

OPUS-RS solution : 940123223W.14O OP1408215927393

opus <opus@ngs.noaa.gov>

Sat 8/16/2014 1:09 PM

To: John Freetly <John.Freetly@neciusa.com>;

FILE: 940123223W.14O OP1408215927393

NGS OPUS-RS SOLUTION REPORT

=====

All computed coordinate accuracies are listed as 1-sigma RMS values.

For additional information: <http://www.ngs.noaa.gov/OPUS/about.jsp#accuracy>

USER: john.freetly@neciusa.com DATE: August 16, 2014
 RINEX FILE: 9401223w.14o TIME: 19:08:53 UTC

SOFTWARE: rsgps 1.37 RS53.prl 1.99.2 START: 2014/08/11 22:26:20
 EPHEMERIS: igr18051.eph [rapid] STOP: 2014/08/11 23:57:35
 NAV FILE: brdc2230.14n OBS USED: 6108 / 6216 : 98%
 ANT NAME: CHCX91R NONE QUALITY IND. 56.34/114.36
 ARP HEIGHT: 1.800 NORMALIZED RMS: 0.293

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2014.61087)

X: -1394347.857(m) 0.007(m) -1394348.732(m) 0.007(m)
 Y: -4035587.786(m) 0.018(m) -4035586.563(m) 0.018(m)
 Z: 4723617.241(m) 0.020(m) 4723617.232(m) 0.020(m)

LAT: 48 4 51.24422 0.002(m) 48 4 51.26498 0.002(m)
 E LON: 250 56 21.50080 0.002(m) 250 56 21.44155 0.002(m)
 W LON: 109 3 38.49920 0.002(m) 109 3 38.55845 0.002(m)
 EL HGT: 976.327(m) 0.027(m) 975.739(m) 0.027(m)
 ORTHO HGT: 991.474(m) 0.029(m) [NAVD88 (Computed using GEOID12A)]

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 12) SPC (2500 MT)

Northing (Y) [meters] 5327111.263 425779.141
 Easting (X) [meters] 644434.242 632717.716
 Convergence [degrees] 1.44326408 0.32135402
 Point Scale 0.99985633 0.99956701
 Combined Factor 0.99970336 0.99941408

US NATIONAL GRID DESIGNATOR: 12UXU4443427111(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DG9749	MTMS MONTANA STATE UNI CORS ARP	N483227.426	W1094111.858	69092.9
DM7133	MTLW LEWISTOWN CORS ARP	N470314.929	W1092633.764	117738.7
DL7731	P053 WHITEWATERMT2007 CORS ARP	N484333.865	W1074331.456	122166.3
DI2257	P049 ARMINGTON_MT2006 CORS ARP	N472059.850	W1105422.382	160581.3
DI3425	P052 LRRNCHJRDNMT2006 CORS ARP	N472229.026	W1070107.185	172148.3
DI3422	P050 WICKUMRNCHMT2006 CORS ARP	N484834.096	W1111454.296	181010.9

NEAREST NGS PUBLISHED CONTROL POINT

Information on nearest mark is not available due to database connectivity issues or has restrictions on when or how it can be published.

This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.