

OPUS-RS solution : 018773_14_258_A1.14O OP1411071614553

opus <opus@ngs.noaa.gov>

Thu 9/18/2014 2:25 PM

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

FILE: 018773_14_258_A1.14O OP1411071614553

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: 0187258w.14oDATE: September 18, 2014
TIME: 20:24:36 UTCSOFTWARE: rsgps 1.37 RS51.prl 1.99.2 START: 2014/09/15 22:32:05
EPHEMERIS: igr18101.eph [rapid] STOP: 2014/09/15 23:54:45
NAV FILE: brdc2580.14n OBS USED: 4662 / 5430 : 86%
ANT NAME: CHCX90D-OPUS NONE QUALITY IND. 28.88/ 66.62
ARP HEIGHT: 1.800 NORMALIZED RMS: 0.285

REF FRAME: NAD_83(2011)(EPOCH:2010.0000) IGS08 (EPOCH:2014.70676)

X: -1416178.663(m) 0.004(m) -1416179.525(m) 0.004(m)
Y: -4257462.385(m) 0.009(m) -4257461.136(m) 0.009(m)
Z: 4519841.476(m) 0.018(m) 4519841.437(m) 0.018(m)LAT: 45 24 8.78650 0.007(m) 45 24 8.80667 0.007(m)
E LON: 251 36 3.95078 0.003(m) 251 36 3.89505 0.003(m)
W LON: 108 23 56.04922 0.003(m) 108 23 56.10495 0.003(m)
EL HGT: 1374.427(m) 0.018(m) 1373.759(m) 0.018(m)
ORTHO HGT: 1386.812(m) 0.021(m) [NAVD88 (Computed using GEOID12A)]

UTM COORDINATES STATE PLANE COORDINATES

UTM (Zone 12) SPC (2500 MT)

Northing (Y) [meters] 5030949.366 128690.677
Easting (X) [meters] 703565.186 686186.534
Convergence [degrees] 1.85276057 0.80545740
Point Scale 1.00010952 0.99978227
Combined Factor 0.99989406 0.99956688

US NATIONAL GRID DESIGNATOR: 12TYR0356530949(NAD 83)

BASE STATIONS USED

PID	DESIGNATION	LATITUDE	LONGITUDE	DISTANCE(m)
DI3064	BIL6 BILLINGS 6 CORS ARP	N455816.251	W1075948.499	70561.3
DM7161	WYSH SHERIDAN CORS ARP	N444801.769	W1070035.715	128188.1
DJ8992	P033 TENSLEEPTRWY2005 CORS ARP	N435710.415	W1072315.121	179966.6
AI5647	MAWY MAMMOTH WYOMING CORS ARP	N445824.319	W1104121.433	186239.1
DM7133	MTLW LEWISTOWN CORS ARP	N470314.929	W1092633.764	200506.8
DK7547	MTSU BOZEMAN CORS ARP	N453940.376	W1110242.008	208716.5

NEAREST NGS PUBLISHED CONTROL POINT

QW0681	25 DHW	N452328.	W1082434.	1506.5
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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.