980925.39	-0.04	-39.56	-0.47	0.00	-0.61	-40.69
IFCUSHAP 4	48 20.70	-92 57.80	1256.00	mn	980801.30	980921.20	-0.01	-42.84	-0.51	0.00	-1.79	-45.15
IFCUSHAP 4	48 26.00	-93 12.30	1188.00	mn	980811.40	980929.14	-0.01	-40.52	-0.48	0.00	-6.02	-47.04
IFCUSHAP 4	48 26.70	-93 12.00	1171.00	mn	980811.80	980930.19	-0.02	-39.94	-0.48	0.00	-8.27	-48.71
IFCUSHAP 4	48 26.70	-93 10.70	1192.00	mn	980810.90	980930.19	-0.01	-40.66	-0.49	0.00	-7.20	-48.35
IFCUSHAP 4	48 27.20	-93 9.39	1203.00	mn	980810.60	980930.94	-0.02	-41.03	-0.49	0.00	-7.22	-48.76
IFCUSHAP 4	48 26.70	-93 9.39	1164.00	mn	980812.00	980930.19	-0.03	-39.70	-0.47	0.00	-8.73	-48.94
IFCUSHAP 4	48 27.70	-93 8.30	1183.00	mn	980812.40	980931.69	-0.03	-40.35	-0.48	0.00	-8.04	-48.91
IFCUSHAP 4	48 27.20	-93 8.10	1175.00	mn	980811.50	980930.94	-0.03	-40.08	-0.48	0.00	-8.95	-49.53
IFCUSHAP 4	48 26.70	-93 8.10	1170.00	mn	980811.30	980930.19	-0.02	-39.91	-0.48	0.00	-8.87	-49.27
IFCUSHAP 4	48 26.00	-93 7.80	1153.00	mn	980812.00	980929.14	-0.02	-39.33	-0.47	0.00	-8.73	-48.54
IFCUSHAP 4	48 25.80	-93 7.10	1205.00	mn	980809.80	980928.84	-0.02	-41.10	-0.49	0.00	-5.74	-47.34
IFCUSHAP 4	48 25.20	-93 7.10	1175.00	mn	980810.70	980927.94	-0.03	-40.08	-0.48	0.00	-6.75	-47.34
IFCUSHAP 4	48 29.40	-93 5.20	1120.00	mn	980817.10	980934.23	-0.05	-38.20	-0.46	0.00	-11.81	-50.52
IFCUSHAP 4	48 28.70	-93 3.80	1124.00	mn	980815.80	980933.19	-0.06	-38.34	-0.46	0.00	-11.69	-50.55
IFCUSHAP 4	48 28.60	-93 4.69	1126.00	mn	980816.40	980933.03	-0.04	-38.40	-0.46	0.00	-10.76	-49.66
IFCUSHAP 4	48 27.70	-93 3.20	1133.00	mn	980814.50	980931.69	-0.04	-38.64	-0.46	0.00	-10.64	-49.79
IFCUSHAP 4	48 27.90	-93 4.19	1170.00	mn	980813.70	980931.98	-0.02	-39.91	-0.48	0.00	-8.26	-48.67
IFCUSHAP 4	48 27.90	-93 4.80	1163.00	mn	980814.20	980931.98	-0.03	-39.67	-0.47	0.00	-8.43	-48.60
IFCUSHAP 4	48 27.00	-93 5.10	1193.00	mn	980810.60	980930.64	-0.01	-40.69	-0.49	0.00	-7.85	-49.04
IFCUSHAP 4	48 27.00	-93 4.50	1143.00	mn	980813.20	980930.64	-0.01	-38.98	-0.47	0.00	-9.95	-49.42

International Falls CUSMAP Gravity Data

meter used:

STATION		L O C A T I O N S		G R A V I T Y		C O R R E C T I O N S		A N O M A L I E S	
IDENTIFICATION	proj	LATITUDE	LONGITUDE	ELE	ST	THEORETICAL	TERRAIN BOUGUER CURV	SPECIAL	FREE
sta-id		deg	min	(in ft)			2.67 g/cc		AIR
IFCUSHAP	4	48 26.80	-93 3.90	1169.00	mn	980812.20	980930.34	0.00	-8.21
IFCUSHAP	4	48 26.60	-93 2.90	1187.00	mn	980810.80	980930.04	0.00	-7.62
IFCUSHAP	4	48 26.70	-93 1.70	1119.00	mn	980813.80	980930.19	0.00	-11.16
IFCUSHAP	4	48 25.70	-93 1.60	1179.00	mn	980810.70	980928.69	0.00	-7.12
IFCUSHAP	4	48 25.70	-93 2.90	1162.00	mn	980809.90	980928.69	0.00	-7.65
IFCUSHAP	4	48 25.30	-93 2.30	1154.00	mn	980811.70	980928.09	0.00	-7.87
IFCUSHAP	4	48 24.90	-93 2.90	1207.00	mn	980808.50	980927.49	0.00	-5.50
IFCUSHAP	4	48 21.80	-93 10.90	1164.00	mn	980810.60	980922.84	0.00	-2.79
IFCUSHAP	4	48 21.90	-93 12.40	1197.00	mn	980810.10	980922.99	0.00	-0.33
IFCUSHAP	4	48 22.50	-93 14.10	1179.00	mn	980812.20	980923.89	0.00	-0.83
IFCUSHAP	4	48 22.50	-93 14.80	1199.00	mn	980811.50	980923.89	0.00	0.35
IFCUSHAP	4	48 22.90	-93 14.80	1161.00	mn	980813.60	980924.49	0.00	-1.73
IFCUSHAP	4	48 23.10	-93 14.10	1172.00	mn	980812.60	980924.79	0.00	-1.98
IFCUSHAP	4	48 23.40	-93 14.80	1195.00	mn	980812.10	980925.24	0.00	-0.77
IFCUSHAP	4	48 24.60	-93 14.80	1171.00	mn	980813.60	980927.04	0.00	-3.33
IFCUSHAP	4	48 25.40	-93 14.70	1179.00	mn	980813.10	980928.24	0.00	-4.27
IFCUSHAP	4	48 24.70	-93 13.40	1204.00	mn	980811.20	980927.19	0.00	-2.77
IFCUSHAP	4	48 24.70	-92 47.60	1129.00	mn	980808.70	980927.19	0.00	-12.32
IFCUSHAP	4	48 24.10	-92 49.10	1139.00	mn	980808.90	980926.29	0.00	-10.28
IFCUSHAP	4	48 23.90	-92 50.20	1138.00	mn	980809.30	980925.99	0.00	-9.69
IFCUSHAP	4	48 25.50	-92 50.80	1125.00	mn	980810.40	980928.39	0.00	-12.20
IFCUSHAP	4	48 26.10	-92 51.10	1119.00	mn	980811.10	980929.29	0.00	-12.96
IFCUSHAP	4	48 24.30	-92 50.70	1206.00	mn	980804.90	980926.59	0.00	-8.28
IFCUSHAP	4	48 23.70	-92 52.00	1137.00	mn	980808.00	980925.70	0.00	-10.77
IFCUSHAP	4	48 23.00	-92 53.50	1178.00	mn	980806.90	980924.64	0.00	-6.98
IFCUSHAP	4	48 24.00	-93 2.50	1184.00	mn	980808.60	980926.14	0.00	-6.21
IFCUSHAP	4	48 23.60	-93 2.90	1163.00	mn	980809.10	980925.54	0.00	-7.09
IFCUSHAP	4	48 22.80	-93 3.60	1165.00	mn	980808.90	980924.34	0.00	-5.89
IFCUSHAP	4	48 22.20	-93 3.40	1184.00	mn	980807.50	980923.45	0.00	-46.12
IFCUSHAP	4	48 21.80	-93 3.00	1222.00	mn	980805.20	980922.84	0.00	-45.51
IFCUSHAP	4	48 21.40	-93 2.70	1203.00	mn	980805.90	980922.24	0.00	-2.73
IFCUSHAP	4	48 20.50	-93 2.90	1179.00	mn	980806.20	980920.90	0.00	-3.23
IFCUSHAP	4	48 20.50	-93 3.80	1204.00	mn	980804.80	980920.90	0.00	-3.83
IFCUSHAP	4	48 20.90	-92 58.80	1267.00	mn	980800.60	980921.49	0.00	-2.88
IFCUSHAP	4	48 25.80	-93 14.50	1188.00	mn	980812.10	980928.84	0.00	-1.75
IFCUSHAP	4	48 24.60	-93 12.10	1182.00	mn	980811.60	980927.04	0.00	-5.03
IFCUSHAP	4	48 24.60	-93 10.80	1181.00	mn	980811.50	980927.04	0.00	-4.30
IFCUSHAP	4	48 24.60	-93 9.50	1196.00	mn	980810.50	980927.04	0.00	-4.48
IFCUSHAP	4	48 24.60	-93 8.20	1168.00	mn	980811.00	980927.04	0.00	-45.39
IFCUSHAP	4	48 24.60	-93 7.20	1195.00	mn	980809.80	980927.04	0.00	-46.56
IFCUSHAP	4	48 24.60	-93 7.20	1195.00	mn	980809.80	980927.04	0.00	-46.14

International Falls CUSMAP Gravity Data

STATION		LOCATIONS		GRAVITY		CORRECTIONS		ANOMALIES	
IDENTIFICATION	LONGITUDE	LATITUDE	LONGITUDE	ELE	ST OBSERVED	THEORETICAL	TERRAIN BOUGUER CURV	SPECIAL	FREE COMPLETE-BOUGUER
proj	sta-ld	deg	min	deg	min	(in ft)			
							2.67 g/cc	AIR	2.67 g/cc

STATION IDENTIFICATION proj sta-id	L O C A T I O N S		G R A V I T Y		C O R R E C T I O N S TERRAIN BOUGUER CURV 2.67 g/cc	SPECIAL FREE AIR	A N O M A L I E S				
	LATITUDE deg min	LONGITUDE deg min	ELE (in ft)	ST OBSERVED			THEORETICAL	COMPLETE-BOUGUER 2.67 g/cc			
IFCUSHAP 4	48 24.60	-93 5.80	1205.00	mn 980808.80	980927.04	-0.02	-41.10	-0.49	0.00	-4.94	-46.55
IFCUSHAP 4	48 24.50	-93 4.50	1220.00	mn 980807.80	980926.89	-0.02	-41.61	-0.50	0.00	-4.37	-46.50
IFCUSHAP 4	48 24.50	-93 3.40	1200.00	mn 980808.40	980926.89	-0.02	-40.93	-0.49	0.00	-5.65	-47.09
IFCUSHAP 4	48 24.50	-93 2.60	1207.00	mn 980808.00	980926.89	-0.03	-41.17	-0.49	0.00	-5.40	-47.09
IFCUSHAP 4	48 24.20	-93 1.40	1198.00	mn 980808.10	980926.44	-0.01	-40.86	-0.49	0.00	-5.69	-47.05
IFCUSHAP 4	48 21.30	-93 0.60	1392.00	mn 980794.50	980922.09	0.49	-47.48	-0.56	0.00	3.30	-44.25
IFCUSHAP 4	48 19.40	-93 9.20	1188.00	mn 980805.00	980919.25	0.00	-40.52	-0.48	0.00	-2.53	-43.54
IFCUSHAP 4	48 18.40	-93 8.00	1180.00	mn 980802.40	980917.75	-0.02	-40.25	-0.48	0.00	-4.39	-45.14
IFCUSHAP 4	48 18.00	-93 5.70	1196.00	mn 980800.50	980917.15	-0.01	-40.79	-0.49	0.00	-4.18	-45.47
IFCUSHAP 4	48 17.79	-93 4.60	1264.00	mn 980796.40	980916.84	0.01	-43.11	-0.51	0.00	-1.57	-45.19
IFCUSHAP 4	48 17.70	-93 3.80	1271.00	mn 980794.70	980916.70	0.01	-43.35	-0.51	0.00	-2.48	-46.34
IFCUSHAP 4	48 18.40	-93 2.90	1286.00	mn 980796.00	980917.75	0.01	-43.86	-0.52	0.00	-0.82	-45.19
IFCUSHAP 4	48 17.70	-93 2.20	1302.00	mn 980793.20	980916.70	0.02	-44.41	-0.53	0.00	-1.07	-45.98
IFCUSHAP 4	48 17.40	-93 1.50	1278.00	mn 980794.50	980916.25	0.02	-43.59	-0.52	0.00	-1.58	-45.67
IFCUSHAP 4	48 17.60	-93 0.00	1308.00	mn 980792.30	980916.55	0.03	-44.61	-0.53	0.00	-1.25	-46.36
IFCUSHAP 4	48 17.79	-92 59.20	1292.00	mn 980793.70	980916.84	0.01	-44.07	-0.52	0.00	-1.64	-46.22
IFCUSHAP 4	48 15.30	-93 10.10	1307.00	mn 980790.00	980913.10	0.02	-44.58	-0.53	0.00	-0.20	-45.28
IFCUSHAP 4	48 15.30	-93 9.50	1310.00	mn 980787.80	980913.10	0.03	-44.68	-0.53	0.00	-2.11	-47.30
IFCUSHAP 4	48 15.80	-93 8.20	1301.00	mn 980788.70	980913.85	0.02	-44.37	-0.52	0.00	-2.82	-47.70
IFCUSHAP 4	48 16.00	-93 7.40	1296.00	mn 980789.60	980914.15	0.03	-44.20	-0.52	0.00	-2.68	-47.38
IFCUSHAP 4	48 16.10	-93 6.30	1292.00	mn 980788.70	980914.30	0.07	-44.07	-0.52	0.00	-4.11	-48.63
IFCUSHAP 4	48 16.29	-93 5.10	1297.00	mn 980788.00	980914.59	0.07	-44.24	-0.52	0.00	-4.62	-49.31
IFCUSHAP 4	48 17.00	-93 5.50	1295.00	mn 980791.90	980915.65	0.09	-44.17	-0.52	0.00	-1.97	-46.58
IFCUSHAP 4	48 17.79	-92 53.60	1178.00	mn 980798.70	980916.84	0.08	-40.18	-0.48	0.00	-7.37	-47.95
IFCUSHAP 4	48 16.79	-92 52.00	1190.00	mn 980796.30	980915.34	0.18	-40.59	-0.48	0.00	-7.13	-48.03
IFCUSHAP 4	48 17.20	-92 52.80	1193.00	mn 980797.00	980915.95	0.05	-40.69	-0.49	0.00	-6.76	-47.89
IFCUSHAP 4	48 17.00	-92 53.40	1235.00	mn 980795.40	980915.65	0.00	-42.12	-0.50	0.00	-4.11	-46.74
IFCUSHAP 4	48 16.79	-92 54.30	1286.00	mn 980792.60	980915.34	0.02	-43.86	-0.52	0.00	-1.81	-46.17
IFCUSHAP 4	48 16.70	-92 55.60	1337.00	mn 980789.80	980915.20	0.04	-45.60	-0.54	0.00	0.33	-45.78
IFCUSHAP 4	48 16.00	-92 56.50	1262.00	mn 980792.10	980914.15	0.04	-43.04	-0.51	0.00	-3.38	-46.89
IFCUSHAP 4	48 16.70	-92 56.60	1320.00	mn 980790.80	980915.20	0.05	-45.02	-0.53	0.00	-0.27	-45.78
IFCUSHAP 4	48 17.00	-92 58.10	1241.00	mn 980795.00	980915.65	0.01	-42.33	-0.50	0.00	-3.95	-46.77
IFCUSHAP 4	48 17.79	-92 58.20	1249.00	mn 980795.70	980916.84	0.01	-42.60	-0.51	0.00	-3.68	-46.78
IFCUSHAP 4	48 18.60	-92 57.90	1264.00	mn 980798.40	980918.05	0.01	-43.11	-0.51	0.00	-0.79	-44.40
IFCUSHAP 4	48 19.10	-92 57.70	1231.00	mn 980800.10	980918.80	0.01	-41.99	-0.50	0.00	-2.94	-45.42
IFCUSHAP 4	48 19.79	-92 57.70	1193.00	mn 980803.40	980919.83	0.10	-40.69	-0.49	0.00	-4.25	-45.32
IFCUSHAP 4	48 20.10	-92 55.00	1163.00	mn 980804.10	980920.30	0.00	-39.67	-0.47	0.00	-6.84	-46.98
IFCUSHAP 4	48 21.70	-92 52.60	1197.00	mn 980804.10	980922.70	-0.03	-40.83	-0.49	0.00	-6.03	-47.38
IFCUSHAP 4	48 21.20	-92 54.00	1217.00	mn 980802.30	980921.95	-0.03	-41.51	-0.49	0.00	-5.20	-47.24
IFCUSHAP 4	48 21.10	-92 54.80	1163.00	mn 980805.20	980921.80	0.04	-39.67	-0.47	0.00	-7.24	-47.34

BOUGUER GRAVITY DATA

International Falls CUSMAP Gravity Data

Meter used:

STATION IDENTIFICATION proj sta-id	L O C A T I O N S		G R A V I T Y		C O R R E C T I O N S		A N O M A L I E S	
	LATITUDE deg min	LONGITUDE deg min	ELE (in ft)	ST OBSERVED	THEORETICAL	TERRAIN BOUGUER CURV 2.67 g/cc	SPECIAL FREE AIR	COMPLETE-BOUGUER 2.67 g/cc
IFCUSHAP 4	48 20.40	-92 55.40	1179.00	mn 980803.90	980920.74	-0.01	0.00	-5.98
IFCUSHAP 4	48 20.40	-92 56.50	1208.00	mn 980803.10	980920.74	0.00	0.00	-4.05
IFCUSHAP 4	48 23.30	-92 54.70	1128.00	mn 980809.50	980925.09	0.04	0.00	-9.53
IFCUSHAP 4	48 23.20	-92 56.10	1178.00	mn 980806.70	980924.95	-0.04	0.00	-48.18
IFCUSHAP 4	48 23.30	-92 57.10	1168.00	mn 980807.30	980925.09	-0.04	0.00	-48.31
IFCUSHAP 4	48 23.50	-92 58.00	1135.00	mn 980809.70	980925.39	0.00	0.00	-48.14
IFCUSHAP 4	48 23.40	-92 58.90	1171.00	mn 980808.60	980925.24	-0.01	0.00	-46.96
IFCUSHAP 4	48 23.10	-92 59.60	1177.00	mn 980808.30	980924.79	-0.02	0.00	-46.46
IFCUSHAP 4	48 22.40	-92 58.60	1212.00	mn 980805.90	980923.74	-0.02	0.00	-45.73
IFCUSHAP 4	48 21.80	-92 57.80	1190.00	mn 980806.30	980922.84	0.01	0.00	-45.71
IFCUSHAP 6	47 55.30	-93 4.90	1293.00	mn 980760.90	980883.09	0.05	0.00	-45.18
IFCUSHAP 6	47 55.30	-93 6.10	1293.00	mn 980763.50	980883.09	0.04	0.00	-42.59
IFCUSHAP 6	47 55.40	-93 2.60	1291.00	mn 980761.80	980883.24	0.02	0.00	-44.58
IFCUSHAP 6	47 55.40	-93 3.90	1293.00	mn 980763.40	980883.24	0.03	0.00	-42.85
IFCUSHAP 6	47 55.40	-93 16.70	1349.00	mn 980767.70	980883.24	0.03	0.00	-35.21
IFCUSHAP 6	47 55.40	-93 25.70	1370.00	mn 980760.20	980883.24	0.05	0.00	-41.44
IFCUSHAP 6	47 55.60	-93 39.70	1287.00	mn 980771.00	980883.54	0.04	0.00	-35.89
IFCUSHAP 6	47 55.70	-93 11.20	1282.00	mn 980763.00	980883.69	0.01	0.00	-44.37
IFCUSHAP 6	47 55.70	-93 12.00	1260.00	mn 980768.30	980883.69	-0.01	0.00	-40.40
IFCUSHAP 6	47 56.10	-93 3.90	1292.00	mn 980759.60	980884.29	0.03	0.00	-47.76
IFCUSHAP 6	47 56.10	-93 6.10	1292.00	mn 980765.60	980884.29	0.04	0.00	-41.75
IFCUSHAP 6	47 56.30	-93 25.10	1359.00	mn 980761.00	980884.59	0.03	0.00	-42.67
IFCUSHAP 6	47 56.40	-93 2.60	1293.00	mn 980754.00	980884.74	0.00	0.00	-53.78
IFCUSHAP 6	47 56.40	-93 17.29	1337.00	mn 980768.00	980884.74	0.03	0.00	-37.13
IFCUSHAP 6	47 56.40	-93 32.50	1309.00	mn 980762.80	980884.74	0.01	0.00	-44.02
IFCUSHAP 6	47 56.50	-93 33.40	1305.00	mn 980764.00	980884.89	0.01	0.00	-43.20
IFCUSHAP 6	47 56.60	-93 35.09	1287.00	mn 980764.60	980885.04	0.01	0.00	-43.83
IFCUSHAP 6	47 56.80	-93 29.20	1324.00	mn 980765.30	980885.34	0.02	0.00	-41.21
IFCUSHAP 6	47 56.90	-93 12.00	1288.00	mn 980762.30	980885.49	0.03	0.00	-46.50
IFCUSHAP 6	47 56.90	-93 18.79	1337.00	mn 980767.50	980885.49	0.02	0.00	-38.39
IFCUSHAP 6	47 57.00	-93 19.90	1324.00	mn 980763.60	980885.64	0.01	0.00	-43.22
IFCUSHAP 6	47 57.00	-93 21.40	1327.00	mn 980761.50	980885.64	0.02	0.00	-45.13
IFCUSHAP 6	47 57.00	-93 22.50	1330.00	mn 980760.60	980885.64	0.02	0.00	-45.86
IFCUSHAP 6	47 57.00	-93 25.00	1361.00	mn 980759.10	980885.64	0.04	0.00	-45.49
IFCUSHAP 6	47 57.00	-93 27.20	1341.00	mn 980763.40	980885.64	0.02	0.00	-42.40
IFCUSHAP 6	47 57.00	-93 28.10	1336.00	mn 980765.10	980885.64	0.02	0.00	-41.00
IFCUSHAP 6	47 57.10	-93 0.00	1305.00	mn 980747.20	980885.79	0.01	0.00	-60.90
IFCUSHAP 6	47 57.10	-93 23.40	1358.00	mn 980759.50	980885.79	0.05	0.00	-45.41
IFCUSHAP 6	47 57.10	-93 24.10	1378.00	mn 980757.30	980885.79	0.07	0.00	-46.40
IFCUSHAP 6	47 57.10	-93 25.70	1341.00	mn 980762.10	980885.79	0.02	0.00	-43.85

BOUGUER GRAVITY DATA

International Falls CUSMAP Gravity Data

Meter used:

STATION IDENTIFICATION proj sta-id	L O C A T I O N S		ELE (in ft)	G R A V I T Y ST OBSERVED	THEORETICAL	C O R R E C T I O N S		SPECIAL AIR	A N O M A L I E S			
	LATITUDE deg min	LONGITUDE deg min				TERRAIN BOUGUER 2.67 g/cc	CURV 2.67 g/cc		FREE AIR	COMPLETE-BOUGUER 2.67 g/cc		
IFCUSHAP 6	47 57.50	-93 11.30	1236.00	mn	980763.20	980886.39	-0.02	-42.16	-0.50	0.00	-6.96	-49.64
IFCUSHAP 6	47 57.60	-93 25.20	1318.00	mn	980760.70	980886.55	0.02	-44.95	-0.53	0.00	-1.90	-47.37
IFCUSHAP 6	47 57.60	-93 26.00	1333.00	mn	980760.90	980886.55	0.02	-45.46	-0.54	0.00	-0.29	-46.28
IFCUSHAP 6	47 57.90	-93 7.80	1287.00	mn	980756.80	980886.99	0.04	-43.90	-0.52	0.00	-9.17	-53.55
IFCUSHAP 6	47 57.90	-93 12.00	1278.00	mn	980761.20	980886.99	0.02	-43.59	-0.52	0.00	-5.63	-49.71
IFCUSHAP 6	47 58.20	-93 8.70	1289.00	mn	980756.70	980887.45	0.04	-43.96	-0.52	0.00	-9.53	-53.98
IFCUSHAP 6	47 58.20	-93 20.70	1348.00	mn	980768.80	980887.45	0.06	-45.98	-0.54	0.00	8.11	-38.35
IFCUSHAP 6	47 58.20	-93 33.20	1347.00	mn	980768.20	980887.45	0.07	-45.94	-0.54	0.00	7.42	-38.99
IFCUSHAP 6	47 58.20	-93 34.50	1290.00	mn	980769.70	980887.45	0.00	-44.00	-0.52	0.00	3.56	-40.96
IFCUSHAP 6	47 58.20	-93 35.59	1279.00	mn	980770.40	980887.45	0.00	-43.62	-0.52	0.00	3.23	-40.91
IFCUSHAP 6	47 58.30	-93 10.00	1274.00	mn	980758.20	980887.59	0.01	-43.45	-0.52	0.00	-9.59	-53.55
IFCUSHAP 6	47 58.70	-93 5.30	1301.00	mn	980753.80	980888.20	0.02	-44.37	-0.52	0.00	-12.06	-56.94
IFCUSHAP 6	47 58.70	-93 20.70	1345.00	mn	980771.40	980888.20	0.06	-45.87	-0.54	0.00	9.68	-36.67
IFCUSHAP 6	47 59.20	-93 6.50	1311.00	mn	980755.50	980888.95	0.01	-44.71	-0.53	0.00	-10.16	-55.40
IFCUSHAP 6	47 59.20	-93 7.70	1304.00	mn	980755.90	980888.95	0.01	-44.48	-0.53	0.00	-10.42	-55.42
IFCUSHAP 6	47 59.20	-93 8.89	1296.00	mn	980756.90	980888.95	0.00	-44.20	-0.52	0.00	-10.18	-54.90
IFCUSHAP 6	47 59.20	-93 10.40	1290.00	mn	980758.00	980888.95	0.03	-44.00	-0.52	0.00	-9.64	-54.13
IFCUSHAP 6	47 59.20	-93 29.70	1319.00	mn	980768.70	980888.95	0.02	-44.99	-0.53	0.00	3.79	-41.71
IFCUSHAP 6	47 59.30	-93 11.70	1288.00	mn	980759.70	980889.09	0.04	-43.93	-0.52	0.00	-8.28	-52.69
IFCUSHAP 6	47 59.30	-93 31.40	1333.00	mn	980775.80	980889.09	0.03	-45.46	-0.54	0.00	12.05	-33.92
IFCUSHAP 6	47 59.30	-93 32.20	1323.00	mn	980773.80	980889.09	0.02	-45.12	-0.53	0.00	9.11	-36.53
IFCUSHAP 6	47 59.50	-93 5.20	1327.00	mn	980755.00	980889.40	0.02	-45.26	-0.53	0.00	-9.61	-55.39
IFCUSHAP 6	47 59.50	-93 20.80	1328.00	mn	980771.90	980889.40	0.03	-45.29	-0.53	0.00	7.38	-38.42
IFCUSHAP 6	47 59.60	-93 2.70	1327.00	mn	980753.50	980889.55	0.02	-45.26	-0.53	0.00	-11.26	-57.04
IFCUSHAP 6	47 59.70	-93 11.70	1293.00	mn	980759.90	980889.70	0.05	-44.10	-0.52	0.00	-8.21	-52.78
IFCUSHAP 6	47 59.90	-93 4.00	1374.00	mn	980752.80	980889.99	0.10	-46.86	-0.55	0.00	-7.99	-55.31
IFCUSHAP 6	48 0.00	-93 20.60	1300.00	mn	980768.60	980890.15	0.00	-44.34	-0.52	0.00	0.70	-44.17
IFCUSHAP 8	48 0.00	-92 28.60	1424.00	mn	980742.80	980890.15	0.07	-48.57	-0.57	0.00	-13.44	-62.51
IFCUSHAP 8	48 0.10	-93 6.50	1325.00	mn	980756.30	980890.30	0.01	-45.19	-0.53	0.00	-9.40	-55.12
IFCUSHAP 8	48 0.30	-92 31.70	1474.00	mn	980742.00	980890.59	0.12	-50.27	-0.59	0.00	-9.99	-60.73
IFCUSHAP 8	48 0.30	-92 57.60	1408.00	mn	980749.30	980890.59	0.08	-48.02	-0.56	0.00	-8.90	-57.40
IFCUSHAP 8	48 0.40	-92 35.70	1466.00	mn	980742.80	980890.75	0.15	-50.00	-0.58	0.00	-10.09	-60.53
IFCUSHAP 8	48 0.40	-92 55.00	1394.00	mn	980749.90	980890.75	0.07	-47.55	-0.56	0.00	-9.76	-57.80
IFCUSHAP 8	48 0.50	-92 37.20	1407.00	mn	980746.40	980890.90	0.06	-47.99	-0.56	0.00	-12.19	-60.68
IFCUSHAP 8	48 0.50	-92 49.80	1314.00	mn	980749.70	980890.90	0.01	-44.82	-0.53	0.00	-17.63	-62.97
IFCUSHAP 8	48 0.60	-92 28.50	1419.00	mn	980743.70	980891.05	0.07	-48.40	-0.57	0.00	-13.91	-62.81
IFCUSHAP 8	48 0.60	-92 35.30	1492.00	mn	980741.70	980891.05	0.26	-50.89	-0.59	0.00	-9.05	-60.27
IFCUSHAP 8	48 0.70	-92 29.10	1424.00	mn	980743.40	980891.20	0.06	-48.57	-0.57	0.00	-13.89	-62.97
IFCUSHAP 8	48 0.80	-92 33.80	1467.00	mn	980743.30	980891.34	0.13	-50.04	-0.58	0.00	-10.10	-60.59
IFCUSHAP 8	48 0.80	-92 57.50	1417.00	mn	980749.50	980891.34	0.06	-48.33	-0.57	0.00	-8.60	-57.44

BOUGUER GRAVITY DATA

International Falls CUSMAP Gravity Data

Meter used:

STATION IDENTIFICATION proj sta-ld	L O C A T I O N S			G R A V I T Y			C O R R E C T I O N S			A M O N A L I E S		
	LATITUDE deg min	LONGITUDE deg min	ELE (in ft)	ST OBSERVED	THEORETICAL	TERRAIN BOUGUER CURV	2.67 g/cc	SPECIAL	FREE AIR	COMPLETE-BOUGUER	2.67 g/cc	
IFCUSMAP 8	48 0.80	-93 12.00	1301.00	mn 980760.10	980891.34	0.02	-44.37 -0.52	0.00	-8.92	-53.79		
IFCUSMAP 8	48 0.90	-92 31.40	1382.00	mn 980748.10	980891.50	0.09	-47.14 -0.55	0.00	-13.44	-61.04		
IFCUSMAP 8	48 0.90	-92 52.60	1299.00	mn 980752.20	980891.50	0.01	-44.31 -0.52	0.00	-17.14	-61.97		
IFCUSMAP 8	48 0.90	-92 54.20	1365.00	mn 980751.40	980891.50	0.04	-46.56 -0.55	0.00	-11.74	-58.81		
IFCUSMAP 8	48 0.90	-93 6.60	1309.00	mn 980758.20	980891.50	0.01	-44.65 -0.53	0.00	-10.20	-55.37		
IFCUSMAP 8	48 1.00	-92 30.70	1429.00	mn 980745.10	980891.65	0.06	-48.74 -0.57	0.00	-12.17	-61.42		
IFCUSMAP 8	48 1.10	-92 52.10	1300.00	mn 980752.40	980891.80	0.02	-44.34 -0.52	0.00	-17.15	-62.00		
IFCUSMAP 8	48 1.20	-92 31.30	1433.00	mn 980745.70	980891.95	0.06	-48.88 -0.57	0.00	-11.50	-60.89		
IFCUSMAP 8	48 1.20	-92 51.60	1307.00	mn 980751.80	980891.95	0.06	-44.58 -0.53	0.00	-17.24	-62.29		
IFCUSMAP 8	48 1.30	-92 29.80	1324.00	mn 980751.00	980892.09	0.15	-45.16 -0.53	0.00	-16.59	-62.14		
IFCUSMAP 8	48 1.30	-92 32.80	1433.00	mn 980746.00	980892.09	0.06	-48.88 -0.57	0.00	-11.35	-60.74		
IFCUSMAP 8	48 1.30	-92 48.50	1339.00	mn 980750.40	980892.09	0.03	-45.67 -0.54	0.00	-15.78	-61.96		
IFCUSMAP 8	48 1.30	-92 49.80	1296.00	mn 980752.90	980892.09	0.02	-44.20 -0.52	0.00	-17.33	-62.04		
IFCUSMAP 8	48 1.30	-93 6.60	1317.00	mn 980758.70	980892.09	0.01	-44.92 -0.53	0.00	-9.55	-54.99		
IFCUSMAP 8	48 1.50	-92 55.00	1384.00	mn 980751.90	980892.40	0.05	-47.20 -0.55	0.00	-10.35	-58.06		
IFCUSMAP 8	48 1.50	-92 57.50	1406.00	mn 980750.80	980892.40	0.06	-47.95 -0.56	0.00	-9.39	-57.84		
IFCUSMAP 8	48 1.60	-93 13.60	1299.00	mn 980762.50	980892.55	0.02	-44.31 -0.52	0.00	-7.90	-52.71		
IFCUSMAP 8	48 1.70	-92 52.10	1303.00	mn 980753.50	980892.70	0.02	-44.44 -0.53	0.00	-16.68	-61.62		
IFCUSMAP 8	48 1.70	-92 56.30	1395.00	mn 980753.60	980892.70	0.06	-47.58 -0.56	0.00	-7.92	-56.00		
IFCUSMAP 8	48 1.70	-93 12.00	1314.00	mn 980761.00	980892.70	0.02	-44.82 -0.53	0.00	-8.14	-53.46		
IFCUSMAP 8	48 1.80	-92 32.00	1407.00	mn 980748.30	980892.84	0.06	-47.99 -0.56	0.00	-12.24	-60.73		
IFCUSMAP 8	48 1.90	-92 48.70	1321.00	mn 980752.50	980893.00	0.01	-45.06 -0.53	0.00	-16.28	-61.86		
IFCUSMAP 8	48 1.90	-93 14.00	1305.00	mn 980763.00	980893.00	0.01	-44.51 -0.53	0.00	-7.28	-52.31		
IFCUSMAP 8	48 2.00	-92 29.30	1345.00	mn 980750.80	980893.15	0.02	-45.87 -0.54	0.00	-15.87	-62.27		
IFCUSMAP 8	48 2.00	-92 36.50	1364.00	mn 980751.50	980893.15	0.03	-46.52 -0.55	0.00	-13.38	-60.43		
IFCUSMAP 8	48 2.00	-92 49.90	1302.00	mn 980754.60	980893.15	0.01	-44.41 -0.53	0.00	-16.11	-61.04		
IFCUSMAP 8	48 2.00	-92 50.80	1299.00	mn 980754.40	980893.15	0.03	-44.31 -0.52	0.00	-16.60	-61.40		
IFCUSMAP 8	48 2.20	-92 38.00	1395.00	mn 980749.80	980893.45	0.04	-47.58 -0.56	0.00	-12.47	-60.57		
IFCUSMAP 8	48 2.20	-92 49.30	1304.00	mn 980754.50	980893.45	0.03	-44.48 -0.53	0.00	-16.33	-61.30		
IFCUSMAP 8	48 2.20	-92 49.90	1293.00	mn 980755.00	980893.45	0.03	-44.10 -0.52	0.00	-16.86	-61.45		
IFCUSMAP 8	48 2.20	-92 54.30	1301.00	mn 980756.00	980893.45	0.02	-44.37 -0.52	0.00	-15.12	-59.99		
IFCUSMAP 8	48 2.20	-92 54.90	1338.00	mn 980754.90	980893.45	0.02	-45.64 -0.54	0.00	-12.73	-58.88		
IFCUSMAP 8	48 2.20	-92 56.30	1335.00	mn 980756.40	980893.45	0.03	-45.53 -0.54	0.00	-11.51	-57.55		
IFCUSMAP 8	48 2.20	-93 6.60	1343.00	mn 980759.40	980893.45	0.03	-45.81 -0.54	0.00	-7.76	-54.08		
IFCUSMAP 8	48 2.20	-93 7.40	1328.00	mn 980760.60	980893.45	0.02	-45.29 -0.53	0.00	-7.97	-53.78		
IFCUSMAP 8	48 2.20	-93 13.10	1330.00	mn 980761.90	980893.45	0.02	-45.36 -0.54	0.00	-6.48	-52.36		
IFCUSMAP 8	48 2.30	-92 29.30	1379.00	mn 980749.60	980893.60	0.03	-47.03 -0.55	0.00	-14.32	-61.88		
IFCUSMAP 8	48 2.30	-92 48.10	1349.00	mn 980751.40	980893.60	0.02	-46.01 -0.54	0.00	-15.34	-61.88		
IFCUSMAP 8	48 2.40	-92 36.80	1371.00	mn 980751.90	980893.75	0.04	-46.76 -0.55	0.00	-12.93	-60.20		
IFCUSMAP 8	48 2.40	-92 54.30	1319.00	mn 980755.10	980893.75	0.01	-44.99 -0.53	0.00	-14.62	-60.13		

BOUGUER GRAVITY DATA

International Falls CUSMAP Gravity Data

Meter used:

STATION IDENTIFICATION proj sta-id	L O C A T I O N S		G R A V I T Y		C O R R E C T I O N S TERRAIN BOUGUER CURV 2.67 g/cc	SPECIAL FREE AIR	A N O M A L I E S COMPLETE-BOUGUER 2.67 g/cc
	LATITUDE deg min	LONGITUDE deg min	ELE (in ft)	ST OBSERVED			
IFCUSHAP 8	48 2.40	-93 11.90	1349.00	mn 980761.10	980893.75	0.00	-52.32
IFCUSHAP 8	48 2.60	-92 48.80	1321.00	mn 980754.40	980894.05	0.00	-61.00
IFCUSHAP 8	48 2.60	-92 50.80	1291.00	mn 980755.30	980894.05	0.00	-61.87
IFCUSHAP 8	48 2.60	-92 54.90	1339.00	mn 980754.30	980894.05	0.00	-60.01
IFCUSHAP 8	48 2.60	-93 13.20	1344.00	mn 980762.00	980894.05	0.00	-52.02
IFCUSHAP 8	48 2.70	-92 58.80	1391.00	mn 980751.00	980894.20	0.00	-60.31
IFCUSHAP 8	48 2.80	-92 59.40	1396.00	mn 980751.00	980894.35	0.00	-60.14
IFCUSHAP 8	48 2.80	-93 9.70	1381.00	mn 980759.80	980894.35	0.00	-53.28
IFCUSHAP 8	48 2.80	-93 13.70	1335.00	mn 980763.30	980894.35	0.00	-51.56
IFCUSHAP 8	48 2.90	-92 29.10	1330.00	mn 980753.70	980894.50	0.00	-61.60
IFCUSHAP 8	48 2.90	-92 36.30	1367.00	mn 980752.70	980894.50	0.00	-60.40
IFCUSHAP 8	48 2.90	-92 56.20	1315.00	mn 980757.10	980894.50	0.00	-59.11
IFCUSHAP 8	48 2.90	-93 6.60	1436.00	mn 980754.50	980894.50	0.00	-54.37
IFCUSHAP 8	48 3.00	-92 49.10	1329.00	mn 980754.90	980894.65	0.00	-60.61
IFCUSHAP 8	48 3.10	-92 51.10	1304.00	mn 980756.50	980894.80	0.00	-60.67
IFCUSHAP 8	48 3.10	-92 59.90	1408.00	mn 980750.80	980894.80	0.00	-60.10
IFCUSHAP 8	48 3.20	-92 49.80	1304.00	mn 980756.80	980894.95	0.00	-60.50
IFCUSHAP 8	48 3.30	-92 28.90	1312.00	mn 980755.60	980895.10	0.00	-61.36
IFCUSHAP 8	48 3.30	-92 47.20	1417.00	mn 980750.40	980895.10	0.00	-60.28
IFCUSHAP 8	48 3.50	-92 35.70	1407.00	mn 980751.40	980895.40	0.00	-60.20
IFCUSHAP 8	48 3.50	-92 42.40	1312.00	mn 980756.30	980895.40	0.00	-60.96
IFCUSHAP 8	48 3.50	-92 45.90	1353.00	mn 980754.00	980895.40	0.00	-60.82
IFCUSHAP 8	48 3.50	-93 4.00	1441.00	mn 980755.60	980895.40	0.00	-53.93
IFCUSHAP 8	48 3.50	-93 6.60	1455.00	mn 980754.20	980895.40	0.00	-54.46
IFCUSHAP 8	48 3.60	-92 51.10	1294.00	mn 980757.90	980895.55	0.00	-60.63
IFCUSHAP 8	48 3.60	-93 1.10	1434.00	mn 980749.70	980895.55	0.00	-60.39
IFCUSHAP 8	48 3.60	-93 2.90	1431.00	mn 980754.90	980895.55	0.00	-55.39
IFCUSHAP 8	48 3.60	-93 5.00	1449.00	mn 980754.20	980895.55	0.00	-54.98
IFCUSHAP 8	48 3.60	-93 13.70	1357.00	mn 980762.10	980895.55	0.00	-52.64
IFCUSHAP 8	48 3.70	-93 7.70	1463.00	mn 980752.90	980895.70	0.00	-55.51
IFCUSHAP 8	48 3.70	-93 9.89	1415.00	mn 980755.50	980895.70	0.00	-55.89
IFCUSHAP 8	48 3.70	-93 12.70	1382.00	mn 980760.10	980895.70	0.00	-53.28
IFCUSHAP 8	48 3.80	-92 35.30	1419.00	mn 980751.70	980895.85	0.00	-59.62
IFCUSHAP 8	48 3.80	-93 6.60	1511.00	mn 980750.50	980895.85	0.00	-55.03
IFCUSHAP 8	48 3.80	-93 8.70	1466.00	mn 980753.20	980895.85	0.00	-55.19
IFCUSHAP 8	48 3.90	-92 42.30	1308.00	mn 980757.40	980896.00	0.00	-60.72
IFCUSHAP 8	48 3.90	-92 45.70	1352.00	mn 980754.90	980896.00	0.00	-60.58
IFCUSHAP 8	48 3.90	-92 47.70	1347.00	mn 980755.50	980896.00	0.00	-60.30
IFCUSHAP 8	48 3.90	-92 48.50	1391.00	mn 980753.30	980896.00	0.00	-59.85
IFCUSHAP 8	48 3.90	-93 5.30	1426.00	mn 980756.50	980896.00	0.00	-54.49

BOUGUER GRAVITY DATA

International Falls CUSHAP Gravity Data

Meter used:

STATION IDENTIFICATION proj sta-id	L O C A T I O N S		G R A V I T Y		C O R R E C T I O N S		A N O M A L I E S	
	LATITUDE deg min	LONGITUDE deg min	ELE (in ft)	ST OBSERVED	THEORETICAL	TERRAIN BOUGUER CURV 2.67 g/cc	SPECIAL AIR	COMPLETE-BOUGUER 2.67 g/cc
IFCUSHAP 8	48 4.00	-92 29.20	1317.00	mn 980758.00	980896.15	0.03 -44.92 -0.53	0.00 -14.30	-59.73
IFCUSHAP 8	48 4.10	-93 1.40	1394.00	mn 980754.90	980896.30	0.08 -47.55 -0.56	0.00 -10.32	-58.34
IFCUSHAP 8	48 4.10	-93 6.50	1342.00	mn 980762.20	980896.30	0.07 -45.77 -0.54	0.00 -7.90	-54.15
IFCUSHAP 8	48 4.10	-93 10.50	1409.00	mn 980758.90	980896.30	0.12 -48.06 -0.56	0.00 -4.90	-53.41
IFCUSHAP 8	48 4.10	-93 11.90	1415.00	mn 980758.20	980896.30	0.09 -48.26 -0.57	0.00 -5.04	-53.78
IFCUSHAP 8	48 4.10	-93 12.70	1414.00	mn 980758.60	980896.30	0.10 -48.23 -0.57	0.00 -4.73	-53.43
IFCUSHAP 8	48 4.19	-92 41.50	1329.00	mn 980757.10	980896.44	0.04 -45.33 -0.54	0.00 -14.36	-60.19
IFCUSHAP 8	48 4.19	-92 41.50	1329.00	mn 980757.20	980896.44	0.04 -45.33 -0.54	0.00 -14.26	-60.09
IFCUSHAP 8	48 4.19	-93 8.80	1313.00	mn 980764.30	980896.44	0.08 -44.78 -0.53	0.00 -8.67	-53.90
IFCUSHAP 8	48 4.19	-93 13.60	1348.00	mn 980763.40	980896.44	0.03 -45.98 -0.54	0.00 -6.28	-52.77
IFCUSHAP 8	48 4.30	-92 46.70	1381.00	mn 980754.60	980896.60	0.05 -47.10 -0.55	0.00 -12.14	-59.75
IFCUSHAP 8	48 4.40	-92 29.40	1296.00	mn 980759.80	980896.75	0.03 -44.20 -0.52	0.00 -15.08	-59.78
IFCUSHAP 8	48 4.40	-92 32.90	1392.00	mn 980755.40	980896.75	0.05 -47.48 -0.56	0.00 -10.45	-58.44
IFCUSHAP 8	48 4.40	-92 36.09	1339.00	mn 980757.50	980896.75	0.08 -45.67 -0.54	0.00 -13.34	-59.47
IFCUSHAP 8	48 4.50	-92 58.70	1288.00	mn 980761.30	980896.90	0.02 -43.93 -0.52	0.00 -14.48	-58.91
IFCUSHAP 8	48 4.69	-92 34.80	1391.00	mn 980755.80	980897.19	0.08 -47.44 -0.56	0.00 -10.58	-58.50
IFCUSHAP 8	48 4.69	-92 36.30	1357.00	mn 980757.20	980897.19	0.04 -46.28 -0.55	0.00 -12.38	-59.17
IFCUSHAP 8	48 4.69	-92 36.70	1321.00	mn 980759.40	980897.19	0.08 -45.06 -0.53	0.00 -13.56	-59.07
IFCUSHAP 8	48 4.69	-92 38.90	1278.00	mn 980761.70	980897.19	0.21 -43.59 -0.52	0.00 -15.32	-59.21
IFCUSHAP 8	48 4.69	-92 59.20	1315.00	mn 980760.30	980897.19	0.03 -44.85 -0.53	0.00 -13.23	-58.58
IFCUSHAP 8	48 4.69	-93 13.60	1370.00	mn 980762.20	980897.19	0.05 -46.73 -0.55	0.00 -6.16	-53.39
IFCUSHAP 8	48 4.80	-92 49.30	1302.00	mn 980759.90	980897.35	0.07 -44.41 -0.53	0.00 -15.02	-59.88
IFCUSHAP 8	48 4.80	-92 50.20	1302.00	mn 980760.00	980897.35	0.03 -44.41 -0.53	0.00 -14.92	-59.82
IFCUSHAP 8	48 4.80	-92 51.20	1292.00	mn 980760.60	980897.35	0.02 -44.07 -0.52	0.00 -15.26	-59.83
IFCUSHAP 8	48 4.90	-92 46.60	1326.00	mn 980758.30	980897.50	0.04 -45.23 -0.53	0.00 -14.52	-60.24
IFCUSHAP 8	48 4.90	-92 59.80	1302.00	mn 980761.80	980897.50	0.05 -44.41 -0.53	0.00 -13.27	-58.15
IFCUSHAP 8	48 5.00	-93 12.40	1339.00	mn 980764.90	980897.65	0.04 -45.67 -0.54	0.00 -6.84	-53.01
IFCUSHAP 8	48 5.10	-92 52.10	1305.00	mn 980759.20	980897.80	0.01 -44.51 -0.53	0.00 -15.88	-60.91
IFCUSHAP 8	48 5.10	-93 13.60	1375.00	mn 980762.30	980897.80	0.06 -46.90 -0.55	0.00 -6.20	-53.59
IFCUSHAP 8	48 5.20	-92 29.70	1231.00	mn 980765.60	980897.95	0.16 -41.99 -0.50	0.00 -16.59	-58.92
IFCUSHAP 8	48 5.30	-92 37.09	1330.00	mn 980761.00	980898.10	0.03 -45.36 -0.54	0.00 -12.03	-57.90
IFCUSHAP 8	48 5.30	-92 49.30	1304.00	mn 980761.70	980898.10	0.07 -44.48 -0.53	0.00 -13.78	-58.71
IFCUSHAP 8	48 5.50	-92 52.70	1326.00	mn 980759.20	980898.40	0.03 -45.23 -0.53	0.00 -14.52	-60.25
IFCUSHAP 8	48 5.50	-92 58.50	1410.00	mn 980755.30	980898.40	0.09 -48.09 -0.56	0.00 -10.51	-59.08
IFCUSHAP 8	48 5.60	-92 35.59	1380.00	mn 980759.60	980898.55	0.04 -47.07 -0.55	0.00 -9.18	-56.77
IFCUSHAP 8	48 5.60	-92 36.30	1365.00	mn 980760.10	980898.55	0.03 -46.56 -0.55	0.00 -10.09	-57.17
IFCUSHAP 8	48 5.70	-92 49.30	1306.00	mn 980762.80	980898.70	0.15 -44.54 -0.53	0.00 -13.09	-58.01
IFCUSHAP 8	48 5.80	-92 30.00	1237.00	mn 980767.30	980898.85	0.07 -42.19 -0.50	0.00 -15.23	-57.85
IFCUSHAP 8	48 5.80	-92 37.20	1328.00	mn 980761.80	980898.85	0.01 -45.29 -0.53	0.00 -12.17	-57.99
IFCUSHAP 8	48 5.80	-92 58.00	1352.00	mn 980759.20	980898.85	0.04 -46.11 -0.54	0.00 -12.52	-59.13

BOUGUER GRAVITY DATA

International Falls CUSMAP Gravity Data

Meter used:

STATION IDENTIFICATION proj sta-id	L O C A T I O N S		G R A V I T Y		C O R R E C T I O N S		A N O M A L I E S	
	LATITUDE deg min	LONGITUDE deg min	ELE (in ft)	ST OBSERVED	THEORETICAL	TERRAIN BOUGUER CURV 2.67 g/cc	SPECIAL FREE AIR	COMPLETE-BOUGUER 2.67 g/cc
IFCUSMAP 8	48 5.80	-93 0.60	1336.00	mn 980761.80	980898.85	0.03	-45.57 -0.54	0.00 -11.42 -57.50
IFCUSMAP 8	48 5.80	-93 2.40	1305.00	mn 980765.50	980898.85	0.02	-44.51 -0.53	0.00 -10.63 -55.65
IFCUSMAP 8	48 5.80	-93 13.60	1311.00	mn 980767.10	980898.85	0.02	-44.71 -0.53	0.00 -8.47 -53.70
IFCUSMAP 8	48 6.00	-92 52.00	1305.00	mn 980761.30	980899.15	0.04	-44.51 -0.53	0.00 -15.13 -60.13
IFCUSMAP 8	48 6.00	-92 52.60	1294.00	mn 980761.70	980899.15	0.04	-44.13 -0.52	0.00 -15.77 -60.39
IFCUSMAP 8	48 6.00	-93 1.80	1310.00	mn 980764.30	980899.15	0.01	-44.68 -0.53	0.00 -11.66 -56.86
IFCUSMAP 8	48 6.10	-92 30.30	1276.00	mn 980766.00	980899.30	0.02	-43.52 -0.52	0.00 -13.32 -57.34
IFCUSMAP 8	48 6.10	-92 32.80	1264.00	mn 980767.50	980899.30	0.05	-43.11 -0.51	0.00 -12.94 -56.51
IFCUSMAP 8	48 6.10	-92 50.60	1333.00	mn 980761.00	980899.30	0.03	-45.46 -0.54	0.00 -12.95 -58.92
IFCUSMAP 8	48 6.30	-92 33.00	1281.00	mn 980766.80	980899.60	0.02	-43.69 -0.52	0.00 -12.34 -56.53
IFCUSMAP 8	48 6.30	-92 57.60	1381.00	mn 980756.80	980899.60	0.06	-47.10 -0.55	0.00 -12.94 -60.54
IFCUSMAP 8	48 6.30	-93 14.30	1312.00	mn 980767.00	980899.60	0.01	-44.75 -0.53	0.00 -9.23 -54.50
IFCUSMAP 8	48 6.40	-92 30.80	1224.00	mn 980769.50	980899.75	0.07	-41.75 -0.50	0.00 -15.15 -57.33
IFCUSMAP 8	48 6.50	-92 49.30	1306.00	mn 980764.10	980899.90	0.15	-44.54 -0.53	0.00 -12.99 -57.91
IFCUSMAP 8	48 6.60	-92 30.90	1248.00	mn 980769.00	980900.05	0.01	-42.57 -0.51	0.00 -13.69 -56.76
IFCUSMAP 8	48 6.60	-92 33.09	1245.00	mn 980768.80	980900.05	0.06	-42.46 -0.50	0.00 -14.18 -57.09
IFCUSMAP 8	48 6.60	-93 5.70	1326.00	mn 980765.40	980900.05	0.11	-45.23 -0.53	0.00 -9.97 -55.62
IFCUSMAP 8	48 6.70	-92 34.20	1327.00	mn 980764.10	980900.20	0.01	-45.26 -0.53	0.00 -11.32 -57.10
IFCUSMAP 8	48 6.70	-93 13.60	1288.00	mn 980768.30	980900.20	0.00	-43.93 -0.52	0.00 -10.78 -55.24
IFCUSMAP 8	48 6.80	-92 48.00	1284.00	mn 980765.00	980900.35	0.29	-43.79 -0.52	0.00 -14.61 -58.63
IFCUSMAP 8	48 6.90	-92 8.89	1403.00	mn 980754.30	980900.50	0.15	-47.85 -0.56	0.00 -14.27 -62.54
IFCUSMAP 8	48 6.90	-93 11.40	1288.00	mn 980768.60	980900.50	0.01	-43.93 -0.52	0.00 -10.78 -55.23
IFCUSMAP 8	48 7.10	-92 50.20	1350.00	mn 980761.40	980900.80	0.16	-46.04 -0.54	0.00 -12.45 -58.88
IFCUSMAP 8	48 7.20	-92 32.40	1228.00	mn 980770.60	980900.95	0.00	-41.88 -0.50	0.00 -14.88 -57.26
IFCUSMAP 8	48 7.20	-93 12.10	1287.00	mn 980768.80	980900.95	0.00	-43.90 -0.52	0.00 -11.13 -55.54
IFCUSMAP 8	48 7.20	-93 13.60	1279.00	mn 980768.30	980900.95	0.01	-43.62 -0.52	0.00 -12.38 -56.51
IFCUSMAP 8	48 7.30	-92 31.30	1235.00	mn 980769.90	980901.10	-0.01	-42.12 -0.50	0.00 -15.07 -57.70
IFCUSMAP 8	48 7.30	-92 31.30	1235.00	mn 980770.00	980901.10	-0.01	-42.12 -0.50	0.00 -14.97 -57.60
IFCUSMAP 8	48 7.30	-92 57.30	1374.00	mn 980756.90	980901.10	0.05	-46.86 -0.55	0.00 -15.00 -62.36
IFCUSMAP 8	48 7.40	-92 7.70	1341.00	mn 980758.90	980901.25	0.16	-45.74 -0.54	0.00 -16.25 -62.37
IFCUSMAP 8	48 7.50	-92 32.70	1260.00	mn 980769.30	980901.40	0.01	-42.97 -0.51	0.00 -13.62 -57.09
IFCUSMAP 8	48 7.60	-92 7.30	1323.00	mn 980760.10	980901.55	0.09	-45.12 -0.53	0.00 -17.04 -62.61
IFCUSMAP 8	48 7.60	-92 15.80	1386.00	mn 980760.40	980901.55	0.05	-47.27 -0.56	0.00 -10.82 -58.60
IFCUSMAP 8	48 7.60	-92 17.40	1366.00	mn 980761.70	980901.55	0.04	-46.59 -0.55	0.00 -11.40 -58.50
IFCUSMAP 8	48 7.60	-92 21.10	1336.00	mn 980764.30	980901.55	0.04	-45.57 -0.54	0.00 -11.62 -57.69
IFCUSMAP 8	48 7.60	-92 56.60	1360.00	mn 980759.00	980901.55	0.04	-46.39 -0.55	0.00 -14.66 -61.56
IFCUSMAP 8	48 7.70	-92 16.50	1414.00	mn 980759.40	980901.70	0.07	-48.23 -0.57	0.00 -9.34 -58.06
IFCUSMAP 8	48 7.70	-93 13.60	1279.00	mn 980768.30	980901.70	0.01	-43.62 -0.52	0.00 -13.13 -57.26
IFCUSMAP 8	48 7.80	-92 9.50	1460.00	mn 980753.80	980901.85	0.12	-49.80 -0.58	0.00 -10.76 -61.02
IFCUSMAP 8	48 7.80	-92 15.80	1361.00	mn 980762.20	980901.85	0.07	-46.42 -0.55	0.00 -11.67 -58.57

BOUGUER GRAVITY DATA

International Falls CUSMAP Gravity Data

Meter used:

STATION		L O C A T I O N S		G R A V I T Y		C O R R E C T I O N S		A M O N A L I E S	
IDENTIFICATION	proj	LATITUDE	LONGITUDE	ELE	ST OBSERVED	THEORETICAL	TERRAIN BOUGUER CURV	SPECIAL	FREE
sta-id		deg	min	(in ft)			2.67 g/cc		AIR
IFCUSHAP 8	8	48 7.80	-92 17.79	1363.00	mn 980762.50	980901.85	0.03 -46.49 -0.55	0.00	-11.18
IFCUSHAP 8	8	48 7.80	-92 50.80	1344.00	mn 980762.10	980901.85	0.23 -45.84 -0.54	0.00	-13.37
IFCUSHAP 8	8	48 7.90	-92 33.00	1241.00	mn 980770.40	980902.00	0.01 -42.33 -0.50	0.00	-14.90
IFCUSHAP 8	8	48 8.00	-92 19.60	1416.00	mn 980760.60	980902.15	0.06 -48.30 -0.57	0.00	-8.40
IFCUSHAP 8	8	48 8.00	-92 46.80	1279.00	mn 980766.70	980902.15	0.10 -43.62 -0.52	0.00	-15.18
IFCUSHAP 8	8	48 8.10	-92 30.40	1317.00	mn 980766.50	980902.30	0.01 -44.92 -0.53	0.00	-11.96
IFCUSHAP 8	8	48 8.10	-92 31.10	1299.00	mn 980767.80	980902.30	0.01 -44.31 -0.52	0.00	-12.35
IFCUSHAP 8	8	48 8.10	-92 45.20	1273.00	mn 980768.30	980902.30	0.05 -43.42 -0.51	0.00	-14.29
IFCUSHAP 8	8	48 8.20	-92 10.60	1363.00	mn 980761.00	980902.45	0.04 -46.49 -0.55	0.00	-13.28
IFCUSHAP 8	8	48 8.20	-92 14.30	1383.00	mn 980761.40	980902.45	0.06 -47.17 -0.55	0.00	-11.00
IFCUSHAP 8	8	48 8.20	-92 21.00	1333.00	mn 980765.30	980902.45	0.14 -45.46 -0.54	0.00	-11.80
IFCUSHAP 8	8	48 8.20	-92 45.80	1282.00	mn 980766.60	980902.45	0.05 -43.73 -0.52	0.00	-15.30
IFCUSHAP 8	8	48 8.30	-92 13.80	1374.00	mn 980762.20	980902.60	0.05 -46.86 -0.55	0.00	-11.20
IFCUSHAP 8	8	48 8.30	-92 56.00	1348.00	mn 980761.00	980902.60	0.09 -45.98 -0.54	0.00	-14.84
IFCUSHAP 8	8	48 8.30	-93 12.70	1300.00	mn 980769.10	980902.60	0.02 -44.34 -0.52	0.00	-11.26
IFCUSHAP 8	8	48 8.39	-92 21.50	1331.00	mn 980765.90	980902.73	0.09 -45.40 -0.54	0.00	-11.68
IFCUSHAP 8	8	48 8.39	-92 21.50	1331.00	mn 980766.00	980902.73	0.09 -45.40 -0.54	0.00	-11.58
IFCUSHAP 8	8	48 8.39	-92 51.40	1338.00	mn 980763.50	980902.73	0.17 -45.64 -0.54	0.00	-13.42
IFCUSHAP 8	8	48 8.50	-92 11.60	1321.00	mn 980764.50	980902.90	0.03 -45.06 -0.53	0.00	-14.18
IFCUSHAP 8	8	48 8.50	-92 44.50	1276.00	mn 980770.40	980902.90	0.03 -43.52 -0.52	0.00	-12.52
IFCUSHAP 8	8	48 8.50	-93 12.00	1311.00	mn 980768.90	980902.90	0.01 -44.71 -0.53	0.00	-10.72
IFCUSHAP 8	8	48 8.60	-92 12.40	1353.00	mn 980762.90	980903.05	0.02 -46.15 -0.54	0.00	-12.92
IFCUSHAP 8	8	48 8.60	-92 31.20	1272.00	mn 980770.20	980903.05	-0.01 -43.38 -0.51	0.00	-13.24
IFCUSHAP 8	8	48 8.60	-92 32.80	1249.00	mn 980771.30	980903.05	-0.01 -42.60 -0.51	0.00	-14.30
IFCUSHAP 8	8	48 8.70	-92 33.30	1276.00	mn 980770.30	980903.20	0.03 -43.52 -0.52	0.00	-12.92
IFCUSHAP 8	8	48 8.80	-92 51.80	1344.00	mn 980764.70	980903.35	0.09 -45.84 -0.54	0.00	-12.27
IFCUSHAP 8	8	48 8.80	-92 51.90	1324.00	mn 980765.60	980903.35	0.14 -45.16 -0.53	0.00	-13.25
IFCUSHAP 8	8	48 8.89	-92 55.70	1321.00	mn 980764.50	980903.48	0.07 -45.06 -0.53	0.00	-14.77
IFCUSHAP 8	8	48 8.89	-93 11.20	1316.00	mn 980769.40	980903.48	0.02 -44.88 -0.53	0.00	-10.34
IFCUSHAP 8	8	48 9.00	-92 22.80	1360.00	mn 980766.70	980903.65	0.03 -46.39 -0.55	0.00	-9.06
IFCUSHAP 8	8	48 9.00	-92 31.30	1296.00	mn 980770.00	980903.65	0.00 -44.20 -0.52	0.00	-11.78
IFCUSHAP 8	8	48 9.10	-92 44.10	1281.00	mn 980771.20	980903.80	0.03 -43.69 -0.52	0.00	-12.14
IFCUSHAP 8	8	48 9.10	-92 54.50	1301.00	mn 980766.60	980903.80	0.08 -44.37 -0.52	0.00	-14.87
IFCUSHAP 8	8	48 9.10	-93 9.00	1295.00	mn 980771.20	980903.80	0.02 -44.17 -0.52	0.00	-10.83
IFCUSHAP 8	8	48 9.10	-93 10.10	1315.00	mn 980769.50	980903.80	0.02 -44.85 -0.53	0.00	-10.65
IFCUSHAP 8	8	48 9.10	-93 10.70	1320.00	mn 980769.50	980903.80	0.02 -45.02 -0.53	0.00	-10.17
IFCUSHAP 8	8	48 9.20	-92 24.10	1351.00	mn 980767.40	980903.95	0.05 -46.08 -0.54	0.00	-9.51
IFCUSHAP 8	8	48 9.20	-92 53.00	1363.00	mn 980764.20	980903.95	0.05 -46.49 -0.55	0.00	-11.58
IFCUSHAP 8	8	48 9.39	-93 8.30	1290.00	mn 980772.50	980904.23	0.02 -44.00 -0.52	0.00	-10.43
IFCUSHAP 8	8	48 9.50	-92 26.50	1245.00	mn 980774.50	980904.40	0.01 -42.46 -0.50	0.00	-12.83
IFCUSHAP 8	8	48 9.50	-92 26.50	1245.00	mn 980774.50	980904.40	0.01 -42.46 -0.50	0.00	-12.83

BOUGUER GRAVITY DATA

International Falls CUSMAP Gravity Data

Meter used:

STATION IDENTIFICATION proj sta-id	L O C A T I O N S		G R A V I T Y		C O R R E C T I O N S TERRAIN BOUGUER CURV 2.67 g/cc	SPECIAL AIR	A M O N A L I E S COMPLETE-BOUGUER 2.67 g/cc				
	LATITUDE deg min	LONGITUDE deg min	ELE (in ft)	ST OBSERVED							
IFCUSMAP 8	48 9.50	-92 31.40	1254.00	Mn 980773.60	980904.40	-0.02	-42.77	-0.51	0.00	-12.88	-56.18
IFCUSMAP 8	48 9.50	-92 52.30	1313.00	Mn 980768.30	980904.40	0.09	-44.78	-0.53	0.00	-12.63	-57.86
IFCUSMAP 8	48 9.70	-92 27.20	1248.00	Mn 980774.70	980904.70	0.02	-42.57	-0.51	0.00	-12.64	-55.70
IFCUSMAP 8	48 9.70	-92 28.30	1237.00	Mn 980776.10	980904.70	0.02	-42.19	-0.50	0.00	-12.28	-54.95
IFCUSMAP 8	48 9.70	-92 29.70	1259.00	Mn 980774.10	980904.70	0.04	-42.94	-0.51	0.00	-12.21	-55.62
IFCUSMAP 8	48 9.80	-92 21.80	1373.00	Mn 980766.20	980904.85	0.04	-46.83	-0.55	0.00	-9.54	-56.88
IFCUSMAP 8	48 9.89	-92 31.60	1303.00	Mn 980771.20	980904.98	0.04	-44.44	-0.53	0.00	-11.27	-56.19
IFCUSMAP 8	48 9.89	-92 44.30	1315.00	Mn 980771.30	980904.98	0.05	-44.85	-0.53	0.00	-10.03	-55.36
IFCUSMAP 8	48 10.20	-92 21.60	1460.00	Mn 980762.20	980905.45	0.36	-49.80	-0.58	0.00	-5.96	-55.98
IFCUSMAP 8	48 10.30	-92 30.80	1235.00	Mn 980777.10	980905.60	-0.01	-42.12	-0.50	0.00	-12.37	-55.00
IFCUSMAP 8	48 10.40	-92 21.30	1408.00	Mn 980765.60	980905.75	0.13	-48.02	-0.56	0.00	-7.75	-56.21
IFCUSMAP 8	48 10.80	-92 45.00	1495.00	Mn 980763.70	980906.35	0.70	-50.99	-0.59	0.00	-2.07	-52.96
IFCUSMAP 8	48 10.90	-92 30.70	1227.00	Mn 980778.90	980906.50	-0.01	-41.85	-0.50	0.00	-12.22	-54.58
IFCUSMAP 8	48 11.10	-92 43.80	1306.00	Mn 980775.90	980906.80	0.02	-44.54	-0.53	0.00	-8.09	-53.14
IFCUSMAP 8	48 11.20	-92 40.09	1265.00	Mn 980779.10	980906.95	0.00	-43.15	-0.51	0.00	-8.90	-52.56
IFCUSMAP 8	48 11.20	-92 42.50	1292.00	Mn 980777.60	980906.95	0.05	-44.07	-0.52	0.00	-7.86	-52.40
IFCUSMAP 8	48 11.30	-92 41.10	1278.00	Mn 980778.50	980907.10	0.02	-43.59	-0.52	0.00	-8.43	-52.52
IFCUSMAP 8	48 11.30	-92 53.30	1359.00	Mn 980773.30	980907.10	0.08	-46.35	-0.55	0.00	-6.01	-52.83
IFCUSMAP 8	48 11.30	-93 11.80	1373.00	Mn 980775.20	980907.10	0.08	-46.83	-0.55	0.00	-2.79	-50.09
IFCUSMAP 8	48 11.60	-92 47.30	1314.00	Mn 980776.20	980907.55	0.14	-44.82	-0.53	0.00	-7.79	-53.00
IFCUSMAP 8	48 11.70	-92 30.20	1260.00	Mn 980778.80	980907.70	0.00	-42.97	-0.51	0.00	-10.42	-53.90
IFCUSMAP 8	48 11.70	-92 42.10	1270.00	Mn 980779.10	980907.70	0.05	-43.32	-0.51	0.00	-9.18	-52.96
IFCUSMAP 8	48 11.70	-92 45.50	1312.00	Mn 980776.50	980907.70	0.03	-44.75	-0.53	0.00	-7.83	-53.08
IFCUSMAP 8	48 11.70	-93 12.00	1350.00	Mn 980778.40	980907.70	0.10	-46.04	-0.54	0.00	-2.35	-48.84
IFCUSMAP 8	48 11.80	-92 29.50	1317.00	Mn 980775.40	980907.85	0.04	-44.92	-0.53	0.00	-8.61	-54.02
IFCUSMAP 8	48 12.00	-92 47.50	1392.00	Mn 980772.00	980908.15	0.05	-47.48	-0.56	0.00	-5.26	-53.24
IFCUSMAP 8	48 12.00	-92 48.60	1320.00	Mn 980776.90	980908.15	0.04	-45.02	-0.53	0.00	-7.12	-52.64
IFCUSMAP 8	48 12.00	-92 53.90	1310.00	Mn 980776.50	980908.15	0.11	-44.68	-0.53	0.00	-8.47	-53.57
IFCUSMAP 8	48 12.10	-92 45.70	1319.00	Mn 980776.50	980908.30	0.03	-44.99	-0.53	0.00	-7.77	-53.26
IFCUSMAP 8	48 12.10	-93 12.70	1364.00	Mn 980778.60	980908.30	0.08	-46.52	-0.55	0.00	-1.44	-48.43
IFCUSMAP 8	48 12.20	-92 30.50	1262.00	Mn 980780.30	980908.45	0.03	-43.04	-0.51	0.00	-9.48	-53.00
IFCUSMAP 8	48 12.20	-92 44.60	1340.00	Mn 980775.60	980908.45	0.03	-45.70	-0.54	0.00	-6.84	-53.06
IFCUSMAP 8	48 12.40	-92 56.30	1302.00	Mn 980777.70	980908.75	0.07	-44.41	-0.53	0.00	-8.62	-53.48
IFCUSMAP 8	48 12.40	-93 13.50	1358.00	Mn 980779.90	980908.75	0.07	-46.32	-0.55	0.00	-1.15	-47.95
IFCUSMAP 8	48 12.50	-92 42.20	1293.00	Mn 980779.00	980908.90	0.01	-44.10	-0.52	0.00	-8.31	-52.93
IFCUSMAP 8	48 12.50	-92 46.80	1324.00	Mn 980777.80	980908.90	0.05	-45.16	-0.53	0.00	-6.60	-52.24
IFCUSMAP 8	48 12.60	-92 30.80	1281.00	Mn 980780.60	980909.05	0.00	-43.69	-0.52	0.00	-7.99	-52.20
IFCUSMAP 8	48 12.60	-92 54.20	1305.00	Mn 980778.50	980909.05	0.10	-44.51	-0.53	0.00	-7.84	-52.77
IFCUSMAP 8	48 12.70	-92 28.30	1301.00	Mn 980779.50	980909.20	0.02	-44.37	-0.52	0.00	-7.37	-52.25
IFCUSMAP 8	48 12.70	-92 55.40	1311.00	Mn 980778.80	980909.20	0.04	-44.71	-0.53	0.00	-7.12	-52.33

BOUGUER GRAVITY DATA

International Falls CUSMAP Gravity Data

Meter used:

STATION IDENTIFICATION proj sta-id	L O C A T I O N S		G R A V I T Y		C O R R E C T I O N S		A M O N A L I E S	
	LATITUDE deg min	LONGITUDE deg min	ELE (in ft)	ST OBSERVED	THEORETICAL	TERRAIN BOUGUER CURV 2.67 g/cc	SPECIAL AIR	COMPLETE-BOUGUER 2.67 g/cc
IFCUSHAP 8	48 12.70	-93 6.20	1395.00	mn 980776.50	980909.20	0.07	-47.58	-0.56
IFCUSHAP 8	48 12.80	-93 4.40	1330.00	mn 980779.70	980909.35	0.08	-45.36	-0.54
IFCUSHAP 8	48 12.80	-93 7.30	1315.00	mn 980780.90	980909.35	0.09	-44.85	-0.53
IFCUSHAP 8	48 12.90	-92 31.20	1247.00	mn 980783.80	980909.50	0.03	-42.53	-0.51
IFCUSHAP 8	48 12.90	-92 49.00	1308.00	mn 980780.00	980909.50	0.09	-44.61	-0.53
IFCUSHAP 8	48 12.90	-93 7.60	1325.00	mn 980780.70	980909.50	0.06	-45.19	-0.53
IFCUSHAP 8	48 12.90	-93 11.10	1328.00	mn 980782.30	980909.50	0.11	-45.29	-0.53
IFCUSHAP 8	48 12.90	-93 13.90	1360.00	mn 980780.40	980909.50	0.06	-46.39	-0.55
IFCUSHAP 8	48 13.00	-92 42.20	1268.00	mn 980782.20	980909.65	0.02	-43.25	-0.51
IFCUSHAP 8	48 13.00	-93 2.90	1336.00	mn 980779.80	980909.65	0.04	-45.57	-0.54
IFCUSHAP 8	48 13.10	-92 41.20	1255.00	mn 980783.20	980909.80	0.07	-42.80	-0.51
IFCUSHAP 8	48 13.10	-92 54.80	1321.00	mn 980779.90	980909.80	0.04	-45.06	-0.53
IFCUSHAP 8	48 13.10	-93 2.30	1332.00	mn 980779.80	980909.80	0.04	-45.43	-0.54
IFCUSHAP 8	48 13.20	-92 28.00	1241.00	mn 980783.70	980909.95	0.14	-42.33	-0.50
IFCUSHAP 8	48 13.20	-92 31.70	1211.00	mn 980786.50	980909.95	0.06	-41.30	-0.49
IFCUSHAP 8	48 13.20	-93 1.90	1370.00	mn 980778.40	980909.95	0.05	-46.73	-0.55
IFCUSHAP 8	48 13.20	-93 8.89	1350.00	mn 980781.10	980909.95	0.06	-46.04	-0.54
IFCUSHAP 8	48 13.20	-93 10.10	1318.00	mn 980783.80	980909.95	0.05	-44.95	-0.53
IFCUSHAP 8	48 13.30	-92 55.30	1311.00	mn 980781.40	980910.10	0.03	-44.71	-0.53
IFCUSHAP 8	48 13.30	-92 55.30	1311.00	mn 980781.50	980910.10	0.03	-44.71	-0.53
IFCUSHAP 8	48 13.40	-93 0.80	1363.00	mn 980779.20	980910.25	0.04	-46.49	-0.55
IFCUSHAP 8	48 13.40	-93 14.90	1386.00	mn 980781.00	980910.25	0.07	-47.27	-0.56
IFCUSHAP 8	48 13.50	-92 32.80	1276.00	mn 980782.80	980910.40	-0.01	-43.52	-0.52
IFCUSHAP 8	48 13.50	-92 59.80	1387.00	mn 980778.30	980910.40	0.05	-47.31	-0.56
IFCUSHAP 8	48 13.50	-93 15.60	1351.00	mn 980782.60	980910.40	0.05	-46.08	-0.54
IFCUSHAP 8	48 13.60	-92 56.60	1375.00	mn 980779.30	980910.55	0.08	-46.90	-0.55
IFCUSHAP 8	48 13.60	-92 58.80	1404.00	mn 980777.60	980910.55	0.07	-47.89	-0.56
IFCUSHAP 8	48 13.70	-92 40.20	1287.00	mn 980783.20	980910.70	0.02	-43.90	-0.52
IFCUSHAP 8	48 13.70	-92 57.80	1409.00	mn 980777.90	980910.70	0.07	-49.06	-0.56
IFCUSHAP 8	48 13.80	-92 33.70	1255.00	mn 980785.00	980910.85	-0.01	-42.80	-0.51
IFCUSHAP 8	48 13.90	-93 15.80	1297.00	mn 980786.90	980911.00	0.05	-44.24	-0.52
IFCUSHAP 8	48 14.00	-92 55.60	1312.00	mn 980783.70	980911.15	0.04	-44.75	-0.53
IFCUSHAP 8	48 14.00	-93 9.70	1351.00	mn 980783.00	980911.15	0.04	-46.08	-0.54
IFCUSHAP 8	48 14.20	-92 28.60	1225.00	mn 980787.10	980911.45	-0.01	-41.78	-0.50
IFCUSHAP 8	48 14.20	-92 38.80	1238.00	mn 980786.70	980911.45	0.01	-42.22	-0.50
IFCUSHAP 8	48 14.30	-93 8.80	1331.00	mn 980784.80	980911.60	0.05	-45.40	-0.54
IFCUSHAP 8	48 14.40	-92 36.20	1260.00	mn 980786.20	980911.75	0.02	-42.97	-0.51
IFCUSHAP 8	48 14.40	-93 13.20	1300.00	mn 980787.00	980911.75	0.05	-44.34	-0.52
IFCUSHAP 8	48 14.50	-93 14.00	1322.00	mn 980786.60	980911.90	0.03	-45.09	-0.53
IFCUSHAP 8	48 14.50	-93 14.80	1314.00	mn 980788.00	980911.90	0.04	-44.82	-0.53

BOUGUER GRAVITY DATA

International Falls CUSMAP Gravity Data

Meter used:

STATION IDENTIFICATION proj sta-id	L O C A T I O N S		ELE (in ft)	G R A V I T Y ST OBSERVED	THEORETICAL	C O R R E C T I O N S		SPECIAL	FREE AIR	A N O M A L I E S		
	LATITUDE deg min	LONGITUDE deg min				TERRAIN BOUGUER CURV 2.67 g/cc	COMPLETE-BOUGUER 2.67 g/cc					
IFCUSMAP 8	48 14.50	-93 15.80	1301.00	mn	980789.30	980911.90	0.02	-44.37	-0.52	0.00	-0.27	-45.15
IFCUSMAP 8	48 14.60	-92 27.70	1196.00	mn	980789.00	980912.05	0.04	-40.79	-0.49	0.00	-10.58	-51.82
IFCUSMAP 8	48 14.60	-92 40.09	1333.00	mn	980782.70	980912.05	0.03	-45.46	-0.54	0.00	-4.00	-49.98
IFCUSMAP 8	48 14.70	-93 8.20	1364.00	mn	980783.90	980912.20	0.06	-46.52	-0.55	0.00	-0.04	-47.05
IFCUSMAP 8	48 14.80	-92 29.20	1224.00	mn	980788.10	980912.35	-0.02	-41.75	-0.50	0.00	-9.15	-51.42
IFCUSMAP 8	48 14.80	-92 38.40	1203.00	mn	980790.20	980912.35	-0.02	-41.03	-0.49	0.00	-9.03	-50.57
IFCUSMAP 8	48 14.80	-92 55.90	1260.00	mn	980789.00	980912.35	0.15	-42.97	-0.51	0.00	-4.87	-48.20
IFCUSMAP 8	48 14.80	-93 13.40	1301.00	mn	980788.60	980912.35	0.03	-44.37	-0.52	0.00	-1.42	-46.29
IFCUSMAP 8	48 15.30	-92 27.50	1151.00	mn	980792.40	980913.10	0.04	-39.26	-0.47	0.00	-12.47	-52.16
IFCUSMAP 8	48 15.50	-92 29.50	1164.00	mn	980792.30	980913.40	-0.01	-39.70	-0.47	0.00	-11.64	-51.83
IFCUSMAP 8	48 15.70	-92 29.00	1164.00	mn	980793.10	980913.70	-0.04	-39.70	-0.47	0.00	-11.14	-51.36
IFCUSMAP 8	48 16.00	-92 27.50	1124.00	mn	980795.10	980914.15	0.00	-38.34	-0.46	0.00	-13.35	-52.15
IFCUSMAP 8	48 16.20	-92 28.40	1128.00	mn	980796.00	980914.45	-0.05	-38.47	-0.46	0.00	-12.39	-51.37
IFCUSMAP 8	48 1.30	-92 56.90	1424.00	mn	980750.80	980892.09	0.07	-48.57	-0.57	0.00	-7.39	-56.46
IFCUSMAP 8	48 3.20	-92 49.80	1304.00	mn	980756.80	980894.95	0.03	-44.48	-0.53	0.00	-15.53	-60.50
IFCUSMAP 8	48 3.90	-92 21.30	1432.00	mn	980747.60	980896.00	0.05	-48.84	-0.57	0.00	-13.74	-63.11
IFCUSMAP 8	48 4.80	-92 20.90	1430.00	mn	980751.70	980897.35	0.05	-48.77	-0.57	0.00	-11.18	-60.48
IFCUSMAP 8	48 4.90	-92 21.50	1419.00	mn	980752.60	980897.50	0.05	-48.40	-0.57	0.00	-11.47	-60.38
IFCUSMAP 8	48 5.00	-92 16.20	1515.00	mn	980744.80	980897.65	0.15	-51.67	-0.60	0.00	-10.39	-62.51
IFCUSMAP 8	48 5.50	-92 0.30	1467.00	mn	980745.20	980898.40	0.13	-50.04	-0.58	0.00	-15.25	-65.74
IFCUSMAP 8	48 5.70	-92 20.50	1430.00	mn	980753.50	980898.70	0.07	-48.77	-0.57	0.00	-10.73	-60.01
IFCUSMAP 8	48 6.00	-92 20.29	1375.00	mn	980757.40	980899.15	0.07	-46.90	-0.55	0.00	-12.45	-59.83
IFCUSMAP 8	48 6.20	-92 4.40	1380.00	mn	980752.30	980899.45	0.04	-47.07	-0.55	0.00	-17.38	-64.97
IFCUSMAP 8	48 6.30	-92 1.70	1409.00	mn	980750.70	980899.60	0.05	-48.06	-0.56	0.00	-16.41	-64.98
IFCUSMAP 8	48 6.50	-92 20.29	1403.00	mn	980757.80	980899.90	0.05	-47.85	-0.56	0.00	-10.17	-58.54
IFCUSMAP 8	48 6.90	-92 17.29	1386.00	mn	980759.20	980900.50	0.09	-47.27	-0.56	0.00	-10.97	-58.71
IFCUSMAP 8	48 6.90	-92 20.40	1387.00	mn	980759.00	980900.50	0.06	-47.31	-0.56	0.00	-11.08	-58.88
IFCUSMAP 8	48 6.90	-92 42.80	1310.00	mn	980764.00	980900.50	0.05	-44.68	-0.53	0.00	-13.31	-58.48
IFCUSMAP 8	48 7.10	-92 43.00	1320.00	mn	980763.60	980900.80	0.05	-45.02	-0.53	0.00	-13.07	-58.58
IFCUSMAP 8	48 7.20	-92 22.10	1382.00	mn	980761.00	980900.95	0.03	-47.14	-0.55	0.00	-9.99	-57.66
IFCUSMAP 8	48 7.30	-92 17.29	1398.00	mn	980759.40	980901.10	0.05	-47.68	-0.56	0.00	-10.24	-58.43
IFCUSMAP 8	48 7.40	-92 17.70	1395.00	mn	980759.80	980901.25	0.05	-47.58	-0.56	0.00	-10.27	-58.36
IFCUSMAP 8	48 7.50	-92 21.80	1409.00	mn	980760.20	980901.40	0.06	-48.06	-0.56	0.00	-8.71	-57.27
IFCUSMAP 8	48 7.50	-92 22.30	1440.00	mn	980758.50	980901.40	0.11	-49.11	-0.57	0.00	-7.49	-57.07
IFCUSMAP 8	48 7.90	-92 22.90	1475.00	mn	980757.20	980902.00	0.20	-50.31	-0.59	0.00	-6.10	-56.80
IFCUSMAP 8	48 8.00	-92 43.90	1283.00	mn	980768.00	980902.15	0.06	-43.76	-0.52	0.00	-13.50	-57.72
IFCUSMAP 8	48 8.39	-92 21.50	1331.00	mn	980766.00	980902.73	0.09	-45.40	-0.54	0.00	-11.58	-57.42
IFCUSMAP 8	48 9.60	-92 56.30	1308.00	mn	980768.40	980904.55	0.05	-44.61	-0.53	0.00	-13.15	-58.24
IFCUSMAP 8	48 9.80	-92 54.10	1322.00	mn	980768.60	980904.85	0.08	-45.09	-0.53	0.00	-11.94	-57.48
IFCUSMAP 8	48 9.89	-92 54.90	1380.00	mn	980766.10	980904.98	0.04	-47.07	-0.55	0.00	-9.12	-56.70

BOUGUER GRAVITY DATA

International Falls CUSMAP Gravity Data

Meter used:

STATION IDENTIFICATION proj sta-id	L O C A T I O N S		G R A V I T Y		C O R R E C T I O N S TERRAIN BOUGUER CURV 2.67 g/cc	SPECIAL	A N O M A L I E S				
	LATITUDE deg min	LONGITUDE deg min	ELE (in ft)	ST OBSERVED			THEORETICAL	FREE AIR	COMPLETE-BOUGUER 2.67 g/cc		
IFCUSHAP 8	48 10.00	-92 53.20	1315.00	mn 980769.70	980905.15	0.09	-44.85	-0.53	0.00	-11.80	-57.09
IFCUSHAP 8	48 10.30	-93 12.10	1347.00	mn 980771.70	980905.60	0.08	-45.94	-0.54	0.00	-7.24	-53.64
IFCUSHAP 8	48 10.50	-92 21.00	1399.00	mn 980766.40	980905.90	0.10	-47.72	-0.56	0.00	-7.95	-56.13
IFCUSHAP 8	48 11.00	-92 20.50	1383.00	mn 980768.70	980906.65	0.11	-47.17	-0.55	0.00	-7.90	-55.52
IFCUSHAP 8	48 11.00	-92 21.00	1372.00	mn 980769.40	980906.65	0.07	-46.79	-0.55	0.00	-8.24	-55.51
IFCUSHAP 8	48 11.00	-93 11.70	1362.00	mn 980773.40	980906.65	0.06	-46.45	-0.55	0.00	-5.18	-52.12
IFCUSHAP 8	48 11.10	-92 21.40	1306.00	mn 980773.20	980906.80	0.01	-44.54	-0.53	0.00	-10.79	-55.85
IFCUSHAP 8	48 11.20	-92 21.10	1320.00	mn 980772.90	980906.95	0.01	-45.02	-0.53	0.00	-9.93	-55.47
IFCUSHAP 8	48 11.20	-92 36.90	1204.00	mn 980782.30	980906.95	0.06	-41.06	-0.49	0.00	-11.43	-52.93
IFCUSHAP 8	48 11.20	-92 37.50	1204.00	mn 980782.30	980906.95	0.08	-41.06	-0.49	0.00	-11.43	-52.91
IFCUSHAP 8	48 11.20	-92 39.20	1234.00	mn 980780.80	980906.95	0.04	-42.09	-0.50	0.00	-10.12	-52.67
IFCUSHAP 8	48 11.40	-92 38.09	1215.00	mn 980782.70	980907.25	0.05	-41.44	-0.49	0.00	-10.30	-52.18
IFCUSHAP 8	48 11.60	-93 8.89	1354.00	mn 980775.90	980907.55	0.05	-46.18	-0.54	0.00	-4.33	-51.01
IFCUSHAP 8	48 11.60	-93 10.60	1357.00	mn 980776.10	980907.55	0.08	-46.28	-0.55	0.00	-3.85	-50.60
IFCUSHAP 8	48 12.00	-93 3.80	1349.00	mn 980774.60	980908.15	0.05	-46.01	-0.54	0.00	-6.70	-53.20
IFCUSHAP 8	48 12.60	-92 44.90	1330.00	mn 980777.20	980909.05	0.02	-45.36	-0.54	0.00	-6.78	-52.66
IFCUSHAP 8	48 13.40	-92 49.30	1300.00	mn 980781.60	980910.25	0.27	-44.34	-0.52	0.00	-6.41	-51.00
IFCUSHAP 8	48 13.50	-92 42.10	1279.00	mn 980783.00	980910.40	0.02	-43.62	-0.52	0.00	-7.13	-51.25
IFCUSHAP 8	48 14.40	-92 42.80	1292.00	mn 980783.90	980911.75	0.03	-44.07	-0.52	0.00	-6.36	-50.92
IFCUSHAP 8	48 15.40	-92 39.80	1302.00	mn 980785.80	980913.25	0.04	-44.41	-0.53	0.00	-5.02	-49.91
IFCUSHAP 8	48 15.60	-92 42.00	1342.00	mn 980784.20	980913.55	0.03	-45.77	-0.54	0.00	-3.16	-49.44
IFCUSHAP 8	48 15.70	-92 38.90	1209.00	mn 980791.20	980913.70	0.00	-41.24	-0.49	0.00	-8.82	-50.55
IFCUSHAP 8	48 15.90	-92 35.30	1208.00	mn 980792.10	980914.00	-0.02	-41.20	-0.49	0.00	-8.30	-50.02
IFCUSHAP 8	48 16.10	-92 34.30	1174.00	mn 980794.10	980914.30	0.02	-40.04	-0.48	0.00	-9.80	-50.30
IFCUSHAP 8	48 16.10	-92 35.59	1199.00	mn 980792.80	980914.30	0.03	-40.89	-0.49	0.00	-8.75	-50.10
IFCUSHAP 8	48 16.10	-92 36.80	1215.00	mn 980792.20	980914.30	0.00	-41.44	-0.49	0.00	-7.85	-49.78
IFCUSHAP 8	48 16.10	-92 39.09	1224.00	mn 980792.20	980914.30	-0.02	-41.75	-0.50	0.00	-7.00	-49.27
IFCUSHAP 8	48 16.10	-92 42.30	1297.00	mn 980788.00	980914.30	0.01	-44.24	-0.52	0.00	-4.34	-49.09
IFCUSHAP 8	48 16.40	-92 38.20	1218.00	mn 980792.40	980914.75	0.04	-41.54	-0.49	0.00	-7.81	-49.81
IFCUSHAP 8	48 16.50	-92 37.40	1226.00	mn 980792.20	980914.90	-0.02	-41.82	-0.50	0.00	-7.42	-49.75
IFCUSHAP 8	48 16.50	-92 39.59	1223.00	mn 980792.40	980914.90	-0.02	-41.71	-0.50	0.00	-7.49	-49.73
IFCUSHAP 8	48 16.70	-92 36.80	1232.00	mn 980792.20	980915.20	0.02	-42.02	-0.50	0.00	-7.16	-49.66
IFCUSHAP 8	48 16.90	-92 42.90	1338.00	mn 980786.90	980915.50	0.04	-45.64	-0.54	0.00	-2.78	-48.92
IFCUSHAP 8	48 17.10	-92 36.20	1266.00	mn 980790.80	980915.80	-0.01	-43.18	-0.51	0.00	-5.95	-49.65
IFCUSHAP 8	48 17.20	-92 43.20	1336.00	mn 980787.40	980915.95	0.07	-45.57	-0.54	0.00	-2.92	-48.96
IFCUSHAP 8	48 17.20	-92 43.60	1279.00	mn 980790.50	980915.95	0.01	-43.62	-0.52	0.00	-5.18	-49.31
IFCUSHAP 8	48 17.70	-92 35.30	1165.00	mn 980797.40	980916.70	0.11	-39.73	-0.48	0.00	-9.75	-49.85
IFCUSHAP 8	48 17.70	-92 44.30	1329.00	mn 980789.00	980916.70	0.04	-45.33	-0.54	0.00	-2.73	-48.55
IFCUSHAP 8	48 18.00	-92 45.00	1333.00	mn 980789.50	980917.15	0.05	-45.46	-0.54	0.00	-2.30	-48.25
IFCUSHAP 8	48 18.60	-92 45.60	1336.00	mn 980790.40	980918.05	0.05	-45.57	-0.54	0.00	-2.02	-48.07

BOUGUER GRAVITY DATA

International Falls CUSMAP Gravity Data

Meter used:

STATION IDENTIFICATION proj sta-id	L O C A T I O N S		G R A V I T Y		C O R R E C T I O N S		A N O M A L I E S	
	LATITUDE deg	LONGITUDE deg min	ELE (in ft)	ST OBSERVED	THEORETICAL	TERRAIN BOUGUER CURV 2.67 g/cc	SPECIAL FREE AIR	COMPLETE-BOUGUER 2.67 g/cc
IFCUSHAP 8	48 18.70	-92 46.20	1339.00	mn 980790.60	980918.20	0.04	-45.67 -0.54	0.00 -1.69
IFCUSHAP 8	48 19.20	-92 34.80	1163.00	mn 980798.70	980918.95	0.02	-39.67 -0.47	0.00 -10.89
IFCUSHAP 8	48 13.30	-92 15.20	1161.00	mn 980785.20	980910.10	0.20	-39.60 -0.47	0.00 -15.73
IFCUSHAP 8	48 14.20	-92 19.50	1161.00	mn 980788.20	980911.45	0.08	-39.60 -0.47	0.00 -14.08
IFCUSHAP 8	48 15.10	-92 14.70	1164.00	mn 980787.60	980912.80	0.00	-39.70 -0.47	0.00 -15.74
IFCUSHAP 8	48 15.50	-92 29.50	1164.00	mn 980792.40	980913.40	-0.01	-39.70 -0.47	0.00 -11.54
IFCUSHAP 8	48 16.60	-92 17.70	1161.00	mn 980790.40	980915.05	0.09	-39.60 -0.47	0.00 -15.48
IFCUSHAP 8	48 16.90	-92 24.60	1121.00	mn 980796.20	980915.50	-0.03	-38.23 -0.46	0.00 -13.88
IFCUSHAP 8	48 20.10	-92 17.29	1185.00	mn 980794.50	980920.30	-0.05	-40.42 -0.48	0.00 -14.36
IFCUSHAP 8	48 21.00	-92 2.80	1185.00	mn 980797.20	980921.65	-0.06	-40.42 -0.48	0.00 -13.01
IFCUSHAP 8	48 21.00	-92 28.30	1120.00	mn 980801.00	980921.65	-0.07	-38.20 -0.46	0.00 -15.32
IFCUSHAP 8	48 21.00	-92 31.60	1120.00	mn 980802.10	980921.65	-0.03	-38.20 -0.46	0.00 -14.22
IFCUSHAP 8	48 21.20	-92 11.80	1186.00	mn 980798.30	980921.95	-0.05	-40.45 -0.48	0.00 -12.13
IFCUSHAP 8	48 21.70	-92 8.30	1185.00	mn 980798.80	980922.70	-0.05	-40.42 -0.48	0.00 -12.46
IFCUSHAP 8	48 24.30	-92 40.09	1122.00	mn 980807.30	980926.59	-0.01	-38.27 -0.46	0.00 -13.78
IFCUSHAP 8	48 24.80	-92 34.09	1120.00	mn 980805.40	980927.34	0.00	-38.20 -0.46	0.00 -16.62
IFCUSHAP 8	48 26.10	-92 29.70	1121.00	mn 980808.30	980929.29	-0.07	-38.23 -0.46	0.00 -15.57
IFCUSHAP 8	48 26.10	-92 51.10	1120.00	mn 980810.90	980929.29	-0.06	-38.20 -0.46	0.00 -13.07
IFCUSHAP 8	48 26.40	-92 55.50	1120.00	mn 980811.80	980929.73	-0.06	-38.20 -0.46	0.00 -12.62
IFCUSHAP 8	48 26.80	-92 45.60	1120.00	mn 980810.40	980930.34	-0.06	-38.20 -0.46	0.00 -14.62
IFCUSHAP 8	48 27.10	-92 42.80	1121.00	mn 980809.90	980930.79	-0.07	-38.23 -0.46	0.00 -15.47
IFCUSHAP 8	48 27.80	-92 50.20	1120.00	mn 980811.50	980931.84	-0.01	-38.20 -0.46	0.00 -15.02
IFCUSHAP 8	48 28.20	-92 58.70	1120.00	mn 980814.90	980932.44	-0.05	-38.20 -0.46	0.00 -12.22
IFCUSHAP 8	48 30.10	-92 38.59	1121.00	mn 980814.60	980935.28	-0.07	-38.23 -0.46	0.00 -15.27
IFCUSHAP 8	48 30.30	-92 44.40	1120.00	mn 980813.90	980935.58	0.16	-38.20 -0.46	0.00 -16.36
IFCUSHAP 8	48 31.10	-93 4.19	1120.00	mn 980817.00	980936.78	-0.06	-38.20 -0.46	0.00 -14.46
IFCUSHAP 8	48 31.30	-93 15.60	1108.00	mn 980818.70	980937.08	-0.06	-37.79 -0.45	0.00 -14.19
IFCUSHAP 8	48 32.00	-92 45.70	1109.00	mn 980815.50	980938.13	-0.05	-37.82 -0.45	0.00 -18.35
IFCUSHAP 8	48 32.90	-92 49.50	1110.00	mn 980817.50	980939.48	-0.07	-37.86 -0.45	0.00 -17.60
IFCUSHAP 8	48 33.40	-93 6.50	1109.00	mn 980820.80	980940.23	-0.06	-37.82 -0.45	0.00 -15.15
IFCUSHAP 8	48 34.09	-93 10.80	1109.00	mn 980823.20	980941.26	-0.06	-37.82 -0.45	0.00 -13.78
IFCUSHAP 8	48 35.59	-92 53.80	1109.00	mn 980821.70	980943.51	-0.07	-37.82 -0.45	0.00 -17.53
IFCUSHAP 8	48 36.00	-93 11.20	1110.00	mn 980830.70	980944.12	-0.04	-37.86 -0.45	0.00 -9.04
IFCUSHAP 8	48 36.09	-92 59.60	1109.00	mn 980825.90	980944.25	-0.06	-37.82 -0.45	0.00 -14.08
IFCUSHAP 8	48 37.00	-93 5.30	1109.00	mn 980834.60	980945.62	-0.06	-37.82 -0.45	0.00 -6.74
IFCUSHAP 8	48 37.70	-93 11.10	1109.00	mn 980836.00	980946.66	-0.06	-37.82 -0.45	0.00 -6.39
IFCUSHAP 10	48 18.10	-92 21.80	1135.00	ont980794.60	980917.30	-0.01	-38.71 -0.46	0.00 -15.97
IFCUSHAP 10	48 22.30	-92 7.20	1189.00	ont980800.20	980923.59	-0.05	-40.55 -0.48	0.00 -11.59
IFCUSHAP 10	48 23.00	-92 17.79	1150.00	ont980801.70	980924.64	-0.06	-39.22 -0.47	0.00 -14.80
IFCUSHAP 10	48 23.60	-92 14.60	1147.00	ont980803.70	980925.54	-0.01	-39.12 -0.47	0.00 -13.98

BOUGUER GRAVITY DATA

International Falls CUSMAP Gravity Data

Meter used:

STATION IDENTIFICATION proj sta-id	L O C A T I O N S		G R A V I T Y		C O R R E C T I O N S TERRAIN BOUGUER CURV 2.67 g/cc	SPECIAL FREE AIR	A M O N A L I E S COMPLETE-BOUGUER 2.67 g/cc
	LATITUDE deg min	LONGITUDE deg min	ELE (in ft)	ST OBSERVED THEORETICAL			
IFCUSMAP 10	48 24.40	-92 25.40	1120.00	980926.74	-0.04	-38.20 -0.46	0.00 -16.62 -55.32
IFCUSMAP 10	48 28.20	-92 6.50	1189.00	980932.44	0.07	-40.55 -0.48	0.00 -18.03 -59.00
IFCUSMAP 10	48 28.90	-92 18.29	1157.00	980933.48	0.04	-39.46 -0.47	0.00 -14.69 -54.59
IFCUSMAP 10	48 29.50	-92 28.70	1225.00	980934.38	-0.02	-41.78 -0.50	0.00 -12.89 -55.19
IFCUSMAP 10	48 30.20	-92 36.80	1109.00	980935.43	-0.06	-37.82 -0.45	0.00 -18.76 -57.09
IFCUSMAP 10	48 31.30	-93 47.10	1106.00	980937.08	-0.05	-37.72 -0.45	0.00 1.72 -36.50
IFCUSMAP 10	48 33.30	-93 37.59	1138.00	980940.08	-0.04	-38.81 -0.47	0.00 3.83 -35.49
IFCUSMAP 10	48 33.70	-92 44.50	1110.00	980940.67	-0.07	-37.86 -0.45	0.00 -18.89 -57.28
IFCUSMAP 10	48 34.00	-92 27.80	1187.00	980941.13	-0.04	-40.49 -0.48	0.00 -18.00 -59.01
IFCUSMAP 10	48 35.40	-92 17.40	1248.00	980943.22	0.00	-42.57 -0.51	0.00 -17.37 -60.44
IFCUSMAP 10	48 35.40	-92 40.09	1107.00	980943.22	-0.07	-37.76 -0.45	0.00 -22.23 -60.51
IFCUSMAP 10	48 35.90	-92 8.20	1270.00	980943.97	0.00	-43.32 -0.51	0.00 -17.55 -61.38
IFCUSMAP 10	48 36.00	-92 49.00	1108.00	980944.12	-0.07	-37.79 -0.45	0.00 -18.93 -57.24
IFCUSMAP 10	48 36.50	-93 23.10	1117.00	980944.87	-0.05	-38.10 -0.46	0.00 -5.14 -43.74
IFCUSMAP 10	48 37.70	-93 50.10	1105.00	980946.66	-0.04	-37.69 -0.45	0.00 14.94 -23.24
IFCUSMAP 10	48 39.30	-92 17.70	1206.00	980949.06	-0.05	-41.13 -0.49	0.00 -17.35 -59.03
IFCUSMAP 10	48 39.59	-92 56.60	1109.00	980949.49	-0.05	-37.82 -0.45	0.00 -7.32 -45.65
IFCUSMAP 10	48 39.70	-93 8.00	1109.00	980949.66	-0.06	-37.82 -0.45	0.00 -17.88 -56.22
IFCUSMAP 10	49 40.09	-93 16.70	1108.00	980950.24	-0.05	-37.79 -0.45	0.00 -5.95 -44.25
IFCUSMAP 10	48 41.30	-92 5.80	1346.00	980952.05	0.05	-45.91 -0.54	0.00 -13.48 -59.89
IFCUSMAP 10	48 41.50	-92 18.10	1159.00	980952.35	-0.01	-39.53 -0.47	0.00 -20.08 -60.09
IFCUSMAP 10	48 42.20	-92 38.00	1110.00	980953.40	0.04	-37.86 -0.45	0.00 -22.22 -60.50
IFCUSMAP 10	48 42.20	-92 45.70	1216.00	980953.40	0.04	-41.47 -0.49	0.00 -4.55 -46.49
IFCUSMAP 10	48 42.30	-93 44.40	1178.00	980953.55	0.00	-40.18 -0.48	0.00 7.11 -33.54
IFCUSMAP 10	48 42.60	-92 29.00	1112.00	980954.00	-0.07	-37.93 -0.46	0.00 -13.93 -52.39
IFCUSMAP 10	48 43.70	-93 55.00	1157.00	980955.65	-0.02	-39.46 -0.47	0.00 -0.06 -40.01
IFCUSMAP 10	48 43.80	-93 24.70	1110.00	980955.80	-0.03	-37.86 -0.45	0.00 -10.32 -48.66
IFCUSMAP 10	48 44.20	-93 51.10	1202.00	980956.39	0.01	-41.00 -0.49	0.00 0.04 -41.44
IFCUSMAP 10	48 44.40	-93 34.59	1175.00	980956.70	-0.02	-40.08 -0.48	0.00 -5.70 -46.28
IFCUSMAP 10	48 44.50	-92 17.79	1189.00	980956.84	-0.05	-40.55 -0.48	0.00 -15.04 -56.13
IFCUSMAP 10	48 44.90	-92 16.00	1175.00	980957.45	-0.05	-40.08 -0.48	0.00 -15.75 -56.36
IFCUSMAP 10	48 46.20	-92 4.30	1257.00	980959.39	-0.02	-42.87 -0.51	0.00 -10.90 -54.30
IFCUSMAP 10	48 46.20	-92 57.60	1103.00	980959.39	-0.04	-37.62 -0.45	0.00 -24.58 -62.69
IFCUSMAP 10	48 46.60	-92 13.70	1190.00	980959.98	-0.03	-40.59 -0.48	0.00 -11.68 -52.79
IFCUSMAP 10	48 47.10	-93 46.50	1238.00	980960.73	0.01	-42.22 -0.50	0.00 -9.42 -52.14
IFCUSMAP 10	48 47.20	-93 8.39	1108.00	980960.88	0.02	-37.79 -0.45	0.00 -19.89 -58.12
IFCUSMAP 10	48 47.40	-93 17.90	1108.00	980961.18	-0.05	-37.79 -0.45	0.00 -20.19 -58.49
IFCUSMAP 10	48 47.70	-92 4.69	1255.00	980961.63	0.00	-42.80 -0.51	0.00 -13.13 -56.44
IFCUSMAP 10	48 48.20	-92 27.00	1176.00	980962.38	-0.03	-40.11 -0.48	0.00 -21.20 -61.82
IFCUSMAP 10	48 48.50	-93 55.10	1230.00	980962.83	0.02	-41.95 -0.50	0.00 -2.68 -45.11

BOUGUER GRAVITY DATA

International Falls CUSMAP Gravity Data

Meter used:

STATION IDENTIFICATION proj sta-ld	L O C A T I O N S				G R A V I T Y		C O R R E C T I O N S		A M O N A L I E S		
	LATITUDE deg min	LONGITUDE deg min	ELE (in ft)	ST OBSERVED	THEORETICAL	TERRAIN BOUGUER	CURV	SPECIAL	FREE AIR	COMPLETE-BOUGUER	2.67 g/cc
IFCUSHAP 10	48 48.60	-92 41.30	1137.00	ont980837.60	980962.98	-0.04	-38.78	-0.46	0.00	-18.46	-57.75
IFCUSHAP 10	48 48.70	-93 55.00	1218.00	ont980845.00	980963.13	0.01	-41.54	-0.49	0.00	-3.59	-45.62
IFCUSHAP 10	48 48.90	-92 51.20	1110.00	ont980835.40	980963.43	-0.04	-37.86	-0.45	0.00	-23.65	-62.00
IFCUSHAP 10	48 49.90	-93 29.30	1110.00	ont980839.60	980964.92	-0.04	-37.86	-0.45	0.00	-20.94	-59.30
IFCUSHAP 10	48 50.00	-93 38.30	1110.00	ont980843.80	980965.07	-0.01	-37.86	-0.45	0.00	-16.89	-55.22
IFCUSHAP 10	48 50.20	-93 11.10	1103.00	ont980836.00	980965.38	-0.03	-37.62	-0.45	0.00	-25.66	-63.76
IFCUSHAP 10	48 50.40	-93 9.50	1121.00	ont980837.10	980965.67	-0.02	-38.23	-0.46	0.00	-23.16	-61.87
IFCUSHAP 10	48 51.40	-92 18.60	1231.00	ont980830.90	980967.16	-0.04	-41.99	-0.50	0.00	-20.51	-63.04
IFCUSHAP 10	48 51.90	-92 11.60	1289.00	ont980827.90	980967.91	-0.02	-43.96	-0.52	0.00	-18.81	-63.31
IFCUSHAP 10	48 53.00	-93 0.60	1148.00	ont980835.60	980969.56	-0.03	-39.15	-0.47	0.00	-26.01	-65.66
IFCUSHAP 10	48 53.80	-92 2.80	1335.00	ont980824.10	980970.76	0.00	-45.53	-0.54	0.00	-21.12	-67.19
IFCUSHAP 10	48 54.20	-93 55.90	1228.00	ont980860.00	980971.35	0.02	-41.88	-0.50	0.00	4.11	-38.25
IFCUSHAP 10	48 54.40	-93 20.60	1110.00	ont980844.10	980971.66	-0.04	-37.86	-0.45	0.00	-23.17	-61.53
IFCUSHAP 10	48 54.50	-92 31.80	1219.00	ont980840.90	980971.80	0.02	-41.58	-0.50	0.00	-16.28	-58.33
IFCUSHAP 10	48 54.50	-93 55.30	1223.00	ont980859.20	980971.80	0.04	-41.71	-0.50	0.00	2.40	-39.77
IFCUSHAP 10	48 54.60	-93 44.20	1164.00	ont980852.80	980971.95	-0.01	-39.70	-0.47	0.00	-9.70	-49.88
IFCUSHAP 10	48 56.00	-92 41.10	1187.00	ont980838.80	980974.05	0.05	-40.49	-0.48	0.00	-23.63	-64.55
IFCUSHAP 10	48 57.10	-92 52.30	1179.00	ont980855.10	980975.69	-0.02	-40.21	-0.48	0.00	-9.72	-50.44
IFCUSHAP 10	48 57.50	-92 11.50	1266.00	ont980834.70	980976.29	0.01	-43.18	-0.51	0.00	-22.54	-66.23
IFCUSHAP 10	48 57.50	-93 34.09	1143.00	ont980862.10	980976.29	-0.01	-38.98	-0.47	0.00	-6.71	-46.17
IFCUSHAP 10	48 58.20	-92 2.40	1396.00	ont980825.40	980977.34	0.03	-47.61	-0.56	0.00	-20.67	-68.81
IFCUSHAP 10	48 58.30	-93 55.70	1140.00	ont980849.30	980977.48	-0.01	-38.98	-0.47	0.00	-20.99	-60.35
IFCUSHAP 10	48 58.40	-92 22.30	1221.00	ont980849.90	980977.63	-0.01	-41.64	-0.50	0.00	-12.92	-55.07
IFCUSHAP 10	48 59.00	-93 11.10	1140.00	ont980857.30	980978.53	0.07	-38.98	-0.47	0.00	-14.04	-53.32
IFCUSHAP 10	48 59.00	-93 20.00	1161.00	ont980857.60	980978.53	-0.01	-39.60	-0.47	0.00	-11.77	-51.85