# NYE County NWRPO -Technical Data Report

| RID No. | Transmitter | Org. | Receiver | Org. | Key word1 | Title/Description |
|---|---|---|---|---|---|---|
| 7676.00 | Kryder | NWRPO | QARC | NWRPO | Gravity | Gravity Measurement Data 2008 |

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**Doc. Date** 2/8/2008 **General Doc. Type** QA Program Doc **Keyword2** Surface

**Entry Date** 8/12/2009 **Detailed Doc. Type** Data Packet **Keyword3** data

**Data Originator Preparer** Levi Kryder

**Title of Data** Gravity Measurement Data 2008

**Description of Data** Data on a CD as follows: 1) Lacoste and Romberg Gravlog Software Output Files in comma separated values format (*.csv); 2) Excel spreadsheet entitled "NC-Grav_2008.xls" compiling all data from 1); 3) Adobe portable document format (*.pdf) file of 2) entitled "NC-GRAV_2008.pdf"; and 4) Hardcopy printout of 3).

**Data Collection Method** All data were collected in accordance with TPN-12.2 Rev. 0.

**Data Location(s)** Various locations in Amargosa Valley, Jackass Flat, and Crater Flat.

**Data Collection Period(s)** 01/17/2008 to 02/08/2008

**Data Source(s)** Lacoste and Romberg Model G Gravimeter with Aliod100 Upgrade, serial number G-400, Palm model m515 serial number 00uhpk2a95b, Lacoste and Romberg Gravlog software version 2.0 (©2003).

Supporting Data: Positional data in each reading taken from RID 7674, Global Positioning System Raw and Corrected Data in support of 2008 Gravity Survey. Readings and processes were recorded in Scientific Notebook #176, pages 29-52. Steps for data acquisition, accuracy limitations, and software instructions were detailed in "Instruction Manual Model G & D Gravity Meters" and "Aliod100 Upgrade User's Manual" (RID 7455).

**Data Censoring** None

**Data Processing** Positional information (latitude, longitude, and elevation), gravimeter counter setting, and station names were manually entered into Gravlog software on the Palm m515 via touchscreen. Palm m515 internal clock was set to "Zulu Time" (Coordinated Universal Time, or UTC) manually. Gravlog software calculated local earth tide correction based on positional and time information. Based on input from instrumentation within the gravimeter via serial port, raw gravity, long level (a galvanometer reading), cross level (a galvanometer reading), sensor temperature, and battery voltage were recorded by Gravlog software. Gravlog software subtracted the tide correction from the raw gravity reported by the gravimeter to calculate tide corrected gravity. All data for each station were recorded in the memory of the Palm m515, and were periodically downloaded to a workstation at the NWRPO using Windows Hyperterminal software in text capture mode via a Palm-to-Serial null modem cable. The resultant text file was formatted in comma separated values (*.csv) format, which was then read using Excel software. Per the manual, there is a 40 second digital FIR low pass filter applied to the gravity data before it is displayed or sent to the serial port. The stated purpose of this filter is to average out the natural background seismic noise. Temperature and battery voltage data are acquired with less filtering, but the exact parameters are not discussed.

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**Data Limitations** The accuracy of the positional data is discussed in RID 7674, Global Positioning System Raw and Corrected Data in support of 2008 Gravity Survey. Gravimeter data resolution is 0.001 mGal, with a range of 100 mGal. Repeatability is listed at 0.01 mGal. Linearity is listed at better than 0.01% of full scale. Electronic drift is listed at <0.001 mGal per 1000 hrs (not including sensor drift). Meter drift is listed at 1 mGal per month or less. Gravimeter information taken from "Aliod100 Upgrade User's Manual", part of RID 7455.

**Governing QA Docs.** TPN-12.2 Rev. 0

**Frequency of Transmittal** Once

**Direct Questions About Data To-** NWRPO QA Records Center