NYE County NWRPO -Technical Data Report

RID No.	Transmitter	Org.	Receiver	Org.	Key word1	Title/Description
6549	Gilmore	Nye County NWRPO	QARC	Nye	22S	EWDP-22S Westbay Data, 5/18/04 - 11/16/04

Doc. Date	3/3/2005	**General Doc. Type**	QA Program Doc	**Keyword2**	WB
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Entry Date	3/8/2005	**Detailed Doc. Type**	Data	**Keyword3**	data

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Title of Data EWDP-22S Westbay Data, 5/18/04 - 11/16/04

Description of Data One CD containing an Excel file "111604_22S QA.xls". This file contains probe pressure data for atmospheric pressure for probe 0, calculated water elevations for zones 1, 2, 3 and 4, and temperature data for probes 0, 1, 2, 3 and 4 for the period from 5/18/04 to 11/16/04 collected at Phase III EWDP-22S Westbay instrumented well.

Data Collection Method Westbay Mosdax Datalogger and pressure and temperature probes

Data Location(s) NC-EWDP-22S

Data Collection Period(s) 5/18/04 to 11/16/04

Data Source(s) From 5/18/04 to 11/16/04: Westbay datalogger SN 2295 (Probe 0 - atmospheric) and three 250 psi probes- Probe 1 SN 2612, Probe 2 SN 2519, and Probe 3 SN 2615; and one 1000 psi probe - Probe 4 SN 2619.

Probe 1 depth = 560.09 ft
Probe 2 depth = 743.08 ft
Probe 3 depth = 960.55 ft
Probe 4 depth = 1148.46 ft

Depths reflect measured values from the well ground surface to the subject measurement port.
Original Westbay pressure and temperature data can be found in RIDs 6251, 6318, 6399 and 6458; Well Completion Diagram in RID 5264; Wellhead Protection Detail in RID 5457, Summary Westbay Casing Log in RID 5547, and manual water levels in RID 6360.

Data Censoring none

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-22S Westbay data limitations (data collection period 5/18/04 to 11/16/04). 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.

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 (accuracy = +/- 0.015% of the depth measured).

Accuracy of the downhole probe pressure is based on the probe pressure range: 250 psi probe = +/- 0.25 psi (approx. +/-0.58 ft), 1000 psi probe = +/-1.0 psi (approx. +/-2.31 ft).

Specific weight values used in calculations assume a uniform water temp of 15 ° C. 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: 4615, 5024 and 5412). A sonic log is also available in RID 5242.

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 the differences in surveying and processing techniques if different surveys were conducted for the two wells.

Pronounced changes in atmospheric pressure and coincident spikes in the water level elevations in each probe occurred on or about 6/7/04, 9/2/04, 9/19-21/04, 10/26/04, and 11/2/04. Between 9/18/04 and 9/21/04, there were a serious of tremors in the region generally centered near Lat N37.9o to N38.3o and Long W118.6o that may have had some effect on water levels. A water level decline between 8/26/04 and 8/27/04 is disproportionate to changes in barometric pressure over that period. On-site or near site activities may have affected the water levels during this brief period of time. As such, the water level data between 18:48 on 8/26/04 and 13:48 on 8/28/04 should not be used for calculating barometric efficiencies.

Governing QA Docs. TP-9.2 Rev. 1, WP-10 Rev. 0

Frequency of Transmittal Biannually

Direct Questions About Data To- Nye County QA Records Center