NYE County NWRPO -Technical Data Report

RID No.	Transmitter	Org.	Receiver	Org.	Key word1	Title/Description
5758	Gilmore	Nye County	QARC	Nye	10S	EWDP-10S Westbay Data, 5/7/02 - 5/29/03

1

Doc. Date 5/8/2003 **General Doc. Type** QA Program Doc **Keyword2** WB

Entry Date 7/28/2003 **Detailed Doc. Type** Data **Keyword3** data

Data Originator Preparer Kathy Gilmore

Title of Data EWDP-10S Westbay Data, 5/7/02 - 5/29/03

Description of Data One CD containing an Excel file "052903_10S QA.xls". This file contains probe pressure data for atmospheric pressure for probe 0, calculated water elevations for probes 1 and 2, and temperature data for probes 0, 1, and 2 for the period from 5/7/02 to 5/29/03 collected at Phase III EWDP-10S Westbay instrumented well.

Data Collection Method Westbay Mosdax Datalogger and pressure and temperature probes

Data Location(s) EWDP-10S

Data Collection Period(s) 5/7/02 to 5/29/03

Data Source(s) From 5/7/02 to 9/23/02: Westbay datalogger SN 2554 (Probe 0 - atmospheric) and (2) 250 psi probes - Probe 1 SN 2452 and Probe 2 SN 2519.
From 12/4/03 to 2/6/03: Westbay datalogger SN 2554 (Probe 0 - atmospheric) and (2) 250 psi probes - Probe 1 SN 2202 and Probe 2 SN 2614.
From 2/20/03 to 5/29/03: Westbay datalogger SN 2554 (Probe 0 - atmospheric) and (2) 250 psi probes - Probe 1 SN 2611 and Probe 2 SN 2613.
Probe 1 depth = 682.13 ft and Probe 2 depth = 838.98 ft. Depths reflect measured values from the well ground surface to the subject measurement port.
Supporting Data: original Westbay pressure and temperature data can be found in RIDs 5062, 5145, 5147, 5215, 5450, 5479, 5540, 5614, and 5662; Well Completion Diagram in RID 5261; Wellhead Protection Detail in RID 5456; Summary Casing Log in RID 4923; and field notes in Scientific Notebooks #143 (RID 5522) and #155 (RID 6350).

Data Censoring The data from probe 1 (SN 2202) from 1/29/03 to 2/6/03 is censored due to probe failure.

Data Processing The water elevation (ft, amsl [above mean sea level]) in a Westbay isolated zone is calculated from the pressure probe measurement (lb/ft^2) below the water table by subtracting the atmospheric pressure measurement (lb/ft^2) at the ground surface from the pressure measurement, dividing the result by the specific weight (lb/ft^3) of water at 15 degrees Celsius, and adding to this result the elevation (ft, amsl) of the probe. This calculation is made prior to submitting a QA processed data file to the Quality Assurance Records Center (QARC).

Data Limitations EWDP-10S Westbay data limitations (data collection period 5/7/02 to 5/29/03). The following text contains additional information necessary for interpretation of the attached water elevation and temperature data. Time frames are listed for each activity. Certain activities, such as equipment testing or water sampling, may have impacted the data and the data analyzer should be aware of this.

6/17/02 - 6/27/02 data gap - 10S datalogger was used at a different wellsite.

9/11/02 - 9/12/02 data gap due to water sampling.

9/23/02 - 12/4/02 data gap - probes were pulled out of well.

12/4/02 - 2/6/03 Due to equipment problems, null values were downloaded during this time frame for various datapoints. These points were deleted from the dataset. When properly operating, the data logger should record at least 72 pressure and temperature measurements per day. For Probe 1, a total of 3,558 measurements were recorded during the period between the first measurement recorded on 12/5/02 and the last measurement recorded on 1/28/03; under ideal conditions at least 3,960 measurements should have been recorded. For Probe 1, a total of 4,112 measurements were recorded during the period between the first measurement recorded on 12/5/02 and the last measurement recorded on 2/5/03; at least 4,536 measurements should have been recorded. However, the null values were censored from the data set and there should be no limitations on the use of the non-censored data for use in the calculation of average daily water levels, given that an average of 65 measurements were recorded each day.

1/29/03 - 2/6/03 Probe 1 data gap due to probe failure.

2/6/03 - 2/20/03 data gap- probes were pulled out of well due to equipment failures.

Port depths used for water elevation calculations are directly measured values reflecting the distance between ground level and the measurement port and are reported in RID 5616 (measurement accuracy = +/- 0.015% of the depth measured). Specific weight values used in calculations assume a uniform water temp of 15 ° C. Accuracy of the downhole probe pressure is based on the probe pressure range: 250 psi probe = +/- 0.25 psi (~0.58 ft). Probe temperature accuracy =+/- 1° C. The elevations were not corrected for temperature or borehole deviation; temperature and deviation information are available in the geophysical logging suite for this well (RIDs: 4940, 5020, and 5416).

The water-level elevations presented must be considered approximate because of the potential error in the GPS-based elevation of the land surface at the well site which is believed to the on the order of +/- 1.75 ft. according to work performed by the Center for Nuclear Waste Regulatory Analyses. The potential error in the GPS-based elevations does not affect the depth to water nor the absolute change in water levels over time that may be calculated using the elevation datum for land surface. The potential error may, however, result in limitations in the use of these data for the calculation of hydraulic gradients between wells with the error induced in such calculations being inversely proportional to the distance between the two wells being used to perform the calculation, and directly proportional to the differences in surveying and processing techniques if different surveys were conducted for the two wells.

Governing QA Docs. TP-9.2 Rev. 1

Frequency of Transmittal Biannually

Direct Questions About Data To- Nye County QA Records Center