

OPUS-RS solution : 018772_14_268_A1.14O OP1411936202435

opus <opus@ngs.noaa.gov>

Sun 9/28/2014 2:36 PM

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

FILE: 018772_14_268_A1.14O OP1411936202435

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: 0187268w.14oDATE: September 28, 2014
TIME: 20:35:35 UTCSOFTWARE: rsgps 1.37 RS93.prl 1.99.2 START: 2014/09/25 22:33:00
EPHEMERIS: igr18114.eph [rapid] STOP: 2014/09/25 23:41:00
NAV FILE: brdc2680.14n OBS USED: 5040 / 5390 : 94%
ANT NAME: CHCX90D-OPUS NONE QUALITY IND. 4.84/ 27.37
ARP HEIGHT: 1.8000 NORMALIZED RMS: 0.318

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2014.73415)

X: -1393112.706(m) 0.015(m) -1393113.567(m) 0.015(m)
Y: -4269852.660(m) 0.036(m) -4269851.409(m) 0.036(m)
Z: 4515236.731(m) 0.043(m) 4515236.691(m) 0.043(m)LAT: 45 20 39.14275 0.008(m) 45 20 39.16309 0.008(m)
E LON: 251 55 48.70544 0.004(m) 251 55 48.65003 0.004(m)
W LON: 108 4 11.29456 0.004(m) 108 4 11.34997 0.004(m)
EL HGT: 1294.010(m) 0.057(m) 1293.334(m) 0.057(m)
ORTHO HGT: 1306.516(m) 0.058(m) [NAVD88 (Computed using GEOID12A)]

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 13) SPC (2500 MT)

Northing (Y) [meters] 5025773.599 122637.196
Easting (X) [meters] 259506.741 712061.776
Convergence [degrees] -2.18472326 1.04619435
Point Scale 1.00031118 0.99981083
Combined Factor 1.00010828 0.99960803

US NATIONAL GRID DESIGNATOR: 13TBL5950625773(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DG9745	MTEI ENGINC CORS ARP	N454447.035	W1083600.736	60953.1
DI3064	BIL6 BILLINGS 6 CORS ARP	N455816.251	W1075948.499	69929.5
DM7161	WYSH SHERIDAN CORS ARP	N444801.769	W1070035.715	103057.8
DL7758	P722 YNPBASSRCHMT2005 CORS ARP	N452725.985	W1093415.586	118227.6
AI5647	MAWY MAMMOTH WYOMING CORS ARP	N445824.319	W1104121.433	210080.4
DM7133	MTLW LEWISTOWN CORS ARP	N470314.929	W1092633.764	217636.6
DK7547	MTSU BOZEMAN CORS ARP	N453940.376	W1110242.008	235202.5

NEAREST NGS PUBLISHED CONTROL POINT

QW0529	GRAPE	N451729.830	W1080346.244	5879.2
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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.