

OPUS-RS solution : 018506_14_250_A0.14O OP1410279188611

opus <opus@ngs.noaa.gov>

Tue 9/9/2014 10:17 AM

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

FILE: 018506_14_250_A0.14O OP1410279188611

NGS OPUS-RS SOLUTION REPORT

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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
RINEX FILE: 0185250a.14oDATE: September 09, 2014
TIME: 16:17:18 UTCSOFTWARE: rsgps 1.37 RS51.prl 1.99.2 START: 2014/09/07 00:10:30
EPHEMERIS: igr18086.eph [rapid] STOP: 2014/09/07 01:14:00
NAV FILE: brdc2490.14n OBS USED: 4128 / 4434 : 93%
ANT NAME: CHCX90D-OPUS NONE QUALITY IND. 8.21/ 53.64
ARP HEIGHT: 2.0000 NORMALIZED RMS: 0.224

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2014.68227)

X: -1340089.661(m) 0.008(m) -1340090.524(m) 0.008(m)
Y: -4242732.191(m) 0.010(m) -4242730.943(m) 0.010(m)
Z: 4555825.760(m) 0.015(m) 4555825.725(m) 0.015(m)LAT: 45 52 11.36321 0.008(m) 45 52 11.38405 0.008(m)
E LON: 252 28 15.59829 0.006(m) 252 28 15.54271 0.006(m)
W LON: 107 31 44.40171 0.006(m) 107 31 44.45729 0.006(m)
EL HGT: 893.283(m) 0.017(m) 892.610(m) 0.017(m)
ORTHO HGT: 908.021(m) 0.019(m) [NAVD88 (Computed using GEOID12A)]

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 13) SPC (2500 MT)

Northing (Y) [meters] 5082694.384 181939.751
Easting (X) [meters] 303716.769 752958.805
Convergence [degrees] -1.81579180 1.44179444
Point Scale 1.00007366 0.99958944
Combined Factor 0.99993363 0.99944948

US NATIONAL GRID DESIGNATOR: 13TCL0371682694(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DL7728	P051 BILLINGSAPMT2005	CORS ARP	N454823.741 W1083246.070	79342.9
DM7161	WYSH SHERIDAN	CORS ARP	N444801.769 W1070035.715	125634.4
DL7758	P722 YNPBASSRCHMT2005	CORS ARP	N452725.985 W1093415.586	165632.9
DI3425	P052 LRRNCHJRDNMT2006	CORS ARP	N472229.026 W1070107.185	171813.5
DM7133	MTLW LEWISTOWN	CORS ARP	N470314.929 W1092633.764	197351.1
DJ8992	P033 TENSLEEPTRWY2005	CORS ARP	N435710.415 W1072315.121	213349.7

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.