

## OPUS-RS solution : 018697\_14\_270\_A0.14O OP1411944008446

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

Sun 9/28/2014 4:46 PM

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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: 0186270t.14oDATE: September 28, 2014  
TIME: 22:46:19 UTCSOFTWARE: rsgps 1.37 RS93.prl 1.99.2      START: 2014/09/27 19:45:15  
EPHEMERIS: igr18116.eph [rapid]      STOP: 2014/09/27 20:44:30  
NAV FILE: brdc2700.14n      OBS USED: 4165 / 4452 : 94%  
ANT NAME: CHCX90D-OPUS    NONE      QUALITY IND. 21.75/ 49.87  
ARP HEIGHT: 1.8000      NORMALIZED RMS:    0.287

REF FRAME: NAD\_83(2011)(EPOCH:2010.0000)      IGS08 (EPOCH:2014.73930)

X: -1402347.023(m) 0.006(m)      -1402347.884(m) 0.006(m)  
Y: -4266937.206(m) 0.019(m)      -4266935.956(m) 0.019(m)  
Z: 4515350.095(m) 0.021(m)      4515350.055(m) 0.021(m)LAT: 45 20 39.34952    0.006(m)      45 20 39.36977    0.006(m)  
E LON: 251 48 24.01835    0.005(m)      251 48 23.96286    0.005(m)  
W LON: 108 11 35.98165    0.005(m)      108 11 36.03714    0.005(m)  
EL HGT: 1447.068(m) 0.028(m)      1446.394(m) 0.028(m)  
ORTHO HGT: 1459.295(m) 0.029(m) [NAVD88 (Computed using GEOID12A)]

## UTM COORDINATES    STATE PLANE COORDINATES

UTM (Zone 12)      SPC (2500 MT )

Northing (Y) [meters]    5025027.337      122474.481  
Easting (X) [meters]    719879.034      702383.978  
Convergence [degrees]    1.99730233      0.95583589  
Point Scale      1.00019448      0.99981080  
Combined Factor      0.99996762      0.99958402

US NATIONAL GRID DESIGNATOR: 12TYR1987925027(NAD 83)

## BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DG9745	MTEI ENGINC CORS ARP	N454447.035	W1083600.736	54850.4
DI3064	BIL6 BILLINGS 6 CORS ARP	N455816.251	W1075948.499	71357.0
DM7161	WYSH SHERIDAN CORS ARP	N444801.769	W1070035.715	111089.4
DJ8992	P033 TENSLEEPTRWY2005 CORS ARP	N435710.415	W1072315.121	167338.0
AI5647	MAWY MAMMOTH WYOMING CORS ARP	N445824.319	W1104121.433	200569.2
DM7133	MTLW LEWISTOWN CORS ARP	N470314.929	W1092633.764	213154.8
DK7547	MTSU BOZEMAN CORS ARP	N453940.376	W1110242.008	225664.8

## NEAREST NGS PUBLISHED CONTROL POINT

QW0528	POINT	N452502.157	W1080636.918	10403.5
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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.