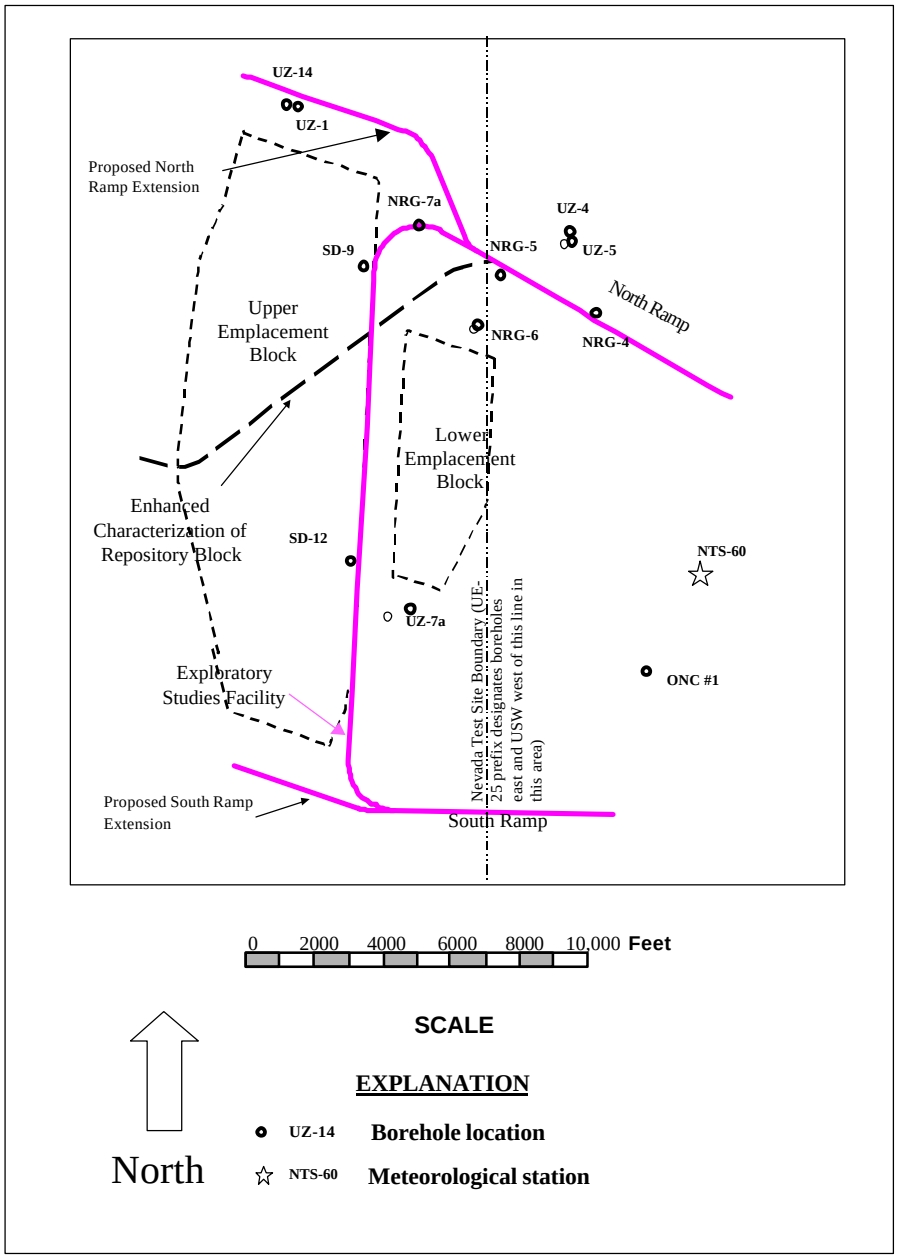



**Figure 3.1-1**
**Location of Selected Boreholes, the Exploratory Studies Facility, and the Enhanced Characterization of the Repository Block at the Yucca Mountain Site**

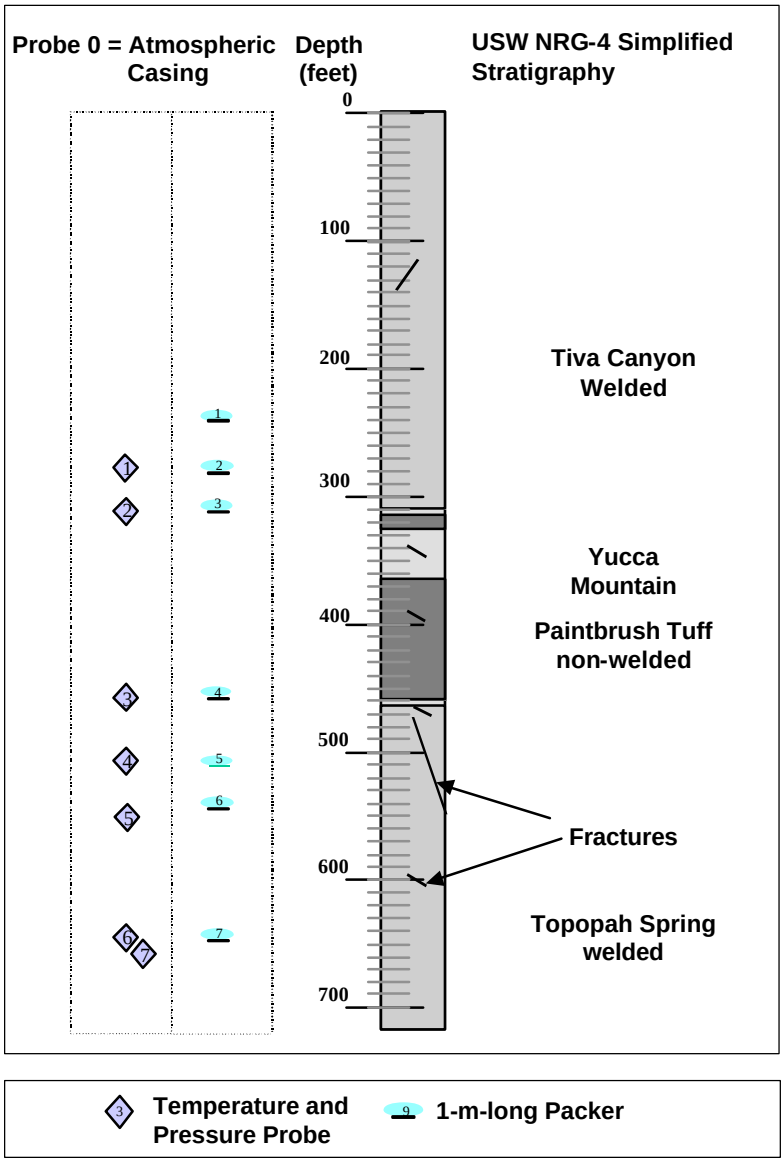



**Figure 3.1-2**
**Schematic Diagram of the Instrumentation and Simplified Stratigraphy in USW NRG-4**

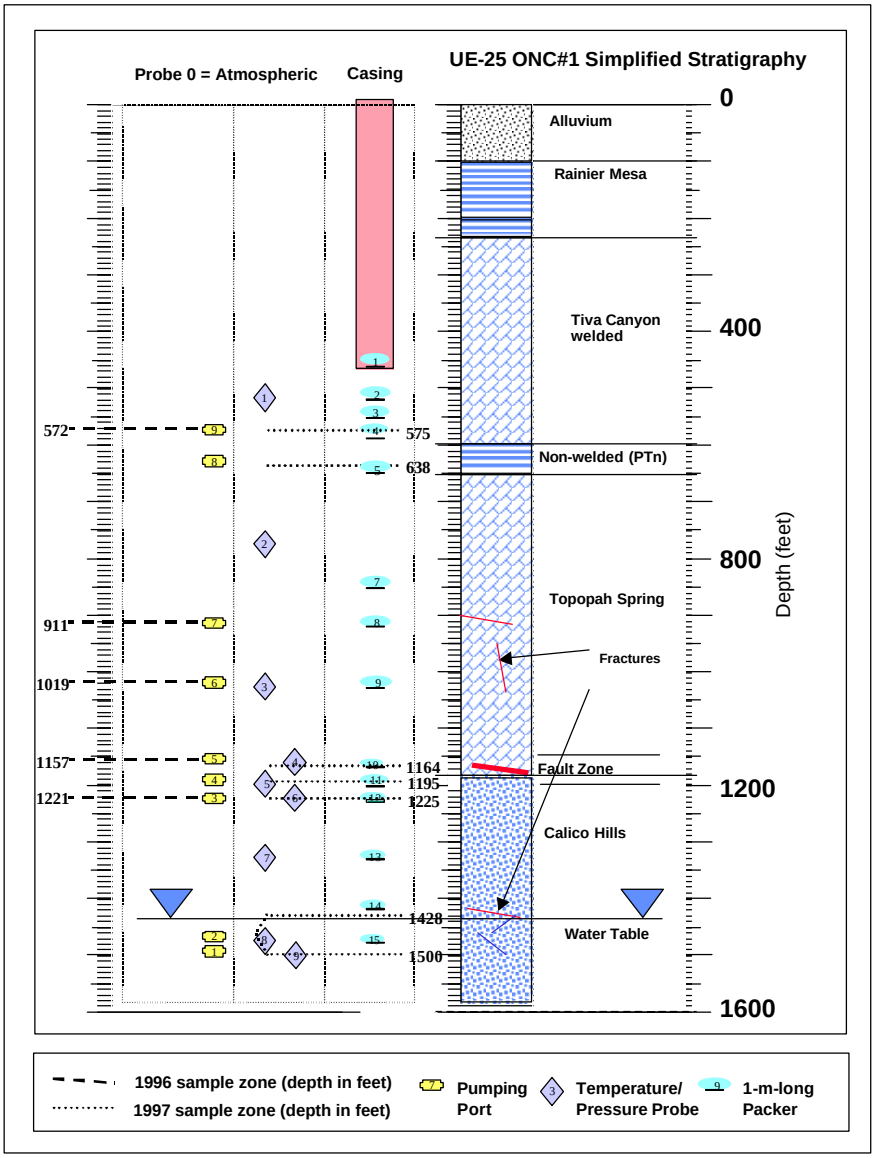



**Figure 3.1-3**
**Schematic Diagram of the Instrumentation and Simplified Stratigraphy in UE-25 ONC#1**

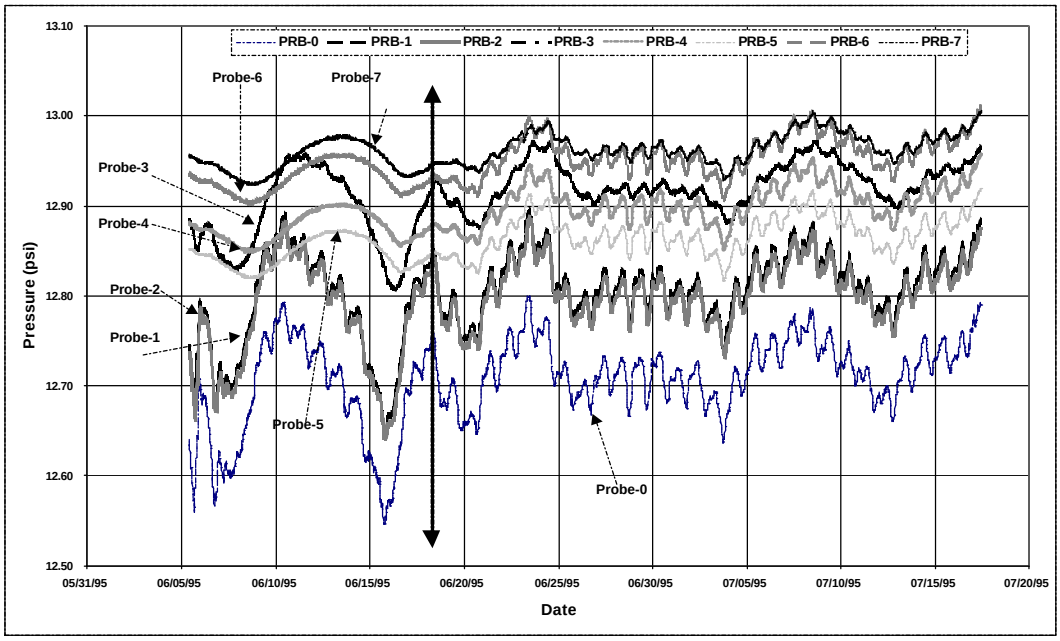
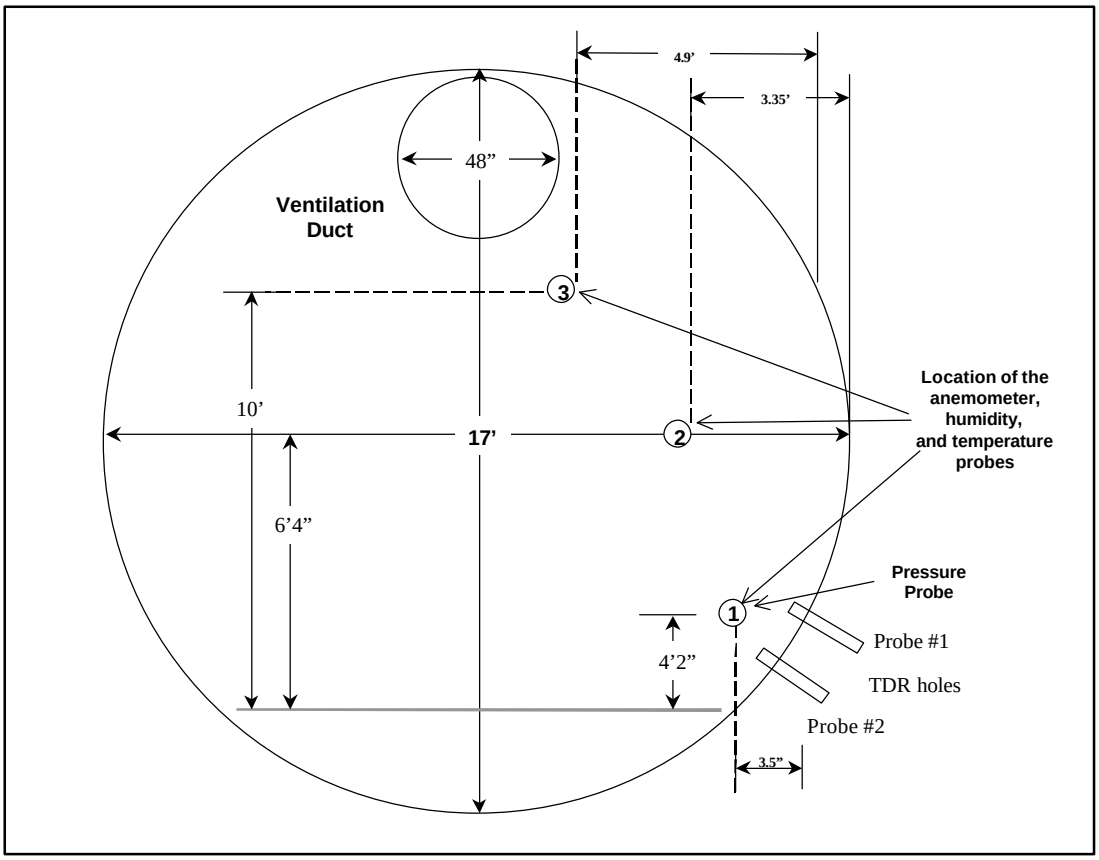
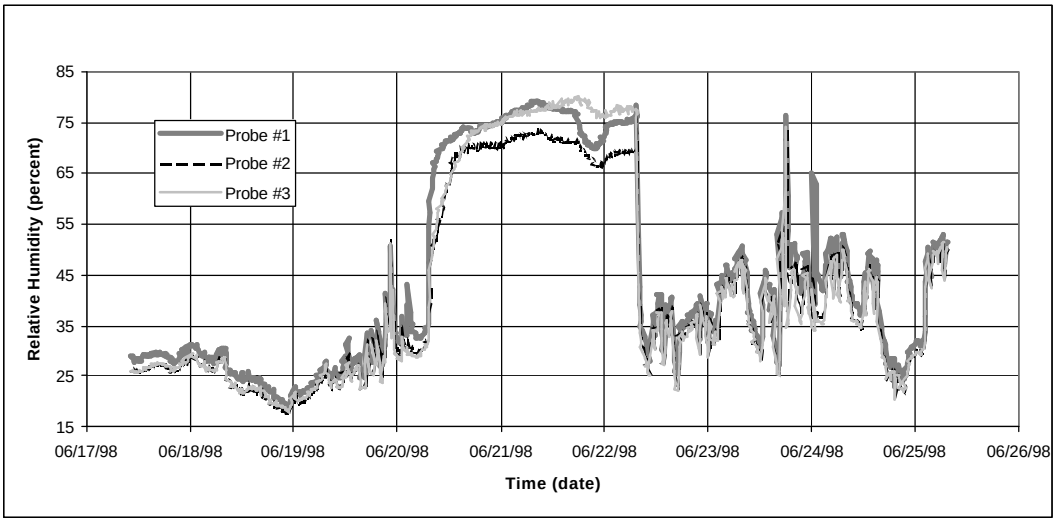



**Figure 3.1-4**
**Pneumatic Pressure Heads in Seven Probes Located in the Unsaturated Zone in USW NRG-4 prior to and Immediately after the Exploratory Studies Facility Broke through the Paintbrush Tuff Non-Welded Unit around June 15, 1995 (shown by double arrow)**



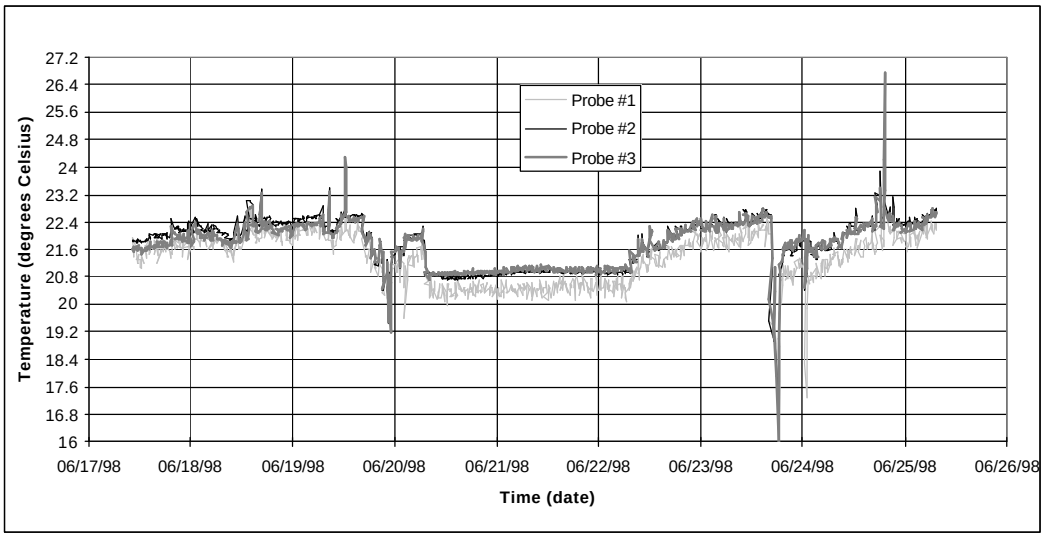

NOTE: TDR = time-domain reflectometry

**Figure 3.1-5**
**Location of Temperature, Pressure, Humidity, Anemometer, and Time-Domain Reflectometry Probes in the Enhanced Characterization of the Repository Block**



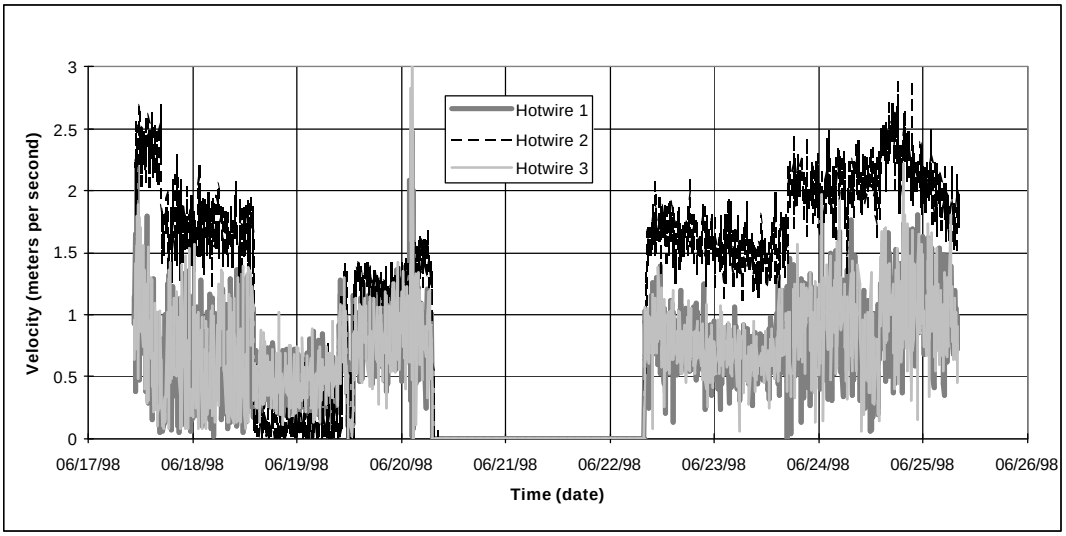

NOTE: See Figure 3.1-5 for location of the probes.

**Figure 3.1-6a**
**Relative Humidity at Three Cross-Sectional Points in the Enhanced Characterization of the Repository Block**



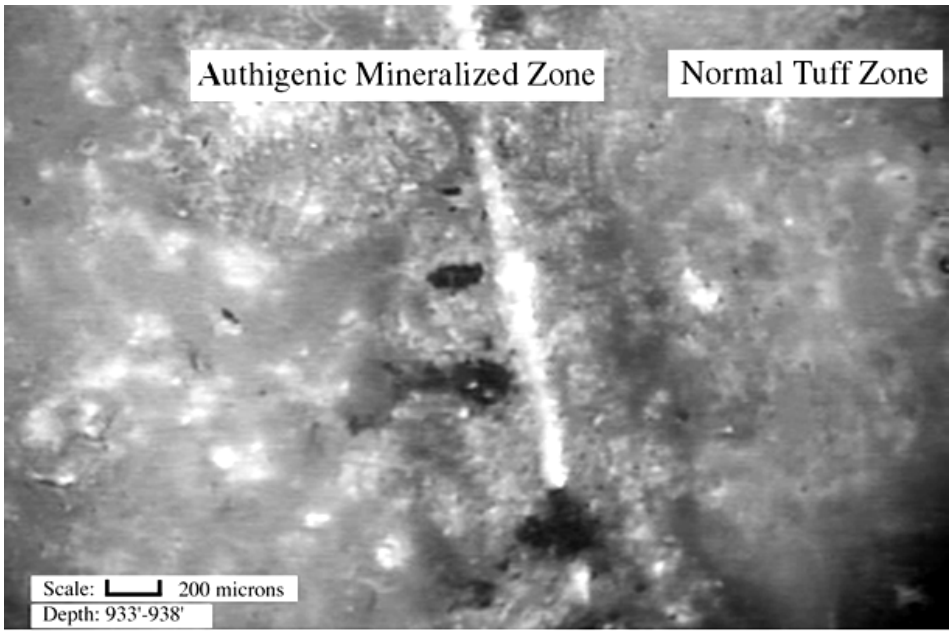

NOTE: See Figure 3.1-5 for location of the probes.

**Figure 3.1-6b**
**Temperature at Three Cross-Sectional Points in the Enhanced Characterization of the Repository Block**




NOTE: See Figure 3.1-5 for location of the probes.

**Figure 3.1-6c**
**Relative Air Velocity Measured at Three Cross-Sectional Points in the Enhanced Characterization of the Repository Block**




NOTE: The bleached zone is about 500 microns wide on either side of the fracture. It contains authigenic zeolites, some clay, manganese oxides, and quartz polymorphs. There is direct interconnectivity between the bleached zone and the fracture, which is still open. The bleached zone has sorption capabilities.

**Figure 3.1-7**
**Bleached Zone Fracture with Quartz Fracture Filling from the Topopah Spring Tuff (933 to 938 ft depth)**

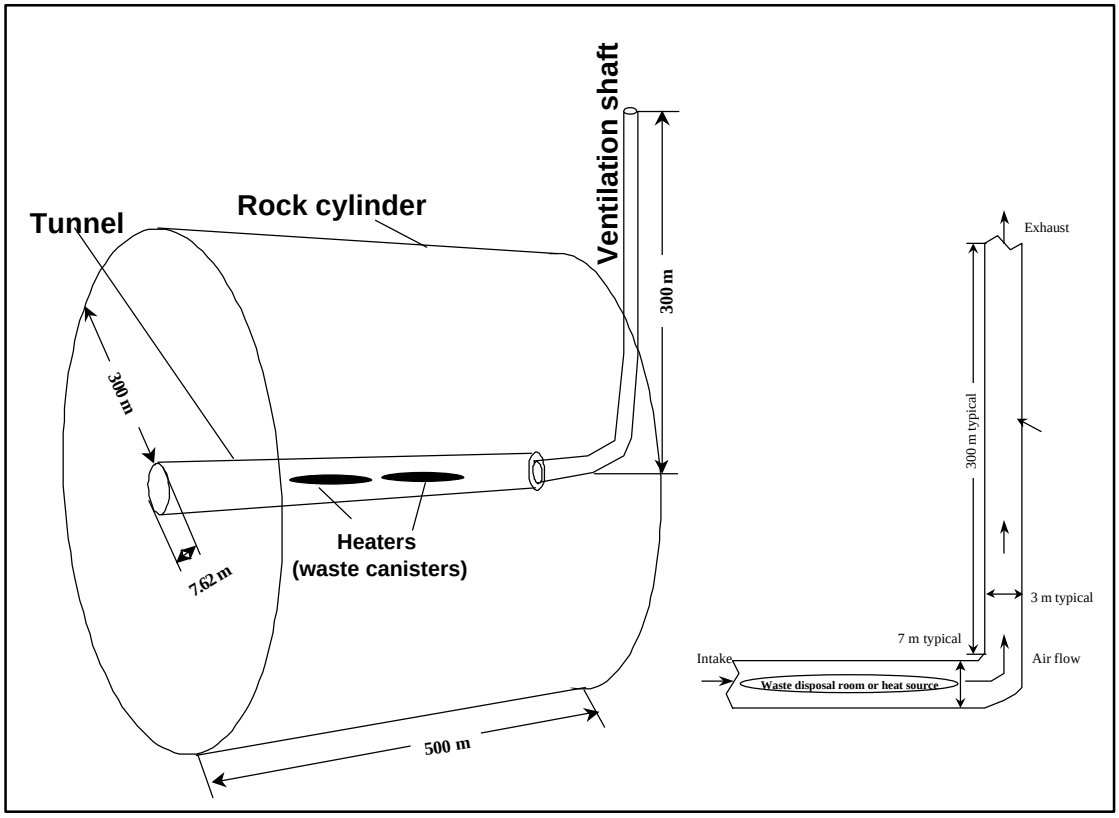
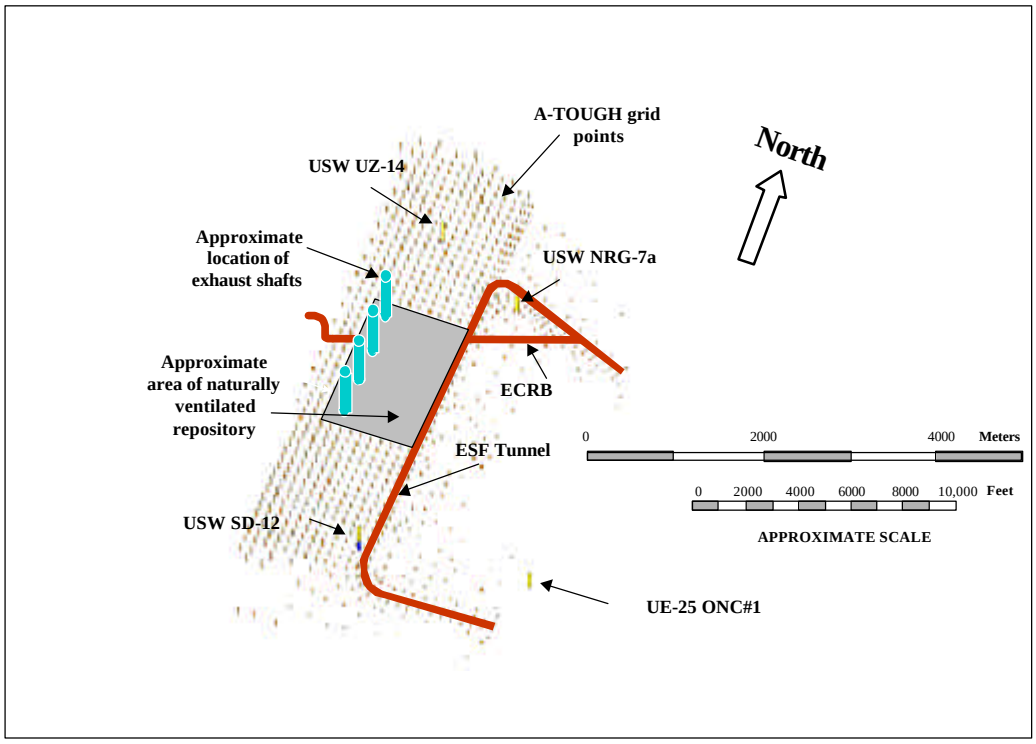
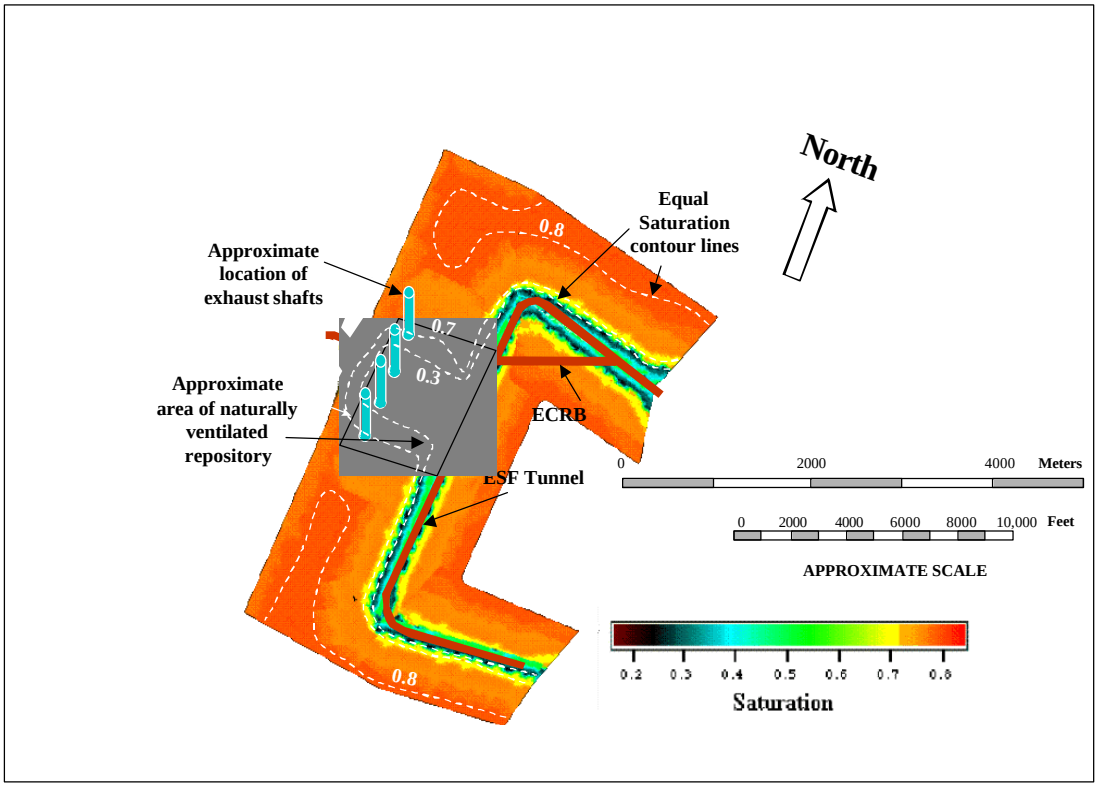



**Figure 3.2-1**
**Three-Dimensional and Cross-Sectional View of the Axisymmetric Tunnel Model**




NOTE: ECRB = enhanced characterization of the repository block; ESF = Exploratory Studies Facility

**Figure 3.2-2**
**Oblique View of Modified Site-Scale Unsaturated Zone Model**




NOTE: ECRB = enhanced characterization of the repository block; ESF = Exploratory Studies Facility

**Figure 3.2-3**
**Reduction in Water Saturation at the Repository Horizon after 1,000 Years of Ventilation, Assuming an Eddy Diffusivity Value of 0.01 and an Infiltration Rate of 4 mm/yr.**

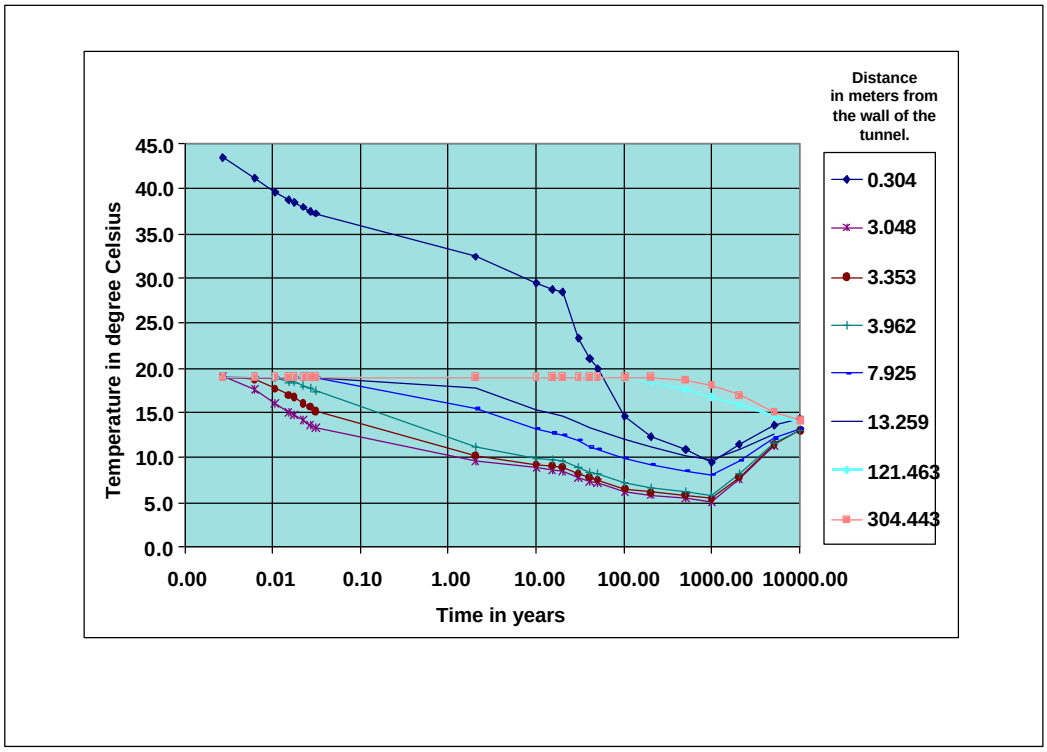



**Figure 3.2-4**
**Reduction in Temperature versus Time and Distance from Tunnel Wall with a Decayed Heat Load, Assuming an Eddy Diffusivity Value of 0.01 and an Infiltration Rate of 4 mm/yr.**

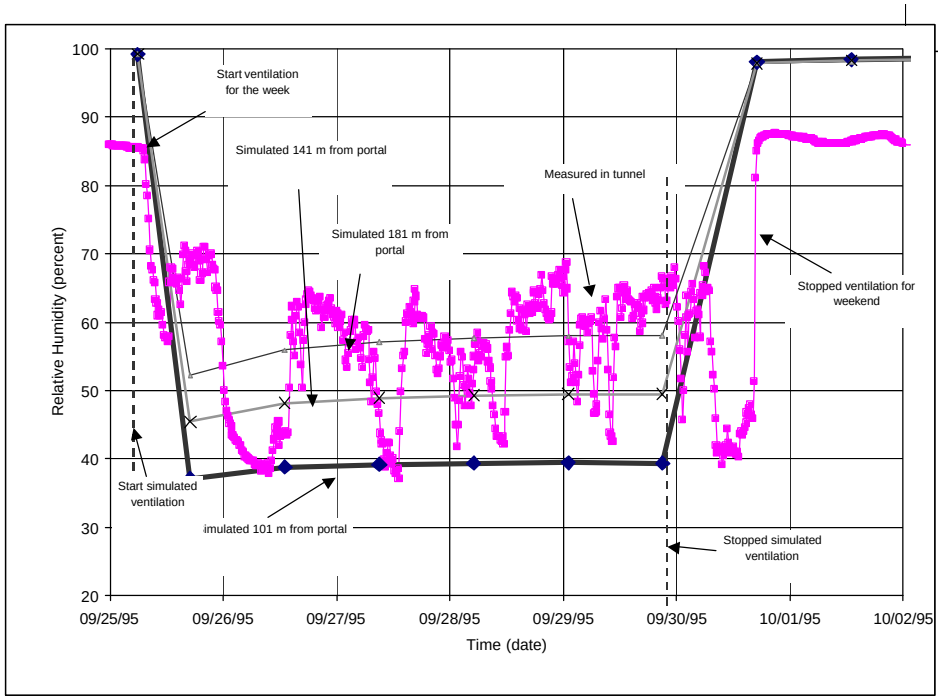



**Figure 3.2-5**
**Comparison between Measured and Simulated Relative Humidity in the Exploratory Studies Facility Tunnel during Construction, Assuming an Eddy Diffusivity Value of 0.01**

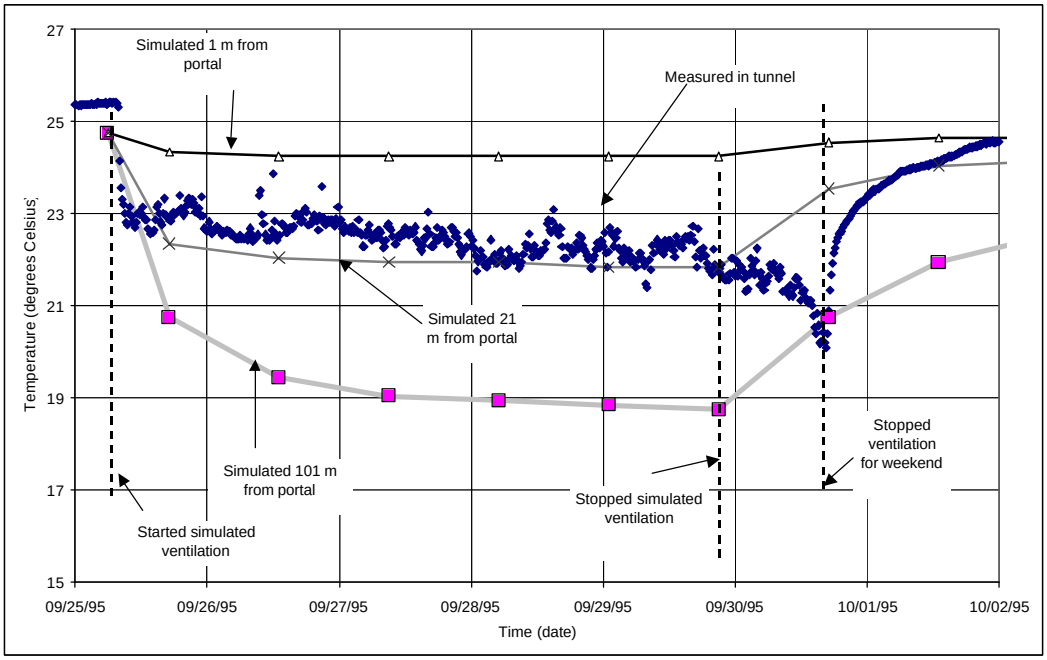



**Figure 3.2-6**
**Comparison between Measured and Simulated Temperature in the Exploratory Studies Facility during Construction, Assuming an Eddy Diffusivity Value of 0.01**

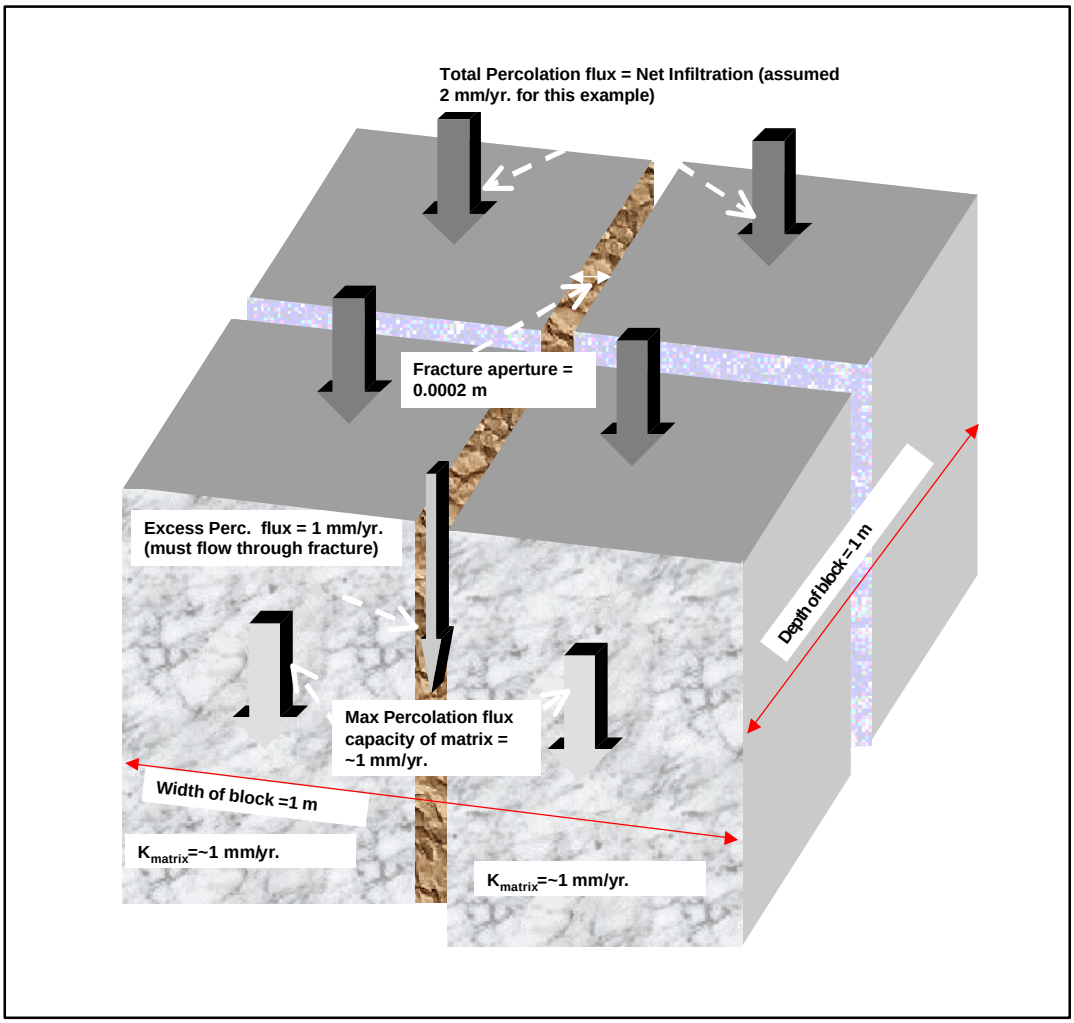



**Figure 3.3-1**
**Conceptual Example Illustrating Assumptions Used for Calculating Percolation through a Fractured Tuff**