

OPUS solution : 018697_14_252_A1.14O OP1410790222141

opus <opus@ngs.noaa.gov>

Mon 9/15/2014 8:13 AM

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

FILE: 018697_14_252_A1.14O OP1410790222141

NGS OPUS SOLUTION REPORT

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All computed coordinate accuracies are listed as peak-to-peak values.

For additional information: <http://www.ngs.noaa.gov/OPUS/about.jsp#accuracy>USER: john.freetly@neciusa.com
RINEX FILE: 0186252s.14oDATE: September 15, 2014
TIME: 14:13:07 UTCSOFTWARE: page5 1209.04 master50.pl 022814 START: 2014/09/09 18:23:00
EPHEMERIS: igr18092.eph [rapid] STOP: 2014/09/09 20:59:00
NAV FILE: brdc2520.14n OBS USED: 5758 / 6149 : 94%
ANT NAME: CHCX90D-OPUS NONE # FIXED AMB: 41 / 43 : 95%
ARP HEIGHT: 1.8000 OVERALL RMS: 0.011(m)

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2014.6899)

X: -1357917.806(m) 0.007(m) -1357918.664(m) 0.007(m)
Y: -4307401.077(m) 0.011(m) -4307399.821(m) 0.011(m)
Z: 4490560.072(m) 0.005(m) 4490560.028(m) 0.005(m)LAT: 45 1 41.39032 0.006(m) 45 1 41.41085 0.006(m)
E LON: 252 30 8.73471 0.004(m) 252 30 8.68009 0.004(m)
W LON: 107 29 51.26529 0.004(m) 107 29 51.31991 0.004(m)
EL HGT: 1412.132(m) 0.012(m) 1411.437(m) 0.012(m)
ORTHO HGT: 1424.370(m) 0.022(m) [NAVD88 (Computed using GEOID12A)]

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 13) SPC (2500 MT)

Northing (Y) [meters] 4989113.787 88511.330
Easting (X) [meters] 303249.424 757787.771
Convergence [degrees] -1.76748398 1.46478326
Point Scale 1.00007602 0.99998321
Combined Factor 0.99985465 0.99976186

US NATIONAL GRID DESIGNATOR: 13TCK0324989113(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DM7161	WYSH SHERIDAN CORS ARP	N444801.769	W1070035.715	46085.2
DL7728	P051 BILLINGSAPMT2005 CORS ARP	N454823.741	W1083246.070	119270.8
DG9745	MTEI ENGINC CORS ARP	N454447.035	W1083600.736	117613.3

NEAREST NGS PUBLISHED CONTROL POINT

QV0323	POWER	N450320.820	W1072550.446	6094.1
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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.