

OPUS-RS solution : 018506_14_269_A4.14O OP1412007697423

opus <opus@ngs.noaa.gov>

Mon 9/29/2014 10:27 AM

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

FILE: 018506_14_269_A4.14O OP1412007697423

6023 ***** WARNING *****
 6023 The Quality Indicator for the network solution
 6023 is less than 3.0. This is often a warning sign that
 6023 the network solution was weak and tropospheric and
 6023 ionospheric refraction in the project area were not strongly
 6023 determined.
 6023 ***** WARNING *****
 6030 ***** WARNING *****
 6030 One or both of the standard deviations associated with
 6030 horizontal coordinates is greater than 5 cm, and/or the
 6030 standard deviation associated with the vertical coordinate
 6030 is greater than 10 cm. This means that the vectors used to
 6030 determine your position did not agree as well as expected.
 6030 Often this is the result of problems with the adopted coordinates
 6030 at one or more of the reference stations selected by OPUS-RS.
 6030 If a problem reference station can be identified, it can
 6030 be excluded with the Exclude feature on the OPUS Options
 6030 page.
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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: 0185269v.14o

DATE: September 29, 2014
 TIME: 16:26:54 UTC

SOFTWARE: rsgps 1.37 RS52.prl 1.99.2 START: 2014/09/26 21:58:15
 EPHEMERIS: igr18115.eph [rapid] STOP: 2014/09/26 22:42:00
 NAV FILE: brdc2690.14n OBS USED: 1468 / 1796 : 82%
 ANT NAME: CHCX90D-OPUS NONE QUALITY IND. 1.42/ 14.82
 ARP HEIGHT: 1.8000 NORMALIZED RMS: 0.475

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

IGS08 (EPOCH:2014.73680)

X: -1411559.125(m) 0.115(m) -1411559.987(m) 0.115(m)
 Y: -4263979.522(m) 0.111(m) -4263978.272(m) 0.111(m)
 Z: 4515436.850(m) 0.066(m) 4515436.810(m) 0.066(m)

LAT: 45 20 39.55410 0.048(m) 45 20 39.57429 0.048(m)
 E LON: 251 40 59.71274 0.116(m) 251 40 59.65712 0.116(m)
 W LON: 108 19 0.28726 0.116(m) 108 19 0.34288 0.116(m)
 EL HGT: 1562.786(m) 0.119(m) 1562.114(m) 0.119(m)
 ORTHO HGT: 1574.829(m) 0.119(m) [NAVD88 (Computed using GEOID12A)]

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 12) SPC (2500 MT)

Northing (Y) [meters]	5024703.893	122327.087
Easting (X) [meters]	710210.128	692714.249
Convergence [degrees]	1.90941096	0.86555494
Point Scale	1.00014334	0.99981077
Combined Factor	0.99989835	0.99956586

US NATIONAL GRID DESIGNATOR: 12TYR1021024703(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DM7161	WYSH SHERIDAN CORS ARP	N444801.769	W1070035.715	119366.5
DL7728	P051 BILLINGSAPMT2005 CORS ARP	N454823.741	W1083246.070	54422.0
DI3064	BIL6 BILLINGS 6 CORS ARP	N455816.251	W1075948.499	74016.9
AI5647	MAWY MAMMOTH WYOMING CORS ARP	N445824.319	W1104121.433	191085.2

NEAREST NGS PUBLISHED CONTROL POINT

QW0679	23 DHW	N452303.	W1082051.	5045.8
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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.