

OPUS-RS solution : 018506_14_264_A1.14O OP1411502601776

opus <opus@ngs.noaa.gov>

Tue 9/23/2014 2:21 PM

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

FILE: 018506_14_264_A1.14O OP1411502601776

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: 0185264t.14oDATE: September 23, 2014
TIME: 20:20:55 UTCSOFTWARE: rsgps 1.37 RS54.prl 1.99.2 START: 2014/09/21 19:08:30
EPHEMERIS: igr18110.eph [rapid] STOP: 2014/09/21 20:07:15
NAV FILE: brdc2640.14n OBS USED: 2052 / 3030 : 68%
ANT NAME: CHCX90D-OPUS NONE QUALITY IND. 15.02/ 14.04
ARP HEIGHT: 1.8000 NORMALIZED RMS: 0.434

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2014.72279)

X: -1413065.672(m) 0.024(m) -1413066.533(m) 0.024(m)
Y: -4263444.367(m) 0.056(m) -4263443.117(m) 0.056(m)
Z: 4515405.902(m) 0.060(m) 4515405.863(m) 0.060(m)LAT: 45 20 39.63970 0.008(m) 45 20 39.65990 0.008(m)
E LON: 251 39 46.30913 0.006(m) 251 39 46.25354 0.006(m)
W LON: 108 20 13.69087 0.006(m) 108 20 13.74646 0.006(m)
EL HGT: 1516.668(m) 0.085(m) 1515.997(m) 0.085(m)
ORTHO HGT: 1528.698(m) 0.085(m) [NAVD88 (Computed using GEOID12A)]

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 12) SPC (2500 MT)

Northing (Y) [meters] 5024653.484 122305.801
Easting (X) [meters] 708612.678 691116.671
Convergence [degrees] 1.89489177 0.85063965
Point Scale 1.00013511 0.99981076
Combined Factor 0.99989735 0.99957308

US NATIONAL GRID DESIGNATOR: 12TYR0861224653(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DL7728	P051 BILLINGSAPMT2005 CORS ARP	N454823.741	W1083246.070	53916.1
DI3064	BIL6 BILLINGS 6 CORS ARP	N455816.251	W1075948.499	74564.3
DM7161	WYSH SHERIDAN CORS ARP	N444801.769	W1070035.715	120754.6
AI5647	MAWY MAMMOTH WYOMING CORS ARP	N445824.319	W1104121.433	189519.9
DM7133	MTLW LEWISTOWN CORS ARP	N470314.929	W1092633.764	208361.9
DK7547	MTSU BOZEMAN CORS ARP	N453940.376	W1110242.008	214570.9

NEAREST NGS PUBLISHED CONTROL POINT

QW0679	23 DHW	N452303.	W1082051.	4506.5
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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.