## **NYE County NWRPO -Technical Data Report** Receiver Org. Org. RID No. **Transmitter** Key word1 Title/Description Report, "Analysis of 24-Hour Pump Test in Well NC-EWDP-3S, 4802 **QARC** Cox Questa Nye 3S Near Yucca Mountain, Nevada", NWRPO-2002-01, January Keyword2 pump Test Report Doc. Date 11/1/2001 General Doc. Type 2002, Prepared by Questa Engineering Corporation Entry Date 1/25/2002 Detailed Doc. Type Technical Report Keyword3 Hydrologic Dave Cox and Scott Stinson **Data Originator** Preparer Analysis of 24-Hour Pump Test in Well NC-EWDP-3S, Near Yucca Mountain, Nevada Title of Data This record contains a hard copy and electronic file of the subject report. The report describes the test procedure, analysis methodology, results and Description of Data hydrologic interpretation of a 24-hr. pump test and 2-hr. recovery period conducted in April 2001 in well NC-EWDP-3S. The purpose of the test was to determine aquifer properties, such as permeability and well efficiency, for subsurface characterization. During the NC-EWDP-3S pump test and recovery, pressure was monitored in the adjacent well NC-EWDP-3D to evaluate inter-well communication. Data collection is described in the Test Procedures and Description section (Section 2.1) of the report. In accordance with TP-9.5, Westbay pressure **Data Collection** Method sensors were placed above the submersible pump in well NC-EWDP-3S, and below the water table in the nearest offset well (NC-EWDP-3D), to measure the pressure response to pumping and recovery. Barometric pressure during the test was also recorded. Pump rates were determined using a 50-gal. (189.3-L) drum and a stopwatch. Data Location(s) NC-EWDP-3S is located about 0.2 miles (about 0.3 km.) north of Highway 95 at a distance approximately 7.5 (about 12 km.) miles west-northwest along the highway from the Lathrop Wells Junction, near the point where Crater Flat is closest to the Amargosa Desert. Data Collection Field activities were conducted in April 2001. A preliminary test interpretation was prepared in April 2001, and the final report was completed in January Period(s) 2002. The original test data were submitted by Nye County personnel to the NWRPO. See RID 4116 for pressure and temperature data during spinner logging Data Source(s) and pump test, and field scientific notebook #132 (RID 4786). References to RIDs containing supporting well information, well logs, and other original data collected from NC-EWDP-3S can be found on the nyecounty.com web site under "EWDP" and "EWDP-3S". Water level sounder measurements were recorded as a check, and were found to have a nearly constant deviation from the Westbay Mosdax readings. Data Censoring The analysis was prepared utilizing the Westbay information. The original test data may be viewed in their entirety at the NWRPO QA Records Center in Pahrump, NV. Data processing for analysis is described in the Model Analysis section (Section 2.2.1) of the report. Data Processing There are no particular limitations regarding the pressure or rate data recorded during the test. The test interpretation is limited by the inherent differences **Data Limitations** between the actual aguifer system present, and the idealized aguifer model assumed in the analysis. Analysis of the test indicated the presence of a severely damaged zone in the immediate vicinity of the well, which is consistent with the operations history indicating grout was injected in another borehole very close to this well. The test was analyzed using an equivalent single layer system, with the well being located in the center of a square with constant pressure boundaries to account for pressure support from outside the damaged region. Differences between the active well results and the observation well results are considered to be within an acceptable range. Because of the inferred effects of grouting, the transmissivity and storage computed from this test are considered to be applicable to an extremely small region extending approximately 22 ft. (about 7 m) from this well.

Governing TP-9.5, TP-9.7

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