**UNDERGROUND TEST AREA PROJECT
PHASE I DATA ANALYSIS TASK**

VOLUME II

**POTENTIOMETRIC DATA
DOCUMENTATION PACKAGE**

Prepared by

IT CORPORATION
4330 South Valley View Boulevard, Suite 114
Las Vegas, Nevada 89103

December 1996

DISCLAIMER

This report was prepared as an account of work sponsored by the United States Government. Neither the United States nor the United States Department of Energy, nor any of their employees, makes a warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness or usefulness of any information, apparatus, product or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial products, process, or service by trade name, mark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

Preface

This product represents partial documentation for the Phase I Data Analysis Task performed in support of the current Regional Flow Model, Transport Model, and Risk Assessment for the Nevada Test Site Underground Test Area Subproject. Because of the size and complexity of the model area, a considerable quantity of data were collected and analyzed in support of the modeling efforts. The data analysis task was broken into eight subtasks, and descriptions of the subtask activities are contained in the following eight volumes that comprise the Phase I Data Analysis Documentation.

- Volume I: Geologic Model Documentation Package
- Volume II: Potentiometric Data Documentation Package
- Volume III: Groundwater Recharge and Discharge Data Documentation Package
- Volume IV: Hydrologic Parameter Data Documentation Package
- Volume V: Transport Parameter and Source Term Data Documentation Package
- Volume VI: Groundwater Flow Model Documentation Package
- Volume VII: Tritium Transport Model Documentation Package
- Volume VIII: Risk Assessment Documentation Package

Each of the volumes details the results of one or two related subtasks. A summary review of project data and results will be contained in the Phase I Report (in progress).

The Underground Test Area Subproject Phase I Data Analysis Task was led by IT Corporation; Tetra Tech, Inc.; GeoTrans, Inc.; and Daniel B. Stephens Corporation. The task could not have been completed without the cooperative efforts of many other participants involved in work at the Nevada Test Site. Their organizations are listed in alphabetical order:

- Bechtel Nevada
- Desert Research Institute
- Lawrence Livermore National Laboratory
- Los Alamos National Laboratory
- Raytheon Services Nevada
- U.S. Geological Survey - Geologic Division
- U.S. Geological Survey - Water Resources Division
- U.S. Geological Survey - Yucca Mountain Project

Table of Contents

Preface

List of Figures

List of Plates

List of Tables

List of Abbreviations and Acronyms

1.0 Introduction

1.1 Project Description

1.1.1 Project Purpose and Scope

1.1.2 Project Objectives

1.1.3 Project Strategy

1.1.4 Project Organization

1.2 Phase I Data Analysis Task Description

1.2.1 Task Purpose and Scope

1.2.2 Task Objectives

1.2.3 Task Approach

1.2.4 Task Data Requirements and Organization

1.2.5 Task Documentation

1.3 Potentiometric Data Subtask Description

1.3.1 Subtask Purpose and Scope

1.3.2 Subtask Objectives

1.3.3 Subtask Approach

1.4 Documentation Organization

2.0 Quality Control

2.1 Data Documentation Evaluation

2.2 Data Quality Evaluation

2.3 Checking Procedures

2.4 Software Quality Assurance

Table of Contents *(Continued)*

- 2.5 Standard Methodologies
- 2.6 Technical and Peer Reviews
- 2.7 Corroboration of Data through the Models

- 3.0 Data Types, Sources, and Prioritization
 - 3.1 Data Types
 - 3.2 Data Sources
 - 3.3 Data Prioritization

- 4.0 Data Documentation Evaluation
 - 4.1 Depth-to-Water Data
 - 4.1.1 USGS Data Set
 - 4.1.2 ERP and Other Data Sets
 - 4.2 Land Surface Elevation Data

- 5.0 Water Level Data Reduction
 - 5.1 Water Level Elevation Calculation
 - 5.2 Incomplete Data Record Identification
 - 5.3 Unstable Water Level Measurement Identification

- 6.0 Data Limitations and Deficiencies
 - 6.1 Data Limitations
 - 6.2 Data Deficiencies
 - 6.2.1 Spatial Deficiencies
 - 6.2.2 Temporal Deficiencies

- 7.0 Data Analysis
 - 7.1 Predevelopment Hydraulic Head Determination
 - 7.2 Uncertainty Analysis
 - 7.3 Effective Open Interval Definition
 - 7.4 Site Hydrostratigraphy Assignment

Table of Contents *(Continued)*

7.5	Potentiometric Maps
7.5.1	Map Generation
7.5.2	Spatial Analysis
7.6	Vertical Hydraulic Head Gradient Analysis
8.0	Interpretive Products
8.1	Predevelopment Hydraulic Head Data Set
8.2	Site Stratigraphy Data Set
8.3	Hydraulic Head Distribution Maps
8.4	Vertical Hydraulic Head Distribution Tables
9.0	Nevada Test Site Regional Groundwater Flow System
9.1	Groundwater Flow System Boundary
9.2	Hydrostratigraphic Units
9.3	Groundwater Movement
9.3.1	Regional Groundwater Movement
9.3.2	Yucca Flat
9.4	Caldera Complex
9.5	Southern Nevada Test Site
9.6	Effect of Human Stress
10.0	References
Appendix A - Hydraulic Head Data Set	
Appendix B - Site Stratigraphy Data Set	
Appendix C - Temporal Water Levels for Selected Wells	

List of Figures

<i>Number</i>	<i>Title</i>
1-1	Investigation Area Location Map
1-2	Data Utilization in Phase I Modeling
5-1	Example Hydrograph Showing Stable and Unstable Trends

List of Plates

Plate 1 - Location of Geologic Cross Sections
Plate 2 - Predevelopment Regional Water Level Map
Plate 3 - Extent of Alluvial Saturation at Yucca Flat, NTS
Plate 4 - Predevelopment Potentiometric Contour Map of the Volcanic Aquifer at Yucca Flat, NTS
Plate 5 - Predevelopment Potentiometric Contour Map of the Lower Carbonate Aquifer at Yucca Flat, NTS
Plate 6 - Predevelopment Composite Water Level Map of the Silent Canyon/Timber Mountain Caldera Complex
Plate 7 - Predevelopment Potentiometric Contour Map of the Volcanic Aquifer at Yucca Mountain, NTS
Plate 8 - Predevelopment Water Level Control Data at Southern NTS

List of Tables

<i>Number</i>	<i>Title</i>
4-1	Depth-to-Water Data Sources and Documentation Qualification
7-1	Hydrostratigraphic Units/Geologic Model Layers
9-1	Direction of Vertical Hydraulic Gradient at Selected Regional Sites
9-2	Direction of Vertical Hydraulic Gradient at Selected Sites in Yucca Flat
9-3	Direction of Vertical Hydraulic Gradient at Selected Sites in the Caldera Complex
9-4	Direction of Vertical Hydraulic Gradient at Selected Sites in the Southern NTS

List of Abbreviations and Acronyms

A	Acceptable
AA	Alluvial Aquifer
AMSL	Above mean sea level
ANAL_F	Analysis Flag
BAQ	Basal Aquifer
BCU	Basal Confining Unit
C	Consistent
CAU	Corrective Action Unit(s)
DDE_F	Data Documentation Evaluation Flag
DIF	Data Information Form
DOE/NV	U.S. Department of Energy, Nevada Operations Office
DOE	U.S. Department of Energy
DRI	Desert Research Institute
DTN	Data Transfer Number
DTW	Depth to water
DVS	Death Valley Section
EOI	Effective open interval
EPA	U.S. Environmental Protection Agency
ER	Environmental Restoration
ERDBMS	Environmental Restoration Data Base Management System
ERMA	Environmental Resource Management Applications
ERP	(Nevada) Environmental Restoration Program
ft	Foot (feet)
GWSI	Ground Water Site Inventory
H	Hydraulic Head
HSU	Hydrostratigraphic unit(s)
I	Intrusives
ICRP	International Commission on Radiation Protection
IT	IT Corporation
km ²	Square kilometer(s)
LANL	Los Alamos National Laboratories
LCA	Lower Carbonate Aquifer
LCCU	Lower Clastic Confining Unit

List of Abbreviations and Acronyms (Continued)

LLNL	Lawrence Livermore National Laboratory
LSE	True land surface elevation
m	Meter(s)
m ²	Square meter(s)
m/d	Meter(s) per day
mi ²	Square mile(s)
NA	Not-acceptable
NC	Non-consistent
NDDB	Nevada District Database
NPS	National Park Services
NTS	Nevada Test Site
NWIS	National Water Information System
PDQE	Primary Data Quality Evaluation Flag
PM	Pahute Mesa
RSN	Raytheon Services Nevada
SDQE	Secondary Data Quality Evaluation Flag
TBA	Welded tuffs
TC	Tuff Cone
TCB	Non-welded tuffs
TCTC	Calico Hills Tuff Cone
TCU	Tuff Confining Unit
TD	Total depth
TMAQ	Timber Mountain Aquifer
TPTA	Topopah Spring Tuff Aquifer
TPTC	Paintbrush Tuff Cone
TS	Tertiary sediments
TW-F	Test Well F
UGTA	Underground Test Area
USGS	U.S. Geological Survey
UTM	Universal Transverse Mercator
UCCU	Upper Clastic Confining Unit
VA	Volcanic Aquifer
VCCU	Volcaniclastic Confining Unit

List of Abbreviations and Acronyms (Continued)

VTA	Vitric Tuff Aquifer
VU	Volcanics Undifferentiated
WLA	Wahmonie Lava Aquifer
WTA	Welded Tuff Aquifer
WW-2	Water Well 2
YMDB	Yucca Mountain Database

1.0 Introduction

The Nevada Test Site (NTS), located in Nye County Southern Nevada, was the location of 908 announced nuclear detonations conducted in shafts and tunnels between 1951 and 1992. About one-third of these nuclear underground detonations were conducted near or below the water table (Duncan, 1993 [personal communication]). As an unavoidable consequence of these testing activities, radionuclides have been introduced into the subsurface environment, impacting groundwater. The U.S. Department of Energy, Nevada Operations Office (DOE/NV) has been in the process of investigating the effects of these underground nuclear detonations as part of the Underground Test Area (UGTA) Subproject. Descriptions of the project, the data analysis task, and the Potentiometric Data Subtask are briefly discussed in the following text.

1.1 Project Description

This subsection contains descriptions of the purpose, scope, objectives, strategy, and organization of the UGTA project. Documentation supporting this effort is outlined in Section 1.2.5 of the report.

1.1.1 Project Purpose and Scope

The purpose of the UGTA project is to collect data and perform technical evaluations to support decisions regarding the corrective actions necessary to ensure that the weapon testing areas do not pose a significant risk to human health and the environment.

The scope of the UGTA includes the following activities:

- Collection and evaluation of new and existing data
- Quantification of risk to human health and the environment
- Selection of the corrective actions to reduce risk from the sites
- Implementation of corrective actions and closure of the testing areas

1.1.2 Project Objectives

The UGTA project objectives are prerequisite to generating the necessary end products to complete the project. The objectives provide the framework for project strategy. Project definition establishes the starting point, and objectives focus the end-point products.

The overall objective of the UGTA project is to evaluate the effects of the weapons testing areas on groundwater and identify and implement the appropriate corrective actions. This objective

ensures that risks to human health and the environment from impacted groundwater are within protective levels.

Meeting the overall objective requires that several specific project objectives be achieved:

- Effectively plan and scope the UGTA project so that needed data are properly collected and relevant evaluations are properly performed.
- Prepare UGTA project plans as guidance and information tools for efficiently conducting the project.
- Determine the characteristics of the groundwater system and the nature and extent of contamination at a level necessary to support a baseline risk assessment.
- Develop credible predictions of contaminant fate and transport.
- Quantify risk to human health and the environment, in the absence of any present or future remedial action, to acceptable levels of uncertainty.
- Evaluate an appropriate range of remedial technologies applicable to the various contaminants and impacted media.
- Select appropriate corrective action alternatives.
- Implement selected corrective actions.
- Close the underground test areas.

1.1.3 Project Strategy

The Nevada Division of Environmental Protection regulates U.S. Department of Energy's (DOE's) Nevada corrective actions through the Federal Facility Agreement and Consent Order. Appendix VI of the agreement, "The Corrective Action Strategy," describes the processes that will be used to complete the corrective actions, including those in the UGTA. The individual sites covered by the agreement are known as Corrective Action Sites, and they are grouped into Corrective Action Units (CAUs). The UGTA comprises six CAUs, generally reflecting the geographic locations and geologic and hydrologic environments of the weapons testing areas.

1.1.4 Project Organization

Because of the complexity of the problem, the UGTA scope was separated into two major phases. During Phase I, project activities have been focused on a regional investigation. During Phase II, several localized investigations focusing on the CAUs will be conducted.

Phase I consists of existing data assessment, groundwater flow and solute transport modeling, and risk assessment. A key portion of the data assessment activities is the completion of a preliminary risk assessment. The risk assessment was designed to determine whether or not there is an imminent risk to human health and the environment and to provide input to a value-of-information analysis that will identify and prioritize potential data needs. The results of Phase I will be directly used in developing the work scope for the weapons testing areas and in the implementation of Phase II. Further information on the Phase I data analysis task is provided in the following subsection.

1.2 Phase I Data Analysis Task Description

This subsection contains a more detailed description of the purpose and scope, objectives, approach, and data requirements and organization of the UGTA Data Analysis Task.

1.2.1 Task Purpose and Scope

The overall purpose of the Data Analysis Task is to compile and analyze existing, as well as new data. During Phase I, the focus of the data analysis task was a regional investigation. The Phase I Data Analysis Task scope of work includes the evaluation of regional groundwater flow conditions, the transport of tritium from the weapons testing areas, and the determination of the presence or absence of imminent risk to human health and the environment.

1.2.2 Task Objectives

The objectives of the Phase I Data Analysis Task are as follows:

- Evaluate the regional groundwater flow conditions using a groundwater flow model.
- Evaluate the transport of tritium in groundwater using a groundwater transport model.
- Develop a preliminary assessment of risk to human health and the environment from the weapons testing areas.

1.2.3 Task Approach

The approach for the Phase I Data Analysis Task has included the following steps:

- Selection of a regional groundwater flow system, large enough to encompass the NTS
- Selection of an area of investigation, large enough to include the selected regional groundwater flow system
- Collection and analysis of data

- Simulation of regional groundwater flow with a three-dimensional numerical code
- Definition of the major flow paths from the weapons testing areas using a particle-tracking code
- Simulation of the transport of tritium using a numerical, one-dimensional transport code
- Calculations of risk to humans and the environment from exposure to tritiated groundwater

The NTS regional groundwater-flow system ([Figure 1-1](#)), which fully encompasses the groundwater flow system underlying the NTS, was selected for this investigation. The boundary of this groundwater flow system has not been well-defined in some areas. The boundary defined by Waddell et al. (1984) was used at the start of this investigation and is shown on [Figure 1-1](#). The selected area of investigation had to be large enough to allow for a reevaluation and potential expansion of the groundwater flow system boundary. This area covers a large part of Southern Nevada and part of Inyo County in Eastern California. The area extends from Death Valley, north to Antelope Valley, and from the Palmetto Mountains east to the Sheep Range, extending over an area of 80,650 square kilometers (km²) (31,140 square miles [mi²]).

Data collection and analysis activities are dictated by the type of data needed. Data types and their methods of analysis are, in turn, dictated by the modeling approach and will not be discussed in this section; however, the documentation of necessary data types, as well as the methods of analysis, are discussed in the appropriate data documentation volume.

The computer code selected to simulate groundwater flow is MODFLOW (McDonald and Harbaugh, 1988). MODFLOW was developed by the U.S. Geological Survey (USGS) for the numerical simulation of fully three-dimensional saturated groundwater flow in porous media, and it was designed to simulate flow under both steady-state and transient conditions. The code may also be used to simulate flow in fractured media by invoking an equivalent porous media assumption. This assumption implies that at the scale of the model, the hydraulic behavior of fractured geologic units is analogous to that of porous media. The groundwater flow model for the NTS Region flow system was developed through the process of steady-state calibration. The calibration of the steady-state flow model was performed using the trial and error technique. Transmissivities were varied first within predetermined bounds to match the simulated heads and flux rates with predefined target values derived from observed data. Second, the recharge rates and distribution were modified, as needed, to achieve a reasonable calibration. The code selected

to simulate pathlines is MODPATH (Pollock, 1989). MODPATH was developed by the USGS to compute and display three-dimensional pathlines based on results of steady-state simulations using MODFLOW. The program uses information on layer geometry, boundary conditions, and flux rates to calculate the velocities and positions of particles at different times. MODPATH was used to compute and display pathlines originating from individual underground nuclear testing locations located throughout the weapons testing areas. MODPATH also provided specific discharge distributions along the pathlines, which were used in the transport model.

The code used to simulate contaminant transport is MC-TRANS (GeoTrans, 1995). MC-TRANS was developed specifically for the UGTA project. This finite-element, one-dimensional, radionuclide transport model simulates advection in a dual-porosity, fractured system with dispersion, sorption, and first-order decay. The code was used to simulate the concentrations of tritium downgradient from selected nuclear test sites, under the no- corrective-action alternative. The code was used in the stochastic mode to evaluate the uncertainties associated with the predicted tritium concentrations.

The code used to estimate human health risk from exposure to tritium-contaminated groundwater is GW-RISK (IT, 1996a), also developed specifically for this project. The code implements the appropriate U.S. Department of Energy (DOE, 1993 [5400.5]), International Commission on Radiation Protection (ICRP, 1991), and U.S. Environmental Protection Agency (EPA) approaches (EPA, 1989a; EPA, 1989b; and EPA, 1991). The code uses tritium concentrations simulated by MC-TRANS (GeoTrans, Inc., 1995) as input for three of the most conservative predicted pathlines. The ecological risk assessment determines tritium concentrations below which no adverse effects would be expected to ecological receptors. These concentrations were compared with measured and modeled tritium concentrations in surface water and groundwater. Although no formal guidance exists on how to assess ecological risks associated with exposure to radionuclides, the general format suggested in the EPA “Framework” document (EPA, 1992) was used in conjunction with published radiation dose models (Baker and Soldat, 1992; Blaylock et al., 1993). Both human and ecological risk assessments included examination of data, exposure assessment, toxicity assessment, risk evaluation, and evaluation of uncertainties.

1.2.4 Task Data Requirements and Organization

Task data requirements and organization are briefly described in this section. Data required to achieve the objectives of the Phase I data analysis are as follows:

- Geologic data for regional groundwater flow and transport modeling
- Hydrologic data for regional groundwater flow modeling
- Transport parameter and tritium source data for tritium transport modeling
- Risk-related data for assessment of risk to human health and the environment

MODFLOW (McDonald and Harbaugh, 1988) data requirements include geologic framework data, potentiometric data, hydraulic conductivity/transmissivity data, and groundwater recharge and discharge data. Data needs also include estimates of the uncertainties which are used to define the input variable bounds and the output variables target ranges, for use in the model calibration process. MODPATH data requirements are MODFLOW data and porosity data. In addition to the Darcy velocities calculated by MODPATH, the transport model, MC-TRANS, requires transport parameter data including bulk and fracture porosity, dispersion, and tritium matrix diffusion data. Data for the tritium source needed for the transport model include the tritium source initial spatial extent and concentration. Data needed for the risk assessment include the peak tritium concentration distribution generated by the transport model from flowpath at each receptor location. In addition, exposure scenario, tritium dosimetry, and tritium detriment and risk data are required.

The data analysis task was organized into several subtasks, based upon the approach and the major types of data needs. Data needs of the flow model were fulfilled under four subtasks: Geologic Model, Potentiometric Data, Groundwater Recharge and Discharge Data, and Hydrologic Parameter Data. Porosity data are needed by both MODPATH and MC-TRANS and were collected under the Transport Parameter Subtask, together with data on dispersion and matrix diffusion. Data needed to define the source term were collected and analyzed under the Source Term Subtask. Data needed for risk assessment were collected and analyzed under the Risk Assessment Subtask.

1.2.5 Task Documentation

Work performed under the data analysis task is documented in eight volumes:

- Volume I: Regional Geologic Model Documentation Package (IT, 1996b)
- Volume II: Potentiometric Data Documentation Package (This package)

- Volume III: Groundwater Recharge and Discharge Data Documentation Package (IT, 1996c)
- Volume IV: Hydrologic Parameter Data Documentation Package (IT, 1996d)
- Volume V: Transport Parameter and Source Term Data Documentation Package (IT, 1996e)
- Volume VI: Groundwater Flow Model Documentation Package (IT, 1996f)
- Volume VII: Tritium Transport Model Documentation Package (IT, 1996g)
- Volume VIII: Risk Assessment Documentation Package (IT, 1996a)

A separate documentation package was not prepared for the Source Term Subtask; however, results of this subtask are reported in Volume V of the task documentation.

The documentation packages are meant to fulfill several project needs. The first five packages serve as a repository of available and pertinent data collected for possible inclusion into the modeling process. There is little relationship between these five packages; instead, they are directly related to Volumes VI and VII, the packages that document the flow and transport modeling process and results. Volume VIII, the Risk Assessment and Modeling Package, is most directly related to the transport package, Volume VII. Concentrations of tritium at specific locations and times required by the risk assessment are provided by the transport model.

Figure 1-2 illustrates how information from each of the packages was utilized and how they relate to each other.

A second project need was the ability to centralize and make the information required readily available for a highly technical review of the modeling process. The intended audience of these eight documents is the technical reviewer. A report of the entire project that contains information related to regulatory and risk management issues is contained in the *Regional Groundwater Flow and Tritium Transport Modeling, and Risk Assessment of the Underground Test Area, Nevada Test Site, Nevada* (DOE, in press). This document is intended to serve as the primary project summary that reaches a broader audience.

1.3 Potentiometric Data Subtask Description

This subsection contains descriptions of the purpose and scope, objectives, and approach of the Potentiometric Data Subtask.

Figure 1-2
Data Utilization in Phase I Modeling

1.3.1 Subtask Purpose and Scope

The potentiometric surface, as defined by water levels observed in wells, is a measure of the driving energy that causes water to move through transmissive geologic media. Potentiometric data may be used in three ways during the development of a groundwater flow model. First, observed water levels are used during the groundwater flow model calibration, verification, and validation processes for comparison with water levels simulated by the model. Second, the observed water levels are used to develop potentiometric maps to help define flow directions which are also used during the calibration process. Third, the data help define the model boundaries, based on the potentiometric maps. Thus, the purpose of the Potentiometric Data Subtask is the compilation of potentiometric data within the selected area of investigation.

The scope of this subtask is to evaluate water level and spring data within the investigation area to help define the boundaries of the NTS regional groundwater flow system, the groundwater flow directions, and to provide a data set for use during the flow model development.

1.3.2 Subtask Objectives

The objectives of the Potentiometric Data subtask are to:

- Collect, compile, and qualify existing and newly-acquired depth-to-water and ancillary data within the area of investigation.
- Evaluate the temporal trends in these data and identify a subset that is representative of predevelopment, steady-state conditions for use in the model calibration.
- Provide a set of water level data, indicating the location of the measurement point, average water level elevation, variance, and the hydrostratigraphic unit (HSU) or HSUs represented.
- Prepare maps of hydraulic head distribution to determine groundwater divides and flow-line boundaries of the basin and to determine which geologic units significantly affect flow.

1.3.3 Subtask Approach

The general subtask approach includes the following steps:

- Compile and qualify new and available depth-to-water and ancillary data.
- Extract historical water level data subset representative of natural undisturbed groundwater flow system conditions.

- Determine hydraulic head values representative of predevelopment conditions for sites with available data.
- Evaluate uncertainties associated with the hydraulic head values.
- Prepare data set for use in the steady-state groundwater flow model.
- Prepare regional and local hydraulic head contour maps.

The following assumptions, deemed appropriate for a regional investigation, were made during the performance of this subtask:

- Spatial variations in groundwater density do not cause a significant effect on the hydraulic heads. Thus, no corrections were made on the hydraulic heads for density variation due to changes in temperature or chemistry. One exception was made for Test Well F which has a temperature that is significantly higher than that of other wells completed in the Lower Carbonate Aquifer.
- The degree of deviation of the boreholes is negligible enough so that no correction is necessary on the depth-to-water measurements for a regional scale study.
- No leakage occurs between hydrostratigraphic units within the casing in boreholes open to multiple hydrostratigraphic units. Thus, observed hydraulic heads are representative of the hydrostratigraphic units targeted for measurement.
- The land surface elevation at a regional spring location is a good approximation of the hydraulic head at that location.

1.4 Documentation Organization

This document is organized in ten sections as follows:

- Section 1.0 - Contains brief descriptions of the UGTA project and the data analysis task and subtasks
- Section 2.0 - Contains the Quality Assurance protocols used
- Section 3.0 - Contains descriptions of the data types, sources, and prioritization
- Section 4.0 - Contains descriptions of the documentation evaluation process for raw data
- Section 5.0 - Contains descriptions of the hydraulic head data reduction process for analysis
- Section 6.0 - Contains a discussion of the data deficiencies and limitations

- Section 7.0 - Details the data analysis performed to generate the interpretive products
- Section 8.0 - Lists the interpretive products derived from the data
- Section 9.0 - Provides a discussion of water movement within the NTS regional groundwater flow system
- Section 10.0 - Provides a list of the references cited

2.0 Quality Control

A Quality Assurance Program has been developed for all activities performed under the Environmental Restoration (ER) Program including the UGTA project. Quality Assurance Measures taken to control quality during the process of generating the products under the different data analysis subtasks include data documentation evaluation, data quality evaluation, checking procedures, software quality assurance, use of standard methodologies, technical and peer reviews, and corroboration through the models.

2.1 Data Documentation Evaluation

During the documentation evaluation process of data, flags are assigned. The five levels of Data Documentation Evaluation Flags (DDE_F) are briefly presented here:

- Level 1: Data are collected in accordance with Nevada Environmental Restoration Program (ERP) subproject quality assurance plans, approved Nevada procedures, and/or participant-specific procedures. This ranking indicates that all supporting documentation for the data is on file and is available for review by data users.
- Level 2: Data are collected in accordance with approved plans and procedures as required for Level 1, with the exception that one or more documentation requirements may be deficient in some way. Examples of data documentation deficiencies may include lost or destroyed field-data collection forms or data acquired using interim or draft procedures.
- Level 3: Data are collected using accepted scientific methodology (e.g., American Society of Testing Materials, U.S. Environmental Protection Agency methods, USGS procedures) and accompanied by supporting and corroborative documentation such as testing apparatus diagrams, field or laboratory notes, and procedures. Documents referenced to qualify submitted data under the Level 3 category are noted and described in Part II of the Data Information Form (DIF).
- Level 4: Data are collected by a participating Nevada ERP organization or another organization not associated with the Nevada ERP prior to the issuance and implementation of project-approved standard policies, procedures, or practices governing data acquisition and qualification. The methods of data collection are documented and traceable; however, the validity and prudence of data use or compliance with referenced procedures is indeterminate. Supporting documentation may or may not exist. Documentation provided to qualify submitted data under Level 4 shall be noted and described in Part II of the Data Information Form.

Level 5: Data are obtained under unknown, undesirable, or uncertain conditions. When data documentation is unknown, any available supporting or helpful descriptions of the intended use and conditions of data capture should be described and listed in Part II of the Data Information Form.

2.2 Data Quality Evaluation

The criteria used to evaluate the different types of required data were dependent on the type of data and the intended usage of the data. Thus, various criteria were used to evaluate data quality. The general procedure assigned one or more flags to each record compiled in the database, indicating the data quality or suitability of the individual data record for the intended usage. Subtask-specific data quality evaluation procedures are described in detail in the corresponding subtask documentation package.

2.3 Checking Procedures

Various checking procedures were designed for quality control purposes. Checking procedures applicable to the UGTA data analysis subtasks include those developed for transcription of data, generation of figures, tables and logs, and performance of calculations. Data compiled by project personnel were subjected to the checking procedures before being added to the ER database. However, the bulk of the ER database is comprised of external digital databases developed by agencies external to the UGTA project, mainly the National Water Information System (NWIS) data from the USGS. Internal procedures do not govern other ER database participants; therefore, their data were not subjected to the checking procedures described here.

2.4 Software Quality Assurance

Various computer codes were developed in-house to aid in the data analysis subtasks. Codes developed specifically for the UGTA project were subjected to software quality assurance requirements such as validation/verification, preparation of operating manuals, and documentation of the theoretical basis for the calculations. Codes developed to load data and perform unit conversion codes used on the Environmental Restoration Data Base Management System (ERDBMS) were also checked.

2.5 Standard Methodologies

Only standard and widely accepted methodologies were used in the development of the interpretive products. The various methodologies used are too numerous to list here; however, they are described and referenced, where appropriate, in the sections discussing their use in the data analysis process.

2.6 *Technical and Peer Reviews*

The review process constitutes an important measure of product quality. It was used throughout the performance of the data analysis activities. The review process consists of technical and peer reviews. The technical review process is internal and is performed by qualified personnel. The peer review process is intended to complement the technical review process and is usually performed by individuals who are independent of the project.

Products generated under the Data Analysis Task were subjected to a continual review process to identify major flaws, if any, in the conceptual model of the groundwater flow system at an early stage. For example, the geologic cross sections and maps were subjected to technical and peer reviews several times during their development.

The hydrogeologic cross sections were also subjected to technical peer reviews during their generation. The peer reviews were conducted during periodical meetings involving the IT geologists and hydrogeologists and representatives from Raytheon Services Nevada (RSN), the USGS, Desert Research Institute (DRI), Los Alamos National Laboratories (LANL), and Lawrence Livermore National Laboratories (LLNL). Comments were recorded, evaluated, and incorporated into the process of defining the hydrostratigraphy.

The map products were internally reviewed by project personnel and submitted for peer review along with this documentation package. Following receipt of comments from the peer reviewers on the documentation packages and the map products, comments were resolved either by explanation or by modification of the products. Formal responses were prepared.

2.7 *Corroboration of Data through the Models*

This step is completed as the groundwater flow model is calibrated. During the calibration process, interpretations are tested and modified as required. This step particularly applies to the geologic model where extensive interpretation is necessary. The geologic model has been modified during the calibration of the flow model because the initial interpretations in some areas did not allow for the duplication of the observed hydraulic heads within the existing levels of uncertainties.

3.0 Data Types, Sources, and Prioritization

More than 20,000 records of depth-to-water and ancillary data were compiled and stored in the ER database. The data types needed and their sources are briefly discussed, and the data types prioritized for quality evaluation are presented.

3.1 Data Types

Data categories needed for the potentiometric data analysis include site information, hydraulic head measurement data, well construction data, and hydrostratigraphic information. A site is defined as a well, a test hole, a mine shaft, or a spring. These data are stored in the Environmental Restoration Database and include the following data types:

Site information

- Unique site identifier
- Type of site
- Site location
- Error associated with site location
- Land surface elevation
- Error on land surface measurement

Depth-to-Water Data

- Depth-to-water measurements
- Method of depth-to-water measurement
- Measurement method error
- Date of measurement

Well Construction Data

- Well total depth
- Open interval top
- Open interval bottom
- Position of water level with respect to top of open interval

Stratigraphic/Hydrostratigraphic Data (one of the following)

- Well hydrostratigraphy
- Well stratigraphy
- Well lithology

The primary types of data needed for hydraulic head calculations are measurements of the land surface elevation and depth-to-water. The additional data types are needed for site description, data qualification, uncertainty evaluation, and hydrostratigraphic unit assignment. The well construction and stratigraphy/hydrostratigraphy data are discussed in later sections.

3.2 Data Sources

Data sources are the U.S. Geological Survey NWIS/Ground Water Site Inventory (GWSI) databases (USGS, 1989); the USGS Yucca Mountain Project and Nevada District databases; the Environmental Restoration Program geologic and field activity reports; the National Park Services (NPS); and other related publications.

The USGS NWIS/GWSI data files were obtained from the USGS Carson City office through the local USGS field office. This data set constitutes the majority of the well and spring data currently in the ERDBMS.

Data collected during field investigations in support of the ERP for ER wells and for wells recompleted under the ERP were compiled from existing geologic reports, field activity reports, and from interviews with the field geologists and hydrogeologists. They were subsequently loaded into the ER database. The ER well data are considered preliminary.

Data for 11 wells located in the Amargosa Desert were retrieved from the USGS Yucca Mountain and Nevada District databases. This data set consists mainly of water level information and lacks some of the ancillary data such as well construction data and hydrostratigraphy information. Despite these deficiencies, this data set was evaluated and included in the ER database.

Data for four wells located in the vicinity of the Bullfrog mine near Beatty, Nevada, were obtained from the National Park Services. The sources of data consisted of a report prepared by Fox and Westhoff (1989) and several monitoring reports prepared by the various mining companies operating the mine at different times.

Additional sources of information include various publications used to fill data gaps such as missing wells, missing well construction, or stratigraphy information. All source references are specified in the ER database and documented on the data transfer sheets. The spring data set was prepared by the Groundwater Recharge and Discharge Subtask group, and all spring data used for the Potentiometric Data Subtask were extracted from that data set.

3.3 *Data Prioritization*

Data types were prioritized for uncertainty assessment which consists of data documentation evaluation and variance estimates. The hydraulic head is one of the most important variables in the calibration of a groundwater flow model. All data types needed to define the hydraulic head at a given location contribute to the uncertainty associated with that hydraulic head value. The hydraulic head for each available record is obtained by subtracting the depth-to-water measurement from the land surface elevation. Thus, the two major data types prioritized for uncertainty evaluation are depth-to-water measurements and land surface elevation estimates. Other data types such as site location may be an additional source of uncertainty in the hydraulic heads of a given site. The USGS associates an accuracy value with the latitude/longitude of a given site. The effect of this uncertainty on the hydraulic head may not be directly quantified. Therefore, it was assumed to be negligible for the scope of Phase I.

4.0 Data Documentation Evaluation

The documentation of the two prioritized variables, depth-to-water and land surface elevation, was evaluated based on the process described in the following sections.

4.1 Depth-to-Water Data

Data documentation levels for depth-to-water measurements were assigned to different data sets based on the five levels of data documentation. [Table 4-1](#) presents a summary of the data documentation flag assignments for all data used in the evaluation of the potentiometric head data.

4.1.1 USGS Data Set

Data obtained from the USGS databases were subdivided into two data sets, based on discussions with USGS representatives conducted in March 1994. The USGS representatives reported that before 1968, depth-to-water measurements were made using various methods described in non-specified, in-house documentation. Starting in 1968, USGS personnel used documented, standard procedures for measuring depth-to-water with steel or electric tapes and the wireline method (Garber and Koopman, 1968). These procedures were internally updated later by the USGS. Procedures used by the USGS between 1976 and 1987 for the "iron horse," a method similar to the wireline method, are documented by Weir and Nelson (1976). These USGS procedures have been updated since, but the updates have not been published.

Based on the history of the procedures, two data documentation levels were defined for USGS depth-to-water measurements:

Level 5: Depth-to-water measured before 1968

Level 3: Depth-to-water measured after 1968

4.1.2 ERP and Other Data Sets

The ERP depth-to-water measurement data were assigned data documentation levels of 1 or 2. Level 1 was assigned if the measurement was fully documented, and Level 2 was assigned if documentation was incomplete or lacking. All other depth-to-water measurements were assigned a Level 5 due to lack of documentation.

Table 4-1
Depth-to-Water Data Sources and Documentation Qualification

Data Set Description	Reference	Source	Procedure	DDE_F
NWIS/GWSI Data before 1968	DTN 1 ^a	USGS	Undocumented	5
NWIS/GWSI Data after 1968	DTN 1 ^a	USGS	Documented ^b	3
ER data (fully documented)	DTN 46 ^a	IT reports and records ^c	Documented ^d	1
Other ER data	DTN 46 ^a	IT reports and records ^c	Documented ^d	2
ER Recompletion Data	DTN 46 ^a	IT reports and records ^c	Documented ^b	2
Selected ER DTW data	DTN 46 ^a	USGS	Documented ^b	3
Amargosa data	DTN 49 ^a	YMDB/NDDB ^e	Undocumented ^f	5
Referenced data	DTN ^a		Undocumented ^f	5

^aDTN stands for Data Transfer Number to the ER database on the ERDBMS.

^bDocumented in Garber and Koopman, 1968; and Weir and Nelson, 1976.

^cThe IT reports and records are located in the IT central filing system.

^dDocumented in Project procedures.

^eYMDB is the Yucca Mountain Database, NDDB is the Nevada District Database.

^fUndocumented here also means that documentation exists but is either not readily available or is insufficient.

4.2 *Land Surface Elevation Data*

Land surface elevation estimates were all assigned a Level 5 documentation. The land surface elevation data obtained from the USGS database were assigned a Level 5 documentation because of a lack of proper documentation or existence of a standard set of procedures in the determination of this variable. All other land surface elevations obtained from sources other than the USGS and including those of the ERP data were also assigned a Level 5 because of a lack of standard operating procedures and other documentation

5.0 Water Level Data Reduction

For the purposes of constructing a predevelopment, steady-state model, the available water level data set needed to be reduced to a data subset consistent with natural and undisturbed groundwater flow system conditions. In theory, this means that one would use only predevelopment data (before the 1970s) to generate the potentiometric maps and the hydraulic head data set for use in the groundwater flow model. But, as expected, not enough predevelopment data exist to define natural steady-state conditions over the extensive area of investigation. Thus, for each site, the whole period of record, including recent data, was used in the data evaluation and reduction process. The data reduction consisted of calculating water level elevations, identifying and filtering out incomplete data records and water level measurements not representative of predevelopment groundwater flow system conditions.

5.1 Water Level Elevation Calculation

For each depth-to-water measurement, the water level elevation is calculated as the difference of the land surface elevation and the depth-to-water measurement, as follows:

$$H = LSE - DTW \quad (5-1)$$

Where:

- H = Hydraulic head value, in meters;
- LSE = Land surface elevation, in meters; and
- DTW = Temporal average of depth-to-water values over the period of record, in meters.

5.2 Incomplete Data Record Identification

Incomplete water level records were identified and flagged. The flags used were defined as follows:

- DP: Water level measurement affected by pumping at time of measurement.
- WP: Well pumping at time of depth-to-water measurement. No depth-to-water measurement available for that time.
- WD: Well dry at time of depth-to-water measurement. No depth-to-water measurement available for that time.

WO: Well obstructed at time of depth-to-water measurement. No depth-to-water measurement available for that time.

WF: Well flowing at time of depth-to-water measurement. No depth-to-water measurement available for that time.

WW: Well destroyed at time of depth-to-water measurement. No depth-to-water measurement available for that time.

WV: Unknown reason. No depth-to-water measurement available for record.

If all records for a given site were found to be incomplete, the records were identified and flagged accordingly in the ER database. The available information for such sites was used in subsequent analyses only in areas where data are sparse.

5.3 Unstable Water Level Measurement Identification

A temporal data analysis was performed for each site to identify water levels that are unstable and, therefore, not representative of the predevelopment groundwater flow conditions. The purpose of the temporal analysis was to identify water level measurements that are inconsistent with a hydrograph's stable part of the curve. A horizontal stable trend is defined as that part of the hydrograph that includes only cyclical variations about a mean value. Such a stable trend is representative of steady-state conditions. Water level measurements that are inconsistent with the stable trend are inappropriate for steady-state, predevelopment conditions. An example hydrograph illustrating the "stable" and "non-stable" parts of the curve is presented in [Figure 5-1](#).

The procedure used in the temporal analysis of the water level data included a general review of the hydrograph for each site, followed by a detailed review and evaluation of individual water level records. The general procedure was as follows:

- Prepare a hydrograph for each site for which multiple records of water level measurements exist.
- Screen out unstable water level measurements.
- Generate statistical information on the consistent data including minimum, maximum, mean, standard deviation, hydrograph slope, number of data points, and period of record for each of the sites is in the ER database. A FORTRAN code to generate statistical data was developed to accommodate the structure and the bulk of the depth-to-water data. The statistical method used is outlined in a later section.

Figure 5-1
Example Hydrograph Showing Stable and Unstable Trends

- Review the hydrograph for general shape, scatter, and apparent trends. Review results of the full data set statistical analysis, i.e., minimum, maximum, mean, standard deviation, hydrograph slope, number of data points used, and period of record used.
- Establish whether or not a suitable trend exists based on a review of the hydrograph slope and standard deviation. If a hydrograph is completely vertical or consists of erratic points, the site may not be suitable for use; consequently, all data points may be considered inconsistent. However, if a general short-term or long-term trend of relatively stable data points is apparent on the hydrograph, the individual data records for the site are reviewed to determine the period of record for the trend. If multiple trends are present, they are noted along with pumping trends.
- Sites for which a period of record associated with a horizontal stable trend was identified, and all data points outside of that period of record are flagged as inconsistent and assigned the appropriate inconsistent code. In addition, any data points within the stable trend period which are identified as inconsistent are flagged as necessary.

Following the data reduction tasks which have been described, a flag field was created in the database to identify data to be used for subsequent analysis. Each measurement was flagged either as consistent (C) with an identified horizontal stable trend or non-consistent (NC) if it was considered incomplete or inconsistent.

The following criteria were developed to identify and flag data records considered to be inconsistent with a pre-identified steady-state trend:

- AL: Data records which are anomalously low as compared to the general trend of the hydrograph are considered inconsistent. The method used to define such inconsistent data records is comparative, highly subjective, and varies from hydrograph to hydrograph according to data trends, scatter, and number of records. The flag used for this type of data point is AL for Anomalously Low.
- AH: Data records which are anomalously high relative to the general trend of the hydrograph are also considered inconsistent. The method used to define such inconsistent data is comparative, highly subjective, and varies from hydrograph to hydrograph according to data trends, scatter, and number of records. The flag used for this type of data point is AH for Anomalously High.
- DV: Data records which are not part of a horizontal (steady-state) trend for a given site are considered inconsistent on the basis that they are not used in the development of the steady-state regional model. Vertical trends and large scatter in the data are indicative of unstable water levels, often resulting from drilling activities and underground testing activities. Such disturbed water levels may not be representative of true, undisturbed water level conditions. Therefore, such data records are considered inconsistent and are flagged as DV for Data point part of Vertical trend.

NT: The data record is not part of the stable trend and is not chosen for detailed analysis. The data record is not considered to be representative of steady-state aquifer conditions as a result of various activities, including pumping, testing activities, and possibly well construction.

6.0 Data Limitations and Deficiencies

Data limitations and deficiencies identified by Wood (1994) and during the data reduction task are discussed in this section.

6.1 Data Limitations

Data quality for wells located on the Nevada Test Site and Yucca Mountain is generally good. For those wells located outside of the Nevada Test Site, only a small number of sites have documented and reliable data.

Data limitations associated with the NWIS database are detailed in the transmittal letter (Wood, 1994). Limitations cited include duplicate site identification numbers, unverified data and inaccurate land surface elevations. Wood (1994) states that water levels for test holes U-3cn 5, U-4u PS 2A, U-19v PS 1D, and U-20n PS 1DD-H have been corrected for borehole deviation. Water levels for other test holes may or may not have been corrected for borehole deviation by earlier investigators. It was determined that the water levels for Test Well F (TW-F) were not corrected for temperature. It is unknown whether this type of correction was made for other holes where temperature may significantly affect the water level measurements. It should be noted that, except for TW-F, the effects of borehole deviation and/or temperature on water levels were assumed to be negligible at the regional scale.

Errors found in the ER database during the analysis were corrected whenever possible. In some instances, sites with erroneous data were simply flagged as such and were not included in subsequent analyses. Errors found include duplicate sites, erroneous land surface elevations, and erroneous coordinates.

6.2 Data Deficiencies

Data deficiencies observed in the data set are either spatial or temporal.

6.2.1 Spatial Deficiencies

No data are available for large portions within the study area. The largest of these areas is to the east of the Nevada Test Site and to the northwest and north of the NTS. Few well data are available at depths outside of the NTS or in close proximity. In these areas, most data for the Lower Carbonate Aquifer (LCA) are provided by springs. The land surface elevation of a spring was used as an approximation of the hydraulic head at that location.

6.2.2 *Temporal Deficiencies*

Predevelopment, steady-state data are not available over large portions of the investigation area. Therefore, recent data were used to fill some of the spatial data gaps, introducing more uncertainty in the depiction of the steady-state head distribution. The use of recent data in areas with little or no development is acceptable because the groundwater system has not been disturbed. However, in areas where the groundwater system has been artificially stressed by underground nuclear testing or pumping, such as in Yucca Flat and the Amargosa Desert, the use of recent data may introduce errors that are difficult to discern.

7.0 Data Analysis

Potentiometric data analysis comprised the determination of stable hydraulic heads representative of predevelopment groundwater flow conditions, the evaluation of the uncertainty associated with the identified stable hydraulic heads, the definition of the effective open interval, the assignment of hydrostratigraphic units, and the mapping of the predevelopment hydraulic head data.

7.1 Predevelopment Hydraulic Head Determination

For the purposes of the steady-state groundwater flow model, the groundwater system is assumed to be in equilibrium under predevelopment conditions. One of the primary task objectives was to determine predevelopment hydraulic heads and to depict a conceptual model that is representative of the groundwater flow system under natural equilibrium conditions only. The reduced data set described in Section 5.0 was supplemented with spring data and used to determine hydraulic head values at sites for which data are available. The reduced water level data set consists of historical hydraulic head elevations derived from the available depth-to-water measurements and flagged as consistent (C) with stable groundwater flow system conditions. The spring data consists of regional spring locations and land surface elevations.

For a given site with multiple "consistent" (C) water level measurements, the stable hydraulic head value is calculated as a time-average (mean) of the series of n measurements as follows:

$$\bar{H} = \frac{1}{n} \sum_{j=1}^n H_t \quad (7-1)$$

Where:

$\bar{H}$ = Temporal average of hydraulic head values over period of record, in meters;

H_t = "Consistent" hydraulic head value at a given time t, in meters; and

n = Number of water level measurements available for the site over period of record.

For sites having a single water level measurement, the measured value was selected to represent the steady-state predevelopment hydraulic head for that site. For springs, the land surface elevation at the spring location was used as an approximate hydraulic head value.

7.2 *Uncertainty Analysis*

The two variables used to calculate the hydraulic head are depth-to-water (DTW) and land surface elevation (LSE) (Equation 5-1). Thus, the uncertainty associated with a mean hydraulic head value at a given site stems from three main sources of errors: the error associated with estimating the land surface elevation, the error associated with depth-to-water measurements, and the error associated with reducing the temporal water level measurements to a mean value.

The USGS database provides an estimate of the land surface elevation accuracy based on the method used including topographic maps or surveying, which provides better accuracies. These estimates are only gross indicators of the potential error based on the method of estimation. For the purposes of this task, they are assumed to represent the errors on land surface elevations for sites reported in the NWIS database. These errors range between 0 and 70 meters (m) (0 and 230 feet [ft]). The LSE errors for other sites are unknown.

It is assumed that the error on depth-to-water measurements is dependent only on the method used. Human errors arising from different operators may not be estimated here and will be neglected. Based on the USGS procedures, different methods are used depending on the depths to be measured. For depth-to-water measurements taken in shallow wells (7.6 to 30.5 m [25 to 100 ft]) using the wireline method, the steel tape or the electric tape, the accuracies range between ± 0.01 to 0.1 foot. For measurements in intermediate-depth wells (30.5 to 305 m [100 to 1,000 ft]) made using the steel and electric tapes, the accuracies range between ± 0.1 and 0.5 foot. For deep wells (305 to 914 m [1,000 to 3,000 ft]), the accuracy of depth-to-water measurements made using the wireline method is approximately 0.5 foot. In summary, the error associated with the depth-to-water measurements is generally less than 0.5 foot.

When averaging measurements, the error associated with taking individual depth-to-water measurements is included within the fluctuations of the hydrograph.

The hydrograph error is dependent on the site under consideration and may be estimated from the hydrograph variance. For flow model calibration purposes, estimates of the variances associated with the hydraulic head values, rather than errors, are used to weigh the hydraulic heads. Thus, a discussion of the variances is presented next.

As shown by Equation 5-1, the hydraulic head value is derived from land surface elevation and depth-to-water measurements, which are independent variables. Thus, the variance of the

average hydraulic head value may be expressed as the sum of the variances of the two independent variables, i.e:

$$\mathbf{F}_{\bar{H}}^2 = \mathbf{F}_{LSE}^2 + \mathbf{F}_{DTW}^2 \quad (7-2)$$

Where:

- $\mathbf{F}_{\bar{H}}^2$ = Variance associated with the average hydraulic head, in meters squared;
- $\mathbf{F}_{LSE}^2$ = Variance associated with the land surface elevation, in meters squared; and
- $\mathbf{F}_{DTW}^2$ = Hydrograph variance of "consistent" measurements, in meters squared.

An alternate way to express the variance associated with the mean hydraulic head value obtained from multiple water level measurements is the variance of the sample mean, as follows:

$$\mathbf{F}_{\bar{H}}^2 = \mathbf{F}_{LSE}^2 + \frac{\mathbf{F}_{DTW}^2}{n} \quad (7-3)$$

Where:

- $\mathbf{F}_{\bar{H}}^2$ = Variance the average hydraulic head, in meters squared;
- $\mathbf{F}_{LSE}^2$ = Variance associated with the land surface elevation, in meters squared;
- $\mathbf{F}_{DTW}^2$ = Hydrograph variance of "consistent" measurements, in meters squared.; and
- n = Number of historical water level measurements used to calculate the average.

For each site, only one measurement or estimate of the land surface elevation is available. This single measurement is accompanied by an estimated accuracy that is dependent on the method used. For example, for land surface elevations estimated from topographic maps, the accuracy is equal to half of the contour interval used. The variance of the land surface elevation may be estimated from the land surface accuracy, assuming that the accuracy represents the error on the

estimate with a 95 percent confidence level, and is, therefore, equal to two standard deviations. Thus, the variance associated with the land surface elevation is estimated as follows:

$$\sigma_{LSE}^2 = (0.5 * LSE)^2 \quad (7-4)$$

Where:

σ_{LSE}^2 = Variance associated with land surface elevation, in meters squared; and
LSE = Accuracy (Error) of land surface elevation measurement, in meters.

For sites having a single measurement of depth-to-water, temporal variances are unknown for such sites and were assigned a "999" code value in the database. Thus, the total variance is unknown and also is assigned a "999" code. For springs, the variance of the land surface elevation is used as the total hydraulic head variance. A total hydraulic head variance value of 100 square meters is recommended for all hydraulic head values assigned a "999" code. This variance is equivalent to an estimated error of +/- 20 meters or plus or minus two standard deviations, with a 95 percent confidence level.

7.3 Effective Open Interval Definition

Well construction data were used to define the well open interval to identify the hydrostratigraphic unit or units associated with each site for which water level measurements were available.

Detailed well construction data are stored in the ER database. The open interval of each completion zone is the construction data of primary interest. The term "open interval" refers to any type of opening through which water may flow freely from the rock formation into the borehole. Examples of open intervals include open borehole (uncased) or the intervals in which well screens and perforated casing are gravel packed. Types of well construction data needed for well hydrostratigraphic unit assignment are limited and include the following for each site:

Total depth (TD)
Depth to top of first open interval
Depth to bottom of first open interval

Depth-to-top of nth open interval
Depth-to-bottom of nth open interval

Depth-to-top of last open interval
Depth to bottom of last open interval
Total depth

An effective open interval (EOI) was defined for each site for which well construction data are available. The EOI was defined in different ways depending on the relative positions of the minimum depth-to-water measurement and the minimum depth to the top of open interval or depth to the top of the shallowest open interval.

If the minimum depth-to-water measurement is greater than the minimum depth-to-top of open interval, than the EOI is defined as follows:

Depth of EOI top = minimum depth-to-water measurement
Depth of EOI bottom = maximum screen bottom

If the minimum depth-to-water measurement is less than the minimum depth-to-top of open interval, than the EOI is defined as follows:

Depth of EOI top = minimum depth to open interval top
Depth of EOI bottom = maximum screen bottom

For cases where the borehole is open, the EOI is defined as the length of the saturated thickness.

Depth of EOI top = minimum depth-to-water measurement
Depth of EOI bottom = total depth

7.4 Site Hydrostratigraphy Assignment

Assignment of hydrostratigraphic units to a given site was made based on the detailed hydrostratigraphy defined in the Geologic Model Documentation Package (Volume I) and the available stratigraphy and well construction data. A summary of the hydrostratigraphic organization used is presented in [Table 7-1](#). The detailed hydrostratigraphic units used are referred to as the "original" units on this table. A site stratigraphy data set, consistent with the stratigraphic cross-sections constructed under the geologic model subtask (Plate 1) was developed for selected wells and holes located in the vicinity of the cross sections. This data set was used in the assignment of the hydrostratigraphic units to individual sites.

Table 7-1
Hydrostratigraphic Units/Geologic Model Layers

Consolidated Unit	Geologic Model Layer	Original Unit	Description
	20	AA	Alluvial Aquifer
	19	TMAQ-7	Uppermost Welded Tuffs (referred to in text as TMA)
TC	18	TPTC-6	Laterally Variable Tuffs and Lava Flows of Paintbrush Group Tuff Cone
		TCTC-5	Laterally Variable Tuffs and Lava Flows of Calico Hills
	17	TCBCU-4	Non-Welded Tuffs (referred to in text as TCB)
	16	TBAQ-3	Welded Tuffs Above BCU-2 (referred to in text as TBA)
	15	BCU-2	Non-Welded Tuffs (referred to in text as BCU)
	14	BAQ-1	Welded Tuffs (referred to in text as BAQ)
VA	13	WTA	Welded Tuff Aquifer
		VTA	Vitric Tuff Aquifer
		TCU2	Zeolitized Tuff Confining Unit (Upper) Volcanic Tuff Aquifer
		TPTA	Topopah Springs Tuff Aquifer
		WLA	Wahmonie Lavas Aquifer
VCU	12	TCU1	Zeolitized Tuff Confining Unit (Lower)
		VCCU	Volcaniclastic Confining Unit (Volcanic Tuff Confining Unit)
	11	VU	Volcanics Undifferentiated
TSDVS	10	TS DVS	Tertiary Sediments Death Valley Section
	9	LCA3	Lower Carbonate Aquifer (Yucca Flat Upper Plate), Upper Carbonate Aquifer in NTS Area
	8	UCCU	Upper Clastic Confining Unit
	7	LCA	Lower Carbonate Aquifer
	6	LCCU	Lower Clastic Confining Unit
	5	LCA1	Lower Carbonate Aquifer (Upper Plate)
	4	LCCU1	Lower Clastic Confining Unit (Upper Plate)
	3	LCA2	Lower Carbonate Aquifer (Lower Plate)
	2	LCCU2	Lower Clastic Confining Unit (Lower Plate)
	1	I	Intrusives

Five methods were used to assign hydrostratigraphic units to sites based on the information available. Descriptions of the methods are as follows:

- Method 1: This method was used for wells or holes having available open interval and stratigraphy data. It consisted of identifying the stratigraphic units to which the well was open, using the EOI previously defined, and then identifying the corresponding HSU based on the hydrostratigraphic organization of the area. Sources of data were the ER database or related publications. This method was used for most of the wells located on the Nevada Test Site and vicinity.
- Method 2: This method was used for some of the wells for which open interval and stratigraphy data were not available. The hydrostratigraphic units tapped by the wells, especially for those on the NTS and in the Amargosa Desert, were found in USGS publications (Arteaga et al., 1991; La Camera and Westenburg, 1994).
- Method 3: This method was also used for some of the wells for which open interval and stratigraphy data were not available, but for which lithologic or drillers' logs were available. This method was used mostly for private wells located in the Amargosa Desert and Penoyer Valley. Most of these private wells were completed in the Alluvial Aquifer (AA).
- Method 4: Numerous wells outside of the NTS were lacking the geology and well construction information necessary to assign an HSU with confidence. These wells were posted on AA isopach maps and surficial geology maps with their water level elevations and TDs posted. The well depth was then compared to the thickness of the alluvium at that location. If the well depth was definitely less than the thickness of the AA at that location, the well was assigned the AA HSU.
- Method 5: If no geology and well construction data were available, the HSU assignment was made based on information from neighboring wells and comparisons of water levels with those observed in neighboring wells.

7.5 Potentiometric Maps

This section includes descriptions of the methods used to generate the potentiometric maps and definitions of the spatial outliers generated during the process.

7.5.1 Map Generation

Potentiometric contour maps were prepared using a combination of automatic and hand-contouring techniques. The automatic contouring was performed using a software package residing on the ERDBMS with the ER database. This software package is a module of Environmental Resource Management Applications (ERMA) and can be used in conjunction with the mapping software package.

The maps were developed using the following steps:

- Step 1: The hydraulic head contours were generated using the automatic technique.
- Step 2: Spatial outlier data points were identified and flagged using the procedure outlined in the next subsection.
- Step 3: The head contours were modified by hand to account for the effect of the controlling features and to interpolate the lines in areas where large data gaps exist.

The spatial outliers identified during the mapping process were flagged accordingly as described in the following subsection.

7.5.2 Spatial Analysis

The spatial analysis was conducted during the generation of the regional composite potentiometric head map. The spatial analysis was performed only on the reduced data set which was derived from the temporal analysis previously described. The objective of the spatial analysis was to identify and analyze spatial outliers in the reduced potentiometric head data set. The spatial analysis consisted of a spatial trend analysis on the potentiometric head contour maps. Based on the head potentiometric surface, data points were assigned a Primary Data Quality Evaluation Flag (PDQE): acceptable (A) or not-acceptable (NA). Further documentation of this spatial analysis included the assignment of a Secondary Data Quality Evaluation Flag (SDQE) to explain all of the head values that were flagged as NA.

The secondary flags are designed to explain data points which were considered spatial outliers. These were primarily flagged as NA and are listed here.

- DP Data points which are obviously duplicate points or are known to be duplicate points were flagged as such.
- WC Data points which have wrong coordinates were considered outliers if the correct coordinates were not available.
- P Data points with a high potentiometric head or a land surface elevation (for springs) that was too high for the spatial trend for the area were considered outliers. If such points had a long period of record and a low variance and were located in an area where perched water is known to occur, they were flagged with a P for "Perched."
- AL Data points which were anomalously low for the local trends were considered spatial outliers if their abnormal heads could not be explained.

AH Data points which were anomalously high for the local trends were considered spatial outliers if their abnormal heads could not be explained.

Another Analysis Flag (ANAL_F) was defined for purposes of the predevelopment water level map only. Data points to be included in the generation of the regional water level map were flagged as I for "included" and E for "excluded". For example, for sites in Yucca Flat which have multiple completion zones, only hydraulic heads representative of LCA completions were included as control points in the generation of the regional water level map.

7.6 Vertical Hydraulic Head Gradient Analysis

A vertical hydraulic head gradient analysis was conducted to provide approximate vertical flow directions for the modelers to use as an additional guide during the steady-state model calibration process. The analysis is based on mean hydraulic head values and estimates of the associated variances and, thus, may not yield true vertical flow trends. These trends should be used only as guides to identify vertical hydraulic gradient directions in the modeled area during the calibration process.

The vertical hydraulic head gradient trends were analyzed and defined using two types of data groups. The first type includes head data from multiple completion wells where heads are measured for specific isolated intervals (piezometer nests, packers, or sliding sleeve). The second type includes head data from well clusters in which the wells penetrate different hydrostratigraphic units or are completed at different depths. The definition of a cluster and distances between the wells involved depend on the local head gradient.

Quality well data to evaluate the vertical gradients in the regional areas are scarce. Several sites consisting of well clusters have high or unknown hydraulic head variances. Sites with unknown hydraulic head variances were excluded from the analysis if the observed vertical head differences were not significantly large. A given well or borehole was included in the analysis if it had multiple sites with approximately the same land surface elevation.

8.0 Interpretive Products

Interpretive products include a predevelopment hydraulic head data set, a site stratigraphy data set for selected holes, potentiometric maps, and vertical head distribution tables.

8.1 Predevelopment Hydraulic Head Data Set

A table containing all hydraulic head data and information to be used in the calibration of the regional groundwater flow model was prepared and placed in the ER database. The table contains the following fields:

- Site reference number
- Site identification number
- Reporting name
- Type of site
- Easting
- Northing
- Land Surface Elevation
- Well Depth
- Top of EOI Elevation
- Bottom of EOI Elevation
- Primary hydrostratigraphic unit
- Secondary hydrostratigraphic unit
- Predevelopment hydraulic head elevation
- Total number of depth-to-water records available
- Number of depth-to-water records used
- Beginning date for period of record
- Ending date for period of record
- Water level observed at beginning of period of record
- Water level observed at end of period of record
- Land surface elevation variance
- Hydrograph variance
- Total hydraulic head variance
- Regional analysis flag
- Remarks

A summarized version of this table is presented in [Appendix A](#).

8.2 Site Stratigraphy Data Set

The site stratigraphy data set generated during the construction of the geologic cross sections was placed in the ERDBMS. The site stratigraphy data set ([Appendix B](#)) includes the following fields:

Site reference number
Site identification number
Common name
Stratigraphic unit
Depth to top of stratigraphic unit
Preliminary hydrostratigraphic unit classification
Hydrologic control parameter (type of alteration)
Source of information
Remarks

8.3 *Hydraulic Head Distribution Maps*

Seven hydraulic head maps were generated. They all present the available hydraulic head data selected to represent predevelopment groundwater flow conditions. Potentiometric contours were drawn where sufficient data were available. The maps are presented and discussed in Section 9.0.

8.4 *Vertical Hydraulic Head Distribution Tables*

Vertical head distribution tables were prepared for locations which have either more than one separate completion zone or are closely located. The tables provide a qualitative evaluation of the direction of the vertical hydraulic gradient in the different areas of the NTS regional groundwater flow system. The tables are discussed in Section 9.0.

9.0 Nevada Test Site Regional Groundwater Flow System

The NTS regional groundwater flow system is described in this section. The description focuses on the flow system boundary, the hydrostratigraphic units, groundwater movement within the regional system, and the effect of human-imposed stresses on the flow system.

9.1 Groundwater Flow System Boundary

The NTS regional groundwater flow system is part of the Death Valley Groundwater Basin. The boundary defined by Waddell et al. (1984) for this groundwater flow system ([Figure 1-1](#)) has been modified during this investigation because of uncertainties associated with its location in some areas. The groundwater flow system boundary, delineated during this investigation, is presented in [Plate 2](#).

The boundary of the NTS groundwater flow system, shown in [Figure 1-1](#), was revised based on groundwater divides identified from regional water level contours, the locations of major recharge and discharge areas and flow-controlling geologic features ([Plate 2](#)). The groundwater flow system boundary was selected to match, as much as possible, areas where no cross flow occurs. Such areas may be found along groundwater divides and flow lines. Groundwater divides are lines formed by the highest points in the water table or potentiometric surface. They usually represent top of mounds in areas of important recharge. Groundwater can move radially or laterally away from these divides, but not across the divides. Similarly, flow lines cannot cross other flow lines by definition.

The groundwater flow system boundary was delineated to match groundwater divides that occur along the crests of the Sheep Range (across the Las Vegas Shear Zone), Spring Mountains, Cactus Range, and the Quinn Canyon Range. The boundary ([Plate 2](#)) follows selected flow lines between the Sheep Range and the Spring Mountains, across the Resting Spring and Greenwater Ranges to Death Valley, from Death Valley across the Grapevine Mountains to the west of Bullfrog Mountain and north to the Cactus Range, from the Cactus Range across the Kawich Range to Railroad Valley, across Garden Valley, and from the Timpahute Range down the length of the Pahranaagat Range.

Boundaries based on flow lines are less known than those based on divides. Thus, the locations of the eastern and northern portions of the flow system boundary are the most uncertain. Some uncertainty also exists about the location of the flow-system boundary in the vicinity of the

southern Sheep Range. The interpretation used in this investigation incorporates the Sheep Range within the Death Valley flow system, while others (e.g., Dettinger et al., 1995) have suggested that water recharged in the Sheep Range may flow toward the Las Vegas valley. Water-level data can be interpreted both ways, depending on the configuration of the Las Vegas Shear Zone and its properties. The Sheep Range was included within the groundwater flow system boundary because the top of the LCCU is highest near the crest of the Sheep Range, and it slopes down to the west. This geometry favors flow to the west rather than to the south.

Certain sections of the NTS groundwater flow system are flow boundaries, i.e. groundwater either enters or exits the flow system as underflow across them. Subsurface inflow occurs along the boundary from Pahranaagat Valley, Sarcobatus Flat and Pahrump Valley. Subsurface outflow occurs at the southern boundary, in the vicinity of Eagle Mountain.

9.2 Hydrostratigraphic Units

Geologic formations of hydrologic significance in the subsurface of the NTS region have been grouped in ten main hydrogeologic (or hydrostratigraphic) units by Winograd and Thordarson (1975). During the Phase I regional investigation, the hydrostratigraphy of the NTS region defined by Winograd and Thordarson (1975) was refined to yield twenty hydrostratigraphic units presented in [Table 7-1](#) and described in detail in the Geologic Model Documentation Package (IT, 1996b). The hydrostratigraphic units are classified as either aquifers or aquitards.

The ten major hydrostratigraphic units include, from oldest to youngest: Lower Clastic Aquitard; Lower Carbonate Aquifer; Upper Clastic Aquitard; Upper Carbonate Aquifer; Tuff Aquitard; Lava Flow Aquitard; Bedded Tuff Aquifer; Welded-Tuff Aquifer; Lava Flow Aquifer; and the Valley-Fill Aquifer. The entire sequence of hydrogeologic units may either not be present or may be repeated in areas due to lack of deposition, normal faulting, melting and replacement from plutons or caldera formation, or thrust faulting. Generally, the aquifer units have transmissivities greater than 2.5 meters per day (m/d) and the aquitards have transmissivities less than 2.5 m/d. The hydraulic properties of the major hydrogeologic units are presented in the Hydrologic Parameter Data Documentation Package (IT, 1996d). A more detailed description of the hydrostratigraphy and structural features of the NTS region, based on the three-dimensional geologic model, is provided in the Geologic Model Documentation Package (IT, 1996b).

9.3 Groundwater Movement

Within the NTS region, Winograd and Thordarson (1975) classified groundwater movement in three categories: (1) Movement of perched water; (2) intrabasin movement of water, including

semiperched water; and (3) interbasin movement of water. Perched groundwater has been defined by Meinzer (1923) as being such “if it is separated from an underlying body of ground water by unsaturated rock.” Meinzer (1923) defines groundwater as being semi-perched “if it has greater pressure head than an underlying body of groundwater, from which it is however not separated by any unsaturated rock.” Semi-perched water, like perched water, is underlain by a negative confining bed of either permeable or impermeable type. Intrabasin flow occurs between the semi-perched water and the underlying water. Perched groundwater occurs on the Nevada Test Site, the Spring Mountains and Sheep Range. The presence and movement of perched groundwater is evidenced by numerous springs in these areas. For the purpose of this investigation, perched groundwater will not be discussed further in this document. Rather, discussions of the interbasin (or regional) groundwater movement and intrabasin movement within areas of the NTS are presented in this section.

9.3.1 Regional Groundwater Movement

Interbasin movement of groundwater or regional flow represents the lateral movement of groundwater from one basin to the next. As shown by the hydraulic head contours shown on [Plate 2](#), the general groundwater flow direction in the regional flow system is from the north to the south and from the east to the southwest. Within the NTS regional groundwater flow system, water flows from areas of recharge at higher potential to areas of lowest potential located at low altitudes. Where groundwater encounters structural and geologic conditions that are conducive to upward flow, groundwater is discharged to the surface in the form of a wet playa or springs from which the water is then lost to the atmosphere by evapotranspiration.

The general flow directions are consistent with the fact that groundwater moves from areas of recharge to areas of discharge. The NTS regional groundwater-flow system exhibits several areas of recharge and discharge. Areas of recharge to the north include Cactus Range, Kawich Range, Reville Range, Quinn Canyon Range, and Grant Range. Areas of recharge to the east include the Golden Gate Range, Pahrnagat Range, and Sheep Range which is an area of great recharge. A great amount of recharge also occurs on the Spring Mountains to the south of the NTS. Other areas of recharge include the mesas and higher-elevation areas surrounding the NTS. Some recharge may also occur along canyons such as Fortymile Canyon. Major discharge areas located within the boundaries of the NTS regional groundwater-flow system boundaries include Ash Meadows, Franklin Lake Playa, Central Death Valley, Oasis Valley, Indian Springs and Penoyer Valley. Groundwater flow directions within the NTS subsurface are structurally controlled by faults, fractures, and caldera formations associated with Tertiary volcanics.

The effect of structure on regional flow patterns is significant in the Caldera Complex, in Yucca Flat, and in the area of the Furnace Creek Ranch fault located in the south-western part of the investigation area ([Plate 2](#)). In the Caldera Complex, the extensive fault system is important because the faults constitute the secondary porosity through which water moves, mostly to the south and to the east to Yucca Flat. The Furnace Creek fault seems to act as a conduit for groundwater movement from the Amargosa Desert to Death Valley.

Hydraulic gradients are very low to the east and west of the Nevada Test Site, suggesting the presence of very transmissive media (thick LCA). In other areas, the prevailing flow direction and hydraulic gradients may be altered when groundwater encounters geologic units with significantly lower transmissivity than the prevailing units. Depending on their size and orientation, they may or may not affect groundwater flow. If these formations are oriented perpendicular to flow, they may alter flow significantly and cause steepening of the local horizontal hydraulic gradients (damming effect). If their orientation is parallel to the prevailing flow direction, their effect may be insignificant. The Upper Clastic Confining Unit (UCCU) and LCCU outcrops that occur on the NTS cause the observed steep gradients ([Plate 2](#)). These two units affect the prevailing directions and rates of groundwater flow in areas where they intersect other hydrogeologic units such as the Lower Carbonate Aquifer and the Volcanic Aquifer (VA). An outcrop of the LCCU, located in Kawich Valley, does not affect the general flow patterns. The hydraulic gradient also steepens at the southwestern boundary of the groundwater flow system because of the presence of low-permeability Tertiary sediments along the Funeral Mountains.

Good-quality well data to evaluate the vertical hydraulic gradients for areas outside of the NTS are scarce. Wells and boreholes were included in [Table 9-1](#) if they have multiple completions or form a cluster with approximately the same land surface elevation. As shown on the table, most sites represent holes that were completed in the alluvial aquifer and either show small vertical head variations at the same location, or are uncertain (high hydraulic head variances). The available well data are provided in [Table 9-1](#).

At Ash Meadows, vertical upward groundwater movement is evidenced by numerous springs originating from the Lower Carbonate Aquifer and the presence of an upward vertical gradient in closely-spaced wells completed both in the AA and the LCA ([Plate 2](#)).

In the Amargosa Farms area, Kilroy (1991) presents an analysis of the vertical gradients. She calculated vertical gradients for 21 nested piezometers, one well cluster, and one river and well

Table 9-1
Direction of Vertical Hydraulic Gradient at Selected Regional Sites

Site ID	Map Reference Number	Site Name	Site Type ^a	Northing UTM Zone 11 (m)	Easting UTM Zone 11 (m)	Reference Elevation (m AMSL)	Depth to EOI Top (m)	Depth to EOI Bottom (m)	Mid-EOI Elevation (m AMSL)	Head Elevation (m AMSL)	Total Variance (m ²)	Primary HSU ^b	Vertical Gradient Direction
361413116221202	173		W	4,010,211	556,616	609.7	3.2	6.1	605.1	606.3	0.04	AA	Slightly up
361413116221203	174		W	4,010,211	556,616	609.6	2.2	9.4	603.8	606.7	0.08	AA	
361415116222101	178		W	4,010,271	556,390	609.6	2.3	8.2	604.4	607.2	0.03	AA	Slightly up
361415116222103	180		W	4,010,271	556,390	609.6	1.8	10.7	603.4	607.7	0.03	AA	
361700116220203	309	GS-10	W	4,015,358	556,832	616.9	-1.1	4.9	615.0	617.7	0.08	AA	Down
361700116220202	308	GS-9	W	4,015,358	556,832	615.6	0.4	2.4	614.2	614.9	0.06	AA	
361700116220204	310	GS-11	W	4,015,358	556,832	614.4	0.3	1.8	613.4	613.8	0.06	AA	
361954116181202	395		W	4,020,855	563,029	716.7	47.9	48.8	668.4	692.0	2.88	TS	Down
361954116181201	394	GS-3 W	W	4,020,855	563,029	716.7	600.2	603.2	115.0	648.2	0.1	TS	
362014116134902	399		W	4,021,644	569,555	740.8	24.8	481.6	487.6	715.9	0	AA	Slightly up
362014116133901	398	GS-1 W	W	4,021,644	569,555	740.8	472.1	475.2	267.2	716.2	0.01	AA	
392333116560402	2207		W	4,360,126	505,649	1,790.7	23.1	121.9	1,718.2	1,761.8	2.34	AA	Down
392333116560401	2206		W	4,360,126	505,649	1,790.7	73.7	121.9	1,692.9	1,715.4	4.3	AA	

^aW is for well and X is for exploratory hole.

^bSee Acronym List

pair. Kilroy (1991) found that upward gradients occur in the central and southern part of Amargosa Desert and that they are associated with freshwater limestones, carbonate-rock outcrops and subbasin structures. She identified downward gradients to occur in consolidated Tertiary conglomerates, and crystalline and volcanic rocks. Kilroy (1991) associated the large downward gradients on the east flank of the Funeral Mountains to recharge from Bullfrog Hills and the Funeral Mountains. Kilroy (1991) also concluded that downward gradients occur near the channel of Amargosa River.

Vertical groundwater movement is downward in recharge areas and downward in discharge areas. In valleys outside of the NTS, this is evidenced by two wells tapping the LCA in Penoyer Valley. The vertical groundwater movement is upward in the lowest part of the valley as indicated by the presence of a wet playa and a valley-floor spring (Plate 2). The upward water flow movement is also exhibited by numerous regional springs on the valley floors of Oasis, Penoyer, Indian Springs, and Death Valley valleys; and Ash Meadows.

The general trends of regional groundwater movement within the NTS regional groundwater flow system are consistent with findings from previous studies such as that of Winograd and Thordarson (1975), Waddell (1982), Waddell et al. (1984), Lacznia et al. (1996), and Kilroy (1991).

9.3.2 Yucca Flat

The local groundwater flow system of Yucca Flat is complex. The groundwater flow system consists of four main aquifers: the Alluvial Aquifer, the Volcanic Aquifer, the Upper Carbonate Aquifer, and the Lower Carbonate Aquifer. On the western side of the flat, the alluvial, volcanic, and upper carbonate aquifers are separated from the LCA by the UCCU, creating a semi-perched groundwater system measurement.

The Quaternary alluvial deposits vary in thickness from zero on the flanks of the surrounding higher elevation ranges to more than 600 m (1,968 ft) in the south-central part of the flat. However, the available data indicate that the alluvial deposits are unsaturated over most of Yucca Flat. The alluvium is saturated in discrete places and forms a discontinuous aquifer (Plate 3). The Alluvial Aquifer is composed of two major areas. The largest of these areas is located in the central part of the valley and is crossed by major faults. The second alluvial basin is located in the northern part of the flat and is smaller than the central one. Available data for the alluvial aquifer are not sufficient to draw potentiometric contours and to depict the direction of the horizontal movement.

[Plate 4](#) shows the hydraulic head distribution in the Volcanic Aquifer of Yucca Flat. The Volcanic Aquifer consists of the WTA, VTA, and the TPTA and extends over most of the flat. The VA is absent on the westernmost side of the flat. The potentiometric head map shown on [Plate 4](#) exhibits a mound in the central part of the flat. The origin of the mound is not well-understood; this configuration of the potentiometric surface of the volcanic aquifer is most probably not representative of steady-state conditions. Available data from areas north and south of the mound suggest that perhaps predevelopment flow patterns in the Volcanic Aquifer were inward towards the center of the Cenozoic units.

[Plate 5](#) shows the hydraulic head distribution in the Lower Carbonate Aquifer at Yucca Flat. Data from areas beyond the boundaries of Yucca Flat were included in the generation of this potentiometric map. The LCA is bounded by the Eleana Formation (UCCU) to the west and by the LCCU to the north and northeast of the flat. The general direction of groundwater in the LCA in this area is from the eastern, northern, and western edges of the flat towards the axis of the flat and then south towards Frenchman Flat.

In Yucca Flat, the observed trends of vertical hydraulic gradients are downward in the central and northern parts of the flat ([Table 9-2](#)). The data suggest questionable upward groundwater movement in the eastern and southern parts, based on the mean hydraulic head values only. This probably reflects the effects of stress caused by the underground nuclear tests.

The downward trend observed in the central and northern part of Yucca Flat is supported by the available data. For example, in the northern part of Yucca Flat, Water Well 2 (WW-2) has five completion zones, two in the Tuff Confining Unit (TCU1), and three in the LCA ([Table 9-2](#)). The average hydraulic head in the TCU1 of Water Well 2 is 760 m (2,493 ft), while the average head in the underlying LCA is 735 m (2,411 ft), showing a 25-m difference in head between the two hydrostratigraphic units and, thus, a downward gradient. The same trend may be derived from another separate multiple-completion well such as UE-10ITS 5.

In the central part of the flat, the general vertical head gradient is downward at several locations. Test Well E (TW-E), for example, has three separate completion zones: one in the TCU1, a second one in both the TCU1 and the LCA, and a third one in the LCA. The average heads are respectively 748 m, 744 m, and 729 m (2,454 ft, 2,441 ft, and 2,392 ft), displaying a downward vertical hydraulic gradient. Other central locations displaying a downward gradient include UE-4av and UE-1q.

Table 9-2
Direction of Vertical Hydraulic Gradient at Selected Sites in Yucca Flat

Well ID	Site Name	Site Type ^a	Northing (m)	Easting (m)	Reference Elevation (m AMSL)	Depth to EOI Top (m)	Depth to EOI Bottom (m)	Mid-EOI Elevation (m AMSL)	Hydraulic Head (m AMSL)	Total Variance (m ²)	Primary HSU ^b	Direction of Vertical Gradient
370321115594201	TW-E	X	4,101,334	589,362.7	1,271.3	523.1	600.5	709.5	748.2	0.02	TCU1	Down
370321115594202	TW-E	X	4,101,334	589,362.7	1,271.6	548.6	740.7	627.0	743.7	0.04	LCA	
370337116033001	UE-1q	X	4,101,769	583,726.4	1,244.1	473.4	742.8	636.0	770.4	0.1	TCU1	Down
370337116033002	UE-1q	X	4,101,769	583,726.4	1,244.1	749.5	792.5	473.1	739.5	0.01	LCA	
370411116025901	UE-3e	X	4,102,824	584,481.6	1,244.5	474.0	520.3	747.4	770.1	0.12	WTA	Up
370411116025905	UE-3e	X	4,102,824	584,481.6	1,244.5	460.9	643.1	692.5	774.8	0.21	TCU1	
370547116041101	UE-4av	X	4,105,765	582,674.6	1,273.1	476.7	535.8	766.9	795.6	999	TCU1	Down
370547116041104	UE-4av	X	4,105,765	582,674.6	1,273.1	465.3	605.0	738.0	794.5	999	TCU1	
370547116041102	UE-4av	X	4,105,765	582,674.6	1,273.1	524.3	858.0	582.0	777.5	999	TCU1	
370958116051501	WW-2	X	4,113,485	581,020.3	1,362.5	583.7	623.3	759.0	759.9	1.09	TCU1	Down
370958116051503	WW-2	X	4,113,485	581,020.3	1,362.5	658.7	772.7	646.8	760.2	1.7	TCU1	
370958116051508	WW-2	X	4,113,485	581,020.3	1,362.5	777.2	882.7	532.6	735.8	999	LCA	
370958116051511	WW-2	X	4,113,485	581,020.3	1,362.5	777.2	1043.0	452.4	736.5	999	LCA	
370958116051512	WW-2	X	4,113,485	581,020.3	1,362.5	823.0	1040.0	431.0	736.2	0.15	LCA	
371155116031402	UE-10 ITS 5	X	4,117,119	583,968.6	1,378.3	627.9	655.3	736.7	772.6	0.5	TCU1	Down
371155116031401	UE-10 ITS 5	X	4,117,119	583,968.6	1,378.3	620.4	716.3	710.0	757.3	0.25	LCA	

^aW is for well and X is for exploratory hole.

^bSee Acronym List

Composite potentiometric maps were prepared by Doty and Thordarson (1983) and Hale et al. (1995). A Lower Carbonate Aquifer map was prepared by Winograd and Thordarson (1975). The general flow directions depicted on those maps are comparable to the LCA potentiometric map shown on [Plate 5](#). The Doty and Thordarson (1983) map exhibits a mound whereas the Hale et al. (1995) map exhibits several mounds. Note that all these maps do not and should not match the potentiometric surfaces presented here because their purpose was to depict current conditions matching the time of the study rather than predevelopment conditions.

9.4 Caldera Complex

The Caldera Complex has been subdivided into three main areas: Pahute Mesa, Rainier Mesa, and Oasis Valley. The groundwater flow system of the Caldera Complex consists of three aquifers: the Timber Mountain Aquifer, the Belted Range Aquifer, and the Basal Aquifer. The groundwater flow system of the Caldera Complex varies by area. The flow patterns of each of the three areas are briefly discussed next.

On Pahute Mesa ([Plate 6](#)), groundwater occurs in volcanic rocks only and flow is controlled mostly by the structural blocks that form the caldera. The general direction of flow is to the southwest. The role of the Purse fault and corresponding system of faults is not well understood. Blankennagel and Weir (1973) defined this fault system as a partial barrier to flow towards the west and also as a conduit for flow towards the south. Even though the effect of the fault on flow was not taken into account, the general flow directions depicted on [Plate 6](#) are consistent with those presented by Blankennagel and Weir (1973) and O'Hagan and Laczniaik (1996) at the regional scale.

On Rainier Mesa, the groundwater system formed by the edges of the Caldera Complex is overlain by Quaternary alluvium and forms a perched subsystem over the regional aquifer system. Most wells drilled on Rainier Mesa penetrate the perched system. A few others penetrate the LCA3 and the UCCU (shown on [Plate 6](#)). The perched groundwater system of Rainier Mesa has been documented by Thordarson (1965), Russell (1987), Jacobson et al. (1986), and Winograd and Thordarson (1975).

The Oasis Valley groundwater flow system has not been mapped on a separate plate because available data are insufficient for hydraulic head contouring. The general direction of flow in this area may be evaluated from the composite regional flow ([Plate 2](#)). The general flow direction is north to south, from the Pahute Mesa recharge area, to the main discharge area of Oasis Valley, where numerous regional springs occur. The hydraulic gradient is low north of the discharge

area, signifying the presence of transmissive rock units, probably the LCA as assumed in the geologic model. The hydraulic gradient is steeper within the discharge area, showing a thinning of the thicker sequence of LCA to the north.

Selected site data for Rainier Mesa and Pahute Mesa were compiled to show vertical head distributions ([Table 9-3](#)). Data for 11 sites are available for Rainier Mesa. However, out of the 11 sites, six are located in the northern part of the mesa and tap a perched groundwater subsystem. The hydraulic heads of this subsystem are at least 300 m (984 ft) above those of the regional system. Out of the five remaining boreholes located in southern Rainier Mesa, two are completed in the LCA3, one in the UCCU, and one in the BAQ-1. The last hole, TW-1, has 11 separate multiple-completion zones: seven open to the BCU-2 and four open to the LCA3.

TW-1 is the only location on Rainier Mesa where the vertical hydraulic gradients may be directly evaluated. The top four completion zones appear to tap the perched system. The remaining zones exhibit a downward hydraulic head trend.

Most of the wells on Pahute Mesa (PM) are completed in the TPTC6 and TCTC5 HSUs, a few in the welded tuff aquifer (TBAQ-3), four in the non-welded tuffs (BCU2 and TCBCU4), and two in the TMAQ7.

In southern Pahute Mesa, including the PM-3 well area, the hydraulic head data indicate a downward water movement as exhibited on [Table 9-3](#) by PM-3, U-20n PS, and UE-20n 1. In the central area and extending to the northern and eastern sides of the mesa, the movement is upward as exhibited by U-19ab, U20bd, PM-1, and others. The vertical gradient trends may not be evaluated in the northern part of Pahute Mesa for lack of multiple-completion wells or clusters of wells.

9.5 Southern Nevada Test Site

The groundwater flow system of southern NTS consists of a sequence of hydrostratigraphic units, as described in the previous section, overlying the LCA. The groundwater flow system consists of three main aquifers: the WTA, the WLA, and the LCA, which is present outside of the caldera. The area was subdivided in two subareas based on data availability. The first subarea includes Crater Flat, Yucca Mountain, and Jackass Flat. The second subarea consists of the rest of the area to the east, including Frenchman Flat. The groundwater flow patterns of each subarea are briefly discussed in the following paragraphs.

Table 9-3
Direction of Vertical Hydraulic Gradient at Selected Sites in the Caldera Complex

Site ID	Site Name	Site Type ^a	Northing UTM Zone 11 (m)	Easting UTM Zone 11 (m)	Reference Elevation (m AMSL)	Depth to EOI Top (m)	Depth to EOI Bottom (m)	Mid-EOI Elevation (m AMSL)	Head Elevation (m AMSL)	Total Head Variance (m ²)	Primary HSU ^b	Vertical Gradient Direction
370929116132307	TW-1	W	4,112,484	568,992	1,876.3	582.2	740.7	1,214.85	1,437.1	0	BCU-2	Down
370929116132308	TW-1	W	4,112,484	568,992	1,876.3	582.2	740.7	1,214.85	1,437.3	0.07	BCU-2	
370929116132311	TW-1	W	4,112,484	568,992	1,876.3	582.2	740.7	1,214.85	1,429.6	0.09	BCU-2	
370929116132310	TW-1	W	4,112,484	568,992	1,876.3	582.2	1282	944.2	1,363.3	999	BCU-2	
370929116132304	TW-1	W	4,112,484	568,992	1,876.3	1,127.8	1,137.2	743.8	1,271.6	999	LCA3	
370929116132306	TW-1	W	4,112,484	568,992	1,876.3	1,127.8	1,282	671.4	1,276.8	999	LCA3	
370929116132309	TW-1	W	4,112,484	568,992	1,876.3	1,127.8	1,282	671.4	1,277	0.09	LCA3	
371421116333701	PM-3	X	4,121,290	539,006.6	1,774.8	443.2	502	1,302.2	1,331.3	0.09	TMAQ7	Slightly Down
371421116333704	PM-3-2	X	4,121,290	539,006.6	1,774.8	444.1	508.1	1,298.7	1,330.5	0.01	TMAQ7	
371421116333703	PM-3-1	X	4,121,290	539,006.6	1,774.8	584.9	653.5	1,155.6	1,329.8	0.02	TPTC6	
371421116333702	PM-3	X	4,121,290	539,006.6	1,774.8	449	920.2	1,090.2	1,330.3	0.17	TMAQ7	
371433116251301	U-20n PS	X	4,121,478	551,152.8	1,971.5	1,280.8	1,306.1	678.05	1,349.1	0.19	TCTC5	Down
371425116210101	U-20n PS	X	4,121,478	551,152.8	1,971.5	1,321.6	1,358.2	631.6	1,324.7	0	TCTC5	
371425116251902	UE-20n 1	X	4,121,479	551,276	1,969.2	695.6	863.8	1,189.5	1,349.4	0.09	TCTC5	Down
371425116251901	UE-20n 1	X	4,121,479	551,276	1,969.2	695.6	1,005.8	1,118.5	1,318.8	999	TCTC5	
371505116254502	U-20 WW	W	4,122,708	550,628	1,971.4	619.8	996.1	1,163.45	1,351.5	0.01	TCTC5	Down
371505116254501	U-20 WW	W	4,122,708	550,628	1,971.4	692.2	996.1	1,127.25	1,344.6	0.04	TCTC5	
371512116193101	U-19ab	X	4,122,984	559,839.9	2,111.7	616.3	685.8	1,460.65	1,495.0	0.09	TCTC5	Up
371513116193001	U-19ab 2	W	4,123,015	559,864.3	2,112.3	614.2	731.5	1,439.45	1,497.8	0.2	TCBCU4	
371542116251203	U-20bd	X	4,123,853	551,433.9	1,977.0	621.1	689.2	1,321.85	1,355.8	0	TCTC5	Up
371542116251202	U-20bd 2	X	4,123,853	551,433.9	1,996.7	621	746.8	1,312.8	1,375.3	0.06	TCTC5	
371617116291702	UE-20f	X	4,124,897	545,393.3	1,864.2	595.6	1,384.7	874.05	1,268.7	999	TCTC5	Up
371617116291701	UE-20f	X	4,124,897	545,393.3	1,864.2	1,358.2	4,171.5	-900.65	1,322.9	1.5	TBAQ3	
371649116242101	PM-1	W	4,125,925	552,677.2	1,998.8	643.9	2,305.2	524.25	1,354.5	0.34	TBAQ3	Up
371649116242102	PM-1	W	4,125,925	552,677.2	1,998.8	2,299.1	2356.4	-328.95	1,359.3	0.22	TBAQ3	
372034116222504	UE-19h	X	4,132,877	555,487.8	2,066.6	643.1	695.9	1,397.1	1,423.1	0.06	TBAQ3	Up
372034116222503	UE-19h	X	4,132,877	555,487.8	2,066.6	593.9	1,129.3	1,205.0	1,472.2	0.15	TBAQ3	
372034116222501	UE-19h	X	4,132,877	555,487.8	2,066.6	707.4	1,053.4	1,186.2	1,422.8	999	TBAQ3	

^aW is for well and X is for exploratory hole.

^bSee Acronym List

Plate 7 presents the available data and the potentiometric surface in the VA for Yucca Mountain and vicinity. The volcanic aquifer overlies the LCA in this area, but only one hole taps the LCA at a depth of approximately 1,200 meters (UE 25p 1PTH). Thus, a composite map could not be prepared. The general flow direction in the volcanic aquifer is from the northwest to the southeast. The hydraulic gradients are low on the edges and high in the middle of the area, coinciding with Yucca Mountain.

Plate 8 presents the hydraulic head data available for the eastern part of the area, including Skull Mountain and Frenchman Flat. The hydraulic head data were not contoured because of insufficient deep hole data representative of the regional system. The available data suggests a very flat gradient within Frenchman Flat.

Table 9-4 shows selected data available for vertical hydraulic gradient analysis for Yucca Mountain. No data from the other areas qualified for inclusion in this table. No vertical head gradient evaluation could be made in Crater Flat and Jackass Flats because of insufficient data.

At Yucca Mountain, most wells were completed in the volcanic aquifer (mostly WTA) (Table 9-4), a few in the TCU1, and a single well in the LCA. Wells completed in the AA that fall within this area are outside of the NTS near the southern corner of the NTS; they cannot be used for the vertical hydraulic gradient analysis because they are too distant. Several separate, multiple-completion-zone wells are present on Yucca Mountain which penetrate the TCU1 and WTA. The hydraulic head elevations in the two hydrostratigraphic units indicate an upward gradient between them. The only well completed in the LCA in this area (UE-25p 1PTH) has a head elevation of 752 m (2,467 ft) and is located near two wells completed in the overlying volcanic aquifer, having an average head elevation of 729.5 m (2,393 ft). The significant difference in head (22 m [72 ft]) indicates an upward groundwater movement from the LCA to the volcanics, in this area.

At Frenchman Flat, most wells for which data were available were completed either in the Quaternary alluvium or the volcanic aquifer; only five of them were completed in the LCA, and two of them in the tuff confining unit (TCU1). Based on the head elevations at these wells, the vertical hydraulic gradient is downward between the LCA and the overlying HSUs and neutral among the AA, WTA, and the TCU1. This configuration is similar to that of Yucca Flat: the Quaternary and Tertiary rocks form a semi-perched flow system above the LCA.

Table 9-4
Direction of Vertical Hydraulic Gradient at Selected Sites in the Southern NTS

Site ID	Site Name	Site Type ^a	Northing UTM Zone 11 (m)	Easting UTM Zone 11 (m)	Reference Elevation (m AMSL)	Depth to EOI Top (m)	Depth to EOI Bottom (m)	Mid-EOI Elevation (m AMSL)	Head Elevation (m AMSL)	Total Head Variance (m ²)	Primary HSU ^b	Vertical Gradient Direction
364942116280004	USW H-3 HTH	X	4,075,758	547,565.4	1,483.2	751.8	752	369.2	731.1	0.03	WTA	Up
364942116280002	USW H-3 HTH	X	4,075,758	547,565.4	1,483.2	750.4	752	293.2	732.6	0.01	WTA	
364942116280003	USW H-3 HTH	X	4,075,758	547,565.4	1,483.2	724.1	1,190	264.2	754.3	0.01	TCU1	
364942116280005	USW H-3 HTH	X	4,075,758	547,565.4	1,483.2	710.5	1,114	264.2	772.2	0.04	TCU1	
365032116265401	USW H-4 HTH	X	4,077,308	549,191.5	1,248.5	533.4	539.5	712.05	729.8	0.05	WTA	Up?
365032116265402	USW H-4 HTH	X	4,077,308	549,191.5	1,248.5	518.4	518.4	67.5	730	0.01	WTA	
365032116265403	USW H-4 HTH	X	4,077,308	549,191.5	1,248.5	518.2	1,181	29.5	730.1	0.02	TCU1	
365049116285504	USW H-6 HTH	X	4,077,815	546,191.9	1,301.7	526.2	752	662.6	775.5	0	WTA	Up?
365049116285502	USW H-6 HTH	X	4,077,815	546,191.9	1,301.7	525.7	1,193	442.35	775.8	0.01	WTA	
365049116285501	USW H-6 HTH	X	4,077,815	546,191.9	1,301.7	526.6	1,219.8	428.5	775.1	999	WTA	
365049116285505	USW H-6 HTH	X	4,077,815	546,191.9	1,301.7	752	1,220	315.7	775.3	0.01	WTA	
365049116285503	USW H-6 HTH	X	4,077,815	546,191.9	1,301.7	1,193	1,220	95.2	777.8	0.05	TCU1	
365108116262301	UE-25b 1 HTH	X	4,078,421	549,952.8	1,200.7	1,199.4	1,215.8	-6.9	730.3	0.07	WTA	Up?
365108116262302	UE-25b 1 HTH	X	4,078,421	549,952.8	1,200.7	472.2			728.3	0.02	WTA	
365108116262303	UE-25b 1 HTH	X	4,078,421	549,952.8	1,200.7	470			730.5	0.01	WTA	
365157116271205	USW H-1 HTH	X	4,079,924	548,730.7	1,303	572	640	697	730.4	0.06	WTA	Up
365157116271204	USW H-1 HTH	X	4,079,924	548,730.7	1,303	738	741	563.5	730.1	0.08	WTA	
365157116271203	USW H-1 HTH	X	4,079,924	548,730.7	1,303	1,112	1,115	189.5	731.1	0.01	WTA	
365157116271202	USW H-1 HTH	X	4,079,924	548,730.7	1,303	1,803	1,806	-501.5	784.9	0.01	TCU1	

^aX is for exploratory hole.

^bSee Acronym List

9.6 Effect of Human Stress

Two types of human-induced stresses have been imposed on the NTS regional groundwater flow system. The first type is groundwater pumping, and the second is underground nuclear testing near or below the water table. The effects of underground nuclear testing on the regional groundwater system are of minor significance in the long term (Laczniak et al., 1996), and will not be discussed further in this document. Groundwater pumping for various uses was initiated at the turn of the century (Mendenhall, 1909), but the effects on groundwater did not become significant until the 1970s. Two major pumping centers and other isolated wells exist within the NTS region. The largest pumping center is the Amargosa Farm area in Amargosa Desert, the second largest is located in Penoyer Valley. Various other pumping wells are located throughout the NTS region. Most wells located in the Amargosa Desert and Penoyer Valley are private wells used for irrigation. Several water supply wells are located on the NTS.

To evaluate the effect of these pumping wells on the groundwater flow system, hydrographs for selected wells located within the NTS and Amargosa Desert were prepared ([Appendix C](#)). Data for these wells were available through early 1994. These wells are the most important with respect to radionuclide transport off the NTS because they are located in the vicinity or downgradient of the underground test areas. The pumping of these wells causes drawdown, which may affect regional flow directions and velocities, thus, potentially impacting the transport of radionuclides. Hydrographs were not prepared for wells located in Penoyer Valley because this area is upgradient of the underground test areas. The hydrographs do not include measurements affected by pumping.

At NTS wells, observed drawdowns are relatively small, usually less than two meters. For example, Well 4 (Water Well 5B) had a net drawdown of 1.86 m (6.10 ft) between 1959 and 1991. The largest drawdowns were observed within the Amargosa Farm area in Amargosa Desert. A maximum drawdown of 9.51 m (31.20 ft) was observed at Well 15 ([Figure C-16](#)) in 1980, but the net drawdown observed between 1955 and 1987 is only 3.63 m (11.91 ft). At Ash Meadows, the groundwater flow system has been in recovery since pumping ceased in the 1970s to preserve an endangered species of pupfish inhabiting the Devil's Hole. Well 26, for example, has recovered nearly 5 m (16 ft) since pumping stopped.

The drawdowns observed in the Amargosa Farm area are consistent with those reported by Kilroy (1991). However, data for the well for which Kilroy (1991) reported the maximum observed drawdown (more than 9.14 m [30 ft]) were not available in the ER database.

Based on this evaluation, historical pumping has caused drawdowns that are less than 10 m (32.81 ft) in the largest pumping center, the Amargosa Farm area. Such drawdowns are of the same magnitude as the errors associated with water level measurements and are, therefore, considered a relatively insignificant disturbance to the regional groundwater flow system.

10.0 References

- Arteaga, F.E., C.S. Savard, M.E. Johnson, and J.C. Stone. 1991. *Hydrogeologic Data from Selected Wells and Test Holes In and Adjacent to the Nevada Test Site, Nye County, Nevada, Through 1986*, USGS-OFR-87-356, Open-File Report. U.S. Geological Survey.
- Baker, D.A. and J.K. Soldat. 1992. *Methods for Estimating Doses to Organisms from Radioactive Materials Released into the Aquatic Environment*, PNL-8150. Richland, WA: Pacific Northwest Laboratory.
- Blankennagel, R.K. and J.E. Weir. 1973. *Geohydrology of the Eastern Part of Pahute Mesa, Nevada Test Site, Nye County, Nevada*, USGS-PP-712-B Professional Paper. U.S. Geological Survey.
- Blaylock, B.G., M.L. Frank, and B.R. O'Neal. 1993. *Methodology for Estimating Radiation Dose Rates to Freshwater Biota Exposed to Radionuclides in the Environment*, ES/ER/TM-78. Oak Ridge, TN: Oak Ridge National Laboratory.
- DOE, see U.S. Department of Energy.
- Doty, G.C. and W. Thordarson. 1983. *Water Table in Rocks of Cenozoic and Paleozoic Age, 1980, Yucca Flat, Nevada Test Site, Nevada*, USGS-WRIR-83-4067, Water-Resources Investigation Report. U.S. Geological Survey.
- Dettinger, M.D., J.R. Harrill, D.L. Schmidt. 1995. *Distribution of Carbonate-Rock Aquifers and the Potential for Their Development, Southern Nevada and Adjacent Parts of California, Arizona, and Utah*. U.S. Geological Water-Resources Investigation Report 91-4146.
- Duncan, D. DOE. 1993. Personal Communication. Las Vegas, NV.
- EPA, see U.S. Environmental Protection Agency.
- Fox, F.L. and D.E. Westhoff. 1989. *Ground-Water Supply Development, Bond Gold Bullfrog Project, Nye County, Nevada*. Reno, NV: Hydro-Search, Inc.
- Garber, M.S. and F.C. Koopman. 1968. "Methods of Measuring Water Levels in Deep Wells." In *Techniques of Water-Resources Investigations of the USGS*, Book 8, Chapter A1, 23. U.S. Geological Survey.
- GeoTrans, Inc. 1995. *A Stochastic Advective - Dispersive Transport Code for Multiple Constituents in Dual Porosity or Fractured Geological Media*. Prepared for the U.S. Department of Energy. Las Vegas, NV.

Hale, G.S., D.A. Trudeau, and C.S. Savard. 1995. *Groundwater Levels from Wells and Test Holes as of 1991, and Potentiometric Contours as of 1991 for Yucca Flat, Nevada Test Site, Nye County, Nevada*, USGS-WRIR-95-4177, Water-Resources Investigation Report. U.S. Geological Survey.

ICRP, see International Commission on Radiological Protection.

International Commission on Radiological Protection. 1991. *1991 Recommendations of the International Commission on Radiological Protection*, Publication 60. New York, NY: Pergamon Press.

IT, see IT Corporation.

IT Corporation. 1996a. *Draft, Risk Assessment Documentation Package (Phase I Data Analysis Documentation, Volume VIII)*. Prepared for DOE/NV. Las Vegas, NV.

IT Corporation. 1996b. *Draft, Geologic Model Documentation Package (Phase I Data Analysis Documentation, Volume I)*. Prepared for DOE/NV. Las Vegas, NV.

IT Corporation. 1996c. *Draft, Groundwater Recharge and Discharge Data Documentation Package (Phase I Data Analysis Documentation, Volume III)*. Prepared for DOE/NV. Las Vegas, NV.

IT Corporation. 1996d. *Draft, Hydrologic Parameter Data Documentation Package (Phase I Data Analysis Documentation, Volume IV)*. Prepared for DOE/NV. Las Vegas, NV.

IT Corporation. 1996e. *Draft, Transport Parameter Documentation Package (Phase I Data Analysis Documentation, Volume V)*. Prepared for DOE/NV. Las Vegas, NV.

IT Corporation. 1996f. *Draft, Groundwater Flow Model Documentation Package, (Phase I Data Analysis Documentation, Volume VI)*. Prepared for DOE/NV. Las Vegas, NV.

IT Corporation. 1996g. *Draft, Tritium Transport Model Documentation Package, (Phase I Data Analysis Documentation, Volume VII)*. Prepared for DOE/NV. Las Vegas, NV.

Jacobson, R.L., M.S. Henne, and J.W. Hess. 1986. *A Reconnaissance Investigation of Hydrogeochemistry and Hydrology of Rainier Mesa*, Publication #45046. Las Vegas, NV: Desert Research Institute.

Kilroy, K. 1991. *Groundwater Conditions in Amargosa Desert, Nevada-California, 1952-87*, USGS-WRI-89-4101, Water-Resources Investigations Report. Carson City, NV: U.S. Geological Survey.

La Camera, R.J. and C.L. Westenburg. 1994. *Selected Ground Water Data for Yucca Mountain Region, Southern Nevada and Eastern California, Through December 1992*, USGS-OFR-94-54 Open-File Report. U.S. Geological Survey.

- Laczniak, R.J., J.C. Cole, D.A. Sawyer, and D.A. Trudeau. 1996. *Summary of Hydrogeologic Controls on Ground-Water Flow at the Nevada Test Site, Nye County, Nevada*, USGS-OFR-96-4109, Open-File Report. U.S. Geological Survey.
- Mendenhall, W.C. 1909. *Some Desert Watering Places in Southeastern California and Southwestern Nevada*, USGS-WSP-224, Water Supply Paper. U.S. Geological Survey.
- Meinzer, O.E. 1923. *Outline of Ground-Water Hydrology, with Definitions*, USGS-WSP-494, Water Supply Paper. U.S. Geological Survey.
- McDonald, M.G. and A.W. Harbaugh. 1988. "A Modular Three-Dimensional Finite Difference Ground-Water Flow Model." In *U.S. Geological Survey Techniques of Water Resources Investigations*, Book 6, Chapter A1. U.S. Geological Survey.
- O'Hagan, M.D. and R.J. Laczniak. 1996. *Ground-Water Levels Beneath Eastern Pahute Mesa and Vicinity, Nevada Test Site, Nye County, Nevada*, USGS-WRIR-96-4042, Water-Resources Investigations Report. U.S. Geological Survey.
- Pollock, D.W. 1989. *Documentation of Computer Programs to Compute and Display Pathlines using Results from the U.S. Geological Survey Modular Three-Dimensional Finite - Difference Ground-Water Flow Model*. Washington, DC: Scientific Software Group.
- Russell C.E. 1987. "Hydrogeologic Investigations of Flow in Fractures Tuffs, Rainier Mesa, Nevada Test Site," Thesis for Master of Science in Geoscience. Las Vegas, NV: University of Nevada.
- Thordarson, W. 1965. *Perched Ground Water in Zeolitized Bedded Tuff, Rainier Mesa and Vicinity, Nevada Test Site, Nevada*, TEI-862. U.S. Geological Survey.
- U.S. Department of Energy. In Press. *Regional Groundwater Flow and Tritium Transport Modeling, and Risk Assessment of the Underground Test Area, Nevada Test Site, Nevada*, DOE/NV--XXX. Las Vegas, NV: IT Corporation.
- U.S. Department of Energy. 1993. *Radiation Protection of the Public and Environment*, DOE Order 5400.5, Change 2, January 7. Washington, DC.
- U.S. Environmental Protection Agency. 1989a. *Risk Assessment for Superfund, Human Health Evaluation Manual (Part A)*, EPA/5401/1-89/001. Washington, DC: U.S. Government Printing Office.
- U.S. Environmental Protection Agency. 1989b. *Risk Assessment Guidance for Superfund, Volume II: Environmental Evaluation Manual*, EPA/540/1-89/001. Washington, DC: U.S. Government Printing Office.

- U.S. Environmental Protection Agency. 1991. *Risk Assessment Guidance for Superfund, Human Health Evaluation Manual (Part B), Development of Risk-Based Preliminary Remediation Goals*, EPA/540/R-92/003. Washington, DC: U.S. Government Printing Office.
- U.S. Environmental Protection Agency. 1992. *Framework for Ecological Risk Assessment*, U.S. Environmental Protection Agency, EPA/630/R-92/00. Washington, DC: U.S. Government Printing Office.
- USGS, see U.S. Geological Survey.
- U.S. Geological Survey. 1989. "Groundwater Site Inventory System." In *National Water Information System (NWIS) User's Manual*, Volume 2, Chapter 4: 14-16, USGS-OFR-89-587, Open-File Report. Reston, VA: U.S. Geological Survey.
- Waddell, R.K. 1982. *Two-Dimensional, Steady-State Model of Ground-Water Flow, Nevada Test Site and Vicinity, Nevada-California*, USGS-WRIR-82-4085, Water-Resources Investigations Report. U.S. Geological Survey.
- Waddell, R.K., J.H. Robison, and R.K. Blankennagel. 1984. *Hydrology of Yucca Mountain and Vicinity, Nevada-California -- Investigative Results through Mid-1983*, USGS-WRIR-84-4267, Water-Resources Investigations Report. U.S. Geological Survey.
- Weir, J.E. and F.W. Nelson. 1976. "Operation and Maintenance of a Deep-Well Water-Level Measurement Device, the 'Iron-Horse'." In *Techniques of Water-Resources Investigation of the USGS*, 76:27-28. U.S. Geological Survey.
- Winograd, I.J. and W. Thordarson. 1975. *Hydrogeologic and Hydrochemical Framework, South-Central Great Basin, Nevada-California, with Special Reference to the Nevada Test Site*, USGS-PP-712-C, Professional Paper. U.S. Geological Survey.
- Wood, D.B. USGS. 1994. Letter to John Eberlin, IT Corporation, dated February 15.

Appendix A

Hydraulic Head Data Set

Description of Appendix Contents

This appendix contains a predevelopment hydraulic data set for the Nevada Test Site regional groundwater flow system. This data set was derived from various databases and reports. The data are presented in table form. The data may be used in conjunction with the other appendices, and [Plates 2, 3, 4, 5, 6, 7, and 8](#), using a reference number. The table ([Table A-1](#)) is provided on pages A-2 through A-66. A bibliography of the publications used to derive the data set is provided from pages A-67 through A-69.

Table A-1 Hydraulic Head Data Set

The following provides a description of each of the fields and the codes used in the table:

Map Ref. No	Site reference number for cross-referencing between tables A-1, B-1 and C-1; and plates 2 through 8.
Official ID	Unique site identification number (may or may not be a USGS ID).
Common name	REDBOOK reporting name for wells on the NTS.
Northing	NAD 27, UTM Zone 11 coordinate, in meters
Easting	NAD 27, UTM Zone 11 coordinate, in meters
Site Type	Codes used are as follows: C: Collector or Ranney type well D: Drain dug to intercept the water table or potentiometric surface O: Outcrop S: Spring T: Tunnel, shaft or mine intercepting groundwater X: Test hole, not completed as a well EW: Exploratory well MW: Monitoring well W: Well other than types C, EW or MW
EOI Top	Depth to top of effective open interval, in meters below ground surface
EOI Bottom	Depth to bottom of effective open interval, in meters below ground surface

Primary HSU	Primary hydrostratigraphic unit (HSU). Represents best estimate for well screened in a single HSU or hydrostratigraphic unit believed to contribute the most water for wells screened in multiple HSUs. HSU codes are described in the hydrostratigraphic unit organization tables included in the Documentation Package. A "U" is used for unknown.
--------------------	--

LSE	Land Surface Elevation, in meters
------------	-----------------------------------

Mean W.L. Elev.	Mean Predevelopment Hydraulic Head Elevation, in meters above mean sea level (amsl)
------------------------	---

Min W.L. Elev.	Minimum Predevelopment Hydraulic Head Elevation, in meters amsl
-----------------------	---

Max W.L. Elev.	Maximum Predevelopment Hydraulic Head Elevation, in meters amsl
-----------------------	---

No. Of Records Used	Number of records used to calculate "stable" mean head value
----------------------------	--

Total Variance	Total hydraulic head variance, in meters squared
-----------------------	--

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
1	09415510	PRESTON BIG SPR	4310240.2	666272.3	S				1737.4	1737.4				999
2	09415590	CRYSTAL SPR	4155148.5	656250.5	S				1158.2	1158.2				999
3	09419625	CORN CRK SPR	4033680.4	647248.2	S				893.1	893.1				999
4	351455116002001		4011655	589228.5	W	51.2	251.5	AA	801.6	816.8	816.1	817.7	23	2.51
5	360000115000001		4022303.4	660959.7	W	0.6	3	AA	457.2	456.1	455.7	456.6	4	0.15
6	360017115460401		3984972.4	611059.7	W	46.3	91.4	AA	932.7	883.9	881.8	886.4	4	7.92
7	360040115150401		3986393.5	657616.2	W	146.3	167.6	MS	784.9	638.6			1	999
9	360047115171401	MOFFAT & LILLIS	3986551.4	654357.7	W	185.9	216.4	AA	856.5	710.3	708.8	712.3	50	0.48
10	360053115512601		3985983.4	602985.1	W	9.5	121.9	AA	856.5	846.1	844.6	846.9	3	4.07
11	360102115170701		3987016.6	654524.8	W	281.6	1148.2	AA	855	673.7	673	674.2	7	0.27
12	360126115181601		3987725.9	652784.6	W	146.3	207.3	MS	880.9	734.6			1	999
13	360201115162701	SUB 52	3988852.3	655493.9	W	194		AA	829.1	635	634.8	635.1	5	9.3
14	360201115204701	SUB 49	3988739.4	648986.5	W	81.4		AA	941.8	860.4			1	999
16	360232116003601		3988882.9	589186	W	60.7	61.3	AA	765.4	729.8			1	999
17	360234115165301		3989857.6	654825.3	W	199.6	213.4	MS	826	626.4			1	999
18	360244115581101		3989290.3	592810.6	W	27.4	28	AA	769.6	753	752.9	753.1	5	2.33
19	360244115581102		3989290.3	592810.6	W	25.3	25.9	AA	769.6	752.4	752.4	752.4	2	2.32
20	360246115241901		3990037.5	643657.7	S			AA	1043.3	1043.3				37.16
21	360256116013501		4022822.2	587393.8	W	112.8	131.1	AA	896.7	785.8			1	999
22	360326115163501		3991467.9	655247.3	W	161.5	182.9	MS	804.7	643.1			1	999
25	360359115573201	MORRIS	3991611.5	593761.7	W	22.9	99.1	AA	786.4	774	772.9	775.4	42	2.59
26	360410115572401		3991952.5	593958.2	W	22.9	99.1	AA	785.8	772.7	771.8	774.8	4	4.31
27	360415115562701		3992122	595382.5	W	24.4	91.4	AA	798.6	776.3	775.6	777.5	4	3.04
28	360425115572401		3992414.7	593953.2	W	22.9	121.9	AA	789.4	773.6	772.7	775.4	4	3.87
29	360429115462101		3992731.5	610536.2	W	123.5		AA	1028.7	901.7	898.2	905.2	6	8.83
30	360445115534201		3993092.2	599499.4	W	32	32.6	AA	867.5	851.3	851.2	851.3	2	2.33
31	360445116015401		3992961.1	587193.4	W	22.9	23.5	AA	765	748	747.7	748.8	6	2.49
32	360453115575801		3993268.3	593093.7	W	18.3	121.9	AA	787.9	772	770.9	773.9	4	4.11
33	360505115582901		3993629.8	592314.4	W	14	152.4	AA	783.3	768.3	767.6	769.3	4	2.9
35	360536115550001		3994641.6	597530.9	W	11.7		AA	841.2	829.4	829.3	829.6	3	2.34
36	360540115552001		3994750.5	596229.2	W	0	204.2	AA	829.1	833.3			1	999
37	360545115545601		3994920	597627.9	W	0	163.1	AA	838.2	842.9	840.7	845	2	11.57

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
38	360546115545701		3994950.6	597602.5	W	5.7	42.7	AA	783.6	777.4	777.1	777.9	3	2.54
40	360608115573101		3995586.3	593744.2	W	8.9	121.9	AA	807.7	798.3	797.6	798.9	5	2.65
41	360610115153301		3996549	656708.2	W	93.3	228.6	AA	746.8	653.5			1	999
42	360611115561802	TURNER	3995698.5	595568.6	W	9.8	23.2	AA	818.1	806.8	806.3	808.3	29	9.41
43	360702116033501		3997157.4	584626.4	W	25.3	26.5	AA	764.7	748.4			1	999
44	360712115155501	CLEAR GRAVEL INC	3998449.6	656124	W	135	228.6	AA	775.7	626.5	625.7	628	69	0.22
45	360714115522001		3987909.9	601710.9	S			AA	920.5	920.5				2.32
47	360739115152701	WS CARGO	3999294.1	656809.1	W	115.8	207.3	AA	755.9	623.6	622.3	625	20	37.62
48	360743115562401		3998531.5	595387.6	W	14.6	160	AA	818.4	807.2	806.7	807.8	6	2.52
49	360748116052301		3998548.9	581913.1	W	17.5		AA	758.6	740.5	739.7	741.1	6	2.6
50	360751116055901		3998633	581012.4	W	30.5	31.1	AA	758.3	739.9	739.1	740.3	3	2.77
53	360756116003501		3998865.8	589109.4	W	13.1	19.5	AA	787.3	774.1	774.1	774.2	2	2.33
54	360808115582801		3999268.5	592280	W	6.1	30.5	AA	800.7	788.9	788.8	789	2	2.33
55	360809115252601		3999962.7	641819.7	W	121.9	147.8	AA	1121.7	999.3	998.1	1000.3	5	9.9
56	360833115543201		4000103	598169.9	W	6.8		AA	835.2	827.8	827.2	828.4	2	3.07
57	360834115555601		4000110.5	596070.3	W	18.3	64.6	AA	821.4	810.6	809.6	811.5	4	3.28
58	360838115581101	ESCAPEES COOP OF NV	4000197.3	592695	W	44.2	76.2	AA	807.1	793.7			1	999
59	360843115581301	ESCAPEES COOP OF NV	4000350.9	592643.4	W	47.2	91.4	AA	807.1	794.9			1	999
60	360845115593601		4000390.7	590568.5	W	6.7	128	AA	797.7	787.5	787.3	787.8	2	2.43
61	360845116022501		4000348	586345	W	12.8	17.4	AA	773.9	760.9	760.8	761.1	4	2.35
62	360845116022502		4000348	586345	W	15.7	19.5	AA	773.9	758.1	758	758.2	2	999
63	360846115583001		4000438.8	592217.5	W	8.5	167.6	AA	804.7	795.4	794.8	796.1	4	2.7
64	360848115571501		4000520.4	594091.2	W	6.5	61	AA	814.4	807.7	807.5	807.9	2	2.44
65	360857115163301	SUB 35	4001668.1	655116.5	W	196.8	259.1	AA	807.1	609.1	607	610.3	6	10.63
66	360857115572801		4000794.2	593763.3	W	7.3		AA	812.3	805			1	999
67	360858115163801		4001696.7	654991	W	207.3	243.8	AA	804.7	600.5			1	999
69	360919115541501		4001525.1	598578.8	S			AA	841.2	841.2				2.32
71	360930116052001		4001692.3	581958.6	W	4.8	6.7	AA	761.1	755.8	754.9	756.3	23	2.45
72	360930116052002		4001692.3	581958.6	W	7.1	12.8	AA	761.1	754	754	754	2	2.32
74	360935115153201		4002866.3	656620	W	141.7	295.7	AA	763.8	600.6	598.6	602.2	48	1.74
75	360935115573001		4001964.5	593700.9	W	6.1	100.6	AA	814.4	803.2	803.2	803.3	3	2.32
76	360938115584001		4002038.3	591950.8	W	7.5		AA	807.4	799.7	799.6	799.9	3	2.35

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
77	360938115593501		4002024	590576.5	W	21.3	182.9	AA	799.5	792.5	792	793.4	4	2.72
78	360939115594601	OUR LADY OF THE VLY	4002051.9	590301.4	W	30.5	54.9	AA	910.1	901.9			1	999
80	360941115295301		3992778.2	635780.7	W	24.8	61	LCA	1389.9	1364.7	1364.3	1365	2	9.58
81	360951116072201		4002311.3	578904.3	W	13.7	14.3	AA	754.7	744.1	744	744.3	5	2.34
82	360951116072202	24N008E21L02S	4002312.7	578900.6	W			AA	754.7	743				999
83	361012116044701	WHITE	4002994.2	582770.9	W	7.6	38.1	AA	768.1	759.2	759	760.8	17	0.75
84	361014116044201		4003057	582895.2	W	7.4	77.1	AA	768.7	759.6	758	761.3	7	4.08
85	361018115573401		4003288.3	593586.7	W	21		AA	822.4	801.2	801.1	801.4	2	2.35
86	361029116014101		4003563.3	587412.5	W	5.2	60.4	AA	784.3	778.2	777.8	779.1	4	2.7
87	361030116014301		4003593.6	587362.3	W	6.1	9.1	AA	783.9	777.7	777.5	777.9	5	2.35
88	361030116051701		4003541.7	582016.2	W	8.6		AA	767.5	758.7	758.4	758.9	2	2.46
89	361031115562901		4003644.2	595156.9	W	19.2	326.1	AA	827.5	807.9	807.7	808.3	3	2.47
90	361031116051601		4003572.7	582040.9	W	5.7	16.5	AA	767.5	760.9	760.4	761.8	4	2.69
91	361034116045901		4003669.2	582464.6	W	7.9	61	AA	768.1	758.6	758.5	758.6	2	2.33
92	361046115553601		4004183.1	596525.1	W	51.8	91.4	AA	859.5	807.7			1	999
96	361118116004301		4005087.6	588846.1	W	21.9	106.7	AA	792.5	790.2	789.7	790.8	2	2.83
97	361121115583901		4005212.2	591942.3	W	15.8	106.7	AA	816.6	800.8	800.7	800.8	2	2.33
98	361123115580601		4005282.5	592765.9	W	4	273.4	AA	820.8	816.5	816	816.8	3	2.49
99	361126115562801	CENTRAL NV UTIL	4005401.3	595212.7	W	123.4	153.9	AA	869.9	793.7			1	999
100	361128115155801		4006336.6	655908.1	W	45.7	76.2	AA	757.4	736.7			1	999
102	361145116034601	RANCHO VISTA NO 4-2	4005874.2	584267.2	W	36.6	54.9	AA	775.1	760.2			1	999
103	361146116042801		4005894.9	583218	W	7.8		AA	774.8	766.6	766.4	767	3	2.43
104	361149116002101		4006048.4	589385.9	W	2.7	106.7	AA	798.6	795.7	795.5	795.9	3	2.36
106	361158116240501		4006033.7	553820.5	W	417.6	423.7	DVS	673.6	584	583.9	584	3	9.29
107	361158116240502		4006033.7	553820.5	W	103.6	106.7	DVS	673.6	579.9	579.6	580.2	2	9.46
108	361204116060301	TURNER	4006427.2	580840.2	W	9.8	152.4	AA	771.4	759.3	757.1	762.3	23	10.17
109	361206115153701		4007517	656411.6	W	175.3	285.6	AA	733.3	601	599.2	602.6	11	2.01
111	361209115583001		4006693.5	592151.5	W	16.5	85.3	AA	824.5	808			1	999
112	361209116061401	TUDOR	4006578.7	580564.1	W	11	91.4	AA	780.3	764.9	759.5	769.3	233	11.53
113	361210115590003		4006716.4	591402	W	0	140.2	AA	816.6	817.8			1	999
114	361210116225701		4006414.1	555516.4	W	417.6	423.7	AA	630.9	607.2	607	607.6	3	9.43
115	361210116225702		4006414.1	555516.4	W	36.6	39.6	DVS	630.9	607.6	607.5	607.9	3	9.33

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
117	361213116015501		4006764.1	587030.8	W	4.3	5.5	AA	785.8	781	780.6	781.4	28	2.39
118	361213116015502		4006764.1	587030.8	W	6.7	21.3	AA	785.8	778.8	778.7	779	3	2.36
119	361216116053701		4006803	581486	W	18.3	167.9	AA	774.2	762.7	762.5	763	3	2.38
121	361217116010001		4006901.2	588403	W	12.2	106.7	AA	798	790.5	790.1	790.8	5	2.38
122	361218116005101		4006934.3	588627.4	W	30.5	160	AA	790.3	785.8	785.3	786.7	3	2.93
123	361218116091901		4006814.6	575941.7	W	3.3	9.1	AA	749.8	746.5	746.5	746.5	2	2.32
124	361219116021001		4006883.6	586655	W	4.9	274.9	AA	781.8	776	775.1	776.9	6	3.04
125	361222115585801		4007086.6	591448	S			AA	816.9	816.9				2.32
126	361222116004401		4007059.3	588801.1	W	7.9		AA	791	783	782.9	783.1	2	2.34
127	361222116030001		4007025.4	585404.9	W	7	67.1	AA	779.7	771.6	770.9	772.7	4	2.98
130	361231116022901		4007310.3	586176.3	W	5.3	41.1	AA	782.7	776.3	775.6	777.5	3	3.26
131	361234115593201	PAHRUMP MOBILE HM PK	4007447.5	590595.2	W	15.5	30.5	AA	815	799.5			1	999
132	361237115171401		4017269.5	660454.1	W	24.4	76.2	TS	705.6	682.8			1	999
133	361239115593601	MOOSE LODGE 808	4007600.5	590493.7	W	61	91.4	AA	810.2	792.5			1	999
134	361242115593901	PAHRUMP COMM CHURCH	4007692.2	590417.8	W	24.4	95.1	AA	805	788.5	787.9	789.1	2	6.69
135	361242116004201		4007676	588844.6	W	8.6		AA	791	782.4	782.3	782.4	2	2.32
137	361245116595701		4007625.4	589919	W	7.1		AA	800.1	793			1	999
138	361246115594201	DODGES MARKET	4007814.7	590341.6	W	18.3	27.4	AA	805	790.6			1	999
139	361246116030001		4007764.8	585397.6	W	6.2	243.8	AA	781.5	774.8	774.3	775.3	4	2.57
140	361246116033101		4007757.3	584623.6	W	6.7	76.2	AA	777.8	769.8	769	771.1	4	3.29
141	361248116113801		4007709.3	572462.9	W	10.1	10.4	AA	748.9	742.3	741.8	742.6	5	2.5
145	361306116033201	BASIN PARK RANCHOS	4008373.3	584592.6	W	18.3	45.7	AA	776.9	768.4			1	999
146	361308116005201		4008474.6	588586.9	W	6.4	128.6	AA	791.3	784.3	783.5	784.9	6	2.53
147	361308116010501		4008471.3	588262.3	W	5.5	121.9	AA	789.4	782.7	781.5	783.9	2	5.25
148	361308116012401		4008466.5	587787.9	W	7.6	121.9	AA	788.8	781.1	781	781.2	2	2.34
149	361311116025501		4008536.3	585514.9	W	8.1		AA	780.9	772.3	772	772.8	3	2.5
150	361313115154301	LVVWD NO. 69	4009578.8	656224.8	W	152.4	342	AA	722.4	602.3			1	999
151	361313116061201		4008551.1	580595.8	W	13.3	22.9	AA	777.2	764			1	999
152	361318116015501	RANCHO VISTA NO 3	4008766.9	587010.8	W	15.2	30.5	AA	784.9	778.1			1	999
153	361319115594201	NYE COMPLEX PARK	4008831.4	590331.1	W	102.1	111.3	AA	805	802.5			1	999
154	361320115152101	SUB 20	4009804.4	656770.3	W	108.6	167.6	AA	713.8	602.3	599.4	605.3	5	14.1
155	361321116041801		4008824.4	583439.7	W	7.3		AA	776.6	769.3	769.2	769.4	2	2.34

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
157	361323116030401	ANCHOR INN	4008903.9	585286.6	W	24.4	48.8	AA	780	770.8			1	999
158	361324115593101		4008988.4	590604.2	W	54.9	79.6	AA	805.3	782.3	781.6	783.6	4	3.2
159	361327116001801		4009068.7	589429.8	W	61	198.1	AA	795.5	805.2	803.5	806.9	2	7.97
160	361331116003601		4009187.3	588979.1	W	11.5		AA	793.4	781.9			1	999
161	361333116001801		4009191.9	589428.5	W	33.5	304.8	AA	795.8	788.8	788.1	789.1	4	2.54
162	361333116050901		4009182	582162.9	W	9.1	60.4	AA	775.4	769.2	768.9	769.6	4	2.41
163	361334115595001		4009291.5	590126.6	W	11.6	125	AA	801.6	790			1	999
164	361334116015601		4009259.6	586980.9	W	5.5	118.9	AA	786.4	779.2	777.3	780.9	5	4.57
165	361345115175401	SUB 19	4010506.8	652936.5	W	154.4		AA	789.4	634.8	634.6	635.1	5	9.34
166	361352116005301		4009830	588548.1	W	12.5		AA	791.9	779.3			1	999
167	361401116042101		4010056.1	583353	W	4.9	61	AA	777.5	772.6	772.5	772.7	4	2.33
168	361405116033201	ROOKRIDGE & CARRADO	4010191.1	584575	W	9.1	51.2	AA	779.7	774.5	773.8	775	11	999
169	361406116110601		4010119.3	573241.7	W	6.1	12.8	AA	749.5	743	742.4	743.4	6	2.55
170	361406116173900	W-10	4010177.3	556166.4	W	1.2	12.2	AA	607.7	605.5	604.7	606.5	23	999
171	361411116100301		4010286.7	574813	W	2.9	9.1	AA	748.9	744.8	743.5	746	7	3.31
172	361413116221201		4010211	556615.5	W	3.2	6.1	AA	609.2	605.8	605.5	606	13	0.04
173	361413116221202		4010211	556615.5	W	3.2	6.1	AA	609.7	606.3	606	606.5	16	0.04
174	361413116221203		4010211	556615.5	W	2.2	9.4	AA	609.6	606.7	606.4	607.4	13	0.08
175	361415115172101	SUB 18	4011445.8	653744	W	164.6	176.8	AA	747.7	622.1	621.9	622.4	5	9.33
176	361415116002001		4010270.3	579905.8	W	0	201.8	AA	795.5	802.6			1	999
177	361415116092601		4010417.9	575735.6	W	6.8	42.7	AA	755	748.2			1	999
178	361415116222101		4010271.2	556390.4	W	2.3	8.2	AA	609.6	607.2	607	607.3	14	0.03
179	361415116222102		4010271.2	556390.4	W	0.5	4.6	AA	609.7	607.2	606	609.2	13	2.01
180	361415116222103		4010271.2	556390.4	W	1.8	10.7	AA	609.6	607.7	607.5	607.8	23	0.03
181	361415116230200	W-14	4010264.6	555367.1	W	1.4	18	AA	610.3	608.9	608.8	608.9	13	0
182	361417115161301	TOMSIK	4011537.5	655440.5	W	86.9	152.4	AA	725.4	619.5	618.1	620.5	50	1.06
183	361417116224001		4010329.8	555915.8	W	3.1	12.2	AA	609.6	606.3	605.9	606.5	14	0.06
184	361419115152701		4011619.7	656587.7	W	48.8	152.4	AA	714.8	672.1			1	999
187	361431115154001		4011983.7	656256.6	W	36.6	106.7	AA	717.8	685.8			1	999
188	361433115182501		4011972.4	652136.7	W	121.9	152.4	AA	792.5	674.8			1	999
190	361437116045001		4011158.4	582618.5	S			AA	778.8	778.8				0.58
191	361439115180001	SUB 17	4012168.2	652757.4	W	119.1		AA	768.1	648	647.3	649	4	9.83

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
193	361446116005601		4011493.1	588456.3	W	79.2	206.7	AA	795.2	791	785.5	797.6	5	39.27
194	361446116010301		4011491.3	588281.6	W	12.2		AA	794	780.5	779.6	781.8	3	3.58
195	361447115161701		4012460.2	655324.1	W	41.1	91.4	AA	742.2	697.7	696.2	701	4	5.15
196	361449116044201		4011530	582814.7	W	4.2		AA	780	775.7	775.5	775.7	4	2.34
197	361451115153401		4012602.7	656395.3	W	41.5	99.1	AA	719.3	672.5	671.3	673.4	4	1.04
198	361451116170800	GS-18	4011168.6	556983.7	W	7.9	8.2	AA	610.4	607.1	606.5	607.6	22	999
199	361455116034901		4011727.6	584135.7	W	6	36.6	AA	779.7	773.2	772.7	773.7	4	2.5
200	361456115155001		4012749.6	655993.1	W	25.2	48.8	AA	718.1	692.6	692	692.9	3	2.56
201	361457115592301		4011855.9	590774	W	62.6	121.9	AA	841.2	778.3	777.9	778.7	2	2.6
202	361457116183400	W-13	4011122.7	554637.8	W	3	4.6	AA	611	608	607.9	608	17	999
203	361500115132001		4012940.7	659735	W	48.8	91.4	TS	694.9	652.3			1	999
204	361507115072301		4013324.5	668641.7	W	15.2	38.4	TS	598.9	583.7			1	999
205	361507115082001	SUB 12	4013297.1	667219	W	26.2		AA	620.3	593.9	593.5	594.1	4	9.37
206	361512115185801		4013159.8	651292	W	134.7	182.9	AA	841.2	706.5			1	999
208	361512116053201		4012226.9	581560.1	W	7.3	9.8	AA	784.9	777.4	777	777.5	3	0.66
209	361512116053202		4012226.9	581560.1	W	11.7	13.7	AA	785.2	773.5	773.5	773.5	2	0.58
210	361513115152801		4013283.3	656532.8	W	79.2	89.9	TS	717.8	678.2			1	999
211	361513116055001		4012253.5	581110.6	W	11.9	30.5	AA	789.4	776	774.6	777.5	3	4.44
213	361514115112901	WILLIS	4013423.4	662497.5	W	54.9	91.4	AA	670.6	625.9	624.9	627.4	18	2.89
214	361514115164501		4013279.7	654610.4	W	36.9	121.9	AA	748.3	710.2	709	711.4	2	2.95
215	361515115112301	KNECHT	4013302.5	662624.6	W	22.2	30.5	AA	666	639.4	637.8	643.8	13	3.15
216	361516115112301	MILLER	4013487.9	662646.2	W	91.4	109.7	AA	666	622	620.1	623.1	7	3.44
217	361516116220101	GS-16	4012153.9	556877.4	W	2	3.3	AA	610.7	608.4	608	608.7	19	999
218	361516116220102	GS-17	4012153.9	556877.4	W	1.9	9.8	AA	610.6	608.3	607.8	608.7	17	999
220	361520115121501		4013587	661345.9	W	54.9	91.4	TS	675.1	630.3			1	999
222	361520115164002		4013795.6	654151.9	W	43.1	121.9	AA	751.3	705	704.5	705.6	4	0.92
223	361522116012301		4012595.5	587771.2	W	73.2	198.1	AA	790.3	781.1	779.7	782.6	2	6.5
224	361522116044701		4012545.6	582680.2	W	91.4	152.4	AA	782.1	773.3	773	773.5	3	999
225	361523116005101	HARMER	4012634.4	588569.5	W	0	236.2	AA	794.6	810.7	810	811.9	15	2.6
226	361523116015601		4012618	586947.4	W	0.1	262.1	AA	787.6	781.4	781.3	781.5	3	2.33
230	361527116171300	GS-15	4012153.9	556877.4	W	1.9	6.9	AA	610.7	608.3	607.8	608.8	23	999
231	361530116030101		4012817.6	585323.1	W	7.2		AA	782.4	774.6	774.1	775.2	3	2.64

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
232	361531115093201		4014002.3	665407.8	W	91.4	213.4	AA	645.3	608.1	607.9	608.4	6	999
233	361533116111901		4012797.1	572894.8	W	5.4	8.2	AA	748.9	743.2	742.7	743.5	5	0.7
234	361534115174101		4013871.3	653201.9	W	69.2	109.7	UCA	781.8	710.2	708.1	712.6	3	5.23
235	361534115374701		4013395.1	623229.1	W	44.2	74.7	UCA	2204.9	2164.8	2164.4	2165.3	2	6.37
236	361536115024201		4014357	675637.6	W	28	167.6	AA	595.9	567.8			1	999
237	361536115041801		4014308.9	673241.6	W	30.5	61	TS	597.4	572.4			1	999
238	361536115101601		4014135.6	664306.8	W	24.4	61	AA	659.9	634.7	633.6	635.8	5	0.8
240	361536116005101		4013034.9	588565.4	W	6.7	235.6	AA	794.9	782.8	782	783.7	6	2.76
241	361539115140501		4014122	658589.9	W	24.4	91.4	TS	705.6	683.4			1	999
243	361542115042901		4014488.3	672963.4	W	27.7	29	AA	596.8	568.8	568.3	569.2	20	0.65
244	361542115082501	SUB 11	4014373.2	667073.5	W	26.7		AA	624.8	598	597.7	598.2	5	9.34
245	361543115143801		4014230.2	657764	W	16.9	25.6	AA	710.2	692.5	691.1	693.3	4	3.25
246	361544115365101		4013721.4	624497.4	W	59.1	83.5	UCA	2145.8	2081.4	2078.5	2085.4	5	45.73
248	361548115034701		4014694.1	674007.8	W	45.7	91.4	AA	602	566.9			1	999
249	361548115075201		4014574	667893.5	W	18.3	30.5	TS	617.2	598.9			1	999
250	361548116005401		4013403.9	588486.8	W	14.6	157	AA	796.7	780.5	779.3	782.1	3	4.37
251	361548116014501		4013391.1	587214.1	W	4.9	153.6	AA	787.6	779.6	779.4	780.3	32	2.36
252	361551115133501		4014505.4	659331.8	W	30.5	61	TS	701	671.5			1	999
253	361552116000901		4013538.6	589608.5	W	73.2	261.2	AA	803.5	784	783.4	784.5	2	2.96
254	361553116212100	GS-4	4013300.5	557868.1	W	0.6	6.8	AA	611.4	610.4	610.2	610.9	21	999
255	361553116212101	GS-5	4013300.5	557868.1	W	0.2	6.5	AA	611.5	610.2	608.7	611.3	19	999
256	361553116212102	GS-6	4013300.5	557868.1	W	0.5	1.6	AA	611.4	610.4	610.2	610.9	19	999
257	361553116212103	GS-7	4013300.5	557868.1	W	0	8.2	AA	612.5	612.4	610.3	613.1	16	0.59
258	361553116212104	GS-3	4013300.5	557868.1	W	0	9.8	AA	611.5	611.6	610.2	611.8	18	0.17
260	361555115034801		4014909.4	673978.7	W	45.7	91.4	AA	602	572.5	572	572.9	14	2.42
262	361602115082801		4014988.1	666986.8	W	21.6	44.2	TS	627.9	609.6			1	999
263	361603115171701		4014775.5	653785	W	54.4		AA	771.1	716.7			1	999
264	361604115140001		4014894.6	658700.6	W	61	97.5	AA	705.6	669.3	668.7	669.6	3	0.84
265	361605115172001		4014835.8	653709.1	W	42.7	91.4	AA	774.2	733			1	999
266	361605115593801		4013947.2	590377.8	W	33.4		AA	823	788.3	787.5	789.5	3	3.5
267	361605116212701	GS-1	4013669.2	557715.9	W	0.2	2.1	AA	612	611.6	611.4	611.9	9	2.34
268	361605116212702	GS-2	4013700	557715.7	W	0.1	3.7	AA	611.8	611.4	611.2	611.6	11	0.04

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
270	361606115135001		4014960.8	658949	W	45.7	91.4	TS	704.1	682.8			1	999
271	361606115140501		4014954	658574.7	W	91.4	152.4	TS	705.6	681.2			1	999
273	361607115353801		4014456.4	626308.9	W	69.2	90.5	AA	2054.4	1984.7	1984.3	1985.1	2	37.5
274	361608116044101		4013964.4	582816.4	W	18.3	155.4	AA	783.3	774.5	773.7	775.7	4	1.42
275	361610116223701	GS-19	4013811.8	555968.3	W	3.8	7.3	AA	611.7	607.6	607.3	607.8	14	0.05
276	361611115151301	USGS	4015077.3	656875	W	0	275.8	AA	719.3	730	729.1	730.9	17	0.43
279	361614115012701		4015565.9	677485.5	W	61	121.9	AA	594.4	552.3			1	999
281	361616116000301		4014279.7	589750.6	W	10.8	199.6	AA	807.7	796.5	795.7	796.9	3	2.8
282	361616116012501		4014258.8	587704.5	W	12.3	61	AA	794.6	782	781.7	782.3	3	2.41
285	361624115130801		4015534.7	659986.9	W	21.5	76.2	AA	707.1	685.1	684.5	685.7	5	0.2
287	361626115090701	CNLV REGIONAL PARK	4015709	665999.5	W	15.2	396.2	AA	658.4	649.4	648.5	649.9	14	0.21
288	361627116221201	GS-13	4014339.7	556588.7	W	0	8.3	AA	612.9	614.4	614.1	614.7	17	999
289	361627116221202	GS-14	4014339.7	556588.7	W	0	6.4	AA	613	613	612.8	613.5	16	999
290	361629115081201	SUB 10	4015827.8	667370	W	25.8	76.2	AA	627.9	601	599.4	602.1	6	10.42
291	361629115181101	SUB 7	4015552.9	652423.4	W	99.4	152.4	AA	810.8	709.9	708.6	711.4	7	10.09
292	361634116043901		4014836.6	589969.4	W	12.6	129.5	AA	816.3	802.7	802	803.6	25	2.53
293	361635115144001		4015831.7	657685.1	W	0	184.4	AA	713.2	716.2	716	716.7	5	2.41
294	361635116172100	GS-12	4014339.7	556588.7	W	0.3	8.9	AA	612.9	612	611.4	612.6	22	999
295	361636115151201		4015848.1	656886.1	W	73.2	115.8	AA	719.3	696.2			1	999
296	361636115191801	SUB 3	4015739.5	650747.9	W	153.9	166.1	AA	864.4	718.8	718	719.6	4	9.8
297	361636116000901		4014894.4	589594.5	W	6.9	335.9	AA	805.9	799			1	999
298	361638116043701		4014889.7	582907.5	W	6.2	10.5	AA	785.5	779.1	779	779.2	2	0.06
299	361639115080701		4016138.3	667488.9	W	30.5	91.4	TS	627.9	604.4			1	999
300	361640116315501		4014657.7	542041.2	W	0	2.7	AA	613.2	613.3			1	999
301	361642116012301		4015060.4	587746.3	W	14.6	152.4	AA	795.5	780.9			1	999
302	361645115164901		4016082.1	654460.8	W	47.2	77.7	TS	762	735.2			1	999
303	361647116043901		4015166.5	582854.9	W	10.4	19.5	AA	785.2	774.7	774.7	774.8	2	2.32
304	361649115080101	SUB 9	4016449.4	667632.7	W	26.3		AA	627	600.3	600	600.6	4	9.36
307	361656115130301		4016523	660093.5	W	24.4	76.2	TS	704.1	680.6			1	999
308	361700116220202	GS-9	4015358	556831.5	W	0.4	2.4	AA	615.6	614.9	614.6	615.3	15	0.06
309	361700116220203	GS-10	4015358	556831.5	W	0	4.9	AA	616.9	617.7	617.4	618.1	13	0.08
310	361700116220204	GS-11	4015358	556831.5	W	0.3	1.8	AA	614.4	613.8	613.5	614.2	15	0.06

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
313	361704116030301		4015713.4	585244.9	W	11.7		AA	787.3	775.4	775.3	775.6	2	2.37
314	361705116213501		4015516.5	557504.1	W	0	2.4	AA	614.2	615.4			1	999
315	361709115145301		4016873.5	657341.7	W	30.5	152.4	TS	716.3	698			1	999
316	361709116004201		4015902.7	588760.7	W	21.3	144.8	AA	802.2	783.9	781.8	785	4	2.57
317	361709116005101		4015900.4	588536.2	W	30.5	182.9	AA	800.4	787			1	999
318	361709116012401		4015892.1	587713	W	15.4	106.7	AA	795.8	780.1	779.8	780.4	3	0.67
320	361720115133201		4017249.3	659356.3	W	24.4	61	TS	710.2	687			1	999
321	361723116000301		4016344.1	589729.3	W	12.6	164.6	AA	811.4	798.1	797.4	798.8	19	0.22
324	361727116170900	GS-8	4015358	556831.5	W	0	10.1	AA	615.4	617.7			1	999
325	361732115142101		4017596.7	658127.2	W	57.9	74.7	TS	716.3	689.8			1	999
326	361734116012201		4016662.9	587755.1	W	15.2	214	AA	799.5	783.7	783.1	784.3	3	0.91
328	361740115153501		4017809.9	656276.7	W	0	216.1	AA	733	743	742.4	744.2	4	2.97
330	361745116215502		4016745.7	556997	W	0.5	2.1	AA	618.1	617.6			1	999
331	361753116000901	STARVER	4017266.9	589570	W	18.9	120.4	AA	813.2	793.6	793	794.3	15	2.5
332	361759115142301		4018427.8	658062.2	W	30.5	91.4	TS	720.9	694.9			1	999
333	361800116244301		4017181.4	552803.9	W	0.3	21	AA	621.2	620.5	620.1	620.9	2	0.92
334	361800116245001		4017180.3	552629.3	W	0.7	42.4	AA	620.8	620			1	999
335	361801116001701		4017511.3	589368	W	17.6	46	AA	811.1	793	792.4	793.5	21	0.69
336	361802116001601		4017542.4	589392.6	W	15.8	120.4	AA	812	780.3	779.6	780.9	3	0.45
337	361804115142401		4018581.5	658034.4	W	27.4	106.7	AA	720.9	691.1	690.9	691.5	3	2.41
338	361806115122701	LAUB	4018696.7	660951.7	W	31.5	73.2	AA	716.3	683.4	682.3	684.8	6	1.03
339	361808116273501		4017402.8	548512.6	W	39	41.1	AA	668.1	628.9	628.6	629.1	2	0.14
340	361808117280202		4350209.2	459717.6	W	2.2		AA	1842.8	1840.3	1839.4	1840.6	12	0.19
341	361811115404401		4018169.6	618621.1	W	62.9	121.9	LCA	2645.7	2578.8	2577.7	2579.8	2	39.45
344	361815115150901		4018900.1	656905.8	W	61	76.2	TS	728.5	715.4			1	999
345	361816115241301		4018696.4	643336.5	W	127.1	165.2	LCA	1170.4	1043.3			1	999
346	361817116244701	DEATH VLY JCT W	4017704.5	552700.9	W	48.8	61	AA	622.3	621.1	620.2	621.4	42	0.07
347	361820116251301		4017793.1	552051.9	W	1.6	48.8	AA	624.5	622.4	621.9	623	2	9.86
349	361826115402801		4018637.3	619013.9	W	50.1		AA	2645.7	2595	2594.5	2595.5	2	37.72
352	361828115594401	CENTRAL NV UTIL	4018351.7	590182.3	W	80.8	111.3	AA	844.9	779.4			1	999
353	361835116220301		4018223.5	556812.8	W	0	8.5	AA	619.7	619.7	619.5	620	2	9.43
354	361835116224501		4018278.1	555740	W	1.4	2.1	AA	620.9	619.5			1	999

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
355	361840115153901		4019657	656143.7	W	73.2	91.4	AA	743.7	713.5	712.3	714.8	2	5.4
356	361840116184001	GA-8K	4018617.2	560376.4	W	29.4	32.6	TS	676.7	647.1	647	647.3	3	9.32
357	361840116184002	GA-8B	4018740	560300.8	W	27.7	64.9	TS	679.7	651.9	651.9	652	3	9.29
358	361840116184003	GA-8C	4018771.5	560400.3	W	29.6	35.1	TS	679.7	650	649.9	650.1	4	9.31
359	361840116184004	GA-8D	4018771.5	560400.3	W	29.8	66.1	TS	679.7	649.7	649.7	649.9	4	9.31
360	361840116184005	GA-8E	4018772	560475.1	W	31.2	58.2	TS	679.7	648.3	648.2	648.5	4	9.32
361	361840116184006	GA-8F	4018772.3	560525	W	33.2	76.8	TS	679.7	646.2	646.1	646.5	3	9.34
362	361840116184007	GA-8M	4018772.3	560525	W	32.5	33.5	TS	679.7	646.7	646.4	647.2	3	9.48
363	361845116193707	GA-8J RATHOLE	4018617.6	560426.3	W	25.5	25.9	TS	676.7	651	650.8	651.2	2	9.36
365	361848115164801		4019872.7	654418.4	W	44.2	76.2	AA	778.8	734.6			1	999
366	361852115160601		4020014.6	655463.7	S			AA	755.9	755.9				37.16
367	361853116015601		4019088.5	586882.7	W	61	114.3	AA	808.6	777.6	776.2	779	13	999
368	361857116023101		4019203	586008.7	W	36.6	96	AA	808	778.9	778.1	779.6	5	0.89
369	361859115164001		4020215.2	654611.8	W	52	77.7	AA	783.3	731.4			1	999
370	361900116030801		4019286.4	585085.1	W	33.8	45.7	AA	810.5	776.5	776.3	776.7	2	0.63
371	361901115194701		4020195	649947.3	W	150.9	190.5	AA	919	768.1			1	999
373	361903116093001		4009806.5	576290.1	W	2.7	36.6	AA	751.3	748	747.6	748.6	3	2.63
374	361905115130301		4020498.2	660020.3	W	36.4	48.8	AA	719.3	682.9	682.9	682.9	2	0.02
375	361907115212801	SUB 2	4020336.8	647425.3	W	231.6	262.1	AA	1005.2	788.4	788.2	788.6	2	9.4
376	361907115402201		4019902.7	619146.1	W	50.1		AA	2535.9	2483.9	2481.5	2485.9	4	40.98
377	361907116013501		4019525.1	587402	W	32.8		AA	810.2	776.9	776.5	777.3	3	0.75
378	361908115153901		4020519.8	656128.2	W	0.4	237.7	AA	752.9	752.3	752.1	752.4	3	0.05
380	361909115155801		4020509.9	655579.6	W	30.5	121.9	TS	751.3	724.8			1	999
381	361909116013401		4019587	587426.4	W	25.5	227.4	AA	811.7	785.5	784.4	786.2	23	0.18
382	361910115170501		4020543.1	653982.4	W	53.3	77.7	AA	789.4	736.1			1	999
383	361911115402001		4020026.6	619194.3	W	82.3	112.8	LCA	2539	2498.3	2497.5	2499.2	5	37.77
384	361922115164701		4020920.8	654424.7	W	48.8	82.3	AA	745.2	704.1			1	999
385	361922115210901		4020807.1	647891.2	W	222.5	244.8	AA	981.5	759			1	999
386	361924115200301		4020896.9	649536	W	155.4	205.7	AA	926.6	771.1			1	999
388	361927116094301		4010204	575937.1	W	2.3	51.8	AA	749.8	747.3	747.2	747.5	2	2.37
389	361928116094701		4010419.7	575935.2	W	3.7	61	AA	750.7	746.4	745.2	747.1	4	3.03
390	361930115193201		4021095.1	650305.8	W	142.6	176.8	AA	908.3	765.7			1	999

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
391	361934115394201		4020256.4	617969.1	W	49.1	1947.1	LCA	2511.6	2454.2	2453.6	2454.6	4	37.35
392	361939115154801	NV DIV FORESTRY	4021471	655886.6	W	0	237.7	AA	748	753.6	752.5	754.5	6	0.57
393	361949115201801		4021660.8	649148.8	W	181.4	205.7	AA	932.7	777.2			1	999
394	361954116181201	GS-3 W	4020854.6	563028.6	W	600.2	603.2	TS	716.7	648.2	647.7	648.8	30	0.1
395	361954116181202		4020854.6	563028.6	W	47.9	48.8	TS	716.7	692	690.9	694.5	4	2.88
396	362004115205401	SUB 1	4022107.6	648243.2	W	234.7	256	AA	948.5	752.1			1	999
397	362006115391801	SUMMER HOLMES W	4021742.7	620716.9	W	46.3	134.1	LCA	2441.4	2395.1			1	999
398	362014116133901	GS-1 W	4021644	569554.6	W	472.1	475.2	AA	740.8	716.2	715.8	716.3	19	0.01
399	362014116134902		4021644	569554.6	W	24.8	481.6	AA	740.8	715.9	715.9	715.9	2	0
400	362033115463201		4022430.8	609886	S			AA	2206.8	2206.8				9.29
401	362033116255202		4021885.1	551055.2	W	11.3		AA	639.5	628.1			1	999
402	362036116015001		4022263.6	587000.5	W	88.7	128.3	AA	868.7	777.8	776.6	780	4	4.8
404	362113116160101	GS-2 DEEP	4022908.9	565805.5	W	355.4	358.4	TS	699.5	694.8	694.3	695.4	4	9.61
405	362113116160102	GS-2 SHALLOW	4022908.9	565805.5	W	35.7	36.6	TS	699.5	694.9	694.2	695.7	4	9.96
406	362120116162201		4023428.5	565253.2	S			LCA	693.4	693.4				58.06
407	362140116261001		4023946.9	550594.5	W	594.4	597.4	AA	646.2	625.1	625	625.3	2	9.33
408	362142116154701		4024113	566120.3	S			LCA	701	701				58.06
409	362145116161301		4024200.5	565471.6	S			LCA	693.4	693.4				58.06
410	362153116171502		4024435.5	563924.7	W	24.4	53.3	AA	674.2	672.6	672.4	672.8	3	9.33
411	362154116162001		4024435.5	563924.7	W	24.4	81.4	AA	676	674.2			1	999
413	362230116162001	Big Spring	4025554	565162.4	S			LCA	682.8	682.8				2.32
414	362230116392901	TRAVERTINE POINT 1 W	4025394.1	530676.6	W	182.3	198.1	LCA	831.6	649.1		649.3	27	0.05
415	362238115462801		4026283.7	609936.9	S			AA	1827.3	1827.3				2.32
416	362250116175001		4026185.4	563039.7	W	1.7		AA	673.6	671.9			1	999
417	362250116175301		4026184.8	562964.9	W	11	30.5	AA	673	671.2	671.1	671.4	2	0.61
418	362250116265101		4026097.8	549560.4	W	502.9	506	AA	664.5	641.5	641	641.6	4	9.39
419	362250116265102		4026097.8	549560.4	W	30.5	31.4	AA	664.5	642.2	641.6	642.4	4	9.44
420	362252116425301	Navel Spring	4026055.4	525591.5	S			AA	634	634				37.16
421	362303116174502		4026586.8	563161.4	W	1.8		AA	676.7	674.7	674.6	674.9	2	9.33
422	362314116160101		4026809.1	564056.7	W	15.2	45.1	AA	686.4	687.3			1	999
423	362343116160802		4027837.2	565568.7	S			LCA	716.3	716.3				58.06
424	362343116160803		4027837.2	565568.7	S			LCA	716.3	716.3				999

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
425	362343116160805		4027837.2	565568.7	S			LCA	716.3	716.3				999
426	362354116174001		4028159.1	563274.5	S			LCA	701	701				58.06
430	362358116163301	SPR MEADOWS 4	4028480.1	565015.9	W	30.5	152.4	AA	702.3	702.9	702.9	703	2	9.3
431	362400116161701		4028298.1	565390.9	W	12.2	86	AA	702.6	696.2	693.2	699.5	15	11.78
432	362401116181101		4028369.2	562500.7	S			LCA	685.8	685.8				9.29
433	362401116181102		4028369.2	562500.7	S			LCA	684.3	684.3				2.32
434	362401116181103		4028369.2	562500.7	S			LCA	685.8	685.8				999
435	362402116172201		4028408.9	563721	W	128	287.7	AA	691.9	688.2			1	999
436	362403116160801	S18 E51 07DB 1	4028454.9	565560.3	W			AA	704.1	698				999
437	362405116161305		4026999.7	564827.7	S			LCA	701	701				58.06
438	362406116154001	SPR MEADOWS 17	4028520.6	566286	W	30.5	152.4	AA	708.7	706.2	705.8	706.8	4	9.49
439	362407116162401		4028267.1	565366.2	S			LCA	716.3	716.3				58.06
441	362408116154001	SPR MEADOWS 16	4028519.4	566136.5	W	3.7	195.7	AA	709.6	705.2	704.9	705.9	4	9.5
442	362409116155601	SPR MEADOWS 2	4028269.1	565640.2	W	18.3	91.4	AA	703.5	699.7	698.2	702.8	7	11.64
443	362410116160901	SPR MEADOWS 1	4028518.1	565962.2	W	47.2	120.4	AA	707.4	705.7	705.5	705.8	3	9.31
444	362410116161002	POINT OF ROCKS SPR	4028513.9	565414.1	S			LCA	707.1	707.1				9.29
446	362415116270501		4028714.7	549196.6	W	9.2		AA	659.9	650.7			1	999
447	362417116163600	POINT OF ROCKS S W	4028971.8	564837.8	W	40.2	142.3	LCA	711.1	707.3	705.9	708.2	142	0.66
448	362425116164901		4029123.6	564537.7	W	7.6	61.9	AA	704.1	696.5			1	999
449	362425116181001	SPR MEADOWS 9	4029385.9	562493.3	W	25	85.3	AA	685.2	678.1	676	679.7	17	10.05
450	362432116165701	POINT OF ROCKS N W	4029337.8	564336.9	W	42.4	152.4	AA	706.5	699.6	697.4	700.2	196	0.16
452	362443116263602		4029581.6	549914	W	7.6		AA	658.4	650.8			1	999
453	362444116251001		4029871.5	552054.3	W	21.8	122.5	AA	665.4	642.8	641.9	643.6	2	999
455	362457115223301		4031094.5	645623	W	24.4	36.6	AA	864.1	844.9			1	999
457	362502116192301	CRYSTAL POOL	4030574.1	560592	S			LCA	669	669				2.32
458	362505116223001		4035749.1	555777.1	W	4.6	30.5	AA	666	661.7	661.4	661.9	4	9.34
459	362508115225302		4031425.1	645119.2	W	20.3		AA	868.7	847.9	847.5	848.3	15	0.08
462	362521116160801		4030856.8	565545.8	W	28.4	65.5	AA	744.3	715.8	715.4	715.9	4	9.36
463	362525115225401		4031948.5	645085.4	W	15.5	18.7	AA	867.2	850.8	850.4	851.6	80	999
464	362525116274301	NA-9 W	4030866.2	548238.1	W	324	324.9	AA	667.8	665.2	664.9	665.7	32	0.07
465	362525116274302		4030866.2	548238.1	W	6.1	7	AA	664.5	659.6	659.1	660.6	3	9.99
466	362525116274501		4030865.9	548188.3	W	2.8	3	AA	665	662.2			1	999

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
467	362526116181801		4030986.9	562307.5	W	15.5		AA	705.6	690.1			1	999
468	362528116212501		4031075.4	557276.5	W	0.1		AA	650.7	650.6			1	999
469	362529116155801		4031105.1	565793	W	19.2		AA	737.6	718.4			1	999
470	362529116160501	SPR MEADOWS 12	4031041.6	565544.4	W	22.6	80.8	AA	741.6	718.8	718.4	719	93	9.3
471	362529116171100	DEVILS HOLE W	4031121.6	563875.4	W	14.6	61	AA	732.7	717.9	717.2	718.2	225	0.06
472	362531115224401	SHOWN W	4032137.6	645331.4	W	36.6	61	AA	868.1	838.5			1	999
473	362532116172700	DEVILS HOLE	4031181	563576.1	W	0.3		LCA	719	718.3	717.9	718.7	399	0.05
475	362532116181501		4031172.3	562380.8	S			LCA	716.3	716.3				9.29
476	362535116244801		4031199.7	552594.1	S			AA	670.6	670.6				58.06
477	362554116184101		4031845.5	561728.5	S			LCA	701	701				9.29
478	362554116204001		4031824.9	558765.6	W	18.3	36.6	AA	664.5	662.6			1	999
479	362555116205301	GARNERS W	4031853.5	558441.6	W	42.7	54.9	AA	658.1	655.1	654.7	655.8	7	0.14
480	362557116181301		4031943	562425.1	S			LCA	723.9	723.9				9.29
481	362620115212601		4033680.4	647248.2	S			AA	894.6	894.6				37.16
482	362624115212701		4033803.2	647221.2	W	6.9	45.7	AA	893.1	885.9	885.6	886.2	38	2.34
483	362627116213501		4033296.3	557635.3	W	45.7	152.4	AA	661.7	659			1	999
485	362648116201401	PETERSON	4033493.1	559401.5	W	27.4	137.2	AA	675.1	673.7	673.4	674	19	9.33
486	362648116274601		4033423.1	548149.1	W	36.3	46	AA	688.8	676			1	999
487	362650116311501		4033457.3	542945.9	W	9.8	91.4	AA	681.1	671.4			1	999
488	362702116322201		4033819	541276.3	W	12.4	86.6	AA	684.2	671.2	670.5	671.8	2	0.96
489	362705116300901		4033927.8	544586.6	W	6.3	7	AA	680	673.7			1	999
490	362705116315001		4033915.2	542072.4	W	9.4		AA	682.8	673.3			1	999
491	362705116322301		4033911.3	541250.9	W	9		AA	684.3	675.3			1	999
492	362711116494401	27N001E24E01S	4034012.7	515333.5	W			AA	146.3	123				999
494	362715116322301		4034219.4	541249.5	W	9.8	91.4	AA	685	673.3	671.3	675.3	2	7.86
495	362723116184101		4034587.8	561709	S			LCA	731.5	731.5				9.29
496	362725116305901		4034537.7	543338.8	W	7.7	119.8	AA	681.9	673	671.9	674.2	2	2.76
497	362726116314401		4034563	542218.6	W	11.2	91.4	AA	683.3	672.2			1	999
498	362727116322201		4034589.2	541272.6	W	13	37.8	AA	683.9	670.9			1	999
499	362728116501101	TEXAS SPR	4034533.9	514664.3	S			LCA	121.9	121.9				37.16
500	362736116123201		4035303.1	570614.9	W	0	7.6	AA	709.7	709.8	709.8	709.9	2	0.02
501	362736116285701		4034892.4	546373.7	W	591	594.1	AA	691.9	674.7	674.6	674.9	3	0.61

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
502	362736116285702		4034892.4	546373.7	W	29.6	30.5	AA	691.9	675.4	674.7	676.2	3	1.17
503	362740116112601		4035141.9	573453.9	W	4.8	6.7	AA	720.9	715.8	715.4	716	3	0.68
504	362745116204001		4035245	558742.3	W	2.4	61.6	AA	682.8	680.3			1	999
505	362750115244001	USBLM	4036453.7	643540.8	W	30.5	79.2	AA	899.2	890.7	889.8	891.2	99	0.14
506	362751116192701	LONGSTREET SPR	4035811.3	560430.8	S			LCA	704.1	704.1				9.29
507	362755116190401	FIVE SPRS W	4035569.7	561129.5	W	0	30.5	LCA	721.6	721.7	721.6	721.8	32	0.03
508	362755116190402		4035569.7	561129.5	W	0	27.4	AA	721.5	721.3	721.2	721.5	3	9.32
509	362755116202001		4035556.5	559237.9	W	5.8		AA	687.9	682.1	682.1	682.2	3	9.29
510	362757116202401		4035617.4	559138	W	30.2	152.4	AA	685.8	679.1			1	999
511	362757116202402		4035617.4	559138	W	5.2	152.4	AA	685.8	680.6			1	999
512	362758116211201		4035640.2	557943.2	W	2.1	61.6	AA	673.6	672.1			1	999
513	362809116213101		4035975.9	557468	W	8.5	170.1	AA	667.5	664.8	664.2	665.4	2	10.03
514	362811116202401		4036048.8	559135	W	18.3	151.5	AA	685.2	679.3	677.9	680.6	2	13.04
516	362830115270501	USAF W 2372-1	4037549.8	638942	W	64.5	91.4	AA	969.3	904.5	903.9	904.8	14	9.33
517	362835116192101	ROGERS SPR	4037136.2	560421.6	S			LCA	693.4	693.4				9.29
518	362835116264101	Gilgans South Well	4036729.1	549748.3	W	16.8	126.5	AA	691	673.9	673.4	674.4	14	9.39
520	362848116195901		4037193.1	559749.3	S			LCA	670.6	670.6				58.06
521	362848116264201	GILGANS NORTH W	4037129	549621.6	W	18.3	120.7	AA	690.3	673.3	673.2	673.6	4	0.05
522	362848116291101		4037815.4	545586.7	W	17.5	121.9	AA	701	683.6			1	999
523	362848116301501		4037716.9	544417.7	W	15.6	62.5	AA	701	685.5			1	999
524	362850116202601		4037250.1	559077	W	14.6	213.4	AA	684.3	680.9	679.7	682.5	3	11.25
525	362852116281401		4037794.5	547428	W	14.3	18.3	AA	701	686.6	686.5	686.7	2	2.34
526	362852116294901		4037812.7	545064.2	W	13.4	18.6	AA	701	687.6			1	999
527	362856116284201		4037759.9	546731.6	W	14.9	19.8	AA	701	685.8	685.5	686.1	2	2.53
528	362858116091501		4036945.9	575404.7	W	11.9	42.4	AA	729.5	719.5			1	999
529	362858116091502		4037627	575771.9	W	11.3	25.9	AA	730.7	719.4			1	999
530	362858116195301	ROGERS SPR W	4037410.4	559971.7	W	30.5	61.6	AA	690.4	689.4	688.8	690.1	79	0.08
531	362858116195302		4037472.5	560046	W	12.2	101.2	AA	691	691.1	691.1	691.2	2	9.29
532	362901116202801		4037588.7	559024.9	W	3.7	84.7	AA	684.3	683.4			1	999
533	362902116304701		4037528	543622.4	W	21.6	62.5	AA	696.5	674.8			1	999
534	362905116092301		4037841	575571	W	27.7	41.1	AA	730	719.3			1	999
535	362905116274001		4037645.1	548274.9	W	19.3		AA	692.8	673.5			1	999

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
536	362906116195101		4037749.1	559944.6	W	2.1	47.9	AA	690.4	689.3	689.1	689.6	18	9.33
537	362917116294601		4038520	544811.7	W	12.4	152.4	AA	701	688.6			1	999
538	362917116304701		4037990.1	543620	W	14.5		AA	698	683.5			1	999
539	362921116280401		4038595.9	547473.5	W	17.6	23.8	AA	696.4	678	677.2	678.8	2	1.34
540	362921116302501		4038547.5	544164.7	W	12.8	25.9	AA	701	688.2			1	999
542	362923116291101		4038646.9	545507.7	W	16.7	64	AA	701	684.3	684.3	684.3	2	2.32
543	362924116203001	Fairbanks Spring	4038359	559019.7	S			AA	685.8	685.8				9.29
544	362925116253301		4038649.4	551429.1	W	13.7	48.8	AA	693.4	675.9	673.3	679.6	3	11.04
545	362927116102601		4038505.3	573997.6	W	10.7	38.1	AA	725.4	714.8			1	999
546	362929116085701	CHERRY PATCH W	4038586.2	576211.4	W	10.1	65.5	AA	729.8	719.2	718.3	719.6	57	0.09
547	362930116295901		4038396.8	544812.3	W	21.8		AA	698	676.2			1	999
549	362938116270001		4038667.6	549264.4	W	30.5	91.4	AA	695.2	672.8	668	673.6	28	3.58
550	362938116300100		4038643	544761.3	W	11.9	15.2	AA	702.5				0	999
551	362939116265401		4038699.2	549413.6	W	21.1		AA	688.8	667.7			1	999
552	362946116254101		4039387.7	551225.6	W	21.6	58.2	AA	698.6	677			1	999
553	362946116270301		4038910.7	548665.9	W	19.5	168.9	AA	698	677.7	676.8	678.5	2	3.67
554	362946116302201		4039256.6	544235.6	W	18.3	61.6	AA	701	688.4	687.9	688.9	2	2.75
555	362946116302301		4038886.7	544212.6	W	13.1	32	AA	701	688.9			1	999
556	362946116302302		4038886.7	544212.6	W	12.2	60	AA	698.9	686.7			1	999
557	362947116252001	MOUNTAIN VIEW HOMES	4038959.5	551750.7	W	32	64	AA	694	673.8	673	674.5	2	1.72
558	362957116254901		4039263.3	551027.4	W	24.3		AA	698	673.7			1	999
559	363002116304801		4039376.5	543588.2	W	17.4		AA	698	680.6			1	999
560	363002116310701		4039374.2	543115.6	W	13.1	65.2	AA	694.9	681.2	680.4	681.8	46	9.42
561	363005116291001		4039481.6	546025.7	W	17.4	24.4	AA	700.4	683.1			1	999
562	363009116291101		4040219.3	545673.5	W	18	20.7	AA	704.1	686.1			1	999
563	363009116302701	HALLOW W	4039594.9	544109.5	W	22.3	34.1	AA	702.6	686.7	686.2	687.2	30	0.09
564	363011116280401		4040230	547663.4	W	24.1	28.7	AA	706.2	681.3	680.5	682.1	2	3.62
565	363017116253001		4040221.2	551494.3	W	27.4	61	AA	701.3	676	675.4	676.5	2	2.88
566	363017116253002		4039882.3	551496.4	W	36.6	61	AA	702.6	684.3			1	999
567	363020116290001		4039945.1	546272	W	19.5	24.4	AA	701	681.5			1	999
568	363026116160401		4040255.2	565574.1	W	23.3		AA	710.2	686.6	685.7	686.9	17	9.36
569	363026116160402		4040255.2	565574.1	W	29		AA	710.2	680.8	679.5	681.1	18	9.42

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
570	363026116275601		4040138.7	547862.9	W	50.6	77.4	AA	705.6	677.4			1	999
571	363027116270001		4040177.4	549255.8	W	67.1	179.8	AA	702.3	677.3			1	999
573	363028116270201		4040207.9	549205.8	W	48.8	106.7	AA	702.3	677.3	677	677.6	30	2.34
574	363030116104501		4040472.8	573458.3	W	18.1	41.1	AA	732.4	714.1	713.7	714.4	7	9.38
575	363030116280001		4040261.4	547762.8	W	20.7	25.3	AA	706.2	685.5			1	999
576	363039116303501		4040518.2	543905.8	W	15.1		AA	702.9	686.2	685.5	687.7	37	9.58
577	363044116271501		4040696.6	548456.8	W	25.5	97.8	AA	740.7	715.1			1	999
580	363045115280201	USAF ALPHA 2	4041683.9	637258.1	W	50.3	59.4	AA	934.5	894.4	894.1	894.5	8	0.59
581	363046116281401		4041183.8	547409.4	W	28.7	75.6	AA	707.1	686.1	685.8	686.3	2	0.72
582	363046116285701		4041116.4	546340.3	W	18.6	24.4	AA	706.2	687.2	686.8	687.6	2	9.6
583	363050116105001		4041057.6	573378.7	W	18.3	41.1	AA	732.4	714.8			1	999
584	363053116271001		4040977	549002.5	W	27.7		AA	704.7	677			1	999
585	363053116272001		4040975.6	548753.7	W	32.3	89	AA	706.5	681.6	681.3	682.1	18	2.35
586	363054116270401		4041008.7	549151.5	W	32	91.4	AA	706.5	678.8			1	999
587	363058116270501		4041131.8	549126	W	48.8	113.4	AA	707.1	682	681.8	682.2	15	0.59
589	363109116252601		4041485.1	551586.3	W	33.5	61	AA	708.1	677.7	677.6	677.8	2	9.33
590	363109116253101		4042069.8	551458.4	W	30.5	68	AA	713.5	687.6			1	999
591	363111116275601		4041525.2	547855.2	W	30.5	91.4	AA	712	688.3	687.5	689.1	2	1.37
592	363111116290201		4041516.3	546213.8	W	17.1	26.8	AA	709.6	692.5			1	999
593	363111116300001		4041878.4	544769.3	W	21.2	46.6	AA	709.1	687.9			1	999
594	363115116242001		4041680	553226.6	W	36.7		AA	740.7	704			1	999
595	363117116303601		4041688.9	543875	W	16.8	61	AA	709	688.7	688.1	689.5	44	2.54
596	363120116300001	BETTLES	4041786	544769.8	W	20.1	49.4	AA	708.7	687	685.5	688.5	21	0.57
597	363121116112301		4042005.9	572549.9	W	29.3	45.7	AA	745.1	714.7			1	999
598	363129116241701		4042111.8	553298.6	W	36	61	AA	713.2	677.2	677.1	677.3	2	9.31
599	363129116242501		4042110.6	553099.7	W	45.7	61	AA	712.6	674.9	674.5	675.3	2	0.91
600	363129116252901		4042100.9	551508	W	53.3	61	AA	713.2	677.3	676.5	678.2	2	3.82
601	363132116285201		4042164.7	546459	W	25.5		AA	710.8	685.3			1	999
602	363133116250101		4042228.4	552203.6	W	37.9	48.8	AA	713.2	675.3			1	999
603	363134116292001		4042222.6	545762.3	W	31.1	55.2	AA	710.2	684.9	684.7	685.2	2	0.71
604	363135115281401	USAF ALPHA 3	4043219.9	636935.1	W	47.2	62.5	AA	931.8	890.5	890.4	890.6	5	0.59
605	363136116271501		4042608.7	548744.5	W	35.7	91.4	AA	717.5	687.5	687	688	2	9.73

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
606	363138116142701		4042494.5	568243	W	21.3	8.8	AA	722.6	701.2			1	999
609	363138116252101		4042625	551554.6	W	23.8	91.4	AA	716.6	692.2	691.5	692.8	2	0.84
610	363138116290201		4042164	546334.6	W	23.5	29.6	AA	712.6	688.6	688	689.1	2	0.73
611	363138116310101		4042700.7	542875.1	W	20.5	54.6	AA	709.3	688.8			1	999
612	363138116323801		4042629.2	540836.2	W	17.8	57.3	AA	708.5	688	686	690.7	4	5.35
613	363140116275301		4042172.7	547926.3	W	32.6	61	AA	716	687.9	687.6	688.2	2	0.17
614	363145116310601		4042547.9	543124.6	W	19.5	61	AA	710.2	689.5	687.8	690.7	62	9.62
615	363148116251001		4042689.2	551977.1	W	41.1	59.4	AA	716.3	676.1	675.6	676.7	2	1.17
616	363155116323301		4042845.5	540959.5	W	32.3	71.9	AA	707.7	689.5			1	999
617	363157116221201		4042870.4	556303	W	29.2	30.5	AA	723.6	693.9	693	694.4	3	1.26
618	363200116304401		4043353.3	543966	W	24.3	45.7	AA	714.5	689.1	688.1	690.2	39	9.67
620	363200116323301		4042999.5	540958.8	W	19.8	61	AA	710.2	693.7			1	999
621	363203116295801		4043604.1	544810.1	W	57.9	81.7	AA	715.7	689.1	688.2	689.9	2	1.97
622	363205115335601	USAF W 2278-1	4044013.3	628415.4	W	73.2	107.6	AA	975.4	941.3			1	999
623	363205116271801		4043564.1	548788.9	W	36.6	91.4	AA	721.8	687.9	686.4	689.5	2	5.23
624	363209116314001		4043283.2	542275.4	W	22	60.4	AA	701	678.1	677.9	679	9	0.16
625	363210116313801		4043314.3	542325	W	21.8	61	AA	712.6	689.9	688.9	690.8	42	0.95
626	363211116294601		4043359.2	545109.8	W	25.3	54.9	AA	715.7	689.5	688.2	690.3	14	9.59
627	363212115240301	SBH-1 S BLK HILLS-1	4044461.5	643158.9	W	202.7	211.8	LCA	1059.2	882.2	881.8	882.4	45	2.34
628	363212116270401		4043567	549286.2	W	32	74.7	AA	721.8	688.5	687.9	689.8	25	2.45
629	363213116133700		4043580.7	569204.3	W	13.2	202.4	LCA	733	719.7	719.5	719.9	2	9.36
630	363213116133800	TRACER W 3	4043580.5	569179.5	W	189	205.7	LCA	732.2	719.5	719.4	719.7	38	0.03
631	363213116133901		4043580.3	569154.6	W	12.1	252.4	LCA	731.5	719.4	719.2	719.5	2	9.31
632	363213116134001		4043580.1	569129.7	W	12.9	202.7	AA	733	719.9	719.7	720.1	2	9.4
633	363214116284801		4043459.3	546551.5	W	53.3	61	AA	717.8	688.2	686.1	690.4	2	9.65
634	363217116320001		4044049	541351.6	W	51.8	147.8	AA	713.5	692.6	690.6	694.6	2	8.54
636	363223116292201		4044440.8	545700.9	W	30	93.6	AA	720.2	690.2			1	999
637	363223116295501		4044310.1	544284.3	W	30.5	91.4	AA	718.7	687.9	686.6	688.9	3	1.47
638	363223116303801		4044154.3	543936.9	W	42.7	128.3	AA	718.4	690.7	690.1	691.5	15	9.55
639	363223116345901		4043691.7	537325.2	W	36.3	77.7	AA	713.4	693.9	693.3	694.4	2	0.63
640	363225116260901		4044156.3	549954.2	W	37.2	112.2	AA	722.4	688.1	687.9	688.2	2	0.62
641	363225116282401		4044323.3	546770.6	W	47.5	125	AA	721.2	687.6			1	999

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
642	363225116310901		4044211.4	543041.6	W	25.6	88.1	AA	715.4	689.8			1	999
643	363230116260501		4043975.1	550601.7	W	36.8		AA	723.3	686.5			1	999
644	363231115322201	USBLM	4044849.7	630740.9	W	3.6	46	AA	944.9	907.7	906.9	908.3	17	0.31
645	363237116292901		4044162.5	545528.3	W	36.6	93.6	AA	720.2	690.4	689.1	691.8	45	2.69
646	363238115464601	ARMY 3	4044766	609254.3	W	94.5	251.8	VU	1102.4	1014.7	1014	1015	56	0.06
647	363243116354101		4044303.5	536278.3	W	26.7		AA	714.5	687.8			1	999
648	363244116320701		4044911.6	541322.7	W	30.5	100.6	AA	718.7	690.1			1	999
650	363248116302801		4044493.8	544059.6	W	32.6		AA	718.4	685.9			1	999
651	363248116303101		4045325.4	543980.8	W	28.8	146.3	AA	721.8	692.8	692.7	693	2	9.34
652	363250116251301		4044999.6	551888.4	W	36.6	152.4	AA	732.4	700	699.6	700.5	3	0.84
653	363252116265001		4045170.3	549475.9	W	45.7	106.7	AA	730	691.3	690.3	691.8	27	0.81
654	363252116292501		4044963.6	545524	W	39.6	146.3	AA	723.6	691.4	691	691.7	13	9.35
655	363254116295501		4044959.5	544728.5	W	30.5	221	AA	722.7	690	687.9	691.8	17	10.79
657	363255115515801	ARMY 2	4045194.9	601490.3	W	151.5	200.6	LCA	1162.2	1010	1009.4	1010.7	22	0.19
658	363256116282101		4045157.6	547213.5	W	33.5	91.4	AA	726.6	687.4	687.1	687.6	3	0.65
659	363310116294001	USBLM W	4045177.9	545249.5	W	31.4	106.1	AA	724.3	691.5	690.2	692.9	26	0.85
660	363316116362401		4045315.8	535205	W	30.5	53.3	AA	719.3	688.9	688.5	689.2	2	0.8
661	363317116293001		4045980.3	545493.8	W	35.3	75.6	AA	726.3	691			1	999
662	363332115244001	DR-1	4046789	642249.8	W	248.4	291.7	LCA	1090.9	842.3	842.1	842.5	10	2.34
663	363332116323501		4045832.2	540522.8	W	27.4	61	AA	720.5	692.1	691.2	693.1	2	2.5
664	363338116303101		4046034.1	543977.1	W	30.5	88.4	AA	722.4	691.3	688.2	694.3	2	27.83
665	363340116332901		4046815.6	539971.3	W	45.1	89	AA	724.2	694.1	692.4	694.9	47	9.61
666	363340116362801		4046424.6	535101.1	W	42.7	115.8	AA	720.2	692.9	692.8	693	2	0.6
667	363342116325101		4046819.5	540791.5	W	29.1	45.7	AA	724.2	693.9	692.7	695.1	45	9.51
668	363342116335701		4046842.7	539150.9	W	27.4	76.2	AA	723.9	696.5			1	999
669	363342116345401		4046710.1	537038.7	W	36.6	85.3	AA	722.1	690.7	688.9	691.9	3	3.31
670	363344116304501		4046496	543925	W	33.5	76.2	AA	727.3	691.2	690	693.8	5	2.73
671	363346116322801		4046700.2	541612.3	W	30.5	89.9	AA	725.7	694.2	693.8	695.3	30	9.38
672	363348116254901		4046380.8	550985.2	W	45.7	118.9	AA	743.7	695	693.6	695.9	32	0.19
674	363348116292701		4046594.6	545117.7	W	42.7	128	AA	726.9	691	690.4	691.6	2	1.32
675	363350116252101		4046880.5	552100.8	W	46.3	88.4	AA	746.8	699.5	698.5	700.4	2	2.42
676	363354115400601		4047239.8	619167.8	S			AA	970.2	970.2				2.32

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
677	363355116254901		4046596.5	550984	W	61.6	139.3	AA	742.2	691.3	690.4	692.2	2	2.2
678	363356115400501	INDIAN SPRS-3	4047301.8	619191.7	S			AA	969.3	969.3				2.32
679	363356115400601	INDIAN SPRS-1	4047270.6	619167.3	S			AA	969.3	969.3				2.32
680	363402116344201		4046743.9	537734.6	W	31.9		AA	721.5	689.6			1	999
681	363405116321501		4047561.8	541384.5	W	39.6	92	AA	740.7	705.6	704.7	706.6	2	11.02
683	363407115215301	COW CAMP	4048059.6	646331.5	W	406.5	427.6	LCA	1272.5	865.8	865.6	866.1	3	2.38
684	363407116243501		4047683.5	552394.3	W	53	136.6	AA	762	709			1	999
685	363407116273301	AMARGOSA VLY WATER	4046951.4	548396.8	W	61	91.4	AA	737.9	701.3			1	999
686	363407116342501		4047668.3	537730.5	W	32	105.8	AA	723.3	691.4	690.1	692.8	3	11.17
687	363409116233701		4047430.7	551351.8	W	42.7	61	AA	755.9	713.2			1	999
690	363410116261101		4047055.5	550434.4	W	64.6	204.2	AA	743.7	691.2			1	999
691	363411116264701		4047666.5	549536.1	W	55.7	51.2	AA	745.2	689.5			1	999
692	363411116272901	AMARGOSA TWN COMPLEX	4047075.2	548495.5	W	61	91.4	AA	739.1	688.9			1	999
693	363415116275101		4047780.8	547944.7	W	45.7	91.4	AA	741.9	696.2			1	999
694	363417116271801		4047259.9	548469.7	W	48.7	57.9	AA	740.7	690.1	688.3	691.9	2	6.61
696	363422115433701	CACTUS SPRG 3	4048031.6	613911.3	W	25.3	30.5	AA	995.2	984.6	984.5	984.6	6	2.32
697	363428116234701	COOKS EAST W	4047631.8	554010.1	W	44.8	82	AA	755.2	719.3	717.8	720.3	28	0.27
698	363428116240301	Cooks West W	4047629.4	553612.5	W	54.3	91.1	AA	754.3	720.1	719.5	720.4	3	9.5
699	363428116281201	AMARGOSA WATER	4047593	547423.9	W	47.8		AA	738.2	690.4			1	999
700	363429116233401		4047664.7	554332.9	W	39.6		AA	755.3	715.7			1	999
701	363429116315901		4047594.6	541781.9	W	53.6	91.4	AA	729.1	690.8	689.5	692.1	2	4.17
702	363430115400501		4048349.5	619177.2	W	4	13.7	AA	944.9	940.9			1	999
703	363434116354001	DEFIR W	4048403.1	536658.6	W	33.9	76.2	AA	727.1	692.4	691.4	693.1	31	0.11
704	363436116333201		4048449	540038.2	W	61	91.4	AA	731.5	693	691.5	693.7	3	10.88
705	363436116342301		4048440.7	538199.2	W	31.8	76.2	AA	740.7	706.9	705.3	708.8	5	12.48
706	363436116345901		4048375.1	537304.9	W		96	AA	726	726			1	999
707	363437116010801	ARMY 6A	4048187.5	587783.8	X	352.7	374.3	LCCU	1050	735.8	735.3	736.6	20	0.23
708	363438116324601		4048082	540611.6	W	45.7	97.5	AA	727.9	696.6	695.2	698	2	4.5
710	363440116282401		4047961.1	547123.7	W	45.1	88.7	AA	731.5	686.4			1	999
711	363442116363301		4047964.8	534970.5	W	42.7	61	AA	725.7	689.1			1	999
712	363447115404601	USAF W 106-2	4048858.2	618076.4	W	40.5	127.4	AA	954.9	934.1	931.8	935.6	19	2.2
713	363452115404401	USAF W 62-1	4049014	618198.5	X	74.7	171.3	AA	950.4	938.9	937.7	940	2	2.67

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
714	363452115405101	USAF W 3	4048918.5	617976.1	W	64	182.9	AA	954	933.3	931.1	936.6	8	11.79
715	363454116314201		4048890.7	542198.2	W	64.6	128.6	AA	733.7	693.4	693.2	693.6	3	0.62
716	363456116335501		4048998.4	538892.6	W	61.9	90.8	AA	740.7	707.4	707.1	707.7	2	0.73
717	363500115400001		4046539.7	619799.1	W	18.3	167.6	UCA	975.4	958.9			1	999
718	363503116284001		4048667.6	546722.1	W	48.8	61	AA	740.7	693.6	692.2	694.9	2	4.33
719	363503116351501		4048619.9	536906.3	W	42.7	48.8	AA	727.9	690.9	690.5	691.3	2	0.92
720	363508115391701	USAF MW-22	4049537	620353.9	W	12.2	19.8	LCA	945	932.5	932.3	932.8	8	0.04
721	363511116335101		4048875.6	538992.5	W	38.6		AA	729.4	690.8			1	999
722	363514115475001	TW-4	4049552.9	607602.8	X	228.9	423.7	LCA	1060.4	835.8	835.7	835.9	14	0.03
724	363519116322001		4049935.1	541522.2	W	61	121.9	AA	737	693.7	693.5	693.9	3	9.32
725	363521116352501		4049173.5	536655.4	W	38.1	76.2	AA	729.7	691	690.4	691.6	2	1.24
726	363523116353701		4050004.1	536353.7	W	39.6	76.2	AA	731.8	693.7	693.3	694	2	0.83
728	363527115510901	TW-10	4049893	602652.7	W	255.4	396.5	LCA	1087.8	832.3	831.6	832.4	7	999
729	363527116292501		4049401.1	545599.9	W	45.3	106.7	AA	744	697.8	696.9	698.7	2	2.09
730	363529115391301	USAF MW-21	4050185.5	620444.2	W	13.7	22.9	AA	943.2	930	929.8	930.3	8	0.02
731	363529115392101	USAF MW-20	4050182.7	620245.5	W	12.4	19.8	AA	942.7	930	929.8	930.3	8	0.02
732	363530116021401	Army 1 WW	4049804	586127.1	WW	243.8	595.3	LCA	961.3	721.7	720.2	722.5	10	999
733	363540116240801		4049847.1	553474.4	W	46	94.8	AA	771.1	721.9	721.5	722.4	21	2.39
734	363549116305001		4050068	543484.4	W	47.2	159.4	AA	742.2	695.9	695.8	695.9	2	9.3
736	363621116263201		4052320.2	549683.2	W	91.4	128	AA	774.2	704.4			1	999
737	363709116264601		4052565.9	549532.7	W	71.7		AA	775.7	704			1	999
738	363711116263701		4053645.6	549750	W	74.7	151.8	AA	783.9	707.7	706.1	709.3	2	5.05
739	363742116263201		4054909.6	549866.8	W	115.8	173.7	AA	795.5	706.7	705.4	708.1	3	2.34
740	363750115394099	S15E5621	4054522.4	619709	W			AA	936	737.8				999
742	363815116175901	TW-5	4054685	562608.2	X	224	243.8	LCCU	931.5	725.1	724.8	725.9	34	0.15
744	363830116241401	AIRPORT W	4054927.3	552821.9	W	109.7	236.8	AA	804.3	705.4	705.3	705.5	30	0.03
745	363835116234001	NDOT W	4055243.6	554136.1	W	120.4	150.9	AA	809.8	705.4	705.1	705.6	29	0.01
746	363836116234001		4055457.3	553811.9	W	109.4	163.1	AA	811.4	702.8	700.1	705.4	2	14.47
748	363840116233501		4055335.3	554011.4	W	115.8	154.5	AA	811.4	701.6			1	999
749	363840116234001		4055397.7	554135.2	W	105.2	120.4	AA	810.8	705.6			1	999
750	363840116235000		4055396.1	553886.8	W	109.7	153.9	AA	813.8	704.1			1	999
751	363907116235701		4056227	553707.8	W	101.5	143.6	AA	819.9	718.4			1	999

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
752	363910115300099	S15E5817	4057200.6	634076.2	W			AA	934.5	843				999
754	364111116470101	N30 E02 31DABC	4059841.3	519382.5	W			AA	1002.8	753				999
755	364141116351401	NA-6 W BGMW-10	4060510.8	527995.8	W	283.5	286.5	AA	801	718.9	718.8	719.1	33	0.03
756	364141116351402		4060510.8	527995.8	W	97.5	98.5	AA	804.7	722.5	722.5	722.5	3	20.9
757	364215116362701	S14 E47 25AAD	4062692.5	534410.7	W			AA	787.9	716				999
758	364243116432401		4062750	524713.6	W	524.3	566.9	AA	823	730.1	730	730.2	2	9.3
759	364246116445701		4062836.1	522406.1	W	85.9	573	TS	829.1	743.2	743.2	743.2	2	9.29
760	364247116442301		4062869.2	523249.6	W	585.2	588.3	TS	829.1	736.6	736.5	736.6	2	9.29
762	364457116231201		4067332.7	550736.8	W	223.7	270.4	WTA	953.4	729.7			1	999
763	364514116482901		4067384.2	517137.5	W	108	228.6	TS	981.5	873.4	873.4	873.5	2	9.3
766	364534116065902	TW-F	4068347.3	578873.7	W	960.1	1036.3	LCA	1262.7	729.3	733.2	734.2	27	0.08
767	364550116472701		4068496.7	518672.5	W	127	359.7	TS	926.6	799.6			1	999
768	364552116413301		4068582	527448.7	W	109.3	126.2	AA	847.3	737.9	737.8	738.1	5	9.3
769	364554116232401	J-12 WW	4068773	554447.3	WW	241.7	310.6	WTA	953.4	727.7	727.2	728	73	0.05
772	364557116410901	MW 309	4068738	528043.3	W	93.1	97.8	AA	844.7	751.5	751.4	751.6	4	0.01
773	364557116411101	MW 317	4068737.9	527993.7	W	93.1	97.8	AA	844.5	751.3	751.2	751.4	4	0.01
774	364557116411201		4068737.8	527968.9	W	85.9	175.3	AA	849.8	763.9			1	999
775	364557116411401	MW 311	4068737.6	527919.3	W	92.4	97.5	AA	844.5	752	751.8	752	4	0.01
776	364557116411501	U.S. ECOLOGY - MW604	4068737.5	527894.5	W	126.5	129.5	AA	844.3	746.1			1	999
777	364557116411801	MW 315	4068737.3	527820.2	W	92.8	97.8	AA	844.7	751.8	751.4	751.9	4	0.05
778	364557116413701	U.S. ECOLOGY-W002	4068735.8	527349.1	W	108.5	114	AA	846.8	738.3			1	999
779	364557116434501		4068726.2	524175.7	W	116.4	122.5	AA	859.5	755.9	755	756.5	3	9.94
780	364559116521901		4068761.3	511432.7	W	144.6	144.8	TS	1146	1001.4			1	999
782	364600116412001	MW 314	4068829.6	527770.2	W	92	96.3	AA	846.2	754	753.8	754.1	4	0.03
783	364600116413001		4068736.3	527522.6	W	138.1	174.7	AA	847.3	751.3			1	999
785	364601116414101	U.S. ECOLOGY-W001	4068858.7	527249.5	W	103.9	110	AA	848.4	744.4			1	999
786	364603116410801	MW 316	4068923	528067.4	W	88.4	91.1	AA	845.8	757.3	757.1	757.4	4	0.02
787	364603116412101	MW 312	4068921.9	527745.1	W	86.6	90.2	AA	847.1	760.3	760	760.5	4	0.05
788	364607116410701	MW 310	4069046.3	528091.8	W	86.5	89.6	AA	846.4	759.7	759.1	760	4	0.14
789	364615116412401	MW 313	4069291.4	527669.6	W	87.3	92	AA	848.5	761.2	761.1	761.3	4	0.01
790	364615116412402	U.S. ECOLOGY - MW600	4069291.4	527669.6	W	140.5	143.9	AA	848.4	755.8			1	999
792	364635115572901	WW-5A	4070369.1	592986.3	WW	212.1	267.3	AA	942.7	725.8	725.1	726.5	18	999

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
793	364649116280201	USW WT-11	4070426.6	547545.6	X	412.4	416.1	WTA	1094.1	730.5	730.2	730.7	53	0.01
794	364656116261601	UE-25 WT 12	4070657.4	550171.8	X	385.3	388.9	WTA	1074.7	729.4	729.1	729.6	61	0.01
795	364706116170601	J-11 WW	4071056.5	563802.3	WW	328.3	395.6	WTA	1049.4	732.2	731.8	732.5	59	0.02
796	364708115574401	WW-5C	4071750.4	592475.5	WW	270.4	365.8	AA	939.1	727.7	725.8	729	16	0.91
797	364732116330701	USW VH-1	4071712.9	539979.3	X	277.7	762.3	WTA	963.5	779.4	779.2	780.2	141	0.01
798	364757116245801	UE-25 WT 3	4072548.6	552093.7	X	339.2	342.9	WTA	1030	729.5	729.3	729.7	37	0.01
799	364758116331701	USW VH-1	4072512.8	539727.7	W	187.5		U	976.9	789.4			1	999
800	364804115580801	WW-5B	4073101.1	591990	WW	207.7	274.3	AA	942.4	734.2	733	734.8	18	999
801	364805115580801	WW-5B	4073132	591989.6	WW	213.4	274.3	AA	942.5	734.2	732.5	734.8	17	0.23
802	364814116485401		4072929.3	516506.9	W	165.9	457.2	AA	957.1	791.1			1	999
803	364822116262601	UE-25 WT 17	4073305.9	549908.4	X	415.4	419.3	WTA	1124	729.6	729.3	729.7	67	0.01
804	364825116290501	USW WT-10	4073376.1	545968.1	X	399	402.6	WTA	1123.4	775.9	775.6	776.1	71	0.01
805	364828116234001	J-13 WW	4073515.8	554020.6	WW	303.6	1009.5	WTA	1011	728.2	727.6	728.7	96	0.03
807	364830115512601	TW-3	4074015.5	601942.7	W	335.6	564.8	LCA	1065	728.7	728.3	729.3	17	0.08
809	364844115541301	WW-1	4074398.5	597799.5	WW	217.6	244.4	AA	944.9	727.3			1	999
810	364905116280101	USW G-3	4074617.4	547547	X	791.9	1533.4	TCU1	1480.5	730.4	730	730.7	31	0.04
811	364915115574101	UE-5n	4075296.2	592635.3	X	219.5	514.2	AA	948.6	733.8	733.2	734.4	82	0.05
812	364916116265601	USW WT- 1	4074965.5	549155.4	X	503.8	507.5	WTA	1201.4	730.5	730.2	730.8	71	0.02
813	364922115580101	RNM-2S	4075475.7	592137.9	X	316.4	352.3	AA	954.9	733.9	732.9	735.8	42	0.35
814	364923115575701	RNM-2	4075538.4	592236.3	X	219.5	285	AA	954.6	733.8	732.8	734.5	7	0.41
815	364928115580101	RNM-1	4075691.4	592135.5	X	238	396.8	AA	956	715.6	715.5	715.8	3	0.02
816	364933116285701	USW WT- 7	4075472.5	546154.9	X	477.6	481.3	WTA	1196.9	775.7	775.5	775.9	61	0.01
817	364938116252102	UE-25p 1 PTH	4075657.3	551504.9	X	1296.9	1805.3	LCA	1114.2	752.3	751.7	752.6	50	0.09
818	364942116280001	USW H-3 HTH	4075757.6	547565.4	X	754.1	792.5	WTA	1483.2	731.4	730.9	732.4	4	0.48
819	364942116280002	USW H-3 HTH	4075757.6	547565.4	X	750.4		WTA	1483.2	732.6	732.4	732.8	15	0.01
820	364942116280003	USW H-3 HTH	4075757.6	547565.4	X	724.1		TCU1	1483.2	754.3	754.2	754.5	6	0.01
821	364942116280004	USW H-3 HTH	4075757.6	547565.4	X	751.8		WTA	1483.2	731.1	730.9	731.4	23	0.03
822	364942116280005	USW H-3 HTH	4075757.6	547565.4	X	710.5		TCU1	1483.2	772.2	772	772.7	21	0.04
823	364945116235001	UE-25 WT 13	4075825.1	553733.5	X	303.2	353.6	WTA	1032.5	729	728.8	729.3	67	0.01
824	364947116254300	UE-25c 1 HTH	4075931.3	550958.3	X	416.1	911.4	WTA	1130.6	730.1			1	999
825	364947116254301	UE-25c 2 HTH	4075869.7	550958.6	X	416.1	914.4	WTA	1132.2	729.3			1	999
826	365011115584701	UE-5c WW	4077004.2	590981.7	WW	245.7	817.5	WLA	980.2	734.3	733.2	734.6	6	0.27

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
827	365023116271801	USW WT-2	4077026.9	548598.7	X	618.1	621.8	WTA	1301.3	730.6	730.3	730.8	37	0.01
828	365032116243501	UE-25 WT 14	4077328.2	552634.2	X	393.5	397.2	WTA	1076.4	730	729.6	730.3	74	0.01
829	365032116265401	USW H-4 HTH	4077307.6	549191.5	X	533.4	539.5	WTA	1248.5	729.8	729.5	730	3	0.05
830	365032116265402	USW H-4 HTH	4077307.6	549191.5	X	518.4		WTA	1248.5	730	729.8	730.1	11	0.01
831	365032116265403	USW H-4 HTH	4077307.6	549191.5	X	518.2		TCU1	1248.5	730.1	729.9	730.3	11	0.02
832	365049116285501	USW H-6 HTH	4077814.6	546191.9	X	526.6	1219.8	WTA	1301.7	775.1			1	999
833	365049116285502	USW H-6 HTH	4077814.6	546191.9	X	525.7		WTA	1301.7	775.8	775.6	776	29	0.01
834	365049116285503	USW H-6 HTH	4077814.6	546191.9	X	523.6		TCU1	1301.7	777.8	777.5	778.1	17	0.05
835	365049116285504	USW H-6 HTH	4077814.6	546191.9	X	526.2		WTA	1301.7	775.5	775.5	775.5	3	0
836	365049116285505	USW H-6 HTH	4077814.6	546191.9	X	526.4		WTA	1301.7	775.3	775.2	775.4	2	0.01
837	365105115565801	UE-5 PW-1	4078697.5	593663.4	X	235		AA	968.7	733.7	733.6	733.7	4	0.03
838	365105116262401	UE-25a 1	4078328.8	549928.6	X	468	762.3	WTA	1199.2	731	730.7	731.2	40	0.01
839	365108116262301	UE-25b 1 HTH	4078421.3	549952.8	X	1199.4	1215.8	WTA	1200.7	730.3	730.1	730.7	5	0.07
840	365108116262302	UE-25b 1 HTH	4078421.3	549952.8	X	472.2		WTA	1200.7	728.3	728.2	728.5	5	0.02
841	365108116262303	UE-25b 1 HTH	4078421.3	549952.8	X	470		WTA	1200.7	730.5	730.2	730.7	10	0.01
842	365114116270401	USW G-4	4078600.3	548936.4	X	548.6	915.3	WTA	1269.5	730.1	729.8	730.3	27	0.01
843	365116116233801	UE-25 WT 15	4078692.8	554037.3	X	353.8	414.5	WTA	1083	728.9	728.7	729.2	137	0.01
844	365122116275501	USW H-5 HTH	4078839.7	547672	X	707.1	781.8	WTA	1478.9	774.8	774.7	774.9	2	0.03
845	365122116275502	USW H-5 HTH	4078839.7	547672	X	703.4		WTA	1478.9	775.2	774.9	775.5	43	0.02
846	365122116275503	USW H-5 HTH	4078839.7	547672	X	703.4		WTA	1478.9	775.1	774.7	775.5	45	0.03
847	365140116260301	UE-25 WT 4	4079410.3	550442.2	X	474	477.6	WTA	1169.2	730.6	730.3	730.9	77	0.02
848	365147116185301	UE-25a 3	4079695.8	561088.1	X	637.3	771.1	UCCU	1385.6	748.3			1	999
849	365152115565701	UE-5 PW-2	4080146	593672.2	X	256		AA	989.5	733.5	733.4	733.6	3	0.03
850	365157116271201	USW H-1 HTH	4079924.2	548730.7	X	571.8	1828.8	WTA	1303	730.9	730.7	731.1	7	0.05
851	365157116271202	USW H-1 HTH	4079924.2	548730.7	X	518		TCU1	1303	784.9	784.7	785	19	0.01
852	365157116271203	USW H-1 HTH	4079924.2	548730.7	X	566.8		WTA	1303	731.1	731	731.4	27	0.01
853	365157116271204	USW H-1 HTH	4079924.2	548730.7	X	572.4		WTA	1303	730.1	729.4	730.6	52	0.08
854	365157116271205	USW H-1 HTH	4079924.2	548730.7	X	572.3		WTA	1303	730.4	729.6	730.7	51	0.06
855	365201115581601	UE-5 PW-3	4080402	591713.1	X	271		WTA	1004.5	733.5	733.4	733.5	4	0.03
856	365213115564401	UE-5f	4080796.7	593986.9	X	271.3	335.3	AA	1006.1	734.9			1	999
857	365239116020901	UE-5j	4081512.8	585932.2	W	242.6	378.6	WTA	1090.6	848			1	999
858	365239116253401	UE-25 WT 16	4081232.6	551149.4	X	510.2	513.9	WTA	1210.9	738.3	738.1	738.5	48	0.01

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
860	365259115571601	UE-11a	4082205.5	593179.2	X	343.8	426.7	WTA	1081.1	736.2	735.9	737.3	24	0.28
862	365322116273501	USW G-2	4082540.1	548146.4	X	522	1830.6	TCU1	1553.9	1030.7	1028.9	1031.9	4	1.66
863	365326116520201		4082535.3	511835	W	83.1	121.9	AA	1164.3	1081.3			1	999
864	365340116264601	UE-25 WT 6	4083101.7	549356	X	368.2	372.2	TCU1	1314.8	1034.1	1034	1034.1	10	0
867	365412116013901	WW-4A	4084386.1	586645.6	WW	324.9	444.1	WTA	1099.1	844.4	844.2	844.7	21	0.04
868	365418116012601	WW-4	4084574.3	586965.5	WW	287.1	450.8	WTA	1097.7	843.3	842.8	844.6	7	0.37
869	365437116384401	S12 E48 07ad	4084775	531574.9	W			VU	1219.2	1174				999
870	365445116383901	GEXA W 3	4085020.5	531701.4	W	63.4	213.4	VU	1243.9	1194.8	1194.2	1195.4	18	0.11
871	365500116003901	WW-C-1	4085880.5	588115.2	WW	470	520.3	LCA	1195.1	724.6	724.2	725.1	14	0.1
872	365502115134101	DDL-2	4086951.6	657846	W	65.1	140.2	LCA	1005.8	940.5	940	940.8	10	9.37
873	365503116444101		4085546.5	522742.5	S			AA	1027.2	1027.2				14.52
874	365506115142499	S12E60 10AD	4087056.6	656775.9	W			AA	990.9	925.2				999
875	365508116003501	WW-C	4086128	588211.6	WW	478.8	511.8	LCA	1195.1	725.6	724.7	726.7	7	0.64
876	365508116003502	WW-C	4086128	588211.6	WW	475.5	518.5	LCA	1195.1	724.7	724.1	725.1	7	999
877	365517116365801	S12 E48 04ca	4086017.7	534193	W			VU	1193	990				999
878	365520116370301	GEXA W 4	4086108.2	534072.6	W	243.8	487.7	VU	1198.1	1009.2	1008.1	1009.7	21	0.26
879	365527116475301	BEATTY SUMMIT W	4086274.6	517990.2	W	73.2	213.4	VU	1170.4	1161.3			1	999
881	365550116091101	UE-14b	4087299.3	575432.5	X	625.1	1121.7	TPTA	1326.9	819.1	818.8	819.6	20	0.05
885	365636116430801		4088416.1	524169.4	S			AA	1085.1	1085.1				14.52
887	365709116481101	BEATTY INDIAN SPR W	4089416.7	517538.4	W	61	210.3	VU	1292.4	1238.4			1	999
888	365711115115101	Desert Valley Well	4090978.1	660492.9	W	48.6	128	AA	977.8	929.1			1	999
889	365711115115201	DDL-1	4090977.7	660468.1	W	48.2	128	AA	977.8	929.4	928.7	929.6	21	0.66
890	365731116425501		4090114.3	525351.5	S			AA	1085.1	1085.1				14.52
891	365740116043501	ER-6-2	4090753.7	582224.1	MW	530.5	611.6	LCA	1290	745				999
892	365749116431101		4090667.8	524954.3	S			AA	1085.1	1085.1				14.52
894	365804116432101		4091129.3	524705.6	S			AA	1083.6	1083.6				0.58
895	365810116425101		4091869	524777.6	S			AA	1097.3	1097.3				9.29
897	365821116343701	USW VH-2	4073212.5	537742.1	X	219.5	1219.2	WTA	974.4	810.4			1	999
899	365849116002101	TW-B	4092811.3	587796	W	458.2	504.7	TPTA	1197.6	739.1	738.9	739.3	60	0.01
900	365856116453701		4093217.3	522029.7	S			AA	1249.7	1249.7				14.52
901	365904115593401	ER-6-1	4093417.6	589640.4	MW			LCA	1201	728.7				999
904	365905116012001	UE-6e	4093419.7	587023.2	X	637	1282.9	TCU1	1199.6	739.7	739.3	740.1	15	0.08

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
905	365905116012002	UE-6e	4093420	587023.2	MW	637	698	TPTA	1199.6	739.4			2	0.01
906	365905116033201	UE-6d	4093386.8	583759.9	X	647.7	1187.5	AA	1203	741.2	740.9	741.4	18	999
907	365930115075499	S11E61	4095376.2	666267.3	W			LCA	978.7	930.2				999
910	365943116032901	WW-3	4094558.5	583822.4	WW	470.5	538	AA	1209.8	730.1	726.6	732	14	1.81
911	370002116430101		4094210.3	524573	S			AA	1127.8	1127.8				58.06
912	370003116424501		4094800.5	526128.4	S			AA	1188.7	1188.7				9.29
913	370005116040301	UE-1h	4095228.2	582975.4	X	650.4	1023.5	LCA	1217.7	743.1	742.5	743.4	12	0.08
914	370017116014201	U-3jg	4095632.8	586456.7	X	471.2	502.9	AA	1207.5	735.4	734.9	736.2	5	0.32
915	370020115593001	U-3mi	4095790	589717.8	X			TCU1	1220.3	743.2				10.58
916	370020116003701	U-3kv	4095741.9	588062.3	X	467	487.7	TPTA	1205.9	738.4	738.1	738.9	24	0.02
918	370053116002901	U-3ks	4096760.8	588249.3	X	471.5	490.7	TCU1	1208.7	736.9	736.5	737.2	3	0.09
920	370116115561301	ER-3-1-1	4097539.3	594564.2	MW	765.6	855.5	LCA	1343.6	729.2				999
921	370116115561302	ER-3-1-2	4097539.3	594564.2	MW	673	704.1	LCA	1343.6	729.1				999
922	370142116021100	WW-A	4099200.4	585728.5	WW	488.9	527.3	AA	1221	732.1			1	999
923	370142116021101	WW-A	4099200.4	585728.5	WW	490.1	570	AA	1221	729.7	726.9	732.6	21	4.98
925	370154116430201		4097786.5	525155.7	S			AA	1204	1204				14.52
927	370208116092401	UE-16f	4098944.5	575007.8	X	243.2	384.4	UCCU	1417.8	1174.5			1	999
928	370208116092402	UE-16f	4098944.5	575007.8	X	394.1	450.8	UCCU	1417.8	1306	1305.8	1306.1	16	0.01
931	370214116021002	ER-3-2-2	4099232.6	585724.4	MW	788.8	803.5	AA	1221.6	731.2				999
933	370214116452701		4098424.4	521843.2	S			AA	1213.1	1213.1				9.29
934	370218116033101	UE-1k	4099334.4	583725.8	X	488.6	712.6	AA	1234.7	745.9	745.4	746.1	5	0.11
935	370246116064901	UE-1f	4100150.3	578826.3	X	191.6	214.3	UCCU	1303.7	1112.1			1	999
936	370253116055201	UE-1c	4100379.2	580232.2	X	392.8	573	TCU1	1281.9	886.7	886.3	887.2	19	0.06
937	370254116064201	UE-1b	4100398.4	578996.9	X	196	382.2	UCCU	1302.3	1105.9	1105.5	1106.3	21	0.03
938	370254116070601	UE-1a	4100392.9	578404	X	165.5	291.7	AA	1311.6	1145.5	1145.2	1146.1	28	0.06
940	370254116082002	UE-1L	4100376.1	576576.1	X	218.2	696.2	UCCU	1357.7	1199.8	1199.3	1201	16	0.27
941	370301116065301	UE-1d	4100611.6	578723.2	X	163.3	261.2	LCA3	1309.3	1146			1	999
942	370301116185801	ER-30-1-1	4100465.2	560811.5	MW			TMAQ7	1417	1280			1	999
943	370301116185802	ER-30-1-2	4100465.2	560811.5	MW			TMAQ7	1417	1280			1	999
944	370311115591901	TH-9	4101031.8	589958.8	X	544.1	595.3	LCA	1272.8	728.8			1	999
945	370320116012001	U-3cn 5	4101708.8	586913.3	X	863.2	923.5	LCA	1222.9	729	728.1	729.3	45	0.05
946	370321115594201	TW-E	4101333.7	589362.7	X	523.1	600.5	TCU1	1271.3	748.2	748.2	748.2	4	0.02

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
947	370321115594202	TW-E	4101333.7	589362.7	X	548.6	740.7	TCU1	1271.6	743.7	743.6	743.9	5	0.04
949	370326116021101	U-3jn 1	4101449.7	585680.9	X	501	609.6	WTA	1233.2	731.5	730.9	732.2	3	0.4
950	370334116012100	U-3cn 5 HTH	4101709	586938	X	863.2	922.9	LCA	1222.9	727.6	727.3	727.9	6	0.06
952	370337116033001	UE-1q	4101769.1	583726.4	X	473.4	742.8	TCU1	1244.1	770.4	769.8	770.7	9	0.1
953	370337116033002	UE-1q	4101769.1	583726.4	X	749.5	792.5	LCA	1244.1	739.5	739.4	739.7	4	0.01
954	370338116011801	U-3cn 1	4101832.8	586986.1	X	609.6	749.8	TCU1	1241.8	732.8			1	999
956	370339116011901	U-3cn 3	4101863.4	586961.2	X	509.5	749.8	TCU1	1242.1	732.5	732.4	732.6	2	999
958	370348116024301	U-3mt	4102119.6	584883.8	W	468.5	472.4	TCU1	1239.7	771.1	771	771.2	7	0.01
959	370353116000601	U-3jq 1	4102313.5	588759.5	X	521.1	677.9	TCU1	1272.4	750.7	750.4	751.2	7	0.11
960	370353116020201	TW-7	4102284	585894.8	X	521.2	686.1	TCU1	1238.4	730.4	729.9	731.3	18	0.24
961	370353116021401	U-3an 3	4102311.8	585598.2	X	994.3	1083.6	LCA	1237.7	724.1			1	999
962	370355116013001	U-3cn 4 HTH	4102353.6	586684.4	X	517.2	699.5	AA	1244.7	732	731.1	732.8	9	0.47
963	370406116095600	UE-16d WW	4102759.6	574307.2	WW	229.2	253	UCA	1427.7	1198.5			1	999
965	370411116025901	UE-3e	4102824.4	584481.6	X	474	520.3	WTA	1244.5	770.1	769.9	770.5	4	0.12
969	370411116025905	UE-3e	4102824.4	584481.6	X	460.9	643.1	TCU1	1244.5	774.8	774.2	775.1	4	0.21
976	370411116025912	UE-3e 4-3	4102824.4	584481.6	X	493.5	499.9	WTA	1244.3	771.3	770.4	771.9	78	0.05
977	370412115593601	UE-7aa	4102906.9	589494.2	X	335.9	656.5	LCA	1298	729.6	729.3	730.1	10	0.08
978	370412116095101	UE-16d WW	4102759.6	574307.2	WW	349	914.4	UCCU	1427.7	1198.2			1	999
979	370418116044501	TW-D	4103326.1	582229.3	W	540.1	594.4	LCA	1265.5	740.5	740.1	740.7	19	999
980	370419116101700	UE-17a	4103158.7	574130.8	X	227.1	362.7	UCCU	1431.5	1236.9	1236.7	1237.1	4	0.02
981	370425116095801	UE-17a	4103158.7	574130.8	W	227.1	370	UCCU	1431.5	1237.2	1236.7	1237.8	13	0.09
982	370428116043001	TW-D	4103326.1	582229.3		524.8	594.4	LCA3	1265.5	740	739.5	740.7	13	0.2
983	370434116040702	UE-4ae	4103516.6	582795.4	X	493.7	698	TCU1	1258.9	763.2	760.7	765.2	3	5.32
984	370435116040701	U-4ak	4103547.4	582795.1	X	492.3	496.8	TCU1	1259	766.4	766.1	766.7	2	0.19
985	370436116000201	U-7ca	4103639.7	588844.4	X	518.5	548.6	TCU1	1293.6	774.2	773.3	775.1	42	0.27
986	370444116001801	U-7bc	4103882	588446.8	X	531.6	685.8	TCU1	1289	757.4	757.4	757.4	2	0
987	370447116030501	U-7au	4103932.3	584322.3	X	488.6	488.6	WTA	1252.9	764.3			1	999
990	370451116024102	U-7cd 1	4104061.5	584913.7	X	432.6	518.2	TCU1	1254.1	820.9	820.5	821.4	6	0.17
991	370454116003201	U-7bd	4104186.6	588097.8	X	533.1	609.6	TCU1	1287.3	754.2	754.2	754.2	2	0.77
992	370501116041301	UE-4ah	4104347.4	582663.8	X	470.3	869	TCU1	1262.5	760.9	759.5	762.6	5	1.38
994	370509116040301	U-4au	4104595.1	582784.8	X	497.4	533.4	VTA	1263.2	763.5	763	763.9	17	0.05
996	370513116025101	U-4u PS 2A	4104735.5	584511.8	X	490.7	694.9	TCU1	1254.8	756.1	755.8	756.2	8	0.02

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
997	370514116000601	U-7cb	4104809.6	588733.3	X	543.2	563.9	TCU1	1306.5	761.9	760.3	763.4	72	0.5
998	370514116024101	U-7ba	4104770.3	584906.6	X	458.4	458.7	TCU1	1258.6	800.2			1	999
999	370520116025701	U-4u	4104951.2	584509.7	X	515.1	380.7	TCU1	1255.6	740.5			1	999
1000	370523117143701		4104648.5	478353.1	W	43.3		AA	1272.8	1229.6			1	999
1002	370547116041101	UE-4av	4105765.1	582674.6	X	476.7	535.8	TCU1	1273.1	795.6	794.8	796.4	2	999
1003	370547116041102	UE-4av	4105765.1	582674.6	X	524.3	858	TCU1	1273.1	777.5	777.3	777.6	12	999
1004	370547116041103	U-4av	4105765.1	582674.6	X	482.3	518.2	TCU1	1273.3				0	999
1005	370547116041104	UE-4av	4105765.1	582674.6	X	465.3	605	TCU1	1273.1	794.5	794.4	794.6	3	999
1006	370554116005601	U-7bl	4106029.4	587486.1	X		551.7	TCU1	1315.8				0	999
1007	370556116000901	UE-7nS	4106103.1	588645.7	W	597.4	672.1	LCA	1331.7	731.5	731.1	732	150	0.03
1008	370556116025401	UE-4t	4106061.3	584572.6	X	487.7	518.5	TCU1	1263	775.3			1	999
1015	370601116030102	UE-4a	4106213.7	584398.3	X	879.7	922.9	TCU1	1266.4	773.6	772.6	774.3	11	0.43
1016	370601116030103	UE-4a	4106213.7	584398.3	X	492.1	777.2	TCU1	1266.4	772.9	772.6	773.2	5	0.05
1019	370605116012401	U-7cc	4106361.2	586791.4	X	480.7	487.7	TCU1	1306.5	825.4	824.6	825.8	5	0.2
1021	370608116043102	UE-4ab	4106407.5	582174.5	X	495	730.3	TCU1	1280.5	784.8	784.3	785.5	3	0.37
1023	370616116090801	UE-17c	4106590.2	575335	X	96.2	178.6	UCCU	1473.6	1318.1	1317.7	1318.8	6	0.14
1024	370626116015601	U-7a	4107000.3	585994.9	X	743.1	822.7	TCU1	1296.9	727.4			1	999
1025	370627116554101		4106595.3	506396.1	W	18.4		AA	1249.7	1231.3			1	999
1026	370631116551801		4106719	506963.7	W	18.7		AA	1222.9	1204.2	1204.1	1204.2	2	2.32
1029	370645116031901	U-2gh	4107565.1	583940.4	X	479.2	548.9	WTA	1273.2	793.5	793	794	16	0.13
1030	370648116473001		4107260.3	518513.3	W	28.4	35.7	TMAQ7	1231.4	1202.4	1202	1203	12	2.41
1031	370700116474001		4107629.5	518265.7	W	29.3		AA	1249.7	1220.4			1	999
1032	370704116474201		4107384.1	518784.5	W	28.8		AA	1264.9	1236.1			1	999
1033	370712116073901	UE-2s	4108335.8	577515.9	X	591.9	600.5	LCA3	1397	805.1			1	999
1034	370720116041601	U-2gk	4108629.8	582523.1	X	543.5	551.4	AA	1292.6	748.8	748.5	749.1	6	0.08
1035	370723116033101	U-2bs	4108733.2	583632.7	X	524.6	585.2	TCU1	1288.2	763.1	762.8	763.6	4	0.14
1036	370726116040302	UE-2ar	4108817.9	582842.1	X	545.9	716.6	VTA	1292.6	746.7			1	999
1037	370728116042001	U-2gf	4108875.4	582422	X	539.2	551.7	TCU1	1295	754.2	752.8	755.8	13	0.87
1038	370736116050301	UE-2fb	4109111.6	581358.5	X	524.6	850.4	TCU1	1302.7	763.8	762.6	765.4	8	0.7
1039	370737116035901	U-2v	4109157.8	582937.5	X	556.3	771.1	VTA	1297.4	741.1			1	999
1041	370741116194501	UE-18t	4109083.8	559593.4	X	577.9	792.5	TMAQ7	1585.3	1306.3	1305.9	1307.3	26	999
1042	370753116502701	TPJ-2	4109254.8	514141.7	W	17.6		AA	1220.7	1203.1	1203.1	1203.2	9	0.58

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
1043	370758116040601	UE-2aw	4109803.2	582758.4	X	552.6	709.6	VTA	1302.1	748.2	746.9	749.5	5	1.24
1044	370802116050301	U-2dr	4109912.8	581350.8	X	565.7	609.6	AA	1314.7	748.4	747.7	749	12	0.15
1045	370806116264001	UE-18r	4109757	549324.3	X	496.5	1525.2	TMAQ7	1688	1271.9	1271.6	1272.1	13	0.03
1046	370815116032701	U-9ct	4110336.6	583715.5	X	511.1	521.2	TCU1	1299.8	787.9	787.1	788.7	2	1.16
1047	370819116022901	U-9 ITS UE-S-25	4110474.5	585169.9	X	546.2	618.1	TCU1	1286.9	740.3	740.1	740.7	3	0.11
1049	370823116050001	UE-2dj	4110560.6	581418.6	X	577	716.3	AA	1323.1	745.7	745.2	746.1	5	0.17
1052	370831116080701	UE-2ce	4110763.9	576802.7	W	426.1	616.3	LCA3	1452.1	1010.9	1009.7	1011.4	159	0.15
1054	370835116504901		4110548.1	513596.8	W	13.1		AA	1280.2	1265.5	1263.9	1267.1	2	5.14
1055	370836116035001	U-2av	4110978.1	583141.6	X	569.4	668.4	TCU1	1310	740.7			1	999
1056	370840116510101	TPJ-1	4110701.7	513300.5	W	12.7	32.6	AA	1216.5	1203.2	1202.7	1203.8	20	0.17
1057	370846116030851	U-9ca 1	4111296.6	584174.8		548.6	978.4	TCU1	1293.6	750.8	750	751.4	3	0.51
1059	370904116040301	U-2ei	4111837.8	582812.4	X	513.6	640.1	TCU1	1319	740.4	740.2	740.5	3	0.03
1060	370909116041901	UE-2aa	41111988	582416.3	W	591	706.2	TCU1	1325.1	734.1			1	999
1061	370909116041951	UE-2aa	41111988	582416.3	X	583.7	672.7	TCU1	1325.1	739.3	738.6	741.5	14	0.65
1062	370910116045901	UE-2ax 2	4112009.2	581429.2	X	599.8	746.8	TCU1	1340	740.2			1	999
1063	370917116023701	U-10l 1	4112259.5	584929.9	X	561.5	673	LCA	1299.8	735	733.7	738.3	4	4.63
1067	370929116132304	TW-1	4112483.7	568992	W	1127.8	1137.2	LCA3	1876.3	1271.6			1	999
1069	370929116132306	TW-1	4112483.7	568992	W	1127.8	1282	LCA3	1876.3	1276.8			1	999
1070	370929116132307	TW-1	4112483.7	568992	W	582.2	740.7	BCU2	1876.3	1437.1	1437.1	1437.2	2	0
1071	370929116132308	TW-1	4112483.7	568992	W	582.2	740.7	BCU2	1876.3	1437.3	1437	1437.7	9	0.07
1072	370929116132309	TW-1	4112483.7	568992	W	1127.8	1282	LCA3	1876.3	1277	1276.4	1277.3	19	0.09
1073	370929116132310	TW-1	4112483.7	568992	W	582.2	1282	BCU2	1876.3	1363.3			1	999
1074	370929116132311	TW-1	4112483.7	568992	W	582.2	740.7	BCU2	1876.3	1429.6	1428.9	1430	21	0.09
1075	370953116030801	U-10k 1	4113361.2	584154.1	X	604.4	697.7	LCA	1302.2	734.5	734.2	734.8	3	0.09
1076	370956116172101	WW-8	4113269.7	563115.4	WW	381	1673.4	BAQ1	1735.8	1407.6	1407.2	1408	6	0.11
1077	370958116051501	WW-2	4113484.6	581020.3	WW	583.7	623.3	TCU1	1362.5	759.9	759.2	760.7	2	1.09
1078	370958116051503	WW-2	4113484.6	581020.3	WW	658.7	772.7	TCU1	1362.5	760.2	759.3	761.1	2	1.7
1079	370958116051508	WW-2	4113484.6	581020.3	WW	777.2	882.7	LCA	1362.5	735.8			1	999
1080	370958116051511	WW-2	4113484.6	581020.3	WW	777.2	1043	LCA	1362.5	736.5			1	999
1081	370958116051512	WW-2	4113484.6	581020.3	WW	823	1040	LCA	1362.5	736.2	735.8	736.5	4	0.15
1082	371014116051601	UE-8e	4113977.4	580990.9	X	579.9	646.5	TCU1	1368.1	785.8	785.7	785.9	2	0.02
1083	371014116051602	UE-8e	4113977.4	580990.9	X	582.1	752.9	TCU1	1368.1	785.8	785.7	786	3	0.03

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
1086	371043116142101	ER-19-1-1	4114753.9	567539.5	MW	978	1085	UCCU	1871	1325.9				999
1090	371052116125201	U-12e.06-1 R/C	4115047.7	569735.6	X	890.3	969.3	LCA3	2308.3	1416.6	1414.9	1418	4	1.8
1091	371106116110401	ER-12-1	4115501.6	572394.9	W	516.1	1049	LCA3	1773.9	1302.4			1	999
1092	371108116045301	UE-10j	4115647	581542	X	657.9	725.4	LCA	1394.1	735.2	734.4	736.2	7	0.45
1094	371109116024702	UE-10 ITS 3	4115708.5	584648.4	X	563.5	587	TCU1	1326.7	762.2	759.9	763.2	12	1.03
1095	371123116025201	UE-10bf	4116138.6	584520.8	X	576.1	690.7	TCU1	1337.2	759.6	758.6	761.1	6	0.91
1096	371123116025202	UE-10bf	4116138.6	584520.8	X	570.9	619	TCU1	1337.2	763.9	761.7	766.3	5	4.24
1097	371131116021501	UE-10aa	4116425.5	585455	X	374.3	420.6	LCCU	1341.5	992.5	990.6	994.3	2	6.81
1099	371154116024601	UE-10 ITS 1	4117095.4	584659.2	X	369.9	701	TCU1	1367.4	996.7	995.1	997.5	5	0.84
1100	371154116024602	UE-10 ITS 1	4117095.4	584659.2	X	585.5	613	TCU1	1367.4	994.9	994.7	995.1	3	0.05
1101	371155116031401	UE-10 ITS 5	4117119.3	583968.6	X	620.4	716.3	TCU1	1378.3	757.3	757	757.9	3	0.25
1102	371155116031402	UE-10 ITS 5	4117119.3	583968.6	X	627.9	655.3	TCU1	1378.3	772.6	771.9	773.5	4	0.5
1103	371158117105501		4116808.1	483857	W	7.8		AA	1218	1207.6	1204.9	1210.2	2	14.41
1104	371200117103101		4116870.1	483635.3	W	92.7		AA	1286.3	1193.6			1	999
1108	371243115050601		4119604.4	670701.9	W	6.2	19.5	AA	975.4	968.9	968.6	969.1	2	0.74
1110	371313116274201	U-20as	4119239.5	547765.3	X	613.3	640.1	TPTC6	1898	1284.5	1284.4	1284.7	6	0.04
1111	371315116282701	U-20y	4119294.9	546655.9	X	629.1	793.1	TPTC6	1907.1	1276.9	1275.3	1278	9	0.59
1112	371321116292301	ER-20-1	4119473.7	545271.1	MW	590.4	629.4	TPTC6	629.4	1278.1				999
1113	371329116220301	UE-19fS	4119784.2	556116.7	X	781.8	2118.4	TBAQ3	2052.9	1350			1	999
1115	371332116112802	UE-12t 6	4119995.7	571764.7	X	21.3	445.3	TMAQ7	2105.3	1847.4	1847.1	1847.9	7	0.11
1116	371332116254101	U-20be	4119842.5	550743.8	X	659.3	676.7	TCTC5	1978.6	1303.8	1303.5	1304.2	16	0.06
1118	371337117070201		4119849.4	489875.6	W	7.8		AA	1219.2	1211.4			1	999
1119	371339116221601	U-19az	4120090.2	555794.3	X	633.2	649.2	TPTC6	2058.3	1424.5	1424.2	1425.1	28	0.04
1120	371339116433401		4119910.7	490146.8	W	1.2		AA	1219.2	1218			1	999
1121	371339117074501		4120250.7	489309.3	W	13.2		AA	1249.7	1236.5			1	999
1122	371341116222901	U-19aq	4120149.7	555473.5	X	642.8	662.9	TPTC6	2072.2	1429	1428.5	1429.4	3	0.79
1123	371341117073401		4119974	488816.2	W	54.9		AA	1282.3	1227.4			1	999
1126	371349116222001	U-19bh	4120397.7	555693.7	X	639	654.7	TPTC6	2062.9	1423.3	1422.6	1423.8	8	0.28
1127	371350116264701	U-20ax	4120387.5	549114.1	X	625.1	670.6	TCTC5	1992.2	1329.7	1328.9	1330.4	52	0.19
1129	371352116281801	UE-20c	4120436.3	546871.4	W	648	1629.5	TCTC5	1915.1	1267			1	999
1130	371353116282501	U-20c	4120466.1	546698.7	X	1383.8	1463	TCTC5	1914.4	1275.3			1	999
1131	371359116252301	U-20av	4120677.2	551182.3	X	631.9	640.1	TPTC6	1970.2	1336.8	1336.2	1338.4	6	0.92

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
1132	371401116220601	U-19x	4120769.8	556036.2	X	674.8	679.7	TPTC6	2066.8	1392			1	999
1133	371401116252001	UE-20av	4120739.3	551255.9	X	648.7	796.7	TCTC5	1968.4	1319.5	1319.3	1319.7	3	0.05
1134	371410116221301	U-19ae	4121046	555861.8	X	694.9	832.1	TCTC5	2065	1369.8	1369.5	1370.1	2	0.19
1136	371416116282201	U-20ao	4121175.3	546768.7	X	596.5	655.3	TPTC6	1913.8	1317.3			1	999
1138	371421116333701	PM-3	4121289.8	539006.6	X	443.2	502	TMAQ7	1774.8	1331.3	1331	1331.6	3	0.09
1139	371421116333702	PM-3	4121289.8	539006.6	X	449	920.2	TMAQ7	1774.8	1330.3	1329.6	1331	21	0.17
1140	371421116333703	PM-3-1	4121289.8	539006.6	X	584.9	653.5	TPTC6	1774.8	1329.8	1329.7	1330.1	6	0.02
1141	371421116333704	PM-3-2	4121289.8	539006.6	X	444.1	508.1	TMAQ7	1774.8	1330.5	1330.4	1330.7	6	0.01
1143	371425116210101	U-20n PS 1DD-H	4121478.2	551152.8	X	1321.6	1358.2	TCTC5	1971.5	1324.7	1324.7	1324.7	2	0
1144	371425116251901	UE-20n 1	4121479	551276	X	695.6	1005.8	TCTC5	1969.2	1318.8			1	999
1145	371425116251902	UE-20n 1	4121479	551276	X	695.6	863.8	TCTC5	1969.2	1349.4	1348.5	1349.8	31	0.09
1147	371433116251301	U-20n PS 1DD-H	4121478.2	551152.8	X	1280.8	1306.1	TCTC5	1971.5	1349.1	1348.8	1349.4	2	0.19
1148	371434116251601	U-20a 2 WW	4121756.8	551348.2	WW	718.1	1188.7	TCTC5	1973.3	1343.7	1343.6	1343.9	2	0.07
1149	371434116255101	U-20a	4121751.5	550485.9	X	658.6	663.5	TCTC5	1987.2	1328.7			1	999
1150	371439115480001	Watertown 2 WW	4122428.5	606437.3	WW	273.1	332.5	VU	1352.4	1079.3			1	999
1151	371440115483401	Watertown 1 WW	4122448.7	605599.3	WW	171	204.2	VU	1353.6	1204.1			1	999
1153	371444116263001	U-20bf	4122054	549523.2	X	634	685.8	TCTC5	1988	1338.1	1332.8	1338.9	28	1.19
1154	371450116594901		4122092.8	500274.7	W	4.6	76.2	AA	1249.7	1244.8	1244.5	1245.1	2	0.2
1156	371452116284901	UE-20D	4122281	546097.3	X	745.5	1369.2	TCTC5	1905.9	1273.9	1273.4	1274.4	2	0.47
1157	371452116292101	U-20ak	4122276.7	545309	X	621.2	640.1	TPTC6	1900.4	1278.5	1277.7	1279.2	7	0.29
1160	371452116293903	U-20bb 1	4122274.3	544865.5	X	617.8	714.8	TPTC6	1898.9	1280.9	1280.6	1281.1	17	2.35
1161	371452116303301	U-20at 1	4122267.3	543535.2	W	617.5	669.6	TMAQ7	1902.2	1284.4	1284	1284.6	4	0.67
1163	371459116204801	UE-19i	4122600.8	557921	X	882.7	2426.2	TBAQ3	2084.5	1396.3			1	999
1164	371505116254501	U-20 WW	4122707.7	550628	WW	692.2	996.1	TCTC5	1971.4	1344.6	1344.3	1344.9	9	0.04
1165	371505116254502	U-20 WW	4122707.7	550628	WW	619.8	996.1	TCTC5	1971.4	1351.5	1351.5	1351.6	2	0.01
1166	371505116594101		4122555.1	500471.8	W	7.9	38.1	AA	1219.2	1213.8	1213.7	1214	3	2.35
1167	371509116223601	U-19au	4122860.4	555283.1	X	631.5	670.6	TCTC5	1991.6	1358.5	1358.3	1358.7	8	0.6
1168	371509116223602	U-19au 1	4122860.4	555283.1	X	632.4	660.5	TCTC5	1991.5	1358.8	1358.6	1359.1	3	0.1
1169	371512116193101	U-19ab	4122984	559839.9	X	616.3	685.8	TCTC5	2111.7	1495	1494.7	1495.3	3	0.09
1170	371513116193001	U-19ab 2	4123015	559864.3	W	614.2	731.5	TCBCU4	2112.3	1497.8	1497.5	1498.1	2	0.2
1171	371517116594001		4122924.8	500496.4	W	4.2		AA	1219.2	1215			1	999
1172	371519116223301	U-19av	4123169	555355.1	X	616.4	653.5	TCTC5	1985.3	1369			1	999

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
1173	371521116252001	U-20ah	4123204.5	551240.9	X	608.7	701	TCTC5	1964.4	1354	1352.4	1355.8	12	1.04
1174	371523117012601		41231110	497885.2	W	4.7	79.2	AA	1219.2	1213.5	1212.5	1214.5	2	2.02
1175	371523117033401		4123512	494732.5	W	11.6	182.9	AA	1219.2	1207.6			1	999
1176	371525117005301		4123171.5	498698.2	W	1.8		AA	1219.2	1217.4			1	999
1177	371527117013601		4123233.3	497639	W	6.9		AA	1219.2	1212.3			1	999
1179	371537115555001	Watertown 4 WW	4124174.1	603064.5	WW	35.7	165.2	AA	1355.4	1320.7			1	999
1180	371539115500301	Watertown 3 WW	4124239.6	603384	WW	48.8	111.6	AA	1355.1	1322.6			1	999
1182	371542116251202	U-20bd 2	4123852.9	551433.9	X	621	746.8	TCTC5	1996.7	1375.3	1375	1375.7	5	0.06
1183	371542116251203	U-20bd	4123852.9	551433.9	X	621.1	689.2	TCTC5	1977	1355.8	1355.7	1355.9	7	0
1184	371542116251301	U-20bd 1	4123852.7	551409.3	X	621.1	732.1	TCTC5	1976.8	1355.5	1355.3	1355.7	6	0.02
1185	371545115495401	WNGM W	4124427.3	603603.4	W	48.8	111.6	AA	1355.1	1322.5			1	999
1186	371547116292601	U-20bc	4123970.9	545176.7	X	569.5	609.6	TPTC6	1873.4	1303.1	1302.9	1303.9	22	0.07
1187	371547117011101		4123849.5	498254.9	W	4.6	42.1	AA	1211.6	1206.9	1206.8	1207	2	0.61
1188	371551116262501	U-20ai	4124119.4	549634.2	X	624.8	656.5	TCTC5	1982.1	1356.2	1355.1	1357.3	7	0.44
1189	371553117034302	TERREL	4123080.7	494510.6	W	10.6	76.2	AA	1219.5	1208.5	1208.4	1208.9	5	0.06
1190	371554116185301	U-19c	4124285.1	560766.7	X	714.1	968.3	TBAQ3	2143.4	1429.2			1	999
1191	371555117015001		4124096.3	497294.4	W	18.3	79.2	AA	1215.5	1208.7	1208.5	1208.8	2	0.63
1192	371604116243801	U-20am	4124536	552267.1	X	652.3	670.6	TCTC5	2009.5	1357	1356.7	1357.3	2	0.19
1193	371608116191001	UE-19c	4124713.5	560344.8	X	737.9	1377.7	TBAQ3	2143.7	1428.9			1	999
1194	371608116191002	UE-19c WW	4124713.5	560344.8	WW	737.9	2587.4	TBAQ3	2143.7	1431.1	1429.3	1432.6	3	2.81
1195	371617116291701	UE-20f	4124896.6	545393.3	X	1358.2	4171.5	TBAQ3	1864.2	1322.9	1321.7	1324.1	3	1.5
1196	371617116291702	UE-20f	4124896.6	545393.3	X	595.6	1384.7	TCTC5	1864.2	1268.7			1	999
1197	371617116291801	U-20f	4124896.5	545368.8	X	588.3	1280.8	TMAQ7	1864.5	1276.2			1	999
1198	371618116260201	UE-20h WW	4124985.6	550195.5	WW	763.8	2196.7	TCTC5	1998.5	1355.5	1353.5	1357	3	3.22
1199	371620116213501	U-19bg 1	4125058.3	556771.1	X	645.6	685.8	TCTC5	2040.3	1394.5	1394.3	1394.7	5	0.04
1202	371623116243701	UE-20ab	4125121.6	552288.1	X	648	777.2	TCTC5	2005.9	1356.1	1355.8	1356.7	6	0.67
1203	371626115074201		4125688.2	666586	W	9.4	21	AA	1017.1	1007.7			1	999
1204	371630116221202	U-19aS	4125360.4	555857.8	X	668.1	857.4	TCTC5	2060.8	1392.7			1	999
1205	371632116211301	U-19ay	4125431.8	557310.4	X	646.7	657.1	TPTC6	2045.8	1396.9	1396.9	1397	3	0.03
1207	371643116212001	U-19ar	4125769.6	557135.6	X	644.3	670.6	TPTC6	2044	1398.9	1398.1	1399.6	3	999
1208	371646117010101		4125667.5	498501.6	W	43.6	61.9	AA	1221.6	1205.8			1	999
1209	371648116242001	TW-9	4125894.6	552702	W	643.9	2301.8	TCTC5	1993.5	1349.2	1348.8	1349.6	2	999

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
1210	371649116242101	PM-1	4125925.3	552677.2	W	643.9	2305.2	TBAQ3	1998.8	1354.5	1354.1	1354.9	2	0.35
1211	371649116242102	PM-1	4125925.3	552677.2	W	2299.1	2356.4	TBAQ3	1998.8	1359.3	1358.4	1360.4	48	0.22
1212	371652117015201		4125852.8	497245.8	W	19.5	68	AA	1234.4	1214.9			1	999
1214	371658116244401	U-20aw	4126199.1	552109.1	X	635.5	640.1	TCTC5	2007.1	1371.4	1371.3	1371.6	10	0.59
1215	371700115072601		4127324.1	666676.7	W	6.4	28	AA	1019.3	1012.8			1	999
1216	371707115071301		4127970.8	666639.2	W	3.7	50	AA	1022.3	1018.6			1	999
1217	371711115071501		4127723.3	666594.8	W	3.9	106.7	AA	1019.3	1015.3			1	999
1218	371712117020701		4126469.2	496876.6	W	22.1	82.3	AA	1234.4	1212	1211.6	1212.3	2	0.3
1219	371713117020301		4126500	496975.1	W	19.5	15.2	AA	1226.8	1207.2	1207	1207.3	2	2.37
1220	371714116230301	U-19bk	4126708	554592.9	X	605	670	TCTC5	2033	1427.8	1427.7	1428	6	0.04
1225	371746116184601	U-19ba	4127737.7	560914	X	656.1	663.5	TCTC5	2144.9	1488.8	1488.7	1488.9	11	0.03
1230	371750116195901	UE-19e WW	4127848.1	559115.8	WW	754.4	1830.3	TBAQ3	2108.8	1432	1429.7	1433	4	2.45
1231	371750116262701	U-20an	4127786.2	549563.3	X	606.3	617.5	TCTC5	1969.6	1363.1	1362.9	1363.4	3	0.06
1233	371758116193601	UE-19z	4128098.6	559680.3	X	669.6	853.4	TCTC5	2099.5	1429.7	1429.2	1429.8	6	999
1234	371801116320301	UE-20j WW	4128080.3	541289.3	WW	530.4	1734.3	TBAQ3	1799.2	1412			1	999
1236	371802116320301	U-20m	4128111.1	541289.1	X	1127.2	1264	BCU2	1799.2	1412.1			1	999
1237	371807116243001	U-20g	4128327.6	552440.5	X	1216.2	1280.2	TCTC5	1972.1	1357.3			1	999
1238	371821117025801		4128596.2	495326.5	W	41.1	114.3	AA	1249.7	1208.5			1	999
1239	371830116215301	UE-19gS WW	4129061.4	556300.8	WW	807.7	2286	TBAQ3	2048	1424.9	1424.6	1425.2	3	0.12
1241	371836116215101	U-19g	4129246.6	556348.8	X	627.3	1003.4	TBAQ3	2052.5	1424.2	1422.8	1425.2	6	0.95
1242	371851116273801	U-20e	4129655.8	547804.5	X	564.8	1174.4	TCTC5	1925.1	1360.3			1	999
1243	371852116175701	UE-19b 1 WW	4129780.4	562105.3	WW	667.5	1371.6	TBAQ3	2073.2	1427.9	1427.9	1428	2	0.03
1244	371852116281701	U-20ar 1	4129681.2	546844.3	X	559.9	696.5	TCTC5	1926	1364.4	1363.5	1364.9	8	0.26
1245	371855117030001		4129643.8	495573.2	W	40.6	114.3	AA	1251.2	1210.3	1210.1	1210.7	2	0.75
1246	371901116272501	UE-20e 1	4129965.8	548122.8	X	553.9	1949.2	TCTC5	1919.3	1364.1	1362.8	1365.5	3	1.84
1247	371929116185501	U-19ai	4130910.2	560669.4	X	625.1	632.5	TBAQ3	2055	1429	1428.3	1429.8	10	0.79
1249	372003115085301		4132859.7	664399.9	W	5.7	12.2	AA	1047.6	1041.9			1	999
1250	372005115084501		4133300.9	664883.5	W	3.4	21.3	AA	1038.8	1035.4			1	999
1251	372024115271899	S7E58	4133506.1	636861.3	X					1113				999
1252	372024116312001	UE-20p	4132492.3	542325.6	W	269.4	1365.5	TBAQ3	1692.6	1423.1			1	999
1253	372034116222501	UE-19h	4132877.4	555487.8	X	707.4	1053.4	TBAQ3	2066.6	1422.8			1	999
1254	372034116222503	UE-19h	4132877.4	555487.8	X	593.9	1129.3	TBAQ3	2066.6	1472.2	1471.7	1472.7	6	0.15

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
1255	372034116222504	UE-19h	4132877.4	555487.8	X	643.1	695.9	TBAQ3	2066.6	1423.1	1422.8	1423.5	8	0.06
1256	372042116340501	PM-2	4133027.4	538263.1	W	762	2676.8	BCU2	1702.5	1443	1442.7	1443.3	15	0.03
1258	372054116191901	U-19d 2	4133525.3	560060	X	780.3	1999.8	BCU2	2091.1	1428	1427.6	1428.5	2	0.37
1259	372115115095401		4135444.8	662576.8	W	4.9	13.4	AA	1048.5	1043.6			1	999
1261	372138117274001		4134765.3	459169.3	W	92.1		AA	1447.5	1354.2	1353	1355.4	2	3.46
1262	372151115103101		4136641	662258.2	W	9.1	19.5	AA	1060.7	1051.6			1	999
1263	372159115095101		4136536.4	663220.1	W	3.2		AA	1219.2	1216			1	999
1264	372208115094601		4137802.9	663342.9	W	2.5		AA	1056.1	1053.6			1	999
1265	372240115095101		4138168	663089.7	W	2.8	19.8	AA	1066.8	1064			1	999
1266	372247115093501		4138380.8	662938	W	5.5	20.7	AA	1057	1051.6			1	999
1267	372248115101001		4138388.7	661756.7	W	0.9	29.6	AA	1050	1049.2			1	999
1268	372257115100701		4138326.4	663308	W	15.8	56.4	AA	1058.3	1042.5			1	999
1269	372318115100201		4139330.5	662624.1	W	4.9	19.5	AA	1219.2	1214.3			1	999
1270	372341115104801		4140010.3	661110.4	W	11.3	76.2	AA	1079	1067.7			1	999
1271	372345115083201		4139237.1	662576.8	W	6.8	13.4	AA	1067.4	1060.6			1	999
1272	372354115054801		4140186.3	662238.5	W	4.7	58.5	AA	1069.8	1065.1			1	999
1273	372354115282499	S6E58 28E NE	4139951.7	635132.5	X					1128				999
1274	372411115105201		4140593	660951.5	W	5.9	14	AA	1084.5	1078.6			1	999
1275	372417115104701		4141319.5	661847.6	W	2.2		AA	1075.9	1073.7			1	999
1276	372500115104002	WHIPPLE	4143225.6	661564.6	W	1.8	12.5	AA	1066.8	1063.9	1063.2	1065	41	0.21
1277	372543116363501	GOLD FLAT 2	4142287	534534.1	W	70.9	88.4	AA	1594.1	1523	1522.9	1523.2	6	0.59
1279	372642116281301	Gold Flat 1	4144165.5	546861.5	W	144	148.1	VU	1565.1	1421.2			1	999
1280	372700117110001	USGS	4144604.2	483787.7	W	86.5		AA	1408.8	1320.8	1319.6	1322.3	14	0.54
1281	372719117240301		4145249.3	464552	S			AA	1569.7	1569.7				9.29
1282	372749115113401	ASH SPRS	4147633.9	659930.8	S			AA	1101.9	1101.9				0.58
1284	372857115124001		4149696.8	658171.2	S			AA	1114	1114				0.58
1287	373003117110101		4149904.7	483773.4	W	145.1	182.9	AA	1429.5	1318.3			1	999
1288	373036117151201		4151274.9	477614	W	73.5	184.1	LCCU	1423.4	1312.2	1312.2	1312.2	2	0.58
1289	373043115134901		4152931.8	656415	W	2.6	19.7	AA	1188.7	1186.1			1	999
1290	373113115130401		4153877.3	657502.3	W	20.9	44.2	AA	1169.8	1148.9			1	999
1291	373155115135801	CRYSTAL SPRS	4155115.9	656152.9	S			AA	1161.3	1161.3				2.32
1292	373157115135101		4155563.5	655358.7	W	19.5	34.7	AA	1178.7	1159.1	1159	1159.2	2	0.59

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
1293	373158115141001		4155233.6	655856.1	W	9.1	30.5	AA	1167.7	1158.5			1	999
1294	373158115141601		4155230.9	655708.7	W	9.1	42.7	AA	1169.8	1160.7			1	999
1295	373202115141301		4155355.5	655780.1	W	9.8	32	AA	1168.9	1159.2			1	999
1296	373202115142301		4155350.9	655534.6	W	13.1	66.8	AA	1174.4	1161.3			1	999
1297	373215115165801		4155681.2	651722.8	W	54.8		AA	1269.5	1214.7			1	999
1299	373228116472001	HAMMEL MINE	4154717.2	518654.1	T	36.2	37.5	VU	1688.6	1652.3	1652.3	1652.4	4	0.15
1300	373320117090601	RALSTON W	4156309.6	486607.5	W	93		AA	1449.6	1356.2	1356	1356.6	8	0.61
1301	373323117090801		4154089.3	487511.9	W	15.2	30.5	AA	1446.3	1437.1			1	999
1302	373330115135101		4158099.7	657422.3	W	11.8	34.1	AA	1167.4	1155.6			1	999
1303	373330115142002	SCHOFIELD	4158064.5	655557.4	W	18.3	29.3	AA	1219.2	1199.5	1197	1200.9	9	2.05
1304	373338117085001		4156186.4	486558.2	W	94.3		AA	1456.9	1362.6			1	999
1305	373339115134901		4158367.8	656926.3	W	19.2		AA	1179.6	1160.4			1	999
1306	373405115090001		4159294.6	663412.7	W	365.8	396.2	LCA	1289.3	1109.3	1108	1110.6	2	3.61
1307	373446116433301	TTR SULFIDE MINE	4158984.4	524212.3	T	16.8		AA	1868.4	1851.3	1851	1851.7	5	2.38
1308	373453115131401		4160631.2	657595.1	W	7.3	30.5	AA	1176.5	1169.2			1	999
1309	373500115133301		4160860.1	656658.3	W	8	121.9	AA	1178.1	1170.1			1	999
1310	373523115133001		4161570.4	656718.5	W	6.7	58.5	AA	1178.7	1171.9			1	999
1312	373554115125201	HIKO SPR	4162543.5	657632.4	S			AA	1181.1	1181.1				2.32
1313	373614115083701		4229888.5	664031.9	W	25.6		AA	1341.1	1315.5			1	999
1314	373622116434601	TTR ANTELOPE MINE 1	4161941.9	523884.9	T	6		AA	1935.5	1928.8	1928.5	1929.4	7	9.39
1315	373622116434701	TTR ANTELOPE MINE 2	4161941.8	523860.3	T	6.9		AA	1937.3	1929.6	1928.9	1930.4	6	9.73
1316	373623116434701	TTR ANTELOPE MINE 3	4161972.6	523860.2	T	9.4		AA	1939.1	1929	1928.3	1929.7	7	9.63
1317	373623116565201		4161323	504123.2	W	33.5		AA	1429.5	1396			1	999
1318	373624115434101		4162460.7	610611.9	W	100.3	122.2	LCA	1505.7	1405.4			1	999
1320	373635115450101		4162807.2	608841.6	W	99.7	143.3	LCA	1505.7	1406			1	999
1321	373704115465701		4163477.9	605890.2	W	59.7		AA	1505.7	1446			1	999
1322	373704115490401		4163467.4	602604.5	W	59.4	73.2	AA	1487.4	1428			1	999
1323	373708115482201		4163995.3	605368.6	W	56.7	76.2	AA	1496.6	1439.9	1439.9	1439.9	2	2.32
1324	373713115125101		4163695.1	658199.1	W	9.1	32	AA	1204	1194.9			1	999
1325	373721115470102		4164421.4	607349.2	W	54.9	118.9	AA	1480.7	1442			1	999
1326	373721115473401		4164411	606540.2	W	40.2	126.5	AA	1482.9	1440	1437.4	1442.6	2	15.89
1327	373721115483901		4164390.6	604946.8	W	50.3	78	AA	1490.5	1438.8	1437.4	1440.2	2	6.08

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
1328	373729115442601		4164328.6	609679.8	W	43.5		AA	1492.6	1449.1			1	999
1329	373729115454301		4164424.9	607618.8	W	36.6	63.4	AA	1492.6	1456			1	999
1330	373741115480601		4164780.4	604083.7	W	56.4	76.2	AA	1487.4	1431			1	999
1331	373803115050501		4166745.3	669004.1	W	208.9	213.4	AA	1295.4	1086.5			1	999
1335	373813115454001		4165747.3	607381	W	21.3	163.7	AA	1484.4	1463			1	999
1336	373815115434601		4166034.1	610441.7	W	33.5	82.6	AA	1484.4	1450.8			1	999
1337	373817115483301		4165818.5	603286.3	W	41.1	76.2	AA	1490.5	1449.3			1	999
1338	373819115465201		4165819.9	605835.6	W	34.7	92.4	AA	1484.4	1449.6			1	999
1340	373833115441101	USGS-MX	4166695.5	611486.8	W	53.3	59.4	AA	1499.9	1456.2	1455.7	1457.6	4	149.45
1341	373838115424001		4166829.4	612269.4	W	42		AA	1484.4	1442.3			1	999
1342	373851115472001		4167189.1	606847.6	W	32.6		AA	1465.2	1432.6			1	999
1343	373907115461701		4167432.8	606623.9	W	26.6	76.2	AA	1473.7	1447.1			1	999
1344	373907115472901		4167663.7	605395.5	W	23.2	91.4	AA	1473.7	1450.5			1	999
1345	373943115495701		4168534.7	601095.8	W	43.3	50.3	AA	1487.4	1444.2			1	999
1346	373944115454101		4168854.2	609252.2	W	9.8		AA	1450.2	1440.4			1	999
1347	373954115114501		4168284.9	659582.4	W	42.5	171.6	LCA	1219.2	1176.7			1	999
1348	373955115490201		4169199.1	602484.4	W	31.1	72.5	AA	1478.3	1447.2			1	999
1349	373955115512901		4169085	600721.5	W	52.1	121.9	AA	1491.4	1439.3			1	999
1350	373957115440501		4169323	609736.1	W	9		AA	1456.9	1448			1	999
1352	374020115494101		4169680.1	601498.3	W	36	99.7	AA	1481.3	1445.3			1	999
1353	374024115502901		4171705.2	600738.6	W	43.3	50.3	AA	1493.5	1450.3			1	999
1354	374029115501901		4169854.6	600638.6	W	44.5	76.5	AA	1488.9	1444.4			1	999
1355	374041115114501		4171301.6	659328.2	W	57	352.7	LCA	1219.2	1162.2			1	999
1356	374051115420802		4170989.7	614442.5	W	30.5	79.2	AA	1477.1	1446	1445.3	1446.6	2	3.1
1357	374052115403001		4170787.3	615400.8	W	31.6		AA	1476.8	1445.1			1	999
1358	374058115113501		4171949.3	659340.2	W	64.9	146	LCA	1236.6	1171.7			1	999
1359	374140115490401		4172185.3	602178	W	32.5		AA	1478.3	1445.8			1	999
1362	374218115031501		4221871.9	671550.4	W	66		AA	1524	1458			1	999
1363	374230115491701		4174696.3	603322.3	W	5.7	6.1	AA	1463	1457.3			1	999
1364	374241116264601	TTR CEDAR PASS R-1 W	4173731.7	548825	W	145.1	236.2	AA	1736.1	1608.1			1	999
1365	374243117135101		4172997.2	479190.7	W	7.7	13.7	VU	1740.4	1732.7			1	999
1366	374244115420801		4174481.3	612802.2	W	8.5		AA	1451.8	1443.3			1	999

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
1367	374247115433202		4174536.6	612336.2	W	10.9		AA	1451.8	1440.8			1	999
1368	374247115474001		4174340	604404.2	W	4	6.1	AA	1450.8	1446.8			1	999
1372	374345115414701	USGS-MX	4176359.5	614882.2	W	34.6	57.6	AA	1499.9	1462.2	1462.1	1462.3	5	148.65
1373	374345115415501	USGS-MX	4176356.8	614686.4	W	53.3	59.4	AA	1482.9	1446.3			1	999
1374	374356115422601		4176685.3	613922.9	W	37.6	61	AA	1484.4	1446.6	1446.5	1446.7	2	2.34
1375	374401117140501		4176078.7	479320.9	W	25.4		AA	1688.6	1663.2			1	999
1376	374419115453001		4177333.2	609409.4	S			AA	1464.6	1464.6				9.29
1379	374506116292300	TTR CEDAR PASS WW	4177627.1	545571.4	WW	199.3	257.3	AA	1746.5	1568	1567.8	1568.3	2	2.41
1380	374523115440901	USGS-MX	4179332.2	611365.3	W	41.1	47.2	AA	1500.2	1483.5	1483.4	1483.6	4	148.66
1381	374525115061801		4180332.3	666939	W	110.9	146.3	AA	1296.9	1183.6	1181.2	1186.1	2	11.98
1383	374530115455201	USGS-MX	4179514.3	608842	W	16.7	48.8	AA	1463	1446.4			1	999
1385	374536115445901		4179716.4	610136.5	W	16.6	48.8	AA	1463	1446.4	1446.4	1446.5	2	2.33
1387	374619116435401	TTR EH-4	4180339.5	523636	W	95.8	149.4	AA	1663.6	1567.4	1566.7	1567.8	10	2.41
1389	374658116464101	TTR EH-2	4181530.8	519547.6	W	136.8	233.2	AA	1705.4	1568.6			1	999
1390	374658116464102	TTR EH-2 WW	4181530.8	519547.6	WW	136.6	176.8	AA	1705.4	1567.9	1566.6	1568.7	6	3.16
1391	374700116455101	TTR EH-1	4181595.4	520770.5	W	117.3	195.1	AA	1688.6	1571.2			1	999
1392	374700116455102	TTR EH-1 WW	4181595.4	520770.5	WW	178	222.5	AA	1688.6	1510.6			1	999
1393	374703116445701	TTR SANDIA MAIN WW	4181691.3	522091.1	WW	107	220.7	AA	1671.9	1564.9			1	999
1395	374716115253801		4183227.2	638494.2	W	33.6	57.3	VU	1737.4	1703.5	1703.3	1703.8	2	232.37
1396	374725116452701	TTR SANDIA 2	4182367.4	521355.6	W	105	147.8	AA	1669.6	1564	1563.2	1564.6	9	0.13
1397	374729115483301	USGS-MX	4183112.2	603388.1	W	55.4	58.5	AA	1499.9	1444.4	1444.4	1444.5	6	148.65
1398	374739116453401	TTR SANDIA 4	4182798.4	521183.3	W	107	142	AA	1666.7	1563.8	1563.5	1564.5	7	0.12
1399	374806115413601		4184479.7	613595	W	25.9	36.6	AA	1478.3	1452.4			1	999
1400	374844115202601	USGS-MX	4186071.4	646077.9	W	257.6	408.4	AA	1554.5	1296.9			1	999
1401	374856115205402	USGS-MX	4186429.2	645386.7	W	262.7	442.6	AA	1554.5	1291.7			1	999
1402	374910116373001	TTR DEAD HORSE W	4185641.8	533009.1	W	109.8	118.9	AA	1688.6	1578.7	1578.7	1578.8	6	2.32
1403	374915116460401	TTR EH-5	4185755.1	520442.2	W	134.1	262.1	AA	1651.7	1569.9			1	999
1404	374927117291001		4186324.3	459129.1	S			AA	1325.9	1325.9				9.29
1405	374930117195801		4186244.1	470716.6	S			AA	1530.1	1530.1				9.29
1406	374946115460101		4187509.6	586463.3	W	126.4	141.7	AA	1586.5	1460.1			1	999
1408	375028117213201	USGS-MX	4188532.7	468549.6	W	40.1	45.7	AA	1500.2	1460.1			1	999
1409	375041117212401	USGS-MX	4188440	468622.5	W	26.2	45.7	AA	1484.4	1458.2			1	999

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
1411	375051115445301		4189742.7	608413.4	W	87.5		AA	1539.2	1451.8			1	999
1412	375054116460201	TTR 3B WW	4188806.2	520459	WW	44.2	86.6	AA	1633.7	1599.8	1598.8	1600.3	4	2.76
1413	375055116460201	TTR 3BB	4188837	520458.9	W	33.5		AA	1633.1	1599	1597.7	1599.6	6	2.79
1414	375103115463001		4189765.1	607777.6	W	87.6		AA	1533.1	1445.5			1	999
1415	375115117244201		4189507.7	463788	W	14.6	22.3	AA	1464.6	1449.4	1448.8	1450	2	1.25
1416	375131117230301		4189990.5	466209.3	W	15.7	22.3	AA	1464.6	1448.9			1	999
1417	375139116460001	TTR EH-6	4190192.9	520406.7	W	30	94.5	AA	1632.2	1602	1601.4	1602.2	9	2.38
1418	375147117241401		4189661.5	463862	W	14.5	21.9	AA	1470.7	1456.2			1	999
1419	375211117232501		4191225.5	465676.9	W	11.5	14	AA	1464.6	1451.1	1449.1	1453.1	2	8.38
1420	375244117235801	USGS-MX	4191631	464530.4	W	25	61.3	AA	1500.2	1475.3	1475.3	1475.3	2	148.64
1421	375247117140501		4191489.2	478846.4	W	64	94.5	AA	1521	1456.9			1	999
1422	375248116541601		4192298.3	508407.1	W	64	75.3	AA	1600.2	1537.7			1	999
1423	375255117222101		4191807.4	466558.8	W	13.9	21.9	AA	1470.7	1456.7			1	999
1424	375300117150001		4191551.5	478577.9	W	60	135	AA	1511.8	1450.9	1449.5	1451.9	7	3.05
1425	375300117150002	GOLDFIELD	4191520.7	478577.8	W	36.6	121.9	AA	1511.8	1449.6	1448.3	1451	12	3.18
1427	375310116472301	TTR EH-7	4192992.9	518494.5	W	27.4	217.9	AA	1628.5	1600.3	1599.6	1601.1	2	3.48
1428	375310116472302	TTR EH-7 WW	4192992.9	518494.5	WW	92.7	198.1	AA	1628.5	1599.5	1599	1599.7	8	2.37
1429	375348115324301		4195140.7	627909.9	W	146.3	152.4	AA	1690.4	1553.3			1	999
1430	375357115465101		4195106.3	584869	W	68.6	89	AA	1525.2	1456.6			1	999
1431	375401117150801		4193743	477338	W	42.1	48.8	AA	1505.7	1462.1	1460.6	1463.7	2	4.67
1433	375453116450501	TTR REEDS RANCH W	4196175.5	521856.8	W	30.7	38.7	AA	1641	1610.3	1610.3	1610.3	6	2.32
1435	375519117194001		4196230.4	470459.2	W	18.6		AA	1524	1505.4			1	999
1439	375619116035301	USGS-MX	4199209.3	582189.9	W	37.2	61	AA	1508.8	1471.6			1	999
1440	375742115223001		4234315.8	642128.7	W	2.4		AA	1615.4	1613			1	999
1442	375751116030201	FALLINI BROS	4194324.2	583753.4	W	23.9	41.5	AA	1493.5	1469.1	1468.4	1469.6	12	0.19
1444	375820115442301	REPORT 60 P1	4161645.3	588966.4	W	21	36.6	VU	1478.6	1457.6			1	999
1445	375829116230401		4202985.9	554653.4	W	3.6		AA	1935.5	1931.9			1	999
1446	375937115414701	USGS-MX	4205700.7	614472.4	W	37.8	61	VU	1481.3	1443.5			1	999
1447	375951115582201	USGS-MX	4205828.3	590197.5	W	57	61	AA	1521	1464			1	999
1448	380018115592901	USGS-MX	4206642.5	588554.3	W	26.8	45.7	AA	1482.9	1456			1	999
1450	380054115472601	USGS-MX	4207962.3	606172.6	W	16.8	48.8	VU	1458.5	1441.7			1	999
1451	380059115441201		4207815.6	588712.4	W	34.4	54.9	AA	1491.1	1456.7			1	999

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
1452	380113116394501	USGS-MX	4207911.4	529627.9	W	25.7	57.6	AA	1700.2	1674.5			1	999
1454	380132115333501	USGS-MX	4209480.4	626198.3	W	125.8	324.6	AA	1691.6	1564.4	1563	1565.8	3	4.32
1455	380132115333502	USGS-MX	4209422.2	626418.7	W	128.6	335	AA	1645.9	1516	1514.5	1517.4	2	236.21
1456	380132115333503	USGS-MX	4209421	626345.5	W	90.2	335	AA	1691.6	1601.5			1	999
1457	380235115475501	USGS-MX	4211066.1	605425.2	W	48.5	61	VU	1497.2	1448.7			1	999
1459	380301115252901		4183781.2	638435.9	W	30.7	57.3	VU	1585	1554.3			1	999
1460	380313116012601	USGS-MX	4212005.7	585644.3	W	48.2	61	AA	1480.1	1430.6	1429.2	1432	2	152.4
1461	380338115422001	USGS-MX	4184618.6	614718.2	W	36.6	58.8	AA	1500.2	1463.5	1463.3	1463.6	4	148.66
1462	380348115265001	USGS-MX	4213772.9	636223.5	W	41.7	61	AA	1600.2	1558.3	1558.1	1558.5	2	148.75
1463	380353117000201		4212788.8	499954.9	W	115		AA	1636.8	1520.8	1519.7	1521.7	5	3.23
1464	380400116380001	CASEY	4213070.2	532728.2	W	32.8	43	AA	1676.4	1643	1641.8	1643.6	22	0.24
1465	380407115262601	USGS-MX	4214368.3	636798.5	W	44.2	61	AA	1585	1540.8			1	999
1467	380453115435601		4215403.1	589141.5	W	50.3	62.2	AA	1506.3	1456			1	999
1468	380511116044801		4215592.3	580685.2	W	15.5	21.6	AA	1557.5	1543.5			1	999
1470	380555116474901	USGS-MX	4271862	517855.7	W	21.4	61	AA	2140	2118.6			1	999
1471	380616116192201		4217415.8	559817.7	W	85.3	97.5	AA	1661.2	1575.8			1	999
1472	380639117030501		4217536	496009.7	W	146.3	164.6	AA	1676.4	1530.1			1	999
1474	380646115235001	USGS-MX	4220780.4	640368.7	W	45.7	61	AA	1585	1538.8	1538	1539.3	4	148.97
1475	380652116200901	USGS-MX	4218513.8	558226.8	W	95.8	216.4	AA	1630.7	1534.7	1534.4	1534.9	3	2.42
1476	380652116200902	USGS-MX	4218513.8	558226.8	W	97.3	216.4	AA	1630.7	1533.1	1532.8	1533.3	2	2.45
1477	380652116200903	USGS-MX	4218513.8	558226.8	W	97.3	216.4	AA	1630.7	1533.1	1532.8	1533.4	2	2.47
1480	380718115270101		4220741.3	636253.1	W	71.6	79.2	AA	1615.4	1543.8			1	999
1481	380723117252001	USGS-MX	4219469.2	462824.8	W	39.8	59.7	AA	1500.2	1460.5			1	999
1482	380736115023501		4221470.7	671534.5	W	66.3	62.5	AA	1535	1468.7			1	999
1483	380738115502901	USGS-MX	4172308.5	602176.5	W	31.4	45.1	AA	1500.2	1466.8	1465.6	1468.8	4	150.68
1485	380758115204601	USGS COAL VLY W	4221631.8	644956.9	W	242.9	559.9	LCA	1706.9	1462.6	1461.6	1463.9	56	58.15
1486	380803115352801		4221431.4	623480.7	W	9.6	28	VU	1875.1	1864.9	1864.1	1865.5	3	2.89
1487	380821117275401		4221150.6	459254.1	W	12	18.6	AA	1467.6	1455.6			1	999
1489	380830117272001		4221423.9	460083.1	W	11.9	18.6	AA	1460	1447.9	1446.7	1448.1	10	0.21
1490	380835115242601	USGS-MX	4222678.5	639581	W	25.7	30.5	AA	1600.2	1574.4	1573.8	1574.5	12	148.68
1491	380850115241001	USGS-MX	4223147.5	639962.5	W	25.9	30.5	AA	1592.6	1566.7			1	999
1493	380906115410401		4223529.1	593579.9	W	80.8	99.1	AA	1536.2	1455.4			1	999

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
1494	380906116050501	USGS-MX	4222831.2	580199.6	W	97.5	140.2	AA	1525.5	1454.9	1454.3	1455.4	4	0.79
1495	380906116050502	USGS-MX	4222831.2	580199.6	W	70.4	150.9	AA	1527	1456.1	1455.4	1456.6	5	2.54
1496	380920116090501		4223207.1	574354.3	W	64.2	68	AA	1524	1459.8			1	999
1497	380932116051301	USGS-MX	4223630.6	579997.1	W	71	147.5	AA	1525.5	1454.5			1	999
1498	380932116051302	USGS-MX	4223630.6	579997.1	W	71.6	150.9	AA	1525.5	1453.9			1	999
1499	380937115233401	USGS-MX	4224611.3	640813.7	W	19.2	30.5	AA	1609.3	1590.2			1	999
1500	380959115242401	LUND REPORT 18	4225268.4	639585.1	W	7.4		AA	1600.2	1592.8			1	999
1501	381000115240001	USBLM	4225671.2	639699.9	W	6.6	8.2	AA	1585	1577.6	1576.8	1578.3	34	232.41
1502	381021115233501	USGS-MX	4225967.1	640765.9	W	26.2	30.5	AA	1603.2	1577			1	999
1503	381023116152901		4225068.7	564993.1	W	30.5	41.8	AA	1604.5	1575.5			1	999
1504	381105116221301		4226290.4	555154.2	S			AA	1676.4	1676.4				9.29
1505	381107115341101		4227155.2	602832.5	W	65.1	77.7	AA	1524	1458.9			1	999
1506	381123115252001		4227834.3	638178.3	W	3.7	6.1	AA	1627	1623.4			1	999
1507	381132117044001		4226938	493192.6	W	2.4	16.8	AA	1767.8	1765.4			1	999
1508	381136116201101	USGS-MX	4227266.6	558115.4	W	42.1	61.3	AA	1612.4	1570.3			1	999
1509	381138117042501	TONOPAH 1	4227215.5	493120	W	16.8	96	AA	1725.2	1722.7			1	999
1510	381146115442401	USGS-MX	4228117	610337.9	W	53.9	61	LCA	1511.8	1457.9			1	999
1511	381203115412001		4229065.6	592518.8	W	41.9	45.7	AA	1496.9	1455			1	999
1512	381203117224301		4227958.3	466852.6	W	16.9	29.9	AA	1480.7	1463.8			1	999
1513	381216116142401	USGS-MX	4228564.3	566546.1	W	16.6	61	AA	1585	1568.4	1568.4	1568.4	3	148.65
1514	381232116344501	USGS-MX	4228622.9	537140.6	W	45.9	46.9	AA	1740.1	1694.2			1	999
1515	381241117041702		4229064.2	493753.8	W	5.7	44.2	AA	1737.4	1731.7			1	999
1516	381242117041601		4229095	493778.1	W	2.5	11.6	AA	1767.8	1765.3			1	999
1517	381242117041602	TONOPAH 6	4229095	493778.1	W	11	45.7	AA	1737.4	1726.3			1	999
1518	381306115484801		4230497.9	603884.5	S			AA	1487.4	1487.4				58.06
1519	381306117041701	TONOPAH 5	4229834.7	493754.4	W	15.2	45.7	AA	1740.4	1735.8	1734.3	1737.4	2	6.94
1520	381310116401701	USGS-MX	4229760.3	528843.2	W	28.4	59.1	AA	1800.1	1769.5	1767.2	1771.7	2	158.77
1521	381317117034501		4230173	494800.2	W	4.2	19.2	AA	1767.8	1763.7			1	999
1522	381323115223401		4232187.6	642093	W	0.9		AA	1613	1610.7	1609.3	1612.1	2	6.27
1523	381339115225501		4232789.2	641231.2	W	2.7	61	AA	1585	1582.3			1	999
1524	381341117034002	TONOPAH 11	4230912.8	494654.8	W	5.6	24.4	AA	1749.6	1744			1	999
1525	381342117034601	TONOPAH 10	4230943.7	494508.9	W	5.3	19.2	AA	1749.6	1744.3			1	999

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
1526	381345116124201		4231328.1	569003.5	W	15.2	91.4	AA	1567.3	1566.4			1	999
1527	381346117034203	TONOPAH 12	4231066.9	494606.2	W	5.2	18.3	AA	1749.6	1744.3			1	999
1528	381350116151601		4231451.2	565258.1	W	9.1	36.6	AA	1578.9	1578			1	999
1529	381412117041301		4231868.8	493853.2	W	2.8		AA	1758.4	1755.6			1	999
1530	381413116101401	USGS-MX	4232222.5	572594.1	W	31.4	61	AA	1597.2	1565.8			1	999
1531	381417115311801		4233223.8	607253.6	W	20.5	121.3	AA	1469.1	1448.6			1	999
1532	381421115301501		4232935	608716.2	W	23.2	97.5	AA	1475.2	1452.1			1	999
1533	381421115315501		4233273.6	606353.2	W	16.8	120.7	AA	1469.1	1452.4			1	999
1534	381423115292201		4233112.5	608154.5	W	21	120.4	AA	1469.1	1448.1			1	999
1535	381430115283901		4233612.6	610943.9	W	15.2	32	AA	1493.5	1478.3			1	999
1536	381435117041401		4232577.5	494048.1	W	3.7	5.5	AA	1767.8	1764.2			1	999
1537	381437115214901		4234265.2	642761.7	W	17.6		AA	1585	1567.4			1	999
1538	381439116144401		4233091.4	608884.3	W	48.8	97.5	AA	1481.3	1459.7	1458.2	1461.3	3	3.02
1539	381440116124101		4233023.5	569013.4	W	26.2	120.7	AA	1472.2	1457.7	1455.4	1459.2	3	4.28
1540	381441115210601		4234044.9	644248.9	W	15.4		AA	1629.2	1612.5	1611.5	1613.8	3	3.67
1541	381444115301201		4234076.4	608773.9	W	16.8	97.5	AA	1467.6	1450.8			1	999
1542	381446117041601		4232916.7	493781	W	3.6	5.5	AA	1764.8	1761	1760.9	1761.2	20	9.3
1543	381447116160501		4233198.5	564052.8	W	18.3	54.6	AA	1478.3	1462.5	1461.6	1463	3	3
1544	381448116134101		4233257.7	567552.8	W	47.2	120.4	AA	1478.3	1457.4	1456.8	1458.1	3	2.71
1545	381451115132301		4265833.3	654096.8	W	35.4	43.3	AA	1676.4	1641			1	999
1546	381451116144101		4233338.2	566093.7	W	48.8	97.5	AA	1469.1	1455.5	1452.4	1458.6	2	21.73
1547	381453115325601		4234549.7	604926.5	W	10.1	75.9	AA	1464.6	1454.5			1	999
1548	381453116161002		4233382.4	563929.9	W	18.3	32	AA	1478.3	1463	1462.9	1463	2	2.33
1549	381457115232901	USGS-MX	4235061.3	640681	W	33.7	61	AA	1670	1635.9	1635	1636.3	11	148.77
1550	381458115462901		4233994	607219	W	18.9		AA	1478.3	1459.4			1	999
1551	381500117042001		4233348.3	493684.2	W	3.5	5.5	AA	1767.8	1764.1	1763.9	1764.3	32	0.03
1552	381501115310801		4234643.9	607404.8	W	9.2	22.9	AA	1462.1	1452.9			1	999
1553	381505115375101		4234522.8	597852.9	W	25	33.5	AA	1477.7	1452.7			1	999
1554	381505115504501		4234129.8	600993.7	W	12.9		AA	1465.5	1452.6			1	999
1555	381508117041701		4233594.8	493757.3	W	2.1	11.3	AA	1760.2	1758.2			1	999
1556	381509115502801		4234258.2	601405.3	W	21.3	75.9	AA	1464.3	1453	1451.7	1454.2	2	5.45
1557	381528115314001		4235035.3	606694.7	W	9.4	76.2	AA	1461.5	1452.1			1	999

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
1558	381528115321901		4235452.4	605595.3	W	11.6	66.8	AA	1462.7	1451.2			1	999
1559	381533115470301		4235061.9	606378.3	W	21.3	74.7	AA	1461.2	1452.1	1451.8	1452.5	2	2.61
1560	381537115311601		4235036.2	606767.7	W	9.4	74.7	AA	1461.5	1452.1			1	999
1561	381537115505501		4235113.1	600738.3	W	13.3		AA	1484.7	1471.4			1	999
1562	381603115520901	USGS-MX RR-0-6	4235493.7	599105.1	W	21.1	61	AA	1474.9	1453.5	1453	1453.8	6	148.74
1563	381613115110101		4237187.4	658924.6	W	0.5	3	AA	1554.5	1553.6	1553.3	1554	2	0.85
1565	381635115355701	FEROY W	4236745.7	600645.1	W	16.7	26.8	AA	1470.7	1453.8	1453.7	1454	9	0.03
1566	381651115405901	USGS-MX	4237587.2	615190.8	W	60	74.7	AA	1508.8	1448.7	1448.7	1448.8	3	0.58
1567	381651116170801		4237008.3	562491.9	W	14.7		AA	1591.1	1576.4			1	999
1568	381656115505701		4237547.4	600659.4	W	15.8	30.5	AA	1470.1	1453.7	1453.3	1454.2	2	2.74
1569	381700115312901		4238031.5	607141.2	W	5.8	21.3	AA	1458.5	1452.7			1	999
1570	381709115404701	USGS-MX	4238146.2	615474.5	W	46.6	61.3	AA	1511.8	1465.2			1	999
1572	381745115514201	BUCKHORN	4239898.4	654010.8	W	39.9	64.3	AA	1467.6	1452.7	1452.2	1453	8	0.63
1573	381754116380601	USGS-MX	4238555.8	531896.8	W	22.3	61	AA	1800.1	1777.9			1	999
1574	381805115520101		4239655	599078.4	W	14.8	170.7	AA	1467	1452.2			1	999
1575	381822117051601		4239575.3	492328.9	W	21.6		AA	1798.3	1776.7			1	999
1576	381829115221601		4241042.6	642423.5	W	1	4.3	VU	1606.9	1605.5	1605	1605.9	2	2.77
1577	381846116122901		4240608	569240.1	W	7.5		AA	1600.2	1592.7			1	999
1578	381906117232001		4240999.3	466007.4	W	20.6	30.5	AA	1615.7	1594.9	1594.7	1595.1	2	0.18
1579	381913115404201		4020267.6	618792	S			AA	2581.7	2581.7				2.32
1580	381923116174501	USGS-MX	4241750.2	561848.2	W	34.4	61	AA	1605.1	1570.5	1570.3	1570.6	2	148.71
1581	381935117002901	USGS-MX	4241821.6	499299.5	W	58.1	61	AA	1830.3	1772.3			1	999
1582	381941115131801	USGS-MX	4243502.9	655448.2	W	14.6	61.6	AA	1574.3	1559.6	1559.6	1559.7	4	0.58
1583	381959115525701	PIGEON W	4243152.2	597675.7	W	5.8	6.4	AA	1459.1	1453.2	1453	1453.3	2	999
1584	382005115023701		4244620.6	671069.3	W	36.9	91.4	AA	1661.2	1624	1623.8	1624.2	2	9.39
1585	382009115374201	USGS-MX	4243759.7	619886.7	W	45.1	45.7	AA	1554.5	1509.4			1	999
1586	382021116235901		4250195.1	557586.9	W	74.1	79.2	AA	1719.1	1645			1	999
1587	382022116183301		4243496	560378.2	W	51.1	62.5	AA	1623.7	1572.2	1571.8	1572.6	2	0.3
1588	382101115400101		4245313.1	616488.9	S			AA	1453.3	1453.3				9.29
1589	382105115104801	MOON RIV SPRS	4246192.5	658966.1	S			AA	1591.1	1591.1				0.58
1590	382109116194901	USGS-MX	4244931	558522.7	W	89	153.9	AA	1700.8	1611.8			1	999
1591	382109116194902	USGS-MX	4244931	558522.7	W	92.7	138.7	AA	1700.8	1608.1			1	999

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
1592	382111115055901	USGS-MX	4246491	666124	W	21.3	29.3	AA	1588	1566.5	1566.2	1566.8	6	0.64
1593	382122117081401		4245128.4	488014.1	W	69.2	97.5	AA	1848	1778.8			1	999
1594	382126115052601	USGS-MX	4246968.4	666842.6	W	23.8	30.8	AA	1591.1	1567.3			1	999
1595	382127117075901		4244696.3	488377.5	W	69.2	97.5	AA	1828.8	1759.6			1	999
1596	382144115542601	USGS-MX	4246362.7	595476.5	W	8.9	61	AA	1465.2	1456.3	1456.1	1456.3	9	148.65
1597	382203115521401	ABEL SPR	4246986.8	598672.9	S			AA	1463	1463				9.29
1598	382211115133801		4248120.5	655043.6	W	27.4	30.5	AA	1585	1556.7	1555.7	1557.6	2	234.01
1599	382216117001501		4246783.8	499639.7	W	58.5	79.2	AA	1859.3	1800.8			1	999
1602	382231117232101		4247317.8	466009.8	W	44	70.1	AA	1553.9	1509.9			1	999
1604	382255116153801	USGS-MX	4248244.6	564588.7	W	24	57.3	AA	1620	1596	1595.9	1596	10	148.65
1605	382259115090801	HOT CRK SPR	4249724.9	661372.4	S			AA	1592.6	1592.6				0.58
1606	382315115520501		4249208.8	598864.1	S			AA	1469.1	1469.1				9.29
1607	382341116192801		4249622.2	559337.7	W	55.8		AA	1688.6	1632.8			1	999
1608	382347115101901		4282355.8	658492.6	W	11	12.2	AA	1645.9	1634.9			1	999
1609	382354115514701		4250416.2	599285.9	S			AA	1464.6	1464.6				9.29
1611	382404115355601	GULF OIL	4251041.9	622350.3	W	39.6	45.7	AA	1450.8	1447.8	1447.5	1448	9	9.32
1612	382432115095801	SORENSEN W NO 26	4280767.2	659249.6	W	8.8	13.1	AA	1645.9	1636.7	1636.2	1637.1	25	0.06
1613	382443115352501		4252255.5	623083.9	S			AA	1463	1463				9.29
1614	382444115311101		4252382.8	629243.8	S			AA	1828.8	1828.8				58.06
1615	382450115352001		4252473.1	623201.8	S			AA	1447.8	1447.8				2.32
1616	382451115352201		4252503.2	623152.9	S			AA	1447.8	1447.8				0.58
1617	382457116594601		4251746.1	500755.4	W	55.5	73.2	AA	1859.3	1803.8			1	999
1618	382510117280001		4252249.8	459264.9	W	27.4	432.8	AA	1554.5	1527.1			1	999
1619	382517115012001	FLAG SPR NO 3	4254214.8	672661.2	S			AA	1612.4	1612.4				0.58
1620	382522115012001	FLAG SPR NO 2	4254369	672657.9	S			AA	1609.3	1609.3				0.58
1621	382526115011401	FLAG SPR NO 1	4254495.4	672800.7	S			AA	1612.4	1612.4				0.58
1622	382530115012601		4254612.5	672507.1	S			AA	1600.2	1600.2				999
1624	382555115343301		4254954.3	624158.2	S			AA	1447.8	1447.8				9.29
1625	382605117283201		4253949	458497.6	W	26.3	91.4	AA	1559.1	1532.8			1	999
1626	382613115043301		4283577.3	657888.2	W	1.5		AA	1676.4	1675			1	999
1627	382614115340901		4255088.8	624883.6	S			AA	1449.3	1449.3				9.29
1628	382615115060201		4283779.4	664821.3	W	1.8		AA	1645.9	1644.1			1	999

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
1629	382622115340801		4255335.8	624904	S			AA	1450.8	1450.8				0.58
1630	382624115004001	BUTTERFIELD SPR	4256270.8	673611.6	S			AA	1621.5	1621.5				0.58
1631	382627115160201		4255942	651230.8	W	123.3	132	AA	1700.8	1577.5			1	999
1632	382653116182601		4255548.7	560457.6	S			AA	1649	1649				0.58
1633	382659115054101		4285454.5	665294.2	W	2.7		AA	1645.9	1643.2			1	999
1634	382718115094901	USGS-MX	4257288.5	660250.7	W	14.8	30.8	AA	1598.7	1583.7	1583.4	1583.9	3	0.63
1635	382719115035101		4286502.5	657661.1	W	12.6	24.1	AA	1638	1623.3	1621.3	1625.4	2	17.78
1636	382719115184601		4257503.3	625500.6	W	0.3	45.7	AA	1450.8	1450.5			1	999
1637	382739115473101		4257430.4	605405	S			AA	1469.1	1469.1				0.58
1638	382744115472501		4258018.9	605615.5	S			AA	1466.1	1466.1				9.29
1639	382811115043601		4287418.7	657208.1	W	15.3		AA	1626.1	1610.8			1	999
1640	382855115321801	USGS-MX	4260093.8	627496.1	W	36.7		AA	1475.2	1437.9	1437.2	1438.5	2	3.22
1641	382901116125201	USGS-MX	4259558.9	568520.2	W	72.1	158.5	AA	1706.9	1634.6	1634.5	1634.8	8	2.34
1642	382901116125202	USGS-MX	4259558.9	568520.2	W	77.7	152.4	AA	1709.9	1632.1	1631.9	1632.2	2	2.37
1643	382902115044401		4289541.8	666078.9	W	1.5		AA	1645.9	1644.5			1	999
1644	382908116565901		4259483.5	504388.8	W	61	76.2	AA	1981.2	1920.2			1	999
1645	382926116141501	USGS-MX	4260312.5	566502.8	W	40.2	61	AA	1673.4	1633.1			1	999
1646	382933115202901		4261322.2	623236	W	3	25.9	AA	1435.9	1432.9			1	999
1647	382942115070201	USGS-MX	4261747.5	664209.6	W	11.6	49.4	AA	1598.7	1587.1			1	999
1648	382946115005401		4262520.6	673113	W	25.5	38.1	AA	1631.3	1605.8			1	999
1649	383026116132801	SIX MILE W	4262171.4	567625.9	W	36.6	44.2	AA	1674	1641.2	1640.4	1641.3	12	2.38
1650	383034116204301		4263527.2	555505.8	S			AA	1688.6	1688.6				9.29
1651	383039115331101		4263279.2	626161.4	S			AA	1444.8	1444.8				0.58
1652	383041116203401		4262553.4	557304.7	W	45.7	51.8	AA	1688.6	1642.9			1	999
1653	383049115044901		4292507.2	666306.8	W	4.2	52.1	AA	1645.9	1641.7			1	999
1654	383103115325301	BUTTERFIELD SPR	4264428.8	626724.7	S			AA	1447.8	1447.8				9.29
1655	383109115055801		4264923.6	665695.2	W	12.2	21.9	AA	1600.2	1589.5	1589.5	1589.5	2	9.29
1656	383113115061201	USGS-MX	4264924.1	665719.4	X	45.7	68.6	AA	1594.1	1581.8	1581	1582.4	3	2.83
1657	383113115061202	USGS-MX	4264924.1	665719.4	X	103.6	121.9	AA	1594.1	1581.8	1581	1582.5	3	2.89
1658	383114115123401		4264885.3	656101.6	W	35.4	40.8	AA	1627.6	1592.2			1	999
1659	383122115083701		4293353.2	662474.4	W	12.1	14.6	AA	1676.4	1664.3			1	999
1660	383127116014001	USGS-MX	4264214.5	584754	W	141.8	187.5	AA	1770.9	1628.8	1628.5	1629.1	2	2.45

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
1661	383127116014002	USGS-MX	4264214.5	584754	W	142.3	199.6	AA	1770.9	1628.3	1627.9	1628.6	2	2.53
1662	383127116014003	USGS-MX	4264214.5	584754	W	142.4	199.6	AA	1770.9	1627.8	1627	1628.5	2	3.39
1663	383128115234001		4265162.5	618236.1	W	2.2	2.4	AA	1435.3	1433.1			1	999
1664	383133115030201	USGS-MX	4265007.7	669715.5	W	8.4	30.8	AA	1610.9	1591.2	1591.2	1591.3	10	113.81
1667	383151115182201		4265681.2	625978.4	W	0.8	13.1	AA	1441.7	1440.9			1	999
1668	383153116554501		4264570.6	506468.2	W	61	79.2	AA	2255.5	2192.3	2190.1	2194.6	2	10.15
1669	383154115101501		4266184.6	659443.4	W	15.2	22.9	AA	1603.9	1592.6	1591.7	1593.5	2	11
1671	383256115453301	HAY CORRAL SPR	4268128.8	607782.1	S			AA	1453.9	1453.9				9.29
1672	383257115211201		4280660	621633.1	W	3.2	43	AA	1463.6	1460.5			1	999
1673	383259115460301	REYNOLDS SPRS	4267879.3	607567.6	S			AA	1453.9	1453.9				9.29
1674	383307115321001		4268335.5	628091.4	S			AA	1449.3	1449.3				9.29
1675	383311115461501	BIG SPR	4267996.8	607130.3	S			AA	1469.1	1469.1				9.29
1676	383318115070001		4296760.5	663201.1	W	8.4	25	AA	1664.2	1655.8			1	999
1677	383323115454401	N SPR	4268497.4	607680.4	S			AA	1464.6	1464.6				9.29
1678	383330115021201		4297327.8	660776.4	W	2.2	4.6	AA	1679.4	1677.3			1	999
1679	383346115213001		4269246	621226	W	0.6	16.8	AA	1440.8	1440.2			1	999
1680	383346115313801	BLUE EAGLE SPRS	4269109.5	628296.9	S			AA	1452.4	1452.4				999
1681	383424115311501		4270259.4	628859.4	S			AA	1450.8	1450.8				9.29
1682	383457116465301	USGS-MX	4270261.9	519044.8	W		46.9	AA	2150.1				0	999
1683	383501115030401		4299904.3	666079.4	W	5.6		AA	1673	1667.4			1	999
1684	383510116112901	UNKNOWN MOORES STN	4270949.9	570431.1	W	100		AA	1757.2	1657.1	1657	1657.2	11	2.33
1685	383511115012501		4300369.7	649161.5	W	1	9.1	AA	1676.4	1675.4			1	999
1686	383513115023501		4300586.2	660252.1	W	0.5	3.7	AA	1673.4	1672.8			1	999
1687	383535116155301		4271666.8	564037.7	S			AA	2060.4	2060.4				9.29
1688	383540115010901		4301020.3	640901.7	W	13.3	16.8	AA	1676.4	1663.1			1	999
1689	383540115081801	MOORMAN SPR	4273238.9	662134.7	S			AA	1613.9	1613.9				0.58
1690	383540116220301		4271418.8	555596.2	S			AA	2158	2158				9.29
1691	383542115012701		4301132	647049	W	10.3	11	AA	1674.9	1664.6			1	999
1692	383544115023501		4301400.5	659343.3	W	1.5	3	AA	1678.5	1677			1	999
1693	383544115173401		4273070	648681.6	W	10	13.4	AA	1571.5	1561.5			1	999
1694	383553115164701		4272286	628342.8	W	1	24.1	AA	1450.5	1449.5			1	999
1695	383553115183501		4273412.8	625518	W	1.2	15.2	AA	1447.8	1446.6			1	999

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
1696	383555115171601		4273047.8	627774	W	4.6	18.3	AA	1448.7	1444.1			1	999
1697	383605115004801		4302151.2	673074.6	W	7.2		AA	1676.4	1669.2			1	999
1698	383607115023801		4302384.9	669620.8	W	3.6	54.3	AA	1681.6	1678			1	999
1699	383638115001701		4303260.5	673026.3	W	12.3	14.6	AA	1705.1	1692.7			1	999
1700	383638115010602		4303301.7	672084.9	W	2		AA	1684.8	1682.7			1	999
1701	383642115012201		4303345	671239.9	W	1.4		AA	1685.8	1684.3			1	999
1702	383656115031701		4303604.1	668943.6	W	6.7	15.2	AA	1688.6	1681.9			1	999
1703	383658115023801		4303555.9	669571.6	W	4.6		AA	1686	1681.5			1	999
1704	383700117112401	USGS-MX	4274109.6	483269.1	W	20.3	25.6	AA	1750.2	1729.7	1729.5	1729.8	2	148.71
1706	383712115420301	USGS-MX	4275200.8	613105.1	W	33.1	60.4	AA	1495	1461.6	1461.4	1462	12	113.83
1707	383723115022201		4304652.4	670367.8	W	7.9	34.1	AA	1692.4	1684.5			1	999
1708	383723115032301		4304374.8	668927.2	W	11.4		AA	1694.2	1682.8			1	999
1709	383726115025101	EMIGRANT SPRS	4276640.1	669977.1	S			AA	1670.3	1670.3				2.32
1710	383730115025201		4276762.9	669950.2	S			AA	1664.2	1664.2				999
1711	383730115352501	GRAVEL RIDGE	4275897.7	622721.5	W	0	76.2	AA	1452.4	1451.9	1451.6	1452.8	9	9.44
1712	383734116124501	HTH-1	4275403.3	568554	X	102.8	1117.1	AA	1832.1	1670.1	1669	1671.3	17	0.45
1713	383734116124502	HTH-2	4275557	568504.3	X	153.6	304.8	AA	1836.4	1667.5	1666.3	1668.7	48	0.37
1714	383743115012701		4305384.9	671437	W	7.3	10.4	AA	1693.5	1686.2			1	999
1715	383743115020901		4305554.7	670734.1	W	9.3	9.4	AA	1691.6	1682.3			1	999
1716	383804116181201		4274382.2	560436.7	S			AA	2456.7	2456.7				9.29
1719	383809115042601		4277917	667651.8	S			AA	1630.7	1630.7				9.29
1720	383811116180501		4274782.9	560433.7	S			AA	2487.2	2487.2				9.29
1721	383816115032301		4306403.8	668618.8	W	13	16.5	AA	1699	1686			1	999
1722	383818115021701		4306503.7	670400.3	W	9.4	9.8	AA	1694.9	1685.5			1	999
1723	383823115234301		4278046.3	617997.4	W	0.3	30.8	AA	1456.6	1456.3			1	999
1724	383835115042501		4307226.4	668143.3	W	17.8	56.1	AA	1798.3	1780.6			1	999
1725	383836115295701	BLUE EAGLE	4278057.9	630619.9	W	14.5	21.3	AA	1475.2	1460.4	1459.8	1460.8	13	2.39
1726	383902116183401		4278017	560095	S			AA	2471.9	2471.9				232.26
1727	383914115034901		4308058.8	668125.6	W	19	21.9	AA	1798.3	1779.4			1	999
1728	383915116184401		4276808.2	559209.5	S			AA	2542	2542				9.29
1729	383916115154301		4279920.1	629477.4	W	30.5	67.1	AA	1487.4	1456.9			1	999
1730	383922117091501		4278140.7	486830.6	W	65.5	181.4	AA	1761.7	1694.8	1693.2	1696.3	3	4.75

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
1731	383929115035101		4308732.9	667918.5	W	18.4	21.2	AA	1712.4	1693.9			1	999
1732	383943115541001		4279625.7	595468.2	W	4.6		AA	2103.1	2098.6			1	999
1733	383945116165601		4279298.4	562381.3	S			AA	2255.5	2255.5				9.29
1734	383946117095301		4278913.3	485671.8	W	75.6	149.4	AA	1767.5	1723.8	1721.5	1725	3	3.88
1735	383947116042401		4279585.2	580627.4	S			AA	1978.2	1978.2				2.32
1736	383949115065301		4271802.5	645147.1	W	25.9	30.5	AA	1950.7	1924.8			1	999
1737	383949115065601		4280366.6	642984.8	W	11.8	13.4	AA	1798.3	1786.5			1	999
1738	383952116183701		4279557.6	560010.8	S			AA	2697.5	2697.5				9.29
1739	383957115111901		4309210	656608.1	W	4.9	6.2	AA	2011.7	2006.8			1	999
1740	384000117103401		4279160.9	485116.4	W	48.2	61	AA	1761.7	1725.5	1724.3	1726.7	2	2.76
1741	384002115213601		4280916.3	642684.8	W	11.3		AA	1795.3	1783.9	1783.8	1784	2	9.31
1742	384005116480101	USGS-MX	4279724.3	518949.8	W	29.6	41.5	AA	2140	2109.8	2109.3	2110.4	2	149.34
1743	384009116151501		4279998.5	565131	S			AA	2167.1	2167.1				9.29
1744	384012116182001		4280177.2	560417	S			AA	2584.7	2584.7				9.29
1745	384014116152301		4280272.4	564693.8	S			AA	2225	2225				9.29
1746	384020115012201		4310285	671258.5	W	18.3	396.2	AA	1798.3	1780			1	999
1747	384021115155901		4281432.5	629573.7	W	39.9	61	AA	1502.7	1462.7			1	999
1748	384024116184101		4280541.8	559713.4	S			AA	2651.8	2651.8				9.29
1749	384024116184801		4280695.9	559712.3	S			AA	2651.8	2651.8				9.29
1750	384034115051801		4282360.6	666301.3	W	0.7		AA	1623.4	1622.6			1	999
1751	384034116181701		4280855.9	560484.3	S			AA	2548.1	2548.1				9.29
1752	384035115320001		4281678	627587.7	W	20.9	30.5	AA	1483.5	1461.1	1459.7	1462.5	2	999
1753	384038115355301		4281682.3	621955.8	W	8.5	16.2	AA	1466.1	1463.7	1463.6	1463.8	3	0.59
1754	384042115400301	USGS-MX	4281744.6	615791.7	W	45.6	60.7	AA	1520	1474.1	1473.7	1474.4	3	113.92
1755	384044116181001		4281165.4	560651.1	S			AA	2523.7	2523.7				9.29
1756	384048114341001	USGS-MX	4340407.3	583343	W	41.4	50.6	AA	1880	1838.7			1	999
1757	384058115110701		4282929	657852.7	W	12.5		AA	1632.5	1620			1	999
1758	384060115134401	USGS-MX	4283193.9	654052.4	W	38.9	61	AA	1662.1	1623	1622.8	1623.2	2	113.88
1759	384112115362201		4283546.1	620839.9	W	3.4	4.6	AA	1472.2	1468.8			1	999
1760	384124117095301		4282180.5	485677.7	W	71.9	147.8	AA	1761.4	1724.1	1721.8	1725.2	3	3.84
1761	384131115505301		4283013.1	600187.6	S			AA	2231.1	2231.1				9.29
1762	384149115082501		4284579.6	661735.3	W	5.4	16.2	AA	1630.1	1624.6			1	999

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
1763	384205117072501		4283438.7	489254.8	W	43		AA	1758.7	1715.7			1	999
1764	384205117095801		4283872.4	487685.4	W	17.5		AA	1741.9	1724	1723.6	1724.4	2	0.31
1765	384209115175001		4284656.1	626791	W	21.5	61	AA	1493.5	1472.1			1	999
1766	384210117101501	HADLEY SUBDIVISION	4283599.4	485148.8	W	76.2	106.7	AA	1749.6	1709.3			1	999
1767	384215117095401	HADLEY SUBDIVISION	4283752.5	485656.3	W	61	105.2	AA	1757.2	1723.6			1	999
1768	384218115323101		4284841	626788.1	W	25.9	61	AA	1493.5	1473	1472.5	1473.6	3	0.92
1769	384227116050201		4284507.8	579659.6	S			AA	2100.1	2100.1				2.32
1770	384228115011201		4286001.1	672170.2	W	76.4		AA	1756.3	1679.5	1679.1	1679.8	2	0.28
1771	384235117043101		4284911	499061.8	W	7.1	19.8	AA	2103.1	2096			1	999
1772	384236115025101		4314285	667944.9	W	10.7	11.1	AA	1798.3	1787.6			1	999
1773	384246117094401		4284707.6	485899.6	W	18.3	34.1	AA	1731.3	1715.4			1	999
1774	384248115312301		4285792.1	628415.6	W	45.2	91.4	AA	1508.8	1462.9	1462.1	1463.6	2	3.39
1775	384252117083901		4284889.9	487469.6	W	12.4	72.5	AA	1738.9	1725.3	1724.5	1726.5	16	0.86
1776	384255115163601		4286470.3	628404.7	W	47.7	109.1	AA	1511.8	1464.1			1	999
1777	384257117053101		4285038.2	492010.1	W	115.8		AA	1837.9	1722.1			1	999
1778	384301116451101		4285186.4	521472.4	W	2.1	28.7	AA	2103.1	2101			1	999
1779	384304115023201		4287069.4	670214.1	W	44.9		AA	1716	1671.1			1	999
1781	384304117100301		4285263.3	485441.7	W	12.6	146.3	AA	1757.8	1745.1			1	999
1782	384304117100401		4285263.3	485417.5	W	76.2	143.3	AA	1757.8	1725.5	1725.2	1725.8	3	0.66
1783	384309115045901		4287148.4	666660.4	W	0.9		AA	1634	1633.2			1	999
1784	384312116271501		4284930.9	547773.5	W	9.1		AA	1981.2	1972.1			1	999
1785	384318117001301		4285681.5	499689.7	S			AA	2144.3	2144.3				0.58
1786	384323115041801	USGS-MX	4287600.8	667641.5	W	13.4	15.5	AA	1639.8	1626.4			1	999
1787	384327115162001		4287153.9	628731.9	W	48.8	112.8	AA	1521	1472.2			1	999
1788	384335115173401		4287336.3	626651.7	W	24.4	76.5	AA	1505.7	1481.3			1	999
1789	384338115283601	USGS-MX	4287399.4	632423.5	W	85	170.7	AA	1565.1	1479.9	1478.4	1480.7	8	5.74
1790	384339115310201		4287372.4	628897.4	W	48.8	112.2	AA	1524	1475.9	1475.2	1476.5	2	1.4
1791	384340115204501		4287658.5	643796.1	W	15.1	24.4	AA	1923.3	1908.2			1	999
1792	384342115283501	USGS-MX	4287523.2	632445.6	W	81.8	182.9	AA	1565.1	1481.2	1480.1	1483.3	13	6.21
1794	384342115284101	USGS-MX	4287520.7	632300.7	W	83	185.9	AA	1560.6	1476.4	1475.6	1477.6	10	37.74
1795	384343115174001		4287984.8	626713.8	W	25.3	61	AA	1507.2	1481.9			1	999
1796	384344115283801	USGS-MX	4287583.6	632372.2	W	85	170.7	AA	1565.1	1481.4	1479.5	1483.3	2	7.61

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
1797	384347115163901		4288012.3	628428.2	W	44.4	160.3	AA	1521	1476.6			1	999
1798	384348115283701	USGS-MX	4287707.3	632394.3	W	81.8	182.9	AA	1565.1	1480.2	1479.8	1480.7	5	0.68
1799	384354116450201		4286820.7	521685.3	W	2.1	4	AA	2101.6	2099.5			1	999
1800	384359117010101		4287839.3	498531.1	S			AA	2110.7	2110.7				2.32
1802	384404115311801		4288136.8	628498.6	W	41.4		AA	1522.5	1480.2	1479.4	1481.1	2	1.57
1803	384417115274801		4288031.3	633330.8	W	4.3	12.5	AA	1588	1583.7			1	999
1804	384417115281201		4289235.5	633431.4	S			AA	1600.2	1600.2				9.29
1805	384427115473601		4286779	605332.9	S			AA	2011.7	2011.7				9.29
1807	384431115194401	USGS-MX	4289257.3	645240.4	W	244.8	559.9	AA	1975.1	1730.3			1	999
1808	384433115282601		4289098.9	632636.7	W	48.8	93	AA	1578.9	1530.1			1	999
1809	384502115111801	USGS-MX	4290445.4	657438.1	W	54.3	60	AA	1675.2	1620.4	1620	1620.8	2	114.15
1810	384513117092601		4289237.9	486342	W	30.5	45.7	AA	1719.1	1719.4			1	999
1811	384514117091101		4289268.1	486704.1	W	33.5	42.7	AA	1717.5	1716.3			1	999
1812	384517115003901		4291228.2	672854.2	W	32	47.2	AA	1725.2	1696.7	1694.1	1698.1	3	5.38
1813	384524115001801		4291455	673356.4	S			AA	1722.1	1722.1				58.06
1814	384528116334101		4289779.8	538113.9	S			AA	2615.2	2615.2				2.32
1815	384530117095201		4289763	485715.5	W	4.3	47.2	AA	1720	1717.4	1717	1718	12	0.12
1816	384537117071301		4289972.8	489553.2	W	36.6	51.2	AA	1740.4	1714.5			1	999
1817	384543117095301		4290163.7	485692.1	W	21.3	92.7	AA	1716.9	1714.1	1713.3	1715.1	3	1.46
1819	384543117095901		4290164	485547.2	W	3	16.8	AA	1717.2	1718.2			1	999
1820	384549115000801		4292231	673581	W	18.3	36.6	AA	1725.5	1715.3	1713.3	1717	3	3.47
1821	384553115432501		4291232.6	610898.3	S			AA	1920.2	1920.2				9.29
1822	384555117100601		4290534.2	485379	W	33.5	45.7	AA	1717.2	1718.1			1	999
1823	384556117095201		4290564.4	485716.9	W	33.5	45.7	AA	1717.2	1721.1			1	999
1824	384558117100601		4290626.7	485379.1	W	33.5	45.7	AA	1717.2	1718.3			1	999
1825	384607117095501		4290903.6	485645.1	W	29	38.4	AA	1713	1715.3			1	999
1827	384614115432501		4292559.8	611000.5	S			AA	1883.7	1883.7				9.29
1828	384615115045801		4292882.7	666564.4	W	3.4		AA	1651.1	1647.7			1	999
1830	384621115290301		4292755.1	631851.6	S			AA	1633.7	1633.7				9.29
1833	384640115045001	PUBLIC DOMAIN W 25	4293657.5	666741.3	W	1	13.4	AA	1645.9	1642.7	1641.8	1643.9	41	0.35
1834	384641117080501		4291947.3	488301.1	W	6.1	92.4	AA	1715.4	1710.4	1709	1711.5	4	1.69
1835	384642117102201		4291983.6	484995.5	W	0.2	20.4	AA	1719.4	1719.2			1	999

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
1836	384643117100401		4292013.6	485429.9	W	18.3	60	AA	1709.9	1705.7	1704.4	1706.5	3	1.82
1837	384650117101201	SHOSHONE 2	4292229.8	485237.3	W	27.4	67.1	AA	1712.1	1723.3			1	999
1838	384652117091601		4292907.1	485648.7	W	3	48.8	AA	1703.2	1700.2			1	999
1840	384702117080401		4292594.5	488326.3	W	18.3	176.8	AA	1709.9	1708.2			1	999
1842	384704117102901		4292662	484828	W	22.9	44.2	AA	1714.5	1715.7			1	999
1843	384705117101101		4293092.6	485335.4	S			AA	1706.9	1706.9				2.32
1844	384707115425301		4293407.3	612074.6	S			AA	1834.9	1834.9				9.29
1845	384712117095901		4292907.3	485552.2	W	15.2	39.6	AA	1702.3	1698.4	1698.3	1698.4	2	0.58
1848	384715117095601		4292999.6	485624.7	W	2.4	11.6	AA	1700.8	1698.3			1	999
1851	384716117274201		4293118.6	459906.8	W	6.1	16.8	AA	2438.4	2432.3			1	999
1853	384718117110001		4293095	484080.9	W	0.4	47.2	AA	1724.9	1724.5			1	999
1854	384721115213201		4294450.6	642538.9	S			AA	2118.4	2118.4				232.26
1856	384722115483601		4293874.9	603356.8	S			AA	2097	2097				9.29
1857	384729115062501	USGS-MX	4295120.2	664417.6	W	3.7	49.1	AA	1657.2	1653.5			1	999
1858	384730117082301		4293550.5	488038.1	W	2	3.7	AA	1701.4	1699.4			1	999
1859	384735115010801		4295467.2	672061.9	W	15.2	30.5	AA	1685.5	1674.2	1673.3	1674.8	3	1.16
1860	384736116481801	USGS-MX	4293744.3	516841.8	W	16.3	46.9	AA	2110.1	2093.8			1	999
1861	384738115015801		4295533.7	670853.5	W	7.6	15.8	AA	1664.2	1656.6			1	999
1862	384739115064701		4295417.5	663880.4	W	8.7		AA	1699.3	1690.6			1	999
1863	384739117054301		4293730.7	491729.3	W	23.7	29.3	AA	1733.4	1709.5	1709.1	1709.8	12	0.03
1864	384744115323501		4292263.3	605067.2	W	3	5.2	AA	1981.2	1978.2			1	999
1865	384748115014801		4295847.1	671088.2	W	2.1		AA	1671.5	1669.2	1669.1	1669.4	2	0.08
1866	384753117110601		4294174.2	483938.3	S			AA	1706.9	1706.9				2.32
1868	384825116464901		4295167.2	519081.9	W	2.6		AA	2092.5	2089.9			1	999
1869	384828115333601		4297515.5	624969.8	W	53.3		AA	1554.5	1501.2			1	999
1870	384831115071401		4297007.1	663196	W	61	79.2	AA	1698	1644.8	1644	1646.2	3	3.8
1871	384854116042401		4296446	580456.7	W	152.4	274.3	AA	1996.4	1844			1	999
1872	384855115061101		4297642.3	643398.4	W	2.4	88.4	AA	1920.2	1917.8			1	999
1873	384858117104402		4296176.7	484472.9	S			AA	1706.9	1706.9				2.32
1874	384905115204801		4297675.7	643542.5	W	87.5	88.4	AA	1915.7	1828.2			1	999
1875	384906115262701		4297298.6	636142.8	S			AA	1944.6	1944.6				9.29
1876	384915117104701		4296700.8	484401.6	S			AA	1706.9	1706.9				2.32

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
1880	384919115004901		4298683.2	672450.6	W	13.7	29.9	AA	1691.6	1678.2	1676.4	1679.6	3	3.26
1881	384920115343001	BALL CRK W 1	4297966.6	624239.1	W	48.2	56.7	AA	1545.9	1493.2	1491.8	1493.9	21	0.33
1882	384925115002301		4298881.9	673073.6	W	24.1	90.8	AA	1706.9	1687	1685.2	1688.8	2	7.06
1883	384926116474501		4297044.3	517727	W	3.9	9.1	AA	2086.4	2082.4			1	999
1884	384927115005901		4298924.6	672204.1	W	6.1	61	AA	1685.8	1680.3	1679.1	1681.5	2	2.83
1885	384930115450401		4294954.7	608047.6	W	73.2	88.1	AA	1877.6	1807.5			1	999
1886	384933117105601		4297256	484185.7	W	0.3		AA	1709.9	1709.6			1	999
1887	384933117105801		4297256.2	484137.4	W	2.6	3.4	AA	1713.6	1710.8	1710.7	1711	3	9.32
1889	384938115002301		4299282.6	673064.9	W	10.5	45.7	AA	1731.3	1720.8			1	999
1890	384941117062501		4297492.3	490720.5	W	1.2	4.9	AA	1693.2	1691.2	1690.1	1692	3	1.49
1892	384944117062401		4297584.8	490744.7	W	0.9	7.3	AA	1693.2	1691.5	1690.1	1692.3	3	2.05
1893	384959117103701		4298056.6	484645.4	W	0	11.9	AA	1697.7	1699.5			1	999
1894	385020115232701		4300156.6	618248.7	W	11.8	76.2	AA	1553	1541.1			1	999
1895	385023117125801		4298724.8	491083.6	W	3.7	4.9	AA	1697.7	1694.1			1	999
1896	385037115001501		4301105.7	673218.1	W	8.5	10.4	AA	1703.8	1694.8	1694.2	1695.4	2	3.03
1897	385049115055101		4301302.7	665109.5	W	18.4		AA	1691	1672.2	1671.8	1672.6	2	0.33
1898	385055115025501		4301577.2	669348.7	W	5.8	32	AA	1685.5	1679.1	1678.3	1679.8	2	1.03
1899	385056115014101		4301646.4	671132	W	12.2	36.6	AA	1684	1680.5	1679.5	1681.9	3	1.64
1900	385058115010901		4301724.7	671902.1	W	2.6		AA	1685.2	1681.7	1680.8	1682.6	2	1.59
1901	385101115002401		4301840.8	672984.9	W	12.2	234.7	AA	1702.3	1694.5	1693.5	1695.6	3	1.67
1902	385111115251001		4301690.7	615646.2	W	2.1	61.6	AA	1585	1582.8			1	999
1903	385120115022301		4302364.4	670103.6	W	9.1	55.5	AA	1695	1684.8	1683.7	1685.9	2	2.58
1904	385120115031901		4302335.6	668753.6	W	8.6		AA	1693.2	1683.6	1682.6	1684.6	2	2.12
1905	385130115002701	LUND INT SCHOOL	4302733.2	672893.1	W	26.2	38.4	AA	1694.7	1691			1	999
1906	385134115014701		4302814.7	670962.1	W	21.3	114.3	AA	1706.9	1683.9	1681	1686.2	3	7.71
1907	385140115292401		4299845.3	609451.8	W	62.7	88.1	AA	1728.8	1666.1			1	999
1908	385158115000401	LUND SPR	4301817.9	673347.2	S			AA	1676.4	1676.4				14.52
1909	385201115154501		4303236.8	650747	W	48.8	61	AA	1907.4	1870.6	1869.3	1871.9	2	3.22
1910	385207115013501		4303838.3	671229.3	S			AA	1706.9	1706.9				58.06
1911	385226115124201	USBLM	4304092.7	655142.4	W	39.6	91.4	AA	1901	1868.4	1867.1	1869.2	13	2.62
1912	385232116441601		4302790.5	522750.2	W	1.3		AA	2078.7	2077.5			1	999
1913	385300116440001		4303654.6	523133.3	W	0.3		AA	2078.7	2077.7	2077.2	2078.5	15	0.24

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
1914	385300117071001		4303627.6	489643.5	W	1	1.2	AA	1682.5	1681.5			1	999
1915	385306116412001	USGS-MX	4303851.8	526987.5	W	28.5	43.9	AA	2100.1	2071.6			1	999
1916	385345115225901		4306250.6	640230.2	S			AA	2347	2347				9.29
1917	385349115022201		4306958.3	670029	W	15.1		AA	1700.2	1685.1			1	999
1918	385350115022201		4306989.1	670028.3	W	15.1		AA	1700.2	1685.1			1	999
1919	385352115425301		4306291.4	611820.3	S			AA	1658.1	1658.1				9.29
1920	385353115481801		4303199.6	604416.3	S			AA	1923.3	1923.3				9.29
1921	385355115012401		4307173.4	671422.3	W	17.4	29	AA	1703.5	1684.8	1682.5	1687.2	2	10.88
1922	385400115024001	USGS W NO 24	4307288.1	669588.1	W	13.5	32.9	AA	1706.9	1691.5	1690.7	1692	10	0.74
1923	385411117042101	USGS-MX	4305534.3	493933.6	W	18.5	47.9	AA	1725.2	1706.7			1	999
1925	385414115033401		4307691.9	668278	W	20.3		AA	1709	1688.1	1687.5	1688.7	2	1.32
1927	385439115033701	UNKNOWN (PRESTON)	4308461.1	668189.3	S			AA	1713	1713				0.58
1928	385440115401901		4307324	617129.8	S			AA	1700.8	1700.8				9.29
1929	385447115033601		4308708.2	668208.1	W	20	48.2	AA	1716.6	1696.6	1696.5	1696.6	2	0.58
1932	385452117093101		4307085.1	486252.3	W	10.7	54.9	AA	1696.2	1690.8	1690.2	1691.7	12	2.51
1933	385454117262401		4307226.8	461856.7	W	5.5	15.2	AA	2703	2697.5			1	999
1934	385458115194401	REPORT 60 PL	4308284.3	623499.1	W	82.8	108.5	AA	1676.4	1593.6			1	999
1935	385506117094001		4307517	486036.4	W	8.8	87.2	AA	1696.2	1687.2	1686.9	1687.4	9	0.61
1936	385507114574801	COLD SPRS	4309252.4	667690.6	S			AA	1834.9	1834.9				14.52
1937	385520115430401		4308717.8	611159.7	W	60.4	137.5	AA	1658.1	1655.4			1	999
1938	385524115105801		4309629.5	657539.4	W	2.6	170.1	AA	1847.1	1843.7	1843	1844.4	2	3.43
1939	385525117090001		4308101.2	486928.3	W	0.5	24.7	AA	1685.2	1684	1683.6	1684.7	11	2.44
1940	385530115044601	NICHOLAS SPRS	4308646	668185.4	S			AA	1737.4	1737.4				9.29
1941	385531115033501		4310065.2	668203.4	W	32	66.4	AA	1725.2	1696.6	1695.3	1697.7	3	2.08
1942	385531117090101		4308286.1	486904.6	W	36.6	124.4	AA	1684.9	1682	1681.6	1682.5	9	2.39
1943	385539115045702	ARNOLDSON SPR	4308272	668000.6	S			AA	1737.4	1737.4				999
1944	385539115424100		4309614.8	613531.4	S			AA	1664.2	1664.2				9.29
1945	385539117090601		4308532.8	486856.8	W	36.6	166.1	AA	1685.5	1684.5	1684	1684.9	2	2.72
1946	385540115045701	PRESTON BIG SPR	4310951.7	666377.7	S			AA	1737.4	1737.4				999
1947	385542115045801	INDIAN RANCH SPR	4310362	666197.4	S			AA	1743.5	1743.5				0.02
1948	385552115421001	LITTLE WARM SPR	4310377.5	612966.6	S			AA	1703.8	1703.8				9.29
1949	385601116432101		4309236.6	524055.9	W	1		AA	2133.6	2132.6			1	999

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
1950	385604115415101	DUCKWATER WARM SPR	4310099	612898.3	S			AA	1066.8	1066.8				2.32
1951	385604117274201		4310325.2	458693.8	W	3.7	61	AA	2133.6	2129.9			1	999
1952	385614115045001	UNKNOWN (PRESTON)	4311352.5	666369.3	S			AA	1749.6	1749.6				2.32
1953	385625117252201		4318373	458255	W	6.1	18.3	AA	2133.6	2127.5			1	999
1954	385636115012201	USGS-MX	4312137.8	671362.8	W	48.1	61	AA	1740.1	1692			1	999
1955	385650115421301	BIG WARM SPR	4311822.2	612657	S			AA	1708.4	1708.4				9.29
1956	385651117042601		4310743.8	493600.6	S			AA	1673.4	1673.4				0.58
1957	385711117032001		4311081.7	495309.8	W	2.1		AA	1674.9	1672.8			1	999
1958	385723115273601		4313049.1	612206.2	W	8.1	31.4	AA	1706.9	1698.8			1	999
1959	385733115120501		4313574.2	655847.4	W	15.2	64.6	AA	1855.3	1853.3	1852.3	1853.9	3	0.82
1960	385745117040401		4312407.9	494131.4	S			AA	1670.3	1670.3				0.58
1961	385801115043701		4314657.7	666612.7	W	1.4	68.6	AA	1760.2	1758.5	1758.2	1758.8	2	0.19
1962	385819116462301	USGS-MX	4303212.6	519207.1	W	42.1	43.3	AA	2115	2072.8	2072.8	2072.9	2	148.65
1963	385823117111601		4313593.8	483737	W	2.7	4.6	AA	1682.5	1679.8			1	999
1964	385828117100601		4313744.7	485421.8	S			AA	1676.4	1676.4				2.32
1965	385833115491601		4312088	602758.2	S			AA	1902	1902				9.29
1966	385842117110401		4314178.9	484027	W	0.3	12.2	AA	1671.8	1671.5	1671.5	1671.5	2	2.32
1967	385914117280901		4315253.8	459369.2	W	4.6	27.4	AA	1981.2	1975.1	1973.5	1976.6	2	62.96
1968	385914117280902		4315253.8	459369.2	W	8.5		AA	1981.2	1972.7			1	999
1969	385914117281101		4315254	459321.1	W	10.3		AA	1981.2	1970.9			1	999
1970	385916117281101		4315315.7	459321.4	W	11		AA	1981.2	1970.2			1	999
1971	385934117280701		4315870	459420.5	W	4.7		AA	1981.2	1976.5			1	999
1972	385954115071901		4318059.9	662641.8	W	10.7	45.7	AA	1839.5	1828.4	1828.2	1828.8	3	0.69
1973	390006117262701		4314340.4	457223	W	6.7	18.3	AA	2133.6	2126.9			1	999
1974	390045115493501		4316116.5	601959.8	S			AA	1911.1	1911.1				9.29
1976	390125116581001		4319187.6	502648.7	W	100.6	161.8	AA	1853.2	1748.6	1748	1749.5	8	37.47
1980	390129116580901		4319310.9	502672.6	W	79.2	85	AA	1853.2	1778.5	1778.2	1779.1	12	37.24
1981	390140117101801		4319663.6	485144.1	W	19.8	25.9	AA	1682.5	1682	1679.5	1684.5	2	21.79
1982	390141117080901		4319689.2	488245.9	S			AA	1675.8	1675.8				0.58
1983	390148116395701		4319949.3	528928.3	S			AA	2046.7	2046.7				3.34
1984	390150116403801	USGS-MX	4320130	527749.5	W	23.5	58.5	AA	2120.2	2096.7			1	999
1985	390152117095801		4320032.6	485625.7	W	17.1	23.2	AA	1672.7	1671	1670.6	1671.3	13	9.34

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
1986	390159117094701		4320247.9	485890.5	S			AA	1676.4	1676.4				0.58
1987	390204117101001		4320403	485337.9	W	24.4	30.5	AA	1687.4	1686.4	1685.8	1687	13	37.26
1988	390220116123901		4321178.8	568303.7	S			AA	2225	2225				58.06
1989	390235115060101		4323062.2	664414.6	W	57.9	96.9	AA	1813.6	1758.7	1758	1759.5	3	9.88
1991	390245115373301		4323067	618338.9	S			AA	1764.8	1764.8				9.29
1992	390302117090201		4322188	486975.7	W	29.3	80.5	AA	1672.1	1669.2	1669	1669.4	2	9.34
1993	390321117232901		4322835.7	466138.3	W	8.5	81.7	AA	1981.2	1972.7			1	999
1994	390328115283901		4324492.7	610360.7	W	62.4	68.9	AA	1773.9	1711.5			1	999
1995	390342115324401		4324818	625860.7	S			AA	1905	1905				9.29
1996	390347116123601		4323861.3	568352.5	S			AA	2255.5	2255.5				1228.64
1997	390347117244301		4323645	464363.4	W	5.1		AA	1962.9	1957.8			1	999
1998	390356117244301		4323922.5	464364.6	W	8		AA	1959.9	1951.9			1	999
1999	390356117244401		4323922.6	464340.6	W	8.4	10.6	AA	1962.9	1954.5			1	999
2000	390402117082201		4324035.9	487940	S			AA	1685.5	1685.5				0.58
2001	390404117234801		4325618.9	464132	W	8.1		AA	1981.2	1973.1			1	999
2002	390407115382301		4325061.4	617684	S			AA	1773.9	1773.9				9.29
2003	390412117232601		4325615.3	464948.9	W	6.7	19.8	AA	1981.2	1974.5			1	999
2004	390438116394301	USGS-MX	4325190.8	529245.4	W	24.4	51.5	AA	2100.1	2075.7			1	999
2005	390447116382001		4325475.9	531238.6	S			AA	2016.3	2016.3				2.32
2006	390452115072401		4327244.3	662332	W	83.4	111.3	AA	1846.2	1762.8			1	999
2007	390513117073201		4326222.8	489144.5	W	6.1	18.3	AA	1688.6	1682.5			1	999
2008	390513117081201		4326224.2	488183.6	W	0	49.1	AA	1676.4	1676.8			1	999
2009	390518117075001		4326377.5	488712.3	W	0	30.5	AA	1679.4	1680.8			1	999
2010	390543117075701		4327148.4	488545.3	W	2.4		AA	1697.1	1694	1693.3	1694.7	5	37.49
2012	390608116364901		4327981.7	533414.4	W	3	106.7	AA	2039.7	2036.7			1	999
2013	390625117042501		4328437.3	493638.9	W	0.6	1.8	AA	1670.3	1669.7			1	999
2014	390641116134001		4329211.8	566768.8	S			AA	2438.4	2438.4				9.29
2015	390644117071001		4329027.2	489676.8	W	31.7	43.9	AA	1697.1	1691.5	1690.8	1692.1	5	37.48
2016	390655115341001		4330486.7	623608	S			AA	1853.2	1853.2				9.29
2017	390707116581001		4329729.8	502645.2	W	4.7	13.7	AA	1719.1	1714.1	1713.9	1714.3	3	37.21
2018	390710115202401		4331390.5	622248.8	W	52.1	85.3	AA	1841	1788.9			1	999
2020	390734116013101		4331013.9	584259.5	W	74.2	85.3	AA	1898.9	1824.5	1824.2	1824.8	2	2.46

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
2021	390739116020901		4331158.3	583345.4	W	74.4	91.4	AA	1908	1833.1	1832.5	1833.7	2	0.77
2022	390745117085501		4321663.7	487143.1	W	0	54.9	AA	1676.4	1679.6			1	999
2023	390753116051701		4331543.3	578826.9	W	121.9	152.4	AA	1961.4	1839.5			1	999
2024	390757115485401		4331939.2	602427.3	S			AA	1935.5	1935.5				9.29
2025	390804117223301		4331553.6	467520.4	W	4.7		AA	1926.3	1921.7			1	999
2026	390809115134801		4333132.3	652986.4	W	36.1		AA	2069.6	2033.5			1	999
2027	390822117013001		4332904.7	497579.2	W	4.4		AA	1691.6	1687.2			1	999
2028	390829115373801	USGS-MX	4332902.4	609810.4	W	38.1	48.2	AA	1830	1791.5	1791	1791.9	2	149.04
2029	390838115565901		4332815	590938.8	W	47.2	61	AA	1889.8	1842.5			1	999
2030	390839117040601		4332567.5	494098.4	W	3	17.4	AA	1701.4	1690.6	1689.3	1691.8	8	10.14
2031	390849116003401		4333340.7	585602.9	W	52.8	61.6	AA	1883.7	1830.9			1	999
2032	390855116202701		4338691.8	557068.6	W	38.1	76.8	AA	1969	1930.9			1	999
2033	390900117235901		4336091.6	465979.5	W	3	15.2	AA	2438.4	2435.3			1	999
2034	390905115201301		4335031.1	622384.1	W	63.4	67.4	AA	1856.2	1792.8			1	999
2035	390905116002001		4333375.2	585938.6	W	67.1	73.8	AA	1883.7	1816.6			1	999
2036	390915116415101		4333718.6	526141.4	W	51.8	64	AA	2048.3	1996.4			1	999
2037	390915117005701		4333675.1	498635.6	S			AA	1688.6	1688.6				0.58
2038	390926117052501		4334018	492203.4	S			AA	1804.4	1804.4				0.58
2040	390931115580701		4334674.8	589116.9	W	43.9	58.2	AA	1871.5	1827.6			1	999
2041	390939115581801		4334918.4	588850.1	W	56.7	106.7	AA	1877.6	1820.9			1	999
2043	390949115440101		4002610.9	614334.9	S			AA	1426.5	1426.5				9.29
2045	391041116041101		4336306.6	580362.9	W	105.8	114.6	AA	1950.7	1845			1	999
2046	391045117001401		4336449.3	499667.7	W	5.3	6.7	AA	1700.8	1695.5			1	999
2047	391058116385501	USGS-MX	4335644.5	530238.3	W	35.5	55.5	AA	2000.1	1964.6			1	999
2048	391114116185101	USGS-MX	4338492.1	559229.1	W	37	53	AA	1970.2	1933	1932.7	1933.3	2	148.78
2049	391135115512401		4337905.7	598870	W	4.6	13.7	AA	1949.2	1944.6			1	999
2050	391147116374101		4338426.4	532122.5	W	25.8		AA	1984.2	1958.5			1	999
2051	391148115555801		4338933.8	592163.3	W	51.7	52.1	AA	1859.3	1807.6			1	999
2052	391148117030701		4338392.6	495518	W	79.2	97.5	AA	1775.2	1695.9			1	999
2053	391207115560301		4338902.2	592091.7	W	48.3	50	AA	1859.3	1811			1	999
2054	391253116482501		4340412.8	516670.5	S			AA	2127.5	2127.5				0.58
2055	391313116554201		4341014	506190.3	W	1.3		AA	1697.4	1696.1			1	999

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
2056	391328117172401		4341513.9	474970.9	W	18.6	76.2	AA	1871.5	1852.4	1851.9	1852.9	2	9.74
2057	391330116184101		4341761.5	559444.1	W	18.3	29	AA	1950.7	1932.4			1	999
2059	391342116194401	USGS-MX	4341935.6	558004.1	W	32.7	57.9	AA	1958	1925.3	1925.1	1925.4	2	20.94
2060	391343115201901		4343521.1	623042.8	W	65.5	106.7	AA	2286	2220.5			1	999
2061	391352116591101		4342213.8	501178.4	W	3.6	4.6	AA	1701.1	1697.5			1	999
2062	391354117173901		4342316.6	474613.8	W	4.6	6.1	AA	1859.3	1854.7			1	999
2063	391355117173701		4342347.3	474661.9	W	30.5	44.5	AA	1865.4	1833.7	1832.5	1834.9	2	12.19
2064	391355117173702		4342347.3	474661.9	W	25		AA	1865.4	1840.4			1	999
2065	391355117173703		4342347.3	474661.9	W	30.5	97.5	AA	1865.4	1835.8	1835.5	1836.1	2	9.51
2066	391356116220801		4342526.8	554475.2	W	66		AA	1993.4	1927.4			1	999
2067	391410116032101		4342607.6	581497.2	W	24.1	56.7	AA	1865.1	1840.7	1840.4	1840.9	2	0.18
2068	391424116573801		4343200.9	503407.6	W	1.8	45.7	AA	1697.7	1696			1	999
2069	391435117014501		4343539.7	497486.6	W	17.1	182.9	AA	1728.2	1711.2	1711.2	1711.2	7	37.16
2070	391446116581601		4343878.7	502496.5	W	0.4	6.7	AA	1699.3	1698.8			1	999
2071	391456115551201		4344742.4	593197.7	W	0.4		AA	1834.9	1834.5			1	999
2072	391503116401001		4344454.4	528526.4	W	17.7	19.5	AA	1967.2	1948.9	1948.4	1949.5	2	1.12
2073	391504115552601		4344460.9	592865.4	W	23.5	38.1	AA	1847.1	1823.6			1	999
2074	391509116000701		4347116.6	585116.9	S			AA	1837.9	1837.9				2.32
2075	391513117160801		4344745.1	476802.8	W	14.5	304.8	AA	1828.8	1814.3			1	999
2076	391542117165001		4345642.1	475798.9	W	34.4	43.6	AA	1818.1	1784.4	1784.3	1784.6	2	0.08
2077	391543115255701		4346806.4	635241.1	S			AA	2304.3	2304.3				9.29
2078	391546117154101		4345760.4	477452.9	W	37.2	44.2	AA	1819.7	1786.4	1786.1	1786.7	2	2.49
2079	391600117004401		4346159.5	498949.2	W	6	9.1	AA	1714.2	1707.9	1707	1708.2	14	9.47
2080	391603115530501		4346325.4	596606.3	W	25.9		AA	1847.1	1821.2			1	999
2081	391612117012101		4346529.6	498062.7	W	6.4	14.9	AA	1728.2	1721	1720.3	1721.8	2	10.4
2084	391626116155901		4347217.4	563284.6	W	8.5	9.1	AA	1927.9	1919.3			1	999
2085	391635115591101		4346805.1	587612.8	W	4.6	164.3	AA	1844	1839.5			1	999
2086	391637116021801	FISH CRK SPRS	4347740.8	582953.3	S			AA	1859.3	1859.3				58.06
2088	391645117292001		4347660.5	457835.5	W	3.2	3.7	AA	1859.3	1856.1			1	999
2089	391659117290201		4348089.8	458269.1	W	2.4		AA	1842.5	1839.9	1839.7	1840.1	8	0.02
2090	391659117290202		4348089.8	458269.1	W	3.1		AA	1842.5	1839.3	1839.2	1839.5	11	0
2091	391724117025001		4348749.9	495931.2	S			AA	1956.8	1956.8				0.58

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
2092	391730117144601		4348962.7	478779.6	W	25.6	34.1	AA	1798.3	1771.6	1770.4	1772.7	2	5.01
2093	391754116510701		4349684.1	512770.4	W	53.9	73.2	AA	1761.7	1707.8	1707.7	1707.8	2	2.34
2094	391754117271401	BROWN	4349714	460098.3	W	7.4	14.9	AA	1846.8	1839.3	1838.8	1839.4	15	9.31
2095	391757117275501		4349869.3	459883.5	W	4.8		AA	1845.2	1840.3	1840.1	1840.4	9	0.01
2096	391808117280201		4350209.2	459717.6	W	3.1		AA	1842.8	1839.5	1839.3	1839.7	17	0.04
2098	391813117184401		4351912	472154.6	W	24.3	36	AA	1798.3	1774			1	999
2099	391817115560701	USGS-MX	4350856.6	591400	W	36.7	38.4	AA	1850.1	1813.4			1	999
2100	391829117154701		4350785.5	477323.6	W	22.6	31.7	AA	1794.4	1773.6	1772.8	1774	3	0.47
2101	391835116160201		4351193.5	563180.5	W	4.4	5.5	AA	1917.2	1912.8			1	999
2102	391835116163701		4351627.7	567176.6	W	49	82.9	AA	1953.8	1904.8			1	999
2103	391838117185501		4351077.4	472822.2	W	70.1	82.3	AA	1508.8	1466.9	1466.4	1467.6	12	2.48
2104	391838117185601		4351077.5	472798.2	W	13.1	121.9	AA	1797.7	1768.5	1766	1770.7	15	3.05
2105	391841117295901		4351241.5	456920.9	W	0.1		AA	1842.3	1839.9	1839.2	1840.3	18	0.05
2106	391841117295902		4351241.5	456920.9	W	0.2		AA	1842.3	1839	1838.8	1839.4	19	0.02
2107	391841117295903		4351241.5	456920.9	W	0		AA	1842.3	1840.2	1840.2	1840.3	16	0
2108	391850117284201		4349791	457200.3	W	2.1		AA	1842.6	1839.7	1838.9	1840.5	11	0.22
2109	391850117284202		4349791	457200.3	W	2.3		AA	1842.6	1839.6	1838.9	1840.3	11	0.19
2110	391854115551201		4352079.3	593110.1	W	15.3	18.3	AA	1824.8	1808.7	1807.8	1809.6	9	0.54
2111	391855116191501	USGS-MX	4351991.9	558839.5	W	38.3	48.8	AA	1945.2	1906.9			1	999
2112	391856117180901		4353481.4	472950.2	W	12.5	65.8	AA	1798.3	1785.8			1	999
2113	391857117274301		4351717.4	460180.4	W	2.7	3.7	AA	1889.2	1886.4			1	999
2114	391858115550201	USBLM	4352205.4	593348.1	W	14	18.3	AA	1824.8	1808.7	1807.8	1809.6	28	0.33
2115	391903115021701		4353088.8	669512.2	W	18.4		AA	2121.4	2103			1	999
2116	391904117280601		4351936	459630.8	W	3.1		AA	1842.8	1839.5	1839.4	1839.7	9	0.02
2117	391908117272301		4352054.1	460661	W	2.4		AA	1843	1840.3	1839.7	1840.5	12	0.05
2118	391908117272302		4352054.1	460661	W	3		AA	1843	1839.4	1838.8	1840	11	0.14
2119	391911117192701		4352097.3	472059.5	W	24.6	39.3	AA	1798.9	1769.3	1768.3	1770.7	12	0.6
2120	391911117263801		4352141.2	461739	W	4.3		AA	1845.1	1840.3	1840	1840.7	7	0.06
2121	391915115553501		4352165.2	592558.2	W	15.4	18.6	AA	1824.8	1809.2	1808.8	1809.5	2	0.2
2122	391916117192801		4352251.6	472036.1	W	40.5	80.8	AA	1799.2	1770.1	1768.9	1770.8	9	0.4
2123	391917117185701		4352279.8	472778.5	W	91.4	125.6	AA	1791.6	1769.6	1768.8	1770.3	9	0.34
2124	391925116172901		4352718.2	561084.9	W	4.9	18.3	AA	1911.1	1906.2			1	999

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
2127	391935116144901	USGS-MX	4353028.4	565129.2	W	28.8	56.7	AA	1930	1900.9	1900.7	1901.1	2	20.99
2128	391936116512801		4352827.6	512262.4	W	2.2	20.1	AA	1726.7	1724.5			1	999
2129	391938116512601		4352889.3	512310.2	S			AA	1725.2	1725.2				0.58
2130	391941117192301		4353021.8	472158.5	W	24.4	61	AA	1795.6	1766.8	1764.3	1768.5	10	2.1
2131	391948116415401		4356034	525253.1	W	23.4		AA	1944.6	1921.3			1	999
2134	391956117274601		4353536.5	460117.8	W	2.7		AA	1842.8	1839.8	1839.6	1840.1	17	0.02
2135	391956117274602		4353536.5	460117.8	W	0.7		AA	1842.7	1839.7	1839.5	1840	16	0.03
2136	391956117274603		4353536.5	460117.8	W	2.8		AA	1842.7	1839.5	1839	1839.9	18	0.05
2137	391956117274604		4353536.5	460117.8	W	2.7		AA	1843.1	1840.3	1840.3	1840.4	2	999
2138	391957117185501		4353512.7	472830.7	W	23.2	65.8	AA	1787.7	1767.5	1766.7	1768.4	5	1.2
2139	391959117292201		4353641.1	457820	W	1.8		AA	1842.1	1839.9	1839.2	1840.3	15	0.06
2140	391959117292202		4353641.1	457820	W	2.1		AA	1842.1	1839.3	1838.7	1840	16	0.07
2141	392005116493401		4354280.5	514630	W	40.1		AA	1751.7	1711.6			1	999
2142	392010115522501		4354471	597080.2	W	14.6		AA	1826.4	1810.5	1809.8	1811.7	3	10.38
2143	392016117270201		4354147.8	461174.3	W	3		AA	1842.9	1839.7	1839.5	1839.9	16	0.01
2144	392019117281901		4354249.6	459331.5	W	2.6		AA	1842.6	1839.5	1839.2	1839.9	7	0.06
2145	392030115495501		4355093.3	602339.8	W	38.4	68.6	AA	1831.8	1793.4			1	999
2146	392034117280201		4355141.5	459743.1	W	2.9	3.7	AA	1889.2	1886.3			1	999
2147	392041117203601		4354877.8	470417.8	W	64.3	79.6	AA	1833.4	1769.1			1	999
2148	392041117284901		4354931.6	458616.9	W	6.1	6.7	AA	1842.4	1839.7	1839.4	1840	15	0.03
2149	392041117284902		4354931.6	458616.9	W	19.5	20.1	AA	1842.4	1839	1838.8	1839.7	11	0.12
2150	392047117182101		4355051.2	473649.9	W	12.2	61	AA	1780.9	1768.3	1766.9	1769.8	14	0.75
2151	392047117185401		4355053.9	472860	W	18	73.2	AA	1785.5	1762.9	1762.3	1763.5	4	0.34
2152	392047117264201		4355101	461657.8	W	2.7		AA	1843.6	1840.9	1840.8	1841	2	0.01
2153	392047117264202		4355101	461657.8	W	3.5		AA	1843.6	1840.1	1840	1840.1	8	0
2154	392055115021501		4357090	669113.8	W	88.5		AA	2115.3	2026.6	2026.5	2026.8	3	9.31
2155	392058117275001		4355448.3	460031.9	W	2.5		AA	1842.7	1840	1840	1840.2	12	0.01
2156	392059117173401		4357085.5	473728.5	W	13.1	101.2	AA	1780.6	1767.5			1	999
2157	392110115541701		4355949.4	594452.3	W	25.7		AA	1834.9	1809.2			1	999
2158	392115115520801		4355744.8	597854.4	W	15.8		AA	1822.7	1806.9			1	999
2159	392122116475301		4356105	517402.7	W	46.8	50.6	AA	1759	1712	1711.6	1712.2	3	0.13
2160	392122116501301		4356097.9	513860.7	W	25.1	28	AA	1737.1	1711.5	1711.1	1711.9	3	0.21

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
2161	392126116581701		4356209.2	502181.5	W	73.5	89.9	AA	1804.4	1725.9	1725.9	1725.9	3	9.29
2162	392130115550001		4356891.8	593339.8	W	89.3	98.1	AA	1883.7	1794.4			1	999
2163	392131117272201		4356462.2	460707.2	W	6.1	6.7	AA	1843.7	1840.5	1839.5	1840.8	11	0.24
2164	392135117185401		4356533.6	472865.1	W	39.6	45.7	AA	1787	1766.7	1764.8	1768.4	16	1.38
2165	392137116094901		4356881.5	572061.6	W	96.9	107	AA	2002.5	1905.6			1	999
2166	392138117181701		4358290.4	472966.9	W	25.4	99.1	AA	1780.6	1755.3			1	999
2167	392138117182101		4356623.3	473655.2	W	12.6		AA	1780	1766.3	1765.4	1767.4	3	1.1
2168	392139117150201		4356639.5	478417.6	W	14.6	21.3	AA	1773.6	1767.4	1767	1767.8	3	0.17
2169	392141117271301		4356769.3	460924.1	W	10.1		AA	1851.5	1841.3	1841.2	1841.3	8	0
2170	392145116541301		4356799	508307.6	W	57.9	64	AA	1745	1713.5	1713.4	1713.6	2	2.33
2171	392145116541302		4356799	508307.6	W	38.1	39.6	AA	1745	1713.3	1713.2	1713.5	2	2.35
2172	392155117185501		4357150.2	472843.3	W	32	97.5	AA	1788.3	1766.8	1766.2	1767.5	9	0.33
2173	392157117192701		4357214.6	472077.8	W	28.6		AA	1795.3	1763	1761.4	1764.7	9	3.89
2174	392159115505901		4357857.1	599096.3	W	11.3	23	AA	1813	1800.6	1799.9	1801.6	3	10.1
2175	392204117182101		4357424.8	473657.9	W	18	101.2	AA	1780.3	1767.2			1	999
2176	392206117185101		4357489	472940.2	W	36.6	85.3	AA	1789.2	1766	1764.1	1767.6	11	4.05
2177	392208117271401		4357601.8	460904.4	W	6.8		AA	1848.3	1841.5	1841.5	1841.5	10	0
2179	392213117192901		4357708	472031.8	W	36.6	121.9	AA	1797.4	1764.5	1763.2	1765.4	12	0.61
2180	392218115472801		4358508.8	604137.8	W	16.8		AA	1816	1798.3	1797.7	1799.2	4	9.82
2181	392218117182101		4357856.4	473659.4	W	32	111.3	AA	1780.6	1766.5	1765.3	1768.5	17	0.87
2182	392227115514001		4358377.8	598826.4	W	9.1	23.2	AA	1816.6	1807.5			1	999
2183	392231117185501		4358260	472847.2	W	23.8	75.6	AA	1785.5	1764.4	1762.7	1766.3	16	1.19
2184	392233115034301		4359460.6	667482.1	W	85.3	102.1	AA	2072.6	1987.3			1	999
2185	392233117174201		4358315.7	474594.1	W	10.7	71.6	AA	1772.4	1763.1	1762	1763.8	7	1.17
2187	392238117292301		4358542.7	457822.6	W	6.1	6.7	AA	1845.4	1841.5	1841.4	1841.7	9	0.01
2188	392244117145701		4358642.9	478542.8	W	4.3	11.6	AA	1767.8	1764.5	1762.7	1766.3	2	8.73
2189	392248117290701	USGS	4358848.9	458207.1	W	9.8	12.8	AA	1851.7	1841.7	1841.3	1841.9	12	0.02
2190	392252117272601		4358959.6	460624.1	W	10.1	10.7	AA	1848.6	1841.9	1841.6	1842	9	0.02
2192	392300115493001	FERA	4359765	601201.6	W	6.9	17.1	AA	1807.5	1796.9	1796	1797.3	54	0.16
2193	392301115464801	USGS-MX	4359847.3	605077	W	22.1	58.2	AA	1820	1797.9	1797.8	1797.9	2	148.65
2194	392302117174501		4359209.9	474525.2	W	28.7		AA	1780.6	1752			1	999
2195	392305116522101		4359268.4	510984.3	W	31.5	32.9	AA	1745.9	1714.4			1	999

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
2196	392305117284101		4359369.7	458831.9	W	19.5	20.1	AA	1848.1	1841.9	1841.6	1842	9	0.01
2197	392305117284102		4359369.7	458831.9	W	7.6	8.2	AA	1848.1	1841.9	1841.8	1842	10	0
2198	392308116553401		4359355.8	506367.1	W	76.2	82.3	AA	1769.4	1716	1715.9	1716.2	3	2.35
2199	392308116553402		4359355.8	506367.1	W	38.7	93	AA	1769.4	1716.9	1716.8	1717	2	2.34
2200	392310116125001	BARTHOLEMAE CORP	4359709.6	567705	W	28.6	40.8	AA	1929.4	1900.6	1900.1	1900.8	32	0.04
2201	392318115391801		4360634.5	614948.3	W	2.4	6.2	AA	1950.7	1948.3			1	999
2202	392322117182301		4359829.5	473618.2	W	14.3	64.6	AA	1780.6	1764.8	1759	1768.1	20	4.7
2203	392322117182302		4359829.5	473618.2	W	14.3	64.6	AA	1780.6	1765	1762.6	1768.1	18	1.88
2204	392322117185701		4359832.3	472804.9	W	30.5	109.7	AA	1788.6	1760.4	1757.3	1762.2	11	2.62
2205	392329117160601		4360034.8	476896.1	W	3.6	6.1	AA	1764.5	1760.9			1	999
2206	392333116560401		4360125.9	505648.8	W	73.7	121.9	AA	1790.7	1715.4	1714.5	1717	3	4.3
2207	392333116560402		4360125.9	505648.8	W	23.1	121.9	AA	1790.7	1761.8	1761.7	1761.9	2	2.34
2208	392337116515901		4360255	511054.6	W	29.4	32.9	AA	1745.9	1715.5	1714.4	1716.5	5	0.55
2209	392337117133501		4360271.6	480508.7	W	4.6	14.3	AA	1764.8	1762.3	1762.2	1762.3	2	2.34
2210	392342117182101		4360445.9	473668.1	W	19.8	158.5	AA	1780.6	1760.3	1755.2	1763.2	17	5.36
2211	392405117160401		4361144.5	476947.2	W	2.4		AA	1763.3	1760.9			1	999
2213	392416116204901		4361652.8	556231.2	S			AA	1932.4	1932.4				2.32
2214	392416116562001		4361450.9	504882.6	W	48.2	61	AA	1853.2	1804.9	1804.8	1804.9	2	9.3
2215	392419117264401		4361603.5	462096.4	W	18.5	32.3	AA	1860.8	1842.3	1842.3	1842.3	3	0.02
2216	392422115391801		4363063.9	614505.7	W	7.6	12.5	AA	2011.7	2004.1			1	999
2217	392424115485801		4362364.6	601933.3	W	12.6		AA	1814.2	1800.8	1800.2	1801.6	3	2.89
2218	392433116195001	USGS-MX	4362187.2	557638.3	W	17.7	48.8	AA	1910.2	1892.5			1	999
2219	392440117183501		4362235	473339.4	W	21.3	151.5	AA	1781.6	1762.2	1762	1762.4	3	0.61
2220	392452117155701		4364386.1	475402.9	W	14.3	96.9	AA	1798.3	1784			1	999
2221	392459115443101		4363235.6	607088.2	W	16.5	17.7	AA	1828.8	1812.2	1812.1	1812.3	2	0.05
2222	392501117164801		4362874	475900.2	W	29.3	149.4	AA	1766.3	1748.1	1747	1749.3	2	4.88
2223	392505117171301		4362999.2	475302.8	W	12.7	199	AA	1770.9	1758.2			1	999
2224	392509117171201		4363122.4	475327.1	W	11.5		AA	1770.9	1758.1	1756.5	1759.4	16	1.42
2225	392509117171901		4363122.9	475159.7	W	11.2		AA	1772.4	1757.9	1757.1	1758.7	11	0.92
2226	392518115022601		4365490.6	668189.5	S			AA	2347	2347				58.06
2227	392528115445901		4364414.7	607622	W	19.8	30.5	AA	1814.8	1794.7	1794.4	1795	2	9.51
2228	392529116133901		4363984.5	566496.1	W	17.9	41.1	AA	1898.9	1881			1	999

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
2229	392529117133201		4363724	480589.1	W	1.3		AA	1755.6	1754.3			1	999
2230	392531117092401		4363773.1	486518.8	W	7.4		AA	1777	1769.6			1	999
2231	392532117171301		4363831.5	475305.5	W	61	97.5	AA	1773	1756.7	1755.5	1757.5	10	0.45
2232	392539117291901		4364891.1	458215.6	W	65.5	77.7	AA	1856.5	1842.8	1842.5	1843.1	3	37.27
2234	392542117152201		4366014.9	477033.4	W	12.7	73.2	AA	1780.6	1767.9			1	999
2235	392545115321901		4365220.5	626311.7	W	3.2	4.3	AA	1920.2	1917.1			1	999
2236	392552116555101		4364411	505956.5	S			AA	1935.5	1935.5				0.58
2238	392556117163901		4364568.8	476120.6	W	14.3		AA	1771.2	1756.9			1	999
2239	392557117160401		4364597.1	476957.5	W	15.2	128	AA	1765.1	1755.6	1754.6	1756.6	20	0.36
2240	392559117171301		4364663.8	475308.1	W	24.4	86.6	AA	1776.4	1761.9	1760.7	1763.3	18	0.4
2241	392559117171302		4364663.8	475308.1	W	24.4	86.6	AA	1776.4	1762.1	1761.3	1763	2	1.43
2242	392610115474201	USGS-MX	4365537	603995.8	W	12.2	43.6	AA	1810.2	1797.5	1797.1	1798	3	148.85
2243	392617115115801		4366726.5	654959.9	W	5.4		AA	2011.1	2005.7			1	999
2244	392623117160301		4365398.5	476983.7	W	39.6	73.2	AA	1766.6	1753.7	1752.3	1755.3	23	0.5
2245	392623117171101		4365403.5	475358.3	W	61	97.5	AA	1782.5	1755.1	1752.8	1756.2	13	0.85
2246	392623117171102		4365403.5	475358.3	W	26.2	97.5	AA	1782.5	1755.3	1754.7	1756.3	11	0.37
2248	392634115482101		4366384	602765.1	W	32.1	18.3	AA	1827	1794.7	1794.5	1794.9	2	9.35
2249	392634116463501		4366013.1	504592.8	S			AA	2033	2033				0.58
2250	392636116365601		4365835.7	533085.5	W	46.8		AA	1941.6	1894.8			1	999
2251	392643117153101		4366012.8	477750.5	W	16.8	62.2	AA	1762.7	1752.2	1751.6	1752.5	14	0.15
2252	392654116420901		4366362.3	525602	W	6.7	21.9	AA	1919.9	1913.3			1	999
2253	392656116422301		4366422.8	525267.1	W	24.8	35.1	AA	1919.9	1895.1			1	999
2254	392700117110001		4366521	484229.1	W	13.4	62.2	AA	1745	1742.7	1742.2	1743.6	21	2.44
2255	392703116380401	USGS-MX	4367496.8	532242	W	25.7	53.6	AA	1920.2	1894.5			1	999
2259	392747116532101		4367805.3	509299.5	W	4.5	12.2	AA	1818.4	1813.5	1812	1813.9	11	9.72
2262	392800116380001		4369556.6	530847.7	W	14.4	31.1	AA	1908	1893.2	1892.2	1893.6	17	0.21
2263	392814117091401		4368797.5	486766.5	W	3.4		AA	1749.6	1746	1745.8	1746.2	4	2.36
2264	392821116425401		4369040.8	524517.9	W	28.2	37.5	AA	1922.7	1894.5			1	999
2266	392827116060401		4369572.6	577320.4	W	140.3	164.6	AA	2197.6	2057.2	2057	2057.3	3	2.35
2267	392833117093101		4369383.9	486361.3	W	3.4	29	AA	1746.5	1743.1			1	999
2268	392837117275901		4369817.7	459341.2	W	27.2	36.6	AA	1870.6	1843.3	1843.3	1843.3	3	0.02
2269	392840115412401		4371579.5	610604.9	W	10	10.7	AA	1798.3	1788.3			1	999

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
2270	392845115463001		4369626.7	605446.6	W	17.1	48.8	AA	1789.2	1776.7			1	999
2271	392847115455901		4370529.8	606103.4	W	17.1	48.8	AA	1799.5	1787			1	999
2272	392847116143901	USGS-MX	4370076.2	565010.3	W	25	48.8	AA	1900.1	1873.3	1871.4	1875.1	2	155.71
2273	392848116061501		4370217.4	577051.1	W	140.6	164.6	AA	2197.6	2057			1	999
2274	392849117162001		4369900.5	476591	W	30.8	106.4	AA	1786.1	1755.3			1	999
2275	392850115421002	ELDRIDGE	4371579.5	610604.9	W	6.7	11.3	AA	1798.3	1788	1787.2	1788.4	25	0.07
2276	392906115090701		4371772.9	658946.3	W	60.4	82.3	AA	2072.6	2012.3			1	999
2277	392917116470901		4370750.2	518421.1	S			AA	2109.2	2109.2				0.58
2279	ASH-B-1	ASH-B-1	4064213	529046.6	MW	310.3	371.9	AA	815	719.1			1	999
2280	ASH-B-2	ASH-B-2	4064213	529046.6	MW	82.6	142.3	VU	815	719.5			1	999
2281	BT001	Salt	4040130.6	500746.2	S			AA	-73.2	-73.2				999
2282	BT002		4041363.3	501989.7	S			LCA	-79.3	-79.3				999
2283	BT004		4045680.8	508451.8	S			LCA	-79.3	-79.3				999
2284	BT005		4041060.7	509948.7	S			LCA	-79.3	-79.3				999
2285	BT006		4042909.1	509697.9	S			LCA	-79.3	-79.3				999
2286	BT007	Salt	4042909.6	510195.2	S			LCA	-79.3	-79.3				999
2287	BT008		4039523	512189.3	S			AA	3.1	3.1				999
2288	BT009	Cow	4039216.7	513433.6	S			AA	61	61				999
2289	BT010		4040142.6	514427.2	S			AA	158.5	158.5				999
2290	BT012	Nevares	4040144.4	515422.1	S			AA	219.5	219.5				999
2291	BT013	Nevares	4040453.9	516167.8	S			AA	158.5	158.5				999
2294	BT120		4088232.9	524240.4	S			AA	1060.7	1060.7				999
2295	BT128		4089160.2	525227	S			AA	1060.7	1060.7				999
2296	BT139		4090699.4	524727.9	S			AA	1082	1082				999
2298	BT172		4093783	525460.5	S			AA	1112.5	1112.5				999
2301	CF006	Beatty Spr	4196174.6	544195.3	S			AA	2109.2	2109.2				999
2302	CF007		4196796.3	545168.7	S			AA	2133.6	2133.6				999
2311	DV005	Eagle Borax	4005939	511986.9	S			LCA	-79.2	-79.2				999
2312	DV006	Tule	4010866.9	510732.2	S			LCA	-79.3	-79.3				999
2313	DV007		4010563.4	513977.3	S			LCA	-86	-86				999
2314	DV008		4009345	520968.9	S			AA	-79.3	-79.3				999
2315	DV009		4032431.2	507718	S			AA	-79.3	-79.3				999

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
2316	DV010		4032748.3	514688.5	S			AA	97.5	97.5				999
2317	DV011	Travertine	4032749.2	515186.4	S			AA	97.5	97.5				999
2318	DV012		4033056.5	514688	S			AA	97.5	97.5				999
2319	DV013	Travertine	4032749.6	515435.3	S			AA	121.9	121.9				999
2320	DV016		4033057.8	515434.8	S			AA	121.9	121.9				999
2321	DV017	DV Hotel Tunnel	4033978.8	513441.8	S			AA	15.2	15.2				999
2322	DV018		4036127.5	506470.3	S			AA	-79.2	-79.2				999
2323	DV019		4033672.3	514438	S			AA	48.8	48.8				999
2324	DV021		4033672.7	514686.9	S			AA	121.9	121.9				999
2325	DV022		4033980.4	514437.5	S			AA	48.8	48.8				999
2326	DV026		4037975.5	505473.7	S			AA	-79.3	-79.3				999
2327	DV027		4037056.7	511197.5	S			AA	-73.2	-73.2				999
2328	DV030		4038596.9	510946.7	S			AA	-73.2	-73.2				999
2329	DV031		4038600.1	513185.8	S			AA	30.5	30.5				999
2330	DV114		4028341.8	562771.2	S			LCA	684.3	684.3				999
2331	DV121	Last Chance	4023738.4	565296.9	S			LCA	686.7	686.7				999
2332	DV127		4032338.3	561497.2	S			LCA	702.6	702.6				999
2333	DV138		4032033.8	561997.4	S			LCA	709.6	709.6				999
2334	DV141		4031421.1	562499.8	S			LCA	713.2	713.2				999
2335	DV145	Big Spring	4025554	565162.4	S			LCA	682.5	682.5				999
2336	DV154	Jack Rabbit	4027124	564773.2	S			LCA	691.9	691.9				999
2337	DV165		4024362.2	566289.2	S			LCA	693.4	693.4				999
2338	DV170	Bell	4038178.6	559465.1	S			LCA	692.5	692.5				999
2339	DV180		4035417.8	561226.4	S			LCA	714.8	714.8				999
2340	DV204		4028668.3	565259.8	S			LCA	704.1	704.1				999
2341	DV212	Indian Rock (King)	4028670.2	565508.9	S			LCA	708.7	708.7				999
2342	ER-20-2-1S	ER-20-2-1S	4118446.3	553210.3	MW			TCTC5	2042	1349.8			1	999
2343	ETW-I-4	PW-1	4078907.2	515798.2	EW	15.2	329.8	AA	1000	811.6				999
2344	ETW-II-1	PW-2	4078167.3	515601.5	EW	15.2	367.3	AA	1000	780.8				999
2345	ETW-II-2	PW-3	4078171	517483.6	EW	18.3	426.7	AA	963	783.4				999
2346	ETW-II-5	PW-4	4076195.7	515828	EW	15.2	442	AA	985	779.9				999
2347	GL001	Fish Lake	4176435.9	417512.3	S			AA	2042.2	2042.2				999

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Table A-1
Hydraulic Head Data Set

Map Ref. No.	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Site Type	EOI ^c Top (m bgs) ^d	EOI Bottom (m bgs)	Primary HSU ^e	LSE (m)	Mean W.L. Elev. (m)	Min. W.L. Elev. (m)	Max. W.L. Elev. (m)	No. of Records Used	Total Variance (m ²)
2348	GL011	Waterworks	4178367.9	444451.9	S			AA	1304.5	1304.5				999
2349	GL017	Alkali	4186247.5	470175.1	S			AA	1545.3	1545.3				999
2350	IS017	Indian	4046815.3	619567.7	S			AA	967.7	967.7				999
2351	LC005		4149296.4	419206.4	S			AA	1554.5	1554.5				999
2352	LC015	Staininger	4098437.6	465412.4	S			AA	847.3	847.3				999
2353	LWS-A-1	LWS-A-1	4045693	549021.7	MW	502.9	617.2	AA	730	693.6			1	999
2354	LWS-A-2	LWS-A-2	4045693	549021.7	MW	40.5	95.1	AA	730	685.8			1	999
2355	MSH-C-1	MSH-C-1	4039731	565375.3	MW	451.1	510.2	AA	710	710.2			1	999
2356	MSH-C-2	MSH-C-2	4039731	565375.3	MW	73.1	125.6	AA	710	711.1			1	999
2357	PM011		4096243.8	523970.3	S			AA	1133.9	1133.9				999
2358	PM013		4095629	524466.4	S			AA	1121.7	1121.7				999
2359	PM015	Long Spring	4097787.4	524954.3	S			AA	1182.6	1182.6				999
2360	PM018		4095325.2	525950.1	S			AA	1170.4	1170.4				999
2361	PR017	Grove Spr	4132029	664412.5	S			AA	1042.4	1042.4				999
2362	PR029	Brownie	4150407.1	658154.1	S			AA	1127.8	1127.8				999
2363	PR032	Lonetree Spr	4118298.1	671588.1	S			AA	981.5	981.5				999
2364	PR033	Hoyt	4118939.8	672808.3	S			AA	960.1	960.1				999
2365	QC022	Modes Hole Spr	4209371.4	627025.6	S			AA	1676.4	1676.4				999
2366	SV017	McLean	4050914.9	498261	S			AA	-36.6	-36.6				999
2368	TR184	Trough Spr	4205880.6	597316.3	S			AA	2011.7	2001.9				999
2373	UE-29a-1	UE-29a-1	4088340.7	555757.6	X	10.7	65.5	AA	1215.2	1191.6			4	0.33
2374	UE-29a-2	UE-29a-2	4088345.5	555749.1	X	86.9	421.5	TCU1	1215.2	1186.9			4	0.08
SM23-1	SM23-1	SM23-1	4055901	587967	MW	396.9	406	LCA	1080	724.8			1	999

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

^c - Effective Open Interval

^d - Meters below Ground Surface

^e - Primary Hydrostratigraphic Unit

Bibliography

- Arteaga, F.E., C.S. Savard, M.E. Johnson, and J.C. Stone. 1991. *Hydrogeologic Data from Selected Wells and Test Holes in and Adjacent to the Nevada Test Site, Nye County, Nevada, Through 1986*, USGS-OFR-87-536, Open-File Report. U.S. Geological Survey.
- Bentley, C.B., J.H. Robison, and R.W. Spengler. 1983. *Geohydrologic Data for Test Well USW H-5, Yucca Mountain Area, Nye County, Nevada*, USGS-OFR-83-853, Open-File Report. U.S. Geological Survey.
- Cole, E., B. Cernoch, L. Bruce, and J.D. Rumbaugh. 1992. *Hydrology and Steady State Ground-Water Model of Tikaboo Valleys North and South, Clark and Lincoln Counties, Nevada*, Report. Prepared for Summit Engineering Corporation and Geraghty and Miller, Inc.
- Craig, L.W., R.L. Reed, and F.W. Spengler. 1983. *Geohydrologic Data for Test Well USW H-6, Yucca Mountain Area, Nye County, Nevada*, USGS-OFR-83-856, Open-File Report. U.S. Geological Survey.
- Drellack, Jr., S.L. and P.H. Thompson. 1990. *Selected Stratigraphic Data for Drill Holes in Los Alamos National Laboratory Use Areas of Yucca Flat, Nevada Test Site, Fenix and Scisson of Nevada* Report DOE/NV-10322-39.
- Fox, F.L. and D.E. Westhoff. 1989. *Ground-Water Supply Development, Bond Gold Bullfrog Project, Nye County, Nevada*. Reno, NV: Hydro-Search, Inc.
- IT Corporation. 1994. *Resource Conservation and Recovery Act Site Characterization Plan, Area 6 Steam Cleaning Effluent Ponds, Nevada Test Site*, DOE/NV/10972-14 Report. U.S. Department of Energy. Las Vegas, NV.
- Johnston, R.H. 1968. *U.S. Geological Survey Tracer Study Amargosa Desert, Nye County, Nevada - Part I: Exploratory Drilling, Tracer Well Construction and Testing, and Preliminary Findings*, USGS-WRIR-84-4032, Water-Resources Investigation Report. U.S. Geological Survey.
- La Camera, R.J. and C.L. Westenburg. 1994. *Selected Ground-Water Data for Yucca Mountain Region, Southern Nevada and Eastern California Through December-1992*, USGS-OFR-94-54, Open-File Report. U.S. Geological Survey.
- Lobmeyer, D.H., M.S. Whitfield, Jr., R.R. Lahoud, and L. Bruckheimer. 1983. *Geohydrologic Data for Test Well UE-25b#1, Nevada Test Site, Nye County, Nevada*, USGS-OFR-83-855, Open-File Report. U.S. Geological Survey.
- Raytheon Services Nevada. 1991. *Nevada Test Site Drilling and Mining Summary*. Prepared for the U.S. Department of Energy. Las Vegas, NV.

- Reynolds Electrical and Engineering Company, Inc. 1994. *Site Characterization and Monitoring Data from Area 5 Pilot Wells, Nevada Test Site, Nye County, Nevada*, DOE/NV/11432-74 Report.
- Robison, J.H., D.M. Stephens, R.R. Luckey, and D.A. Baldwin. 1988. *Water Levels in Periodically Measured Wells in the Yucca Mountain Area, Nevada, 1981-1987*, USGS-OFR-88-468, Open-File Report. U.S. Geological Survey.
- Rush, F.E., W. Thordarson, and L. Bruckheimer. 1983. *Geohydrologic and Drill-Hole Data for Test Well USW H-1, Adjacent to Nevada Test Site, Nye County, Nevada*, USGS-OFR-83-14, Open File Report. U.S. Geological Survey.
- Rush, F.E., W. Thordarson, and D.G. Pyles. 1984. *Geohydrology of Test Well USW H-1, Yucca Mountain, Nye County, Nevada*, USGS-WRIR-84-4032, Water-Resources Investigation Report. U.S. Geological Survey.
- Schaefer, D.H., T.M. Morris, and M.D. Dettinger. 1992. *Hydrogeologic and Geophysical Data for Selected Wells and Springs in the Sheep Range Area, Clark and Lincoln Counties, Nevada*, USGS-OFR-89-425, Open-File Report. U.S. Geological Survey.
- Thomas, J.M., J.L. Mason, and J.D. Crabtree. 1986. "Ground-Water Levels in the Great Basin Region of Nevada, Utah, and Adjacent States." Map, ATLAS HA-694-B. U.S. Geological Survey.
- Thordarson, W., R.A. Young, and I.J. Winograd. 1967. *Records of Wells and Test Holes in the Nevada Test Site, and Vicinity (Through December-1966)*, USGS-TEI-872. U.S. Geological Survey.
- Thordarson, W., F.E. Rush, R.W. Spengler, and S.J. Waddell. 1984. *Geohydrologic and Drill-Hole Data for Test Well USW H-3, Yucca Mountain, Nye County, Nevada*, USGS-OFR-84-149, Open-File Report. U.S. Geological Survey.
- U.S. Geological Survey (USGS), 1989. "Groundwater Site Inventory System." In *National Water Information System (NWIS) User's Manual*, Volume 2, Chapter 4: pp. 14-16, USGS-OFR-89-587, Open-File Report. U.S. Geological Survey.
- Waddell, Jr., R.K. 1984. *Hydrologic and Drill-Hole Data for Test Wells UE-29a#1 and UE-29A#2, Fortymile Canyon, Nevada Test Site*, USGS-OFR-084-142, Open-File Report. U.S. Geological Survey.
- Waddell, Jr., R.K., J.H. Robison, and R.K. Blankennagel. 1984. *Hydrology of Yucca Mountain and Vicinity, Nevada-California Investigative Results Through Mid-1983*, USGS-WRIR-84-4267, Water-Resources Investigation Report. U.S. Geological Survey.
- Whitfield, Jr., M.S., W. Thordarson, and E.P. Eshom. 1984. *Geohydrologic and Drill-Hole Data for Test Well USW H-4, Yucca Mountain, Nye County, Nevada*, USGS-OFR-84-449, Open-File Report. U.S. Geological Survey.

Appendix B

Site Stratigraphy Data Set

Description of Appendix Contents

This appendix contains stratigraphy data for selected drill-holes located within the Nevada Test Site region. The data are presented in table form. The locations of the selected drill holes are shown on [Plate 1](#). The table ([Table B-1](#)) containing the stratigraphy data is provided from page B-2 through B-71. The stratigraphy data table is followed by another table containing the keys to the stratigraphic unit symbols used (page B-72 through B-74).

Table B-1 Site Stratigraphy Data Set

The site stratigraphy data set provided in Appendix B includes the following fields:

Ref No	Site reference number for cross-referencing between the data in the Appendix and the hydraulic head maps.
---------------	---

Official ID	Unique site identification number (may or may not be a USGS ID)
--------------------	---

Common Name	REDBOOK reporting name for wells on the NTS.
--------------------	--

Stratigraphic Penetrations

Stratigraphy	Stratigraphic units are coded as shown on the table included on the next page.
---------------------	--

Depth-to-top	Depth-to-top of stratigraphic unit, in meters.
---------------------	--

Hydrologic Control

Hstrat	Preliminary hydrostratigraphic unit classification. Codes are:
---------------	--

EW:	Extracaldera welded tuff
EN:	Extracaldera non-welded tuff
IW:	Intracaldera welded tuff
IN:	Intracaldera non-welded tuff
TC:	Tuff cone
LF:	Lava flow
PC:	Paleozoic carbonate rock
PN:	Paleozoic non-carbonate rock

Hcrtl	Type of alteration to describe hydrologic properties of stratigraphic unit. Codes are as follows:
--------------	---

Z:	Unit is zeolitic
GL:	Unit is glassy
DV:	Unit is devitrified
U:	Alteration is unknown

Data Source	Source of information. Usually standard citation or personal communication reference.
--------------------	---

Remarks

Additional information for each stratigraphic interval.

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
198	361451116170800	GS-18	QTa	0			
646	363238115464601	ARMY 3	QTa	0			
			Tv	115.8		U	Tertiary volcanic unit described only as andesite
722	363514115475001	TW-4	Fill	0			Artificial fill
			Op	6.1	PC		
			Cn	109.7	PC		
728	363527115510901	TW-10	QTa	0			
			Cn	3	PC		
			Cb	310.9	PC		
762	364457116231201		QTa	0			
			Tp	100	TC	U	interpretation by CCR (3,4,5)
765	364534116065901	TW-F	Tw	0	EN	Z	
			Tc	452		U	Chiefly Tertiary Sediments Some Pavits Spring Tuff in Tc
			Pz	956	PC		
766	364534116065902	TW-F	Tw	0	EN	Z	
			Tc	452		U	Chiefly Tertiary Sediments Some Pavits Spring Tuff in Tc
			Pz	956	PC		
769	364554116232401	J-12 WW	QTa	0			interpretation by CCR (3,4,5)
			Tp	157	EW	U	
792	364635115572901	WW-5A	QTa	0			
			QTc	178.3			
793	364649116280201	USW WT-11	QTa	0			
			Tp	12.2	EW	U	interpretation by CCR (5)
			Ta	387.1	EN	U	
794	364656116261601	UE-25 WT 12	QTa	0			YM spreadsheet contains no lithology descriptions.
			Tp	18.3	EW	U	LSE=1074.7 (NWIS)
			Ta	387.1	EN	U	
795	364706116170601	J-11 WW	QTa	0			interpretation by CCR (3,5)
			Tf	312	LF	U	
			Tp	351	TC	U	
796	364708115574401	WW-5C	QTa	0			QTa to TD of 365.8 m
797	364732116330701	USW VH-1	QTa	0			interpretation by CCR (5)
			Tp	155.5	EW	U	
			Tc	566.9	EW	U	
798	364757116245801	UE-25 WT 3	QTa	0			YM spreadsheet contains no lithology descriptions.
			Tp	3.4	EW	U	LSE=1030.0(NWIS)
			Ta	112.8	EN	U	
			Tc	153.9	EW	U	
801	364805115580801	WW-5B	QTa	0			QTa to TD of 274.3 m
803	364822116262601	UE-25 WT 17	QTa	0			YM spreadsheet contains no lithology descriptions.
			Tp	9.1	EW	U	LSE=1124.0 (NWIS)

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Ta	300.2	EN	U	
			Tc	378.6	EW	U	
804	364825116290501	USW WT-10	QTa	0			YM spreadsheet contains no lithology descriptions
			Tm	18.3	EW	U	
			Tp	191.1	EW	U	
805	364828116234001	J-13 WW	QTa	0			LSE=1011.02 (NWIS)
			Tp	132.5	EW	D	Ash flow tuff; pt/wld; lithophysae common.
			Tp	178.9	EW	Z	Ash flow tuff; clayey; pumiceous; zeol.
			Tp	207.3	EW	D	Mod/wld ash flow tuff; devitr; lithophysae common.
			Ta	449.6	EN	Z	Bedded and reworked tuff; zeol.
			Tc	530.4	EW	D	Ash flow tuff; pt/wld; pt/zeol-zeol; pt/clayey
			Tc	707.1	EW	Z	Bedded tuff.
			Tc	716.3	EW	D	Pt/wld ash flow tuff; zeol. common.
			Tr	981.5	EN	Z	Ash flow tuff; argillized; zeol.
807	364830115512601	TW-3	QTa	0			
			Op	48	PC		
809	364844115541301	WW-1	QTa	0			Well TD in alluvium
810	364905116280101	USW G-3	Tp	0	EW	U	YM spreadsheet contains no lithology descriptions.
			Ta	430.6	EN	U	LSE=1480.5 (NWIS)
			Tc	475.6	EW	U	
			Tr	1181.5	EN	U	
			Tt	1488.3	EN	U	
811	364915115574101	UE-5n	QTa	0			QTa to TD of 514.2 m
812	364916116265601	USW WT- 1	QTa	0			YM spreadsheet contains no lithology descriptions.
			Tp	9.1	EW	U	LSE=1201.4 (NWIS)
			Ta	421.8	EN	U	
			Tc	475	EW	U	
813	364922115580101	RNM-2S	QTa	0			QTa to TD of 352.3 m
814	364923115575701	RNM-2	QTa	0			Well TD in alluvium, USGS NWIS
815	364928115580101	RNM-1	QTa	0			Well TD in alluvium USGS NWIS
816	364933116285701	USW WT- 7	QTa	0			interpretation by CCR (5)
			Tp	12.2	EW	U	
817	364938116252102	UE-25p 1 PTH	QTa	0			LSE=1114.20 (NWIS)
			Tm	39	EW	G	Non/wld ash fall-air fall tuff; vitric.
			Tp	51.8	EW	D	Ash flow tuff, dns/wld-mod/wld; lithophysae.
			Tp	351.4	EW	Z	Pt/wld; pt/zeol.
			Ta	381	EN	Z	Ash flow-bedded-reworked tuff; non-pt/wld; zeol.
			Tc	435.9	EW	D	Non/wld-pt/wld ash flow tuff; pt/zeol; devitr.
			Tc	539.5	EW	Z	Pt/wld-bedded tuff.
			Tc	557.8	EW	D	Non/wld-mod/wld ash flow tuff.
			Tc	655.3	EW	Z	Non/wld-mod/wld ash flow-bedded tuff
			Tc	713.2	EW	D	Non/wld-mod/wld ash flow tuff.
			Tc	804.7	EW	Z	Par/wld-non/wld ash flow tuff.

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Tr	872.6	EN	Z	Non/wld-pt/wld; zeol; argillized.
			Tt	1067.4	EN	D	Tt=older tuffs/sed.(informal)=YM sprdst; non-pt/wld tuff; conglom.
			Sl	1243.6	PC		
			Sr	1667.3	PC		
818	364942116280001	USW H-3 HTH	Tp	0	EW	U	interpretation by CCR (5)
			Ta	424.3	EN	U	
			Tc	453.2	EW	U	
			Tr	1108.5	EN	U	
823	364945116235001	UE-25 WT 13	QTa	0			YM spreadsheet contains no lithology descriptions.
			Tp	67.1	EW	U	LSE=1032.5 (NWIS)
824	364947116254300	UE-25c 1 HTH	Tp	0	EW	D	Mod-dns/wld ash flow tuff.
			Tp	79.2	EW	G	Non-pt/wld ash flow tuff; bedded; vitric.
			Tp	98.4	EW	D	Mod-dns/wld ash flow tuff; sl. zeol. and argill.
			Tp	392.3	EW	Z	Non-mod/wld; vitric.
			Ta	406	EN	Z	Non/wld ash flow-ash fall-bedded tuff; ss.
			Tc	515.7	EW	D	Non/wld-mod/wld ash flow tuff; sl. argill-zeol.
			Tc	645.9	EW	Z	Bedded tuff w/ss; argill.
			Tc	656.2	EW	D	Non-dns/wld ash flow tuff; sl. argill. and zeol.
			Tc	821.4	EW	Z	Non/wld ash flow-bedded tuff; zeol(?).
			Tc	838.2	EW	D	Pt/wld ash flow tuff; tuff breccia; sl/zeol.and argill.
825	364947116254301	UE-25c 2 HTH	QTa	0			
			Tp	21.3	EW	D	Mod-dns/wld ash flow tuff.
			Tp	76.2	EW	G	Non-pt/wld ash flow tuff; bedded; vitric.
			Tp	96.8	EW	D	Mod-dns/wld ash flow tuff; sl. zeol. and argill.
			Tp	384	EW	Z	Non-mod/wld; vitric.
			Ta	401.1	EN	Z	Non/wld ash flow-ash fall tuff; bedded tuff. ss.
			Tc	509.6	EW	D	Non/wld-mod/wld ash flow tuff; sl. argill-zeol.
			Tc	643	EW	Z	Bedded tuff w/ss; argill.
			Tc	651.7	EW	D	Non-dns/wld ash flow tuff; sl. argill. and zeol.
			Tc	815.3	EW	Z	Non/wld ash flow tuff; bedded tuff; zeol(?).
			Tc	831.8	EW	D	Pt/wld ash flow tuff; tuff breccia; sl/zeol.and argill.
827	365023116271801	USW WT-2	QTa	0			interpretation by CCR (5)
			Tp	18.3	EW	U	
			Ta	397.2	EN	U	
			Tc	485.8	EW	U	
828	365032116243501	UE-25 WT 14	QTa	0			interpretation by CCR (5)
			Tp	36.6	EW	U	
			Ta	368.8	EN	U	
829	365032116265401	USW H-4 HTH	Tpc	0	EW	GD	
			Tp	0			interpretation by CCR (5)
			Tp	61.6	EN	GL	
			Tpt	65.2	EW	GD	

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Tac	399.9	TC	Z	
			Ta	399.9	EN	U	
			Tcp	495.9	EW	DZ	
			Tc	495.9	EW	U	
			Tcb	689.8	EW	DZ	Base of Tcb assumed to have Altn="Z" as throughout Yucca Mtn.
			Tct	812	EW	DZ	DV/Z/AR
			Trl	1154.6	EW	DZ	Bedded tuff above ash flow included with Trl as for UE-25b1H.
			Tr	1164	EN	U	
830	365032116265402	USW H-4 HTH	Tpc	0	EW	GD	
			Tp	61.6	EN	GL	
			Tpt	65.2	EW	GD	
			Tac	399.9	TC	Z	
			Tcp	495.9	EW	DZ	
			Tcb	689.8	EW	DZ	Base of Tcb assumed to have Altn="Z" as throughout Yucca Mtn.
			Tct	812	EW	DZ	DV/Z/AR
			Trl	1154.6	EW	DZ	
837	365105115565801	UE-5 PW-1	QTa	0			
838	365105116262401	UE-25a 1	QTa	0	AL	U	
			Tpc	9.1	EW	GD	
			Tp	66.1	EN	AG	
			Tpt	73	EW	DZ	DV/GL/Z
			Tac	415.7	TC	Z	
			Tcp	559.5	EW	DZ	
			Tcb	711.2	EW	DZ	
839	365108116262301	UE-25b 1 HTH	QTa	0			LSE=1200.7 (NWIS)
			QTa	0	AL	U	
			Tpc	45.7	EW	GD	No data reported for samples. Assumed to have same character as in UE-25a1.
			Tp	45.7	EW	U	Non/wld-dns/wld. ash flow tuff; vitr.
			Tp	73.2	EN	AG	No data reported for samples. Assumed to have same character as in UE-25a1.
			Tpt	83.8	VT	DZ	DGZ No data reported for samples. Assumed to have same character as in UE-25a1.
			Tp	83.8	EW	D	Dns/wld ash flow tuff; pt/vitric.
			Tac	422.1	TC	Z	No data reported for samples. Assumed to have same character as in UE-25a1.
			Ta	422.2	EN	Z	Non/wld;bedded ash flow-ash fall tuff; zeol.
			Tcp	569.7	EW	DZ	No data reported for samples. Assumed to have same character as in UE-25a1.
			Tc	569.7	EW	Z	Non/wld-mod/wld ash flow tuff; bedded

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Tc	577.9	EW	D	Non-mod/wld ash flow tuff; sl. zeol.
			Tcb	718	EW	DZ	
			Tc	848.2	EW	Z	Non-pt/wld ash flow tuff and bedded tuff.
			Tct	878.6	EW	DC	D/AR/Z/CC
			Tc	897.8	EW	D	Pt-mod/wld ash flow tuff; sl. zeol. and argill.
			Tc	1024.2	EW	Z	Pt/wld ash flow tuff; bedded tuff; argill.
			Trl	1189	EW	DA	
			Tr	1207.1	EN	D	Mod/wld ash flow tuff; devitr; argill. and zeol.
840	365108116262302	UE-25b 1 HTH	QTa	0	AL	U	
			QTa	0			LSE=1200.7 (NWIS)
			Tpc	45.7	EW	GD	No data reported for samples. Assumed to have same character as in UE-25a1.
			Tp	45.7	EW	U	Non/wld-dns/wld. ash flow tuff; vitr.
			Tp	73.2	EN	AG	No data reported for samples. Assumed to have same character as in UE-25a1.
			Tp	83.8	EW	D	Dns/wld ash flow tuff; pt/vitric.
			Tpt	83.8	VT	DZ	DGZ No data reported for samples. Assumed to have same character as in UE-25a1.
			Tac	422.1	TC	Z	No data reported for samples. Assumed to have same character as in UE-25a1.
			Ta	422.2	EN	Z	Non/wld;bedded ash flow-ash fall tuff; zeol.
			Tc	569.7	EW	Z	Non/wld-mod/wld ash flow tuff; bedded
			Tcp	569.7	EW	DZ	No data reported for samples. Assumed to have same character as in UE-25a1.
			Tc	577.9	EW	D	Non-mod/wld ash flow tuff; sl. zeol.
			Tcb	718	EW	DZ	
			Tc	848.2	EW	Z	Non-pt/wld ash flow tuff and bedded tuff.
			Tct	878.6	EW	DC	D/AR/Z/CC
			Tc	897.8	EW	D	Pt-mod/wld ash flow tuff; sl. zeol. and argill.
			Tc	1024.2	EW	Z	Pt/wld ash flow tuff; bedded tuff; argill.
			Trl	1189	EW	DA	
			Tr	1207.1	EN	D	Mod/wld ash flow tuff; devitr; argill. and zeol.
841	365108116262303	UE-25b 1 HTH	QTa	0	AL	U	
			QTa	0			LSE=1200.7 (NWIS)
			Tpc	45.7	EW	GD	No data reported for samples. Assumed to have same character as in UE-25a1.
			Tp	45.7	EW	U	Non/wld-dns/wld. ash flow tuff; vitr.
			Tp	73.2	EN	AG	No data reported for samples. Assumed to have same character as in UE-25a1.
			Tp	83.8	EW	D	Dns/wld ash flow tuff; pt/vitric.
			Tpt	83.8	VT	DZ	DGZ No data reported for samples. Assumed to have same character as in UE-25a1.

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Tac	422.1	TC	Z	No data reported for samples. Assumed to have same character as in UE-25a1.
			Ta	422.2	EN	Z	Non/wld;bedded ash flow-ash fall tuff; zeol.
			Tcp	569.7	EW	DZ	No data reported for samples. Assumed to have same character as in UE-25a1.
			Tc	569.7	EW	Z	Non/wld-mod/wld ash flow tuff; bedded
			Tc	577.9	EW	D	Non-mod/wld ash flow tuff; sl. zeol.
			Tcb	718	EW	DZ	
			Tc	848.2	EW	Z	Non-pt/wld ash flow tuff and bedded tuff.
			Tct	878.6	EW	DC	D/AR/Z/CC
			Tc	897.8	EW	D	Pt-mod/wld ash flow tuff; sl. zeol. and argill.
			Tc	1024.2	EW	Z	Pt/wld ash flow tuff; bedded tuff; argill.
			Trl	1189	EW	DA	
			Tr	1207.1	EN	D	Mod/wld ash flow tuff; devitr; argill. and zeol.
842	365114116270401	USW G-4	QTa	0			interpretation by CCR (5)
			Tp	9.1	EW	U	
			Ta	429.7	EN	U	
			Tc	536.7	EW	U	
843	365116116233801	UE-25 WT 15	QTa	0			interpretation by CCR (5)
			Tp	64	EW	U	
844	365122116275501	USW H-5 HTH	Tp	0	EW		interpretation by CCR (5)
			Ta	521.2	EN	U	
			Tc	592.8	EW	U	
847	365140116260301	UE-25 WT 4	QTa	0	AL	U	
			Tp	0	EW	U	
			Tpc	14.6	EW	GD	
			Tp	86.1	EN	GL	
			Tpt	132.2	EW	DZ	DV/GL/Z
			Ta	351.7	EN	U	
			Tac	354.9	TC	GD	
848	365147116185301	UE-25a 3	Me	0	PN		T.D. at 771.2 m in Unit 1 of Eleana Fm. on sample log
849	365152115565701	UE-5 PW-2	QTa	0			
850	365157116271201	USW H-1 HTH	Tp	0	EW	U	interpretation by CCR (5)
			Ta	459	EN	U	
			Tc	565.7	EW	U	
			Tr	1234.7	EN	U	
851	365157116271202	USW H-1 HTH	Tp	0	EW	U	interpretation by CCR (5)
			Ta	459	EN	U	
			Tc	565.7	EW	U	
			Tr	1234.7	EN	U	
852	365157116271203	USW H-1 HTH	Tp	0	EW	U	interpretation by CCR (5)
			Ta	459	EN	U	
			Tc	565.7	EW	U	

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
853	365157116271204	USW H-1 HTH	Tr	1234.7	EN	U	
			Tp	0	EW	U	interpretation by CCR (5)
			Ta	459	EN	U	
			Tc	565.7	EW	U	
854	365157116271205	USW H-1 HTH	Tr	1234.7	EN	U	
			Tp	0	EW	U	interpretation by CCR (5)
			Ta	459	EN	U	
			Tc	565.7	EW	U	
855	365201115581601	UE-5 PW-3	Tr	1234.7	EN	U	
			QTa	0			
			Tma	188.1			
			Tmab	279.5			
			Tmr	291.1			
856	365213115564401	UE-5f	QTa	0			QTa to TD of 335.3 m
857	365239116020901	UE-5j	QTa	0			
			Tma	332	EW	D	
			Tmr	376	EW	U	
858	365239116253401	UE-25 WT 16	QTa	0			interpretation by CCR (5)
			Tp	41.8	EW	U	
860	365259115571601	UE-11a	Ta	325.5	EN	U	
			QTa	0			
			Tma	167.6	EW		
			Tmr	274.3	EW		
861	365315115562701	UE-11b	QTa	0			
			Tmr	57.9			
			Tmr	61	EW	D	
			Tmrh/Ta	193.5	a		
			Tp	305	EW	D	
			Tpt	310.9			
			Tac	378			
			Zeo	378			
			Tw	381	EN	Z	
			Twlb	393.2			
			Tw	393.2			
862	365322116273501	USW G-2	Tp	0	EW	U	YM spreadsheet contains no lithology descriptions.
			Ta	535.5	EN	U	LSE = 1553.9 (NWIS)
			Tc	824.1	EW	U	
			Tr	1278.6	EN	U	
			Tt	1811.3	EN	U	
864	365340116264601	UE-25 WT 6	QTa	0	AL	U	
			QTa	0			interpretation by CCR (5)
			Tpt	17.1	EW	DZ	DGZ No data reported for samples. Assumed similar to Tpt throughout Yucca Mtn.

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Tp	51.8	EW	U	
			Ta	116.7	EN	U	
			Tac	116.9	TC	U	No data reported for samples. High densities for Tac indicate lava.
867	365412116013901	WW-4A	QTa	0			
			Tmaw	228.6	EN	G	Poorly indurated, Post-Ammonia Tanks air-fall tuff, possibly tuff of Buttonhook
			Tma	233.2	EW	G	Partially to moderately welded
			Tmab	295.7	EN	G	Poorly indurated bedded tuff
			Tmr	298.7	EN	D	Non-welded to partly welded
			Tmr	320	EW	G	Moderately to densely welded
			Tmr	387.1	EN	G	
			Tmrh/Ta	397.8	EN	G	Pre-Tmr and Paintbrush bedded tuffs, undifferentiated
			Tpt	403.9	EW	G	Densely welded to vitrophyric
			Tpt	434.3	EN	G	Partially welded
			Zeo	442			
			Tac	442	EN	Z	Bedded tuff
868	365418116012601	WW-4	QTa	0			
			Tma	158.5	EW	D	Moderately to densely welded
			Tmr	225.5	EN	GD	Vitric to devitrified
			Tmr	240.8	EW	D	Moderately to densely welded
			Tmr	362.7	EN	GD	Vitric to partially devitrified
			Tmrh/Ta	368.8	EN	D	Partially devitrified
			Tpt	381	EW	U	Moderately to densely welded
			Tpt	384	EW	G	Densely welded vitrophyre
			Tac	408.4	EN	D	Non- to partially welded; vapor phase mineralization
871	365500116003901	WW-C-1	QTa	0			Tops from TW6-C
			Tpt	65.5	EW	D	Has welded Tpt
			Tac	155.4	EN		
			Tw	170.7	EN	Z	
			Tc	200.9	EN	Z	
			Tn/To	259	EN	Z	
			Oa	413	PC		Pz stratigraphic pick from cross sections
875	365508116003501	WW-C	QTa	0			Tbg nd, Tc,Tn/To contact uncertain
			Tw	170.7	EN	Z	
			Tc	200.9	EN	Z	
			Tn/To	259	EN	Z	
			Oa	413	PC		Pz stratigraphic pick from cross sections
876	365508116003502	WW-C	QTa	0			Tbg nd, Tc,Tn/To contact uncertain
			Tw	170.7	EN	Z	
			Tc	200.9	EN	Z	
			Tn/To	259	EN	Z	
			Oa	413	PC		Pz stratigraphic pick from cross sections

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
880	365550116084201	UE-14a	QTa	0			
			Tma	324	EW	G	Welding is partial at top, moderate at bottom
			Tma	353	EW	D	
			Tm	398	EN	Z	Unit is argillized and partially zeolitized
			Tmr	411	EW	Z	Unit is partially argillized and zeolitized
			Tmr	424	EW	U	
			Tmr	575	EN	Z	
			Tp	616	EN	Z	Unit is partially argillized and zeolitized
			Tpc	627	EN	Z	Unit is silicified and slightly welded
			Tpc	641	EW	Z	Unit is silicified; partially to densely welded
			Tpt	741	EN	D	Non-welded to densely welded; devitrified at top only
			Tpt	765	EW	U	Unit is silicified and moderately welded
			Tpt	917	EW	D	Unit is silicified
881	365550116091101	UE-14b	QTa	0			
			Tma	412	EW	Z	Matrix is partially to moderately welded and slightly argillized
			Tma	435	EW	Z	Moderately to slightly welded
			Tmr	495	EN	Z	Partially to moderately welded
			Tmr	652	EN	Z	
			Tp	690	EN	Z	Bedded tuff; partially argillized
			Tpc	701	EN	Z	Partially zeolitized and silicified
			Tpc	715	EW	DZ	Densely welded; silicified
			Tpt	799	EW	U	Moderately welded
			Tpt	809	EW	G	Vitrophyre
			Tpt	814	EW	DZ	Moderately to densely welded and silicified
			Tpt	888	EW	Z	Welding decreases from top to bottom; partially silicified
			Tpt	1091	EW	Z	Vitrophyre and densely welded tuff
897	365821116343701	USW VH-2	QTa	0			
			Tf	359	LF	U	
			Tm	389	EW	U	
			Tp	595	EW	U	
			Tc	1138	EW	U	
899	365849116002101	TW-B	QTa	0			
			Tmr	289.6	EW		
			Tmr	356	EN		
			Tmrh/Ta	395.3	EN		Has welded Tpt
			Tmrh/Ta	402.3	EN	Z	
			Tpt	430.1	EW	D	
904	365905116012001	UE-6e	QTa	0			
			Tmr	426.1	EW		
			Tmr	492	EN		
			Tmrh/Ta	524.3	EN	Z	Has welded Tpt

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Tpt	572.4	EW	D	
			Tac	673.6	EN	Z	
			Tw	704.1	EN	Z	
			Tc	736.1	EN	Z	
			Tn/To	819.9	EN	Z	
			Dg	1214.6	PC		Pz stratigraphic pick from cross sections
906	365905116033201	UE-6d	QTa	0			
			Tn/To	1161.3	EN	Z	Zeol from Drellack,1994, pc
910	365943116032901	WW-3	QTa	0			
913	370005116040301	UE-1h	QTa	0			Basalt(225.6-307.8) included in QTa thickness
			Pz	518.2	PC		
914	370017116014201	U-3jg	QTa	0			
915	370020115593001	U-3mi	QTa	0			
			Tmr	108.2	EN		
			Tmrh/Ta	179.8	EN		
			Tmrh/Ta	225.6	EN	Z	
			Tw	234.7	EN	Z	
			Tc	257.6	EN	Z	
			Tn/Ta	324.6	EN	Z	
			Pz	542.5	PC		
916	370020116003701	U-3kv	QTa	0			
			Tma	310.9	EN		
			Tmr	356.6	EW		
			Tmr	425	EN		
			Tmrh/Ta	455.7	EN		Has welded Tpt
			Tpt	476.4	EW		
918	370053116002901	U-3ks	QTa	0			
			Tma	231.6	EN		
			Tmr	254.5	EW		
			Tmr	310	EN		
			Tmrh	339.9	EN		Has welded Tpt
			Tpt	362.7	EW		
			Tpt	381	EW	Z	
			Tac	396.2	EN	Z	
			Tw	402.3	EN	Z	
			Tc	414.5	EN	Z	
922	370142116021100	WW-A	QTa	0			
923	370142116021101	WW-A	QTa	0			
924	370142116033301	UE-1r WW	QTa	0			Tn/To nd
			Tmr	682.8	EW		
			Tmr	786.4	EN		
			Tw	800.1	EN	Z	
			Tmrh/Ta	803.1	EN	Z	

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Tw	951	EN	Z	
			Tc	969.3	EN	Z	
			Pz	1115.6	PC		
			Oe	1185.7	PC		Oe pick from Drellack
926	370157115591401	U-3mh	QTa	0			
			Tmr	77.7	EN		
			Tmr	149.4	EN	Z	
			Tmrh/Ta	152.4	EN	Z	
			Tw	198.1	EN	Z	
			Tc	222.5	EN	Z	
			Tn/Ta	300.2	EN	Z	
			Pz	521.2	PN		
927	370208116092401	UE-16f	QTa	0			
			MDe	24.1	PN		Eleana shale
928	370208116092402	UE-16f	QTa	0			
			MDe	24.1	PN		Eleana shale
929	370209116092500	UE-16f	QTa	0			
			MDe	24.4	PN		Eleana argillite, sandstone, siltstone, and quartzite
934	370218116033101	UE-1k	QTa	0			
			Tmr	664.5	EN		
935	370246116064901	UE-1f	QTa	0			Tmrh/Ta, Tw, Tc, Tbg, Tn/To, nd
			Mc	170.7	PN		Pz stratigraphic pick from cross sections
936	370253116055201	UE-1c	QTa	0			Tma, Tmr, Tw, Tc, nd
			Tmrh/Ta	368.8	EN		
			Tbg	405.4	EN		
			Tn/To	408.4	EN		
			Op	539.8	PC		Pz stratigraphic pick from cross sections
937	370254116064201	UE-1b	QTa	0			Tmrh/Ta, Tw, Tc, Tn/To, nd
			Mc	231.6	PN		Pz stratigraphic pick from cross sections
938	370254116070601	UE-1a	QTa	0			
			Mc	274.3	PN		Pz stratigraphic pick from cross sections
939	370254116082001	UE-1L	QTa	0			
			Mc	61	PN		
940	370254116082002	UE-1L	QTa	0			
			Mc	61	PN		
941	370301116065301	UE-1d	QTa	0			Tmrh/Ta, Tw, Tc, Tbg, Tn/To, nd
			Oe	250	PC		
944	370311115591901	TH-9	QTa	0			Tw, Tc, Tbg, Tn/To nd
			Tmr	108.2	EW		
			Tmr	168.5	EN		
			Tmrh/Ta	205.1	EN		
			Tmrh/Ta	362.7	EN	Z	
			Op	576.1	PC		

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
946	370321115594201	TW-E	QTa	0			Hole in high temperature area
			Tmr	137.2	EN		Tw,Tc, nd
			Tmrh/Ta	228.6	EN		
			Tbg	350.8	EN		
			Tn/To	353.3	EN	Z	
			Op	719	PC		Pz stratigraphic pick from cross sections
947	370321115594202	TW-E	QTa	0			Hole in high temperature area
			Tmr	137.2	EN		Tw,Tc, nd
			Tmrh/Ta	228.6	EN		
			Tbg	350.8	EN		
			Tn/To	353.3	EN	Z	
			Op	719	PC		Pz stratigraphic pick from cross sections
948	370321115594203	TW-E	QTa	0			Hole in high temperature area
			Tmr	137.2	EN		Tw,Tc, nd
			Tmrh/Ta	228.6	EN		
			Tbg	350.8	EN		
			Tn/To	353.3	EN	Z	
			Op	719	PC		Pz stratigraphic pick from cross sections
949	370326116021101	U-3jn 1	QTa	0			
			Tma	502.3	EN		
			Tmr	566.9	EN		
950	370334116012100	U-3cn 5 HTH	QTa	0			
			Tma	281.9	EN		
			Tmr	291.1	EN		
			Tmrh/Ta	355.1	EN		
			Tmrh/Ta	365	EN	Z	
			Tw	425.2	EN	Z	
			Tc	435.9	EN	Z	
			Tn/To	504.4	EN	Z	
			Ds	859.8	PC		Pz stratigraphic pick from cross sections
951	370334116012101	U-3cn 5 HTH	QTa	0			
			Tma	281.9	EN		
			Tmr	291.1	EN		
			Tmrh/Ta	355.1	EN		
			Tmrh/Ta	365	EN	Z	
			Tw	425.2	EN	Z	
			Tc	435.9	EN	Z	
			Tn/To	504.4	EN	Z	
			Ds	859.8	PC		Pz stratigraphic pick from cross sections
952	370337116033001	UE-1q	QTa	0			Hole deepened from 742.8 to 792.5 m 5/92
			Tma	389.5	EN		
			Tmr	410.6	EW		
			Tmr	500	EN		

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Tmrh/Ta	534.9	EN		
			Tmrh/Ta	548.6	EN	Z	
			Tw	579.1	EN	Z	
			Tc	595.9	EN	Z	
			Tbg	629.4	EN	Z	
			Tn/To	635.5	EN	Z	
			Pz	716.3	PC		
953	370337116033002	UE-1q	QTa	0			Hole deepened from 742.8 to 792.5 m 5/92
			Tma	389.5	EN		
			Tmr	410.6	EW		
			Tmr	500	EN		
			Tmrh/Ta	534.9	EN		
			Tmrh/Ta	548.6	EN	Z	
			Tw	579.1	EN	Z	
			Tc	595.9	EN	Z	
			Tbg	629.4	EN	Z	
			Tn/To	635.5	EN	Z	
			Pz	716.3	PC		
954	370338116011801	U-3cn 1	QTa	0			Tw,Tc,Tn/To, nd
			Tma	277.4	EN		
			Tmrh/Ta	356.6	EN		
955	370338116011901	U-3cn PS 2	QTa	0			Data from U3cn#1
			Tma	277.4	EN		Tw,Tc,Tn/To, nd
			Tmr	356.6	EN		
957	370339116024201	UE-3mf	QTa	0			
			Tma	207.3	EN		
			Tmr	288	EW		
			Tmr	396	EN		
			Tmr	428.2	EN	Z	
			Tmrh/Ta	435.9	EN	Z	
			Tw	542.5	EN	Z	
			Tc	570	EN	Z	
			Tbg	632.5	EN	Z	
			Tn/To	634	EN	Z	
958	370348116024301	U-3mt	QTa	0			
			Tma	193.5	EN		
			Tmr	276.8	EW		
			Tmr	387.1	EN		
			Tmr	418.2	EN	Z	
			Tmrh/Ta	419.1	EN	Z	
959	370353116000601	U-3jq 1	QTa	0			Hole in high temperature area
			Tma	199.6	EN		Tc nd
			Tmr	240.8	EN		

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Tmrh/Ta	280.4	EN		
			Tw	317	EN		
			Tw	326.1	EN	Z	
			Tbg	384	EN	Z	
			Tn/To	390.1	EN	Z	
			Pz	675.1	PC		
960	370353116020201	TW-7	QTa	0			Tma,Tmr,Tw,Tc, nd
			Tmrh/Ta	328.9	EN		
			Tmrh/Ta	506	EN	Z	
961	370353116021401	U-3an 3	QTa	0			Tbg,Tn/To nd
			Tma	475.5	EN		Tops from U3an#1
			Tmr	563.9	EW		
			Tmr	650	EN		
			Tmrh/Ta	682.8	EN		
			Tmrh/Ta	685.8	EN	Z	
			Ds	984.5	PC		Pz stratigraphic pick from cross sections
962	370355116013001	U-3cn 4 HTH	QTa	0			Tma,Tmr,Tmrh/Ta,Tw,Tc,Tn/To nd
963	370406116095600	UE-16d WW	QTa	0			
			Pbs	24.4	PC		
			Mc	453.2	PN		
964	370409116025901	U-3kz	QTa	0			
			Tma	286.5	EN		
			Tmr	367.3	EW		
			Tmr	485	EN		
			Tmrh/Ta	518.2	EN	Z	
			Tw	609.6	EN	Z	
			Tc	634	EN	Z	
965	370411116025901	UE-3e	QTa	0			Hole in over pressurized area
			Tma	283.5	EN		
			Tmr	365.8	EW		
			Tmr	475	EN		
			Tmrh/Ta	513.6	EN	Z	
			Tw	606.6	EN	Z	
			Tc	632.5	EN	Z	
			Tn/To	710.2	EN	Z	
966	370411116025902	UE-3e	QTa	0			Hole in over pressurized area
			Tma	283.5	EN		
			Tmr	365.8	EW		
			Tmr	475	EN		
			Tmrh/Ta	513.6	EN	Z	
			Tw	606.6	EN	Z	
			Tc	632.5	EN	Z	
			Tn/To	710.2	EN	Z	

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
967	370411116025903	UE-3e	QTa	0			Hole in over pressurized area
			Tma	283.5	EN		
			Tmr	365.8	EW		
			Tmr	475	EN		
			Tmrh/Ta	513.6	EN	Z	
			Tw	606.6	EN	Z	
			Tc	632.5	EN	Z	
			Tn/To	710.2	EN	Z	
968	370411116025904	UE-3e	QTa	0			Hole in over pressurized area
			Tma	283.5	EN		
			Tmr	365.8	EW		
			Tmr	475	EN		
			Tmrh/Ta	513.6	EN	Z	
			Tw	606.6	EN	Z	
			Tc	632.5	EN	Z	
			Tn/To	710.2	EN	Z	
969	370411116025905	UE-3e	QTa	0			Hole in over pressurized area
			Tma	283.5	EN		
			Tmr	365.8	EW		
			Tmr	475	EN		
			Tmrh/Ta	513.6	EN	Z	
			Tw	606.6	EN	Z	
			Tc	632.5	EN	Z	
			Tn/To	710.2	EN	Z	
970	370411116025906	UE-3e	QTa	0			Hole in over pressurized area
			Tma	283.5	EN		
			Tmr	365.8	EW		
			Tmr	475	EN		
			Tmrh/Ta	513.6	EN	Z	
			Tw	606.6	EN	Z	
			Tc	632.5	EN	Z	
			Tn/To	710.2	EN	Z	
971	370411116025907	UE-3e 2	QTa	0			Hole in over pressurized area
			Tma	286.5	EN		
			Tmr	368.8	EW		
			Tmr	475	EN		
			Tmr	513.6	EN	Z	
			Tmrh/Ta	516.6	EN	Z	
			Tw	604.7	EN	Z	
			Tc	638.6	EN	Z	
			Tn/To	720.5	EN	Z	
972	370411116025908	UE-3e 3	QTa	0			Hole in over pressurized area
			Tma	243.5	EN		

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Tmr	332.2	EW		
			Tmr	475	EN		
			Tmrh/Ta	498.3	EN	Z	
			Tw	601.4	EN	Z	
			Tc	627.3	EN	Z	
973	370411116025909	UE-3e 4	QTa	0			Hole in over pressurized area
			Tma	281.9	EN		
			Tmr	365.8	EW		
			Tmr	497	EN	Z	
			Tmrh/Ta	513.6	EN	Z	
			Tw	603.5	EN	Z	
			Tc	632.5	EN	Z	
974	370411116025910	UE-3e 4-1	QTa	0			Hole in over pressurized area
			Tma	281.9	EN		
			Tmr	365.8	EW		
			Tmr	497	EN	Z	
			Tmrh/Ta	513.6	EN	Z	
			Tw	603.5	EN	Z	
			Tc	632.5	EN	Z	
975	370411116025911	UE-3e 4-2	QTa	0			Hole in over pressurized area
			Tma	281.9	EN		
			Tmr	365.8	EW		
			Tmr	497	EN	Z	
			Tmrh/Ta	513.6	EN	Z	
			Tw	603.5	EN	Z	
			Tc	632.5	EN	Z	
976	370411116025912	UE-3e 4-3	QTa	0			Hole in over pressurized area
			Tma	281.9	EN		
			Tmr	365.8	EW		
			Tmr	477	EN		
			Tmr	497	EN	Z	
			Tmrh/Ta	513.6	EN	Z	
			Tw	603.5	EN	Z	
			Tc	632.5	EN	Z	
977	370412115593601	UE-7aa	QTa	0			Hole in high temperature area
			Tmr	61	EN		Tw,Tc,Tbg, nd
			Tmrh/Ta	114.3	EN		
			Tn/To	237.7	EN	Z	
			Pz	475.5			
979	370418116044501	TW-D	QTa	0			
			Tn/To	462	EN	Z	estimated from contact correlation-poor
			Pz	527			unknown Pz type
980	370419116101700	UE-17a	QTa	0			

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Pbs	22.3	PC		
			Mc	166.4	PN		
983	370434116040702	UE-4ae	QTa	0			
			Tma	475	EN		
			Tmr	486	EN		
			Tmr	488	EN	Z	Z estimated from XRD and elog-good
			Tmrh/Ta	540	EN	Z	
			Twlb	585	EN	Z	
			Tc	597	EN	Z	
			Tbgb	644	EN	Z	
			Tn/To	650	EN	Z	
			Cbk	719	PC		
984	370435116040701	U-4ak	QTa	0			
			Tma	477	EN		
			Tma	479	EN	Z	Z estimated from XRD
			Tmr	492	EN	Z	
985	370436116000201	U-7ca	QTa	0			Hole in high temperature area
			Tma	67.1	EN		
			Tmr	85.3	EN		
			Tmrh/Ta	195.1	EN		
			Tmrh/Ta	228.6	EN	Z	
			Tw	256	EN	Z	
			Tc	277.4	EN	Z	
			Tn/To	349	EN	Z	
986	370444116001801	U-7bc	QTa	0			Hole in high temperature area
			Tmr	126.5	EN		
			Tmrh/Ta	214	EN		
			Tw	257.6	EN	Z	
			Tc	277.4	EN	Z	
			Tbg	329.2	EN	Z	
			Tn/To	333.8	EN	Z	
987	370447116030501	U-7au	QTa	0			Hole in over pressurized area
			Tma	301.8	EN		
			Tmr	390.1	EW		
			Tmr	492.3	EN	Z	
			Tmrh/Ta	527.3	EN	Z	
			Tw	614.2	EN	Z	
			Tc	635.5	EN	Z	
			Tbg	701	EN	Z	
			Tn/To	705.6	EN	Z	
989	370451116024101	U-7cd	QTa	0			Hole in over pressurized area
			Tma	110.6	EN		
			Tmr	171.6	EW		

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Tmr	290	EN		
			Tmr	313.6	EN	Z	
			Tmrh/Ta	327.4	EN	Z	
			Tw	434.9	EN	Z	
			Tc	457.5	EN	Z	
			Tbg	505.4	EN	Z	
			Tn/To	511.5	EN	Z	
990	370451116024102	U-7cd 1	QTa	0			Hole in over pressurized area
			Tma	110.6	EN		
			Tmr	171.6	EW		
			Tmr	290	EN		
			Tmr	313.6	EN	Z	
			Tmrh/Ta	327.4	EN	Z	
			Tw	434.9	EN	Z	
			Tc	457.5	EN	Z	
			Tbg	505.4	EN	Z	
			Tn/To	511.5	EN	Z	
991	370454116003201	U-7bd	QTa	0			
			Tma	211.8	EN		
			Tmr	286.5	EW		
			Tmr	290	EN		
			Tmrh/Ta	332.2	EN		
			Tw	333.8	EN	Z	
			Tc	338.3	EN	Z	
			Tn/To	370.3	EN	Z	
992	370501116041301	UE-4ah	QTa	0			
			QTa	388			
			QTa	442			
			Tma	461	EN	Z	Z from XRD
			Tmr	530	EN	Z	Z from XRD
			Tmr	590	EN	Z	Z estimated from elog-good
			Tmrh/Ta	597	EN	Z	
			Twlb	634	EN	Z	
			Tc	654	EN	Z	
			Tbgb	727	EN	Z	
			Tn/To	734	EN	Z	
			Op	849	PC		
993	370506116031001	U-4r	QTa	0			
			Tma	310.9	EN		
			Tmr	373.4	EW		
			Tmr	484.6	EN		
			Tmr	513.6	EN	Z	
			Tmrh/Ta	527.3	EN	Z	

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Tw	597.4	EN	Z	
			Tc	614.2	EN	Z	
994	370509116040301	U-4au	QTa	0			
			Tma	377	EN		
			Tmr	438	EN		
			Tmrh/Ta	529	EN		no records leading me to assume there is pervasive zeolitization in this hole
996	370513116025101	U-4u PS 2A	QTa	0			Depths represent pre-test bed configuration
			Tma	216.4	EN		
			Tmr	268.2	EW		
			Tmr	365	EN		
			Tmr	408	EN	Z	
			Tmrh/Ta	408.4	EN	Z	
			Tw	496.8	EN	Z	
			Tc	512.1	EN	Z	
			Tbg	544.1	EN	Z	
			Tn/To	551.7	EN	Z	
997	370514116000601	U-7cb	QTa	0			Hole in high temperature area
			Tmr	80.8	EN		
			Tmrh/Ta	137.2	EN		
			Tw	201.2	EN		
			Tc	234.7	EN		
			Tc	240.8	EN	Z	
			Tn/To	289.6	EN	Z	
998	370514116024101	U-7ba	QTa	0			
			Tma	91.4	EN		
			Tmr	129.5	EW		
			Tmr	233.2	EN		
			Tmrh/Ta	273.7	EN	Z	
			Tw	371.9	EN	Z	
			Tc	388.6	EN	Z	
			Tn/To	467.6	EN	Z	
999	370520116025701	U-4u	QTa	0			Hole in over pressurized area
			Tma	201.2	EN		
			Tmr	248.4	EW		
			Tmr	350	EN		
			Tmrh/Ta	393.2	EN	Z	
			Tw	489.2	EN	Z	
			Tc	504.4	EN	Z	
			Tbg	536.4	EN	Z	
			Tn/To	545.6	EN	Z	
1001	370543116054101	UE-4aa	QTa	0			
			Tc	239	EN		

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Tbg	258	EN		
			Tn/To	261	EN		
			Pz	366	PC		
1002	370547116041101	UE-4av	QTa	0			
			Tma	268	EN		
			Tmr	293	EW		
			Tmr	365	EN		
			Tmrh/Ta	386	EN		
			Tmrh/Ta	393	EN	Z	
			Tw	437	EN	Z	
			Tc	454	EN	Z	
			Tbg	527	EN	Z	
			Tn	547	EN	Z	
			Mc	811	PN		
1003	370547116041102	UE-4av	QTa	0			
			Tma	268	EN		
			Tmr	293	EW		
			Tmr	365	EN		
			Tmrh/Ta	386	EN		
			Tmrh/Ta	393	EN	Z	
			Tw	437	EN	Z	
			Tc	454	EN	Z	
			Tbg	527	EN	Z	
			Tn	547	EN	Z	
			Mc	811	PN		
1004	370547116041103	U-4av	QTa	0			
			Tma	268	EN		
			Tmr	293	EN		
			Tmr	365	EN		
			Tmrh/Ta	386	EN		
			Tmrh/Ta	393	EN	Z	
			Tw	437	EN		
			Tc	454	EN	Z	
			Tbg	527	EN	Z	
			Tn/To	547	EN		
			Mc	811	PN		
1005	370547116041104	UE-4av	QTa	0			
			Tma	268	EN		
			Tmr	293	EW		
			Tmr	365	EN		
			Tmrh/Ta	386	EN		
			Tmrh/Ta	393	EN	Z	
			Tw	437	EN	Z	

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Tc	454	EN	Z	
			Tbg	527	EN	Z	
			Tn	547	EN	Z	
			Mc	811	PN		
1007	370556116000901	UE-7nS	QTa	0			Hole in high temperature area
			Tma	55.8	EN		Tc nd
			Tmr	85.3	EN		
			Tmrh/Ta	153.9	EN	Z	
			Tw	184.1	EN	Z	
			Tn/To	237.7	EN	Z	
			Oa	499.9	PC		Pz stratigraphic pick from cross sections
1008	370556116025401	UE-4t	QTa	0			
			Tma	131.1	EN		
			Tmr	169.2	EW		
			Tmr	222.5	EN		
			Tmr	307.8	EN	Z	
			Tmrh/Ta	317	EN	Z	
			Tw	378	EN	Z	
			Tc	393.2	EN	Z	
			Tbg	445	EN	Z	
			Tn/To	451.1	EN	Z	
1009	370556116025402	UE-4t	QTa	0			
			Tma	131.1	EN		
			Tmr	169.2	EW		
			Tmr	222.5	EN		
			Tmr	307.8	EN	Z	
			Tmrh/Ta	317	EN	Z	
			Tw	378	EN	Z	
			Tc	393.2	EN	Z	
			Tbg	445	EN	Z	
			Tn/To	451.1	EN	Z	
1010	370556116025403	UE-4t	QTa	0			
			Tma	131.1	EN		
			Tmr	169.2	EW		
			Tmr	222.5	EN		
			Tmr	307.8	EN	Z	
			Tmrh/Ta	317	EN	Z	
			Tw	378	EN	Z	
			Tc	393.2	EN	Z	
			Tbg	445	EN	Z	
			Tn/To	451.1	EN	Z	
1011	370556116025404	UE-4t	QTa	0			
			Tma	131.1	EN		

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Tmr	169.2	EW		
			Tmr	222.5	EN		
			Tmr	307.8	EN	Z	
			Tmrh/Ta	317	EN	Z	
			Tw	378	EN	Z	
			Tc	393.2	EN	Z	
			Tbg	445	EN	Z	
			Tn/To	451.1	EN	Z	
1012	370556116025405	UE-4t 1	QTa	0			
			Tma	129.5	EN		
			Tmr	169.2	EW		
			Tmr	223	EN		
			Tmrh/Ta	320	EN	Z	
			Tw	394.7	EN	Z	
			Tc	413	EN	Z	
			Tbg	461.8	EN	Z	
			Tn/To	475.5	EN	Z	
1015	370601116030102	UE-4a	QTa	0			Tmrh/Ta, Tw, Tc, nd
			Tma	164.6	EN		
			Tmr	228.6	EW		
			Tmr	340	EN		
			Tbg	508.4	EN	Z	Zeol. from Drellack, 1994 pc
			Tn/To	516.9	EN	Z	
1016	370601116030103	UE-4a	QTa	0			Tmrh/Ta, Tw, Tc, nd
			Tma	164.6	EN		
			Tmr	228.6	EW		
			Tmr	340	EN		
			Tbg	508.4	EN	Z	Zeol. from Drellack, 1994 pc
			Tn/To	516.9	EN	Z	
1019	370605116012401	U-7cc	QTa	0			
			Tma	152.4	EN		
			Tmr	187.5	EW		
			Tmr	219.5	EN		
			Tmrh/Ta	245.4	EN	Z	
			Tw	268.2	EN	Z	
			Tc	283.5	EN	Z	
			Tbg	320	EN	Z	
			Tn/To	345.9	EN	Z	
1020	370608116043101	UE-4ab	QTa	0			
			Tma	302	EN		
			Tmr	314	EW		
			Tmr	370	EN		
			Tmrh/Ta	379	EN		

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Tw	414	EN		
			Tc	426	EN		
			Tbg	495	EN	Z	
			Tn	509	EN	Z	
			Pz	777	PC		
			Mc	797	PN		
1021	370608116043102	UE-4ab	QTa	0			
			Tma	302	EN		
			Tmr	314	EW		
			Tmr	370	EN		
			Tmrh/Ta	379	EN		
			Tw	414	EN		
			Tc	426	EN		
			Tbg	495	EN	Z	
			Tn	509	EN	Z	
			Pz	777	PC		
			Mc	797	PN		
1024	370626116015601	U-7a	QTa	0			Tma,Tw,Tc, nd
			Tmr	234.7	EW		
			Tmr	277	EN		
			Tmrh/Ta	307.8	EN		
			Tmrh/Ta	350.5	EN	Z	
			Tbg	438.9	EN	Z	
			Tn/To	490.7	EN	Z	
			Sl	815.6	PC		Pz stratigraphic pick from cross sections
1027	370632116014401	U-7ag	QTa	0			
			Tmr	167.6	EW		
			Tmr	225.6	EN		
			Tmrh/Ta	259.1	EN		
			Tmrh/Ta	292.6	EN	Z	
			Tw	295.7	EN	Z	
			Tc	310.9	EN	Z	
			Tbg	368.8	EN	Z	
			Tn/To	393.2	EN	Z	
1028	370641116030501	U-2bt	QTa	0			
			Tmr	277	EN		
			Tmrh/Ta	402	EN	Z	estimated from old records-medium
1029	370645116031901	U-2gh	QTa	0			
			Tma	310	EN		
			Tmr	331	EN		
			Tmrh/Ta	491	EN		
			Tmrh/Ta	533	EN	Z	Z from logs and sample descriptions
1033	370712116073901	UE-2s	QTa	0			

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Tmr	256	EN		
			Tmrh/Ta	305	EN		
			Tbgb	408	EN		
			Tn/To	433	EN		
			Tn/To	506	EN	Z	Z estimated from GP5 correlation-medium
			Oc	529	PC		
1034	370720116041601	U-2gk	QTa	0			new hole, no lith log; entire hole QTa? if yes, no pervasive zeolitization
1035	370723116033101	U-2bs	QTa	0			
			Tmr	402	EN		
			Tmrh/Ta	512	EN		
			Tmrh/Ta	527	EN	Z	Z estimated from sample descriptions
1036	370726116040302	UE-2ar	QTa	0			
			Tma	619	EN		
			Tmr	643	EN		no records leading me to assume there is pervasive zeolitization in this hole
1037	370728116042001	U-2gf	QTa	0			
			Tma	525	EN	Z	Z estimated from elog-good
			Tma	527	EN		
			Tmr	538	EN	Z	
1038	370736116050301	UE-2fb	QTa	0			
			Tmr	498	EN		
			Tmrh/Ta	551	EN		
			Twlb	567	EN		
			Tc	584	EN		
			Tbgb	651	EN		
			Tn/To	661	EN		
			Tn/To	785	EN	Z	Z estimated from XRD and elog
			Op	792	PC		
1039	370737116035901	U-2v	QTa	0			
			Tma	547	EN		
			Tmr	585	EN		
			Tmrh/Ta	671	EN		still looking for info on pervasive zeolitization
1041	370741116194501	UE-18t	QTa	0	EN		
			Tt	91.7	EW		
			Tt	130	EN		
			Tf	131.9	EN		
			Tf	258	?		
			Tm	286	EN		
			Tm	286.1	EW		
			Tm	288	EW		
			Tm	394.7	EN		
			Tm	498.4	EW		

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
1043	370758116040601	UE-2aw	Tm	507	EW		
			QTa	0			
			Tmr	501	EN		
			Tmrh/Ta	614	EN		no records- assume pervasive zeolotization; can this be right??
1044	370802116050301	U-2dr	QTa	0			no records leading me to assume there is pervasive zeolotization in this hole
1045	370806116264001	UE-18r	Tt	0	EW		
			Tt	51.2	EN		
			Tf	103	LF		
			Tm	324.6	EN		
			Tm	348.1	EW		
			Tm	897.6	EN		
			Tm	1027.2	EW		
			Tm	1083.3	LF		
			Tm	1184.5	EN		
			Tm	1367	EW		
			Tm	1441.7	EN		
1046	370815116032701	U-9ct	QTa	0			
			Tmr	297	EN		
			Tmrh/Ta	390	EN		
			Tmrh/Ta	396	EN	Z	Z estimated-medium
			Twlb	443	EN	Z	
			Tc	462	EN	Z	
1047	370819116022901	U-9 ITS UE-S-25	QTa	0			
			Tmr	216	EN		
			Tmrh/Ta	253	EN		
			Twlb	292	EN		
			Tc	309	EN		
			Tc	365	EN	Z	Z estimated-good
			Tbgb	378	EN	Z	
			Tn/To	411	EN	Z	
			Oa	597	PC		
1048	370822116082701	U-2ca 1	QTa	0			Volvanics not all defined
			Tbg	204	EN		
			Tn/To	223	EN		
			Mc	432.8	PN		
1049	370823116050001	UE-2dj	QTa	0			
			Tma	658	EN		
			Tmr	684	EN		no records- assume pervasive zeolotization; can this be right??
1050	370826116041901	U-2ex	QTa	0			
			Tma	501	EN		

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
1051	370831116080700	UE-2ce WW	Tmr	520	EN		
			QTa	0			
			Tmrh/Ta	117	EN		no pervasively zeolitized rocks
			Tbgb	172	EN		
			Tn/To	201	EN		
1052	370831116080701	UE-2ce	Cbk	337	PC		
			QTa	0			
			Tmrh/Ta	117	EN		no pervasively zeolitized rocks
			Tbgb	172	EN		
			Tn/To	201	EN		
1055	370836116035001	U-2av	Cbk	337	PC		
			QTa	0			
			Tmr	357	EN		
			Tmrh/Ta	442	EN		
			Twlb	489	EN		
			Tc	507	EN		
			Tc	564	EN	Z	Z estimated-medium
			Tbgb	582	EN	Z	
1057	370846116030851	U-9ca 1	Tn/To	591	EN	Z	
			QTa	0			Volvanics not all defined
			Tbg	591	EN		
1058	370900116045601	U-2eh	SI	939	PC		
			QTa	0			
			Tmrh/Ta	610	EN		no records- assume pervasive zeolotization; can this be right??
1059	370904116040301	U-2ei	Tbgb	669	EN		
			QTa	0			
			Tmr	350	EN		
			Tmrh/Ta	420	EN		
			Twlb	483	EN		
			Tc	497	EN		
			Tbgb	521	EN		
			Tbgb	548	EN	Z	Z estimated from XRD-good
1060	370909116041901	UE-2aa	Tn/To	551	EN	Z	
			QTa	0			
			Tma	410	EN		
			Tmr	426	EN		
			Tmrh/Ta	488	EN		
			Twlb	545	EN		
			Tc	560	EN	Z	Z estimated-medium
			Tbgb	578	EN	Z	
			Tn/To	597	EN	Z	
			Mc	701	PN		

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
1061	370909116041951	UE-2aa	QTa	0			
			Tma	410	EN		
			Tmr	426	EN		
			Tmrh/Ta	488	EN		
			Twlb	545	EN		
			Tc	560	EN	Z	Z estimated-medium
			Tbgb	578	EN	Z	
			Tn/To	597	EN	Z	
1062	370910116045901	UE-2ax 2	QTa	0			
			Tmrh/Ta	631	EN		
			Tbgb	677	EN		
			Tn	713	EN	Z	Z estimated-medium
1063	370917116023701	U-10I 1	QTa	0			no good lith log
			Tmr	283	EN		
			Tmrh/Tc	312	EN		
			Tmrh/Tc	362	EN	Z	Z estimated-medium
			Tn/To	445	EN	Z	
			Oa	607	PC		
1064	370929116132301	TW-1	QTa	0			
			Tbgb	21.3	EN		
			Tn/To	68.6	EN	Z	Z estimated from lith log description
			Pz	1117.1	PC		Pz rock type is dolomite, strat unit unknown
1065	370929116132302	TW-1	QTa	0			
			Tbgb	21.3	EN		
			Tn/To	68.6	EN	Z	Z estimated from lith log description
			Pz	1117.1	PC		Pz rock type is dolomite, strat unit unknown
1066	370929116132303	TW-1	QTa	0			
			Tbgb	21.3	EN		
			Tn/To	68.6	EN	Z	Z estimated from lith log description
			Pz	1117.1	PC		Pz rock type is dolomite, strat unit unknown
1067	370929116132304	TW-1	QTa	0			
			Tbgb	21.3	EN		
			Tn/To	68.6	EN	Z	Z estimated from lith log description
			Pz	1117.1	PC		Pz rock type is dolomite, strat unit unknown
1068	370929116132305	TW-1	QTa	0			
			Tbgb	21.3	EN		
			Tn/To	68.6	EN	Z	Z estimated from lith log description
			Pz	1117.1	PC		Pz rock type is dolomite, strat unit unknown
1069	370929116132306	TW-1	QTa	0			
			Tbgb	21.3	EN		
			Tn/To	68.6	EN	Z	Z estimated from lith log description
			Pz	1117.1	PC		Pz rock type is dolomite, strat unit unknown
1070	370929116132307	TW-1	QTa	0			

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Tbgb	21.3	EN		
			Tn/To	68.6	EN	Z	Z estimated from lith log description
			Pz	1117.1	PC		Pz rock type is dolomite, strat unit unknown
1071	370929116132308	TW-1	QTa	0			
			Tbgb	21.3	EN		
			Tn/To	68.6	EN	Z	Z estimated from lith log description
			Pz	1117.1	PC		Pz rock type is dolomite, strat unit unknown
1072	370929116132309	TW-1	Tbgb	21.3	EN		
			Pz	1117.1	PC		Pz rock type is dolomite, strat unit unknown
1073	370929116132310	TW-1	QTa	0			
			Tbgb	21.3	EN		
			Tn/To	68.6	EN	Z	Z estimated from lith log description
			Pz	1117.1	PC		Pz rock type is dolomite, strat unit unknown
1074	370929116132311	TW-1	QTa	0			
			Tbgb	21.3	EN		
			Tn/To	68.6	EN	Z	Z estimated from lith log description
			Pz	1117.1	PC		Pz rock type is dolomite, strat unit unknown
1075	370953116030801	U-10k 1	QTa	0			no good lith log
			tuffs	340	EN	Z	Z estimated-questionable
			tuffs	399	EN		
			Cn	631	PC		
1076	370956116172101	WW-8	Tm	0	EW	GD	data presented are for well TW-8/WW-8
			Tr	46.3	EN	Z	
			Tbq	241.4	TC	DZ	
			To	612.6	EN	GZ	
			To	685.2	EN	Z	
			To	762	IW	DZ	
			Tlt	1609.3		A	
1077	370958116051501	WW-2	QTa	0			hole recompleted, depth 1043.030 m
			Tmr	381	EN	Z	Z estimated from UE8e
			Tmrh/Ta	442	EN	Z	
			Tbgb	495	EN	Z	
			Tn/To	527	EN	Z	
			Ds	777	PC		estimated from UE8e; less confidence in Pz rock type due to possible thrusts
1078	370958116051503	WW-2	QTa	0			hole recompleted, depth 1043.030 m
			Tmr	381	EN	Z	Z estimated from UE8e
			Tmrh/Ta	442	EN	Z	
			Tbgb	495	EN	Z	
			Tn/To	527	EN	Z	
			Ds	777	PC		estimated from UE8e; less confidence in Pz rock type due to possible thrusts
1079	370958116051508	WW-2	QTa	0			hole recompleted, depth 1043.030 m

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Tmr	381	EN	Z	Z estimated from UE8e
			Tmrh/Ta	442	EN	Z	
			Tbgb	495	EN	Z	
			Tn/To	527	EN	Z	
			Ds	777	PC		estimated from UE8e; less confidence in Pz rock type due to possible thrusts
1080	370958116051511	WW-2	QTa	0			hole recompleted, depth 1043.030 m
			Tmr	381	EN	Z	Z estimated from UE8e
			Tmrh/Ta	442	EN	Z	
			Tbgb	495	EN	Z	
			Tn/To	527	EN	Z	
			Ds	777	PC		estimated from UE8e; less confidence in Pz rock type due to possible thrusts
1081	370958116051512	WW-2	QTa	0			hole recompleted, depth 1043.030 m
			Tmr	381	EN	Z	Z estimated from UE8e
			Tmrh/Ta	442	EN	Z	
			Tbgb	495	EN	Z	
			Tn/To	527	EN	Z	
			Ds	777	PC		estimated from UE8e; less confidence in Pz rock type due to possible thrusts
1082	371014116051601	UE-8e	QTa	0			there are several holes called UE8e
			Tmr	270	EN		
			Tmrh/Ta	350	EN	Z	Z estimated-medium
			Twlb	354	EN	Z	
			Tc	363	EN	Z	
			Tbgb	391	EN	Z	
			Tn	416	EN	Z	
			To	521	EN	Z	
			Ds	736	PC		less confidence in Pz type due to possible thrusts
1083	371014116051602	UE-8e	QTa	0			See attached sheet-there are several holes in this area called UE8e
			Tmr	270	EN		
			Tmrh/Ta	350	EN	Z	Z estimated-medium
			Twlb	354	EN	Z	
			Tc	363	EN	Z	
			Tbgb	391	EN	Z	
			Tn	416	EN	Z	
			To	521	EN	Z	
			Ds	736	PC		less confidence in Pz type due to possible thrusts
1085	371031116053001	U-8n	QTa	0			big hole, not exploratory hole
			Tmr	162	EN		
			Tmrh/Ta	216	EN		
			Tbgb	242	EN		

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Tn	270	EN		
			Tn	320	EN	Z	samples and logs indicate this is a good pick; gradational
			Tos	345	EN	Z	
			To	352	EN	Z	
1089	3711048116052001	U-8j	QTa	0			
			Tbgb	123	EN		
			Tn	161	EN		
			Tn	210	EN	Z	logs indicate this is a good pick
			Tos	309	EN	Z	
			To	323	EN	Z	
			O	600	PN		PZ quartzite, formation unknown, guessing O
1091	371106116110401	ER-12-1	QTa	0			
			DSs	7.9	PC		
			Oa	240.8	PC		
			DSs	274.3	PC		
			Mc	312.4	PN		
			Ds/Dg	521.2	PC		
			Mc	550.8	PN		
			Ds	874.2	PC		
			DSs	974.4	PC		
			Intrusiv	1086.3			Biotite Lamprophyre intrusive
1092	371108116045301	UE-10j	QTa	0			hole recompleted, depth 796.442 m
							Z estimated at top of tuffs due to northern Yucca Flat location
			Tn	63	EN	Z	
			Tos	109	EN	Z	
			To	116	EN	Z	
			Cbk	316	PC		
1093	371109116024701	UE-10 ITS 3	QTa	0			
			Tmrh/Ta	229	EN		
			Tmrh/Ta	280	EN	Z	Z estimated-medium
			Tw	320	EN	Z	
			Tc	331	EN	Z	
			Tbgb	378	EN	Z	
			Tn/To	395	EN	Z	
1094	371109116024702	UE-10 ITS 3	QTa	0			
			Tmrh/Ta	229	EN		
			Tmrh/Ta	280	EN	Z	Z estimated-medium
			Tw	320	EN	Z	
			Tc	331	EN	Z	
			Tbgb	378	EN	Z	
			Tn/To	395	EN	Z	
1095	371123116025201	UE-10bf	QTa	0			

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Tmrh/Ta	245	EN		
			Tmrh/Ta	280	EN	Z	Z estimated-good
			Twlb	299	EN	Z	
			Tc	314	EN	Z	
			Tbgb	388	EN	Z	
			Tn	408	EN	Z	
			Tos	552	EN	Z	
			To	579	EN	Z	
			Cbk	678	PC		
1096	371123116025202	UE-10bf	QTa	0			
			Tmrh/Ta	245	EN		
			Tmrh/Ta	280	EN	Z	Z estimated-good
			Twlb	299	EN	Z	
			Tc	314	EN	Z	
			Tbgb	388	EN	Z	
			Tn	408	EN	Z	
			Tos	552	EN	Z	
			To	579	EN	Z	
			Cbk	678	PC		
1097	371131116021501	UE-10aa	QTa	0			
			To	143	EN		
			Tos	229	EN		
			To	280	EN		
			To	300	EN	Z	Z estimated from U10ca, U10cb-medium
			Pz	347	PC		Pz strat type unknown
1101	371155116031401	UE-10 ITS 5	QTa	0			
			Tmrh/Ta	235	EN		
			Tmrh/Ta	274	EN	Z	Z estimated-good
			Twlb	282	EN	Z	
			Tc	294	EN	Z	
			Tbgb	348	EN	Z	
			Tn	384	EN	Z	
			Tos	536	EN	Z	
			To	579	EN	Z	
			Cbk	701	PC		CDB has hole depth at 711.4-need to check
1102	371155116031402	UE-10 ITS 5	QTa	0			
			Tmrh/Ta	235	EN		
			Tmrh/Ta	274	EN	Z	Z estimated-good
			Twlb	282	EN	Z	
			Tc	294	EN	Z	
			Tbgb	348	EN	Z	
			Tn	384	EN	Z	
			Tos	536	EN	Z	

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			To	579	EN	Z	
			Cbk	701	PC		CDB has hole depth at 711.4-need to check
1105	371226116125201	UE-12n 15A	QTa	0			
			KQm	571.5			KQm=Cretaceous Quartz Monzonite
1109	371307116103801	UE-12t 7	QTa	0			
			Pz	479.8			
1110	371313116274201	U-20as	Tt	0	EW		
			Tf	84	EN		
			Tm	90	EN		
			Tm	163	EW		
			Tm	187	EN		
			Tm	302	EN	Z	
			Tp	372	LF	Z	
			Tp	484	EN	Z	
1111	371315116282701	U-20y	Tt	0	EW		
			?	18			
			Tm	46	EW		
			Tm	94	EN		
			Tm	98	EW		
			Tm	152	EN		
			Tp	195	LF		
			Tp	378	EN	Z	
			Tp	475	EW	Z	
			Tp	573	EN	Z	
			Tp	640	EW	Z	
			Tp	747	EN	Z	
1113	371329116220301	UE-19fS	Tm	0	EW	GD	
			Tm	287.7	EN	GL	
			Tpc	301.8	EW	GL	
			Tp	320	LF	DZ	DV/GL/Z
			Tac	734.6	TC	Z	
			Tai	776	LF	DZ	DV/Z/GL
			Ta/Tc	1336.6	TC		
			Tcb	1460	EN	D	
			Tbgs	1553	LF	DZ	
			Tbq	1935.5	TC	D	
1114	371332116112801	UE-12t 6	Pz	425.8			
1115	371332116112802	UE-12t 6	Tmr	0			Coring started at 205.3 m in zeolotized Tunnel Bed 3
			Pz	425.8			
1116	371332116254101	U-20be	Tt	0	EW		
			Tf	52	EN		
			Tm	66	EW		
			Tm	84	EN		

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Tm	165	EW		
			Tm	318	EN		
			Tp	429	EN	Z	
			Ta	484	IN	Z	
1119	371339116221601	U-19az	Tm	0	?		
			Tm	24.4	EW		
			Tm	40.2	EN		
			Tm	62.8	EW		
			Tm	254.8	EN		
			Tp	285.3	EW		
			Tp	303.6	EN		
			Tp	329.2	LF		
			Tp	556.3	EW		
1122	371341116222901	U-19aq	Tm	0	EW		
			Tm	34.4	EN		
			Tm	59.1	EW		
			Tm	249.6	EN		
			Tp	285.9	EW		
			Tp	306	EN		
			Tp	335.1	LF		
			Tp	565.4	EW		
1124	371342116125101	U-12s	Kgg	0	LF	U	
			KQm	0			KQm to TD of 486.5 m
1125	371342116125102	U-12s	Kgg	0	LF	U	
			KQm	0			KQm to TD of 486.5 m
1126	371349116222001	U-19bh	Tm	0	EW		
			Tm	40.8	EN		
			Tm	62.2	EW		
			Tm	252.1	EN		
			Tp	281.6	EW		
			Tp	301.8	EN		
			Tp	327.7	LF		
			Tp	538.9	EW		
			Tp	635.8	EN		
1127	371350116264701	U-20ax	Tt	0	EW		
			Tt/Tf	43	EN		
			Tm	51	EN		
			Tm	53	EW		
			Tm	91	EN		
			Tm	110	EW		
			Tm	279	EN		
			Tp	326	EN		
			Tp	334	LF		

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Tp	389	EN		
			Tp	415	EN	Z	
			Tp	431	EW	Z	
			Tp	457	EN	Z	
			Ta	484	IN	Z	
1128	371352116243401	U-20az	Tm	0	EW		
			Tm	157	EN		
			Tp	185	EW		
			Tp	194	EN		
			Tp	223	LF		
			Ta	282	LF		
			Ta	386	IN		
1129	371352116281801	UE-20c	Tt	0	EW		
			Tf	66	EN		
			Tm	67	EW		
			Tm	235	EN		
			Tp	290	LF		
			Tp	637	EW	Z	
			Tp	890	EN	Z	
			Ta	930	TC	Z	
1130	371353116282501	U-20c	Tt	0	EW		
			Tm	67	EW		
			Tm	135	EW		
			?	247	EN		
			Tp	290	LF		
			Tp	637	EW		
			Tp	750	WN	Z	
			Tp	792	EW	Z	
			?	930	IN?	Z	
			Ta	1106	LF	Z	
			Ta	1338	IN	Z	
1131	371359116252301	U-20av	Tt	0	EW		
			Tf	67	EN		
			Tm	89	EW		
			Tm	142	EN		
			Tm	198	EW		
			Tm	359	EN		
			Tm	473	LF		
			Tm	513	LF	Z	
			Tm	564	EN	Z	
			Tp	585	EN	Z	
1132	371401116220601	U-19x	Tm	0	EW		
			Tm	56.7	EN		

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Tm	74.4	EW		
			Tm	289	EN		
			Tp	310.3	EN		
			Tp	313	EW		
			Tp	327.1	EN		
			Tp	344.4	LF		
			Tp	540.7	EW		
			Tp	554.7	EN		
			Tp	602	LF		
1133	371401116252001	UE-20av	Tt	0	EW		
			Tf	76	EN		
			Tm	102	EW		
			Tm	393	EN		
			Tm	425	EN	Z	
			Tm	464	LF	Z	
			Tm	564	EN	Z	
			Tp	582	EN	Z	
			Ta	718	LF	Z	
1134	371410116221301	U-19ae	Tf	0	EW		
			Tm	12.2	EW		
			Tm	51.5	EN		
			Tm	72.2	EW		
			Tm	288.3	EN		
			Tp	311.5	EN		
			Tp	313.9	EW		
			Tp	322.8	EN		
			Tp	351.1	LF		
			Tp	548.9	EW		
			Tp	563.6	EN		
			Tp	581.9	LF		
			Tp	682.8	EN		
			Ta	685.8	IN		
1136	371416116282201	U-20ao	Tt	0	EW		
			Tt	45	EN		
			Tf	67	EN		
			Tm	83	EN		
			Tm	170	EW		
			Tm	290	EN		
			Tp?	300	EN		
			Tp?	417	EN	Z	
			Tp	425	LF	Z	
1138	371421116333701	PM-3	Tt	0	EW		
			Tt	24	EN		

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Tt	37	EW		
			Tt	46	EN		
			Tt	53	LF		
			Tf	140	EN		
			Tm	154	EN		
			Tm	162	EW		
			Tm	181	EN		
			Tm	189	EW		
			Tm	255	EN		
			Tm	533	EN		
			Tp	552	EN		
			Tp	575	EW		
			Tp	652	EN		
			Ta	823	IN		
			Tc	856	IN		
			Tb	899	IW		
			Tq	911	IW		
1139	371421116333702	PM-3	Tt	0	EW		
			Tt	24	EN		
			Tt	37	EW		
			Tt	46	EN		
			Tt	53	LF		
			Tf	140	EN		
			Tm	154	EN		
			Tm	162	EW		
			Tm	181	EN		
			Tm	189	EW		
			Tm	255	EN		
			Tm	533	EN		
			Tp	552	EN		
			Tp	575	EW		
			Tp	652	EN		
			Ta	823	IN		
			Tc	856	IN		
			Tb	899	IW		
			Tq	911	IW		
1140	371421116333703	PM-3-1	Tt	0	EW		
			Tt	24	EN		
			Tt	37	EW		
			Tt	46	EN		
			Tt	53	LF		
			Tf	140	EN		
			Tm	154	EN		

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Tm	162	EW		
			Tm	181	EN		
			Tm	189	EW		
			Tm	255	EN		
			Tm	533	EN		
			Tp	552	EN		
			Tp	575	EW		
			Tp	652	EN		
			Ta	823	IN		
			Tc	856	IN		
			Tb	899	IW		
			Tq	911	IW		
1141	371421116333704	PM-3-2	Tt	0	EW		
			Tt	24	EN		
			Tt	37	EW		
			Tt	46	EN		
			Tt	53	LF		
			Tf	140	EN		
			Tm	154	EN		
			Tm	162	EW		
			Tm	181	EN		
			Tm	189	EW		
			Tm	255	EN		
			Tm	533	EN		
			Tp	552	EN		
			Tp	575	EW		
			Tp	652	EN		
			Ta	823	IN		
			Tc	856	IN		
			Tb	899	IW		
			Tq	911	IW		
1142	371423116220401	U-19af	Tm	0	EW		
			Tm	52.4	EN		
			Tm	72.5	EW		
			Tm	303.3	EN		
			Tp	328	EN		
			Tp	333.2	EN		
			Tp	338.6	LF		
			Tp	549.6	EW		
			Tp	559.6	EN		
			Tp	570.9	LF		
			Tp	632.2	EN		
			Ta	637.6	EN		

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
1144	371425116251901	UE-20n 1	Tt	0	EW		
			Tf	66	?		
			Tf	83	EN		
			Tm	108	EW		
			Tm	337	LF		
			Tp	549	EN	Z	
1145	371425116251902	UE-20n 1	Ta	634	LF	Z	
			Tt	0	EW		
			Tf	66	?		
			Tf	83	EN		
			Tm	108	EW		
			Tm	337	LF		
1148	371434116251601	U-20a 2 WW	Tp	549	EN	Z	
			Ta	634	LF	Z	
			Tm	0	EW		
			Tt	0	EW		
			Tf	73	EN		
			Tm	91	EN		
1149	371434116255101	U-20a	Tm	171	EW		
			Tm	195	EN		
			?	204	EN		
			?	277	LF		
			?	332	EN		
			?	357	EN	Z	
			?	363	EN		
			Tp	369	LF		
			Ta	381	IN	Z	
			Ta	487	LF	Z	
			Tp	553	EN	Z	
			Tp	613	LF	Z	
			Ta	640	IN	Z	
			Ta	674	IN	Z	
1149	371434116255101	U-20a	Ta	698	LF	Z	
			Ta	704	LF	Z	
			Tt	0	EW		
			Tf	58	EN		
			Tm	64	EW		
			Tm	119	EN		
			Tm	140	EW		
			?	280	EN		
1149	371434116255101	U-20a	Tp	287	LF		
			?	457	IN?		
			Ta	503	LF		

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Ta	625	IN		
			Ta	710	LF		
1152	371442116243301	UE-20bh 1	Tm	0	EN		
			Tm	37	EW		
			Tm	105	EN		
			?	113	EN		
			Ta	169	IN		
			Ta	184	LF		
			Ta	224	IN	Z	
			Ta	426	LF	Z	
			Ta	519	IN	Z	
			Ta	725	LF	Z	
1153	371444116263001	U-20bf	Tt	0	EW		
			Tt	35	EN		
			Tf	48	EN		
			Tm	63	EN		
			Tm	78	EW		
			Tm	124	EN		
			Tm	146	EN		
			Tm	172	EW		
			Tm	361	EN		
			Tm	376	EN		
			Tp	447	EN		
			Tp	491	EW		
			Tp	518	EN	Z	
			Ta	531	LF	Z	
			Ta	592	IN	Z	
1156	371452116284901	UE-20D	Tt	0	EW		
			Tt	72	EN		
			Tf	82	EN		
			Tm	105	EW		
			Tm	369	EN		
			Tp	577	LF		
			Tp	677	EW	Z	
			Ta	969	IN	Z	
			Ta	1245	LF	Z	
1157	371452116292101	U-20ak	Tt	0	EW		
			Tf	72	EN		
			Tm	90	EN		
			Tm	180	EN		
			Tm	350	EW		
			?	354	EN		
			?	488	EN	Z	

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
1158	371452116293901	U-20bb	Tp	534	LF	Z	
			Tt	0	EW		
			Tt	31	EN		
			Tf	73	EN		
			Tm	85	EN		
			Tm	181	EW		
			Tm	337	EN		
			Tm	349	EN		
			Tm	453	EN	Z	
			Tp	614	EN	Z	
1159	371452116293902	U-20bb	Tp	644	LF	Z	
			Tp	658	EN	Z	
			Tt	0	EW		
			Tt	31	EN		
			Tf	73	EN		
			Tm	85	EN		
			Tm	181	EW		
			Tm	337	EN		
			Tm	349	EN		
			Tm	453	EN	Z	
1160	371452116293903	U-20bb 1	Tp	614	EN	Z	
			Tp	644	LF	Z	
			Tp	658	EN	Z	
			Tt	0	EW		
			Tt	31	EN		
			Tf	73	EN		
			Tm	85	EN		
			Tm	181	EW		
			Tm	337	EN		
			Tm	349	EN		
1161	371452116303301	U-20at 1	Tm	453	EN	Z	
			Tp	614	EN	Z	
			Tp	644	LF	Z	
			Tp	658	EN	Z	
			Tt	0	EW		
			Tt	37	EN		
			Tf	67	EN		
			Tm	73	EN		
			Tm	143	EW		
			Tm	299	EN		
1163	371459116204801	UE-19i	Tm	421	EN	Z	
			Tm	0	EW		
			Tm	235.3	EN		

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Tm	240.8	EN		
			Tp	259.1	EW		
			Tp	260.3	EW		
			Tp	271.3	EN		
			Tp	274.3	EN		
			Tp	301.8	LF		
			Tp	304.8	LF		
			Tp	576.7	EW		
			Tp	585.2	EW		
			Tp	600.5	LF		
			Tp	618.7	EW		
			Tp	630.9	EN		
			Tp	640.1	EN		
			Ta	655.3	IN		
			Ta	657.5	IN		
			Tc	713.2	IN		
			Tc	730.9	IN		
			Tc	750	IN	Z	
			Tc	751	IN	Z	
			Tc	941.8	LF	Z	
			Tc	954	IN	Z	
			Tc	997.6	IW	Z	
			Tc	1011.9	IW	Z	
			Tc	1026.3	LF	Z	
			Tc	1033.3	IN	Z	
			Tc	1042.4	LF	Z	
			Tc	1157.6	IN	Z	
			Tc	1161.3	IN	Z	
			Tc	1239.6	IW	Z	
			Tc	1251.8	LF	Z	
			Tb	1484.4	IW	Z	
			Tb	1603.3	LF	Z	
			Tb	2077.2	IW	Z	
			Tb	2234.2	LF	Z	
1164	371505116254501	U-20 WW	Tt	0	EW		
			Tf	73	EN		
			Tm	89	EN		
			Tm	101	EW		
			Tm	393	EN		
			Ta	440	TC	Z	
			Ta	701	TC	Z	
1165	371505116254502	U-20 WW	Tt	0	EW		
			Tf	73	EN		

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Tm	89	EN		
			Tm	101	EW		
			Tm	393	EN		
			Ta	440	TC	Z	
			Ta	701	TC	Z	
1166	371505116594101		QTa	0			
1167	371509116223601	U-19au	Tm	0	EW		
			Tm	222.6	EN		
			Tp	247.3	EW		
			Tp	264.1	EN		
			Tp	277.9	LF		
			Tp	317.7	EN		
			Tp	334.1	LF		
			Ta	445.6	IN		
			Ta	514.1	LF		
			Ta	641	IN		
1168	371509116223602	U-19au 1	Tm	0	EW		
			Tm	222.6	EN		
			Tp	247.3	EW		
			Tp	264.1	EN		
			Tp	277.9	LF		
			Tp	317.7	EN		
			Tp	334.1	LF		
			Ta	445.6	IN		
			Ta	514.1	LF		
			Ta	641	IN		
1169	371512116193101	U-19ab	Tm	0	EN		
			Tm	14.6	EW		
			Tm	320	EN		
			Tm	358.4	EW		
			Tp	360.9	EW		
			Tp	374.9	EN		
			Tp	388	LF		
			Tp	469.4	EN		
			Ta	488.3	IN		
			Tc	576.1	IN		
			Tc	637.3	IW		
			Tc	641	IN		
1170	371513116193001	U-19ab 2	Tm	0	EW	GD	
			Tm	340.8	EN	GL	
			Tpc	363	EW	GL	
			Tp	381	LF	DZ	DV/GL/Z
			Ta/Tc	489.2	EN	GL	

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Ta/Tc	545.6	EN	Z	
			Tcb	643.1	IN	Z	
1172	371519116223301	U-19av	Tm	0	EW		
			Tm	237.7	EN		
			Tp	259.1	EW		
			Tp	280.4	EN		
			Tp	313.9	LF		
			Ta	499.9	EN		
			Ta	528.8	LF		
1173	371521116252001	U-20ah	Tt	0	EW		
			Tf	76	EN		
			Tm	112	EW		
			Tm	465	EN	Z	
			Tp	513	EN	Z	
			Ta	554	IN	Z	
			Ta	582	LF	Z	
1174	371523117012601		QTa	0			
			Ty/Tq	61			Hard rock
1175	371523117033401		QTa	0			
1178	371536116262801	U-20ay	Tt	0	EW		
			Tt	35	EN		
			Tf	50	EN		
			Tm	64	EN		
			Tm	153	EW		
			Tm	380	EN		
			Tp	473	EN		
			Tp	491	EW		
			Tp	502	EN	Z	
			Ta	513	IN	Z	
			Ta	577	LF	Z	
1181	371542116251201	U-20bd	QTa	0			
			Tt	14	EW		
			Tf	80	EN		
			Tm	123	EN		
			Tm	139	EW		
			Tm	197	EN		
			Tm	218	EW		
			Tm	463	EW	Z	
			Tm	491	EN	Z	
			Tp	588	EN	Z	
			Ta	646	IN	Z	
1182	371542116251202	U-20bd 2	QTa	0			
			Tt	14	EW		

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Tf	80	EN		
			Tm	123	EN		
			Tm	139	EW		
			Tm	197	EN		
			Tm	218	EW		
			Tm	463	EW	Z	
			Tm	491	EN	Z	
			Tp	588	EN	Z	
			Ta	646	IN	Z	
1183	371542116251203	U-20bd	QTa	0			
			Tt	14	EW		
			Tf	80	EN		
			Tm	123	EN		
			Tm	139	EW		
			Tm	197	EN		
			Tm	218	EW		
			Tm	463	EW	Z	
			Tm	491	EN	Z	
			Tp	588	EN	Z	
1186	371547116292601	U-20bc	Ta	646	IN	Z	
			Tt	0	EW		
			Tf	82	EN		
			Tm	98	EN		
			Tm	199	EW		
			Tm	443	EN		
			Tp?	507	EN		
			Tp?	543	EN	Z	
1187	371547117011101		QTa	0			
1188	371551116262501	U-20ai	Tt	0	EW		
			Tf	47	EN		
			Tm	56	EW		
			Tm	401	EN		
			Ta	490	IN		
			Ta	549	IN	Z	
			Ta	579	LF	Z	
1192	371604116243801	U-20am	Tm	0	EW		
			Tm	168	EN		
			Ta	287	IN	Z	
			Ta	362	LF	Z	
			Ta	413	IN	Z	
			Ta	547	LF	Z	
1193	371608116191001	UE-19c	Tm	0	EW		
			Tm	63.7	EN		

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Tm	82.9	EW		
			Tm	402.3	EN		
			Tm	448.1	LF		
			Tp	464.8	EW		
			Tp	492.9	EN	Z	
			Ta	511.8	IN	Z	
			Tc	666.6	IN	Z	
			Tb	724.5	LF	Z	
			Tb	856.5	IN	Z	
			Tb	864.1	LF	Z	
			Tb	951	IW	Z	
			Tb	973.8	IN	Z	
			Tb	1031.8	LF	Z	
			Tb	1074.4	IW	Z	
			Tb	1095.8	LF	Z	
			Tb	1187.2	IN	Z	
			Tb	1194.8	LF	Z	
			Tb	1210.1	IN	Z	
			Tb	1240.5	LF	Z	
			Tb	1572.8	IW	Z	
			Tb	1633.7	IN	Z	
			Tb	1685.5	LF	Z	
			Tb	1819.7	IN	Z	
			Tb	1834.9	LF	Z	
			Tb	2164.1	IN	Z	
			Tb	2249.4	LF	Z	
			Tb	2325.6	IW	Z	
			Tb	2401.8	LF	Z	
			Tb	2508.5	IN	Z	
1194	371608116191002	UE-19c WW	Tm	0	EW		
			Tm	63.7	EN		
			Tm	82.9	EW		
			Tm	402.3	EN		
			Tm	448.1	LF		
			Tp	464.8	EW		
			Tp	492.9	EN	Z	
			Ta	511.8	IN	Z	
			Tc	666.6	IN	Z	
			Tb	724.5	LF	Z	
			Tb	856.5	IN	Z	
			Tb	864.1	LF	Z	
			Tb	951	IW	Z	
			Tb	973.8	IN	Z	

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Tb	1031.8	LF	Z	
			Tb	1074.4	IW	Z	
			Tb	1095.8	LF	Z	
			Tb	1187.2	IN	Z	
			Tb	1194.8	LF	Z	
			Tb	1210.1	IN	Z	
			Tb	1240.5	LF	Z	
			Tb	1572.8	IW	Z	
			Tb	1633.7	IN	Z	
			Tb	1685.5	LF	Z	
			Tb	1819.7	IN	Z	
			Tb	1834.9	LF	Z	
			Tb	2164.1	IN	Z	
			Tb	2249.4	LF	Z	
			Tb	2325.6	IW	Z	
			Tb	2401.8	LF	Z	
			Tb	2508.5	IN	Z	
1195	371617116291701	UE-20f	Tt	0	EW		
			?	12	EW		
			Tm	101	EW		
			Tm	454	EW		
			Tm	458	EN		
			Tm	459	EN		
			Tm	588	EN	Z	
			Tp	753	EN	Z	
			Tp	776	EW	Z	
			Tp	794	EW	Z	
			Tp	820	EN	Z	
			Tp	830	EN	Z	
			?	878		Z	
			Ta	899	TC	Z	
			Ta	939	TC	Z	
			Ta	1268	LF	Z	
			Tc	1710	IN	Z	
			Tb	2522	LF	Z	
			Tu	2974	?		
1196	371617116291702	UE-20f	Tt	0	EW		
			?	12	EW		
			Tm	101	EW		
			Tm	454	EW		
			Tm	458	EN		
			Tm	459	EN		
			Tm	588	EN	Z	

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Tp	753	EN	Z	
			Tp	776	EW	Z	
			Tp	794	EW	Z	
			Tp	820	EN	Z	
			Tp	830	EN	Z	
			?	878		Z	
			Ta	899	TC	Z	
			Ta	939	TC	Z	
			Ta	1268	LF	Z	
			Tc	1710	IN	Z	
			Tb	2522	LF	Z	
			Tu	2974	?		
1198	371618116260201	UE-20h WW	Tt	0	EW		
			Tf	48	EN		
			Tm	52	EN		
			Ta	347	TC		
			Ta	633	TC	Z	
			Tc	1707	IW	Z	
			Tc	1946	TC	Z	
1199	371620116213501	U-19bg 1	Tt	0	EW	D	
			Tf	29.3	EN	GZ	GL/Z/CC
							Based on U19bg from Fer/etal/1994(E) and Pro/1991b(F).
			Tm	49.4	EW	GD	
			Tm/Tp	434.2	EN	GZ	
							Based on U19bg from Fer/etal/1994(E) and Pro/1991b(F).
			Tpc	451.4	EW	GD	
							Based on U19bg from Fer/etal/1994(E) and Pro/1991b(F).
			Tp	479.8	LF	GD	
			Tac	656.2	TC	GL	
1202	371623116243701	UE-20ab	Tm	0	EW		
			Tm	91	EN		
			Tp	250	EN		
			Tp	272	LF		
			Tp	333	EN		
			Ta	381	EN	Z	
			Ta	486	LF	Z	
1204	371630116221202	U-19aS	Tt	0	EN		
			Tt	9.1	EW		
			Tt	27.4	EN		
			Tf	30.5	EN		
			Tm	42.7	EN		
			Tm	54.9	EW		
			Tm	106.7	EN		

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Tm	118.9	EW		
			Tm	370.3	EN		
			Tp	381	EW		
			Tp	390.1	EN		
			Tp	393.2	EW		
			Tp	396.2	EN		
			Tp	414.5	LF		
			Tp	545.6	EN	Z	
			Ta	563.9	EN	Z	
			?	566.9	?	Z	
			Tc	725.4	LF	Z	
			Tc	813.8	IN	Z	
1205	371632116211301	U-19ay	Tt	0	?		
			Tt	21.3	EW		
			Tf	57.9	EN		
			Tm	109.1	EN		
			Tm	117.7	EW		
			Tm	177.4	EN		
			Tm	198.1	EW		
			Tm	460.3	EN		
			Tp	517.6	EN		
			Tp	538.9	EN		
			Tp	549.9	LF		
1207	371643116212001	U-19ar	Tt	0	EN		
			Tt	9.1	EW		
			Tt	18.3	EN		
			Tt	21.3	EW		
			Tf	44.8	EN		
			Tm	78.6	EN		
			Tm	91.5	EW		
			Tm	150	EN		
			Tm	170.4	EW		
			Tm	437.7	EN		
			Tp	492.6	EN		
			Tp	495	EW		
			Tp	524.6	EN		
			Tp	530.1	LF		
1208	371646117010101		QTa	0			
1210	371649116242101	PM-1	Tm	0	EW		
			Tm	176	EN		
			Tp	180	EN		
			Tp	215	LF		
			Tp	271	EN		

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Ta	353	IN		
			Ta	492	IN	Z	
			Ta	550	LF	Z	
			Ta	669	IN	Z	
			Tc	900	IN	Z	
			Tb	1603	TC	Z	
			Tr?	2298	LF	Z	
			Tb?	2322	IW	Z	
1211	371649116242102	PM-1	Tm	0	EW		
			Tm	176	EN		
			Tp	180	EN		
			Tp	215	LF		
			Tp	271	EN		
			Ta	353	IN		
			Ta	492	IN	Z	
			Ta	550	LF	Z	
			Ta	669	IN	Z	
			Tc	900	IN	Z	
			Tb	1603	TC	Z	
			Tr?	2298	LF	Z	
			Tb?	2322	IW	Z	
1212	371652117015201		QTa	0			
1213	371653116181901	U-19ac	Tm	0	EN		
			Tm	18.3	EW		
			Tm	61	EN		
			Tm	73.5	EW		
			Tm	390.1	EN		
			Tm	425.8	LF		
			Tp	440.4	EW		
			Tp	448.1	EN		
			Ta	463.3	IN		
			Tc	532.5	LF		
1214	371658116244401	U-20aw	Tm	0	EW		
			?	170	EN		
			Tp	181	LF		
			?	290	EN	Z	
			Ta	338	IN	Z	
			Ta	420	LF	Z	
			Ta	584	IN	Z	
1218	371712117020701		QTa	0			Below 71.63 m possibly volcanic rock.
1224	371745116184701	U-19ba 2	Tm	0	?		
			Tm	18.3	EW		
			Tm	59.9	EN		

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Tm	73.4	EW		
			Tm	347.7	EN		
			Tp	372.2	EN		
			Ta	375.9	EN		
			Tc	482.9	EN		
			Tc	490.8	LF		
			Tc	657.1	IN		
1225	371746116184601	U-19ba	Tm	0	?		
			Tm	21.3	EW		
			Tm	59.4	EN		
			Tm	74.8	EW		
			Tm	349	EN		
			Tp	375	EN		
			Ta	379.2	IN		
			Tc	480.9	IN		
			Tc	490.9	LF		
1226	371746116184701	U-19ba 1	Tm	0	EW		
			Tm	59.7	EN		
			Tm	74.5	EW		
			Tm	348.6	EN		
			Tp	373.2	EN		
			Ta	375.2	IN		
			Tc	480.3	IN		
			Tc	491.1	LF		
			Tc	657.1	IN		
1227	371746116184702	U-19ba 3	Tm	0	?		
			Tm	18.3	EW		
			Tm	59.6	EN		
			Tm	72.6	EW		
			Tm	349.4	EN		
			Tp	374	EN		
			Ta	377.9	EN		
			Tc	479.4	EN		
			Tc	491.2	LF		
			Tc	654.7	IN		
1228	371748116195901	U-19e	Tm	0	EW		
			Tm	59.1	EN		
			Tm	74.4	EW		
			Tm	301.8	EN		
			Ta	317	LF		
			Ta	463.3	IN		
			Ta	502.9	LF	Z	
			Ta	521.2	IN	Z	

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Ta	570.6	LF	Z	
			Tc	579.1	LF	Z	
			Tc	586.7	IN	Z	
			Tc	588.3	LF	Z	
			Tc	626.1	IN	Z	
			Tc	804.7	LF	Z	
			Tc	826.3	IN	Z	
			Tb	894	IW	Z	
			Tb	1091.2	IN	Z	
			Tb	1130.8	IW	Z	
			Tb	1197.9	IN	Z	
			Tb	1274.1	IW	Z	
			Tb	1319.8	IN	Z	
			Tb	1352.1	IW	Z	
			Tb	1359.7	IN	Z	
			Tb	1362.8	IW	Z	
			Tb	1371	IN	Z	
			Tb	1375.3	IW	Z	
			Tb	1403.9	IN	Z	
			Tb	1407.9	IW	Z	
			Tb	1413.1	IN	Z	
			Tb	1417.3	IW	Z	
			Tb	1445.7	IN	Z	
			Tb	1447.8	IW	Z	
			Tb	1468.5	IN	Z	
			Tb	1471.9	LF	Z	
1229	371750116182401	U-19ax	Tm	0	?		
			Tm	24.4	EW		
			Tm	62.2	EN		
			Tm	69.5	EW		
			Tm	365.2	EN		
			Ta	385.6	EN		
			Tc	449.6	EN		
			Tc	462.1	LF		
			Tc	471	LF	Z	
			Tc	645.6	IN	Z	
1230	371750116195901	UE-19e WW	Tm	0	EW		
			Tm	56.7	EN		
			Tm	75	EW		
			Ta	313.3	LF		
			Ta	494	LF	Z	
			Ta	527	IN	Z	
			Tc	570	LF	Z	

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Tc	619.7	IN	Z	
			Tc	804.1	LF	Z	
			Tc	831.8	IN	Z	
			Tb	894	IW	Z	
			Tb	1100.3	IN	Z	
			Tb	1120.1	IW	Z	
			Tb	1211.6	IN	Z	
			Tb	1338.1	IW	Z	
			Tb	1370.1	IN	Z	
			Tb	1374.7	IW	Z	
			Tb	1437.1	IN	Z	
			Tb	1466.1	LF	Z	
			Tb	1565.5	IN	Z	
			Tb	1578.3	LF	Z	
			Tb	1620.9	IN	Z	
			Tb	1647.4	IW	Z	
			Tb	1660.6	IN	Z	
			Tb	1670.9	LF	Z	
			Tb	1769.1	IN	Z	
			Tb	1805.6	IW	Z	
1231	371750116262701	U-20an	Tm	0	EN		
			Tm	42	EW		
			Tm	150	EN		
			?	179	EN		
			Ta	216	IN		
			Ta	259	IN	Z	
			Ta	274	LF	Z	
1233	371758116193601	UE-19z	Tm	0	EW		
			Tm	61	EN		
			Tm	79.3	EW		
			Tm	319.4	EN		
			Ta	326.1	IN		
			Tc	542.5	IN		
			Tc	582.6	LF		
			Tc	693.4	IN		
1234	371801116320301	UE-20j WW	Tt	0	EW		
			Tt	88	LF		
			Tf	168	EN		
			Tm	192	EW		
			Tm	412	EN		
			Tp	430	EN		
			Tp	488	EN	Z	
			Tc	530	IN	Z	

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Tb	573	IW	Z	
			Tu	604		Z	
			Tq	991		Z	
			?	1378		Z	
1236	371802116320301	U-20m	Tt	0			
			Tt	79	EN		
			Tt	85	LF		
			Tf	152	LF		
			Tf	159	EN		
			Tm	168	EW		
			Tm	413	EN		
			Tp	427	EN		
			Tp	475	EN	Z	
			Tc	538	IN	Z	
			Tb	565	IN	Z	
			Tb	578	IW	Z	
			Tu	588	IW	Z	
			Tu	704	TC	Z	
			Tq	1010	LF	Z	
			Tq	1178	IN	Z	
			Tq	1260	LF	Z	
1237	371807116243001	U-20g	Tm	0	EW		
			Tm	88	EN		
			Tp	98	LF		
			Tp	201	EN	Z	
			Ta	235	TC	Z	
			Tc	881	IN	Z	
1239	371830116215301	UE-19gS WW	Tm	0	EW		
			Tm	27.7	EN		
			Tm	54.9	EW		
			Tm	243.8	EN		
			Ta	257	LF		
			Ta	539.5	IN	Z	
			Tc	597.4	IN	Z	
			Tc	647.4	LF	Z	
			Tc	658.7	IN	Z	
			Tb	807.7	LF	Z	
			Tb	888.2	IN	Z	
			Tb	937.6	LF	Z	
			Tb	1127.8	IN	Z	
			Tb	1146.1	LF	Z	
			Tb	1205.5	IW	Z	
			Tb	1245.1	LF	Z	

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Tb	1307.6	IN	Z	
			Tb	1313.7	IW	Z	
			Tb	1461.2	IN	Z	
			Tb	1466.1	IW	Z	
			Tb	2002.5	IN	Z	
1240	371830116215304	UE-19gS	Tm	0	EW		
			Tm	27.7	EN		
			Tm	54.9	EW		
			Tm	243.8	EN		
			Ta	257	LF		
			Ta	539.5	IN	Z	
			Tc	597.4	IN	Z	
			Tc	647.4	LF	Z	
			Tc	658.7	IN	Z	
			Tb	807.7	LF	Z	
			Tb	888.2	IN	Z	
			Tb	937.6	LF	Z	
			Tb	1127.8	IN	Z	
			Tb	1146.1	LF	Z	
			Tb	1205.5	IW	Z	
			Tb	1245.1	LF	Z	
			Tb	1307.6	IN	Z	
			Tb	1313.7	IW	Z	
			Tb	1461.2	IN	Z	
			Tb	1466.1	IW	Z	
			Tb	2002.5	IN	Z	
1241	371836116215101	U-19g	Tm	0	EW		
			Tm	29.9	EN		
			Tm	32	EN		
			Tm	57.9	EW		
			Tm	234.7	EN		
			Tm	242	EN		
			Ta	252.4	LF		
			Ta	277.4	LF		
			Ta	359.7	IN		
			Ta	417.6	IN		
			Ta	454.2	LF		
			Ta	463.3	IN		
			Ta	469.4	LF		
			Ta	484.6	IN		
			Ta	536	IN	Z	
			Tc	563.9	IN	Z	
			Tc	590.4	IN	Z	

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Tc	635.5	LF	Z	
			Tc	636.4	LF	Z	
			Tc	651.4	IN	Z	
			Tc	653.8	IN	Z	
			Tb	845.5	LF	Z	
			Tb	858	LF	Z	
			Tb	881.5	IN	Z	
			Tb	888.8	IN	Z	
			Tb	944.3	LF	Z	
			Tb	969.3	LF	Z	
1242	371851116273801	U-20e	Tt	0	EW		
			Tm	105	EW		
			Tm	116	EN		
			Tm	186	EW		
			Tm	405	EW	Z	
			Ta	425	LF	Z	
			?	488	EN		
			Ta	494	LF		
			Ta	613	IN	Z	
			Ta	655	LF	Z	
			Ta	927	IN	Z	
			Ta	1085	LF	Z	
			Ta	1116	IN	Z	
1243	371852116175701	UE-19b 1 WW	Tt	0	EW		
			Tt	12.2	EN		
			Tm	23.8	EW		
			Tm	332.2	EN		
			Ta	338.3	IN		
			Ta	372	IN	Z	
			Tc	445	LF	Z	
			Tb	490.7	IN	Z	
			Tb	531.9	LF	Z	
			Tb	701	LF	Z	
			Tb	1072.9	IW	Z	
			Tb	1196.6	LF	Z	
1244	371852116281701	U-20ar 1	Tt	0	EW		
			Tt	50	EN		
			Tf	92	EN		
			Tm	109	EN		
			Tm	199	EW		
			Tp	470	EN		
			Ta	592	IN		
			Ta	607	IN	Z	

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
1246	371901116272501	UE-20e 1	Ta	638	LF	Z	
			Tt	0	EW		
			Tm	105	EW		
			Tm	405	EW	Z	
			Ta	425	TC	Z	
			Tc	1296	TC	Z	
1247	371929116185501	U-19ai	Tb	1668	TC	Z	
				0			
			Tm	23.3	EW		
			Tm	69.5	EN		
			Tm	86.7	EW		
			Tm	291.7	EN		
			Ta	306.6	EN		
			Tc	432.8	LF		
			Tc	498.7	EN	Z	
1252	372024116312001	UE-20p	Tb	508.4	EN	Z	
			Tt	0	EW		
			Tt	69	EN		
			Tm	146	EW		
			Tm	402	EN		
			Tb	451	IW	Z	
			Tq	555	IN	Z	
			Tu	628	TC	Z	
1253	372034116222501	UE-19h	?	914	TC	Z	
			Tm	0	EW		
			Tm	143.3	EN		
			Ta	158.5	IN		
			Ta	332	IN	Z	
			Tc	396.2	IN	Z	
			Tb	460.3	LF	Z	
			Tb	619.4	IN	Z	
			Tb	629.1	LF	Z	
			Tb	701	IW	Z	
			Tb	751	IN	Z	
			Tb	763.2	LF	Z	
			Tm	0	EW		
1255	372034116222504	UE-19h	Tm	143.3	EN		
			Ta	158.5	IN		
			Ta	332	IN	Z	
			Tc	396.2	IN	Z	
			Tb	460.3	LF	Z	
			Tb	619.4	IN	Z	
			Tb	629.1	LF	Z	
			Tb	629.1	LF	Z	

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
			Tb	701	IW	Z	
			Tb	751	IN	Z	
			Tb	763.2	LF	Z	
1256	372042116340501	PM-2	Tt	0	EW		
			Tt	64	EN		
			Tt	91	EW		
			Tb	110	IW		
			Tq	165	IN		
			Tq	402	IN	Z	
			Tq	875	LF	Z	
			Tq	1099	IN	Z	
			Tq	1268	LF	Z	
1258	372054116191901	U-19d 2	Tm	0	EW	GD	Altn assumed similar to that throughout the region for Tmr.
			Tac	103.6	TC	GL	
			Tbd	173.7	LF	DZ	
			Tbgs	1594.1	LF	D	
			Tr	1727.6	EN	Z	
			Tbq	1770.9	TC	DZ	DV/Z/AR
1277	372543116363501	GOLD FLAT 2	QTa	0			
1279	372642116281301	Gold Flat 1	QTa	0			interpretation by CCR (3,4,5)
			Tr	75	EN	U	
9999	364539116024301	UE-5m	QTa	0			
			Tw	50.3			
			Tws	131.1			
			Tc	335.3			
			Tpa	390.1			
9999	364601116010301	TH-5	QTa	0			
			Tw	40.8			
9999	364905115565701	U-5a	QTa	0			
9999	364905115572201	U-5b	QTa	0			
9999	364924115580101	U-5e	QTa	0			
9999	364947116254302	UE-25c 3 HTH	QTa	0			
			Tp	24.4	EW	D	Mod-dns/wld ash flow tuff.
			Tp	68.6	EW	G	Non-pt/wld ash flow tuff; bedded; vitric.
			Tp	93	EW	D	Mod-dns/wld ash flow tuff; sl. zeol. and argill.
			Tp	381	EW	Z	Non-mod/wld; vitric.
			Ta	396.2	EN	Z	Non/wld ash flow-ash fall tuff; bedded tuff. ss.
			Tc	496.8	EW	D	Non/wld-mod/wld ash flow tuff; sl. argill-zeol.
			Tc	635.5	EW	Z	Bedded tuff w/ss; argill.
			Tc	643.1	EW	D	Non-dns/wld ash flow tuff; sl. argill. and zeol.
			Tc	807.7	EW	Z	Non/wld ash flow tuff; bedded tuff; zeol(?).
			Tc	841.2	EW	D	Pt/wld ash flow tuff; tuff breccia; sl/zeol.and argill.

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
9999	365011115584702	UE-5c WW	QTa	0			
			Tw	411.5			
			Tws	701			
9999	365049116010801	TH-4	QTa	0			
			Tw	39.3			
9999	365218115555101	UE-5k	QTa	0			
			QTb	289.6			
			Tma	506			
9999	365218115555201	U-5k	QTa	0			
9999	365237115570201	U-5i	QTa	0			
9999	365238115554301	U-11f	QTa	0			
			Tma	487.7			
9999	365238115555201	U-11e	QTa	0			
9999	365238115561601	U-11c	QTa	0			
			Tma	484.6			
9999	365245115560501	U-11g	QTa	0			
9999	365315115562702	U-11b	QTa	0			
9999	371442116204601	U-19v	Tm	0	EW		
			Tm	256	EN		
			Tp	275.8	EW		
			Tp	298.7	EN		
			Tp	304.8	LF		
			Tp	597.4	IN		
			Ta	637	IN		
			Tc	719.3	IN	Z	
			Tc	1060.7	LF	Z	
9999	371759116193601	U-19zS	Tm	0	EW		
			Tm	62.2	EN		
			Tm	76.2	EW		
			Tm	320	EN		
			Tp	332.8	EN		
			Ta	341.4	IN		
			Ta	381	LF		
			Ta	400.8	IN		
			Tc	539.5	IN		
			Tc	576.1	LF		
			Tc	618.7	IN		
			Tc	624.2	LF		
9999	HTH5-3		QTa	0			
			Pz	47.9			
9999	SB5 AP1		QTa	0			
9999	SB5 AP2		QTa	0			
9999	SB5 NE1		QTa	0			

Table B-1 Site Stratigraphy Data Set

Map Reference Numbers	Official ID	Common Name	Stratigraphic Unit	Depth-to-top (m)	Hstrat	Hctrl	Remarks
9999	SB5 NN1		QTa	0			
9999	SB5 NS1		QTa	0			
9999	SB5 NW1		QTa	0			
9999	SB5 RP1		QTa	0			
9999	SB5 RP2		QTa	0			
9999	U-11c 1		QTa	0			
			QTc	207.3			
			Tma	484.6			
9999	U-11g 1		QTa	0			
			QTc	187.5			
9999	U-11g Ex1		QTa	0			
			QTc	188.1			
			Tmr	341.4			
9999	U-5LS		QTa	0			
9999	U-5RNM5		QTa	0			
9999	U-5c		QTa	0			
9999	U-5d		QTa	0			
9999	U-5i 1		QTa	0			
9999	UE-5i		QTa	0			
			QTc	167.6			
			QTb	268.2			
			Tma	335.3			
			Tmr	475.5			

Keys to Symbols for Stratigraphic Units

Stratigraphic unit symbols and definitions follow Ferguson et al. (*in press*); ages are from Sawyer et al. (*in review*). Assemblages are in bold. Structural types are: *Form*, caldera forming; *Fill*, caldera filling; *Prec*, caldera precursor. Note that symbols separated by a slash indicate uppermost and lowermost units for an undivided grouping.

Symbol	Unit	Struct type	caldera	age (Ma)
QTa	alluvium			
Tyb	Post-Thirsty Canyon basalts			
Ts	Volcanics of Stonewall Mtn		Stonewall Mtn	7.6
Tyo	rhyolite of Obsidian Butte			
Tt	Thirsty Canyon Group		Black Mtn	9.4
Ttg	Gold Flat Tuff			
Tth	trachyte of Hidden Cliff	Fill	Black Mtn	
Tts	lavas of Pillar Spring	Fill		
Ttt	Trail Ridge Tuff	Form	Black Mtn	
Ttc	comendite of Ribbon Cliff	Prec		
Tf	Volcanics of Fortymile Canyon			
Tfn	latite of Donovan Mountain			
Tm	Timber Mountain Group			
Tma	Ammonia Tanks Tuff	Form	Ammonia Tanks	11.45
Tmat	rhyolite of Tannenbaum Hill	Prec	Ammonia Tanks	
Tmr	Rainier Mesa Tuff	Form	Rainier Mesa	11.6
Tmrf	rhyolite of Fluorspar Canyon	Prec	Rainier Mesa	
Tp	Paintbrush Group			
Tpc	Tiva Canyon Tuff	Form	Claim Canyon	12.65
Tpt	Topopah Spring Tuff	Form		12.7
Ta	Volcanics of Area 20	Fill		
Tac	Calico Hills Formation	Fill		
Tai	rhyolite of Inlet	Fill		
Tw	Wahmonie Formation			
Tc	Crater Flat Group			
Tcpm	post-Tcb, pre-Tai	Fill		
Tcb	Bullfrog Tuff	Form		
Tcbl	lithic-rich	Form	Area 20	13.1
Tcbs	Stockade Wash lobe	Form		13.1
Tct	Tram Tuff	Form		
Tb	Belted Range Group			
Tbd	Dead Horse Flat Formation	Fill		
Tbg	Grouse Canyon Tuff	Form	Grouse Canyon	13.6
Tbgs	comendite of Split Ridge	Prec		
Tbq	comendite of Quartet Dome	Prec		
Tr	Tram Ridge Group			
Tn	Tunnel Formation			

Keys to Symbols for Stratigraphic Units (Continued)

Symbol	Unit	Struct type	caldera	age (Ma)
Tq	Volcanics of Quartz Mountain			
Tqs	tuff of Sleeping Butte	Form		
Tqu	post-Tqt Tq	Fill		
Tqt	tuff of Tolicha Peak	Form		
Tql	pre-Tqt Tq	Prec		
Tqb	Bt-bearing rhy of Quartz Mtn	Prec		
Tqm	dacite of Mt. Helen	Prec		
Tu	Volcanics of Big Dome			
Tuo	rhyolite of Ochre Ridge	Fill		
Tub	Tub Spring Tuff	Form		14.9
To	Volcanics of Oak Spring Butte			
Tor	Redrock Valley Tuff	Form		
Tot	tuff of Twin Peaks	Form		15.4
Tk	Volcanics of Kawich Valley			
Te	Volcanics of Central Nevada			
Tlt	tuffaceous paleocolluvium			

Source: Warren, R.G. 1994. "Structural Elements and Hydrogeologic Units of the Southwestern Nevada Volcanic Field." An informal document prepared for the Hydrologic Model Working Group of the UGTA RI/FS of IT Corporation. Las Vegas, NV.

Appendix C

Temporal Water Levels for Selected Wells

Description of Appendix Contents

This appendix contains temporal (historical) water level data for selected wells located at the Nevada Test Site and the Amargosa Desert. The data are presented in table and graphic forms ([Figure C-1 and Table C-1](#)). A map showing the location of the selected wells is provided first (page C-2), followed by a table containing the data (pages C-3 through C-30). The corresponding hydrographs are presented last (pages C-31 through C-56) ([Figures C-2, C-3, C-4, C-5, C-6, C-7, C-8, C-9, C-10, C-11, C-12, C-13, C-14, C-15, C-16, C-17, C-18, C-19, C-20, C-21, C-22, C-23, C-24, C-25, C-26, and C-27](#)).

Figure C-1
Well Reference Map

**Table C-1 Historical Water Levels for Selected Wells at the Nevada Test Site
and the Amargosa Desert**

The following provides a description of each of the fields used in Table C-1.

Map Reference Numbers	Site reference number for cross-referencing between the data in the tables and maps. Well #: Number for cross-referencing between Table C-1 and Figure C-1 (XXXX) Number for cross-referencing between Table C-1 and tables A-1 and B-1, and plates 2 through 8.
----------------------------------	---

Official ID	Unique site identification number (may or may not be a USGS ID).
--------------------	--

Common Name or Reporting name	REDBOOK reporting name for wells on the NTS.
--	--

Northing	NAD 27, Universal Transverse Mercator (UTM) Zone 11 coordinate, in meters
-----------------	--

Easting	NAD 27, UTM Zone 11 coordinate, in meters
----------------	---

Measurement Date	Date of water level measurement, month/day/year
-----------------------------	---

Water Level Elevation	Water level elevation based on measured depth-to-water and estimated land surface elevation, in meters
----------------------------------	---

**Table C-1 Historical Water Levels for Selected Wells at the Nevada Test Site
and the Amargosa Desert**

Map Reference Numbers	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Measurement Date	Water-Level Elevation (m)
Well 1 (1076)	370956116172101	WW-8	4113270	563115	1/3/63	1409.55
					1/4/63	1404.21
					1/9/63	1410.46
					1/10/63	1410.37
					3/21/71	1407.99
					3/24/71	1407.85
					10/25/71	1407.42
					8/7/72	1407.24
					6/29/78	1407.26
					2/17/82	1407.78
Well 2 (923)	370142116021101	WW-A	4099200	585728	9/20/60	732.13
					11/30/60	731.92
					11/30/60	731.84
					11/30/60	731.76
					1/6/61	731.64
					1/13/61	732.07
					1/13/61	731.89
					6/20/61	731.25
					9/7/61	732.59
					9/8/63	728.96
					9/8/63	728.93
					4/10/69	729.11
					11/5/71	727.25
					1/27/94	731.28
Well 3 (871)	365500116003901	WW-C-1	4085880	588115	5/30/62	724.66
					1/25/63	724.51
					1/25/63	724.45
					6/6/63	724.6
					6/7/63	724.45
					8/20/63	724.91
					9/7/63	724.69
					9/8/63	724.63
					10/8/63	725.12
					10/8/63	724.6
					10/10/63	724.57
					4/11/69	725.12
					3/29/71	724.3
					3/29/71	724.33
					8/6/72	724.2
Well 4 (800)	364804115580801	WW-5B	4073101	591990	8/25/59	734.39
					8/25/59	734.42
					8/25/59	734.39
					8/26/59	734.32
					8/26/59	734.39
					8/26/59	734.32
					8/27/59	734.16
					8/27/59	734.32
					8/31/59	734.14
					12/23/60	734.18
					12/23/60	734.17
					6/7/62	734.75
					10/19/64	733.94
					10/19/64	733.98
					3/25/71	734.35
					10/29/71	734.23
					7/30/72	734.39
					1/16/80	733.04
					8/25/59	734.54
					8/25/59	734.45

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

**Table C-1 Historical Water Levels for Selected Wells at the Nevada Test Site
and the Amargosa Desert**

Map Reference Numbers	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Measurement Date	Water-Level Elevation (m)
Well 4 Con't.					8/25/59	734.42
					8/26/59	734.35
					8/26/59	734.41
					8/26/59	734.35
					8/27/59	734.19
					8/27/59	734.35
					8/29/59	733.99
					8/31/59	734.17
					12/23/60	734.21
					12/23/60	734.2
					6/7/62	734.78
					10/19/64	733.99
					3/21/69	734.6
					3/25/71	734.29
					5/6/91	732.53
Well 5 (795)	364706116170601	J-11 WW	4071056	563802	3/15/61	731.82
					3/15/61	731.76
					3/22/61	731.89
					4/10/61	732.01
					8/16/62	732.28
					11/27/63	731.95
					2/19/64	732.46
					2/19/64	732.37
					7/16/64	731.92
					10/6/64	732.04
					11/4/71	732.01
					8/6/72	732.22
					1/23/73	731.92
					3/22/73	732.16
					2/12/90	732.25
					7/10/90	732.14
					7/20/90	732.2
					7/27/90	732.16
					7/31/90	732.19
					8/9/90	732.17
					8/15/90	732.22
					8/21/90	732.17
					8/27/90	732.15
					9/14/90	732.21
					10/19/90	732.25
					11/19/90	732.31
					12/13/90	732.3
					1/24/91	732.23
					2/28/91	732.4
					3/27/91	732.23
					4/19/91	732.19
					5/7/91	732.18
					6/10/91	732.18
					7/23/91	732.18
					8/22/91	732.19
					9/16/91	732.15
					10/31/91	732.09
					11/26/91	732.21
					12/16/91	732.18
					1/31/92	732.18
					2/20/92	732.16
					4/6/92	732.17
					5/4/92	732.19
					5/21/92	732.21
					6/17/92	732.19
					7/16/92	732.2
					8/19/92	732.21

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

**Table C-1 Historical Water Levels for Selected Wells at the Nevada Test Site
and the Amargosa Desert**

Map Reference Numbers	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Measurement Date	Water-Level Elevation (m)
Well 5 Con't.					9/11/92	732.2
					10/30/92	732.3
					11/25/92	732.13
					12/17/92	732.25
					2/2/93	732.2
					3/4/93	732.11
					3/30/93	732.19
					5/5/93	732.23
					6/1/93	732.23
					6/21/93	732.22
					12/1/93	732.15
					12/15/93	732.33
Well 6 (742)	363815116175901	TW-5	4054685	562608	11/6/71	725.04
					7/24/72	725.12
					1/16/80	724.97
					9/10/90	725.1
					4/15/91	725.2
					2/19/92	725.18
					3/18/92	725.17
					4/14/92	725.15
					5/18/92	725.17
					6/16/92	725.14
					7/22/92	724.93
					8/19/92	724.88
					9/18/92	724.81
					10/22/92	724.78
					11/17/92	724.8
					12/16/92	724.76
					1/13/93	724.79
					2/10/93	724.78
					3/25/93	724.82
					4/22/93	724.89
					5/27/93	724.81
					6/24/93	724.76
					7/22/93	724.77
					8/27/93	724.82
					9/27/93	724.82
					10/20/93	724.86
					11/19/93	724.81
					12/22/93	724.82
Well 7 (707)	363437116010801	ARMY 6A	4048188	587784	4/7/58	736.58
					8/6/58	736.21
					12/12/58	736.37
					5/21/59	736.52
					8/14/59	736.43
					1/27/60	736.27
					2/11/64	735.94
					1/28/65	736.27
					10/26/71	735.79
					7/28/72	736.09
					1/16/80	735.48
					5/4/90	735.55
					11/1/90	735.44
					11/1/90	735.44
					6/6/91	735.45
					9/26/91	735.36
					5/14/92	735.36
					11/13/92	735.3
					6/21/93	735.57
					1/19/94	735.4
Well 8 (703)	363434116354001	DEFIR W	4048403	536659	7/2/62	693.15

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

**Table C-1 Historical Water Levels for Selected Wells at the Nevada Test Site
and the Amargosa Desert**

Map Reference Numbers	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Measurement Date	Water-Level Elevation (m)
Well 8 Con't.					3/4/64	692.32
					7/9/64	692.3
					9/2/64	692.28
					10/24/64	692.63
					2/12/65	692.63
					5/20/65	692.63
					8/17/65	692.59
					11/23/65	692.62
					3/15/66	692.6
					6/16/66	692.36
					9/22/66	692.54
					1/31/67	692.54
					3/21/67	692.58
					6/15/67	692.52
					9/29/67	692.5
					1/10/68	692.44
					4/16/68	692.55
					9/24/68	692.5
					1/14/69	692.43
					6/9/70	692.41
					10/30/70	692.41
					10/12/71	692.34
					3/8/72	692.42
					11/8/72	692.47
					8/23/73	692.12
					2/26/74	691.78
					11/14/74	691.87
					4/30/75	691.76
					9/26/75	691.4
					7/20/76	690.73
					7/28/78	690.46
					12/28/78	691.03
					12/20/79	690.69
					4/1/80	688.6
					7/18/80	688.25
					9/12/80	688.96
					12/18/80	690.49
					9/3/81	689.06
					1/10/87	689.95
					2/22/90	690.04
					5/1/90	689.94
					4/9/91	689.37
					4/16/91	689.06
					2/19/92	690.28
					3/18/92	690.28
					4/14/92	690.3
					5/19/92	690.31
					6/16/92	690.29
					7/21/92	690.29
					8/20/92	690.39
					9/17/92	690.37
					10/21/92	690.37
					11/17/92	690.39
					12/16/92	690.38
					1/13/93	690.35
					2/19/93	690.37
					3/24/93	690.42
Well 9 (672)	363348116254901		4046381	550985	6/29/62	695.89
					3/5/64	695.05
					6/18/64	695.04
					9/2/64	694.89
					10/29/64	694.92

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

**Table C-1 Historical Water Levels for Selected Wells at the Nevada Test Site
and the Amargosa Desert**

Map Reference Numbers	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Measurement Date	Water-Level Elevation (m)
Well 9 Con't.					2/12/65	694.94
					5/20/65	694.9
					8/17/65	694.89
					11/23/65	695.08
					3/15/66	695.02
					6/16/66	694.93
					9/22/66	695.01
					1/31/67	695.03
					6/15/67	695.37
					9/29/67	695.28
					1/10/68	695.31
					4/16/68	695.35
					9/24/68	695.08
					1/14/69	695.33
					6/9/70	695.19
					10/12/71	694.64
					3/8/72	694.67
					11/7/72	694.52
					3/13/73	695.1
					8/23/73	694.87
					2/26/74	695
					11/14/74	695.21
					4/30/75	694.94
					9/26/75	694.68
					7/20/76	694.57
					6/27/78	694.02
					12/28/78	692.93
					12/20/79	691.82
					4/1/80	693.81
					7/18/80	693.76
					9/12/80	693.71
					12/18/80	693.72
					9/3/81	693.6
					12/9/81	693.58
					3/17/83	693.51
					6/22/83	693.4
					9/20/83	693.35
					3/1/84	693.38
					3/20/85	693.19
					7/23/85	693.15
					12/10/85	693.15
					3/21/86	692.64
Well 10 (671)	363346116322801		4046700	541612	2/24/55	695.25
					7/4/62	695.04
					3/4/64	694.22
					7/9/64	694.09
					9/2/64	693.97
					10/29/64	694
					2/12/65	694.44
					5/20/65	694.11
					8/17/65	694.07
					11/23/65	694.35
					3/15/66	694.26
					6/16/66	694.1
					9/22/66	694.18
					1/31/67	694.27
					3/21/67	694.34
					6/15/67	694.33
					9/29/67	694.08
					1/10/68	694.16
					4/16/68	694.28
					9/24/68	694.09

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

**Table C-1 Historical Water Levels for Selected Wells at the Nevada Test Site
and the Amargosa Desert**

Map Reference Numbers	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Measurement Date	Water-Level Elevation (m)
Well 10 Con't.					1/14/69	694.26
					6/9/70	694.24
					10/30/70	694.17
					10/12/71	694.49
					3/8/72	694.15
					11/8/72	694.08
					3/13/73	694.05
					8/23/73	693.99
					2/26/74	693.78
					11/14/74	694.03
					4/30/75	693.76
					9/26/75	693.6
					7/20/76	693.08
					7/28/78	693.22
					12/28/78	693.16
					12/20/79	692.86
					4/1/80	692.87
					7/18/80	692.6
					9/12/80	692.51
					12/18/80	692.54
					9/3/81	692.06
					12/9/81	692.22
					3/17/83	692.03
					6/22/83	691.74
					9/20/83	691.62
					1/20/84	692.35
					3/1/84	691.77
					3/20/85	691.7
					7/23/85	691.46
					12/10/85	691.51
					2/13/86	691.85
					3/21/86	691.51
					1/8/87	691.77
Well 11 (667)	363342116325101		4046820	540791	2/14/55	694.6
					5/23/56	695.07
					11/21/57	694.34
					2/21/58	694.61
					11/20/58	694.52
					2/23/59	694.41
					1/7/60	694.36
					4/20/60	694.34
					7/29/60	694.35
					10/21/60	694.39
					12/2/60	694.46
					2/8/61	694.49
					5/24/61	694.37
					7/27/61	694.31
					9/20/61	694.25
					11/23/61	694.19
					1/24/62	694.25
					11/9/62	693.58
					12/21/62	693.96
					2/18/63	693.9
					6/19/63	693.62
					9/25/63	693.84
					12/11/63	694.14
					8/25/64	693.37
					10/29/64	693.44
					2/12/65	693.84
					11/23/65	693.8
					3/15/66	693.85
					9/22/66	693.63

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

**Table C-1 Historical Water Levels for Selected Wells at the Nevada Test Site
and the Amargosa Desert**

Map Reference Numbers	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Measurement Date	Water-Level Elevation (m)
Well 11 Con't.					1/31/67	693.85
					3/21/67	693.89
					6/15/67	693.6
					9/29/67	693.69
					1/10/68	693.8
					4/16/68	693.94
					1/14/69	693.53
					6/9/70	693.37
					10/30/70	693.16
					10/12/71	693.57
					3/9/72	693.51
					11/8/72	693.54
					3/13/73	693.67
					8/23/73	693.08
					2/26/74	692.74
Well 12 (665)	363340116332901		4046816	539971	2/14/55	694.72
					11/21/57	694.7
					2/21/58	694.74
					5/22/58	694.68
					8/26/58	694.66
					11/20/58	694.7
					2/23/59	694.7
					5/22/59	694.67
					9/17/59	694.63
					1/7/60	694.66
					4/20/60	694.64
					7/29/60	694.55
					10/22/60	694.65
					12/2/60	694.74
					2/8/61	694.56
					5/24/61	694.47
					7/27/61	694.43
					9/20/61	694.39
					11/26/61	694.37
					1/24/62	694.39
					5/10/62	694.23
					7/4/62	694.88
					8/9/62	694.14
					10/22/62	694.33
					11/9/62	694.08
					12/21/62	693.76
					2/18/63	694.07
					6/19/63	693.81
					9/25/63	694.21
					12/11/63	694.11
					8/25/64	693.98
					2/12/65	694.18
					11/23/65	693.96
					9/22/66	693.84
					1/31/67	694
					3/21/67	694.05
					9/29/67	693.76
					1/10/68	693.93
					9/24/68	693.72
					1/14/69	693.21
					6/9/70	693.55
					10/30/70	693.79
					10/12/71	693.81
					3/8/72	692.35
					3/13/73	694
					2/26/74	693.05
					1/8/87	692.4

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

**Table C-1 Historical Water Levels for Selected Wells at the Nevada Test Site
and the Amargosa Desert**

Map Reference Numbers	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Measurement Date	Water-Level Elevation (m)
Well 13 (659)	363310116294001	USBLM W	4045178	545249	8/27/53	692.63
					2/12/55	692.9
					5/24/56	692.9
					8/28/57	692.87
					2/15/58	692.81
					9/4/58	692.72
					9/15/59	692.41
					3/7/61	692.51
					6/28/62	691.26
					2/24/63	691.53
					2/15/65	691.7
					2/14/66	691.81
					2/16/67	691.64
					2/13/68	691.4
					2/24/69	691.4
					2/15/70	691.52
					2/10/71	691.38
					2/11/72	690.65
					3/20/73	690.53
					1/31/74	690.76
					2/24/75	690.68
					3/5/76	690.44
					3/8/77	690.45
					3/11/78	690.5
					3/7/79	690.43
					3/19/80	690.21
					3/4/81	689.81
					3/18/82	689.63
					3/24/83	689.41
					4/15/86	688.9
					3/16/87	688.81
					4/18/88	688.63
					4/12/89	688.39
					2/22/90	688.72
					3/20/90	688.69
					5/1/90	688.63
					6/20/90	687.98
					7/26/90	687.37
					9/17/90	688.1
					3/28/91	688.26
					4/9/91	688.32
					2/19/92	688.22
					3/18/92	687.93
					4/14/92	687.79
					5/19/92	687.99
					6/16/92	687.53
					7/21/92	687.68
					8/20/92	687.96
					9/17/92	687.62
					10/21/92	687.88
					11/17/92	687.96
					12/11/92	688.04
					1/13/93	687.82
					2/19/93	688.2
					3/24/93	688.23
					4/22/93	688.39
					4/29/93	688.18
					5/19/93	687.86
					6/22/93	687.92
					7/20/93	687.59
					8/24/93	687.36
					9/24/93	687.77

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

**Table C-1 Historical Water Levels for Selected Wells at the Nevada Test Site
and the Amargosa Desert**

Map Reference Numbers	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Measurement Date	Water-Level Elevation (m)
Well 13 Con't.					10/19/93	687.63
					11/18/93	687.74
					12/21/93	687.86
Well 14 (653)	363252116265001		4045170	549476	3/21/61	690.37
					6/28/62	690.37
					3/5/64	691.73
					6/18/64	691.76
					9/2/64	691.62
					10/29/64	691.78
					2/12/65	691.84
					5/20/65	691.61
					8/17/65	691.63
					11/23/65	691.59
					3/15/66	691.6
					6/16/66	691.54
					9/22/66	691.56
					1/31/67	691.59
					3/21/67	691.56
					6/15/67	691.51
					9/29/67	691.49
					1/10/68	691.41
					4/16/68	691.52
					9/24/68	691.29
					1/14/69	691.21
					6/9/70	691.19
					8/23/73	690.9
					2/26/74	690.94
					11/14/74	690.68
					9/26/75	690.25
					11/30/75	690.49
					6/27/78	688.2
					12/28/78	688.17
					12/20/79	688.08
					4/1/80	688.06
					7/18/80	688.03
					9/12/80	688.01
					12/18/80	687.96
					9/3/81	687.49
					12/9/81	687.76
					3/17/83	687.56
					6/22/83	687.48
					9/20/83	687.53
					1/19/84	687.69
					3/1/84	687.34
					3/20/85	687.55
					7/23/85	687.08
					12/10/85	686.99
					2/12/86	687.41
					2/13/86	687.13
					3/21/86	686.95
					1/13/87	687.22
Well 15 (645)	363237116292901		4044163	545528	2/14/55	691.12
					12/6/55	691.16
					8/28/57	691.18
					11/21/57	691.8
					2/21/58	691.16
					8/26/58	691.3
					11/20/58	691.1
					2/23/59	691.05
					5/22/59	690.96
					9/17/59	690.9

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

**Table C-1 Historical Water Levels for Selected Wells at the Nevada Test Site
and the Amargosa Desert**

Map Reference Numbers	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Measurement Date	Water-Level Elevation (m)
Well 15 Con't.					1/7/60	690.9
					4/20/60	690.89
					7/29/60	690.85
					10/21/60	690.89
					12/2/60	690.99
					2/8/61	690.83
					5/24/61	690.77
					7/27/61	690.59
					9/20/61	690.25
					11/23/61	690.3
					1/24/62	690.25
					5/10/62	690.06
					8/9/62	689.81
					11/9/62	689.75
					12/21/62	689.9
					2/18/63	690.64
					6/19/63	689.82
					9/25/63	690.32
					12/11/63	690.28
					3/4/64	689.89
					6/18/64	689.75
					9/2/64	689.85
					11/4/64	690
					2/12/65	690.1
					5/20/65	690.15
					8/17/65	690.08
					11/23/65	690.23
					3/15/66	690.21
					6/16/66	689.71
					9/29/67	689.51
					1/10/68	689.64
					4/16/68	689.82
					9/24/68	689.14
					1/14/69	689.52
					6/9/70	689.85
					11/8/72	688.24
					3/13/73	688.69
					8/23/73	689.01
					2/26/74	689.04
					11/14/74	689.5
					4/30/75	689.37
					9/26/75	689.09
					7/20/76	684.58
					7/28/78	684.66
					12/28/78	688.03
					12/20/79	687.64
					4/1/80	683.91
					7/18/80	682.29
					9/12/80	683.21
					12/18/80	684.2
					9/3/81	686.9
					12/9/81	688.38
					3/17/83	687.66
					6/22/83	687.57
					9/20/83	687.98
					3/1/84	687.99
					3/20/85	687.83
					7/23/85	687.74
					12/10/85	687.28
					3/21/86	687.68
					1/10/87	687.49
Well 16 (628)	363212116270401		4043567	549286	12/8/62	689.76

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

**Table C-1 Historical Water Levels for Selected Wells at the Nevada Test Site
and the Amargosa Desert**

Map Reference Numbers	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Measurement Date	Water-Level Elevation (m)
Well 16 Con't.					3/5/64	688.65
					6/18/64	688.62
					9/2/64	688.51
					11/4/64	688.71
					2/12/65	688.75
					5/20/65	688.65
					8/17/65	688.61
					11/23/65	688.52
					3/15/66	688.5
					6/16/66	688.36
					9/22/66	688.42
					1/31/67	688.59
					3/21/67	688.49
					6/15/67	688.48
					9/29/67	688.43
					1/10/68	688.26
					4/16/68	688.45
					9/24/68	688.14
					1/14/69	688.25
					6/9/70	688.09
					10/29/70	687.98
					10/12/71	688.54
					3/8/72	687.94
					11/7/72	687.93
					3/13/73	688.28
					8/23/73	687.87
					2/26/74	687.76
					11/14/74	688.31
					4/30/75	688.16
					9/26/75	687.93
					6/27/78	686.53
					12/28/78	686.46
					12/20/79	686.42
					4/1/80	687.08
					7/18/80	686.36
					9/12/80	686.33
					12/18/80	686.17
					9/3/81	685.4
					12/9/81	685.88
					3/17/83	685.67
					6/22/83	685.31
					9/20/83	685.62
					3/1/84	685.5
					3/20/85	685.28
					7/23/85	684.8
					12/10/85	685.06
					3/21/86	685.02
					1/13/87	685.66
Well 17 (624)	363209116314001		4043283	542275	9/15/59	679.05
					2/18/64	677.93
					2/15/65	677.93
					2/14/66	677.97
					2/16/67	677.97
					2/13/68	677.85
					2/24/69	678.03
					2/15/70	678.09
					2/10/71	678.07
					3/20/73	676.64
Well 18 (595)	363117116303601		4041689	543875	1/31/74	676.85
					2/24/75	677.75
Well 18 (595)	363117116303601		4041689	543875	8/28/57	688.43

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

**Table C-1 Historical Water Levels for Selected Wells at the Nevada Test Site
and the Amargosa Desert**

Map Reference Numbers	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Measurement Date	Water-Level Elevation (m)
Well 18 Con't.					11/21/57	689.5
					2/21/58	689.55
					5/22/58	689.4
					8/26/58	689.11
					11/20/58	689.29
					2/23/59	689.41
					5/22/59	689.24
					9/17/59	689.22
					1/7/60	689.21
					4/20/60	689.16
					7/29/60	689.18
					8/25/60	689.13
					10/21/60	689.34
					12/2/60	689.22
					2/8/61	688.91
					5/24/61	688.84
					7/27/61	688.81
					9/20/61	688.69
					11/23/61	688.69
					1/24/62	688.68
					5/10/62	688.58
					7/5/62	688.39
					8/9/62	688.47
					11/9/62	688.41
					12/21/62	688.38
					2/18/63	688.36
					6/18/63	688.36
					9/25/63	688.29
					12/11/63	688.26
					3/4/64	688.29
					6/18/64	688.28
					8/25/64	688.2
					11/25/64	688.25
					2/12/65	688.32
					5/20/65	688.2
					8/17/65	688.09
					11/23/65	688.31
					3/15/66	688.29
					6/16/66	688.14
					9/22/66	688.25
					1/31/67	688.5
					3/21/67	688.15
					6/15/67	688.11
					9/29/67	686.89
					1/10/68	688.01
					4/16/68	688.1
					3/8/72	687.84
					3/13/73	687.74
					8/23/73	687.81
					2/26/74	687.83
					4/1/80	686
					9/12/80	685.08
					12/18/80	683.36
					1/18/84	683.76
					2/13/86	683.51
					1/10/87	683.62
Well 19 (576)	363039116303501		4040518	543906	3/7/52	686.87
					8/5/56	687.72
					8/28/57	687.04
					11/21/57	687.03
					8/26/58	686.92
					11/20/58	686.97

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

**Table C-1 Historical Water Levels for Selected Wells at the Nevada Test Site
and the Amargosa Desert**

Map Reference Numbers	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Measurement Date	Water-Level Elevation (m)
Well 19 Con't.					2/23/59	686.84
					5/22/59	686.78
					9/17/59	686.47
					3/4/64	686.3
					6/18/64	686.3
					8/2/64	685.83
					11/4/64	686.07
					2/12/65	686.1
					5/12/65	685.75
					11/23/65	685.9
					3/15/66	685.89
					6/16/66	685.53
					9/22/66	685.71
					1/31/67	686.35
					3/21/67	685.99
					6/15/67	685.78
					9/25/67	685.58
					1/10/68	686.26
					4/16/68	686.21
					9/24/68	685.81
					1/14/69	685.99
					6/9/70	686.44
					10/30/70	686.92
					10/12/71	685.5
					3/8/72	686.17
					11/8/72	685.86
					3/13/73	686.13
					8/23/73	685.68
					2/26/74	686.31
					11/14/74	685.55
					4/30/75	685.51
					9/26/75	685.21
					8/16/78	684.44
					12/28/78	684.78
					4/1/80	684.08
					7/18/80	683.24
					9/12/80	682.73
					12/18/80	683.03
					9/1/81	681.72
					12/9/81	682.24
					3/17/83	682.26
					6/22/83	681.19
					9/20/83	680.37
					3/1/84	681.8
					3/20/85	681.83
					7/23/85	680.65
					12/10/85	680.94
					3/21/86	681.15
					1/12/87	681.73
Well 20 (574)	363030116104501		4040473	573458	11/8/60	714.3
					1/10/61	714.38
					6/9/62	714.18
					6/13/62	714.32
					10/21/93	713.72
Well 21 (573)	363028116270201		4040208	549206	12/22/93	713.77
					3/5/64	677.65
					6/18/64	677.44
					9/2/64	677.23
					11/4/64	677.37
					2/12/65	677.39
					5/20/65	677.36

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

**Table C-1 Historical Water Levels for Selected Wells at the Nevada Test Site
and the Amargosa Desert**

Map Reference Numbers	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Measurement Date	Water-Level Elevation (m)
Well 21 Con't.					8/17/65	677.38
					11/23/65	677.3
					3/15/66	677.34
					6/16/66	677.27
					9/22/66	677.15
					1/31/67	677.45
					3/21/67	677.24
					6/15/67	677.3
					9/29/67	677.29
					1/10/68	677.25
					4/16/68	677.23
					9/24/68	677.05
					1/14/69	677.2
					6/9/70	677.24
					10/29/70	677.22
					3/9/72	677.23
					11/8/72	676.99
					3/13/73	677.07
					8/23/73	677.01
					2/26/74	677.1
					11/14/74	677.43
					4/30/75	677.34
					9/26/75	677.24
					8/16/78	677.05
					12/28/78	676
					12/29/79	676.92
					4/1/80	676.7
					7/18/80	676.19
					9/12/80	675.93
					12/18/80	675.84
					9/1/81	675.18
					12/9/81	675.24
					3/17/83	675.45
					6/22/83	675.83
					9/20/83	675.42
					3/1/84	675.81
					3/20/85	676.05
					7/23/85	676.02
					12/10/85	675.7
					3/21/86	675.47
Well 22 (563)	363009116302701	HALLOW W	4039595	544110	7/5/62	686.9
					3/4/64	687.09
					7/9/64	687.06
					9/2/64	687.18
					10/29/64	686.92
					2/12/65	687.04
					5/20/65	686.92
					8/17/65	686.48
					11/23/65	686.84
					3/15/66	686.57
					6/16/66	686.4
					9/22/66	686.29
					1/31/67	686.92
					3/21/67	686.47
					6/15/67	686.39
					9/29/67	686.26
					1/10/68	686.81
					4/16/68	686.89
					9/24/68	686.45
					1/14/69	686.57
					6/9/70	686.55
					10/12/71	686.22

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

**Table C-1 Historical Water Levels for Selected Wells at the Nevada Test Site
and the Amargosa Desert**

Map Reference Numbers	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Measurement Date	Water-Level Elevation (m)
Well 22 Con't.					3/8/72	687.05
					11/8/72	686.61
					2/26/73	686.49
					3/13/73	686.87
					8/23/73	686.54
					11/14/74	686.45
					4/30/75	686.34
					9/26/75	686.22
					8/16/78	685.05
					12/28/78	684.38
					4/1/80	684.49
					7/18/80	683.82
					9/12/80	683.27
					12/18/80	683.67
					9/1/81	682.15
					12/9/81	682.86
					3/17/83	683.01
					6/22/83	681.55
					9/20/83	681.01
					3/1/84	682.64
					3/20/85	681.73
					7/23/85	681.37
					12/10/85	681.67
					3/21/86	682.24
					7/1/86	681.08
					12/23/86	682.18
					3/10/87	682.61
					3/8/88	682.72
					10/19/88	682.78
					10/17/89	683.4
					2/22/90	683.7
					3/27/90	683.72
					5/1/90	683.72
					6/20/90	683.68
					7/26/90	683.55
					9/17/90	683.55
					4/9/91	683.8
					10/17/91	682.98
					2/18/92	683.51
					3/10/92	683.11
					3/18/92	683.51
					4/14/92	683.44
					5/19/92	683.02
					6/16/92	682.8
					7/21/92	682.45
					8/20/92	682.33
					9/17/92	682.24
					10/21/92	682.39
					11/17/92	682.81
					11/19/92	682.78
					12/16/92	682.97
					1/13/93	683.17
					2/19/93	683.32
					3/11/93	683.28
					3/24/93	683.38
					4/21/93	683.19
					5/19/93	683.09
					6/22/93	682.63
					7/20/93	682.22
					8/24/93	681.94
					9/24/93	681.76
					10/19/93	682.19
					11/16/93	682.38

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

**Table C-1 Historical Water Levels for Selected Wells at the Nevada Test Site
and the Amargosa Desert**

Map Reference Numbers	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Measurement Date	Water-Level Elevation (m)
Well 22 Con't.					12/21/93	682.68
Well 23 (546)	362929116085701	CHERRY PATCH W	4038586	576211	2/4/60	718.6
					3/11/61	718.61
					3/24/63	718.51
					2/21/64	718.33
					2/16/65	719.65
					2/14/66	719.49
					2/16/67	719.51
					2/17/68	719.41
					2/24/69	719.56
					2/15/70	719.52
					2/10/71	719.43
					2/11/72	719.15
					3/20/73	719.12
					1/31/74	719.2
					3/5/76	719.31
					3/11/78	719.07
					3/7/79	719.09
					3/19/80	719.06
					3/4/81	719.13
					3/18/82	719.04
					3/24/83	718.28
					4/15/86	718.92
					3/15/87	718.96
					4/18/88	719.1
					4/13/89	719.11
					2/21/90	719.12
					3/20/90	719.13
					5/2/90	718.7
					3/28/91	719.22
					4/9/91	719.65
					8/31/91	719.42
					2/17/92	719.06
					3/24/92	719.12
					4/15/92	719.62
					5/20/92	719.42
					6/17/92	719.15
					7/22/92	719.07
					8/18/92	719.05
					9/18/92	718.98
					10/27/92	719.14
					11/17/92	719.08
					12/15/92	719.15
					1/12/93	719.17
					2/19/93	719.2
					3/23/93	719.18
					4/20/93	719.24
					4/22/93	719.22
					5/18/93	718.91
					6/21/93	719.18
					7/19/93	719.22
					8/26/93	719.58
					9/27/93	719.35
					10/18/93	719.5
					11/15/93	719.52
					12/20/93	719.53
Well 24 (521)	362848116264201	GILGANS NORTH W	4037129	549622	1/10/68	673.26
					4/16/68	673.18
					9/24/68	673.58
					1/1/69	673.32
					6/9/70	671.56

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

**Table C-1 Historical Water Levels for Selected Wells at the Nevada Test Site
and the Amargosa Desert**

Map Reference Numbers	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Measurement Date	Water-Level Elevation (m)
Well 24 Con't.					10/29/70	670.44
					3/9/72	670.59
					11/8/72	670.52
					3/13/73	670.55
					8/23/73	670.72
					2/26/74	670.77
					8/16/78	671.23
					12/28/78	671.25
					12/20/79	668.03
					4/1/80	670.01
					7/18/80	666.57
					9/12/80	667.36
					9/1/81	665.29
					12/9/81	669.11
					3/17/83	669.92
					6/22/83	669.95
					9/20/83	669.46
					3/1/84	670.07
					3/20/85	670.14
					7/23/85	668.91
					12/10/85	670.02
					3/21/86	669.93
					7/1/86	669.98
					12/23/86	669.87
					1/12/87	670.1
					3/10/87	670.1
					3/8/88	669.83
					10/19/88	669.65
					10/17/89	669.35
					2/22/90	669.49
					3/27/90	669.4
					5/1/90	668.58
					6/20/90	668.11
					7/26/90	668.29
					9/19/90	668.38
					4/9/91	668.58
					10/17/91	667.89
					3/10/92	668.92
					4/21/92	668.1
					5/19/92	667.78
					6/16/92	667.64
					7/21/92	667.64
					8/18/92	667.44
					9/17/92	667.22
					10/21/92	667.93
					11/17/92	668
					11/19/92	667.79
					12/16/92	668.59
					12/17/92	668.55
					1/13/93	668.68
					2/19/93	668.81
					3/11/93	667.83
					3/24/93	668.33
					4/21/93	667.65
					5/19/93	666.96
					6/22/93	666.65
					7/20/93	666.34
					8/23/93	666.71
					9/24/93	666.69
					10/19/93	667.21
					11/16/93	667.72
					12/21/93	668.05

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

**Table C-1 Historical Water Levels for Selected Wells at the Nevada Test Site
and the Amargosa Desert**

Map Reference Numbers	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Measurement Date	Water-Level Elevation (m)
Well 25 (473)	362532116172700	DEVILS HOLE	4031181	563576	5/22/62	718.68
					8/2/62	718.73
					12/17/62	718.69
					2/25/63	718.69
					3/21/63	718.69
					4/17/63	718.68
					5/22/63	718.63
					9/17/63	718.69
					11/13/63	718.67
					2/3/64	718.67
					2/21/64	718.67
					3/18/64	718.68
					9/30/64	718.66
					11/10/64	718.68
					12/15/64	718.65
					1/23/65	718.66
					2/16/65	718.65
					3/26/65	718.67
					5/10/65	718.67
					6/9/65	718.63
					7/19/65	718.68
					8/16/65	718.69
					10/14/65	718.68
					12/6/65	718.68
					12/13/65	718.71
					1/18/66	718.68
					2/14/66	718.67
					5/18/66	718.69
					6/19/66	718.61
					8/30/66	718.68
					10/24/66	718.64
					1/15/67	718.64
					1/25/67	718.65
					3/28/67	718.65
					5/22/67	718.65
					7/23/67	718.61
					11/14/67	718.65
					12/12/67	718.65
					1/9/68	718.65
					2/13/68	718.68
					3/12/68	718.63
					4/9/68	718.62
					5/6/68	718.65
					6/11/68	718.62
					7/8/68	718.63
					9/18/68	718.68
					10/22/68	718.64
					11/22/68	718.64
					1/2/69	718.57
					2/15/69	718.66
					4/4/69	718.66
					5/8/69	718.61
					6/12/69	718.58
					7/10/69	718.55
					8/18/69	718.59
					9/16/69	718.5
					10/6/69	718.4
					10/10/69	718.43
					11/13/69	718.38
					12/3/69	718.41
					12/14/69	718.42
					2/8/70	718.44
					2/17/70	718.46

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

**Table C-1 Historical Water Levels for Selected Wells at the Nevada Test Site
and the Amargosa Desert**

Map Reference Numbers	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Measurement Date	Water-Level Elevation (m)
Well 25 Con't.					3/11/70	718.43
					3/26/70	718.49
					4/23/70	718.39
					5/9/70	718.36
					5/12/70	718.34
					5/22/70	718.29
					6/2/70	718.33
					6/29/70	718.31
					7/30/70	718.29
					8/21/70	718.2
					8/28/70	718.16
					9/10/70	718.21
					9/18/70	718.18
					9/22/70	718.13
					10/13/70	718.21
					11/6/70	718.19
					12/1/70	718.16
					12/3/70	718.13
					12/4/70	718.15
					12/8/70	718.16
					12/10/70	718.12
					12/14/70	718.17
					12/21/70	718.23
					12/30/70	718.22
					1/8/71	718.27
					1/11/71	718.29
					1/18/71	718.29
					1/25/71	718.3
					1/29/71	718.29
					2/5/71	718.31
					2/8/71	718.23
					2/16/71	718.29
					2/17/71	718.3
					3/3/71	718.26
					3/15/71	718.21
					3/24/71	718.23
					3/30/71	718.28
					4/6/71	718.29
					4/13/71	718.2
					4/20/71	718.22
					4/27/71	718.2
					5/4/71	718.26
					5/11/71	718.23
					5/18/71	718.26
					5/25/71	718.22
					6/3/71	718.21
					6/12/71	718.21
					6/19/71	718.13
					6/21/71	718.13
					6/28/71	718.15
					7/1/71	718.12
					7/6/71	718.13
					7/8/71	718.07
					7/13/71	718.1
					7/16/71	718.06
					7/20/71	718.07
					7/27/71	718.09
					8/9/71	718.08
					8/18/71	718.02
					8/23/71	718.04
					9/7/71	718.05
					10/7/71	718.11
					11/1/71	718.02

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

**Table C-1 Historical Water Levels for Selected Wells at the Nevada Test Site
and the Amargosa Desert**

Map Reference Numbers	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Measurement Date	Water-Level Elevation (m)
Well 25 Con't.					12/1/71	718.05
					12/20/71	718.07
					1/24/72	718.1
					2/3/72	718.11
					2/11/72	718.15
					2/18/72	718.16
					3/10/72	718.16
					4/10/72	718.11
					5/11/72	718.08
					5/15/72	718.02
					5/25/72	717.98
					6/8/72	717.98
					6/19/72	717.98
					6/30/72	717.97
					7/13/72	717.93
					8/3/72	717.93
					8/11/72	717.88
					8/17/72	717.92
					8/28/72	717.9
					9/9/72	717.91
					9/18/72	717.86
					9/27/72	717.9
					10/10/72	717.89
					10/19/72	717.89
					11/2/72	717.91
					11/13/72	717.9
					12/1/72	717.95
					12/8/72	718
					12/21/72	718.05
					1/5/73	718.08
					1/18/73	718.15
					2/15/73	718.14
					2/20/73	718.16
					2/23/73	718.15
					3/7/73	718.14
					3/20/73	718.22
					3/28/73	718.16
					4/6/73	718.09
					4/11/73	718.11
					4/21/73	718.02
					5/4/73	718.01
					5/8/73	717.97
					5/16/73	717.9
					5/19/73	717.92
					5/24/73	717.96
					5/29/73	717.93
					5/31/73	717.99
					6/7/73	717.94
					6/12/73	717.93
					6/19/73	717.92
					6/22/73	717.96
					6/24/73	717.94
					7/2/73	718
					7/13/73	717.96
					7/16/73	717.95
					7/19/73	717.96
					7/24/73	717.97
					7/26/73	717.99
					7/30/73	717.97
					8/1/73	717.99
					8/6/73	718.02
					8/8/73	718.02
					8/21/73	718.01

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

**Table C-1 Historical Water Levels for Selected Wells at the Nevada Test Site
and the Amargosa Desert**

Map Reference Numbers	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Measurement Date	Water-Level Elevation (m)
Well 25 Con't.					8/27/73	717.97
					9/5/73	718.02
					9/10/73	718
					9/12/73	717.99
					9/17/73	718
					9/21/73	718.01
					9/24/73	718.01
					10/1/73	718.04
					10/18/73	718.01
					10/22/73	718.01
					10/24/73	718.01
					11/9/73	717.99
					11/17/73	718.04
					11/19/73	718.01
					11/28/73	718.01
					12/5/73	718.04
					12/19/73	718.07
					1/3/74	718.09
					2/4/74	718.12
					2/8/74	718.08
					3/4/74	718.07
					4/4/74	718
					5/2/74	718.04
					6/3/74	717.99
					7/4/74	717.99
					8/5/74	718.04
					9/5/74	718.01
					10/1/74	717.99
					11/5/74	718.06
					12/2/74	718.07
					1/3/75	718.09
					2/3/75	718.16
					3/3/75	718.16
					4/2/75	718.13
					4/30/75	718.08
					6/2/75	718.06
					7/1/75	718.05
					7/16/75	718.04
					8/1/75	717.99
					8/22/75	718
					9/4/75	717.98
					10/2/75	717.99
					11/5/75	718.11
					11/19/75	718.03
					12/2/75	718.07
					12/12/75	718.15
					12/30/75	718.21
					1/6/76	718.11
					1/29/76	718.19
					2/3/76	718.22
					3/2/76	718.19
					3/18/76	718.18
					3/22/76	718.18
					4/2/76	718.15
					5/4/76	718.09
					6/2/76	718.09
					6/9/76	718.04
					7/1/76	718.06
					7/15/76	718.13
					8/4/76	718.16
					9/3/76	718.17
					10/8/76	718.14
					10/14/76	718.16

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

**Table C-1 Historical Water Levels for Selected Wells at the Nevada Test Site
and the Amargosa Desert**

Map Reference Numbers	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Measurement Date	Water-Level Elevation (m)
Well 25 Con't.					11/2/76	718.14
					12/1/76	718.17
					1/4/77	718.24
					2/2/77	718.19
					3/1/77	718.26
					4/4/77	718.14
					5/3/77	718.12
					5/11/77	718.16
					6/1/77	718.11
					7/6/77	718.15
					7/26/77	718.13
					7/28/77	718.13
					8/1/77	718.14
					9/1/77	718.17
					10/3/77	718.18
					11/2/77	718.22
					12/5/77	718.24
					1/3/78	718.26
					2/1/78	718.26
					3/14/78	718.25
					4/5/78	718.26
					5/10/78	718.26
					6/6/78	718.26
					7/6/78	718.25
					8/9/78	718.27
					9/11/78	718.27
					10/3/78	718.27
					11/2/78	718.27
					11/30/78	718.32
					1/10/79	718.31
					2/8/79	718.29
					3/6/79	718.29
					3/27/79	718.3
					4/13/79	718.31
					5/3/79	718.31
					6/15/79	718.31
					7/2/79	718.29
					8/3/79	718.23
					9/5/79	718.22
					10/3/79	718.23
					11/6/79	718.31
					12/6/79	718.33
					1/7/80	718.33
					1/17/80	718.31
					2/8/80	718.32
					3/13/80	718.31
					4/8/80	718.32
					5/8/80	718.35
					6/5/80	718.33
					7/8/80	718.29
					8/7/80	718.32
					9/17/80	718.35
					10/7/80	718.31
					11/4/80	718.29
					12/2/80	718.36
					1/6/81	718.35
					2/2/81	718.34
					3/12/81	718.35
					4/1/81	718.36
					5/5/81	718.29
					6/6/81	718.32
					7/1/81	718.3
					8/19/81	718.32

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

**Table C-1 Historical Water Levels for Selected Wells at the Nevada Test Site
and the Amargosa Desert**

Map Reference Numbers	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Measurement Date	Water-Level Elevation (m)
Well 25 Con't.					9/4/81	718.32
					10/7/81	718.33
					11/5/81	718.32
					12/3/81	718.32
					1/11/82	718.34
					2/8/82	718.34
					3/11/82	718.34
					4/7/82	718.31
					5/10/82	718.32
					6/2/82	718.35
					7/1/82	718.33
					8/3/82	718.32
					9/3/82	718.35
					10/4/82	718.36
					11/6/82	718.38
					12/7/82	718.38
					1/12/83	718.36
					2/10/83	718.36
					3/18/83	718.37
					4/15/83	718.31
					5/13/83	718.33
					6/9/83	718.33
					7/14/83	718.4
					8/8/83	718.32
					9/13/83	718.38
					10/6/83	718.35
					11/10/83	718.39
					12/7/83	718.36
					1/24/84	718.37
					2/14/84	718.36
					3/8/84	718.36
					5/8/84	718.38
					6/15/84	718.35
					7/17/84	718.4
					9/13/84	718.38
					10/12/84	718.35
					12/6/84	718.34
					2/16/85	718.42
					3/7/85	718.36
					5/6/85	718.37
					7/31/85	718.36
					10/8/85	718.41
					10/22/85	718.38
					12/5/85	718.42
					1/15/86	718.41
					4/15/86	718.41
					5/4/86	718.42
					6/18/86	718.42
					8/7/86	718.41
					9/24/86	718.44
					11/4/86	718.43
					1/12/87	718.44
					3/5/87	718.42
					4/21/87	718.43
					6/17/87	718.44
					7/30/87	718.44
					9/29/87	718.45
					11/4/87	718.46
					1/21/88	718.43
					3/10/88	718.46
					4/29/88	718.42
					6/14/88	718.41
					7/26/88	718.44

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

**Table C-1 Historical Water Levels for Selected Wells at the Nevada Test Site
and the Amargosa Desert**

Map Reference Numbers	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Measurement Date	Water-Level Elevation (m)
Well 25 Con't.					9/1/88	718.47
					10/5/88	718.47
					12/1/88	718.47
					1/27/89	718.45
					4/12/89	718.46
					5/10/89	718.46
					6/15/89	718.43
					7/25/89	718.47
					9/7/89	718.47
					11/29/89	718.43
					8/22/90	718.41
					4/8/91	718.4
					8/27/91	718.38
					9/24/91	718.38
					1/27/92	718.37
					3/18/92	718.36
					5/19/92	718.44
					8/19/92	718.35
					11/18/92	718.42
					2/16/93	718.45
					5/21/93	718.41
Well 26 (447)	362417116163600	POINT OF ROCKS S W	4028972	564838	3/9/72	703.27
					12/2/74	702.28
					1/3/75	703.05
					2/3/75	703.32
					3/3/75	703.71
					4/2/75	703.4
					12/30/75	703.23
					1/30/76	703.78
					2/3/76	703.82
					3/1/76	703.27
					8/3/76	703.59
					9/2/76	703.18
					11/30/76	703.36
					1/4/77	703.43
					2/2/77	703.66
					3/2/77	703.53
					7/6/77	703.99
					8/2/77	703.32
					9/1/77	703.68
					10/3/77	703.93
					11/2/77	704.04
					12/5/77	704.18
					1/13/78	704.39
					2/2/78	704.42
					4/5/78	704.55
					5/10/78	704.56
					6/7/78	704.55
					7/6/78	704.73
					9/11/78	704.44
					10/3/78	704.66
					11/2/78	704.86
					12/1/78	705.05
					1/10/79	705.22
					3/6/79	705.37
					4/13/79	705.39
					5/3/79	705.41
					6/14/79	704.71
					10/3/79	704.44
					11/6/79	704.66
					12/6/79	704.93
					1/7/80	704.87

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

**Table C-1 Historical Water Levels for Selected Wells at the Nevada Test Site
and the Amargosa Desert**

Map Reference Numbers	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Measurement Date	Water-Level Elevation (m)
Well 26 Con't.					2/8/80	705.1
					3/13/80	705.29
					4/8/80	704.82
					5/8/80	705.12
					7/8/80	705
					8/7/80	705.3
					9/17/80	704.75
					10/7/80	705.15
					11/4/80	705.2
					12/2/80	705.29
					1/6/81	704.87
					2/2/81	705.24
					3/12/81	705.43
					4/1/81	705.48
					6/6/81	704.71
					7/1/81	704.92
					8/19/81	705.47
					9/4/81	705.51
					10/7/81	705.54
					11/5/81	705.56
					12/3/81	705.82
					1/11/82	705.88
					2/8/82	705.99
					3/11/82	705.98
					4/7/82	706.02
					5/10/82	706.01
					6/2/82	705.97
					7/1/82	705.97
					8/3/82	705.98
					9/3/82	706
					10/4/82	705.99
					11/6/82	706.02
					12/7/82	706.03
					2/10/83	706.06
					3/18/83	706.08
					4/15/83	706.06
					5/13/83	706.13
					6/9/83	706.14
					7/14/83	706.12
					8/8/83	706.13
					9/13/83	706.12
					10/6/83	706.15
					11/10/83	706.17
					12/7/83	706.18
					1/24/84	706.2
					2/14/84	706.2
					3/8/84	706.21
					4/13/84	706.24
					5/8/84	706.24
					6/15/84	706.25
					7/17/84	706.27
					9/13/84	706.33
					10/12/84	706.36
					12/6/84	706.4
					2/16/85	706.47
					3/7/85	706.43
					5/6/85	706.41
					7/31/85	706.35
					10/8/85	706.46
					10/22/85	706.46
					12/5/85	706.54
					1/15/86	706.61
					3/4/86	706.58

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

**Table C-1 Historical Water Levels for Selected Wells at the Nevada Test Site
and the Amargosa Desert**

Map Reference Numbers	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Measurement Date	Water-Level Elevation (m)
Well 26 Con't.					4/15/86	706.6
					5/14/86	706.6
					6/18/86	706.59
					8/7/86	706.62
					9/24/86	706.7
					11/4/86	706.76
					1/12/87	706.86
					3/5/87	706.9
					3/17/87	706.88
					4/21/87	706.89
					8/4/87	706.86
					8/25/87	707.01
					9/29/87	707.11
					11/4/87	707.26
					1/21/88	707.41
					3/10/88	707.45
					4/29/88	707.47
					6/14/88	707.47
					7/26/88	707.47
					9/1/88	707.47
					10/5/88	707.5
					12/1/88	707.56
					1/27/89	707.59
					4/12/89	707.59
					6/15/89	707.84
					7/25/89	707.51
					9/7/89	707.81
					11/29/89	707.51
					2/21/90	707.36
					4/10/90	707.55
					5/2/90	707.37
					5/21/90	707.55
					8/21/90	707.58
					9/11/90	707.6
					9/20/90	707.43
					10/17/90	707.65
					11/13/90	707.69
					12/18/90	707.73
					1/14/91	707.73
					2/12/91	707.77
					3/14/91	707.8
					4/8/91	707.79
					4/24/91	707.81
					5/21/91	707.81
					6/21/91	707.81
					7/19/91	707.8
					8/14/91	707.8
					9/24/91	707.82
					11/20/91	707.81
					11/25/91	707.83
					12/12/91	707.83
					1/3/92	707.87
					1/13/92	707.85
					1/31/92	707.87
					2/18/92	707.85
					2/27/92	707.84
					3/17/92	707.86
					3/30/92	707.87
					4/13/92	707.88
					4/30/92	708.07
					5/20/92	707.97
					5/27/92	707.92
					6/16/92	707.85

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

**Table C-1 Historical Water Levels for Selected Wells at the Nevada Test Site
and the Amargosa Desert**

Map Reference Numbers	Official ID	Common Name	Northing ^a (m) ^b	Easting ^a (m)	Measurement Date	Water-Level Elevation (m)
Well 26 Con't.					6/29/92	708.23
					7/21/92	708.24
					7/31/92	708.2
					8/17/92	708.17
					8/27/92	708.13
					9/16/92	708.1
					10/1/92	708.07
					10/20/92	708.06
					11/18/92	708.04
					11/30/92	708
					12/13/92	708.01
					12/17/92	708.04
					1/14/93	708.01
					1/26/93	708.02
					2/19/93	708.06
					2/25/93	708.04
					3/24/93	708.09
					3/29/93	708.09
					4/21/93	708.08
					4/29/93	708.08
					5/21/93	708.13
					5/27/93	708.12
					6/23/93	708.1
					7/12/93	708.1
					7/20/93	708.09
					8/25/93	708.08
					9/16/93	708.08
					9/24/93	708.09
					9/29/93	708.09
					10/8/93	708.09
					10/20/93	708.11
					10/21/93	708.1
					10/21/93	708.1
					11/17/93	708.15
					11/23/93	708.14
					12/16/93	708.16
					12/21/93	708.17

^a - UTM Coordinates; Zone 11; NAD 27

^b - Meters

Figure C-2
Hydrograph for Well 370956116172101 (WW-8)

Figure C-3
Hydrograph for Well 370142116021101 (WW-A)

Figure C-4
Hydrograph for Well 365500116003901 (WW-C-1)

Figure C-5
Hydrograph for Well 364804115580801 (WW-5B)

Figure C-6
Hydrograph for Well 364706116170601 (J-11 WW)

Figure C-7
Hydrograph for Well 363815116175901 (TW-5)

Figure C-8
Hydrograph for Well 363437116010801 (Army 6A)

Figure C-9
Hydrograph for Well 363434116354001 (DEFIR W)

Figure C-10
Hydrograph for Well 363348116254901

Figure C-11
Hydrograph for Well 363346116322801

Figure C-12
Hydrograph for Well 363342116325101

Figure C-13
Hydrograph for Well 363340116332901

Figure C-14
Hydrograph for Well 363310116294001 (USBLM W)

Figure C-15
Hydrograph for Well 363252116265001

Figure C-16
Hydrograph for Well 363237116292901

Figure C-17
Hydrograph for Well 363212116270401

Figure C-18
Hydrograph for Well 363209116314001

Figure C-19
Hydrograph for Well 363117116303601

Figure C-20
Hydrograph for Well 363039116303501

Figure C-21
Hydrograph for Well 363030116104501

Figure C-22
Hydrograph for Well 363028116270201

Figure C-23
Hydrograph for Well 363009116302701 (Hollow W)

Figure C-24
Hydrograph for Well 362929116085701 (Cherry Patch W)

Figure C-25
Hydrograph for Well 362848116264201 (Gilgans North W)

Figure C-26
Hydrograph for Well 362532116172700 (Devils Hole)

Figure C-27
Hydrograph for Well 36241711613600 (Point of Rocks SW)

Site Attribution
(Hydrostratigraphic-Unit Designations):

- Alluvial Aquifer (AA)
- Caldera Complex Welded Tuffs (TMAQ7)
- Caldera Complex Tuffs and Lava Flows (TPTC6/TCTC5)
- Caldera Complex Non-Welded Tuffs (BCU2/TCBCU4)
- Caldera Complex Welded Tuffs (TBAQ3)
- Caldera Complex Welded Tuffs (BAQ1)
- Welded Tuff Aquifer (VA/VTa)
- Vitric Tuff Aquifer (VA/VTa)
- Topopah Springs Aquifer (VA/TPTA)
- Volcanic Confining Unit (TCU1/VCCU)
- Regional Volcanics: Undifferentiated (VU)
- Death Valley Section (DVS)
- Regional Tertiary Sediments (TS)
- Upper Plate of Lower Carbonate Aquifer (LCA3/UCA)
- Upper Clastic Confining Unit (UCCU)
- Regional Carbonate Aquifer (LCA)
- Lower Clastic Confining Unit (LCCU)
- Intrusives (I)
- Spring
- Site Reference Number
- Water-Level Elevation (meters)

Map Attributes:

- ~ Alluvial Surface Contact
- ~ Regional Fault
- ~ NTS Regional Groundwater Flow System Boundary
- ~ Outcrop of the Lower Clastic Confining Unit
- ~ Outcrop of the Upper Clastic Confining Unit
- ~ Area of Evapotranspiration/Discharge
- Water-Level Elevation Contour (meters)

Fault Descriptions:

- BMF Black Mountain Fault
- BRBF Belted Range Boundary Fault
- CGS Cole Fault
- FCFZ Furnace Creek Fault Zone
- LVVZ Las Vegas Valley Shear Zone
- MMF Mine Mountain Fault
- RVF Rock Valley Fault
- RVFZ Rock Valley Fault Zone
- SLFZ State Line Fault Zone

Groundwater Recharge
(cubic meters/day)

209
156
58
0

EXPLANATION:

Scale: 1:300,000
Coordinates: UTM Zone 11, NAD 1927
Variable Contour Interval: 100 and 500 meters

DRAWN BY	A. Burns	10-23-96	COMPUTER GENERATED DRAWING NO MANUAL CHANGES ALLOWED
DRAFT CHK	R. Gillson	10-23-96	PROJ. NO. 768693.02010103
PROJ. CHK	D. Drai	10-24-96	FILE DIR. \master\nts\dgn\bmp
PROJ. MGR	J. Eberlin	10-25-96	FILE NAME p22.dgn

PREPARED FOR
UNITED STATES DEPARTMENT OF ENERGY
NEVADA OPERATIONS OFFICE (DOE/NV)
NEVADA ENVIRONMENTAL RESTORATION PROJECT
LAS VEGAS, NEVADA

TITLE
**PREDEVELOPMENT
REGIONAL WATER-LEVEL MAP
PLATE 2**

EXPLANATION:

Map Attributes:

- Well Completed in the Alluvial Aquifer
- UE-6d Site Reporting Name
- 906 Site Reference Name
- 741 Water-Level Elevation (meters)
- Approximate Extent of Alluvial Saturation
- Alluvial Surface Contact
- Fault
- NTS Boundary

Fault Descriptions:

- CF Carpetbag Fault
- EGHF East Gravity High Fault
- MMF Mine Mountain Fault
- RFF Range Front Fault
- ToF Topgallant Fault
- YF Yucca Fault

Scale: 1:100,000
Coordinates: UTM Zone 11

DRAWN BY	A. Burns	28 FEB '96	PROJECT NO.	764027.01.03.01.00	PREPARED FOR	UNITED STATES DEPARTMENT OF ENERGY NEVADA OPERATIONS OFFICE (DOE/NV) NEVADA ENVIRONMENTAL RESTORATION PROJECT LAS VEGAS, NEVADA	TITLE EXTENT OF ALLUVIAL SATURATION AT YUCCA FLAT, NTS PLATE 3
DRAFT CHK	R. Gillson	28 FEB '96	FILE DIR.	/master/nts/dgn/bnp			
PROJ CHK	D. Driscoll	29 FEB '96	FILE NAME	p3yfaaaa.dgn			
PROJ MGR	M. Hampton	29 FEB '96		Version: 8 (2-28-96)

Map Attributes:

- Well Completed in the Vitric Tuff Aquifer
- Well Completed in the Welded Tuff Aquifer
- Well Completed in the Topopah Springs Aquifer
- UE-6e Site Reporting Name
- 905 Site Reference Number
- 739 Water-Level Elevation (meters)
- Potentiometric Contour (10 m interval)
- ~ Alluvial Surface Contact
- Fault
- Area in which Volcanic Aquifer is not Present

EXPLANATION:

Fault Descriptions:

- CF Carpetbag Fault
- EGHF East Gravity High Fault
- MMF Mine Mountain Fault
- RFF Range Front Fault
- ToF Topgallant Fault
- YF Yucca Fault
- 10 Reference Number os Structural Block within Caldera Complex

Scale: 1:100,000
Coordinates: UTM Zone 11
Contour Interval: 10 Meters

DRAWN BY	A. Burns	28 FEB 96	PROJECT NO.	764027.01.03.01.00	PREPARED FOR
DRAFT CHK	R. Gillson	28 FEB 96	FILE DIR.	/master/nts/dgn/bmp	UNITED STATES DEPARTMENT OF ENERGY NEVADA OPERATIONS OFFICE (DOE/NVO) NEVADA ENVIRONMENTAL RESTORATION PROJECT LAS VEGAS, NEVADA
PROJ CHK	O. Drier	29 FEB 96	FILE NAME	p4volcaq.dgn	
PROJ MGR	M. Hampton	29 FEB 96		Version: 4 (2-28-96)	

TITLE PREDEVELOPMENT POTENTIOMETRIC
CONTOUR MAP OF THE VOLCANIC
AQUIFER AT YUCCA FLAT, NTS
PLATE 4

EXPLANATION:

Map Attributes:

Fault Descriptions:

- Well Completed in the Lower Carbonate Aquifer

ER-6-1 Site Reporting Name

901 Site Reference Name

729 Water-Level Elevation (meters)

--- Potentiometric Contour (10 m interval)

— Fault

— Alluvial Surface Contact

— NTS Boundary
- EGHF East Gravity High Fault

MMF Mine Mountain Fault

RRF Range Front Fault

ToF Topgallant Fault

YF Yucca Fault

10 Reference Number of Structural Block within Caldera Complex
- Scale: 1:100,000
- Coordinates: UTM Zone 11
- Contour Interval: 10 meters

DRAWN BY	A. Burns	28 FEB 96	PROJECT NO.	764027.01.03.01.00	PREPARED FOR
DRAFT CHK	R. Gillson	28 FEB 96	FILE DIR.	/mster/nts/dgn/bmp	
PROJ CHK	O. Drick	29 FEB 96	FILE NAME	p5lcaaglz.dgn	
PROJ MGR	M. Hampton	29 FEB 96		Version: 9 (2-28-96)	

UNITED STATES DEPARTMENT OF ENERGY
NEVADA OPERATIONS OFFICE (OOE/NV)
NEVADA ENVIRONMENTAL RESTORATION PROJECT
LAS VEGAS, NEVADA

TITLE
PREDEVELOPMENT POTENTIOMETRIC
CONTOUR MAP OF THE LOWER CARBONATE
AQUIFER AT YUCCA FLAT, NTS
PLATE 5

Well Descriptions:

- Well Completed in Welded Tuffs (BAQ1)
- Well Completed in Non-Welded Tuffs (BCU2/TCBCU4)
- Well Completed in Welded Tuffs (TBAQ3)
- Well Completed in Tuffs and Lava Flows (TPTC6/TCTC5)
- Well Completed in Welded Tuffs (TMAQ7)
- Well Completed in Upper Plate of LCA (LCA3)
- Well Completed in Upper Clastic Confining Unit (UCCU)

EXPLANATION:

- Site Reporting Name
- Site Reference Number
- Water-Level Elevation (meters)
- Water Level Contour (50 m interval)
- Boundary of Structural Block within Caldera Complex (R. Warren, 1994)
- Reference Number of Structural Block within Caldera Complex
- Boundary Defining Extent of Caldera Complex
- NTS Boundary

Map Attributes:

Scale: 1:100,000

Coordinates: UTM Zone 11

Contour Interval: 50 meters

DRAWN BY	A. Burns	28 FEB '96	PROJECT NO.	764027.01.03.01.00	PREPARED FOR	UNITED STATES DEPARTMENT OF ENERGY	TITLE
DRAFT CHK	R. Gillison	28 FEB '96	FILE DIR.	/master/nts/dgn/bmp		NEVADA OPERATIONS OFFICE (OOE/NV)	PREDEVELOPMENT COMPOSITE WATER-LEVEL MAP OF THE SILENT CANYON/TIMBER MOUNTAIN CALDERA COMPLEX
PROJ CHK	O. Driscoll	29 FEB '96	FILE NAME	p6pmwlmpldgn		NEVADA ENVIRONMENTAL RESTORATION PROJECT	PLATE 6
PROJ MGR	M. Hampton	29 FEB '96		Version: 5 (2-28-96)		LAS VEGAS, NEVADA

Well Descriptions:

- Well Completed in the Welded Tuff Aquifer
- Well Completed in the Tuff Confining Unit
- Site Reporting Name
- Site Reference Name
- Water-Level Elevation (meters)
- Area in which Volcanic Aquifer is not Present

Scale: 1:100,000
Coordinates: UTM Zone 11
Dual Contour Intervals: 100 and 25 meters

EXPLANATION:

- Alluvial Surface Contact
- Fault
- NTS Boundary
- Potentiometric Contour (100 m interval)
- Potentiometric Contour (25 m interval)
- Reference Number of Structural Block within Caldera Complex

Fault Descriptions:

- MMF Mine Mountain Fault
- BMF Black Mountain Fault

Map Attributes:

- 51

DRAWN BY	A. Burns	28 FEB 96	PROJECT NO.	764027.01.03.01.00	PREPARED FOR	UNITED STATES DEPARTMENT OF ENERGY	TITLE
DRAFT CHK	R. Gillson	28 FEB 96	FILE DIR.	/master/nts/dgn/bmp		NEVADA OPERATIONS OFFICE (OEE/NV)	PREDEVELOPMENT POTENTIOMETRIC
PROJ CHK	O. Driest	29 FEB 96	FILE NAME	p7ymnts.dgn		NEVADA ENVIRONMENTAL RESTORATION PROJECT	CONTOUR MAP OF THE VOLCANIC AQUIFER
PROJ MGR	M. Hampton	29 FEB 96		Version: 5 (2-28-96)		LAS VEGAS, NEVADA	AT YUCCA MOUNTAIN, NTS
							PLATE 7

EXPLANATION:

Well Descriptions:

- Well Completed in the Alluvial Aquifer
- Well Completed in the Topopah Springs Aquifer
- Well Completed in the Welded Tuff Aquifer
- Well Completed in the Lower Carbonate Aquifer

Map Attributes:

- WW-5A Site Reporting Name
- 792 Site Reference Number
- 726 Water-Level Elevation (meters)
- NTS Boundary
- ~ Alluvial Surface Contact
- RVF Rock Valley Fault

Scale: 1:100,000

Coordinates: UTM Zone 11

DRAWN BY	A. Burns	28 FEB 96	PROJECT NO.	764027.01.03.01.00	PREPARED FOR UNITED STATES DEPARTMENT OF ENERGY NEVADA OPERATIONS OFFICE (DOE/NV) NEVADA ENVIRONMENTAL RESTORATION PROJECT LAS VEGAS, NEVADA	TITLE WATER-LEVEL CONTROL DATA AT SOUTHERN NTS PLATE 8
DRAFT CHK	R. Gillson	28 FEB 96	FILE DIR.	/master/nts/dgn/bmp		
PROJ CHK	O. Drici	29 FEB 96	FILE NAME	p8ffwlcnt1.dgn		
PROJ MGR	M. Hampton	29 FEB 96		Version: 2 (2-28-96)		