NYE County NWRPO -Technical Data Report

RID No.	Transmitter	Org.	Receiver	Org.	Key word1	Title/Description
7164	Sampson	Nye County NWRPO	QARC	Nye	24PB	Thermal logging data and original Westbay MOSDAX pressure and temperature data collected at NC-EWDP-24PB from 8/8/06 to 8/12/06 using Sensornet Sentinel Distributed Temperature Sensor (DTS) equipment.

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Entry Date 2/21/2007 **Detailed Doc. Type** Data **Keyword3** Logging

Data Originator Preparer
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Title of Data
Thermal logging data and original Westbay MOSDAX pressure and temperature data collected at NC-EWDP-24PB from 8/8/06 to 8/12/06 using Sensornet Sentinel Distributed Temperature Sensor (DTS) equipment.

Description of Data
One cd containing temperature data (raw and processed) collected in NC-EWDP-24PB from 8/8/06 to 8/12/06 using Sensornet DTS equipment, including a reference temperature probe (RTP). Raw Sensornet data are in document description format (*.ddf) as well as *.tdf, *.txt, and *.tcd files, and processed data are in Excel spreadsheets (*.xls). Also included on the cd are the raw Westbay data files (*.WD2 format) and the corresponding files converted with WinGT software to comma separated value format (*.CSV). Sensornet DTS configuration files are stored in *.cfg files.

Data Collection Method
The fiber optic temperature sensing cable was attached to a Westbay data cable and run to the bottom of well NC-EWDP-24PB. Westbay MOSDAX probe EM2619 was hung at approximately 1155 feet (ft) below the top of the well casing. Westbay MOSDAX probe EM2444 (with the RTP attached adjacent to Westbay probe measurement port) was installed at approximately 425 ft below the top of well casing (approximately 20 ft below measured water table) on a second cable. The previously installed heater wire on the exterior of the well casing was used. Westbay data were collected on data logger MDL2565. The fiber optic cable is connected to the Sentinel DTS unit, which continuously records temperature data along the length of the cable (every 1.16 ft). The heater wire connected to a generator, which supplied power at 240 volts.

After data collection started, data were "stacked" every 900 seconds, and each "stack" recorded as a temperature profile along the length of the cable (and the well) every 900 seconds. After in situ conditions were recorded by the Sentinel DTS, the heater wire was turned on and allowed to heat the well for approximately 39.25 hours. At that time, the heater wire was turned off, and the well allowed to cool while data logging continued.

Gross deflections from baseline temperature profile at specific depths may indicate a change in geology, well completion materials, or local flow features.

Data Location(s)
NC-EWDP-24PB

Data Collection Period(s)
8/8/06 to 8/12/06

Data Source(s)
Sensornet Sentinel DTS; 1309 ft fiber optic cable; Sensornet RTP; Westbay MOSDAX probes EM2444 (0-250 psi) and EM2619 (0-1000 psi); and Westbay MOSDAX Data Logger MDL 2565.

Supporting Data: Field Scientific Notebook #165, pages 80 to 84.

Data Censoring
Negative length data associated with the Sentinel DTS raw data were removed upon import to the Excel spreadsheet.

Data Processing
Data were imported into an Excel spreadsheet for ease of manipulation and graphing. Westbay data were converted from *.WD2 format to *.CSV format for ease of manipulation and graphing.

Data Limitations
In 24PB, the heater wire is installed on the outside of the piezometer casing, but the fiber optic cable is installed inside the casing. The casing being between the two may produce a "damping" effect on the temperature data. These data were collected to corroborate data collected in 24PB from 6/20/06 to 6/24/06.

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Governing QA Docs.	TPN-6.1 Rev. 0
Frequency of Transmittal	As required by PI
Direct Questions About Data To-	NWRPO QA Records Center