

## OPUS-RS solution : 018697\_14\_250\_A0.14O OP1410732801258

opus &lt;opus@ngs.noaa.gov&gt;

Sun 9/14/2014 4:17 PM

To: John Freetly &lt;John.Freetly@neciusa.com&gt;;

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## 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: 0186250t.14oDATE: September 14, 2014  
TIME: 22:16:56 UTCSOFTWARE: rsgps 1.37 RS91.prl 1.99.2      START: 2014/09/07 19:13:15  
EPHEMERIS: igr18090.eph [rapid]      STOP: 2014/09/07 21:02:00  
NAV FILE: brdc2500.14n      OBS USED: 4708 / 5044 : 93%  
ANT NAME: CHCX90D-OPUS      NONE      QUALITY IND. 30.19/ 68.13  
ARP HEIGHT: 1.8000      NORMALIZED RMS:      0.358

REF FRAME: NAD\_83(2011)(EPOCH:2010.0000)      IGS08 (EPOCH:2014.68449)

X: -1360828.691(m) 0.006(m)      -1360829.550(m) 0.006(m)  
Y: -4300519.426(m) 0.017(m)      -4300518.171(m) 0.017(m)  
Z: 4496309.725(m) 0.006(m)      4496309.682(m) 0.006(m)LAT: 45 6 3.25835 0.010(m)      45 6 3.27887 0.010(m)  
E LON: 252 26 27.17010 0.008(m)      252 26 27.11533 0.008(m)  
W LON: 107 33 32.82990 0.008(m)      107 33 32.88467 0.008(m)  
EL HGT: 1466.652(m) 0.015(m)      1465.960(m) 0.015(m)  
ORTHO HGT: 1479.263(m) 0.017(m) [NAVD88 (Computed using GEOID12A)]

## UTM COORDINATES      STATE PLANE COORDINATES

UTM (Zone 13)      SPC (2500 MT )

Northing (Y) [meters]      4997345.944      96470.404  
Easting (X) [meters]      298656.726      752738.793  
Convergence [degrees]      -1.81336156      1.41976230  
Point Scale      1.00009849      0.99994093  
Combined Factor      0.99986857      0.99971105

US NATIONAL GRID DESIGNATOR: 13TBK9865697345(NAD 83)

## BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DM7161	WYSH SHERIDAN CORS ARP	N444801.769	W1070035.715	54719.1
DI3062	BIL5 BILLINGS 5 CORS ARP	N455816.237	W1075947.298	102598.2
DG9745	MTEI ENGINC CORS ARP	N454447.035	W1083600.736	108579.9
DL7758	P722 YNPBASSRCHMT2005 CORS ARP	N452725.985	W1093415.586	162777.2

## NEAREST NGS PUBLISHED CONTROL POINT

QV0347	GLO 11 RM	N450510.417	W1073522.533	2899.1
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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.