

**INTERIM CHANGE NOTICE
(ICN)**

A. Document No.: PNNL-13023 Revision No.: 1		Effective Date of ICN: October 2004
Document Title: RCRA Groundwater Monitoring Plan for Single-Shell Tank Waste Management Area A-AX at the Hanford Site		Change Requested By: S. M. Narbutovskih
Document's Original Author: S. M. Narbutovskih and D. G. Horton		
B. Action: Make changes in the monitoring plan as described below in Section D. Attach this ICN to the front of the document.		
C. Effect of Change: This ICN documents the installation of two additional downgradient monitoring wells and two additional upgradient wells. It updates the monitoring network. The project scientist will provide a schedule change request providing the list of additional wells to the sample scheduler.		
D. Reason for Change/Description of Change: (1) Reason for Change: Update groundwater quality monitoring plan at WMA A-AX (PNNL-13023) to document the addition of two newly installed downgradient wells and two newly installed upgradient wells. The monitoring network is updated to reflect the addition of these new wells. Description of Change: (2) Replace Figure 1.2 on page 1.3 with the attached Figure 1.2. (3) Remove page 4.3 with Table 4.1; replace with the attached page 4.3 with Table 4.1 to document the addition of 4 newly installed wells to and the removal of 2 wells from the monitoring network. (4) Add Plates 4 and 5 at the end of the document.		
E. Document Management Decisions: For this ICN, S. P. Luttrell, T. G. Walker and S. M. Narbutovskih will sign approval. See attached distribution list.		
F. Approval Signatures (Please Sign and Date)		Type of Change: (Check one): Minor <input type="checkbox"/> X Major <input type="checkbox"/>

Process Quality Department: T. G. Walker

Thomas G. Walker

Date: 10/28/04

Approval Authority: S. P. Luttrell

S. P. Luttrell

Date: 10/26/04

Other

Approvals: S.M. Narbutovskih (Technical)

S.M. Narbutovskih

Date: Oct 22, 04

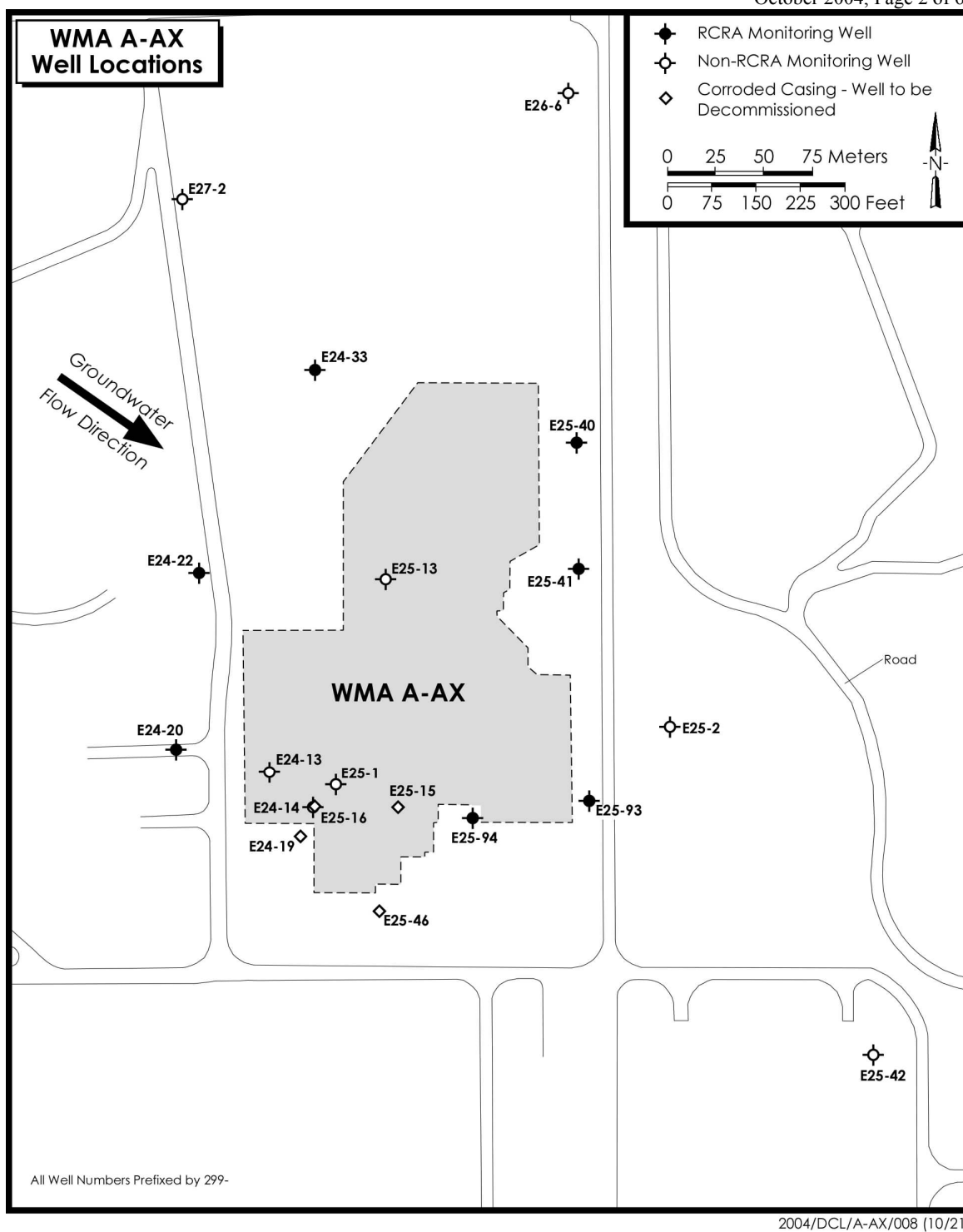


Figure 1.2. Location Map of WMA A-AX and Surrounding Facilities

tasks can be planned that will lead to network improvements, as needed. Finally this section describes the manner in which data are stored and retrieved, lists data interpretation methods and provides the reporting requirements for the program

4.2.1 Monitoring Network

The present network has been expanded to consist of seven RCRA Standard wells and one older carbon-steel well (Figure 1.2). Two newly installed upgradient and two newly installed downgradient wells have been added to the network. However, two wells, 299-E24-19 and 299-E25-46, were removed from the network due to corroded casing. Currently eight wells, as listed in Table 4.1, are used for monitoring the groundwater quality. The water level measurements are made semiannually over a one hour interval to eliminate daily earth tide effects and to reduce barometric effects due to changing atmospheric pressure.

The monitoring system at dangerous waste sites is located along the hydraulically downgradient limit of the waste management area, defined as the area on which waste is stored at the regulated unit. Monitoring wells are placed as close as reasonable possible to the WMA. As can be seen from Figure 1.2, only two wells are close to the WMA boundary. Unfortunately, the presence of numerous ancillary facilities along the perimeter of the WMA limits monitoring well sites. Utilities, both underground and overhead, water pipelines, waste transfer lines, diversion boxes, DSTs, support buildings and change trailers make it difficult to safely install a well without impacting the operation of or the access to existing facilities. Consequently it was necessary to install upgradient wells further from the WMA than regulations require. The point of compliance for WMA A-AX equates an imaginary line connecting the downgradient wells.

Sampling for groundwater quality is performed at least semi-annually as required for a site in interim detection status. If a significant increase in a site-specific contaminant is observed, the well with rising contamination may be monitored quarterly until it is confirmed that the contaminant level has returned to historic background levels. Table 4.1 provides well-by-well information on sampling objective, sampling frequency, and the position of the well with respect to flow direction. Although the location of one well with respect to flow direction is ambiguous, upgradient and downgradient wells are marked according to the southeast flow direction across WMA A-AX.

Table 4.1. Network Monitoring Wells

Well Name	Completion Date	Up gradient Down gradient	Sampling Objective	Sampling Frequency
299-E24-20	1991	Up	C, WL	SA
299-E24-22*	2003	Up	C	SA
299-E24-33*	2003	Up	C	SA
299-E25-2	1955	Down	C, WL	SA
299-E25-40	1989	Marginally Down	C	SA
299-E25-41	1989	Down	C, WL	SA
299-E25-93*	2003	Down	C, WL	SA
299-E25-94*	2004	Down	C	SA
WL Water level measurement C Chemistry monitoring. SA Semi-annual. * Newly installed well				

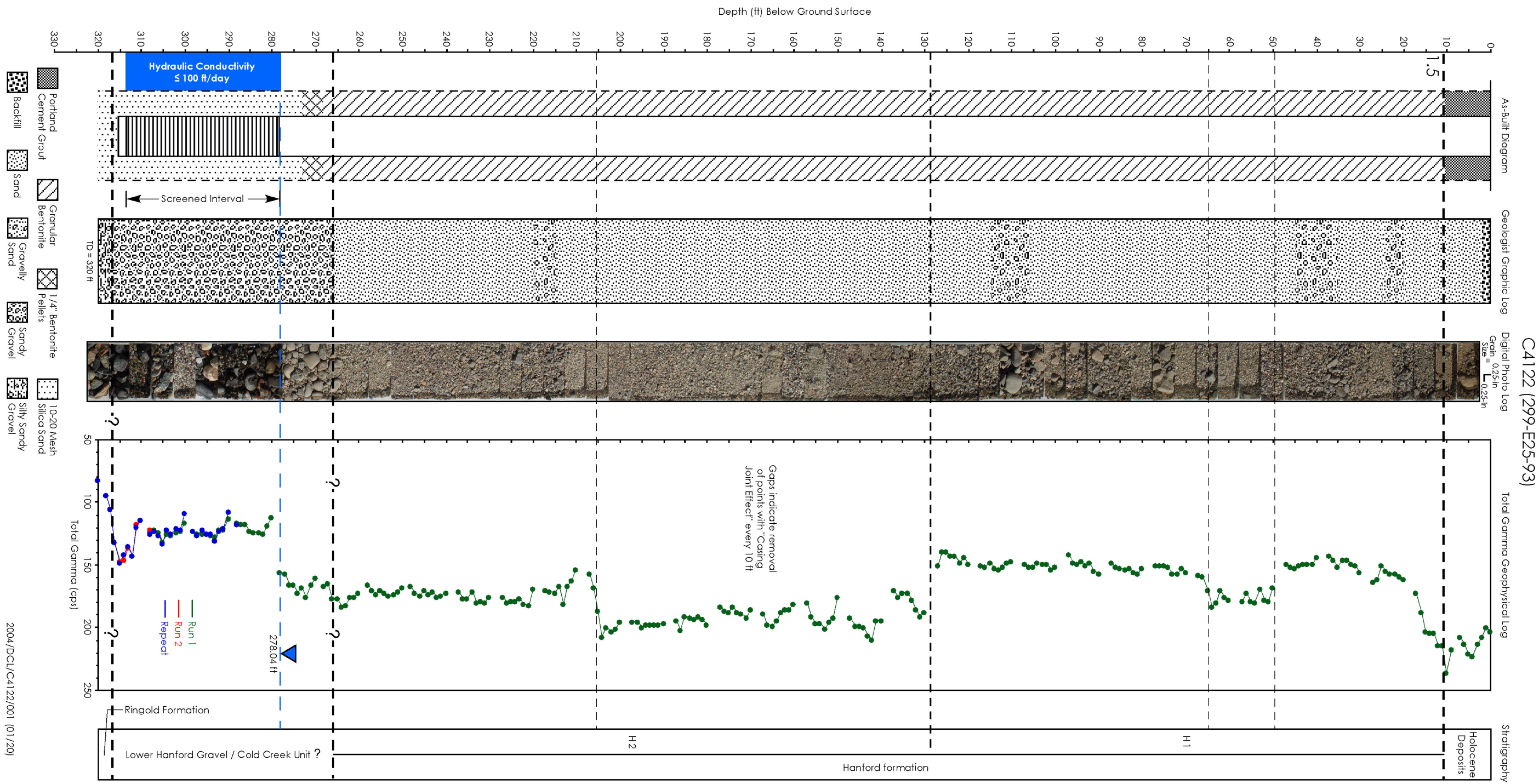


PLATE 4. Geologic Section for Well 299-E25-93 near WMA A-AX (after PNNL-14538)

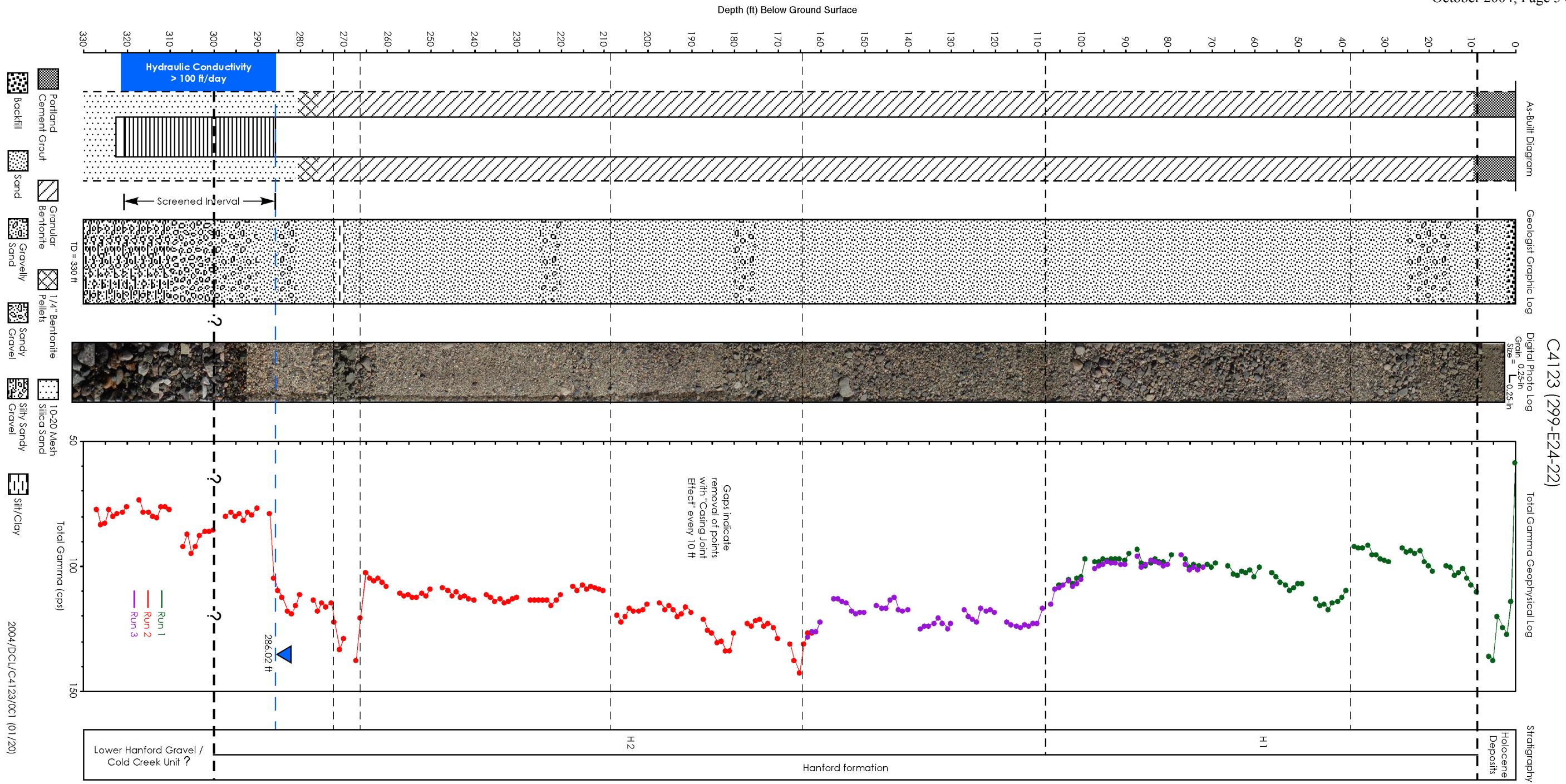


PLATE 5. Geologic Section for Well 299-E24-22 near WMA A-AX (after PNNL-14538)

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