Technical Data Information Report

RID Number	Transmitter	Transmitter Organization	Receiver	Receiver Organization	Keyword 1
7838.03	Brickey		QARC	Nye County NWRPO	GWE

Document Date	2/21/2012	General Document Type	QA Program Doc	Keyword 2	Position Coordinates
Entry Date	3/19/2012	Detail Document Type	Data	Keyword 3	GPS

Document Title/Subject

Post-Processed GPS Position for GWE Well NC-GWE-PV-3.

Data Originator/Preparer

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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, & 12/5/11. This RID covers only GPS data collection on 11/30/11 for the Pahrump Valley GWE well NC-GWE-PV-3, and NGS Survey Marker Pahrump NW Base. One ESRI Shapefile (GWE_Wells_PV3.shp) and one MS Excel spreadsheet (GWE_Wells_PV3.xlsx) are presented, providing Post processed GPS Horizontal and Vertical Positions for GWE Well NC-GWE-PV-3. File GWE_Wells_PV3.xlsx is posted to the NWRPO website as rid7838_03.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-3, see the Data Limitation section below.

Data Collection Location

GWE Well NC-GWE-PV-3 in Pahrump Valley, Nye County, Nevada

Data Collection Period

11/30/2011

Data Sources

Trimble Raw Data Files: R113012A.ssf. Final Processed Data Files: GWE_Wells_PV3_d83.shp and GWE_Wells_PV3_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-3 is expected to be within 16.3 cm (6.42in).
The GeoXH 6000 GNSS unit is an updated version of the GeoXH 2005 GPS unit. The GeoXH 6000 improved specifications were found in the GeoExplorer 6000 Series GeoXH Handheld Datasheet (2011) and the GeoExplorer 6000 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