

Technical Data Information Report

RID Number	Transmitter	Transmitter Organization	Receiver	Receiver Organization	Keyword 1
7838.02	Brickey	TerraSpectra Geomatics	QARC	Nye County NWRPO	GWE

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Document Title/Subject: Post-Processed GPS Positions for GWE Wells NC-GWE-PV-1 and NC-GWE-PV-2.

Data Originator/Preparer: Dave Brickey

Data Description
This RID supersedes RID 7838.01. The purpose of the GWE Wells GPS data collection task was to develop differentially corrected GPS positions for the GWE Wells in Pahrump Valley, Amargosa Valley, Oasis Valley, and the vicinity of a Gravity Fault. There were four (4) GPS data collection days: 11/23/11, 11/30/11, 12/4/11, and 12/5/11. This RID covers only GPS data collection on 11/23/11 for the Pahrump Valley GWE wells, PV-1 and PV-2, and NGS Survey Marker Pahrump NW Base. One ESRI Shapefile (GWE_Wells_PV1_PV2.shp) and one MS Excel spreadsheet (GWE_Wells_PV1_PV2.xlsx) are presented, providing post-processed GPS Horizontal and Vertical Positions for GWE Wells NC-GWE-PV-1 and NC-GWE-PV-2. File GWE_WELLS_PV1_PV2 is posted to the NWRPO website as rid7838_02.zip.

Data Collection Method
This data collection effort utilized a GeoXH 6000 GNSS (global navigation satellite system) unit and Zephyr Model 2 antenna. The Zephyr Model 2 L1/L2 antenna was attached to a tripod mounted ~2m range pole. Measurements were made and are reported here at the top of metal well casing. Test and verification was performed at National Geodetic Survey (NGS) Survey Control Points with occupation at Pahrump NW Base (PID = GS0851), Lathrop (PID = GS0091, and Beatty High School Center of Population (PID = DG4047). These base stations were selected for their proximity to the four groupings of GWE wells and because they were among the few NGS Survey Control Points in Southern Nye County that were GPS observed and part of the NAD83 (2007) adjustment with an accuracy estimate at the 95% confidence level of 0.67 cm for northing and easting and at least 1.76 cm for the ellipsoid height.

The Primary Data Quality Objective (DQO) was for Carrier Fixed Post processing and could not be met for lack of required base stations within 10 km of the GWE wells. The Secondary DQO (10cm + 1ppm horizontal and vertical accuracy) was achieved, based upon comparison to the known Survey NGS Survey Control Points locations. Baseline length to base stations ranged from 63-84 km, falling well within the required 10-250km. The required minimum occupation time was 2 minutes, and was achieved with 45 minutes of logging at one second intervals. These data collection parameters met the Trimble documented standard for H-Star Carrier Float Post processing and was achieved for the GWE wells and NGS Survey Control Points.

For estimated horizontal and vertical accuracies at NC-GWE-PV-1 and NC-GWE-PV-2, see the Data Limitation section below.

Data Collection Location: GWE Wells NC-GWE-PV-1, NC-GWE-PV-2 in Pahrump Valley, Nye County, Nevada

Data Collection Period: 11/23/2011

Data Sources: Trimble Raw Data Files: R112315A.ssf, R112312D.ssf. Final Processed Data Files: GWE_Wells_GF_and_OV_d83.shp and GWE_Wells_GF_and_OV_d83.xlsx.
Supporting Data: GPS (GNSS) and base station data, Trimble metadata files, a GPS Data Collection and Post-Processing Log, and digital photographs taken onsite are part of the QA package and may be requested from the NWRPO office.

Data Censoring: None

Data Processing: Trimble GPS Pathfinder Office V5.20 for differential correction of GPS positions, using H-Star Carrier Float Post-processing

Data Limitations

These developed GPS coordinates were not developed using survey techniques or instrumentation, and should not be considered a survey. Horizontal and vertical positional accuracy for PV-1 and PV-2 is expected to be within 16.6 cm (6.54in).

The GeoXH 6000 GNSS unit is an updated version of the GeoXH 2005 GPS unit. The GeoXH 6000 improved specification were found in the GeoExplorer 6000 Series GeoXH Handheld Datasheet (2011) and the GeoExplorer 600 Series: Customer FAQs (July 7, 2011).

Governing QA Docs:

TP-9.8, Rev. 2

Frequency of Transmittal

As Needed

Direct Questions
About Data To:

NWRPO QA Records Center