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Revision 0

Development of the Hanford South Geologic Framework Model, Hanford Site Washington

Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

Contractor for the U.S. Department of Energy
under Contract DE-AC06-08RL14788

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T. B. Hammond
INTERA

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ENVIRONMENTAL CALCULATION COVER PAGE

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Environmental Calculation File

Development of the Hanford South Geologic Framework Model, Hanford Site Washington

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Terms and Abbreviation

3D	three-dimensional
CERCLA	*Comprehensive Environmental Response, Compensation, and Liability Act of 1980*
CHPRC	CH2M HILL Plateau Remediation Company
Cold Creek	Cold Creek unit
ECF	environmental calculation file
FESI	Freestone Environmental Services, Inc.
GIS	geographic information system
Hanford	Hanford formation (undifferentiated)
HEIS	Hanford Environmental Information System (database)
LiDAR	Laser Imaging Detection Ranging
NAIP	National Agriculture Imagery Program
NAVD88	North American Vertical Datum 1988
ODBC	Open Database Connectivity
OU	Operable Unit
Ringold A	Ringold Formation unit A
Ringold E	Ringold Formation unit E
Ringold LM	Ringold Formation lower mud unit
Rtf	member of Taylor Flats of the Ringold Formation

Environmental Calculation File

Process for Constructing a Three-Dimensional Geological Framework Model of the Hanford Area South of Gable Mountain and Gable Butte

1 Purpose

This environmental calculation file (ECF) provides background and details the process used in constructing a three-dimensional (3D) geological framework model for the CERCLA groundwater operable units south of Gable Mountain and Gable Butte (i.e., 200-BP-5, 200-PO-1, 200-UP-1, 200-ZP-1, 1100-EM-1, and 300-FF-5). The model includes the 200, 300, 400, 600 and 1100 Areas of the Hanford Site and is titled the Hanford South Model. Leapfrog Hydro®[1] (versions 1-7 thru 2.1, ARANZ Geo Limited, LLC, 2013) is a powerful 3D geological modeling tool that utilizes existing geologic and hydrogeologic data to provide a 3D spatial geologic representation of the subsurface. It is used as a visual tool that can be manipulated by the end user to illustrate and explore geologic features that control and constrain groundwater, and groundwater contaminant movement, in the subsurface. These 3D model interpretations can be used during many stages of project development requiring hydrogeologic evaluations, to enhance and improve site investigations and characterization, conceptual model development, inputs to other modeling efforts, remedial process evaluations, and remedial action decisions. In addition, the portability of the models and associated viewer software allow visual presentations of complex hydrogeologic-to-contaminant relationships/ issues to be easily presented as well as to improve communications and interactions with regulators and the public.

The objective of this modeling effort is to provide an accurate representation of our current understanding of the subsurface geologic environment beneath contaminated waste disposal facilities in support of other modeling needs (i.e., contaminant fate and transport), to make informed remedial action decisions, and as an educational tool for presenting complex hydrogeologic concepts and data associations. The model is constructed based on the most up to date and defensible 3D interpretations of the Hanford Site's extensive hydrogeologic database (i.e., Hanford Environmental Information System (HEIS) and the Hanford GeoContacts datasets; Attachment A).

2 Background

Leapfrog Hydro® (version 2.1, ARANZ Geo Limited, LLC, 2013) utilizes radial basis functions to construct 3D interpolations based on borehole geologic unit contact elevations to create continuous surfaces representing geologic lithostratigraphy. If the user is so inclined to create these surfaces with a different geo-statistical function (i.e., ordinary kriging, inverse distance weighting), then surfaces can be created using any geographic information system (GIS) tool to generate a continuous gridded surface, and these surfaces can be imported into Leapfrog. However, given the Leapfrog workflow paradigm, it is much more practical, and time effective, to use the proprietary interpolation function (radial basis functions), and manage the model consistently within Leapfrog software. The HEIS and the Hanford GeoContacts datasets provide the borehole and geologic unit data used with the Leapfrog proprietary interpolation function to generate the models.

[1] Leapfrog Hydro® is a registered trademark of ARANZ Geo Limited, LLC of Christchurch, New Zealand.

The 3D Hanford South Model is updated periodically as borehole, or geologic unit datasets are updated, or as interpretations change. Data inputs and configuration files will be available concurrently with each release of the model, however, there is additional qualitative information used in each model version. The process of creating the 3D Hanford South Model will be repeatable to a certain extent based solely on using the same input data provided with each version.

Additionally, underlying data from boreholes, such as location, surface elevation, casing, and depth to geologic units, can be dynamically linked to an underlying database using Open Database Connectivity (ODBC). Consequently, changes to the model can be made concurrently with changes to the database, as opposed to uploading new flat files. Supporting data is also imported and uploaded to the model to provide improved spatial representation and orientation for the end-user. This includes, for example, Laser Imaging Detection Ranging (LiDAR) based ground surface layers, river bathymetry, and facility location information. In addition, user-specified layers can be imported to support multiple projects (e.g., water table surfaces, contaminant plume interpretations, etc.).

3 Methodology

The Leapfrog workflow overview for creating the Hanford South Model follows a generalized, but consistent, structure. In summary, interpreted borehole data is used to define geologic unit contacts as subsurface elevations. These data inputs are interpolated within the Leapfrog Hydro® framework to define geologic unit surfaces that form the upper (i.e., top of the geologic unit surface) and lower bounding model surfaces of the geologic unit intervals that, combined together, represent the solid model. The basic methodology for development and construction of the 3D Hanford South Model is as follows:

a. Define the model boundaries and gather the site-specific descriptions, information, and geologic data for constructing the geologic unit layers of the model.

b. Run the model to generate the surface interpolations needed to assemble the geologic unit surface/layer components of the solid model. Subtract from the top down, or add from the bottom up, the interpolated surfaces to generate the volume and spatial orientation of each geologic unit. Apply additional control points or edit with polylines as necessary to constrain known hydrogeologic features (e.g., pinch-outs, faults, etc.) within the model domain.

c. Save the new model as a unique 3D geologic model 'scene' for visual exploration and graphic presentations. Retain copies and records of all supporting data used in the model in user accessible folders maintained in internal CHPRC-links.

Figure 1 depicts the lateral boundaries used to define the Hanford South Model domain. The Columbia River forms the eastern boundary and the Gable Mountain-Gable Butte structural lineament forms the northern boundary. The western boundary is defined by a north-to-south transect located upgradient of the westernmost 200-Area operational area (200 West Operable Unit). Rattlesnake Mountain and the Yakima River define the model's southern boundary. Basalt sub-crops and above ground exposures are assumed to be impermeable boundaries and form the basement rock underlying the entire Hanford Site. The basalt surface represents the bottom layer of Leapfrog Hydro® Hanford South Model.

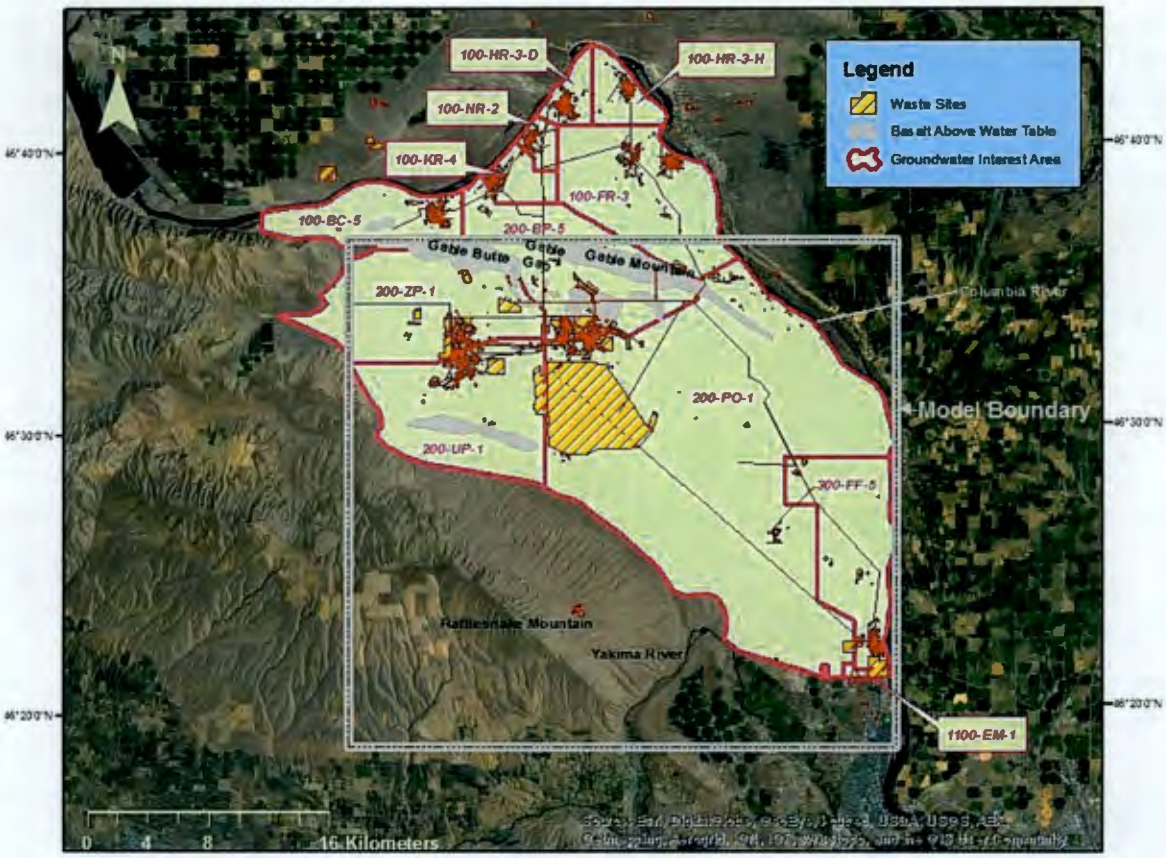

Figure 1. Hanford South 3D Geologic Framework Model Boundary

3.1 Defining Model Construction Boundaries – Topography, Basalt Surfaces, and Importing Borehole Data

Multiple datasets are used in the construction of the Hanford South Model. The top and bottom, or bounding, layers of the model are imported as surfaces. The first step in creating the model top layer is to define the topography, and all data associated with it, which represents the ground surface of the model. Detailed elevation data representing the relief across the Hanford Site and bathymetry of the adjoining Columbia River are used to complete construction of the surface layer for this model. This required combining land surface topography (Aero-Metric LiDAR, 2008) with the Columbia River bathymetry (PNNL- 19878, 2010). This surface was created using a continuous (grid) interpolated from 0.5 m resolution LiDAR for land surface, integrated with continuous (grid) 0.2 m bathymetry data to represent the bottom of the Columbia River. The two grids (LiDAR & bathymetry) were combined to create one continuous surface using a mosaic spatial analysis function in ArcMap®[2] 10.1 (ESRI, 2011). ArcGIS® Desktop, Release 10.1. Redlands, CA. Environmental Systems Research Institute.).

One assumption of this model is that movement of groundwater (confined and unconfined) and related contamination sourced at Hanford is constrained to the sedimentary layers above the basalt bedrock (suprabasalt sediments). Therefore, the 3D Hanford South Model lowest surface is defined by the top of basalt. The top of basalt was interpolated into a 15-m grid from contours based on published

[2] ArcMap® is a registered trademark of ESRI, Inc., Redlands, California, in the United States and other countries.

interpretations of the top of basalt surface (e.g., PNNL-14753, 2006 and SGW-48478, 2011) using the contours spatial analysis function in ArcMap® 10.1. Further refinements were made to the basalt surface using the Topo-to-Raster function in ArcMap® 10.1 which can use point data, contour data, boundary data and drain enforcement to create a hydrologically correct surface with/or without sinks or drains.

The next step in the modeling workflow, after the upper (topography) and lower (top of basalt surface) boundaries of the model are defined, is to construct the spatial representation of the geologic unit surfaces that are defined within the model boundaries; information for defining the top of each surface is acquired from HEIS and the Hanford GeoContacts dataset (excel spreadsheets). The process for selecting boreholes, defining contact elevations from borehole logs, and quality assurance for borehole contacts is described in detail in PNNL-17913 (2009). The Hanford South Model described in this ECF expands the process defined in PNNL-17913 (2009) to incorporate geologic data for the entire area defined within the new model.

In summary, the technical approach for this work was to assemble a regional stratigraphic model of the southern Hanford Site using previously published interpretations of the geologic units. These geologic units are managed, periodically updated as new well data become available, and maintained in an excel spreadsheet at CHPRC (GeoContacts_Hanford_revision date). The GeoContacts_Hanford_2014-06-26 dataset used for this model, is located on the internal link maintained by CHPRC: \\hanford\data\sitedata\PRC-Spatial\Visualization or the internal IDMS/RDS link: http://idmsweb.rl.gov/idms/livelink.exe?func=ll&objId=161734869&objAction=browse&viewType=1 . Previous hydrogeologic modeling support work for the 200-PO-1 OU, completed by FESI (ECF-200PO1-09-2074, 2010), was also incorporated to supplement construction of the geologic units in the Hanford South Model. The hydrogeologic data set generated by FESI significantly reduced the time required to complete the Hanford South Model.

To define and construct geologic unit layers within the Hanford South Model, two primary data sets were utilized, 1) best-estimate depth to geologic unit contacts (in feet below ground surface), and 2) ground-surface elevations (at the time of drilling in meters above mean sea level). These data are selected based on professional judgment by professional or registered geologists and hydrogeologists, reviewed and approved by general technical consensus for model input. Anomalies in the geologic model and the related borehole data (e.g., elevations) with high variability for specific unit contacts were reevaluated to verify or revise best-estimate geologic unit contacts or ground surface elevations relative to raw and interpreted borehole or other related data.

For the Hanford South Model, best estimates of geologic unit contacts were compiled for 1,396 wells and boreholes within, and adjacent to the Hanford South Model domain (Attachment A, Tables A-1 and A-2). The primary approach for this work was to build on the existing dataset compiled by FESI for near-field 200-PO-1 Groundwater OU conceptual model development. Data quality control and validation steps were incorporated to crosscheck the FESI dataset against the original GeoContacts database source. Variances between the two datasets were resolved and revisions made accordingly to maintain consistency with the GeoContacts data source where possible.

The following steps describe the borehole data used and the essential format and fields required to develop the Leapfrog Hanford South Model:

1. The required borehole spatial location information, i.e., surface coordinates and elevations, along with other optional well construction information (e.g., total drilled depth and screen intervals) are obtained from well and borehole records maintained in HEIS.

2. From these data, the borehole best estimate ground-surface elevation (at the time of drilling) was calculated, using steps outlined in PNNL-17913 (2009). Attachment A (Table A-1) contains the borehole horizontal coordinates, total depth, and best-estimate ground surface elevations used in the Hanford South Model(*note*: Maximum drill depth reported in Table A-1 is approximately ± 1 m of actual borehole total drill depth to facilitate model visualization).

3. Two geologic contact spreadsheets (ECF-200PO1-09-2074 (2010) Geologic Data Package, and GeoContacts_Hanford-2014-06-26) were provided by CHPRC to INTERA during the database development process. The well data used to develop the geologic unit contact spreadsheets included information available from boreholes within the 200 PO-1 and 200-BP-5 Groundwater OUs (including the 200 East Area, and portions of the 300 and 600 Areas), selected boreholes from the adjacent 200 ZP-1 and 200-UP-1 Groundwater OUs that are within the 200 West Area, and wells located beyond the OUs. The geologic unit contact data (reported in feet below ground surface) included major and minor stratigraphic unit contacts that are representative of Hanford Site suprabasalt geology. These include the Hanford formation (including subunits), the Cold Creek unit (including subunits), the Ringold Formation (including subunits), and the top of basalt.

4. The project team (comprised of CHPRC and INTERA staff) utilized hydrostratigraphic nomenclature and corresponding model layers from the geologic units and subunits (Figure 2) developed during the initial 200-PO-1-OU model development process completed by FESI (ECF 200PO1-09-2074, 2010). This consisted of revising and/or grouping some units to more consistently interpret and define the significant physical and hydraulic features controlling the flow of groundwater and potential contaminants across the southern Hanford Site. During construction of the various geologic model layers, several data re-evaluation iterations were required to resolve issues relating to unit contact selection, mapping continuity, and data consistency. Each time, the project team reviewed, and in some cases re-evaluated, the raw geologic data in order to validate questionable geologic unit contacts and improve consistency in the geologic interpretation. Revisions that were made were updated and captured in the appropriate database.

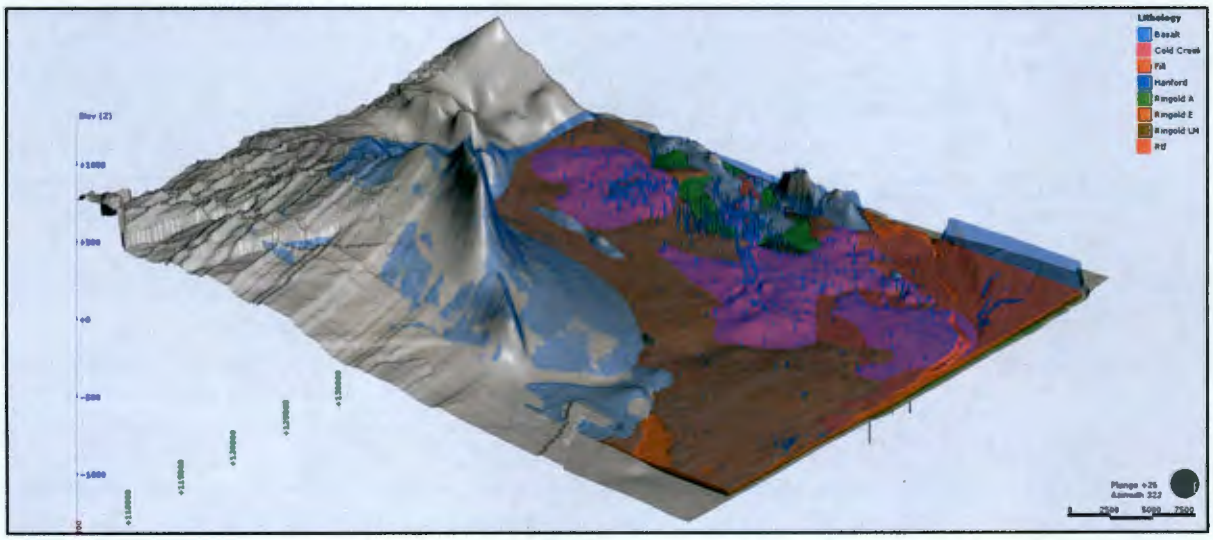

Figure 2. Three-Dimensional View of the Leapfrog Hydro® Model Output with the Topographic Surface Layer and the Hanford formation Layer Removed to Show Hydrogeologic Boundaries and Borehole Locations

In addition to the above-mentioned updates, a 100% data quality check was implemented in which the model input 'depth to unit' file defined in Table A-2 (Attachment A) was compared against the GeoContacts database (GeoContacts_Hanford-2014-06-26). This tolerance check was done by using an Excel Visual Basic script; this data comparison defined data depth discrepancies between the original GeoContacts database and the model input dataset. Model input variances can occur because of minor variations in elevations selected (rounding errors) as well as during geologic unit selections in the original GeoContacts dataset. Several steps were taken to resolve the differences. The geologic unit depths used in the model input file that were within a 0.25 m (0.8 ft) tolerance limit of their corresponding depths in the GeoContacts database were considered satisfactory and left unaltered in the model. Exceedances of the 0.25 m tolerance limit were revised with the correct best estimate contact depth from the GeoContacts database. For units that were ≥ 1 m different, additional scrutiny was applied to the unit depth pick. The GeoContacts dataset was used, and hydrogeologic expertise was applied to determine the nature of the discrepancy, and define and replace the anomalous or exceeded value with the best estimate unit depth picks from the GeoContacts database. These changes are documented in Attachment B.

To maintain geologic model consistency across the site, consideration was also given to existing hydrogeologic model layers and unit depths defined for the adjacent OUs (e.g., 200-ZP-1 Groundwater OU).

The final validated geologic unit contacts data table (Table A-2, Attachment A) is imported into the model, formatted as depth below ground surface in meters.

The construction steps include:

1. Import selected borehole collars containing borehole horizontal location coordinates and ground surface elevations using the "Borehole Data" folder directory in the Leapfrog project tree (Table A-1, Attachment A). Table A-1 (Attachment A) contains the entire population of well and borehole surface information used to identify and locate the boreholes within the Hanford South Model.

2. Import available geologic unit data (depths of geologic unit contact tops) associated with each borehole (Table A-2, Attachment A). This data import is a subset of the borehole collar data set which defines all of the available wells within the model domain (Table A-1 (Attachment A)) Only boreholes and wells with geologic unit contact data that provide interpretable geologic data and that are drilled to adequate depths for defining the regional geologic units used for the model are included during this step. The Hanford South Model domain is divided into six geologic units that are based on area-specific geologic interpretations and publications (documented in the Hanford_GeoContacts_2014-06-26 dataset).

    a. The six geologic units are:

        i. Hanford formation (undifferentiated; Hf) - Equivalent to hydrostratigraphic unit 1 (Figure 3). The Hanford formation is undifferentiated and primarily consists of three facies subunits (silt-dominated, sand dominated, and gravel dominated) where identified. This unit represents the youngest unit present in the Hanford South Model and exhibits very high hydraulic properties. It is present within the vadose zone and upper portions of the unconfined aquifer

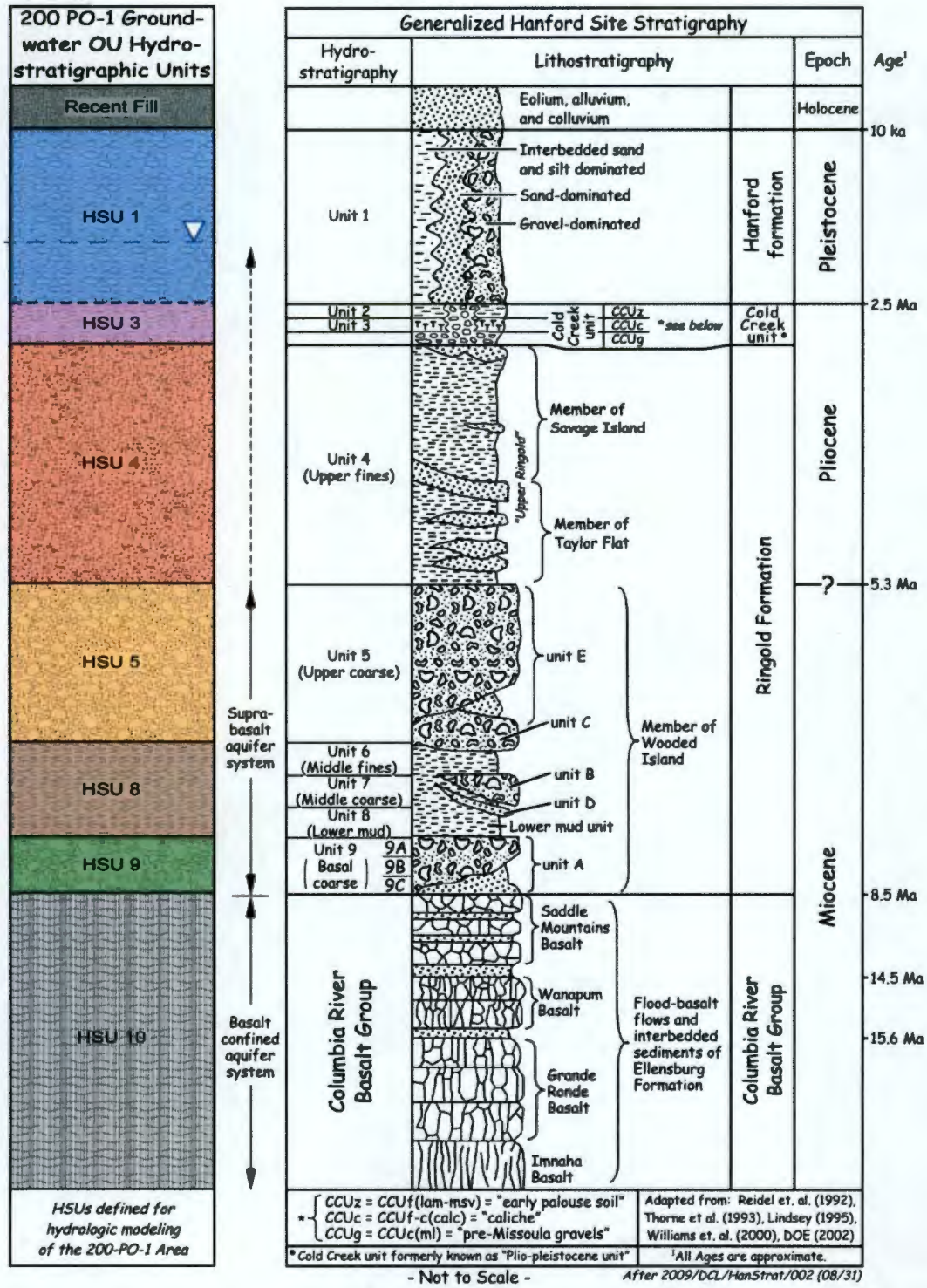

Figure 3. Hydrostratigraphic Column Showing 200-PO-1-OU Suprabasalt Geologic and Model Layer Correlations

ii. Cold Creek unit (undifferentiated; CCU) - Equivalent to hydrostratigraphic units 2 and 3 (Figure 3). The Cold Creek unit undifferentiated consists of subunits Cold Creek unit Z (Early Palouse Soil), unit C (caliche), and unit G (pre-Missoula gravels) where identified. This unit typically underlies the Hanford formation and exhibits hydraulic properties similar to less than the Hanford formation. It is present within the vadose zone and upper portions of the unconfined aquifer.

iii. Ringold Formation, Member of Taylor Flats (Rtf) - Equivalent to hydrostratigraphic unit 4 (Figure 3) or the Upper Ringold Formation undifferentiated where identified. Where present, this unit exhibits much lower hydraulic properties than overlying Hanford formation or Cold Creek units. It is present primarily within the upper portion of the unconfined aquifer.

iv. Ringold Formation, Member of Wooded Island unit E (Rwie) - Equivalent to Ringold hydrostratigraphic unit 5 (Figure 3). Ringold Formation unit E is combined with Ringold Formation unit C. This is the primary unit forming the unconfined portion of the suprabasalt aquifer system and exhibits hydraulic properties that are generally lower than Hanford formation and Cold Creek units.

v. Ringold Formation, lower mud unit (Rlm) - Equivalent to Ringold hydrostratigraphic units 6 - 8 (Figure 3). Ringold Formation lower mud undifferentiated is combined with Ringold Member of Wooded Island units B and D where identified. This unit is an aquitard, creating confining conditions, and isolating the Ringold Formation unit E from underlying Ringold Formation unit A where the units are present.

vi. Ringold Formation, Member of Wooded Island unit A (undifferentiated)(Rwia) - Equivalent to hydrostratigraphic units 9A - C (Figure 3). Ringold Formation unit A undifferentiated is combined with subunits Rwia upper, Rwia mud, and Rwia lower where identified. This unit is typically confined by the overlying Ringold Formation lower mud unit where present and exhibits relatively low hydraulic properties.

The completed Leapfrog Hydro® model is termed a 'scene' (Figure 2). Each scene is unique, composed of the top and bottom boundaries of the model as defined above, and the data inputs (pre-defined) from the tables (Attachment A). Each model scene (or version) including the supporting tables used in the construction of the model are archived as a complete model data package to support future re-creation of the model. Note, each Leapfrog Hydro® scene available for use will also contain wells that were not used in the geological framework construction, but whose existence and location are of specific interest to scientists and project managers. Examples of these include decommissioned wells, aquifer tubes, and other wells that do not have information and details essential to geologic model construction.

3.2 Building a Geologic Framework Model

A geological model is the fundamental method for describing and ordering geologic units in Leapfrog Hydro®. Building the geological model in Leapfrog Hydro® is a process of successive refinements made up of defining the models boundary extents and building the internal structures. The geological model consists of a number of non-intersecting volumes that fit together to exactly fill a 3D boundary defined by the model top and bottom extents. The geological model is usually built from oldest to youngest or from

youngest to oldest. For the Hanford South Model, the model boundary extents default to the topographic and top of basalt layers, but different lateral extents can be made if desired.

Two-dimensional geologic unit columns constructed from imported borehole geologic unit contact data (Table A-2, Attachment A) are used as the basis to form the internal structure of the model, and the 3D model is created in the following sequence:

a) Define surfaces from linked geologic unit columns in chronological order from oldest to youngest (e.g., Rlm, CCU, and Hf).

b) Build geological unit model volumes from oldest to youngest as sequential new deposits from the geologic unit contacts.

c) Leapfrog generates a new surface for each sequential geologic unit entry using radial basis function.

As mentioned previously, users may desire a different approach to interpolating from borehole data. This can be accomplished by applying an interpolation scheme in 2D to create a continuous surface, and then importing the grid directly in to the Leapfrog model, and transform it to a 3D surface. The disadvantage of this approach is maintaining and managing the 3D model. If model surfaces are interpolated using the proprietary Leapfrog interpolation co-radial base function scheme, then the model automatically updates if boreholes are updated. Conversely, if gridded surfaces are first created with a 3rd party program and then imported into the model, then each time there is an update to the borehole data, each surface will have to be re-created, and imported into the 3D model.

3.3 Refine Geological Unit Surfaces and Spatial Resolution

Model surfaces in the Hanford South Model are refined by adding control points to geologic unit surfaces or using polylines. The control point data includes x-coordinate, y-coordinate, and an elevation (z-coordinate) of the unit it represents (e.g., Rlm, CCU, and Hf). The logic for placement of control points and polylines is based on an underlying understanding and knowledge of the interpreted geologic framework, which is developed by professionally trained and experienced hydrogeologists and geologists, and is necessary in areas where the interpolated surface deviates from empirical information that is not represented by borehole contacts (e.g., geologic truncations, variations in structural interfaces, faults, etc.). It also may be useful in areas where borehole data is sparse but well-defined structural patterns or depositional trends are known. The tables containing the control points that are associated with each scene or revision are also uploaded and archived concurrently with each model release.

The Hanford South Model is considered a regional model and it provides geologic detail appropriate for the scale of this model. Refined models consisting of smaller extents are often required for supporting project specific work scope in more localized areas typically defined by the CERCLA Operable Unit boundaries. To meet the specific needs of scientists and project managers, we have created smaller models ("sub models") with greater spatial detail and higher resolution in select areas of interest within the larger Hanford South Model boundary. To maintain model consistency and transparency, the smaller models are created by making a copy of the Hanford South Model in the same workspace and changing/trimming the model extents to cover a smaller area. Spatial detail and resolution are added and/or increased during this process.

3.4 Add Feature Data

Additional feature data is added to the geological models as reference points, and attributes of interest. Particularly important are the sources and information for the wells and boreholes. The following feature

data is also added to the Hanford South Model Leapfrog scenes to improve spatial orientation and for view enhancement:

a) 1-m resolution Aerial photographs – National Agriculture Imagery Program (NAIP, 2012)

b) Groundwater Area Operable Unit boundaries

c) Waste sites boundaries

d) Well names, and color-indicators, by category, of the well information provided at that location. Information may include well screen information, geologic information, or well status, i.e., well decommissioned

e) Published two-dimensional groundwater plume extents for all major contaminants of concern

f) Published interpretations of the water table

g) Well screen information (e.g., Table 1)

Additional feature data can be added to any scene at the request of project staff. The feature data sets are captured and archived with the completed scene data package.

Table 1. Example of Leapfrog Well Screens Table

Well Name	From (m)[a]	To (m)[b]	Well Type	Status	Screen Type
399-2-32	6.95	36.88	GROUNDWATER WELL	IN-USE	Screen
299-W22-89	70.36	101.38	GROUNDWATER WELL	IN-USE	Screen
299-W11-96	89.79	146.4	GROUNDWATER WELL	IN-USE	Screen
699-S5-E2	44.2	74.98	GROUNDWATER WELL	IN-USE	Screen
699-S5-E2B	44.07	79.25	GROUNDWATER WELL	IN-USE	Screen

Notes:

a. Depth in meters below ground surface of the top of open interval (screen or perforations).

b. Depth in meters below ground surface of the bottom of the open interval (screen or perforations).

3.5 Step-by-Step Instructions for Reproducing the Geologic Hanford South Model

The overall workflow outline and logic for creating the 3D Hanford South Model is presented in the previous Methodology (Sections 3.1 through 3.4). This section provides the exact sequence of steps that must be followed, and the input files required in each step, in order for the user to construct or recreate the same 3-D geologic model (*note: variation from this sequence of steps will produce a slightly different model output)*:

a) Open Leapfrog Hydro® software and create a new project

b) Import borehole data by right clicking on the folder titled "Borehole" data and navigating to the comma separated value (csv) table entitled "Hanford South Leapfrog Collars.csv". In the "import

data dialogue box" there will also be a section to import well intervals. In this area, browse to the coma separated value table entitled "Hanford South Lithology.csv".

c) Follow the prompts in the Leapfrog Borehole Data dialogue box entering the well name column from the csv file as (Hole ID) , the x-coordinates column from the table as (X) data, the y-coordinates as (Y) data, the elevation as (Z) and the constructed depth as (MAX DEPTH) in the Leapfrog dialogue boxes respectively.

d) To add the upper surface of the model right click on the folder entitled "Topography", then "New Topography", then "Import Elevation Grid". Browse to the Lidar .tif file, and import it *(note: Leapfrog will not accept the native 0.5 resolution due to the size of the file. Input 40 for the grid spacing).*

e) To add the lower surface of the model and the northern clipping boundary, right click on the "Meshes" folder, and "import elevation grid", and navigate to stwdtob.tif, and Hanford South Trim.tif, and import both files.

f) To create a new geological model we define a region that encompasses the boundary coordinates of the model. Right click on the folder entitled "Geological Model", and click "New geological model". In the Base Lithology dropdown, navigate to the lithology (which should appear by default). Set the X minimum and maximum to 559,311.49 and 595,217.07 respectively, and set the Y minimum and maximum to 109,196.96 and 142738.03 respectively. Set the surface resolution to 100, and click OK. These are the pre-defined model coordinates.

g) Expand the new Geological Model and right click "Surface Chronology", then drop down to "New Deposit from Base Lithology." Drop down to Hanford. Click the radio button "Contacts Below" and check Cold Creek, Rtf, Ringold LM, Ringold E, Ringold A and Basalt. Click OK. This will add the Cold Creek solids model geometry to the existing model.

h) Continue constructing the Geologic Model by right clicking "Surface Chronology", then drop down to "New Deposit from Base Lithology." Drop down to Cold Creek. Click the radio button "Contacts Below" and check Rtf, Ringold LM, Ringold E and Basalt. Click OK.

i) Continue constructing the Geologic Model by right clicking "Surface Chronology", then drop down to "New Deposit from Base Lithology." Drop down to Rtf. Click the radio button "Contacts Below" and check Ringold LM, Ringold E and Basalt. Click OK. This will add the Rtf solids model geometry to the existing model.

j) Continue constructing the Geologic Model by right clicking "Surface Chronology", then drop down to "New Deposit from Base Lithology." Drop down to Ringold E. Click the radio button "Contacts Below" and check Ringold LM, Ringold A and Basalt. Click OK. This will add the Ringold E solids model geometry to the existing model.

k) Continue constructing the Geologic Model by right clicking "Surface Chronology", then drop down to "New Deposit from Base Lithology." Drop down to Ringold LM. Click the radio button "Contacts Below" and check Ringold A and Basalt. Click OK. This will add the Ringold LM solids model geometry to the existing model.

l) Continue constructing the Geologic Model by right clicking "Surface Chronology", then drop down to "New Deposit from Base Lithology." Drop down to Ringold A. Click the radio button "Contacts Below" and check Basalt. Click OK. This will add the Ringold A solids model geometry to the existing model.

m) Surface control is added to the model with control wells included in the "Hanford South Leapfrog Collars.csv" and "Hanford South Lithology.csv" tables when imported. To add more surface control, import previously constructed polylines to the Polylines folder, then add them to the corresponding surface by right-clicking on the surface and selecting "Add > Points". Use polylines constructed for Cold Creek, Rtf, Ringold E Ringold LM and Ringold A. To change the base of the model to the top of basalt, expand the geological model. Under "Boundaries", drop down to New Base, From Surface, and add the top of basalt that was previously added to the mesh ("stwtob").

4 Assumptions and Inputs

Assumptions and inputs for the Hanford South Geoframework model are identified in this section.

4.1 Hanford South Model Domain

The model domain is comprised of a rectangular region:

- approximately 27 km north-south
- approximately 39 km east-west
- coordinates:
  - Washington State Coordinate System: NAD_1983_StatePlane_Washington_South_FIPS_4602
  - Lower left corner: Easting 559312 m, Northing 109197
  - Upper right corner: Easting 595217 m, Northing 142738

4.1.1 Geology of the Hanford South Model Domain

The interior of the Hanford South Model domain is divided into six vertically stacked geologic unit layers. The geologic naming convention is different than the nomenclature used to define other models outside of the Hanford South Model domain (e.g., the 100 Area Model) because these regions were investigated following separate paths and established stratigraphic correlations and nomenclature that are different than the region encompassing the Hanford South Model domain.

The six geologic units (Figure 3) are from youngest to oldest:

1) Hanford formation (undifferentiated, may also be labeled as Unit 1)
2) Cold Creek unit (may also be labeled as Unit 3)
3) Ringold Formation Member of Taylor Flats (may also be labeled as Upper Ringold or Ringold Unit 4)
4) Ringold Formation unit E (this may also be labeled Ringold unit E or Ringold Unit 5)
5) Ringold Formation lower mud unit (may also be labeled as Ringold Unit 8)
6) Ringold Formation unit A (may also be labeled as Ringold Unit 9)

5 Software Applications

Software used for this calculation is applicable in accordance with PRC-PRO-IRM-309, *Controlled Software Management.*

5.1 Approved Software

The following software was used to perform the calculations and was approved and compliant with PRC-PRO-IRM-309. This software is managed under the following documents consistent with the procedure:

5.2 Descriptions

Required software descriptions are approved in the subsections that follow.

5.2.1 Leapfrog Hydro® (Controlled Calculation Software)

Software Title: Leapfrog Hydro®

Software Version 2.1.1

Hanford Information Systems Inventory (HISI) Identification Number: 2874 (Safety Software,graded Level C)

Workstation type and property number (from which software is run): Dell Laptop (non-HLAN),Dell Service Tag #14610748609 and Dell Laptop (non-HLAN),Dell Service Tag #BX9MMQ1

5.2.2 pgAdmin PostGresSQL tools (Utility Software)

pgAdmin PostGresSQL tools were used to store and query data in a spatially-enabled relational database and perform calculations as necessary.

- Software Title: pgAdmin PostGresSQL tools
- Software Version: Version 1.16
- Hanford Information Systems Inventory (HISI) Identification Number: (unregistered)
- Workstation type and property number (from which software is run): Dell Laptop (non-HLAN), Dell Service Tag #14610748609

5.2.3 ArcMap® (Utility Software)

ArcMap® was used for grid math and interpolations using the spatial analyst tool and 3D analyst tools.

- Software Title: ArcMap®
- Software Version: Version 10.2.1
- Hanford Information Systems Inventory (HISI) Identification Number: (unregistered)
- Workstation type and property number (from which software is run): Dell Laptop (non-HLAN),Dell Service Tag #14610748609 and Dell Laptop (non-HLAN),Dell Service Tag #BX9MMQ1

5.3 Statement of Valid Software Application

- Leapfrog Hydro® software identified was used consistent with intended use for CHPRC as identified in CHPRC-01753 and is a valid use of this software for the problem addressed in this application. This software was used within the limitations defined in CHPRC-01753 for CHPRC applications. A copy of the *Software Installation and Checkout Form* for this software is provided in Attachment C to this ECF.

- Utility software was used for limited purposes to support the use of Leapfrog Hydro® and this Calculation

6 Results/Conclusions

The Leapfrog Hydro® model is a 3D geological model builder. The model scenes are outputs representing the model which can be easily viewed and explored using a free Leapfrog Hydro® Viewer (Leapfrog Hydro Viewer® version 4.0, ARANZ Geo Limited, LLC, 2013) The available Hanford South Model and supporting datasets may be accessed (with permission) for viewing at the following link maintained by CHPRC: \\hanford\data\sitedata\PRC-Spatial\Visualization. The Leapfrog Hydro Viewer® (version 4.1 or latest version) can be downloaded from the following link: http://www.rl.gov/softdist/.

The Hanford South Model scenes are maintained and regularly updated to remain consistent with the most recent borehole data and other relevant information. New and revised model scenes are generated periodically as new borehole and site information become available and/or upon project specific request. New models and revisions and the supporting data sets used in their construction are stored together in internal CHPRC folders that are identified and linked by date (e.g., Hanford_South_2014-06-26 and GeoContacts_Hanford_2014-06-26.xslx). These folders are not publically accessible but can be located, with permission, at the following links: (http://idmsweb.rl.gov/idms/livelink.exe?func=ll&objId=183514551&objAction=Open&nexturl=%2Fidms%2Flivelink%2Eexe%3Ffunc%3Dll%26objId%3D161734869%26objAction%3Dbrowse%26viewType%3D1 or the CHPRC link:\\hanford\data\sitedata\PRC-Spatial\Visualization.The calculation results presented in Section 4 are evaluated with respect to the data source uncertainty. Uncertainty is not quantified in the ECF but is discussed qualitatively.

Uncertainties and anomalies in the best-estimate database and Hanford South Model dataset were prioritized for in-depth review and analysis of selected borehole data for verification and validation of selected contacts, as well as to resolve discrepancies. Hanford South Model data quality checks and validation was performed to verify that the resulting model geologic contact input depth files are within 0.25m accuracy of the GeoContacts_Hanford _2014-06-26.xslx data set. The verification included a 100% crosscheck between the two data sets using a macro to compare and identify the GeoContacts variances and highlight those differences.

Exceedances were further compared and those values resolved in the model data set to match the best estimate and most consistent values from GeoContacts_Hanford_2014-06-26.xslx. Variances greater than 1-m were scrutinized and resolved by direct data review and one to one comparisons. These discrepancies were defined, actions taken to update the Leapfrog input file, and the basis and results documented in Attachment B. Following data variance resolution and documentation the updated data set was imported and Leapfrog Hanford South Model regenerated and reviewed again for conformance to the model expectations.

The 3D Hanford South Model documented in this calculation brief presents the current, integrated understanding of the subsurface geologic framework beneath the southern Hanford Site. The geologic conceptual model for the Hanford South Model will continue to evolve as new stratigraphic and hydrologic data become available.

7 References

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Attachment A

Well Information and Geologic Contacts Data Tables

The data contained in Tables A-1 and A-2 represent the most accurate and currently available well location and interpreted geologic contact depths available. Table A-1 presents the format used for well location and elevation information (i.e. ground surface, top of casing, brass cap, etc.) used in Leapfrog Hydro®. The information in Table A-1 is best estimate at the time of drilling and is derived from GeoContacts_Hanford_2014-06-26.xslx. Table A-2 presents the geologic contact information derived from GeoContacts_Hanford_2014-06-26.xslx used to generate geologic unit surfaces and interpolated volumes in the Leapfrog geologic framework model. Tables A-1 and A-2 are formatted for use in Leapfrog Hydro®. All coordinates, elevations and depths are in meters.

Table A-1. Well Names, Locations, Maximum Drill Depths, and Surface Elevations Used in the Model

Well Name	X-coord	Y-coord	Elevation	Drill Depth
299-E13-1	573655.8	134404.5	227.473	107.68
299-E13-13	573409.2	134085.5	221.758	108.8
299-E13-18	573118.6	134216.1	223.597	140.6
299-E13-20	573609.8	134312.9	227.05	182.66
299-E13-62	573588.2	134361.5	227.538	68.06
299-E13-63	573192.4	134269.5	226.438	63.48
299-E13-64	573500.5	134350.8	227.085	19.91
299-E16-1	575782.6	135219.9	212.317	156.45
299-E17-12	574905.4	135125.9	220.264	88.17
299-E17-21	574106.8	134893.4	224.257	147.31
299-E17-24	574518.1	134845.6	224.801	112.25
299-E17-25	574515.2	134845.6	225.025	110.73
299-E17-26	574662.6	135025.1	224.436	116.52
299-E17-4	575117.9	135370	219.035	122.92
299-E17-6	575113.1	135108.2	219.771	153.4
299-E18-1	573296.6	135200.2	219.485	101.19
299-E19-1	572819.7	135085.6	224.807	164.37
299-E23-2	573709.4	135671.8	220.04	139.99
299-E24-13	575300.6	136037.3	211.631	104.63
299-E24-14	575323.9	136018.8	211.654	104.63
299-E24-18	574647.1	135469.8	219.44	100.58
299-E24-19	575316.9	136003.5	211.654	92.65
299-E24-20	575251.1	136049.4	210.114	93.66
299-E24-21	574635.8	135698.2	217.852	103.11
299-E24-22	575262.7	136142.8	209.555	98.66
299-E24-24	574179.8	135459.3	220.488	111.95
299-E24-25	574598.6	136287.2	209.629	111.3132
299-E24-33	575325.4	136251.5	206.032	97.17
299-E24-4	575112.4	136035.2	213.03	101.59
299-E24-5	575037.9	136063.5	212.893	31.57
299-E24-7	574406.5	135560.5	218.67	138.16
299-E24-70	575320.6	136028.2	211.581	40.62
299-E24-71	575309.8	136034.6	211.518	16.24
299-E24-72	575308.1	136048.6	211.465	16.24
299-E24-73	575316.7	136056.5	211.249	16.24
299-E24-8	574546.8	136271.8	210.324	117.44
299-E25-1	575336.1	136030.9	211.459	99.15
299-E25-100	575435.9	136210.5	208.752	31.48

Well Name	X-coord	Y-coord	Elevation	Drill Depth
299-E25-1000	576478.4	135757.7	205.53	120.45
299-E25-101	575436.1	136197.2	208.908	31.48
299-E25-102	575427.2	136188.6	208.965	31.48
299-E25-103	575414.4	136191.5	209.029	16.24
299-E25-104	575408.3	136201.9	209.178	31.48
299-E25-105	575415.9	136216.3	208.663	16.24
299-E25-106	575436.1	136178.3	208.944	16.24
299-E25-107	575436.6	136163.5	209.154	16.24
299-E25-108	575428.3	136159	209.146	31.48
299-E25-109	575415.9	136159.1	209.144	16.24
299-E25-110	575408.6	136162.3	208.328	16.24
299-E25-111	575408.9	136177.1	208.906	31.48
299-E25-112	575414.8	136184.6	209.053	16.24
299-E25-113	575404.8	136213.6	208.797	16.24
299-E25-114	575402.3	136191.3	209.18	31.48
299-E25-115	575387.1	136190.9	210.004	31.48
299-E25-116	575381.1	136200.2	208.757	16.24
299-E25-117	575383.8	136212.5	208.874	16.24
299-E25-118	575393.4	136217.1	208.765	16.24
299-E25-119	575400.1	136185.6	209.526	16.24
299-E25-12	575978.7	135491	208.625	104.63
299-E25-120	575401.1	136159	209.059	16.24
299-E25-122	575381.7	136165.8	209.071	16.24
299-E25-123	575380.1	136178.9	210.101	16.24
299-E25-124	575389.5	136185.3	209.495	16.24
299-E25-127	575411.7	136184.9	209.034	16.24
299-E25-13	575362.9	136140.4	208.378	97.62
299-E25-15	575368.8	136018.6	211.192	104.63
299-E25-16	575323.7	136018.5	211.675	104.63
299-E25-17	575760.3	135702.5	206.657	86.35
299-E25-18	575817.4	135699.3	207.502	92.44
299-E25-19	575852.3	135659	206.909	84.82
299-E25-2	575513.8	136061.9	206.04	115.3
299-E25-236	575328	135965.3	211.774	101.28
299-E25-28	576011.8	136111.7	202.634	107.07
299-E25-32	576382.4	136044.3	204.713	108.9
299-E25-33	575992.1	135713	204.29	122.92
299-E25-35	575708.3	135864.7	205.598	87.87
299-E25-40	575464.7	136212.3	203.11	84.52

Well Name	X-coord	Y-coord	Elevation	Drill Depth
299-E25-41	575466.1	136145.9	204.729	86.04
299-E25-42	575622.8	135887.6	208.244	90.83
299-E25-43	576132.3	136251.5	198.123	79.16
299-E25-46	575359.8	135963.5	211.875	95.58
299-E25-48	575623.9	135815.7	208.184	91.68
299-E25-50	576399.1	135681.6	206.86	89.67
299-E25-55	575369.2	136050.8	210.954	47.03
299-E25-58	575402.7	136029.4	210.657	47.03
299-E25-6	575683.8	136164	201.869	89.39
299-E25-66	575342.3	136083.8	210.703	40.62
299-E25-72	575373	136083.3	210.533	40.62
299-E25-73	575384.7	136089	210.57	17.76
299-E25-74	575395.8	136083.2	210.436	17.76
299-E25-77	575377.5	136060.9	210.729	16.24
299-E25-79	575398.8	136048.7	210.752	40.62
299-E25-81	575387.1	136028.8	210.894	40.62
299-E25-87	575339.8	136036.5	211.442	16.24
299-E25-89	575347.7	136056.6	211.047	40.62
299-E25-90	575363.1	136053.6	210.798	40.62
299-E25-92	575332.5	136032.7	211.399	16.24
299-E25-93	575471.5	136022.1	207.267	97.62
299-E25-94	575409.2	136012.4	211.309	101.5
299-E25-97	575329.1	136055.6	211.166	16.24
299-E25-99	575428.6	136217.1	208.633	16.24
299-E26-1	575231	137092	188.676	76.59
299-E26-10	575589	137023.5	183.512	63.97
299-E26-11	576179.9	137134.6	182.979	63.85
299-E26-14	575786.4	137264.5	182.494	74.33488
299-E26-4	575733.9	136360.9	197.956	87.26
299-E26-5	575614.4	136337.8	198.63	90
299-E26-6	575459.8	136397.9	199.8	89.39
299-E26-77	575579	137130	184	71.96
299-E26-79	575827.9	137051.5	182.356	69.51
299-E26-8	575522.3	136687.2	189.208	122.92
299-E26-9	575576.1	137133.1	183.941	62.91
299-E27-10	575100.3	137052.5	190.81	74.18
299-E27-105	575127.3	136578.5	198.154	13.19
299-E27-107	575144.6	136626	197.65	13.19
299-E27-11	574652.9	137062.7	196.264	81.68

Well Name	X-coord	Y-coord	Elevation	Drill Depth
299-E27-13	575064.9	136489.2	204.088	85
299-E27-14	575217.3	136498.3	200.839	82.32
299-E27-15	575095.3	136630.4	199.16	81.01
299-E27-155	575003.1	136429.1	207.68	104.63
299-E27-16	574179.3	137164.9	198.967	83.02
299-E27-17	574547.3	137122	193.574	76.07
299-E27-2	575254.2	136342	204.152	96.1
299-E27-20	575067.4	136455.9	205.447	85.89
299-E27-21	575145	136407.2	204.993	95.13
299-E27-22	575185.1	136685.3	192.6	82.72
299-E27-23	575069.4	136452.2	205.659	95.78
299-E27-24	575212	136436.3	202.841	97.86544
299-E27-25	575362	136709.2	187.006	76.5904
299-E27-3	575108.9	136284.2	208.898	110.73
299-E27-4	575032	136497.9	204.685	94.81
299-E27-51	575155.6	136568.9	197.954	14.94
299-E27-52	575162.8	136618.7	197.712	46.72
299-E27-54	575204.8	136519.9	199.848	15.4
299-E27-55	575148.5	136491.3	200.433	47.94
299-E27-56	575205.5	136575.8	197.654	45.2
299-E27-58	575148.1	136503.9	198.395	12.28
299-E27-6	575245.1	136332.5	205.631	108.6
299-E27-65	575137.3	136539.3	198.386	13.54
299-E27-66	575127.7	136516.1	198.949	14.47
299-E27-68	575149.3	136557.1	198.088	13.54
299-E27-69	575171	136536	198.037	13.19
299-E27-7	575220.6	136619.4	194.231	86.65
299-E27-70	575172.4	136557	197.972	13.5
299-E27-71	575172.1	136578.3	197.808	13.5
299-E27-72	575192.6	136579.6	197.644	13.8
299-E27-73	575191.3	136558.3	197.865	13.19
299-E27-8	574759.1	137044.2	194.528	79.37
299-E27-9	574917.6	137040.9	192.294	75.74
299-E28-1	573933.4	136732.6	209.299	99.06
299-E28-13	573083.6	136484.9	215.432	77.81
299-E28-16	573136.8	136562.6	214.69	100.09
299-E28-17	573461.2	136331.7	216.079	90.31
299-E28-18	573104.1	136767.8	211.292	78.42
299-E28-19	573064.8	136682.6	212.705	97.01

Well Name	X-coord	Y-coord	Elevation	Drill Depth
299-E28-2	573704.5	136863.9	208.021	99.3
299-E28-22	574040.9	136321.5	213.997	117.13
299-E28-26	572941.6	137024	209.834	101.13
299-E28-3	573708.8	136607.3	211.648	100.67
299-E28-30	573140.3	136550.8	215.062	115.4829
299-E28-5	574033.8	136856.7	205.466	100.98
299-E28-8	573698.1	137074.3	204.263	97.01
299-E29-54	573467.1	136403.1	214.77	115.361
299-E32-1	572611.6	137645.5	200.579	87.26
299-E32-2	572648	137467.5	204.673	89.15
299-E32-3	572600.6	137384	206.93	93.97
299-E32-4	572603.8	137187.2	209.779	95.79
299-E32-8	572663.4	137741.5	196.743	79.24
299-E33-10	573255.5	137258.2	205.496	89.39
299-E33-106	573634.9	137480.2	199.217	31.48
299-E33-11	573901.3	137635.8	189.512	71.1
299-E33-12	573780.6	137632.2	190.294	127.49
299-E33-125	573554.8	137475.7	199.038	31.48
299-E33-129	573668.1	137356.7	200.912	13.8
299-E33-13	573706.5	137584.4	191.798	72.63
299-E33-130	573652.3	137336	200.98	31.48
299-E33-131	573652.2	137358.7	200.788	31.48
299-E33-132	573679.2	137354.7	200.868	14.94
299-E33-14	573985.6	137567.2	189.859	71.1
299-E33-141	573698.3	137362.7	199.664	12.28
299-E33-142	573686.1	137368.7	199.983	11.67
299-E33-143	573661.9	137332.1	201.139	13.8
299-E33-144	573668	137326.1	201.143	13.8
299-E33-145	573671.6	137347.5	200.922	12.58
299-E33-146	573675.6	137338.3	201.089	14.94
299-E33-147	573805.3	137280.9	200.417	31.48
299-E33-148	573797.7	137262.6	200.488	42.15
299-E33-15	573810.3	137540.7	191.453	77.51
299-E33-150	573596.6	137362	201.742	31.48
299-E33-151	573596.6	137333.7	200.902	31.48
299-E33-153	573580.2	137382.8	200.392	31.48
299-E33-154	573574.1	137366	200.616	31.48
299-E33-155	573557.8	137368.2	200.721	31.48
299-E33-158	573638	137357	200.759	31.48

Well Name	X-coord	Y-coord	Elevation	Drill Depth
299-E33-159	573642.2	137347.2	200.885	31.48
299-E33-16	573791.7	137465.3	194.941	79.64
299-E33-160	573637.8	137338	200.915	31.48
299-E33-161	573629.5	137333	201.033	31.48
299-E33-163	573629.4	137391.6	200.372	31.48
299-E33-164	573637.8	137387.3	200.426	31.48
299-E33-165	573637.6	137368.4	200.659	31.48
299-E33-169	573558	137307.2	201.239	31.48
299-E33-17	573878.5	137467.2	192.985	75.4
299-E33-171	573576.9	137337.7	200.943	31.48
299-E33-177	573666.1	137457	199.412	15.33
299-E33-178	573649.8	137459.3	199.46	15.63
299-E33-179	573884.9	137298.7	199.938	31.48
299-E33-18	573779.2	137386.1	197.07	85.74
299-E33-180	573874.4	137285.9	199.914	31.48
299-E33-182	573857.4	137298.5	199.981	12.89
299-E33-184	573880.9	137338.8	199.475	31.48
299-E33-185	573885.1	137326.8	199.675	31.48
299-E33-186	573870.1	137315.5	199.796	31.48
299-E33-189	573850.4	137338.7	199.537	31.48
299-E33-19	573847.6	137422.7	195.16	161.02
299-E33-190	573854.2	137326.6	199.691	31.48
299-E33-191	573842.2	137315.5	200.486	13.19
299-E33-192	573833.3	137340.7	199.577	31.48
299-E33-193	573824.4	137296.3	200.039	13.8
299-E33-195	573800.9	137288.7	200.232	13.19
299-E33-196	573796.7	137298.4	200.145	31.48
299-E33-198	573811.9	137315.5	200.749	12.89
299-E33-1A	573632.3	137614	192.896	72.63
299-E33-2	573617	137641.3	192.607	75.07
299-E33-20	573847.6	137397.9	195.8	78.45
299-E33-200	573803.6	137339.4	199.69	12.89
299-E33-201	573789.6	137338.4	199.669	31.48
299-E33-202	573781.1	137315.5	200.358	31.48
299-E33-203	573770.4	137318.9	199.9	31.48
299-E33-204	573770.4	137338.4	199.768	31.48
299-E33-205	573633.4	137406.2	200.322	83.48
299-E33-206	573608.9	137475.1	199.077	31.48
299-E33-208	573609.3	137506.3	199.999	31.48

Well Name	X-coord	Y-coord	Elevation	Drill Depth
299-E33-209	573598.3	137514.6	199.749	31.48
299-E33-21	573474.5	137293.2	203.366	86.95
299-E33-213	573791.6	137273.8	200.352	31.48
299-E33-214	573779.3	137280.6	200.933	31.48
299-E33-215	573767.2	137267.8	200.693	13.54
299-E33-216	573772.8	137256.3	200.795	12.89
299-E33-217	573765.2	137298.2	200.382	37.58
299-E33-218	573840.4	137284.2	200.715	37.58
299-E33-219	573854.7	137267.9	200.486	31.48
299-E33-22	573624.8	137660.8	192.373	71.71
299-E33-220	573886.9	137268.1	200.292	42.15
299-E33-221	573841.3	137252.7	200.707	42.15
299-E33-223	573581.8	137316.8	201.127	13.5
299-E33-224	573628.4	137301.4	202.187	13.8
299-E33-225	573611.9	137316.2	201.451	13.5
299-E33-226	573642.7	137316.2	201.235	31.48
299-E33-228	573666.9	137487.9	199.131	31.48
299-E33-229	573664.9	137365.2	200.781	13.8
299-E33-23	573617.1	137695.1	191.776	59.52
299-E33-231	573597.2	137391.3	200.349	31.48
299-E33-232	573566.8	137391.3	200.378	31.48
299-E33-233	573609.1	137371.6	200.496	31.48
299-E33-234	573611.8	137341.7	201.314	31.48
299-E33-235	573605.6	137334.8	200.965	31.48
299-E33-237	573581.9	137347.2	200.849	14.72
299-E33-24	573493.6	137578.5	194.867	79.03
299-E33-240	573673.6	137521.8	198.704	31.48
299-E33-241	573672.7	137511.3	198.845	31.48
299-E33-242	573653.5	137516.6	199.419	31.48
299-E33-243	573646.2	137539.4	198.513	31.48
299-E33-244	573648.4	137521	199.329	31.48
299-E33-245	573673	137469.2	199.446	31.48
299-E33-246	573645.8	137472.6	199.329	31.48
299-E33-248	573619.1	137457.2	199.64	31.48
299-E33-249	573623.3	137481.4	199.164	31.48
299-E33-25	573365.3	137681.6	192.361	74.18
299-E33-250	573620	137542.5	198.381	31.48
299-E33-251	573587.9	137457	199.367	31.48
299-E33-252	573583.3	137478.7	199.15	31.48

Well Name	X-coord	Y-coord	Elevation	Drill Depth
299-E33-253	573589.3	137541.5	198.307	31.48
299-E33-254	573558.7	137456.9	199.135	31.48
299-E33-255	573550.8	137465.4	199.108	31.48
299-E33-256	573556.3	137490.4	198.983	31.48
299-E33-258	573586.8	137369.2	200.519	31.48
299-E33-26	573333.4	137681.5	193.143	74.15
299-E33-262	573881.3	137255.2	200.354	31.48
299-E33-265	572866	137468	203.18	87.44128
299-E33-266	572828.9	137468	203.564	88.19109
299-E33-267	573519.5	137494.1	197.363	80.33944
299-E33-268	573519.3	137498.6	197.275	81.3148
299-E33-27	573668.1	137338.2	201	78.72
299-E33-29	573227.9	137231.2	205.753	89.55
299-E33-296	573628.1	137613.8	192.753	70.19
299-E33-3	573633.1	137666	190.07	72.93
299-E33-30	572923.8	137467.8	202.85	86.38
299-E33-302	573579.9	137665.7	191.655	68.97
299-E33-304	573496.6	137563.3	195.161	72.78
299-E33-31	573525	137491.4	197.426	79.03
299-E33-32	573524.8	137354	201.241	83.63
299-E33-33	574080.1	137301.9	195.298	77.84
299-E33-333	574086.4	137181.3	199.163	65.62
299-E33-334	573514.7	137256.4	203.288	87.87
299-E33-335	573568.4	137222.2	203.415	88.17
299-E33-337	573821.8	137193.9	201.99	88.17
299-E33-338	573912.1	137238.2	200.26	85.05
299-E33-339	573716.9	137221.5	202.303	88
299-E33-34	573104.4	137740.4	193.246	74.18
299-E33-340	573779.6	137763.8	188.34	100.27
299-E33-341	573565.2	137652.5	191.254	73.24
299-E33-342	573625.7	137580	194.135	75.83
299-E33-343	573744	137382.3	198.823	81.47
299-E33-344	573782.9	137387.3	199.139	74.79
299-E33-345	573780.9	137388.2	199.095	81.41
299-E33-35	573220.8	137605.1	196.174	77.23
299-E33-36	574068.6	137240	197.272	81.41
299-E33-37	574091.5	137185.4	199.185	82.72
299-E33-38	573591.2	137594.5	193.025	74.03
299-E33-39	573843.5	137637.4	190.121	71.14

Well Name	X-coord	Y-coord	Elevation	Drill Depth
299-E33-4	573616.8	137693.1	192.185	71.41
299-E33-40	573546.3	137723.1	190.381	97.93
299-E33-41	573707.2	137369.9	199.59	81.16
299-E33-44	573706.4	137469.2	196.028	78.72
299-E33-45	573693.1	137350.6	200.173	80.55
299-E33-46	573792.6	137278.4	200.35	81.56
299-E33-47	573916.5	137295.5	197.749	82.96
299-E33-48	573781.4	137162.1	202.592	89.39
299-E33-49	573647.5	137212.8	203.236	89.03
299-E33-5	573574.3	137606.4	193.697	74.76
299-E33-50	573773.6	137599.3	190.742	117.13
299-E33-57	573757.1	137286.7	200.609	46.72
299-E33-6	573574.4	137652.9	191.869	73.54
299-E33-61	573690.6	137358.6	199.711	14.94
299-E33-62	573658.9	137298.3	201.913	46.72
299-E33-63	573639.6	137399.1	200.296	46.72
299-E33-64	573609.3	137358.4	200.76	46.72
299-E33-65	573578.6	137399	200.147	46.72
299-E33-7	573574	137696	191.604	72.02
299-E33-71	573780.7	137471.5	195.342	46.72
299-E33-73	573791.8	137493.4	192.907	46.72
299-E33-74	573809.6	137502.7	192.472	46.72
299-E33-77	573567.7	137298.2	201.843	46.72
299-E33-78	573544.4	137335.7	201.189	14.94
299-E33-8	573475.3	137447.9	198.341	79.37
299-E33-84	573673.6	137517.4	198.812	46.72
299-E33-85	573643.3	137542.5	198.414	46.72
299-E33-86	573615.6	137517.5	199.028	46.72
299-E33-87	573584.3	137486.2	199.097	46.72
299-E33-88	573554.3	137514.7	199.313	46.72
299-E33-9	573646.8	137485.9	199.201	84.82
299-E33-92	573545.1	137335.6	201.139	13.8
299-E33-95	573572.1	137518.1	198.893	31.48
299-E33-97	573555.2	137521.5	199.42	31.48
299-E33-99	573554.3	137542.8	198.549	16.24
299-E34-1	574642.7	137238.2	192.136	75.68
299-E34-10	574284.4	137224.6	195.178	76.9
299-E34-11	574176.2	137581.8	188.406	67.84
299-E34-12	574411	137168.6	194.823	76.56

Well Name	X-coord	Y-coord	Elevation	Drill Depth
299-E34-13	574640.3	137297.3	190.8	73.02424
299-E34-2	574634.8	137220.7	192.814	74.61
299-E34-3	575110.3	137301.4	186.862	66.2
299-E34-4	574825.1	137743.9	179.454	54.98
299-E34-5	574643.8	137743.3	180.621	59.52
299-E34-6	574462.3	137740.7	182.929	60.44
299-E34-7	575274.2	137357.8	184.316	63.64
299-E34-8	574206.4	137249.6	195.418	80.25
299-E34-9	574186	137429.8	191.818	72.51
299-E35-1	575459.8	137465	182.521	60.07
299-E35-2	575576.1	137255.1	183.712	62.66
299-W10-1	566663.1	136734.6	206.691	93.97
299-W10-10	566751.4	136805.9	205.913	77.2
299-W10-101	566849.6	136772.1	206.567	29.65
299-W10-105	566837.5	136778.5	206.374	29.04
299-W10-107	566790.5	136733.5	205.672	34.53
299-W10-109	566766.9	136724	205.591	38.49
299-W10-11	566755	136802.2	205.931	77.2
299-W10-111	566785.3	136723.2	205.6	33.92
299-W10-112	566792.1	136705.2	205.702	34.53
299-W10-115	566766.6	136744	205.72	27.52
299-W10-117	566789.2	136751.4	205.838	38.49
299-W10-12	566755.6	136797.5	205.881	77.2
299-W10-120	566763.1	136703.6	205.688	37.88
299-W10-121	566799.8	136747.8	205.95	38.49
299-W10-122	566817.6	136774.8	206.017	28.74
299-W10-125	566805	136778.6	205.903	29.04
299-W10-126	566782.3	136778.7	205.828	29.07
299-W10-127	566763.6	136760.7	205.629	28.77
299-W10-13	566027.4	136606.8	213.416	77.2
299-W10-134	566784.6	136688.3	205.76	29.68
299-W10-135	566843.8	136660.5	206.421	29.68
299-W10-14	566017.2	136608.9	213.572	141.82
299-W10-140	566771.4	136660.4	205.805	29.65
299-W10-141	566761.3	136677	205.782	37.91
299-W10-143	566813.6	136689.5	206.072	29.38
299-W10-146	566851.4	136735.8	206.768	29.04
299-W10-147	566831.7	136720.3	206.144	31.48
299-W10-148	566822.9	136728	206.237	31.48

Well Name	X-coord	Y-coord	Elevation	Drill Depth
299-W10-15	566770.4	136808.1	206.07	68.76
299-W10-16	566780.9	136606.6	205.249	68
299-W10-161	566734.3	136456.8	205.281	33
299-W10-168	566755.4	136726.1	205.63	38.19
299-W10-17	566775.4	136491.3	204.604	68.94
299-W10-18	566846.9	136396.3	204.657	68.85
299-W10-196	566787.8	136724.8	205.855	55.74
299-W10-2	566672.3	136614.8	206.061	71.1
299-W10-22	566832.6	136883.1	208.024	92.44
299-W10-23	566823.8	136815.3	206.69	83.91
299-W10-24	566885.4	136798.8	208.978	132.83
299-W10-26	566843.4	136400.6	204.673	80.86
299-W10-27	566844	136441.8	204.899	82.9
299-W10-3	566731.9	136673.4	205.763	73.85
299-W10-35	566024.8	136995.5	212.032	159.1912
299-W10-36	566019.2	137452	210.457	141.3
299-W10-4	566734.6	136578.1	205.255	75.68
299-W10-5	566578.6	136474.8	205.465	74.15
299-W10-51	566795.8	136715	205.735	46.11
299-W10-8	566848.8	136811.2	207.413	77.81
299-W10-88	566777.8	136460	205.645	31.48
299-W10-89	566783.4	136436	205.515	31.48
299-W10-9	566748.2	136798.8	205.832	69.58
299-W10-90	566758.3	136445.2	205.454	31.48
299-W10-91	566746.6	136460	205.375	31.48
299-W10-92	566752.1	136435.9	205.381	31.48
299-W10-93	566727.3	136445.1	205.072	31.48
299-W10-94	566772.9	136430	205.668	31.48
299-W10-95	566787.7	136414.2	205.587	31.48
299-W10-96	566772.9	136399.9	205.56	31.48
299-W10-97	566752.3	136425.6	205.449	31.48
299-W10-98	566741.5	136401.5	205.344	31.48
299-W10-99	566727.2	136416.1	205.067	31.48
299-W11-10	568147.5	136610	222.745	94.57
299-W11-12	566927.1	136604	207.881	77.2
299-W11-2	567406.3	136671.1	218.37	162.55
299-W11-24	566912.9	136744.5	209.745	77.2
299-W11-25B	566912.3	136774.8	209.746	125.82
299-W11-26	567045.1	136563.7	212.468	157.97

Well Name	X-coord	Y-coord	Elevation	Drill Depth
299-W11-27	566885	136796.6	208.885	72.63
299-W11-28	566934.9	136743.7	211.355	76.41
299-W11-3	567641.7	136663.9	219.562	100.58
299-W11-39	566908.4	136779.9	209.885	87.05
299-W11-40	566926.8	136709.7	209.696	86.35
299-W11-41	566935.5	136677.8	209.667	86.35
299-W11-42	566920.4	136745.7	210.179	86.35
299-W11-43	567269.8	136971.1	216.733	137.55
299-W11-48	566882	136846.2	208.897	125.66
299-W11-49	567361.7	135924.6	216.009	140.2936
299-W11-50	566966.3	136756.6	212.282	132.189
299-W11-6	567481.6	136492.8	219.315	95.1
299-W11-86	568143.5	136610.1	222.68	150.69
299-W11-87	568141.1	136608.7	222.816	124.56
299-W11-88	567874.7	137113.1	221.115	150.41
299-W11-9	567781	136667.3	220.791	90.53
299-W11-90	567306.7	136519.6	218.146	161.3248
299-W11-92	566692.9	136351.8	204.578	141.208
299-W11-93	567775.4	136780.1	220.55	156.448
299-W11-96	567776.4	136778	220.744	156.448
299-W12-1	568331.3	137206.1	221.773	95.71
299-W12-2	568313	136610	223.478	154.924
299-W12-3	568324.8	137000	224.167	152.1808
299-W12-4	568329	136363.4	223.485	161.2638
299-W13-1	568148.8	136048.6	222.811	161.72
299-W14-1	566953.3	136311.2	203.975	74.15
299-W14-11	566901.7	136287.6	204.383	107.07
299-W14-12	566905.7	136284.2	204.396	68.82
299-W14-13	566901.7	136282.4	204.346	80.86
299-W14-14	566898.4	136181.1	204.621	136.03
299-W14-15	566899.7	136230.7	204.584	80.25
299-W14-18	566897.5	136344.2	204.263	80.71
299-W14-2	566932.3	136340.4	204.722	68.97
299-W14-20	566909.2	136284.6	204.399	135.8
299-W14-21	567721.4	135886.8	219.32	161.02
299-W14-22	568324.7	136117.3	223.622	163
299-W14-3	566940.4	136343	204.679	82.99
299-W14-4	566920.6	136348.8	204.875	63.48
299-W14-5	566899.3	136039.9	203.382	74.15

Well Name	X-coord	Y-coord	Elevation	Drill Depth
299-W14-6	566899.2	136100.8	203.099	74.15
299-W14-7	567034.4	135654.5	207.33	162.85
299-W14-73	567359.1	136204.2	216.725	155.686
299-W14-74	567780.9	136383	221.443	155.8384
299-W14-8A	568013.2	135687.8	221.157	172.6
299-W14-9	567031.8	135650.7	207.478	167.12
299-W15-1	566554.3	135942.9	206.414	92.44
299-W15-10	566448.6	135981.1	206.684	92.44
299-W15-101	566772.9	135619.5	202.234	16.24
299-W15-102	566675.2	135561.6	205.836	46.72
299-W15-11	566412.3	136000.7	207.359	92.44
299-W15-12	566699.2	136368.8	204.457	69.58
299-W15-126	566742.6	136170.1	205.591	31.48
299-W15-127	566742.5	136141	205.53	31.48
299-W15-128	566728.1	136156.9	205.549	31.48
299-W15-13	566845.4	136369.5	204.434	69.58
299-W15-131	566699.4	136148.3	204.844	31.48
299-W15-133	566753.8	136177.3	205.468	31.48
299-W15-134	566728.1	136185.7	205.344	31.48
299-W15-14	566093.4	135648.3	213.015	178.09
299-W15-15	566088.8	135751.5	213.162	78.72
299-W15-152	566309.4	135550	209.414	109.21
299-W15-155	566789.4	136157.1	205.896	36.05
299-W15-159	566719.2	136231.8	204.799	31.48
299-W15-16	566307	135733.6	209.164	75.22
299-W15-160	566728.8	136250.1	204.911	31.48
299-W15-161	566818.7	136277.3	205.094	31.48
299-W15-162	566799.9	136294.7	205.375	31.48
299-W15-163	566792.9	136268.8	205.606	31.48
299-W15-164	566772.1	136294.6	205.873	31.48
299-W15-166	566816.8	136164.9	206.204	35.14
299-W15-167	566817.5	136149.6	205.985	36.05
299-W15-17	566306.9	135719	209.236	138.16
299-W15-171	566800.6	136173.3	206.005	34.83
299-W15-177	566748.6	136231.2	205.173	35.44
299-W15-178	566749.1	136200.8	205.577	34.53
299-W15-18	566308.7	135561.8	209.446	74.91
299-W15-180	566698.5	136221.4	204.542	31.48
299-W15-184	566746.9	136371.1	205.509	31.48

Well Name	X-coord	Y-coord	Elevation	Drill Depth
299-W15-2	566093.8	136336.2	211.344	80.55
299-W15-20	566082.9	135964.2	213.068	75.68
299-W15-202	566653.6	135651	205.033	54.65
299-W15-203	566700.4	135613.4	205.864	7.1
299-W15-216	566793.3	135560.8	202.714	65.01
299-W15-217	566730.5	135594.9	204.935	38.61
299-W15-218	566771	135661.2	203.833	63.82
299-W15-219	566728.9	135654	204.643	65.62
299-W15-22	566683.1	136110.9	204.546	68.64
299-W15-220	566834.9	135618.4	201.508	62.27
299-W15-223	566755.4	135677.8	204.085	37.27
299-W15-225	566657.3	136108.9	204.846	140.6
299-W15-226	566033.3	136450.1	212.373	147.4564
299-W15-227	566034.1	135966.6	213.752	157.0119
299-W15-23	566083.6	135858.1	213.325	74.15
299-W15-3	566729.2	136371.5	205.244	75.68
299-W15-32	566773.4	135635	202.625	74
299-W15-36	566773.9	135429.6	203.861	81.16
299-W15-38	566812.9	135672.9	202.871	70.95
299-W15-39	566819.2	135553	201.248	68.97
299-W15-4	566826.3	136027.7	202.548	67.14
299-W15-40	566652.5	136205	205.06	80.98
299-W15-41	566757.6	136031.7	202.788	73.85
299-W15-42	566581.8	135627	206.531	86.56
299-W15-46	566752.3	135586.7	203.472	161.02
299-W15-48	566777.1	135604.8	202.245	45.35
299-W15-49	566307.2	135972.9	208.383	133.62
299-W15-5	566735	135511.7	204.893	183.58
299-W15-6	566801.5	135654.4	202.079	125.97
299-W15-67	566822.6	136203.1	207.614	46.72
299-W15-69	566758.6	136137.2	205.565	46.72
299-W15-7	566675.9	135920.2	203.396	107.68
299-W15-70	566820.4	136137.7	205.255	46.72
299-W15-71	566758.3	136167.8	205.669	46.72
299-W15-72	566757.5	136230.3	205.237	46.72
299-W15-73	566694.4	136137.1	204.846	46.72
299-W15-75	566710.4	136265.1	204.831	46.72
299-W15-765	566697	136373.1	204.505	82.38
299-W15-79	566754.8	136371.5	205.625	46.72

Well Name	X-coord	Y-coord	Elevation	Drill Depth
299-W15-8	566757.7	135576.7	204.073	63.79
299-W15-82	566786.4	135610.4	202.15	31.79
299-W15-84	566728.6	135609.8	205.117	61.96
299-W15-85	566757.4	135643.7	202.95	33.31
299-W15-86	566742.8	135592.2	202.374	44.89
299-W15-9	566763.3	135631.4	202.08	60.44
299-W15-95	566752.8	135631.4	202.693	36.36
299-W17-1	565310.7	135038.7	198.406	71.29
299-W17-2	566951.6	135806.2	204.515	144.256
299-W17-3	566925.9	135325	206.137	150.9616
299-W18-1	566421.5	135465.2	208.252	131.15
299-W18-10	566485.9	135300.7	207.956	68.06
299-W18-11	566439.6	135265.6	208.45	68.06
299-W18-149	566547	135447.5	205.489	29.04
299-W18-15	566380.1	134733.5	201.814	76.59
299-W18-150	566547.5	135370.3	204.979	40.01
299-W18-158	566532.3	135428.2	205.308	40.93
299-W18-159	566547.1	135416.9	205.227	40.62
299-W18-16	566605.1	135425.7	207.887	107.07
299-W18-163	566562.2	135434	205.335	50.68
299-W18-164	566547.2	135359.5	206.912	47.63
299-W18-165	566532.4	135402.4	205.025	42.18
299-W18-166	566532.3	135380.2	204.835	42.76
299-W18-168	566562.6	135391.1	204.834	40.93
299-W18-169	566562.4	135369.8	204.897	41.23
299-W18-170	566547.1	135394.3	204.891	10.14
299-W18-171	566546.5	135350.5	206.879	42.45
299-W18-173	566554.6	135440.7	205.324	16.54
299-W18-174	566558.2	135437.4	205.946	41.23
299-W18-175	566547.1	135392.1	204.881	40.62
299-W18-19	566610.5	135202.5	204.807	77.2
299-W18-20	566590.1	135081.8	204.673	77.2
299-W18-21	566097.7	134978.7	204.253	70.19
299-W18-22	566088.6	134990.2	204.249	139.69
299-W18-23	566084.6	135342.4	212.854	78.72
299-W18-24	566370.8	135346.3	209.038	74.15
299-W18-246	566493	135392.6	208.774	71.1
299-W18-247	566503.1	135231.7	207.789	70.19
299-W18-248	566583.7	135409	207.189	43.34

Well Name	X-coord	Y-coord	Elevation	Drill Depth
299-W18-249	566474.5	135329	208.292	45.81
299-W18-252	566447	135429.5	208.474	70.5
299-W18-26	566091.3	135491.7	213.243	77.17
299-W18-27	566090.2	135226.6	210.339	73.7
299-W18-28	566092.6	135106.8	207.212	71.14
299-W18-29	566561.2	135028.4	205.476	46.72
299-W18-30	566870.8	135193.6	205.082	72.78
299-W18-31	566721.6	135075.2	202.427	70.37
299-W18-32	566515.6	134975.6	206.396	69.58
299-W18-33	566723.3	134811.1	204.036	71.55
299-W18-56	566543.3	135439.4	205.468	46.72
299-W18-57	566551.8	135441.9	205.569	46.72
299-W18-58	566532.4	135396.7	204.874	46.72
299-W18-59	566562.6	135396.8	205.242	46.72
299-W18-6	566513.1	135412.8	207.361	92.44
299-W18-60	566543.5	135476.9	207.373	44.3
299-W18-61	566551.1	135476.9	207.318	46.72
299-W18-62	566543.5	135469	207.214	44.34
299-W18-63	566551.1	135469	207.221	46.72
299-W18-64	566543.6	135461.4	207.211	43.4
299-W18-65	566550.7	135461.2	206.897	46.72
299-W18-66	566547.8	135366.9	205.011	46.72
299-W18-7	566581	135409.8	207.057	92.44
299-W18-76	566544.3	135441.9	205.67	6.94
299-W18-77	566545	135431.2	205.38	8.62
299-W18-78	566548.7	135441.8	205.62	6.18
299-W18-79	566549.4	135431.6	205.38	8.01
299-W18-80	566548.8	135425.9	205.28	7.55
299-W18-81	566546.3	135434.2	206.21	13.5
299-W18-82	566395.6	135216	208.847	45.5
299-W18-85	566512.1	135344	207.394	46.72
299-W18-86	566504.4	135379.6	208.719	46.72
299-W18-87	566546.8	135341.2	206.81	46.72
299-W18-88	566598.7	135438.2	207.527	46.72
299-W18-89	566501.1	135457	207.909	46.72
299-W18-9	566472.9	135302.1	208.221	68.06
299-W18-93	566454.9	135269.4	208.343	43.67
299-W18-94	566462.7	135244	208.082	25.38
299-W18-95	566435.3	135245	208.408	25.38

Well Name	X-coord	Y-coord	Elevation	Drill Depth
299-W18-96	566435.3	135293.8	208.152	45.84
299-W18-98	566462.5	135328.9	208.265	25.38
299-W18-99	566496.3	135331.7	207.963	42.15
299-W19-1	566886.9	134925.6	205.908	92.75
299-W19-10	567037	134800.8	208.711	175.65
299-W19-12	566897.1	135059.5	205.691	77.2
299-W19-13	567288.9	134897.3	212.312	77.2
299-W19-14	567268	134831.1	211.832	77.2
299-W19-15	567254.3	134975.8	211.978	87.87
299-W19-16	567270.7	135029.2	212.422	87.87
299-W19-17	567287.6	135012.4	213.026	110.12
299-W19-18	567360.6	135012.4	213.526	111.34
299-W19-2	567646.6	134694.7	212.233	92.44
299-W19-22	567098.6	134930.7	210.239	43.67
299-W19-27	567014.4	134930.6	208.534	71.1
299-W19-3	567311.1	134989.2	212.783	92.75
299-W19-31	566897	135127.5	205.636	69.67
299-W19-32	566896.6	135009.3	205.866	69
299-W19-4	567949.9	135350.8	218.686	168.64
299-W19-41	566896.6	135004.5	205.781	81.62
299-W19-42	566896.8	135122.9	205.506	81.83
299-W19-44	566896.9	135042	206.52	83.91
299-W19-45	566897.6	135087.7	205.661	82.11
299-W19-47	566895.3	135161.9	205.551	82.99
299-W19-8	567563.7	135220.3	216.894	179.31
299-W21-1	568143.4	134396.3	213.748	108.29
299-W22-1	566974.6	134268.1	204.407	94.27
299-W22-10	567013	134215.1	205.27	43.06
299-W22-11	566953.7	134262.6	204.159	94.88
299-W22-15	566982.5	134283.9	204.727	82.69
299-W22-17	567012.9	134292.3	205.108	80.55
299-W22-19	567623.3	133975.3	208.192	138.16
299-W22-2	566970.7	134260.1	204.299	94.57
299-W22-24	567648.2	134410.9	211.428	176.26
299-W22-27	567151.7	134496.8	207.643	175.35
299-W22-38	567137.8	134647.8	209.822	72.02
299-W22-39	566903.9	134213.7	203.835	69.06
299-W22-44	566956	134484.4	206.735	75.98
299-W22-45	566945.2	134292.5	203.135	74.15

Well Name	X-coord	Y-coord	Elevation	Drill Depth
299-W22-46	566903.9	134127.8	204.545	74.46
299-W22-47	566908.8	134076.3	205.533	107.25
299-W22-48	566996.6	134425.1	207.132	76.9
299-W22-49	566904.4	134201.6	203.927	73.85
299-W22-50	566904.2	134139.7	204.145	167.73
299-W22-85	566902.9	134260.6	203.682	80.25
299-W22-89	566906.8	134031.7	205.457	101.3765
299-W22-90	566961.4	134483.2	207.07	97.6216
299-W22-91	566911.8	134134.5	204.4	94.66504
299-W22-92	567167.8	134029.8	205.558	100.06
299-W22-95	567170.5	134549.1	208.264	61
299-W23-1	566850.1	134424.8	203.924	80.86
299-W23-10	566570.4	134256.3	202.823	72.63
299-W23-100	566793.1	134225.8	202.887	23.86
299-W23-105	566784.3	134225.7	202.688	33
299-W23-106	566772.4	134219.5	202.657	23.86
299-W23-108	566759.3	134238.6	202.562	40.62
299-W23-109	566767.1	134248.3	202.557	23.86
299-W23-11	566512.3	134299	202.709	72.63
299-W23-113	566774.6	134188.3	202.672	23.86
299-W23-114	566765.5	134191.7	202.535	23.86
299-W23-115	566759.4	134200.2	202.575	23.86
299-W23-117	566786.2	134180.1	202.649	23.86
299-W23-119	566778.1	134158.6	202.603	23.86
299-W23-121	566762.8	134182.9	202.491	39.1
299-W23-125	566809.5	134252.5	202.86	42.15
299-W23-13	566712.8	134445.9	203.255	67.51
299-W23-132	566842	134309.1	203.099	43.67
299-W23-133	566835.3	134283.9	203.102	31.48
299-W23-135	566810.8	134308.8	203.092	43.67
299-W23-136	566790.9	134295.9	202.708	31.48
299-W23-137	566773	134310.5	202.659	43.67
299-W23-138	566773.3	134283.7	202.772	31.48
299-W23-139	566759.6	134295.9	202.601	31.48
299-W23-14	566708.7	134290.2	202.535	69.4
299-W23-140	566842.7	134277.9	203.142	31.48
299-W23-141	566828.1	134277.1	203.073	31.48
299-W23-142	566779.9	134277.5	202.903	31.48
299-W23-143	566782.6	134256.6	202.671	43.67

Well Name	X-coord	Y-coord	Elevation	Drill Depth
299-W23-144	566759.8	134264.8	202.589	31.48
299-W23-15	566794	134127.2	199.795	69.58
299-W23-16	566657.1	134661.5	205.458	73.24
299-W23-163	566803.9	134427.4	203.499	31.48
299-W23-17	566532.1	134630.8	203.213	71.96
299-W23-171	566810.8	134421.6	203.808	31.48
299-W23-19	566759.1	134166.7	202.49	75.98
299-W23-2	566853.9	134258.6	203.094	72.93
299-W23-3	566851.1	134162.6	203.131	71.71
299-W23-4	566628.2	134391.9	202.542	92.44
299-W23-5	566871	134190.3	203.355	77.2
299-W23-51	566849.9	134487.1	204.046	46.72
299-W23-52	566815.3	134509.7	204.059	46.72
299-W23-53	566785.3	134490.4	203.263	46.72
299-W23-54	566817.5	134458.7	204.31	46.72
299-W23-55	566785.5	134458.7	203.379	46.72
299-W23-56	566817.6	134395.7	203.956	46.72
299-W23-57	566785.6	134427.6	203.367	46.72
299-W23-58	566763.6	134281.2	202.729	31.79
299-W23-6	566871.1	134132	203.394	77.2
299-W23-62	566824.7	134254.1	203.2	31.79
299-W23-64	566791.3	134216.6	202.791	39.1
299-W23-65	566756.8	134219.3	202.537	39.1
299-W23-66	566851	134211.9	203.271	39.41
299-W23-67	566821.4	134212.3	203.07	39.41
299-W23-68	566785.8	134192.4	202.821	39.1
299-W23-69	566813.8	134160.1	203.078	39.1
299-W23-7	566870.4	134342.3	203.153	77.2
299-W23-70	566765.9	134159.8	202.443	39.1
299-W23-72	566823.4	134183	203.139	31.48
299-W23-73	566834.5	134250.1	203.108	27.82
299-W23-74	566845.8	134245.8	203.183	23.86
299-W23-75	566850.1	134234	203.213	23.86
299-W23-77	566830.7	134221.1	203.222	23.86
299-W23-78	566821.3	134230.2	203.18	23.86
299-W23-79	566822.8	134243	203.202	23.86
299-W23-8	566707.1	134287.8	202.553	72.63
299-W23-80	566841.6	134217.5	203.22	42.15
299-W23-83	566832.4	134189.7	203.134	23.86

Well Name	X-coord	Y-coord	Elevation	Drill Depth
299-W23-86	566818.8	134168.8	203.076	23.86
299-W23-9	566642	134274.6	202.741	72.63
299-W23-92	566814	134192.8	203	42.15
299-W23-93	566804.4	134188.1	202.982	23.86
299-W23-94	566792.8	134195.1	202.892	42.15
299-W23-96	566812.3	134216.1	203.09	23.86
299-W23-99	566804.4	134220.4	202.863	42.15
299-W26-14	566682.7	133539.2	204.675	80.4
299-W27-2	566908.3	133670.3	206.487	133.59
299-W5-1	568329.7	137321.2	221.696	144
299-W6-1	567214.1	137510.1	214.701	146.09
299-W6-13	567313.3	137630.6	216.804	138.1417
299-W6-14	566939.6	137388.9	212.114	216.14
299-W6-15	567781.7	137076.4	220.952	148.6
299-W6-2	566938.4	137351	211.468	76.59
299-W6-3	567118.2	137299.1	213.355	135.42
299-W6-6	567318.8	137638.7	216.504	144.87
299-W7-1	565932.1	137647.1	210.968	75.68
299-W7-2	566302.8	137638.5	206.29	72.93
299-W7-3	566292	137638.6	206.451	146.33
299-W7-4	566408.8	137308.3	205.018	72.63
299-W7-5	566476	137635.7	205.437	70.8
299-W7-6	566658.1	137636.3	207.219	75.01
299-W8-1	565749.4	137646.6	214.29	83.45
299-W9-1	565657.6	137023.8	225.236	90.92
299-W9-2	565742.2	136872.8	223.765	99.06
699-21-30B	580817.8	129982.9	165.1379	298.18
699-23-33	579923.2	130630.7	168.6936	211.31
699-24-33	579720.1	130768.4	160.2756	51.14
699-24-34A	579522.8	130669.4	163.072	43.7
699-24-35	579176.8	130915	164.543	45.35
699-24-46	575785.7	130793.8	180.7428	208.87
699-25-31	580462.1	131178	157.0229	249.72
699-25-33A	579712.2	131224.6	161.579	78.72
699-25-33B	579708.1	131214	161.645	74.15
699-25-55	573089.1	131212.1	206.9824	100
699-26-33	579709.8	131280.3	163.692	44.76
699-26-35A	579314.1	131347.3	162.664	47.48
699-26-35C	579332	131341.8	162.749	65.34

Well Name	X-coord	Y-coord	Elevation	Drill Depth
699-26-35D	579333.2	131354.6	162.48	71.1
699-28-40	577621.7	131929.8	170.844	143.256
699-29-78	566211.6	132413.6	197.4718	183.88
699-29-83	564510	132372.3	190.508	174.43
699-31-31	580551.7	132794.2	161.6579	198.82
699-31-53A	573754.4	132960.4	216.0164	148.44
699-31-65	569987.7	132774.9	208.9706	66.24
699-31-84A	564383.1	132999.1	190.82	1341.53
699-32-32	580298.6	133206.9	159.2642	220.49
699-32-42	576976.3	133378.9	157.9775	40.02
699-32-62	571009.6	133215.9	215.8	153.7048
699-32-72A	567942.7	133362.6	203.9	177.79
699-33-42	577020.6	133480.7	157.4078	39.41
699-33-56	572922.7	133627.2	219.1311	134.11
699-34-41B	577338.3	133911.7	173.6045	54.56
699-34-58B	571995.7	133849.6	221.11	131
699-35-57	572422.6	134106.7	221.32	106.68
699-35-58	572300.4	134272.9	220.95	106.69
699-35-66A	569857.9	134099.3	221.86	138.16
699-35-78B	566047.6	134279.2	201.4	195.46
699-36-46P	575994.3	134516.8	215.7953	163.46
699-36-46Q	575995.4	134528.7	215.3738	109.81
699-36-46R	575996.8	134540.6	215.4263	110.12
699-36-58A	572251.7	134536.3	224.67	110
699-36-58B	572253.5	134431.2	221.79	110
699-36-61B	571401.2	134586.9	228.494	174.13
699-36-63A	570751.1	134282.9	227.081	81.77
699-36-70A	568466.7	134308.8	215.227	135.11
699-37-36	578973.3	134722.1	166.1	132.07
699-37-43	576828.5	134782.5	211.0075	158.58
699-37-47A	575557	134893.3	218.438	219.45
699-37-82B	564904.6	134733.6	194.3081	192.11
699-37-83	564709.9	134742.8	194.13	191.81
699-37-84	564246.8	134768.4	194.133	191.81
699-37-89	562880.8	134737.9	194.1	200.34
699-37-92	561920.4	134597.2	196.98	210.7
699-38-34A	579490.1	135148.8	152.51	115.3
699-38-61	571219.1	134997.3	227.261	109.12
699-38-65	570090.2	135039.8	230.0384	164.37

Well Name	X-coord	Y-coord	Elevation	Drill Depth
699-38-70	568500.9	135089.2	217.1858	126.88
699-38-70B	568469.1	135331.1	221.821	146.85
699-39-39	578052.4	135391.7	163.8877	64.62
699-39-79	565890.9	135411.9	205.69	90.92
699-40-32	580009.7	135575.5	159.9175	113.78
699-40-33A	579680.9	135822.4	158.5	87.26
699-40-33C	579682.6	135827	158.4109	86.38
699-40-36	578789.3	135633.8	161.289	86.35
699-40-39	577938.1	135645.6	165.252	64.68
699-40-40A	577680.1	135594.1	164.932	70.19
699-40-62	571164.3	135764.4	228.87	118.04
699-40-65	570057.5	135881.2	230.335	140.9
699-40-80	565518	135547.8	200.1	171.39
699-40-84	564246	135751.3	195.529	190.13
699-41-31	580526.9	136001.8	154.11	103.11
699-41-35	579079.7	135947.4	158.74	80.25
699-41-40	577613.9	135995.9	166.489	53.68
699-41-42	577122.1	136067.9	196.204	105.52
699-42-29	581043.2	136427.9	138.988	130.54
699-42-37	578476.8	136247.2	158.36	82.69
699-42-39A	577857.1	136251.8	170.089	55.9
699-42-39B	577859.1	136236.4	170.146	66.84
699-42-40A	577638.1	136421.8	166.741	54.65
699-42-40C	577644.4	136417.9	166.773	120.48
699-42-42A	577088	136290.1	183.937	333.85
699-42-42B	576998.1	136433.9	177.718	77.2
699-42-67	569390.3	136199.8	228.265	161.8
699-43-40	577583.1	136705.3	165.239	41.76
699-43-41E	577478.6	136594.4	167.978	45.78
699-43-41F	577479.4	136579	168.032	55.1
699-43-41G	577466.4	136586.6	168.045	62.36
699-43-41H	577255.8	136578.5	168.045	29.65
699-43-42	577177.1	136607.3	172.84	68.97
699-43-42J	577006.2	136451.9	177.231	49.16
699-43-42K	576997.1	136445	177.475	81.16
699-43-43	576728.5	136576.3	176.551	53.73
699-43-44	576744.7	136652.9	176.62	123
699-43-67B	569374.8	136560.2	227.358	156.2255
699-43-69	568967	136488.5	226.535	153.86

Well Name	X-coord	Y-coord	Elevation	Drill Depth
699-43-84	564184.5	136656.2	198.661	177.79
699-43-91B	562186.5	136693.3	205.06	551.17
699-44-39B	577960.6	136727.4	156.36	56.44
699-44-42	577099.3	136833.6	176.539	53.73
699-44-43B	576673.3	136897.7	176.918	54.85
699-44-64P	570390.6	136897.4	221.55	138.77
699-44-67	569338	136894.3	224.165	147.1516
699-45-30	580870.5	137352	144.723	11.68
699-45-42	577055.1	137286.4	176.5541	60.44
699-45-67	569257	137263	219.771	129.32
699-45-67B	569264.4	137265	219.788	138.1752
699-45-69A	568729.3	137182.7	221.7966	113.17
699-45-69C	568947.1	137233.8	221.673	139.72
699-45-78	566027.8	137045.1	210.56	223.51
699-46-31	580570.6	137585.8	146.1669	175.65
699-46-32	580265.5	137574.7	144.4108	130.54
699-46-33	579960.4	137564.1	143.8124	84.21
699-46-85B	564039.5	137389.4	241.66	221.37
699-47-35A	579312.5	137780.1	145.5587	33.61
699-47-35B	579315.1	137792.7	145.8184	33.92
699-47-42	577156.5	137909	143.52	601.77
699-47-46A	575869.8	137820.7	177.307	64.09
699-47-50	574798.7	137887.2	178.333	90.92
699-47-51	574352.3	137953.2	178.32	51.9
699-47-60	571474.4	137968.7	198.812	88.48
699-47-80B	565556.3	137755.8	218.112	499.35
699-48-35	579291.2	138272.2	149.096	139.69
699-48-48A	575196.6	138112.7	175.271	1726.49
699-48-48B	575179	138104	175.45	1006.85
699-48-50B	573334.5	138044.3	185.562	66.59
699-48-71	568387.9	138056.9	210.4	93.97
699-48-77A	566413.3	137968.9	205.922	140.51
699-48-77C	566468.9	138086.8	205.864	134.26
699-49-31	580539.2	138316.5	160.5593	206.74
699-49-32A	580021.3	138294.9	156.256	31.48
699-49-32B	580175.4	138299.2	157.5822	104.33
699-49-33	579776.9	138286.8	153.8376	109.51
699-49-34	579653.8	138286.3	152.15	26.91
699-49-55B	573138.7	138350.9	162.103	70.19

Well Name	X-coord	Y-coord	Elevation	Drill Depth
699-49-57A	572544.3	138389.2	168.941	52.21
699-49-57B	572536.4	138381	169.63	71.23
699-49-79	565771.1	138271.1	210.749	36.66
699-50-42	577111	138786.7	142.7588	39.1
699-50-45	576172.8	138783.4	137.9392	55.26
699-50-48A	575155	138684.8	168.6937	53.73
699-50-48B	575390.8	138715.9	168.235	77.2
699-50-53A	573649.7	138670.5	170.165	57.39
699-50-53B	573655.4	138659.5	170.187	69.58
699-50-56	572748.2	138841.6	168.909	51.05
699-50-59	571946.9	138741.7	172.1	53.79
699-50-85	564130.2	138669.3	225.8995	183.88
699-50-96	560498.6	138598.9	244.27	338.11
699-50-99	559791.9	138597.8	242.29	223.51
699-51-36B	578921.6	139065.8	157.903	175.65
699-51-36C	578990.4	139081.9	158.376	153.71
699-51-36D	578944.8	139018.8	157.145	214.36
699-51-46	575738.5	139001.6	135.9444	52.21
699-51-63	570664.4	139148.4	174.7838	57.27
699-51-75	566978.1	138906.3	195.94	117.44
699-52-30	580806.1	139262.8	166.637	55.86
699-52-46A	575903.3	139358	139.356	69.58
699-52-48	575231.5	139195.7	142.824	61.05
699-52-52	573920.5	139293.9	170.937	276.24
699-52-54	573254.3	139193.2	173.398	52.39
699-52-55	573102.4	139443.2	174.958	56.87
699-52-55B	573102.2	139440.7	174.854	90
699-52-57	572761.4	139115.3	171.193	51.45
699-53-35	579288.6	139708	161.875	47.1
699-53-47B	575416.1	139485.3	134.168	15.02
699-53-48A	575338.7	139593.9	135.218	17.15
699-53-48B	575336.3	139595.7	135.265	14.44
699-53-50	574584.1	139700.6	135.8944	60.13
699-53-55A	573115.9	139631.9	175.966	139.69
699-54-34	579497.6	140009.5	167.798	51.9
699-54-45A	576314.8	140001.4	150.798	31.91
699-54-48	575357.8	139821.2	139.642	31.79
699-54-49	574988	139825.7	134.465	19.9
699-54-57	572619.4	140029.6	175.865	98.84

Well Name	X-coord	Y-coord	Elevation	Drill Depth
699-55-40	577550.3	140346.5	165.612	38.49
699-55-44	576565.6	140384.1	158.7682	49.77
699-55-50A	574642.3	140245.1	135.61	34.53
699-55-50B	574641.4	140215.5	135.32	29.96
699-55-50C	574660.4	140243.4	135.886	6.57
699-55-50D	574596.5	140248.4	134.773	31.48
699-55-55	573227.6	140150.5	171.841	96.1
699-55-57	572445.4	140119.9	173.426	55.86
699-55-60A	571563.5	140268.3	175.0248	72.02
699-55-65C	569978.2	140263	177.844	45.5
699-55-70	568529.9	140319	174.0388	63.48
699-55-76	566723.4	140225.8	178.157	73.54
699-55-89	562886.6	140199.5	184.94	25.38
699-55-95	560944.8	140231.1	237.4672	162.55
699-56-40A	577561.2	140464.2	173.502	69.58
699-56-40B	577546.9	140592	196.988	122.01
699-56-40C	577564.9	140546.5	187.818	147.28
699-56-41	577533.9	140510.6	181.48	126.58
699-56-42A	577194.1	140508.3	163.149	75.68
699-56-42B	577218.7	140528.2	166.665	77.2
699-56-42C	577186.7	140474.7	161.797	109.05
699-56-42D	577052.6	140601.6	171.475	205.22
699-56-42E	577002.3	140538.5	164.922	214.36
699-56-42F	577134.9	140603.8	176.193	159.5
699-56-43	576756.3	140627.5	164.859	48.24
699-56-51	574312.7	140605.6	134.27	33
699-56-53	573794.2	140650.7	132.871	83.3
699-57-41A	577163.4	140809.2	215.488	157.06
699-57-41B	577364	140891	216.54	141.51
699-57-41C	577254.3	140781	216.204	132.07
699-57-41E	577257.3	140720.5	212.877	168.95
699-57-41F	577362.8	140986.4	215.62	186.32
699-57-42	577159.8	140689.7	202.6	122.92
699-57-83A	564582.8	140825.1	176.7564	109.21
699-58-40	577541.9	141094.3	227.66	138.16
699-58-41A	577530.4	141152.1	216.3	84.52
699-58-41B	577513.6	141162.8	214.49	69.58
699-58-41C	577493.3	141176.3	214.15	32.39
699-58-41D	577474.9	141188	213.908	25.38

Well Name	X-coord	Y-coord	Elevation	Drill Depth
699-58-41E	577473.3	141188.3	213.484	119.87
699-58-41F	577435.8	141051.5	213.37	183.88
699-59-44	576617.3	141539	230.538	22.34
699-59-80B	565637.7	141575	178.2056	61.35
699-60-53E	573722.7	141766.9	251	46.72
699-60-53F	573795.6	141868.9	250.994	89.39
699-60-57	572623.5	141870.3	143.441	48.24
699-60-59	572038.1	141854.5	155.193	476.8
699-60-60	571588.6	141763.9	156.356	40.05
699-61-53	573714.1	141978.1	233.1	118.35
699-61-55A	573009.1	141983.7	141.118	76.9
699-61-55B	573010.9	141983.4	141.451	100.67
699-61-57	572608.3	142435.1	135.322	180.53
699-61-62	570914.9	141921.7	151.76	58.3
699-61-66	569787.6	142008	159.6911	69.58
699-62-53	573646.2	142518.9	134.682	139.99
699-63-51	574446.8	142553.7	129.495	8.62
699-63-55	573094.4	142562.3	130.187	39.1
699-63-58	572262.7	142583.1	150.3582	41.54
699-63-90	562367.3	142612.3	156.2759	78.12
699-65-50	574590.8	143187.9	142.92	179.31
C3103	573802.6	137385.6	198.974	67.45
C3104	573471.2	137347.6	201.99	67.14
C3245	575661	136269.7	200.284	79.94
C3246	573128.8	136589.8	215.03	94.88
C3247	574979.1	135438.8	218.894	31.1
C3830	566739.1	136168.4	205.68	36.59
C3832	566718.6	136143.6	204.83	35.81
C4106	575917.6	135640.2	206.784	85.74
C4160	575106.1	135355.3	219.53	30.82
C4297	575151.2	136534.8	198.23	61.05
C4545	575682.4	136176.3	201.78	75.83
C4562	574116.9	134895.9	224.03	165.29
C4666	574111.5	134903.1	223.933	120.18
C4993	576087.4	135756.7	200.632	431.08
C4996	576145.2	136054.2	204.234	448.39
C4997	576309.4	135755.3	206.31	438.61
C4998	576300.3	135781	206.31	427.73
C5941	575883.4	135558.2	208.3	91.53

Well Name	X-coord	Y-coord	Elevation	Drill Depth
CC_U3_Pwell10	577091.5	133838.9	174.9	71.9
CC_U3_Pwell11	578050.5	133190.2	168.53	66.03
CC_U3_Pwell12	578652.2	132691.9	165.94	63.94
CC_U3_Pwell13	579347.9	132024.3	162.92	61.42
CC_U3_Pwell14	580739.4	130426	165.62	61.62
CC_U3_Pwell15	575988.6	134493.3	217.74	99.74
CC_U3_Pwell16	577586.1	133525.4	164.59	47.09
Fault Well 1	580711.8	135289	155.91	157.06
Fault Well 10	580487.4	138539.1	159.21	122.01
Fault Well 11	580463.2	138793.7	159.51	117.13
Fault Well 12	580408.6	139127.2	158.91	110.12
Fault Well 13	580535.9	135295	156.71	123.84
Fault Well 14	580517.8	135422.4	156.01	120.48
Fault Well 15	580493.5	135677	154.41	114.08
Fault Well 16	580457.1	135919.6	153.01	108.29
Fault Well 17	580426.8	136131.8	150.81	101.89
Fault Well 18	580414.7	136477.4	146.01	93.05
Fault Well 19	580402.5	136768.5	143.51	83.6
Fault Well 2	580711.8	135598.2	153.01	150.35
Fault Well 20	580360.1	137089.9	142.51	76.59
Fault Well 21	580329.8	137356.7	141.41	70.19
Fault Well 22	580299.5	137805.4	146.81	65.01
Fault Well 23	580275.2	138151	153.81	61.96
Fault Well 24	580244.9	138648.2	158.31	59.22
Fault Well 25	580208.5	138915	159.21	58.3
Fault Well 26	580184.3	139169.7	159.01	56.17
Fault Well 3	580717.8	135865	150.71	145.48
Fault Well 4	580669.3	136380.4	144.51	133.89
Fault Well 5	580645.1	136677.5	143.21	130.24
Fault Well 6	580620.8	136980.7	141.51	125.66
Fault Well 7	580602.6	137308.1	143.21	125.06
Fault Well 8	580560.2	137762.9	147.21	123.53
Fault Well 9	580542	138102.5	154.41	125.06
H_U1_Pwell1	571330.7	136962.9	218.52	99.52
H_U1_Pwell10	578413.8	132177.6	168.82	52.82
H_U1_Pwell11	577993.5	132604.4	175.08	59.08
H_U1_Pwell12	577560.1	132873.7	167.96	51.96
H_U1_Pwell2	571481.2	135698.6	222.77	103.77
H_U1_Pwell3	571491.2	135066.5	231.33	112.33

Well Name	X-coord	Y-coord	Elevation	Drill Depth
H_U1_Pwell4	572610	134594.9	229.6	110.6
H_U1_Pwell5	576299.8	133953.4	206.97	90.97
H_U1_Pwell6	577012.3	133676.8	165.59	49.59
H_U1_Pwell7	576668.1	133801	180.82	64.82
H_U1_Pwell8	577286.1	133602	164.37	48.37
H_U1_Pwell9	578834.1	131711.3	165.16	49.16
ra_control1	570185.9	140124.4	177	87
ra_control10	576297.2	140555	161	63
ra_control11	575939.8	140582.5	157	70
ra_control12	575591.7	140683.3	157	74
ra_control13	575142.7	140839	155	71
ra_control14	574913.7	140967.3	152	62
ra_control15	574547.2	141132.2	154	43
ra_control16	573942.5	141416.2	161	13
ra_control2	570231.8	139904.5	173	49
ra_control20	570758.9	139157.5	174	58
ra_control21	570902	139071.6	174	60
ra_control22	571066.6	138964.2	175	56
ra_control23	571367.2	138878.4	171	59
ra_control24	572447.9	139043	168	61
ra_control25	573050.9	141904	130	11
ra_control27	573444.6	143124.3	163	154
ra_control28	573713	143024.1	144	97
ra_control29	574049.3	143067	151	118
ra_control3	570305.1	139693.7	174	53
ra_control30	574049.3	142780.7	133	43
ra_control31	574264.1	143247.7	135	51
ra_control32	574349.9	143040.2	135	51
ra_control33	573552.9	141731.9	135	51
ra_control34	570979.9	139568.8	173.7369	60
ra_control4	570378.4	139483	174	56
ra_control5	570451.7	139263.1	174	57
ra_control7	574437.2	140252.6	132	29
ra_control8	574492.2	140087.7	133	25
ra_control9	574629.6	139931.9	134	20
rlm_control1	565702	138808.2	205	121
rlm_control10	573495.6	135597.3	220	121
rlm_control11	573139.8	135722.3	220	121
rlm_control12	572870.5	135856.9	220	121

Well Name	X-coord	Y-coord	Elevation	Drill Depth
rlm_control13	572572.5	136001.2	221	121
rlm_control14	572389.7	136068.5	222	121
rlm_control15	572226.3	136145.4	222	121
rlm_control16	565318.9	141399.7	175	122
rlm_control17	572979.5	136248.6	218	101
rlm_control18	573104	136232	218	101
rlm_control2	565572.3	139215.9	199	121
rlm_control3	565405.6	139753.2	184	121
rlm_control4	565294.4	140086.7	180	121
rlm_control5	565053.5	140531.4	178	121
rlm_control6	564886.7	140846.4	176	121
rlm_control7	564664.4	141142.9	176	121
rlm_control8	564275.3	141383.8	181	121
rlm_control9	563997.3	141569.1	181	121
rtf_control1	569146.5	137469.9	217	87
rtf_control2	569020.6	137606.3	217	87
rtf_control3	568842.2	137763.7	217	87
rtf_control4	568606.1	137910.6	217	87
3099-47-18A	594896.9	113699.1	114.39	60.2168
399-1-1	594360	116588.8	115.065	25.4696
399-1-10A	594346.5	116734	114.377	15.716
399-1-10B	594350.8	116728.8	114.539	38.2712
399-1-11	594109.8	116660.2	115.676	16.41704
399-1-12	594040.2	116548.5	117.466	21.812
399-1-13A	593910.4	116557.3	118.622	19.0688
399-1-13B	593909.6	116549.2	118.605	39.73424
399-1-14A	593901.1	116778.2	116.965	17.24
399-1-14B	593910.9	116779.1	116.835	38.4236
399-1-15	593988.3	116964.2	116.175	16.6304
399-1-16A	594318.1	116414.2	116.906	16.478
399-1-16B	594324.7	116411.6	116.853	37.9664
399-1-16C	594312	116410.4	117.066	56.2544
399-1-16D	594315.5	116404.6	117.079	57.4736
399-1-17A	594112.9	116413.8	115.36	14.4968
399-1-17B	594104.8	116417.7	115.466	37.052
399-1-17C	594104.7	116409.2	115.501	54.7304
399-1-18A	593870.6	117301.6	119.212	21.2024
399-1-18B	593866.1	117297.2	119.05	40.1
399-1-18C	593872.3	117294.6	118.474	48.6344

Well Name	X-coord	Y-coord	Elevation	Drill Depth
399-1-2	594082.4	116329.5	118.201	32.7848
399-1-20	594257.3	116339.6	117.803	58.9976
399-1-21B	594157.2	116176.8	116.971	37.052
399-1-23	594113.5	116453.2	115.466	37.3568
399-1-24	594116.5	116449.7	115.621	14.8016
399-1-25	594116.9	116450.4	115.595	17.24
399-1-26	594108.3	116456.2	115.459	17.3924
399-1-27	594116.2	116446.2	115.693	17.24
399-1-28	594115.6	116445.8	115.707	14.3444
399-1-29	594118.7	116445.8	115.697	17.5448
399-1-3	594254.2	116334.9	117.751	33.242
399-1-30	594110.6	116449.7	115.63	17.3924
399-1-31	594118.7	116456.2	115.522	17.5448
399-1-32	594137.5	116432.4	115.273	17.3924
399-1-33	594113.3	116430.5	115.732	16.0208
399-1-34	594101.2	116433.8	115.868	17.3924
399-1-35	594122.3	116432.1	115.606	16.9352
399-1-36	594108.5	116438.8	115.829	17.24
399-1-38	594117.4	116435.4	115.75	16.84376
399-1-4	594020.6	116699.6	116.5971	32.7848
399-1-5	594111.7	116552.1	116.011	15.716
399-1-6	594142.5	116900.1	114.232	15.4112
399-1-7	594260.1	116335.1	117.7137	24.86
399-1-8	594257.8	116329.6	117.832	34.6136
399-1-9	594254	116330.4	117.823	57.1688
399-2-1	594467.2	116121.2	114.666	25.4696
399-2-10	594234.6	116094.5	114.958	22.574
399-2-11	594236.3	116074.5	114.963	21.23288
399-2-12	594252.5	116086	114.855	21.812
399-2-13	594237.2	116064.6	114.958	21.08048
399-2-14	594245.3	116070.2	114.834	20.288
399-2-15	594253.3	116076	114.88	20.7452
399-2-16	594261.6	116081.9	114.797	20.8976
399-2-17	594245.1	116060.3	114.87	21.2024
399-2-18	594254.2	116066.1	114.862	21.812
399-2-19	594262.7	116071.8	114.866	20.53184
399-2-2	594385.7	116282.6	115.324	21.812
399-2-20	594270.6	116077.6	114.886	20.8976
399-2-21	594263.3	116061.9	114.84	20.80616

Well Name	X-coord	Y-coord	Elevation	Drill Depth
399-2-22	594279.7	116073.4	114.87	21.812
399-2-23	594272.3	116057.6	114.875	20.288
399-2-24	594280.7	116063.3	114.889	22.574
399-2-25	594269.2	116088.1	115.638	54.1208
399-2-26	594244	116081	114.915	20.92808
399-2-27	594244.1	116078.2	114.896	21.3548
399-2-28	594246.4	116080	114.855	21.812
399-2-29	594270.8	116068.1	114.891	20.7452
399-2-3	594377.4	116220.5	115.1268	21.812
399-2-30	594271.2	116065.5	114.913	21.5072
399-2-31	594273.6	116067.2	114.894	21.2024
399-2-5	594287.7	116068.8	115	41.9288
399-2-7	594235.2	116084.5	114.91	20.8976
399-2-8	594243.5	116090.3	114.925	20.288
399-2-9	594237.7	116089.7	114.908	21.812
399-3-1	594481.3	116008	117.5478	25.7744
399-3-10	594530.1	115832.3	117.6153	22.4216
399-3-11	594309.1	115793.7	121.143	23.9456
399-3-12	594213.8	115946.8	118.537	21.812
399-3-18	594464.7	116020	117.68	41.9288
399-3-19	594071.9	116030.2	120.647	33.5468
399-3-2	593926.7	115803.2	118.0061	33.0896
399-3-20	594375.4	115849.7	120.448	30.956
399-3-21	594379.8	115854.3	120.39	47.72
399-3-22	594217.7	115947.5	118.471	44.8244
399-3-23	594237.9	116054.7	115.014	21.812
399-3-24	594238.8	116044.6	114.978	21.812
399-3-25	594255.1	116056	114.875	21.812
399-3-26	594239.8	116034.8	114.986	22.1168
399-3-27	594247.9	116040.7	114.93	20.8976
399-3-28	594256.1	116046	114.9	21.6596
399-3-29	594264.3	116052	114.898	21.5072
399-3-3	594049.6	115804.8	121.41	55.34
399-3-30	594246.3	116051.4	114.876	20.7452
399-3-31	594246.7	116048.3	114.886	21.2024
399-3-32	594249.1	116050.1	114.891	21.2024
399-3-8	594170.8	115926.2	118.41	16.6304
399-3-9	594504.5	115917.9	118.552	23.336
399-4-1	594274.1	115537.3	120.838	32.7848

Well Name	X-coord	Y-coord	Elevation	Drill Depth
399-4-10	594566.4	115655.8	115.673	20.288
399-4-14	594396.2	115604.7	117.99	43.4528
399-4-2	594018.7	115744.6	122.81	14.4968
399-4-5	594126.9	115636.5	122.81	61.7408
399-4-7	594603.2	115492.6	115.655	49.244
399-4-8	594667	115225	117.6659	23.9456
399-4-9	594537.8	115741.5	116.747	21.812
399-5-1	593750.7	115525.3	120.957	33.0896
399-5-2	592814.5	115454.7	119.739	131.2352
399-5-4B	593733.8	115739.8	120.409	19.95272
399-6-1	593527.2	115807.1	118.753	32.7848
399-8-1	593632.2	116332	121.011	33.0896
399-8-2	593202.4	116300.4	121.564	38.2712
399-8-3	593626.1	116683.6	120.581	33.0896
399-8-4	592872.9	116296.1	120.286	21.812
399-8-5C	593386.1	116573.6	122.21	65.3984
499-S1-7B	587653.5	123206.3	168.4401	199.8152
699-10-30A	580608.1	126498.4	170.05	239.744
699-11-23A	582892.6	126709	166.5	232.124
699-11-45A	576279	126806.6	176.9043	117.824
699-1-18	584529.8	123948.9	164.68	108.68
699-12-18	584371.7	127286.4	167.3756	245.84
699-12-1A	589563	127109	135.711	259.148
699-12-4D	588689.8	127257.7	136.4162	47.72
699-13-1A	589508.7	127427.8	135.62	77.88
699-13-1B	589571.9	127335.9	134.68	73.3232
699-13-26	581845	127490.8	156.3156	251.936
699-13-2B	589353.7	127342.2	134.25	268.7
699-13-3A	589137.4	127305	136.42	25.74392
699-14-38	578401.9	127742.6	157.26	131.54
699-14-E3E	590678.1	127637.4	137.48	193.7192
699-15-15A	585350.7	128021.2	167.05	222.0656
699-15-26	581770.3	127963.5	159.9	108.68
699-15-E13	593789.2	128199.9	126.1	390.0104
699-16-23	582929.8	128376.3	169.3578	242.792
699-16-30A	580614.3	128455.7	171.2735	279.368
699-16-E4A	591004.9	128299.3	140.8916	217.1888
699-17-15	585274.6	128616	163.5026	224.504
699-17-5	588557.9	128811.8	132.5459	34.004

Well Name	X-coord	Y-coord	Elevation	Drill Depth
699-18-21	583841.2	129092.7	164.996	232.124
699-18-25A	582254.7	128891.4	159.0645	98.3168
699-18-25C	582394.9	128849.1	161.9904	56.864
699-18-25D	582402.5	128858.5	161.7008	56.864
699-18-27E	581678.1	128807.4	162.5304	75.152
699-18-27F	581724.1	128807.7	161.9924	74.5424
699-18-27I	581690.2	128806.3	163.266	75.152
699-18-28	581494.8	128878	164.3974	50.768
699-19-23	582904.3	129373.2	164.5391	289.1216
699-19-27	581740.6	129281.5	160.5826	239.744
699-19-34A	579664.5	129162.5	163.78	238.8296
699-19-58	572133.5	129298.8	174.9	93.44
699-20-18A	584317	129477.6	161.09	209.264
699-20-25	582313.1	129740.6	158.68	222.0656
699-20-39	577999.8	129731.1	164.59	194.6336
699-20-E12	593592.9	129735.3	133.6873	110.8136
699-20-E5P	591359.6	129622.3	142.9807	144.0368
699-21-17	584791.6	129855.4	161.6287	222.98
699-22-23	582991.9	130342.7	157.389	221.456
699-2-3	588851.7	124186.7	143.8	46.8056
699-2-33A	580097.6	124130.5	162.82	144
699-24-1P	590390.4	130712.6	145.2931	165.6776
699-25-20	583892.3	130998.9	159.8351	304.3616
699-25-26	582045.1	131061.9	157.2219	210.788
699-26-15A	585472.6	131330.6	135.4339	108.68
699-26-15C	585473.6	131359.3	135.392	194.024
699-26-29A	581066.1	131544.9	157.8765	222.0656
699-2-6A	587920.4	123987	155.293	44.91584
699-2-7	587844.8	123980	145.07	62.96
699-28-23	582806.7	132004.7	161.4081	232.124
699-28-30	580818.7	131993.3	162.4087	294.608
699-2-E14	594061.3	124028.4	118.262	349.1672
699-2-E19	595692.1	124132.6	118.07	89.7824
699-30-25A	582352.3	132605.8	167.2878	99.536
699-30-25C	582358.4	132594.1	165.758	211.262
699-31-11	586434.4	133040.5	147.879	186.404
699-31-17	584799.5	132968.4	134.58	197.072
699-31-23	582837.5	133100.7	159.0401	92.8304
699-31-8	587395.4	132928	146.1256	183.356

Well Name	X-coord	Y-coord	Elevation	Drill Depth
699-32-22A	583197.1	133256.8	158.0272	54.1208
699-32-22B	583199.8	133240.1	157.851	258.4892
699-32-26	581891.2	133145.9	159.6485	219.932
699-33-14	585534.3	133606.9	144.387	176.6504
699-33-21A	583372.3	133484.3	152.77	195.548
699-33-6	588013.4	133424	154.3576	182.1368
699-34-20	583651.8	133725.6	152.93	198.596
699-3-45	576204.8	124401.3	164.88	55.34
699-34-8	587504.4	133902.9	148.3364	177.26
699-35-16	585108.4	134124.6	139.8628	174.212
699-35-28	581285.7	134021.3	163.0481	210.788
699-35-3A	588961.2	134189.6	148.54	148.304
699-35-3B	589068.6	134275.7	145.9826	124.5296
699-35-6	588026.9	134318.7	154.334	163.544
699-36-10	586772.3	134605	161.3733	185.7944
699-36-17	584706.7	134613	135.021	156.8384
699-36-27	581803	134448	162.6557	201.644
699-36-E3	590776.9	134348.2	142.6568	116.3
699-37-E4	590996.3	135407.5	118.3869	32.48
699-38-15	585475.3	134951.3	138.78	151.352
699-38-19	584253.4	135165	141.172	160.8008
699-38-3	589022.7	135122.2	152.51	83.3816
699-38-8A	587567	135238.7	147.3078	143.732
699-38-E0	590010.2	135026.6	143	84.296
699-39-23	582839	135300.6	145.1186	160.496
699-39-7B	587805.7	135431.7	150.3698	139.7696
699-39-E2	590532.7	135446.2	124.3615	76.676
699-40-0	589889.6	135820.6	124.36	116.3
699-40-1	589721.9	135665.5	124.36	130.016
699-40-12B	586323.4	135641.3	157.89	152.876
699-40-13	585937.5	135653.9	154.8044	155.6192
699-40-2	589129.9	135806.4	141.5306	125.444
699-40-20	583830.2	135678.1	146.1778	168.45
699-41-10	586961.1	136136.5	152.935	91.3064
699-41-11	586650.2	136024.8	156.567	133.064
699-41-20	583874.7	136153.3	148.3624	153.4856
699-41-23	582921.9	135903	142.64	38.576
699-42-10	586950.9	136267.3	151.4105	69.056
699-42-12A	586331.2	136445.4	157.2618	108.68

Well Name	X-coord	Y-coord	Elevation	Drill Depth
699-42-21	583404.6	136195.5	141.4834	147.9992
699-42-3	588909.4	136316	135.4956	130.016
699-42-30	580785.7	136215	146.6782	143.4272
699-42-E9B	592466.5	136265.2	117.876	120.4758
699-43-18	584392.2	136579.6	158.238	151.352
699-43-23	582978.2	136713.8	159.116	157.448
699-43-8	587591.5	136705.7	144.54	88.2584
699-43-9	587245.5	136505.4	150.1764	69.056
699-44-16	584910	137006	136.4664	119.0432
699-44-7	587839.6	136982.2	133.4706	146.78
699-45-24	582550.5	137234.5	155.8323	146.1704
699-45-26	582078.6	137280.8	158.3016	146.1704
699-46-15	585429.4	137428.2	136.66	20.288
699-46-21B	583604.1	137556.9	159.42	104.7176
699-46-21C	583478.2	137643.4	159.5265	56.864
699-46-3	588822.7	137688.4	116.6855	100.4504
699-46-5	588470.4	137484.9	117.41	117.824
699-47-24	582596.4	137706.5	157.8256	136.112
699-48-18	584426.5	138726.3	130.21	28.2128
699-48-22	583116	138129.4	158.5601	125.444
699-48-27	581719.9	138267.8	160.64	138.2456
699-49-13A	586060.5	138409.3	125.27	31.5656
699-49-13B	586041.3	138385.5	125.94	28.2128
699-49-13C	586027.7	138356.9	126.33	23.6408
699-49-13E	586042.8	138386.5	126.07	27.6032
699-49-21	583631.7	138558.8	150.9681	47.72
699-4-E6	591590.6	124854.9	131.96	30.956
699-50-30	580810.5	138847.4	161.7212	117.824
699-54-15A	585187.1	139833.1	124.2599	115.3856
699-54-18C	584471.5	139998.6	123.56	110.204
699-61-16A	585098.6	142238.9	126.1599	187.0136
699-6-2A	589319.9	125195.8	133.92	281.1968
699-8-17	584675	126017.9	134.54	62.96
699-8-32	580385	125978.7	170	64.1792
699-9-E2	590618.6	126132.2	128.2307	140.3792
699-9-E5A	591485.5	126311.5	124.16	272.0528
699-S11-E12A	593576.4	120173.5	112.51	87.9536
699-S12-29	580739.6	119809.6	149.66	59.912
699-S12-3	589286.1	119631.8	133.2768	35.528

Well Name	X-coord	Y-coord	Elevation	Drill Depth
699-S14-20A	583899	119084.4	150.74	54.4256
699-S18-E2A	590573.5	117895.2	133.0256	81.248
699-S19-11	586582.4	117799.3	147.4882	38.576
699-S19-E13	593835.3	117605.1	120.2552	26.384
699-S19-E14	594249.9	117716.2	114.1	16.3256
699-S20-E10	593124.4	117366.2	119.731	21.6596
699-S22-E9A	592688.2	116761.7	114.309	15.62456
699-S22-E9B	592696.1	116756.4	114.152	48.0248
699-S22-E9C	592689	116752.6	114.108	57.35168
699-S24-19	584069	116258.9	130.15	114.1
699-S27-E14	594114.1	115212.7	123.47	53.816
699-S27-E9C	592720.9	115324.8	119.283	64.5696
699-S28-E12	593538.1	115000.7	118.724	20.01368
699-S29-E12	593626	114569.5	119.26	26.384
699-S29-E16B	594746.9	114738.8	115.983	38.1188
699-S29-E16C	594742.4	114730.5	115.932	56.22392
699-S30-E15A	594470.9	114308.4	122.405	26.384
699-S31-1	589749.3	114213.3	140.8722	71.4944
699-S3-25	582460.3	122586.1	115.35	55.0352
699-S3-E12	593586.2	122551.4	120.72	81.248
699-S4-E16	594993.8	122402.1	119.28	61.1312
699-S6-E14A	594262.4	121569.4	115.7876	66.6176
699-S6-E14B	594273	121567.2	115.8	64.484
699-S6-E4A	590984.9	121663.5	136.366	37.6616
699-S6-E4B	591117.3	121669	128.74	32.48
699-S6-E4C	591055.4	121668.3	132.61	142.5128
699-S6-E4D	591076.9	121774.7	131.45	45.2816
699-S6-E4E	591039.2	121562.7	130.542	38.576
699-S7-34	579430.7	121503.4	161.638	99.8408
699-S8-19	584225.9	120963.7	154.2238	47.1104
699-11-E4E	590983	126739	135.31	200.939
699-17-26G	581965	128830	158.97	237.59
699-47-92A	561961.1	137899.2	217.64	231.13

* = Maximum drill depth is approximately ± 1 m of actual borehole total drill depth to facilitate model visualization.

Table A-2. Current Lithologic Unit Selections from GeoContacts_Hanford-2014-06-26 for Wells used in the Model
(See Table A-1 for well locations and depths)

Well Name	From	To	Lithology	Well Depth
3099-47-18A	0	14.305	Hanford	58.2168
3099-47-18A	54.81	55.81	Basalt	58.2168
399-1-10B	0	16.9672	Hanford	36.2712
399-1-10B	16.972	34.437	Ringold E	36.2712
399-1-10B	34.437	35.437	Ringold LM	36.2712
399-1-13A	0	15.84	Hanford	17.0688
399-1-13B	0	18.82	Hanford	37.73424
399-1-13B	18.82	35.351	Ringold E	37.73424
399-1-16B	0	15.844	Hanford	35.9664
399-1-16B	15.844	34.741	Ringold E	35.9664
399-1-16C	0	16.453	Hanford	54.2544
399-1-16C	16.453	35.046	Ringold E	54.2544
399-1-16C	35.046	53.334	Ringold LM	54.2544
399-1-16C	53.334	54.334	Basalt	54.2544
399-1-16D	0	16.453	Hanford	55.4736
399-1-16D	16.453	33.522	Ringold E	55.4736
399-1-16D	33.522	54.858	Ringold LM	55.4736
399-1-16D	54.858	55.858	Basalt	55.4736
399-1-17B	0	15.539	Hanford	35.052
399-1-17B	15.539	32.913	Ringold E	35.052
399-1-17C	0	15.539	Hanford	52.7304
399-1-17C	15.539	35.046	Ringold E	52.7304
399-1-17C	35.046	50.591	Ringold LM	52.7304
399-1-17C	50.591	51.591	Basalt	52.7304
399-1-18A	0	15.844	Hanford	19.2024
399-1-18B	0	16.453	Hanford	38.1
399-1-18B	16.453	35.961	Ringold E	38.1
399-1-18C	0	14.594	Hanford	46.6344
399-1-18C	14.594	35.961	Ringold E	46.6344
399-1-18C	35.961	42.88	Ringold LM	46.6344
399-1-18C	42.88	43.88	Basalt	46.6344
399-1-2	0	18.343	Hanford	30.7848
399-1-20	0	15.234	Hanford	56.9976
399-1-20	15.234	36.113	Ringold E	56.9976

Well Name	From	To	Lithology	Well Depth
399-1-20	36.113	53.639	Ringold LM	56.9976
399-1-20	53.639	54.639	Basalt	56.9976
399-1-21B	0	20.873	Hanford	35.052
399-1-21B	20.873	32.913	Ringold E	35.052
399-1-23	16.149	30.474	Ringold E	35.3568
399-1-6	0	12.796	Hanford	13.4112
399-1-8	0	14.015	Hanford	32.6136
399-1-8	14.015	31.998	Ringold E	32.6136
399-1-9	0	15.234	Hanford	55.1688
399-1-9	15.234	35.046	Ringold E	55.1688
399-1-9	35.046	51.81	Ringold LM	55.1688
399-1-9	51.81	54.553	Ringold A	55.1688
399-1-9	54.553	55.553	Basalt	55.1688
399-2-1	0	14.32	Hanford	23.4696
399-2-11	0	17.063	Hanford	19.23288
399-2-12	0	19.806	Hanford	19.812
399-2-13	0	16.911	Hanford	19.08048
399-2-15	0	16.758	Hanford	18.7452
399-2-16	0	16.606	Hanford	18.8976
399-2-18	0	17.368	Hanford	19.812
399-2-19	0	16.454	Hanford	18.53184
399-2-2	0	18.282	Hanford	19.812
399-2-20	0	17.063	Hanford	18.8976
399-2-21	0	16.758	Hanford	18.80616
399-2-22	0	17.52	Hanford	19.812
399-2-24	0	17.673	Hanford	20.574
399-2-25	0	17.673	Hanford	52.1208
399-2-25	17.673	37.18	Ringold E	52.1208
399-2-25	37.18	49.677	Ringold LM	52.1208
399-2-25	49.677	50.677	Basalt	52.1208
399-2-26	0	17.673	Hanford	18.92808
399-2-29	0	16.911	Hanford	18.7452
399-2-30	0	16.911	Hanford	19.5072
399-2-31	0	17.063	Hanford	19.2024
399-2-5	0	17.063	Hanford	39.9288
399-2-5	17.063	38.094	Ringold E	39.9288
399-2-7	0	16.454	Hanford	18.8976
399-3-11	0	18.282	Hanford	21.9456
399-3-12	0	19.501	Hanford	19.812

Well Name	From	To	Lithology	Well Depth
399-3-18	0	14.015	Hanford	39.9288
399-3-18	14.015	38.399	Ringold E	39.9288
399-3-20	0	24.378	Hanford	28.956
399-3-21	0	23.769	Hanford	45.72
399-3-21	23.769	44.19	Ringold E	45.72
399-3-22	0	18.739	Hanford	42.8244
399-3-22	18.739	41.142	Ringold E	42.8244
399-3-23	0	16.454	Hanford	19.812
399-3-24	0	16.149	Hanford	19.812
399-3-25	0	17.368	Hanford	19.812
399-3-26	0	15.844	Hanford	20.1168
399-3-27	0	15.539	Hanford	18.8976
399-3-28	0	17.063	Hanford	19.6596
399-3-29	0	15.996	Hanford	19.5072
399-3-30	0	16.911	Hanford	18.7452
399-3-31	0	16.911	Hanford	19.2024
399-4-1	0	19.501	Hanford	30.7848
399-4-14	20.416	39.618	Ringold E	41.4528
399-5-2	0	14.625	Hanford	129.2352
399-5-2	14.625	53.639	Ringold E	129.2352
399-5-2	53.639	58.516	Ringold LM	129.2352
399-5-2	58.516	59.516	Basalt	129.2352
399-5-4B	0	17.215	Hanford	17.95272
399-8-2	0	21.33	Hanford	36.2712
399-8-3	17.977	26.817	Ringold E	31.0896
399-8-5C	0	22.397	Hanford	63.3984
399-8-5C	22.397	36.265	Ringold E	63.3984
399-8-5C	36.265	58.516	Ringold LM	63.3984
399-8-5C	58.516	59.516	Basalt	63.3984
699-16-E4A	0	26.9676	Hanford	215.1888
699-16-E4A	26.9676	49.5236	Ringold E	215.1888
699-16-E4A	49.5236	86.7086	Ringold LM	215.1888
699-17-15	0	15.90256	Hanford	222.504
699-17-15	15.90256	60.09856	Cold Creek	222.504
699-17-15	60.09856	128.6786	Ringold E	222.504
699-17-15	128.6786	203.9646	Ringold LM	222.504
699-17-15	203.9646	204.9646	Basalt	222.504
699-17-5	0	19.2629	Hanford	32.004
699-17-5	19.2629	28.1629	Rtf	32.004

Well Name	From	To	Lithology	Well Depth
699-18-21	0	15.232	Hanford	230.124
699-18-21	15.232	68.572	Cold Creek	230.124
699-18-21	213.352	214.352	Basalt	230.124
699-18-25A	0	26.63152	Hanford	96.3168
699-18-25C	0	25.2904	Hanford	54.864
699-18-25D	0	23.47684	Hanford	54.864
699-18-27E	0	23.7664	Hanford	73.152
699-18-27F	0	20.27644	Hanford	72.5424
699-18-27I	0	24.376	Hanford	73.152
699-18-28	0	26.4334	Hanford	48.768
699-19-23	0	20.44408	Hanford	287.1216
699-19-23	20.44408	71.04108	Cold Creek	287.1216
699-19-23	71.04108	77.44208	Rtf	287.1216
699-19-23	77.44208	127.1241	Ringold E	287.1216
699-19-23	127.1241	190.8271	Ringold LM	287.1216
699-19-23	190.8271	209.4201	Ringold A	287.1216
699-19-23	209.4201	210.4201	Basalt	287.1216
699-19-27	0	23.40064	Hanford	237.744
699-19-27	23.40064	63.02464	Cold Creek	237.744
699-19-27	63.02464	133.1286	Ringold E	237.744
699-19-27	133.1286	201.0996	Ringold LM	237.744
699-19-27	201.0996	216.9486	Ringold A	237.744
699-19-27	216.9486	217.9486	Basalt	237.744
699-19-34A	0	28.948	Hanford	236.8296
699-19-34A	28.948	67.048	Cold Creek	236.8296
699-19-34A	67.048	76.192	Rtf	236.8296
699-19-34A	76.192	137.152	Ringold E	236.8296
699-19-34A	137.152	193.54	Ringold LM	236.8296
699-19-34A	193.54	219.448	Ringold A	236.8296
699-19-34A	219.448	220.448	Basalt	236.8296
699-19-58	0	44.3905	Hanford	91.44
699-19-58	44.3905	56.3905	Ringold E	91.44
699-19-58	56.3905	61.8715	Ringold LM	91.44
699-19-58	61.8715	62.39	Ringold A	91.44
699-20-18A	0	23.50732	Hanford	207.264
699-20-18A	23.50732	62.21732	Cold Creek	207.264
699-20-18A	62.21732	67.70332	Rtf	207.264
699-20-18A	172.8593	188.7093	Ringold A	207.264
699-20-25	0	23.64448	Hanford	220.0656

Well Name	From	To	Lithology	Well Depth
699-20-25	23.64448	70.88848	Cold Creek	220.0656
699-20-25	70.88848	76.98448	Rtf	220.0656
699-20-25	76.98448	121.1805	Ringold E	220.0656
699-20-25	121.1805	189.7605	Ringold LM	220.0656
699-20-25	189.7605	203.4765	Ringold A	220.0656
699-20-25	203.4765	204.4765	Basalt	220.0656
699-21-17	0	25.0557	Hanford	220.98
699-21-17	25.0557	60.1077	Cold Creek	220.98
699-21-17	60.1077	67.7277	Rtf	220.98
699-21-17	67.7277	114.9717	Ringold E	220.98
699-21-17	114.9717	178.9797	Ringold LM	220.98
699-21-17	178.9797	191.1717	Ringold A	220.98
699-21-17	191.1717	192.1717	Basalt	220.98
699-22-23	0	15.99095	Hanford	219.456
699-22-23	15.99095	57.13895	Cold Creek	219.456
699-22-23	57.13895	70.85495	Rtf	219.456
699-22-23	70.85495	115.051	Ringold E	219.456
699-22-23	115.051	186.679	Ringold LM	219.456
699-22-23	186.679	196.128	Ringold A	219.456
699-22-23	196.128	197.128	Basalt	219.456
699-2-3	0	28.45522	Hanford	44.8056
699-2-33A	0	37.37552	Hanford	142.0368
699-2-33A	37.37552	92.54452	Ringold E	142.0368
699-24-1P	0	20.9541	Hanford	163.6776
699-24-1P	20.9541	42.5951	Cold Creek	163.6776
699-24-1P	42.5951	45.3381	Rtf	163.6776
699-24-1P	45.3381	98.6781	Ringold E	163.6776
699-24-1P	98.6781	132.2061	Ringold LM	163.6776
699-24-1P	132.2061	133.2061	Ringold A	163.6776
699-25-20	0	19.70706	Hanford	302.3616
699-25-20	19.70706	55.06306	Cold Creek	302.3616
699-25-20	55.06306	82.80006	Rtf	302.3616
699-25-20	82.80006	134.6161	Ringold E	302.3616
699-25-20	134.6161	195.5761	Ringold LM	302.3616
699-25-20	195.5761	219.9601	Ringold A	302.3616
699-25-20	219.9601	220.9601	Basalt	302.3616
699-26-15C	0	20.75	Hanford	192.024
699-26-15C	20.75	30.23	Cold Creek	192.024
699-26-15C	30.23	56.686	Rtf	192.024

Well Name	From	To	Lithology	Well Depth
699-26-15C	56.686	124.047	Ringold E	192.024
699-26-15C	124.047	177.387	Ringold LM	192.024
699-26-15C	177.387	184.093	Ringold A	192.024
699-26-15C	184.093	185.093	Basalt	192.024
699-28-23	0	12.82408	Hanford	230.124
699-28-23	12.82408	64.64008	Cold Creek	230.124
699-28-23	64.64008	82.92808	Rtf	230.124
699-28-23	82.92808	142.3641	Ringold E	230.124
699-28-23	142.3641	192.6561	Ringold LM	230.124
699-28-23	192.6561	212.4681	Ringold A	230.124
699-28-23	212.4681	213.4681	Basalt	230.124
699-2-E14	0	19.806	Hanford	347.1672
699-2-E14	19.806	70.098	Ringold E	347.1672
699-2-E14	70.098	85.338	Ringold LM	347.1672
699-2-E14	85.338	97.53	Ringold A	347.1672
699-2-E14	97.53	98.53	Basalt	347.1672
699-2-E19	0	17.2152	Hanford	87.7824
699-2-E19	17.2152	55.3152	Ringold E	87.7824
699-2-E19	55.3152	73.6032	Ringold LM	87.7824
699-30-25A	0	38.3968	Hanford	97.536
699-30-25A	38.3968	76.4968	Cold Creek	97.536
699-30-25A	76.4968	85.6408	Rtf	97.536
699-30-25C	0	34.22104	Hanford	0
699-30-25C	34.22104	71.71104	Cold Creek	0
699-30-25C	71.71104	87.56104	Rtf	0
699-30-25C	87.56104	157.665	Ringold E	0
699-30-25C	157.665	193.631	Ringold LM	0
699-30-25C	193.631	208.262	Ringold A	0
699-30-25C	208.262	209.262	Basalt	0
699-31-11	0	21.329	Hanford	184.404
699-31-11	21.329	48.761	Cold Creek	184.404
699-31-11	48.761	62.477	Rtf	184.404
699-31-11	62.477	135.629	Ringold E	184.404
699-31-11	135.629	146.297	Ringold LM	184.404
699-31-11	146.297	170.071	Ringold A	184.404
699-31-11	170.071	171.071	Basalt	184.404
699-31-17	0	10.962	Hanford	195.072
699-31-17	10.962	39.309	Cold Creek	195.072
699-31-17	39.309	52.11	Rtf	195.072

Well Name	From	To	Lithology	Well Depth
699-31-17	52.11	97.83	Ringold E	195.072
699-31-17	97.83	149.646	Ringold LM	195.072
699-31-17	149.646	167.325	Ringold A	195.072
699-31-17	167.325	168.325	Basalt	195.072
699-31-23	61.53112	76.16212	Rtf	90.8304
699-31-8	0	20.47556	Hanford	181.356
699-31-8	20.47556	37.84856	Cold Creek	181.356
699-31-8	37.84856	60.09956	Rtf	181.356
699-31-8	60.09956	108.8676	Ringold E	181.356
699-31-8	108.8676	154.5876	Ringold LM	181.356
699-31-8	154.5876	163.7316	Ringold A	181.356
699-31-8	163.7316	164.7316	Basalt	181.356
699-32-22A	0	48.01324	Hanford	52.1208
699-32-22B	0	67.414	Hanford	256.4892
699-32-22B	67.414	73.449	Rtf	256.4892
699-32-22B	73.449	126.82	Ringold E	256.4892
699-32-22B	126.82	181.714	Ringold LM	256.4892
699-32-22B	181.714	190.919	Ringold A	256.4892
699-32-22B	190.919	191.919	Basalt	256.4892
699-32-26	0	17.48447	Hanford	217.932
699-32-26	17.48447	62.59547	Cold Creek	217.932
699-32-26	62.59547	76.92047	Rtf	217.932
699-32-26	184.2105	200.3645	Ringold A	217.932
699-32-26	200.3645	201.3645	Basalt	217.932
699-33-14	0	18.91498	Hanford	174.6504
699-33-14	18.91498	41.77498	Cold Creek	174.6504
699-33-14	41.77498	55.49098	Rtf	174.6504
699-33-14	55.49098	107.307	Ringold E	174.6504
699-33-14	107.307	157.599	Ringold LM	174.6504
699-33-14	157.599	166.743	Ringold A	174.6504
699-33-14	166.743	167.743	Basalt	174.6504
699-33-21A	0	18.281	Hanford	193.548
699-33-21A	18.281	48.761	Cold Creek	193.548
699-33-21A	48.761	65.525	Rtf	193.548
699-33-21A	65.525	129.533	Ringold E	193.548
699-33-21A	129.533	173.729	Ringold LM	193.548
699-33-21A	173.729	188.969	Ringold A	193.548
699-33-21A	188.969	189.969	Basalt	193.548
699-33-6	0	23.4616	Hanford	180.1368

Well Name	From	To	Lithology	Well Depth
699-33-6	23.4616	52.4176	Cold Creek	180.1368
699-33-6	52.4176	64.6096	Rtf	180.1368
699-33-6	64.6096	80.4596	Ringold E	180.1368
699-33-6	80.4596	162.6646	Ringold LM	180.1368
699-33-6	162.6646	165.1936	Ringold A	180.1368
699-33-6	165.1936	166.1936	Basalt	180.1368
699-34-20	0	27.424	Hanford	196.596
699-34-20	27.424	60.952	Cold Creek	196.596
699-34-20	60.952	68.572	Rtf	196.596
699-34-20	68.572	99.052	Ringold E	196.596
699-34-20	99.052	172.205	Ringold LM	196.596
699-34-20	172.205	188.359	Ringold A	196.596
699-34-20	188.359	189.359	Basalt	196.596
699-34-8	0	26.49536	Hanford	175.26
699-34-8	26.49536	50.26936	Cold Creek	175.26
699-34-8	50.26936	56.97536	Rtf	175.26
699-34-8	56.97536	99.64736	Ringold E	175.26
699-34-8	99.64736	116.4114	Ringold LM	175.26
699-34-8	116.4114	158.1684	Ringold A	175.26
699-34-8	158.1684	159.1684	Basalt	175.26
699-35-16	0	11.28584	Hanford	172.212
699-35-16	11.28584	38.10884	Cold Creek	172.212
699-35-16	38.10884	50.90984	Rtf	172.212
699-35-16	50.90984	102.7258	Ringold E	172.212
699-35-16	102.7258	113.3938	Ringold LM	172.212
699-35-16	113.3938	157.5898	Ringold A	172.212
699-35-16	157.5898	158.5898	Basalt	172.212
699-35-28	0	14.34808	Hanford	208.788
699-35-28	14.34808	64.64008	Cold Creek	208.788
699-35-28	64.64008	75.30808	Rtf	208.788
699-35-28	75.30808	137.7921	Ringold E	208.788
699-35-28	137.7921	159.1281	Ringold LM	208.788
699-35-28	159.1281	188.0841	Ringold A	208.788
699-35-28	188.0841	189.0841	Basalt	208.788
699-35-3A	0	18.281	Hanford	146.304
699-35-3A	18.281	47.237	Cold Creek	146.304
699-35-3A	47.237	51.809	Rtf	146.304
699-35-3A	51.809	70.097	Ringold E	146.304
699-35-3A	70.097	140.201	Ringold LM	146.304

Well Name	From	To	Lithology	Well Depth
699-35-3A	140.201	141.201	Basalt	146.304
699-35-3B	0	15.94258	Hanford	122.5296
699-35-3B	15.94258	42.46058	Cold Creek	122.5296
699-35-3B	42.46058	48.86158	Ringold E	122.5296
699-35-3B	48.86158	99.15358	Ringold LM	122.5296
699-35-3B	99.15358	114.3936	Ringold A	122.5296
699-35-3B	114.3936	114.3936	Basalt	122.5296
699-36-10	0	36.84232	Hanford	183.7944
699-36-10	36.84232	57.17232	Cold Creek	183.7944
699-36-10	57.17232	65.18832	Rtf	183.7944
699-36-10	65.18832	82.16632	Ringold E	183.7944
699-36-10	82.16632	153.4593	Ringold LM	183.7944
699-36-10	153.4593	164.7673	Ringold A	183.7944
699-36-10	164.7673	165.7673	Basalt	183.7944
699-36-17	0	32.805	Hanford	154.8384
699-36-17	32.805	42.132	Rtf	154.8384
699-36-17	42.132	92.302	Ringold E	154.8384
699-36-17	92.302	144.088	Ringold LM	154.8384
699-36-17	144.088	145.088	Basalt	154.8384
699-36-27	0	19.14868	Hanford	199.644
699-36-27	19.14868	63.34468	Cold Creek	199.644
699-36-27	63.34468	74.01268	Rtf	199.644
699-36-27	74.01268	125.8287	Ringold E	199.644
699-36-27	125.8287	159.3567	Ringold LM	199.644
699-36-27	159.3567	180.6927	Ringold A	199.644
699-36-27	180.6927	181.6927	Basalt	199.644
699-36-E3	0	26.71482	Hanford	114.3
699-36-E3	26.71482	35.85882	Cold Creek	114.3
699-37-E4	0	15.17288	Hanford	30.48
699-38-15	0	34.64908	Hanford	149.352
699-38-15	34.64908	37.72708	Rtf	149.352
699-38-15	37.72708	97.13308	Ringold E	149.352
699-38-15	97.13308	133.7391	Ringold LM	149.352
699-38-15	133.7391	142.2431	Ringold A	149.352
699-38-15	142.2431	143.2431	Basalt	149.352
699-38-19	0	14.471	Hanford	158.8008
699-38-19	14.471	38.855	Cold Creek	158.8008
699-38-19	38.855	47.999	Rtf	158.8008
699-38-19	47.999	108.959	Ringold E	158.8008

Well Name	From	To	Lithology	Well Depth
699-38-19	108.959	148.583	Ringold LM	158.8008
699-38-19	148.583	149.583	Basalt	158.8008
699-38-3	0	51.565	Hanford	81.3816
699-38-3	51.565	53.15	Ringold E	81.3816
699-38-3	53.15	62.842	Ringold LM	81.3816
699-38-3	62.842	63.842	Basalt	81.3816
699-38-8A	0	45.07276	Hanford	141.732
699-38-8A	45.07276	64.97576	Rtf	141.732
699-38-8A	64.97576	121.2728	Ringold E	141.732
699-38-8A	121.2728	122.2728	Basalt	141.732
699-38-E0	0	41.12295	Hanford	82.296
699-38-E0	41.12295	51.82095	Ringold E	82.296
699-38-E0	51.82095	62.51995	Ringold LM	82.296
699-38-E0	62.51995	63.51995	Basalt	82.296
699-39-23	0	12.42864	Hanford	158.496
699-39-23	12.42864	36.81264	Cold Creek	158.496
699-39-23	36.81264	45.95664	Rtf	158.496
699-39-23	45.95664	97.77264	Ringold E	158.496
699-39-23	97.77264	135.8726	Ringold LM	158.496
699-39-23	135.8726	149.5886	Ringold A	158.496
699-39-23	149.5886	150.5886	Basalt	158.496
699-40-1	0	26.77273	Hanford	128.016
699-40-1	26.77273	31.34473	Cold Creek	128.016
699-40-1	31.34473	40.94673	Ringold E	128.016
699-40-12B	0	32.911	Hanford	150.876
699-40-12B	32.911	49.675	Cold Creek	150.876
699-40-12B	49.675	57.295	Rtf	150.876
699-40-12B	57.295	115.207	Ringold E	150.876
699-40-12B	115.207	141.115	Ringold LM	150.876
699-40-12B	141.115	142.115	Basalt	150.876
699-40-20	0	31.63978	Hanford	155.448
699-40-20	31.63978	58.76778	Cold Creek	155.448
699-40-20	58.76778	63.33978	Rtf	155.448
699-40-20	63.33978	116.6798	Ringold E	155.448
699-40-20	116.6798	156.3038	Ringold LM	155.448
699-40-20	156.3038	165.4478	Ringold A	155.448
699-40-20	165.4478	166.4478	Basalt	155.448
699-41-10	0	81.267	Hanford	89.3064
699-41-10	81.267	82.267	Basalt	89.3064

Well Name	From	To	Lithology	Well Depth
699-41-11	0	51.53404	Hanford	131.064
699-41-11	51.53404	54.64304	Rtf	131.064
699-41-11	54.64304	95.73004	Ringold E	131.064
699-41-11	95.73004	114.048	Ringold LM	131.064
699-41-11	114.048	115.048	Basalt	131.064
699-41-23	0	28.949	Hanford	36.576
699-42-10	0	48.70554	Hanford	67.056
699-42-10	48.70554	50.16854	Ringold E	67.056
699-42-10	50.16854	59.98354	Basalt	67.056
699-42-12A	0	28.73484	Hanford	106.68
699-42-12A	28.73484	42.14584	Cold Creek	106.68
699-42-12A	42.14584	50.98484	Rtf	106.68
699-42-12A	50.98484	74.45484	Ringold E	106.68
699-42-12A	74.45484	99.44884	Ringold LM	106.68
699-42-12A	99.44884	100.4488	Basalt	106.68
699-42-29	0	23.55404	Hanford	140.208
699-42-29	23.55404	32.69804	Cold Creek	140.208
699-42-29	32.69804	35.74604	Rtf	140.208
699-42-29	35.74604	87.56204	Ringold E	140.208
699-42-29	87.56204	118.042	Ringold LM	140.208
699-42-3	0	26.44964	Hanford	128.016
699-42-3	26.44964	34.06964	Cold Creek	128.016
699-42-3	34.06964	49.30964	Rtf	128.016
699-42-3	49.30964	70.64564	Ringold E	128.016
699-42-3	70.64564	119.4136	Ringold LM	128.016
699-42-3	119.4136	120.4136	Basalt	128.016
699-42-30	0	21.7862	Hanford	141.4272
699-42-30	107.4352	126.3322	Ringold A	141.4272
699-42-E9B	0	26.268	Hanford	118.4758
699-42-E9B	26.268	35.351	Rtf	118.4758
699-42-E9B	35.351	43.093	Ringold E	118.4758
699-42-E9B	43.093	67.386	Ringold LM	118.4758
699-42-E9B	67.386	68.386	Basalt	118.4758
699-43-18	0	29.77096	Hanford	149.352
699-43-18	29.77096	57.20296	Cold Creek	149.352
699-43-18	57.20296	66.34696	Rtf	149.352
699-43-18	66.34696	92.25496	Ringold E	149.352
699-43-18	92.25496	137.975	Ringold LM	149.352
699-43-18	137.975	138.975	Basalt	149.352

Well Name	From	To	Lithology	Well Depth
699-43-23	0	29.64904	Hanford	155.448
699-43-23	29.64904	55.55704	Cold Creek	155.448
699-43-23	55.55704	58.60504	Rtf	155.448
699-43-23	58.60504	113.469	Ringold E	155.448
699-43-23	113.469	139.377	Ringold LM	155.448
699-43-23	139.377	142.425	Ringold A	155.448
699-43-23	142.425	143.425	Basalt	155.448
699-43-8	0	29.559	Hanford	86.2584
699-43-8	29.559	33.887	Cold Creek	86.2584
699-43-8	33.887	65.83	Rtf	86.2584
699-43-8	65.83	77.473	Ringold E	86.2584
699-43-8	77.473	78.473	Basalt	86.2584
699-44-16	0	39.2054	Hanford	117.0432
699-44-16	39.2054	40.7604	Rtf	117.0432
699-44-16	40.7604	57.4934	Ringold E	117.0432
699-44-16	57.4934	103.7934	Ringold LM	117.0432
699-44-16	103.7934	104.7934	Basalt	117.0432
699-44-7	0	25.47159	Hanford	144.78
699-44-7	25.47159	54.48859	Rtf	144.78
699-44-7	54.48859	57.59759	Ringold E	144.78
699-44-7	57.59759	126.3906	Ringold LM	144.78
699-44-7	126.3906	127.3906	Basalt	144.78
699-45-24	0	25.09228	Hanford	144.1704
699-45-24	25.09228	47.95228	Cold Creek	144.1704
699-45-24	47.95228	49.47628	Rtf	144.1704
699-45-24	49.47628	96.72028	Ringold E	144.1704
699-45-24	96.72028	130.2483	Ringold LM	144.1704
699-45-24	130.2483	131.7723	Ringold A	144.1704
699-45-24	131.7723	132.7723	Basalt	144.1704
699-45-26	0	21.99856	Hanford	144.1704
699-45-26	21.99856	50.95456	Cold Creek	144.1704
699-45-26	50.95456	55.52656	Rtf	144.1704
699-45-26	55.52656	114.9626	Ringold E	144.1704
699-45-26	114.9626	136.2986	Ringold LM	144.1704
699-45-26	136.2986	137.2986	Basalt	144.1704
699-46-15	0	8.149	Hanford	18.288
699-46-15	8.149	9.149	Basalt	18.288
699-46-5	0	10.23504	Hanford	115.824
699-46-5	10.23504	31.48004	Rtf	115.824

Well Name	From	To	Lithology	Well Depth
699-46-5	31.48004	41.93504	Ringold E	115.824
699-46-5	41.93504	97.34704	Ringold LM	115.824
699-46-5	97.34704	98.34704	Basalt	115.824
699-47-24	0	14.9276	Hanford	134.112
699-47-24	14.9276	48.4856	Cold Creek	134.112
699-47-24	48.4856	101.6736	Ringold E	134.112
699-47-24	101.6736	121.7596	Ringold LM	134.112
699-47-24	121.7596	122.7596	Basalt	134.112
699-48-22	0	35.68408	Hanford	123.444
699-48-22	35.68408	47.87608	Cold Creek	123.444
699-48-22	47.87608	79.88008	Ringold E	123.444
699-48-22	79.88008	113.4081	Ringold LM	123.444
699-48-22	113.4081	114.4081	Basalt	123.444
699-48-27	0	52.357	Hanford	136.2456
699-48-27	52.357	53.942	Rtf	136.2456
699-48-27	53.942	120.053	Ringold E	136.2456
699-48-27	120.053	121.053	Basalt	136.2456
699-49-13A	0	25.841	Hanford	29.5656
699-49-13B	0	22.153	Hanford	26.2128
699-49-13C	0	18.06856	Hanford	21.6408
699-49-13E	0	21.60388	Hanford	25.6032
699-49-21	0	38.73308	Hanford	45.72
699-50-30	0	27.67418	Hanford	115.824
699-50-30	27.67418	43.77618	Ringold E	115.824
699-50-30	43.77618	112.7792	Ringold LM	115.824
699-50-30	112.7792	113.8792	Ringold A	115.824
699-50-30	113.8792	114.8792	Basalt	115.824
699-54-15A	0	31.31488	Hanford	113.3856
699-54-15A	31.31488	91.11688	Ringold E	113.3856
699-54-15A	91.11688	103.6189	Ringold LM	113.3856
699-54-15A	103.6189	104.6189	Basalt	113.3856
699-54-18C	0	34.226	Hanford	108.204
699-54-18C	34.226	41.752	Rtf	108.204
699-54-18C	41.752	62.228	Ringold E	108.204
699-54-18C	62.228	105.829	Ringold LM	108.204
699-54-18C	105.829	108.029	Ringold A	108.204
699-54-18C	108.029	109.029	Basalt	108.204
699-61-16A	0	1.63692	Hanford	185.0136
699-61-16A	1.63692	18.01392	Rtf	185.0136

Well Name	From	To	Lithology	Well Depth
699-61-16A	18.01392	93.01792	Ringold LM	185.0136
699-61-16A	93.01792	94.01792	Basalt	185.0136
699-6-2A	0	21.26764	Hanford	279.1968
699-6-2A	21.26764	119.1086	Ringold E	279.1968
699-6-2A	119.1086	140.1396	Ringold LM	279.1968
699-6-2A	140.1396	163.3046	Ringold A	279.1968
699-6-2A	163.3046	164.3046	Basalt	279.1968
699-8-17	0	37.7874	Hanford	60.96
699-8-17	37.7874	60.3424	Cold Creek	60.96
699-9-E5A	0	20.415	Hanford	270.0528
699-9-E5A	20.415	30.473	Cold Creek	270.0528
699-9-E5A	30.473	91.433	Ringold E	270.0528
699-9-E5A	91.433	135.934	Ringold LM	270.0528
699-9-E5A	135.934	145.078	Ringold A	270.0528
699-9-E5A	145.078	146.078	Basalt	270.0528
699-S12-29	0	17.8238	Hanford	57.912
699-S12-29	17.8238	46.7798	Ringold E	57.912
699-S12-29	46.7798	54.0948	Ringold LM	57.912
699-S12-29	54.0948	55.0948	Basalt	57.912
699-S14-20A	0	29.97618	Hanford	52.4256
699-S14-20A	29.97618	40.64418	Ringold E	52.4256
699-S14-20A	40.64418	43.69218	Ringold LM	52.4256
699-S18-E2A	0	20.7956	Hanford	79.248
699-S18-E2A	20.7956	61.9436	Ringold E	79.248
699-S18-E2A	61.9436	75.3556	Ringold LM	79.248
699-S18-E2A	75.3556	76.3556	Basalt	79.248
699-S22-E9B	0	13.71	Hanford	46.0248
699-S22-E9B	13.71	45.105	Ringold E	46.0248
699-S22-E9C	0	10.358	Hanford	55.35168
699-S22-E9C	10.358	45.41	Ringold E	55.35168
699-S22-E9C	45.41	51.81	Ringold LM	55.35168
699-S22-E9C	51.81	52.81	Basalt	55.35168
699-S29-E16C	0	17.978	Hanford	54.22392
699-S29-E16C	17.978	30.474	Ringold E	54.22392
699-S29-E16C	30.474	53.182	Ringold LM	54.22392
699-S29-E16C	53.182	54.182	Basalt	54.22392
699-S30-E15A	0	19.806	Hanford	24.384
699-S31-1	0	21.87724	Hanford	69.4944
699-S31-1	21.87724	56.32024	Ringold E	69.4944

Well Name	From	To	Lithology	Well Depth
699-S31-1	56.32024	66.98824	Ringold LM	69.4944
699-S31-1	66.98824	67.98824	Basalt	69.4944
699-S3-E12	0	12.62166	Hanford	79.248
699-S3-E12	12.62166	15.97466	Rtf	79.248
699-S3-E12	15.97466	65.35266	Ringold E	79.248
699-S3-E12	65.35266	75.41066	Ringold LM	79.248
699-S6-E14A	0	10.4336	Hanford	64.6176
699-S6-E14A	10.4336	53.1056	Ringold E	64.6176
699-S6-E14A	53.1056	59.5066	Ringold LM	64.6176
699-S6-E14A	59.5066	60.5066	Basalt	64.6176
699-S6-E14B	0	13.406	Hanford	62.484
699-S6-E14B	13.406	48.762	Ringold E	62.484
699-S6-E14B	48.762	60.04	Ringold LM	62.484
699-S6-E4C	0	16.758	Hanford	140.5128
699-S6-E4C	16.758	89.91	Ringold E	140.5128
699-S6-E4C	89.91	100.273	Ringold LM	140.5128
699-S6-E4C	100.273	111.855	Ringold A	140.5128
699-S6-E4C	111.855	112.855	Basalt	140.5128
699-S7-34	0	28.034	Hanford	97.8408
699-S7-34	28.034	38.397	Ringold LM	97.8408
699-S7-34	38.397	43.579	Ringold A	97.8408
699-S7-34	43.579	44.579	Basalt	97.8408
299-E13-1	0	106.68	Hanford	111.252
299-E13-13	0	101.8	Hanford	108.8136
299-E13-18	0	92.66	Hanford	139.5984
299-E13-18	92.66	126.49	Ringold E	139.5984
299-E13-18	126.49	139.6	Ringold LM	139.5984
299-E13-20	178.31	181.66	Basalt	181.6608
299-E13-20	0	96.01	Hanford	181.6608
299-E13-20	143.56	178.31	Ringold A	181.6608
299-E13-62	0	0.91	Fill	110.0328
299-E13-62	0.91	67.06	Hanford	110.0328
299-E13-63	0	0.61	Fill	75.5904
299-E13-63	0.61	62.48	Hanford	75.5904
299-E13-64	0	0.76	Fill	62.0268
299-E13-64	0.76	18.9	Hanford	62.0268
299-E16-1	143.87	155.45	Basalt	155.448
299-E16-1	0	83.52	Hanford	155.448
299-E16-1	121.31	143.87	Ringold A	155.448

Well Name	From	To	Lithology	Well Depth
299-E16-1	83.52	101.8	Ringold E	155.448
299-E16-1	101.8	121.31	Ringold LM	155.448
299-E17-12	0	1.52	Fill	103.632
299-E17-12	1.52	87.17	Hanford	103.632
299-E17-21	0	1.52	Fill	146.304
299-E17-21	1.52	102.11	Hanford	146.304
299-E17-21	133.81	146.3	Ringold A	146.304
299-E17-21	102.11	115.21	Ringold E	146.304
299-E17-21	115.22	133.81	Ringold LM	146.304
299-E17-24	0	111.25	Hanford	116.7384
299-E17-25	0	109.73	Hanford	113.8672
299-E17-26	0	1.52	Fill	115.5192
299-E17-26	1.52	115.52	Hanford	115.5192
299-E17-4	0	93.57	Hanford	121.92
299-E17-4	93.57	117.96	Ringold E	121.92
299-E17-4	117.96	121.92	Ringold LM	121.92
299-E17-6	0	95.4	Hanford	152.4
299-E17-6	129.54	152.4	Ringold A	152.4
299-E17-6	95.4	111.86	Ringold E	152.4
299-E17-6	111.86	129.54	Ringold LM	152.4
299-E18-1	0	97.54	Hanford	101.1936
299-E19-1	158.8	163.37	Basalt	163.3728
299-E19-1	0	106.38	Hanford	163.3728
299-E19-1	129.54	158.8	Ringold A	163.3728
299-E19-1	106.38	114	Ringold E	163.3728
299-E19-1	114	129.54	Ringold LM	163.3728
299-E23-2	135.64	138.99	Basalt	138.9888
299-E23-2	0	117.04	Hanford	138.9888
299-E23-2	117.04	135.64	Ringold A	138.9888
299-E24-13	80.16	103.63	Cold Creek	103.632
299-E24-13	0	3.05	Fill	103.632
299-E24-13	3.05	80.16	Hanford	103.632
299-E24-14	83.82	103.63	Cold Creek	103.632
299-E24-14	0	83.82	Hanford	103.632
299-E24-18	0	81.08	Hanford	100.584
299-E24-19	84.43	91.65	Cold Creek	91.65336
299-E24-19	0	3.05	Fill	91.65336
299-E24-19	3.05	84.43	Hanford	91.65336
299-E24-20	83.82	92.66	Cold Creek	92.6592

Well Name	From	To	Lithology	Well Depth
299-E24-20	0	83.82	Hanford	92.6592
299-E24-21	0	2.44	Fill	0
299-E24-21	2.44	102.11	Hanford	0
299-E24-22	0	2.44	Fill	98.65766
299-E24-22	2.44	91.44	Hanford	98.65766
299-E24-24	0	1.52	Fill	110.9472
299-E24-24	1.52	110.95	Hanford	110.9472
299-E24-25	0	84.6	Hanford	110.3071
299-E24-33	0.09	96.13	Hanford	96.13392
299-E24-4	0	4.57	Fill	100.584
299-E24-4	4.57	100.58	Hanford	100.584
299-E24-5	0	2.44	Fill	100.2792
299-E24-5	2.44	30.56	Hanford	100.2792
299-E24-7	136.55	137.16	Basalt	137.16
299-E24-7	0	118.87	Hanford	137.16
299-E24-7	118.87	136.55	Ringold A	137.16
299-E24-70	0	15.24	Fill	39.624
299-E24-70	15.24	39.62	Hanford	39.624
299-E24-71	0	15.24	Fill	39.624
299-E24-72	0	15.24	Fill	39.624
299-E24-73	0	15.24	Fill	39.624
299-E24-8	114.3	116.43	Basalt	116.4336
299-E24-8	0	108.81	Hanford	116.4336
299-E24-8	108.81	114.3	Ringold A	116.4336
299-E25-1	80.77	98.15	Cold Creek	98.1456
299-E25-1	0	6.1	Fill	98.1456
299-E25-1	6.1	80.77	Hanford	98.1456
299-E25-100	0	15.24	Fill	30.48
299-E25-100	15.24	30.48	Hanford	30.48
299-E25-1000	115.37	119.45	Basalt	119.4481
299-E25-1000	0	110.64	Hanford	119.4481
299-E25-1000	110.64	115.37	Ringold A	119.4481
299-E25-101	0	15.24	Fill	30.48
299-E25-101	15.24	30.48	Hanford	30.48
299-E25-102	0	15.24	Fill	30.48
299-E25-102	15.24	30.48	Hanford	30.48
299-E25-103	0	15.24	Fill	30.48
299-E25-104	0	15.24	Fill	30.48
299-E25-104	15.24	30.48	Hanford	30.48

Well Name	From	To	Lithology	Well Depth
299-E25-105	0	15.24	Fill	30.48
299-E25-106	0	15.24	Fill	30.48
299-E25-107	0	15.24	Fill	30.48
299-E25-108	0	15.24	Fill	30.48
299-E25-108	15.24	30.48	Hanford	30.48
299-E25-109	0	15.24	Fill	30.48
299-E25-110	0	15.24	Fill	30.48
299-E25-111	0	15.24	Fill	30.48
299-E25-111	15.24	30.48	Hanford	30.48
299-E25-112	0	15.24	Fill	30.48
299-E25-113	0	15.24	Fill	30.48
299-E25-114	0	15.24	Fill	30.48
299-E25-114	15.24	30.48	Hanford	30.48
299-E25-115	0	15.24	Fill	30.48
299-E25-115	15.24	30.48	Hanford	30.48
299-E25-116	0	15.24	Fill	36.576
299-E25-117	0	15.24	Fill	30.48
299-E25-118	0	15.24	Fill	30.48
299-E25-119	0	15.24	Fill	30.48
299-E25-12	0	1.52	Fill	103.632
299-E25-12	1.52	96.32	Hanford	103.632
299-E25-12	97.84	103.63	Ringold A	103.632
299-E25-12	96.32	97.84	Ringold LM	103.632
299-E25-120	0	15.24	Fill	30.48
299-E25-122	0	15.24	Fill	30.48
299-E25-123	0	15.24	Fill	30.48
299-E25-124	0	15.24	Fill	39.624
299-E25-127	0	15.24	Fill	39.624
299-E25-13	78.03	96.62	Cold Creek	96.6216
299-E25-13	0	6.1	Fill	96.6216
299-E25-13	6.1	78.03	Hanford	96.6216
299-E25-15	83.82	103.63	Cold Creek	103.632
299-E25-15	0	83.82	Hanford	103.632
299-E25-16	80.77	103.63	Cold Creek	103.632
299-E25-16	0	80.77	Hanford	103.632
299-E25-17	0	85.34	Hanford	91.44
299-E25-18	0	86.87	Hanford	91.44
299-E25-18	88.39	91.44	Ringold A	91.44
299-E25-18	86.87	88.39	Ringold LM	91.44

Well Name	From	To	Lithology	Well Depth
299-E25-19	0	1.22	Fill	91.44
299-E25-19	1.22	83.82	Hanford	91.44
299-E25-2	108.51	114.3	Basalt	114.3
299-E25-2	77.72	108.51	Cold Creek	114.3
299-E25-2	0	4.57	Fill	114.3
299-E25-2	4.57	77.72	Hanford	114.3
299-E25-236	0	0.15	Fill	100.1878
299-E25-236	0.15	100.28	Hanford	100.1878
299-E25-28	103.94	106.07	Basalt	106.0704
299-E25-28	0	89.31	Hanford	106.0704
299-E25-28	89.31	103.94	Ringold A	106.0704
299-E25-32	106.68	107.9	Basalt	107.8992
299-E25-32	0	93.27	Hanford	107.8992
299-E25-32	93.27	106.68	Ringold A	107.8992
299-E25-33	115.83	121.92	Basalt	121.92
299-E25-33	0	81.99	Hanford	121.92
299-E25-33	87.78	115.82	Ringold A	121.92
299-E25-33	81.99	87.78	Ringold LM	121.92
299-E25-35	78.33	86.87	Cold Creek	86.868
299-E25-35	0	2.44	Fill	86.868
299-E25-35	2.44	78.33	Hanford	86.868
299-E25-40	75.59	83.52	Cold Creek	83.5152
299-E25-40	0	75.59	Hanford	83.5152
299-E25-41	77.12	85.04	Cold Creek	85.0392
299-E25-41	0	77.11	Hanford	85.0392
299-E25-42	74.98	89.82	Cold Creek	89.82456
299-E25-42	0	6.1	Fill	89.82456
299-E25-42	6.1	74.98	Hanford	89.82456
299-E25-43	0	64.01	Hanford	79.15656
299-E25-46	83.21	94.58	Cold Creek	94.57944
299-E25-46	0	2.13	Fill	94.57944
299-E25-46	2.13	83.21	Hanford	94.57944
299-E25-48	81.23	90.68	Cold Creek	90.678
299-E25-48	0	6.1	Fill	90.678
299-E25-48	6.1	81.23	Hanford	90.678
299-E25-50	0	1.52	Fill	89.67216
299-E25-50	1.52	82.3	Hanford	89.67216
299-E25-55	0	6.1	Fill	46.0248
299-E25-55	6.1	46.02	Hanford	46.0248

Well Name	From	To	Lithology	Well Depth
299-E25-58	0	9.14	Fill	46.0248
299-E25-58	9.14	46.02	Hanford	46.0248
299-E25-6	80.47	88.39	Cold Creek	88.392
299-E25-6	0	1.52	Fill	88.392
299-E25-6	1.52	80.47	Hanford	88.392
299-E25-66	0	16.76	Fill	39.624
299-E25-66	16.76	39.62	Hanford	39.624
299-E25-72	0	16.76	Fill	39.624
299-E25-72	16.76	39.62	Hanford	39.624
299-E25-73	0	16.76	Fill	33.528
299-E25-74	0	16.76	Fill	39.624
299-E25-77	0	15.24	Fill	39.624
299-E25-79	0	15.24	Fill	39.624
299-E25-79	15.24	39.62	Hanford	39.624
299-E25-81	0	15.24	Fill	39.624
299-E25-81	15.24	39.62	Hanford	39.624
299-E25-87	0	15.24	Fill	39.624
299-E25-89	0	15.24	Fill	39.624
299-E25-89	15.24	39.62	Hanford	39.624
299-E25-90	0	15.24	Fill	39.624
299-E25-90	15.24	39.62	Hanford	39.624
299-E25-92	0	15.24	Fill	39.624
299-E25-93	81.08	96.62	Cold Creek	97.536
299-E25-93	0	3.35	Fill	97.536
299-E25-93	3.35	81.08	Hanford	97.536
299-E25-94	82.91	85.34	Cold Creek	101.4984
299-E25-94	0	1.22	Fill	101.4984
299-E25-94	1.22	82.91	Hanford	101.4984
299-E25-97	0	15.24	Fill	39.624
299-E25-99	0	15.24	Fill	30.48
299-E26-1	68.58	75.59	Basalt	75.5904
299-E26-1	0	68.58	Hanford	75.5904
299-E26-10	62.27	62.97	Basalt	62.97168
299-E26-10	0	62.27	Hanford	62.97168
299-E26-11	60.35	62.85	Basalt	62.84976
299-E26-11	0	60.35	Hanford	62.84976
299-E26-14	0	67.5	Hanford	73.33488
299-E26-4	67.06	86.26	Cold Creek	86.2584
299-E26-4	0	67.06	Hanford	86.2584

Well Name	From	To	Lithology	Well Depth
299-E26-5	0	2.44	Fill	89.0016
299-E26-5	2.44	89	Hanford	89.0016
299-E26-6	74.07	88.39	Cold Creek	88.392
299-E26-6	0	4.88	Fill	88.392
299-E26-6	4.88	74.07	Hanford	88.392
299-E26-77	62.64	70.96	Basalt	70.77456
299-E26-77	0	1.52	Fill	70.77456
299-E26-77	1.52	62.64	Hanford	70.77456
299-E26-79	63.09	68.51	Basalt	68.50685
299-E26-79	0	0.3	Fill	68.50685
299-E26-79	0.3	63.09	Hanford	68.50685
299-E26-8	76.2	121.92	Basalt	121.92
299-E26-8	0	3.05	Fill	121.92
299-E26-8	3.05	76.2	Hanford	121.92
299-E26-9	61.27	61.9	Basalt	61.722
299-E26-9	0	61.26	Hanford	61.722
299-E27-10	73.15	73.18	Basalt	73.18248
299-E27-10	0	73.15	Hanford	73.18248
299-E27-105	0	12.19	Fill	30.48
299-E27-107	0	12.19	Fill	30.48
299-E27-11	79.86	80.68	Basalt	80.68056
299-E27-11	0	79.86	Hanford	80.68056
299-E27-13	0	84	Hanford	84.00288
299-E27-14	0	4.57	Fill	81.32064
299-E27-14	4.57	81.32	Hanford	81.32064
299-E27-15	0	3.05	Fill	80.01
299-E27-15	3.05	80.01	Hanford	80.01
299-E27-155	102.41	103.63	Basalt	103.632
299-E27-155	0	102.41	Hanford	103.632
299-E27-16	81.99	82.02	Basalt	81.9912
299-E27-16	62.48	81.99	Cold Creek	81.9912
299-E27-16	0	62.48	Hanford	81.9912
299-E27-17	75.04	75.07	Basalt	75.04176
299-E27-17	0	75.04	Hanford	75.04176
299-E27-2	77.72	95.1	Cold Creek	95.0976
299-E27-2	0	77.72	Hanford	95.0976
299-E27-20	0	0.3	Fill	84.8868
299-E27-20	0.3	84.89	Hanford	84.8868
299-E27-21	0	0.3	Fill	94.13138

Well Name	From	To	Lithology	Well Depth
299-E27-21	0.3	94.13	Hanford	94.13138
299-E27-22	81.69	81.72	Basalt	81.71688
299-E27-22	69.5	81.69	Cold Creek	81.71688
299-E27-22	0	1.52	Fill	81.71688
299-E27-22	1.52	69.49	Hanford	81.71688
299-E27-23	0	3.05	Fill	94.78366
299-E27-23	3.05	94.78	Hanford	94.78366
299-E27-24	0	73.152	Hanford	96.86544
299-E27-25	0	62.484	Hanford	75.5904
299-E27-3	106.38	109.73	Basalt	109.728
299-E27-3	0	3.05	Fill	109.728
299-E27-3	3.05	106.38	Hanford	109.728
299-E27-4	0	6.7	Fill	93.80525
299-E27-4	6.71	93.81	Hanford	93.80525
299-E27-51	0	12.19	Fill	45.72
299-E27-51	12.19	13.93	Hanford	45.72
299-E27-52	0	12.19	Fill	45.72
299-E27-52	12.19	45.72	Hanford	45.72
299-E27-54	0	12.19	Fill	47.244
299-E27-54	12.19	14.4	Hanford	47.244
299-E27-55	0	12.19	Fill	46.9392
299-E27-55	12.19	46.94	Hanford	46.9392
299-E27-56	0	12.19	Fill	44.196
299-E27-56	12.19	44.2	Hanford	44.196
299-E27-58	0	11.28	Fill	30.48
299-E27-6	104.55	107.59	Basalt	107.5944
299-E27-6	78.33	104.55	Cold Creek	107.5944
299-E27-6	0	3.05	Fill	107.5944
299-E27-6	3.05	78.33	Hanford	107.5944
299-E27-65	0	12.19	Fill	41.148
299-E27-66	0	12.19	Fill	44.196
299-E27-66	12.19	13.47	Hanford	44.196
299-E27-68	0	12.19	Fill	41.148
299-E27-69	0	12.19	Fill	36.576
299-E27-7	0	85.65	Hanford	85.6488
299-E27-70	0	12.5	Fill	39.624
299-E27-71	0	12.5	Fill	39.624
299-E27-72	0	12.8	Fill	38.1
299-E27-73	0	12.19	Fill	39.624

Well Name	From	To	Lithology	Well Depth
299-E27-8	78.33	78.36	Basalt	78.3336
299-E27-8	0	78.33	Hanford	78.3336
299-E27-9	0	74.74	Hanford	74.73696
299-E28-1	0	60.05	Hanford	99.06
299-E28-13	0	76.81	Hanford	112.1664
299-E28-16	0	89.31	Hanford	99.06
299-E28-16	89.31	99.09	Ringold A	99.06
299-E28-17	0	89.31	Hanford	106.68
299-E28-18	0	77.42	Hanford	100.584
299-E28-2	96.01	98.3	Basalt	98.298
299-E28-2	0	84.43	Hanford	98.298
299-E28-2	84.43	96.01	Ringold A	98.298
299-E28-22	112.47	116.13	Basalt	30.48
299-E28-22	0	82.3	Hanford	30.48
299-E28-22	82.3	112.47	Ringold A	30.48
299-E28-26	99.37	100.13	Basalt	100.1268
299-E28-26	0	94.49	Hanford	100.1268
299-E28-26	94.49	99.37	Ringold A	100.1268
299-E28-3	0	99.67	Hanford	99.3648
299-E28-5	93.57	99.97	Basalt	99.822
299-E28-5	0	1.52	Fill	99.822
299-E28-5	1.52	88.39	Hanford	99.822
299-E28-5	88.39	93.57	Ringold A	99.822
299-E28-8	91.75	96.01	Basalt	96.012
299-E28-8	0	0.91	Fill	96.012
299-E28-8	0.91	91.74	Hanford	96.012
299-E29-54	83.2104	91.1	Cold Creek	114.361
299-E29-54	0	83.2104	Hanford	114.361
299-E32-1	82.91	86.26	Basalt	86.2584
299-E32-1	0	82.91	Hanford	86.2584
299-E32-2	87.48	88.15	Basalt	88.14816
299-E32-2	0	87.48	Hanford	88.14816
299-E32-3	0	91.14	Hanford	92.6592
299-E32-3	91.14	92.97	Ringold A	92.6592
299-E32-4	0	90.53	Hanford	94.7928
299-E32-4	90.53	94.79	Ringold A	94.7928
299-E32-8	0	78.24	Hanford	78.24216
299-E33-10	87.48	88.39	Basalt	88.392
299-E33-10	0	8.53	Fill	88.392

Well Name	From	To	Lithology	Well Depth
299-E33-10	8.53	87.48	Hanford	88.392
299-E33-106	0	12.8	Fill	30.48
299-E33-106	12.8	30.48	Hanford	30.48
299-E33-11	69.04	70.1	Basalt	70.104
299-E33-11	68.89	69.04	Cold Creek	70.104
299-E33-11	0	0.61	Fill	70.104
299-E33-11	0.61	68.88	Hanford	70.104
299-E33-12	70.71	126.49	Basalt	126.492
299-E33-12	56.39	70.71	Cold Creek	126.492
299-E33-12	0	56.39	Hanford	126.492
299-E33-125	0	14.93	Fill	30.48
299-E33-125	14.94	30.48	Hanford	30.48
299-E33-129	0	12.8	Fill	30.48
299-E33-13	0	2.13	Fill	71.628
299-E33-13	2.13	71.02	Hanford	71.628
299-E33-130	0	12.8	Fill	30.48
299-E33-130	12.8	30.48	Hanford	30.48
299-E33-131	0	12.8	Fill	30.48
299-E33-131	12.8	30.48	Hanford	30.48
299-E33-132	0	12.8	Fill	45.72
299-E33-132	12.8	13.93	Hanford	45.72
299-E33-14	69.5	70.1	Basalt	70.104
299-E33-14	0	69.49	Hanford	70.104
299-E33-141	0	11.28	Fill	30.48
299-E33-142	0	10.67	Fill	30.48
299-E33-143	0	12.8	Fill	30.48
299-E33-144	0	12.8	Fill	30.48
299-E33-145	0	11.58	Fill	30.48
299-E33-146	0	12.8	Fill	45.72
299-E33-146	12.8	13.93	Hanford	45.72
299-E33-147	0	11.89	Fill	30.48
299-E33-147	11.89	30.48	Hanford	30.48
299-E33-148	0	12.19	Fill	41.148
299-E33-148	12.19	41.15	Hanford	41.148
299-E33-15	72.7	76.5	Basalt	76.5048
299-E33-15	0	4.57	Fill	76.5048
299-E33-15	4.57	72.54	Hanford	76.5048
299-E33-150	0	12.8	Fill	30.48
299-E33-150	12.8	30.48	Hanford	30.48

Well Name	From	To	Lithology	Well Depth
299-E33-151	0	12.8	Fill	30.48
299-E33-151	12.8	30.48	Hanford	30.48
299-E33-153	0	12.19	Fill	30.48
299-E33-153	12.19	30.48	Hanford	30.48
299-E33-154	0	12.8	Fill	30.48
299-E33-154	12.8	30.48	Hanford	30.48
299-E33-155	0	12.19	Fill	30.48
299-E33-155	12.19	30.48	Hanford	30.48
299-E33-158	0	12.8	Fill	30.48
299-E33-158	12.8	30.48	Hanford	30.48
299-E33-159	0	12.8	Fill	30.48
299-E33-159	12.8	30.48	Hanford	30.48
299-E33-16	75.13	78.64	Basalt	78.6384
299-E33-16	60.96	75.13	Cold Creek	78.6384
299-E33-16	0	0.61	Fill	78.6384
299-E33-16	0.61	60.96	Hanford	78.6384
299-E33-160	0	12.19	Fill	30.48
299-E33-160	12.19	30.48	Hanford	30.48
299-E33-161	0	12.8	Fill	30.48
299-E33-161	12.8	30.48	Hanford	30.48
299-E33-163	0	12.5	Fill	30.48
299-E33-163	12.5	30.48	Hanford	30.48
299-E33-164	0	12.19	Fill	30.48
299-E33-164	12.19	30.48	Hanford	30.48
299-E33-165	0	12.19	Fill	30.48
299-E33-165	12.19	30.48	Hanford	30.48
299-E33-169	0	12.8	Fill	30.48
299-E33-169	12.8	30.48	Hanford	30.48
299-E33-17	73.91	74.4	Basalt	74.3712
299-E33-17	61.27	73.91	Cold Creek	74.3712
299-E33-17	0	61.26	Hanford	74.3712
299-E33-171	0	12.8	Fill	30.48
299-E33-171	12.8	30.48	Hanford	30.48
299-E33-177	0	14.32	Fill	30.48
299-E33-178	0	14.63	Fill	30.48
299-E33-179	0	13.72	Fill	30.48
299-E33-179	13.72	30.48	Hanford	30.48
299-E33-18	80.86	84.73	Basalt	84.7344
299-E33-18	64.01	80.86	Cold Creek	84.7344

Well Name	From	To	Lithology	Well Depth
299-E33-18	0	4.57	Fill	84.7344
299-E33-18	4.57	64.01	Hanford	84.7344
299-E33-180	0	11.89	Fill	30.48
299-E33-180	11.89	30.48	Hanford	30.48
299-E33-182	0	11.89	Fill	30.48
299-E33-184	0	11.89	Fill	30.48
299-E33-184	11.89	30.48	Hanford	30.48
299-E33-185	0	11.89	Fill	30.48
299-E33-185	11.89	30.48	Hanford	30.48
299-E33-186	0	11.89	Fill	30.48
299-E33-186	11.89	30.48	Hanford	30.48
299-E33-189	0	11.89	Fill	30.48
299-E33-189	11.89	30.48	Hanford	30.48
299-E33-19	78.33	160.02	Basalt	76.8096
299-E33-19	0	78.33	Hanford	76.8096
299-E33-190	0	11.89	Fill	30.48
299-E33-190	11.89	30.48	Hanford	30.48
299-E33-191	0	12.19	Fill	30.48
299-E33-192	0	11.89	Fill	30.48
299-E33-192	11.89	30.48	Hanford	30.48
299-E33-193	0	12.8	Fill	30.48
299-E33-195	0	12.19	Fill	30.48
299-E33-196	0	11.89	Fill	30.48
299-E33-196	11.89	30.48	Hanford	30.48
299-E33-198	0	11.89	Fill	30.48
299-E33-1A	0	71.63	Hanford	71.628
299-E33-2	71.48	74.07	Basalt	74.0664
299-E33-2	0	5.18	Fill	74.0664
299-E33-2	5.18	71.02	Hanford	74.0664
299-E33-20	77.42	77.45	Basalt	77.4192
299-E33-20	63.09	77.42	Cold Creek	77.4192
299-E33-20	0	63.09	Hanford	77.4192
299-E33-200	0	11.89	Fill	30.48
299-E33-201	0	11.89	Fill	30.48
299-E33-201	11.89	30.48	Hanford	30.48
299-E33-202	0	13.72	Fill	30.48
299-E33-202	13.72	30.48	Hanford	30.48
299-E33-203	0	11.89	Fill	30.48
299-E33-203	11.89	30.48	Hanford	30.48

Well Name	From	To	Lithology	Well Depth
299-E33-204	0	11.89	Fill	30.48
299-E33-204	11.89	30.48	Hanford	30.48
299-E33-205	81.38	82.48	Basalt	82.47888
299-E33-205	67.36	81.38	Cold Creek	82.47888
299-E33-205	0	0.61	Fill	82.47888
299-E33-205	0.61	67.36	Hanford	82.47888
299-E33-206	0	14.63	Fill	30.48
299-E33-206	14.63	30.48	Hanford	30.48
299-E33-208	0	14.63	Fill	30.48
299-E33-208	14.63	30.48	Hanford	30.48
299-E33-209	0	14.63	Fill	30.48
299-E33-209	14.63	30.48	Hanford	30.48
299-E33-21	85.04	85.95	Basalt	85.9536
299-E33-21	0	85.04	Hanford	85.9536
299-E33-213	0	11.89	Fill	30.48
299-E33-213	11.89	30.48	Hanford	30.48
299-E33-214	0	11.89	Fill	30.48
299-E33-214	11.89	30.48	Hanford	30.48
299-E33-215	0	12.19	Fill	41.148
299-E33-216	0	11.89	Fill	30.48
299-E33-217	0	11.89	Fill	36.576
299-E33-217	11.89	36.58	Hanford	36.576
299-E33-218	0	11.89	Fill	36.576
299-E33-218	11.89	36.58	Hanford	36.576
299-E33-219	0	11.89	Fill	30.48
299-E33-219	11.89	30.48	Hanford	30.48
299-E33-22	0	7.01	Fill	70.7136
299-E33-22	7.01	70.71	Hanford	70.7136
299-E33-220	0	11.28	Fill	41.148
299-E33-220	11.28	41.15	Hanford	41.148
299-E33-221	0	12.19	Fill	41.148
299-E33-221	12.19	41.15	Hanford	41.148
299-E33-223	0	12.5	Fill	30.48
299-E33-224	0	12.8	Fill	30.48
299-E33-225	0	12.5	Fill	30.48
299-E33-226	0	12.8	Fill	30.48
299-E33-226	12.8	30.48	Hanford	30.48
299-E33-228	0	13.72	Fill	30.48
299-E33-228	13.72	30.48	Hanford	30.48

Well Name	From	To	Lithology	Well Depth
299-E33-229	0	12.8	Fill	30.48
299-E33-23	0	4.57	Fill	70.104
299-E33-23	4.57	58.52	Hanford	70.104
299-E33-231	0	12.8	Fill	30.48
299-E33-231	12.8	30.48	Hanford	30.48
299-E33-232	0	13.72	Fill	30.48
299-E33-232	13.72	30.48	Hanford	30.48
299-E33-233	0	14.93	Fill	30.48
299-E33-233	14.94	30.48	Hanford	30.48
299-E33-234	0	12.8	Fill	30.48
299-E33-234	12.8	30.48	Hanford	30.48
299-E33-235	0	12.8	Fill	30.48
299-E33-235	12.8	30.48	Hanford	30.48
299-E33-237	0	13.72	Fill	30.48
299-E33-24	75.29	78.03	Basalt	78.0288
299-E33-24	0	0.3	Fill	78.0288
299-E33-24	0.3	75.29	Hanford	78.0288
299-E33-240	0	14.32	Fill	30.48
299-E33-240	14.33	30.48	Hanford	30.48
299-E33-241	0	14.93	Fill	30.48
299-E33-241	14.94	30.48	Hanford	30.48
299-E33-242	0	14.93	Fill	30.48
299-E33-242	14.94	30.48	Hanford	30.48
299-E33-243	0	14.63	Fill	30.48
299-E33-243	14.63	30.48	Hanford	30.48
299-E33-244	0	14.93	Fill	30.48
299-E33-244	14.94	30.48	Hanford	30.48
299-E33-245	0	14.93	Fill	30.48
299-E33-245	14.94	30.48	Hanford	30.48
299-E33-246	0	14.93	Fill	30.48
299-E33-246	14.94	30.48	Hanford	30.48
299-E33-248	0	14.63	Fill	30.48
299-E33-248	14.63	30.48	Hanford	30.48
299-E33-249	0	14.63	Fill	30.48
299-E33-249	14.63	30.48	Hanford	30.48
299-E33-25	73.15	73.18	Basalt	73.152
299-E33-25	0	73.15	Hanford	73.152
299-E33-250	0	14.63	Fill	30.48
299-E33-250	14.63	30.48	Hanford	30.48

Well Name	From	To	Lithology	Well Depth
299-E33-251	0	14.63	Fill	30.48
299-E33-251	14.63	30.48	Hanford	30.48
299-E33-252	0	14.63	Fill	30.48
299-E33-252	14.63	30.48	Hanford	30.48
299-E33-253	0	14.63	Fill	30.48
299-E33-253	14.63	30.48	Hanford	30.48
299-E33-254	0	14.63	Fill	30.48
299-E33-254	14.63	30.48	Hanford	30.48
299-E33-255	0	14.63	Fill	30.48
299-E33-255	14.63	30.48	Hanford	30.48
299-E33-256	0	14.63	Fill	30.48
299-E33-256	14.63	30.48	Hanford	30.48
299-E33-258	0	12.5	Fill	30.48
299-E33-258	12.5	30.48	Hanford	30.48
299-E33-26	72.85	73.15	Basalt	73.152
299-E33-26	0	72.85	Hanford	73.152
299-E33-262	0	12.19	Fill	30.48
299-E33-262	12.19	30.48	Hanford	30.48
299-E33-265	67.3608	86	Cold Creek	86.44128
299-E33-265	0	67.3608	Hanford	86.44128
299-E33-266	67.6656	86.3	Cold Creek	87.19109
299-E33-266	0	67.6656	Hanford	87.19109
299-E33-267	61.8744	77.9	Cold Creek	79.33944
299-E33-267	0	61.8744	Hanford	79.33944
299-E33-268	62.1792	77.3	Cold Creek	80.3148
299-E33-268	0	62.1792	Hanford	80.3148
299-E33-27	0	11.58	Fill	77.724
299-E33-27	11.58	77.72	Hanford	77.724
299-E33-29	88.39	88.54	Basalt	88.5444
299-E33-29	0	88.39	Hanford	88.5444
299-E33-296	0	5.49	Fill	69.1896
299-E33-296	5.49	69.19	Hanford	69.1896
299-E33-3	70.71	71.93	Basalt	71.9328
299-E33-3	0	70.71	Hanford	71.9328
299-E33-30	85.04	85.37	Basalt	85.37448
299-E33-30	0	85.04	Hanford	85.37448
299-E33-302	0	4.27	Fill	67.9704
299-E33-302	4.27	67.97	Hanford	67.9704
299-E33-304	60.14	71.78	Cold Creek	71.7804

Well Name	From	To	Lithology	Well Depth
299-E33-304	0	5.03	Fill	71.7804
299-E33-304	5.03	60.14	Hanford	71.7804
299-E33-31	61.27	78.03	Cold Creek	77.99832
299-E33-31	0	61.26	Hanford	77.99832
299-E33-32	81.99	82.63	Basalt	82.38744
299-E33-32	68.28	81.99	Cold Creek	82.38744
299-E33-32	0	68.28	Hanford	82.38744
299-E33-33	76.81	76.84	Basalt	76.8096
299-E33-33	63.09	76.81	Cold Creek	76.8096
299-E33-33	0	63.09	Hanford	76.8096
299-E33-333	0	3.35	Fill	77.4192
299-E33-333	3.35	64.62	Hanford	77.4192
299-E33-334	85.35	86.87	Basalt	86.868
299-E33-334	67.67	85.34	Cold Creek	86.868
299-E33-334	0	67.67	Hanford	86.868
299-E33-335	85.5	87.17	Basalt	87.1728
299-E33-335	68.89	85.5	Cold Creek	87.1728
299-E33-335	0	68.88	Hanford	87.1728
299-E33-337	85.65	87.17	Basalt	87.1728
299-E33-337	65.53	85.65	Cold Creek	87.1728
299-E33-337	0	65.53	Hanford	87.1728
299-E33-338	82.6	84.05	Basalt	0
299-E33-338	64.92	82.6	Cold Creek	0
299-E33-338	0	64.92	Hanford	0
299-E33-339	85.04	87	Basalt	0
299-E33-339	0	1.83	Fill	0
299-E33-34	73.15	73.18	Basalt	73.152
299-E33-34	0	73.15	Hanford	73.152
299-E33-340	68.92	99.27	Basalt	109.3775
299-E33-340	64.01	68.92	Cold Creek	109.3775
299-E33-340	0	64.01	Hanford	109.3775
299-E33-341	70.87	72.24	Basalt	72.2376
299-E33-341	57	70.87	Cold Creek	72.2376
299-E33-341	0	57	Hanford	72.2376
299-E33-342	73.88	74.83	Basalt	74.8284
299-E33-342	57.91	73.88	Cold Creek	74.8284
299-E33-342	0	2.13	Fill	74.8284
299-E33-342	2.13	57.91	Hanford	74.8284
299-E33-343	79.52	80.47	Basalt	80.40624

Well Name	From	To	Lithology	Well Depth
299-E33-343	64.62	79.52	Cold Creek	80.40624
299-E33-343	0	64.62	Hanford	80.40624
299-E33-344	66.14	73.79	Cold Creek	73.79208
299-E33-344	0	4.57	Fill	73.79208
299-E33-344	4.57	66.14	Hanford	73.79208
299-E33-345	79.34	80.41	Basalt	80.40624
299-E33-345	66.14	79.34	Cold Creek	80.40624
299-E33-345	0	4.57	Fill	80.40624
299-E33-345	4.57	66.14	Hanford	80.40624
299-E33-35	76.2	76.23	Basalt	76.2
299-E33-35	0	76.2	Hanford	76.2
299-E33-36	0	80.41	Hanford	80.40624
299-E33-37	81.69	81.72	Basalt	81.534
299-E33-37	59.44	81.69	Cold Creek	81.534
299-E33-37	0	59.44	Hanford	81.534
299-E33-38	72.54	73.03	Basalt	73.03008
299-E33-38	0	72.54	Hanford	73.03008
299-E33-39	69.95	70.13	Basalt	70.13448
299-E33-39	0	69.95	Hanford	70.13448
299-E33-4	0	4.57	Fill	70.4088
299-E33-4	4.57	69.8	Hanford	70.4088
299-E33-40	69.5	96.93	Basalt	96.9264
299-E33-40	0	69.49	Hanford	96.9264
299-E33-41	80.07	80.16	Basalt	80.1624
299-E33-41	66.75	80.07	Cold Creek	80.1624
299-E33-41	0	10.51	Fill	80.1624
299-E33-41	10.52	66.75	Hanford	80.1624
299-E33-44	75.29	77.72	Basalt	77.724
299-E33-44	62.48	75.29	Cold Creek	77.724
299-E33-44	0	62.48	Hanford	77.724
299-E33-45	66.45	79.55	Cold Creek	0
299-E33-45	0	2.74	Fill	0
299-E33-45	2.74	66.45	Hanford	0
299-E33-46	65.53	80.56	Cold Creek	80.52816
299-E33-46	0	10.67	Fill	80.52816
299-E33-46	10.67	65.53	Hanford	80.52816
299-E33-47	78.64	81.96	Basalt	81.96072
299-E33-47	0	0.91	Fill	81.96072
299-E33-47	0.91	78.64	Hanford	81.96072

Well Name	From	To	Lithology	Well Depth
299-E33-48	87.02	88.39	Basalt	88.66632
299-E33-48	0	0.3	Fill	88.66632
299-E33-48	0.3	87.02	Hanford	88.66632
299-E33-49	86.41	88.03	Basalt	88.02624
299-E33-49	0	13.87	Fill	88.02624
299-E33-49	13.87	86.41	Hanford	88.02624
299-E33-5	72.24	73.76	Basalt	73.7616
299-E33-5	0	7.62	Fill	73.7616
299-E33-5	7.62	72.24	Hanford	73.7616
299-E33-50	71.32	116.13	Basalt	116.1288
299-E33-50	57.15	71.32	Cold Creek	116.1288
299-E33-50	0	57.15	Hanford	116.1288
299-E33-57	0	11.89	Fill	45.72
299-E33-57	11.89	45.72	Hanford	45.72
299-E33-6	69.8	72.54	Basalt	72.5424
299-E33-6	0	69.8	Hanford	72.5424
299-E33-61	0	12.19	Fill	45.72
299-E33-61	12.19	13.93	Hanford	45.72
299-E33-62	0	10.36	Fill	45.72
299-E33-62	10.36	45.72	Hanford	45.72
299-E33-63	0	7.62	Fill	45.72
299-E33-63	7.62	45.72	Hanford	45.72
299-E33-64	0	12.19	Fill	45.72
299-E33-64	12.19	45.72	Hanford	45.72
299-E33-65	0	14.63	Fill	45.72
299-E33-65	14.63	45.72	Hanford	45.72
299-E33-7	70.1	71.02	Basalt	71.0184
299-E33-7	0	70.1	Hanford	71.0184
299-E33-71	0	5.79	Fill	45.72
299-E33-71	5.79	45.72	Hanford	45.72
299-E33-73	0	6.7	Fill	45.72
299-E33-73	6.71	45.72	Hanford	45.72
299-E33-74	0	6.1	Fill	45.72
299-E33-74	6.1	45.72	Hanford	45.72
299-E33-77	0	10.06	Fill	45.72
299-E33-77	10.06	45.72	Hanford	45.72
299-E33-78	0	12.19	Fill	45.72
299-E33-78	12.19	13.93	Hanford	45.72
299-E33-8	78.33	78.36	Basalt	78.3336

Well Name	From	To	Lithology	Well Depth
299-E33-8	68.28	78.33	Cold Creek	78.3336
299-E33-8	0	68.28	Hanford	78.3336
299-E33-84	0	14.32	Fill	45.72
299-E33-84	14.33	45.72	Hanford	45.72
299-E33-85	0	14.93	Fill	45.72
299-E33-85	14.94	45.72	Hanford	45.72
299-E33-86	0	14.63	Fill	45.72
299-E33-86	14.63	45.72	Hanford	45.72
299-E33-87	0	14.32	Fill	45.72
299-E33-87	14.33	45.72	Hanford	45.72
299-E33-88	0	14.93	Fill	45.72
299-E33-88	14.94	45.72	Hanford	45.72
299-E33-9	80.16	83.82	Basalt	83.82
299-E33-9	0	13.72	Fill	83.82
299-E33-9	13.72	79.86	Hanford	83.82
299-E33-92	0	12.8	Fill	22.86
299-E33-95	0	14.63	Fill	30.48
299-E33-95	14.63	30.48	Hanford	30.48
299-E33-97	0	14.63	Fill	30.48
299-E33-97	14.63	30.48	Hanford	30.48
299-E33-99	0	15.24	Fill	30.48
299-E34-1	71.63	74.68	Basalt	74.676
299-E34-1	0	71.63	Hanford	74.676
299-E34-10	75.59	75.9	Basalt	75.8952
299-E34-10	0	75.59	Hanford	75.8952
299-E34-11	65.84	66.84	Basalt	66.84264
299-E34-11	0	65.84	Hanford	66.84264
299-E34-12	74.98	75.56	Basalt	75.55992
299-E34-12	0	74.98	Hanford	75.55992
299-E34-13	59.436	68.9	Cold Creek	72.02424
299-E34-13	0	59.436	Hanford	72.02424
299-E34-2	73.46	73.61	Basalt	73.6092
299-E34-2	0	73.46	Hanford	73.6092
299-E34-3	64.92	65.2	Basalt	65.19672
299-E34-3	0	64.92	Hanford	65.19672
299-E34-4	53.49	53.98	Basalt	53.98008
299-E34-4	0	53.49	Hanford	53.98008
299-E34-5	57.61	58.52	Basalt	58.5216
299-E34-5	0	57.61	Hanford	58.5216

Well Name	From	To	Lithology	Well Depth
299-E34-6	59.13	59.44	Basalt	59.436
299-E34-6	0	59.13	Hanford	59.436
299-E34-7	62.48	62.64	Basalt	62.6364
299-E34-7	0	62.48	Hanford	62.6364
299-E34-8	78.33	79.25	Basalt	79.248
299-E34-8	0	78.33	Hanford	79.248
299-E34-9	71.48	71.51	Basalt	71.4756
299-E34-9	0	71.48	Hanford	71.4756
299-E35-1	58.52	59.07	Basalt	59.07024
299-E35-1	0	58.52	Hanford	59.07024
299-E35-2	60.96	61.66	Basalt	61.66104
299-E35-2	0	60.96	Hanford	61.66104
299-W10-1	23.47	33.83	Cold Creek	92.964
299-W10-1	0	0.3	Fill	92.964
299-W10-1	0.3	23.47	Hanford	92.964
299-W10-1	43.28	92.96	Ringold E	92.964
299-W10-1	33.83	43.28	Rtf	92.964
299-W10-10	22.25	35.36	Cold Creek	76.2
299-W10-10	0	22.25	Hanford	76.2
299-W10-10	40.84	76.2	Ringold E	76.2
299-W10-10	35.36	40.84	Rtf	76.2
299-W10-101	24.69	28.65	Cold Creek	28.6512
299-W10-101	0	11.58	Fill	28.6512
299-W10-101	11.58	24.69	Hanford	28.6512
299-W10-105	24.38	28.04	Cold Creek	28.0416
299-W10-105	0	11.58	Fill	28.0416
299-W10-105	11.58	24.38	Hanford	28.0416
299-W10-107	24.69	33.53	Cold Creek	30.48
299-W10-107	0	11.58	Fill	30.48
299-W10-107	11.58	24.69	Hanford	30.48
299-W10-109	24.69	32.31	Cold Creek	28.0416
299-W10-109	0	11.89	Fill	28.0416
299-W10-109	11.89	24.69	Hanford	28.0416
299-W10-11	25.6	37.79	Cold Creek	76.2
299-W10-11	0	0.3	Fill	76.2
299-W10-11	0.3	25.6	Hanford	76.2
299-W10-11	41.15	76.2	Ringold E	76.2
299-W10-11	37.8	41.15	Rtf	76.2
299-W10-111	24.99	32.92	Cold Creek	28.6512

Well Name	From	To	Lithology	Well Depth
299-W10-111	0	11.89	Fill	28.6512
299-W10-111	11.89	24.99	Hanford	28.6512
299-W10-112	25.91	33.53	Cold Creek	26.5176
299-W10-112	0	11.58	Fill	26.5176
299-W10-112	11.58	25.91	Hanford	26.5176
299-W10-115	24.84	26.52	Cold Creek	26.5176
299-W10-115	0	14.63	Fill	26.5176
299-W10-115	14.63	24.84	Hanford	26.5176
299-W10-117	25.3	31.39	Cold Creek	27.7368
299-W10-117	0	11.58	Fill	27.7368
299-W10-117	11.58	25.3	Hanford	27.7368
299-W10-117	31.39	37.19	Rtf	27.7368
299-W10-12	24.99	34.44	Cold Creek	76.2
299-W10-12	0	0.3	Fill	76.2
299-W10-12	0.3	24.99	Hanford	76.2
299-W10-12	41.15	76.2	Ringold E	76.2
299-W10-12	34.44	41.15	Rtf	76.2
299-W10-120	24.69	33.22	Cold Creek	28.0416
299-W10-120	0	11.58	Fill	28.0416
299-W10-120	11.58	24.69	Hanford	28.0416
299-W10-120	33.22	36.88	Rtf	28.0416
299-W10-121	24.69	31.39	Cold Creek	28.0416
299-W10-121	0	12.19	Fill	28.0416
299-W10-121	12.19	24.69	Hanford	28.0416
299-W10-121	31.39	37.49	Rtf	28.0416
299-W10-122	24.99	27.74	Cold Creek	27.7368
299-W10-122	0	12.19	Fill	27.7368
299-W10-122	12.19	24.99	Hanford	27.7368
299-W10-125	25.3	28.04	Cold Creek	28.0416
299-W10-125	0	12.5	Fill	28.0416
299-W10-125	12.5	25.3	Hanford	28.0416
299-W10-126	24.99	28.07	Cold Creek	28.0416
299-W10-126	0	14.02	Fill	28.0416
299-W10-126	14.02	24.99	Hanford	28.0416
299-W10-127	23.77	27.77	Cold Creek	27.7368
299-W10-127	0	14.32	Fill	27.7368
299-W10-127	14.33	23.77	Hanford	27.7368
299-W10-13	34.75	43.89	Cold Creek	76.2
299-W10-13	0	34.75	Hanford	76.2

Well Name	From	To	Lithology	Well Depth
299-W10-13	43.89	76.2	Ringold E	76.2
299-W10-134	26.82	28.68	Cold Creek	28.6512
299-W10-134	0	12.19	Fill	28.6512
299-W10-134	12.19	26.82	Hanford	28.6512
299-W10-135	26.82	28.68	Cold Creek	28.6512
299-W10-135	0	12.19	Fill	28.6512
299-W10-135	12.19	26.82	Hanford	28.6512
299-W10-14	35.66	41.76	Cold Creek	140.8176
299-W10-14	0	35.66	Hanford	140.8176
299-W10-14	41.76	136.25	Ringold E	140.8176
299-W10-14	136.25	140.82	Ringold LM	140.8176
299-W10-140	25.91	28.65	Cold Creek	28.6512
299-W10-140	0	11.58	Fill	28.6512
299-W10-140	11.58	25.91	Hanford	28.6512
299-W10-141	24.69	35.05	Cold Creek	28.6512
299-W10-141	0	12.19	Fill	28.6512
299-W10-141	12.19	24.69	Hanford	28.6512
299-W10-141	35.05	36.88	Rtf	28.6512
299-W10-143	25.91	28.38	Cold Creek	28.3464
299-W10-143	0	12.19	Fill	28.3464
299-W10-143	12.19	25.91	Hanford	28.3464
299-W10-146	24.99	28.04	Cold Creek	27.432
299-W10-146	0	11.58	Fill	27.432
299-W10-146	11.58	24.99	Hanford	27.432
299-W10-147	24.99	30.48	Cold Creek	30.48
299-W10-147	0	12.19	Fill	30.48
299-W10-147	12.19	24.99	Hanford	30.48
299-W10-148	25.91	30.48	Cold Creek	30.48
299-W10-148	0	11.58	Fill	30.48
299-W10-148	11.58	25.91	Hanford	30.48
299-W10-15	22.25	35.05	Cold Creek	67.75704
299-W10-15	0	3.05	Fill	67.75704
299-W10-15	3.05	22.25	Hanford	67.75704
299-W10-15	41.15	67.76	Ringold E	67.75704
299-W10-15	35.05	41.15	Rtf	67.75704
299-W10-16	25.3	32	Cold Creek	66.99504
299-W10-16	0	1.83	Fill	66.99504
299-W10-16	1.83	25.3	Hanford	66.99504
299-W10-16	39.32	66.99	Ringold E	66.99504

Well Name	From	To	Lithology	Well Depth
299-W10-16	32	39.32	Rtf	66.99504
299-W10-161	26.21	32	Cold Creek	32.004
299-W10-161	0	14.02	Fill	32.004
299-W10-161	14.02	26.21	Hanford	32.004
299-W10-168	22.86	33.22	Cold Creek	37.1856
299-W10-168	0	12.19	Fill	37.1856
299-W10-168	12.19	22.86	Hanford	37.1856
299-W10-168	33.22	37.19	Rtf	37.1856
299-W10-17	27.43	34.14	Cold Creek	67.93992
299-W10-17	0	27.43	Hanford	67.93992
299-W10-17	39.01	67.94	Ringold E	67.93992
299-W10-17	34.14	39.01	Rtf	67.93992
299-W10-18	26.52	35.05	Cold Creek	67.84848
299-W10-18	0	1.83	Fill	67.84848
299-W10-18	1.83	26.52	Hanford	67.84848
299-W10-18	39.62	67.85	Ringold E	67.84848
299-W10-18	35.05	39.62	Rtf	67.84848
299-W10-196	24.99	31.7	Cold Creek	0
299-W10-196	0	11.28	Fill	0
299-W10-196	11.28	24.99	Hanford	0
299-W10-196	37.19	54.74	Ringold E	0
299-W10-196	31.7	37.19	Rtf	0
299-W10-2	25.91	34.44	Cold Creek	70.104
299-W10-2	0	2.13	Fill	70.104
299-W10-2	2.13	25.91	Hanford	70.104
299-W10-2	38.71	70.1	Ringold E	70.104
299-W10-2	34.44	38.71	Rtf	70.104
299-W10-22	25.6	34.14	Cold Creek	91.44
299-W10-22	0	0.3	Fill	91.44
299-W10-22	0.3	25.6	Hanford	91.44
299-W10-22	44.2	91.44	Ringold E	91.44
299-W10-22	34.14	44.2	Rtf	91.44
299-W10-23	24.38	33.53	Cold Creek	82.9056
299-W10-23	0	2.44	Fill	82.9056
299-W10-23	2.44	24.38	Hanford	82.9056
299-W10-23	39.93	82.91	Ringold E	82.9056
299-W10-23	33.53	39.93	Rtf	82.9056
299-W10-24	25.3	32.92	Cold Creek	131.826
299-W10-24	0	0.91	Fill	131.826

Well Name	From	To	Lithology	Well Depth
299-W10-24	0.91	25.3	Hanford	131.826
299-W10-24	127.41	131.83	Ringold A	131.826
299-W10-24	38.41	122.83	Ringold E	131.826
299-W10-24	122.84	127.41	Ringold LM	131.826
299-W10-24	32.92	38.4	Rtf	131.826
299-W10-26	26.82	33.53	Cold Creek	79.8576
299-W10-26	0	0.91	Fill	79.8576
299-W10-26	0.91	26.82	Hanford	79.8576
299-W10-26	38.71	79.86	Ringold E	79.8576
299-W10-26	33.53	38.71	Rtf	79.8576
299-W10-27	27.13	34.44	Cold Creek	81.89976
299-W10-27	0	1.22	Fill	81.89976
299-W10-27	1.22	27.13	Hanford	81.89976
299-W10-27	38.1	81.9	Ringold E	81.89976
299-W10-27	34.44	38.1	Rtf	81.89976
299-W10-3	25.91	33.53	Cold Creek	72.8472
299-W10-3	0	7.01	Fill	72.8472
299-W10-3	7.01	25.91	Hanford	72.8472
299-W10-3	38.71	72.85	Ringold E	72.8472
299-W10-3	33.53	38.71	Rtf	72.8472
299-W10-35	31.0896	36.6	Cold Creek	158.1912
299-W10-35	0	31.0896	Hanford	158.1912
299-W10-35	149	157.2768	Ringold A	158.1912
299-W10-35	41.5	138.1	Ringold E	158.1912
299-W10-35	138.1	149	Ringold LM	158.1912
299-W10-35	36.6	41.5	Rtf	158.1912
299-W10-36	21.6408	26.8	Cold Creek	139.2936
299-W10-36	39	131.8	Ringold E	139.2936
299-W10-36	131.8	136.2	Ringold LM	139.2936
299-W10-36	26.8	39	Rtf	139.2936
299-W10-36	0	0.3048	Fill	139.2936
299-W10-36	0.3048	21.64	Hanford	139.2936
299-W10-36	136.2	139.3	Ringold A	139.2936
299-W10-4	27.13	35.05	Cold Creek	74.676
299-W10-4	0	27.13	Hanford	74.676
299-W10-4	40.23	74.68	Ringold E	74.676
299-W10-4	35.05	40.23	Rtf	74.676
299-W10-5	30.48	39.32	Cold Creek	73.152
299-W10-5	0	30.48	Hanford	73.152

Well Name	From	To	Lithology	Well Depth
299-W10-5	41.15	73.15	Ringold E	73.152
299-W10-5	39.32	41.15	Rtf	73.152
299-W10-51	28.04	45.11	Cold Creek	45.1104
299-W10-51	0	28.04	Hanford	45.1104
299-W10-8	25.91	35.36	Cold Creek	76.8096
299-W10-8	0	25.91	Hanford	76.8096
299-W10-8	38.1	76.81	Ringold E	76.8096
299-W10-8	35.36	38.1	Rtf	76.8096
299-W10-88	28.96	30.48	Cold Creek	30.48
299-W10-88	0	13.72	Fill	30.48
299-W10-88	13.72	28.96	Hanford	30.48
299-W10-89	27.43	30.48	Cold Creek	30.48
299-W10-89	0	13.72	Fill	30.48
299-W10-89	13.72	27.43	Hanford	30.48
299-W10-9	25.3	40.84	Cold Creek	68.58
299-W10-9	0	25.3	Hanford	68.58
299-W10-9	40.84	68.58	Ringold E	68.58
299-W10-90	27.43	30.48	Cold Creek	30.48
299-W10-90	0	13.72	Fill	30.48
299-W10-90	13.72	27.43	Hanford	30.48
299-W10-91	28.65	30.48	Cold Creek	30.48
299-W10-91	0	13.72	Fill	30.48
299-W10-91	13.72	28.65	Hanford	30.48
299-W10-92	28.96	30.48	Cold Creek	30.48
299-W10-92	0	13.72	Fill	30.48
299-W10-92	13.72	28.96	Hanford	30.48
299-W10-93	27.43	30.48	Cold Creek	30.48
299-W10-93	0	13.72	Fill	30.48
299-W10-93	13.72	27.43	Hanford	30.48
299-W10-94	27.43	30.48	Cold Creek	30.48
299-W10-94	0	13.72	Fill	30.48
299-W10-94	13.72	27.43	Hanford	30.48
299-W10-95	28.35	30.48	Cold Creek	30.48
299-W10-95	0	14.02	Fill	30.48
299-W10-95	14.02	28.35	Hanford	30.48
299-W10-96	28.04	30.48	Cold Creek	30.48
299-W10-96	0	13.72	Fill	30.48
299-W10-96	13.72	28.04	Hanford	30.48
299-W10-97	28.04	30.48	Cold Creek	30.48

Well Name	From	To	Lithology	Well Depth
299-W10-97	0	13.72	Fill	30.48
299-W10-97	13.72	28.04	Hanford	30.48
299-W10-98	27.43	30.48	Cold Creek	30.48
299-W10-98	0	13.72	Fill	30.48
299-W10-98	13.72	27.43	Hanford	30.48
299-W10-99	27.43	30.48	Cold Creek	30.48
299-W10-99	0	13.72	Fill	30.48
299-W10-99	13.72	27.43	Hanford	30.48
299-W11-10	34.14	39.62	Cold Creek	93.5736
299-W11-10	0	18.9	Fill	93.5736
299-W11-10	18.9	34.14	Hanford	93.5736
299-W11-10	42.98	93.57	Ringold E	93.5736
299-W11-10	39.62	42.98	Rtf	93.5736
299-W11-12	27.74	38.71	Cold Creek	76.2
299-W11-12	0	27.74	Hanford	76.2
299-W11-12	38.71	76.2	Ringold E	76.2
299-W11-2	156.36	161.54	Basalt	161.544
299-W11-2	33.83	45.11	Cold Creek	161.544
299-W11-2	0	1.52	Fill	161.544
299-W11-2	1.52	33.83	Hanford	161.544
299-W11-2	133.5	156.36	Ringold A	161.544
299-W11-2	53.34	133.5	Ringold E	161.544
299-W11-2	45.11	53.34	Rtf	161.544
299-W11-24	28.65	34.14	Cold Creek	76.2
299-W11-24	0	28.65	Hanford	76.2
299-W11-24	41.15	76.2	Ringold E	76.2
299-W11-24	34.14	41.15	Rtf	76.2
299-W11-25B	27.74	37.79	Cold Creek	124.8156
299-W11-25B	0	1.22	Fill	124.8156
299-W11-25B	1.22	27.74	Hanford	124.8156
299-W11-25B	40.23	124.66	Ringold E	124.8156
299-W11-25B	37.8	40.23	Rtf	124.8156
299-W11-26	153.62	156.97	Basalt	156.972
299-W11-26	30.48	43.28	Cold Creek	156.972
299-W11-26	0	30.48	Hanford	156.972
299-W11-26	131.07	153.62	Ringold A	156.972
299-W11-26	43.28	125.88	Ringold E	156.972
299-W11-26	125.88	131.06	Ringold LM	156.972
299-W11-27	25.91	36.58	Cold Creek	71.628

Well Name	From	To	Lithology	Well Depth
299-W11-27	0	3.05	Fill	71.628
299-W11-27	3.05	25.91	Hanford	71.628
299-W11-27	38.71	71.63	Ringold E	71.628
299-W11-27	36.58	38.71	Rtf	71.628
299-W11-28	29.57	37.79	Cold Creek	75.40752
299-W11-28	0	29.56	Hanford	75.40752
299-W11-28	43.59	75.41	Ringold E	75.40752
299-W11-28	37.8	43.59	Rtf	75.40752
299-W11-3	0	0.61	Fill	100.584
299-W11-39	27.4	36.58	Cold Creek	86.04809
299-W11-39	0	1.52	Fill	86.04809
299-W11-39	1.52	27.4	Hanford	86.04809
299-W11-39	39.62	86.05	Ringold E	86.04809
299-W11-39	36.58	39.62	Rtf	86.04809
299-W11-40	26.82	35.97	Cold Creek	85.344
299-W11-40	0	0.91	Fill	85.344
299-W11-40	0.91	26.82	Hanford	85.344
299-W11-40	40.84	85.34	Ringold E	85.344
299-W11-40	35.97	40.84	Rtf	85.344
299-W11-41	27.74	36.58	Cold Creek	85.344
299-W11-41	0	0.91	Fill	85.344
299-W11-41	0.91	27.74	Hanford	85.344
299-W11-41	39.93	85.34	Ringold E	85.344
299-W11-41	36.58	39.93	Rtf	85.344
299-W11-42	28.35	35.36	Cold Creek	85.344
299-W11-42	0	0.91	Fill	85.344
299-W11-42	0.91	28.35	Hanford	85.344
299-W11-42	38.41	85.34	Ringold E	85.344
299-W11-42	35.36	38.4	Rtf	85.344
299-W11-43	28.65	36.58	Cold Creek	136.5504
299-W11-43	0	28.65	Hanford	136.5504
299-W11-43	126.8	136.55	Ringold A	136.5504
299-W11-43	48.46	126.8	Ringold E	136.5504
299-W11-43	36.58	48.46	Rtf	136.5504
299-W11-48	25.91	39.01	Cold Creek	124.6632
299-W11-48	0	25.91	Hanford	124.6632
299-W11-48	39.01	122.53	Ringold E	124.6632
299-W11-48	122.53	124.66	Ringold LM	124.6632
299-W11-49	40.8432	44.5008	Cold Creek	139.2936

Well Name	From	To	Lithology	Well Depth
299-W11-49	0	40.8432	Hanford	139.2936
299-W11-49	44.5008	131.6736	Ringold E	139.2936
299-W11-49	131.6736	135.9408	Ringold LM	139.2936
299-W11-50	29.5656	39.04	Cold Creek	149.352
299-W11-50	0	29.5656	Hanford	149.352
299-W11-50	42.7	127.3	Ringold E	149.352
299-W11-50	127.3	128.3	Ringold LM	149.352
299-W11-50	39.04	42.7	Rtf	149.352
299-W11-50	128.32	131	Ringold A	149.352
299-W11-6	36.58	45.72	Cold Creek	95.0976
299-W11-6	0	1.52	Fill	95.0976
299-W11-6	1.52	36.58	Hanford	95.0976
299-W11-6	45.72	51.82	Rtf	95.0976
299-W11-86	149.66	149.69	Basalt	149.6568
299-W11-86	34.44	38.1	Cold Creek	149.6568
299-W11-86	0	34.44	Hanford	149.6568
299-W11-86	131.68	149.66	Ringold A	149.6568
299-W11-86	44.5	131.67	Ringold E	149.6568
299-W11-86	38.1	44.5	Rtf	149.6568
299-W11-87	34.14	39.01	Cold Creek	123.5598
299-W11-87	0	0.3	Fill	123.5598
299-W11-87	0.3	34.14	Hanford	123.5598
299-W11-87	45.72	123.56	Ringold E	123.5598
299-W11-87	39.01	45.72	Rtf	123.5598
299-W11-88	148.44	149.41	Basalt	149.413
299-W11-88	21.34	41.15	Cold Creek	149.413
299-W11-88	0	2.13	Fill	149.413
299-W11-88	2.13	21.34	Hanford	149.413
299-W11-88	133.2	148.44	Ringold A	149.413
299-W11-88	49.68	133.2	Ringold E	149.413
299-W11-88	41.15	49.68	Rtf	149.413
299-W11-9	33.53	44.2	Cold Creek	90.5256
299-W11-9	0	33.53	Hanford	90.5256
299-W11-90	34.7472	51.816	Cold Creek	160.2943
299-W11-90	0	34.7472	Hanford	160.2943
299-W11-90	51.816	159.4104	Ringold E	160.2943
299-W11-92	28.194	34.7	Cold Creek	140.208
299-W11-92	0	28.194	Hanford	140.208
299-W11-92	39.6	123.4	Ringold E	140.208

Well Name	From	To	Lithology	Well Depth
299-W11-92	123.4	136.6	Ringold LM	140.208
299-W11-92	34.7	39.6	Rtf	140.208
299-W11-93	32.004	42.4	Cold Creek	155.448
299-W11-93	0	32.004	Hanford	155.448
299-W11-93	42.4	153.9	Ringold E	155.448
299-W11-96	32.004	43.2816	Cold Creek	146.3954
299-W11-96	0	32.004	Hanford	146.3954
299-W11-96	129.54	153.924	Ringold A	146.3954
299-W11-96	43.2816	129.54	Ringold E	146.3954
299-W12-1	27.43	35.05	Cold Creek	95.7072
299-W12-1	0	1.52	Fill	95.7072
299-W12-1	1.52	27.43	Hanford	95.7072
299-W12-2	34.4424	45.72	Cold Creek	153.924
299-W12-2	0	34.4424	Hanford	153.924
299-W12-2	129.8448	151.1808	Ringold A	153.924
299-W12-2	45.72	129.8448	Ringold E	153.924
299-W12-3	25.146	34.1376	Cold Creek	151.1808
299-W12-3	0	25.146	Hanford	151.1808
299-W12-3	127.1016	150.876	Ringold A	151.1808
299-W12-3	34.1376	127.1016	Ringold E	151.1808
299-W12-4	39.624	45.4152	Cold Creek	157.2158
299-W12-4	0	39.624	Hanford	157.2158
299-W12-4	131.064	156.3624	Ringold A	157.2158
299-W12-4	45.4152	131.064	Ringold E	157.2158
299-W13-1	160.33	160.72	Basalt	160.721
299-W13-1	45.42	56.39	Cold Creek	160.721
299-W13-1	0	45.41	Hanford	160.721
299-W13-1	130.15	160.33	Ringold A	160.721
299-W13-1	56.39	130.15	Ringold E	160.721
299-W14-1	24.38	35.97	Cold Creek	73.152
299-W14-1	0	24.38	Hanford	73.152
299-W14-1	37.19	73.15	Ringold E	73.152
299-W14-1	35.97	37.19	Rtf	73.152
299-W14-11	28.35	37.79	Cold Creek	106.0704
299-W14-11	0	3.66	Fill	106.0704
299-W14-11	3.66	28.35	Hanford	106.0704
299-W14-11	38.41	106.07	Ringold E	106.0704
299-W14-11	37.8	38.4	Rtf	106.0704
299-W14-12	28.65	38.4	Cold Creek	67.818

Well Name	From	To	Lithology	Well Depth
299-W14-12	0	1.52	Fill	67.818
299-W14-12	1.52	28.65	Hanford	67.818
299-W14-12	38.41	67.82	Ringold E	67.818
299-W14-13	27.13	34.14	Cold Creek	79.8576
299-W14-13	0	1.52	Fill	79.8576
299-W14-13	1.52	27.13	Hanford	79.8576
299-W14-13	38.1	79.86	Ringold E	79.8576
299-W14-13	34.14	38.1	Rtf	79.8576
299-W14-14	28.65	33.53	Cold Creek	135.0264
299-W14-14	0	28.65	Hanford	135.0264
299-W14-14	133.5	135.03	Ringold A	135.0264
299-W14-14	37.49	122.53	Ringold E	135.0264
299-W14-14	122.53	133.5	Ringold LM	135.0264
299-W14-14	33.53	37.49	Rtf	135.0264
299-W14-15	26.52	35.36	Cold Creek	79.248
299-W14-15	0	0.61	Fill	79.248
299-W14-15	0.61	26.52	Hanford	79.248
299-W14-15	37.49	79.25	Ringold E	79.248
299-W14-15	35.36	37.49	Rtf	79.248
299-W14-18	26.21	33.22	Cold Creek	79.7052
299-W14-18	0	0.61	Fill	79.7052
299-W14-18	0.61	26.21	Hanford	79.7052
299-W14-18	37.19	79.71	Ringold E	79.7052
299-W14-18	33.22	37.19	Rtf	79.7052
299-W14-2	25.91	35.66	Cold Creek	67.9704
299-W14-2	0	4.57	Fill	67.9704
299-W14-2	4.57	25.91	Hanford	67.9704
299-W14-2	35.66	67.97	Ringold E	67.9704
299-W14-20	27.432	38.1	Cold Creek	133.8072
299-W14-20	0	27.432	Hanford	133.8072
299-W14-20	38.1	124	Ringold E	133.8072
299-W14-20	124	131.67	Ringold LM	133.8072
299-W14-20	131.67	133.8	Ringold A	133.8072
299-W14-21	41.4528	47.5488	Cold Creek	160.02
299-W14-21	0	41.4528	Hanford	160.02
299-W14-21	137.7696	160.02	Ringold A	160.02
299-W14-21	47.5488	137.7696	Ringold E	160.02
299-W14-22	0	45.11	Hanford	160.721
299-W14-22	45.11	53.34	Cold Creek	160.721

Well Name	From	To	Lithology	Well Depth
299-W14-22	53.34	56.69	Rtf	160.721
299-W14-22	56.69	121.92	Ringold E	160.721
299-W14-22	121.92	160.62	Ringold A	160.721
299-W14-22	160.62	162	Basalt	160.721
299-W14-3	23.77	34.44	Cold Creek	81.9912
299-W14-3	0	23.77	Hanford	81.9912
299-W14-3	35.97	81.99	Ringold E	81.9912
299-W14-3	34.44	35.97	Rtf	81.9912
299-W14-4	21.95	35.05	Cold Creek	62.484
299-W14-4	0	21.94	Hanford	62.484
299-W14-4	35.05	62.48	Ringold E	62.484
299-W14-5	24.38	38.71	Cold Creek	73.152
299-W14-5	0	3.05	Fill	73.152
299-W14-5	3.05	24.38	Hanford	73.152
299-W14-5	38.71	73.15	Ringold E	73.152
299-W14-6	26.82	35.36	Cold Creek	73.152
299-W14-6	0	26.82	Hanford	73.152
299-W14-6	35.36	73.15	Ringold E	73.152
299-W14-7	157.89	161.85	Basalt	161.8488
299-W14-7	38.1	40.23	Cold Creek	161.8488
299-W14-7	0	1.52	Fill	161.8488
299-W14-7	1.52	38.1	Hanford	161.8488
299-W14-7	131.98	157.89	Ringold A	161.8488
299-W14-7	40.23	129.24	Ringold E	161.8488
299-W14-7	129.24	131.98	Ringold LM	161.8488
299-W14-73	37.7952	48.1584	Cold Creek	154.686
299-W14-73	0	37.7952	Hanford	154.686
299-W14-73	48.1584	143.8656	Ringold E	154.686
299-W14-73	143.8656	144.78	Ringold LM	154.686
299-W14-74	37.4904	46.3296	Cold Creek	154.8384
299-W14-74	0	37.4904	Hanford	154.8384
299-W14-74	46.3296	135.636	Ringold E	154.8384
299-W14-8A	163.37	171.6	Basalt	171.6024
299-W14-8A	50.9	56.08	Cold Creek	171.6024
299-W14-8A	0	50.9	Hanford	171.6024
299-W14-8A	139.9	163.37	Ringold A	171.6024
299-W14-8A	56.08	133.5	Ringold E	171.6024
299-W14-8A	133.5	139.9	Ringold LM	171.6024
299-W14-9	161.85	166.12	Basalt	166.116

Well Name	From	To	Lithology	Well Depth
299-W14-9	35.66	40.23	Cold Creek	166.116
299-W14-9	0	2.44	Fill	166.116
299-W14-9	2.44	35.66	Hanford	166.116
299-W14-9	143.56	161.85	Ringold A	166.116
299-W14-9	41.15	130.15	Ringold E	166.116
299-W14-9	130.15	143.56	Ringold LM	166.116
299-W14-9	40.23	41.15	Rtf	166.116
299-W15-1	33.83	35.36	Cold Creek	91.44
299-W15-1	0	1.52	Fill	91.44
299-W15-1	1.52	33.83	Hanford	91.44
299-W15-1	41.15	91.44	Ringold E	91.44
299-W15-1	35.36	41.15	Rtf	91.44
299-W15-10	39.62	45.72	Cold Creek	91.44
299-W15-10	0	39.62	Hanford	91.44
299-W15-10	45.72	91.44	Ringold E	91.44
299-W15-101	0	5.18	Fill	15.24
299-W15-101	5.18	15.24	Hanford	15.24
299-W15-102	36.58	40.23	Cold Creek	45.72
299-W15-102	0	4.57	Fill	45.72
299-W15-102	4.57	36.58	Hanford	45.72
299-W15-102	40.23	45.72	Ringold E	45.72
299-W15-11	38.71	44.81	Cold Creek	91.44
299-W15-11	0	38.71	Hanford	91.44
299-W15-12	27.43	35.97	Cold Creek	68.58
299-W15-12	0	1.22	Fill	68.58
299-W15-12	1.22	27.43	Hanford	68.58
299-W15-12	35.97	68.58	Ringold E	68.58
299-W15-126	0	14.02	Fill	30.48
299-W15-126	14.02	30.48	Hanford	30.48
299-W15-127	0	14.93	Fill	30.48
299-W15-127	14.94	30.48	Hanford	30.48
299-W15-128	0	14.93	Fill	30.48
299-W15-128	14.94	30.48	Hanford	30.48
299-W15-13	28.65	36.88	Cold Creek	68.58
299-W15-13	0	0.3	Fill	68.58
299-W15-13	0.3	28.65	Hanford	68.58
299-W15-13	40.84	68.58	Ringold E	68.58
299-W15-13	36.88	40.84	Rtf	68.58
299-W15-131	0	14.93	Fill	30.48

Well Name	From	To	Lithology	Well Depth
299-W15-131	14.94	30.48	Hanford	30.48
299-W15-133	0	14.93	Fill	30.48
299-W15-133	14.94	30.48	Hanford	30.48
299-W15-134	0	14.93	Fill	30.48
299-W15-134	14.94	30.48	Hanford	30.48
299-W15-14	171.91	177.09	Basalt	177.0888
299-W15-14	47.55	51.82	Cold Creek	177.0888
299-W15-14	0	1.52	Fill	177.0888
299-W15-14	1.52	47.55	Hanford	177.0888
299-W15-14	154.54	171.91	Ringold A	177.0888
299-W15-14	55.78	139.9	Ringold E	177.0888
299-W15-14	139.9	154.53	Ringold LM	177.0888
299-W15-14	51.82	55.78	Rtf	177.0888
299-W15-152	39.62	45.11	Cold Creek	109.2098
299-W15-152	0	39.62	Hanford	109.2098
299-W15-155	31.39	35.05	Cold Creek	35.052
299-W15-155	0	15.24	Fill	35.052
299-W15-155	15.24	31.39	Hanford	35.052
299-W15-159	29.26	30.48	Cold Creek	30.48
299-W15-159	0	14.93	Fill	30.48
299-W15-159	14.94	29.26	Hanford	30.48
299-W15-16	40.54	48.77	Cold Creek	74.2188
299-W15-16	0	3.35	Fill	74.2188
299-W15-16	3.35	40.54	Hanford	74.2188
299-W15-16	54.26	74.22	Ringold E	74.2188
299-W15-16	48.77	54.25	Rtf	74.2188
299-W15-160	27.43	30.48	Cold Creek	30.48
299-W15-160	0	15.24	Fill	30.48
299-W15-160	15.24	27.43	Hanford	30.48
299-W15-161	27.43	30.48	Cold Creek	30.48
299-W15-161	0	14.93	Fill	30.48
299-W15-161	14.94	27.43	Hanford	30.48
299-W15-162	27.43	30.48	Cold Creek	30.48
299-W15-162	0	14.93	Fill	30.48
299-W15-162	14.94	27.43	Hanford	30.48
299-W15-163	27.74	30.48	Cold Creek	30.48
299-W15-163	0	15.54	Fill	30.48
299-W15-163	15.54	27.74	Hanford	30.48
299-W15-164	29.26	30.48	Cold Creek	30.48

Well Name	From	To	Lithology	Well Depth
299-W15-164	0	15.24	Fill	30.48
299-W15-164	15.24	29.26	Hanford	30.48
299-W15-166	30.79	34.14	Cold Creek	34.1376
299-W15-166	0	15.24	Fill	34.1376
299-W15-166	15.24	30.78	Hanford	34.1376
299-W15-167	30.48	35.05	Cold Creek	35.052
299-W15-167	0	14.93	Fill	35.052
299-W15-167	14.94	30.48	Hanford	35.052
299-W15-17	41.45	48.77	Cold Creek	137.16
299-W15-17	0	41.45	Hanford	137.16
299-W15-17	53.65	134.72	Ringold E	137.16
299-W15-17	134.72	137.16	Ringold LM	137.16
299-W15-17	48.77	53.64	Rtf	137.16
299-W15-171	30.48	33.83	Cold Creek	33.8328
299-W15-171	0	14.93	Fill	33.8328
299-W15-171	14.94	30.48	Hanford	33.8328
299-W15-177	29.87	34.44	Cold Creek	34.4424
299-W15-177	0	14.93	Fill	34.4424
299-W15-177	14.94	29.87	Hanford	34.4424
299-W15-178	29.57	33.53	Cold Creek	33.528
299-W15-178	0	15.24	Fill	33.528
299-W15-178	15.24	29.56	Hanford	33.528
299-W15-18	39.93	45.41	Cold Creek	73.914
299-W15-18	0	3.05	Fill	73.914
299-W15-18	3.05	39.93	Hanford	73.914
299-W15-18	52.12	73.91	Ringold E	73.914
299-W15-18	45.42	52.12	Rtf	73.914
299-W15-180	0	14.93	Fill	30.48
299-W15-180	14.94	30.48	Hanford	30.48
299-W15-184	28.04	30.48	Cold Creek	30.48
299-W15-184	0	13.72	Fill	30.48
299-W15-184	13.72	28.04	Hanford	30.48
299-W15-2	33.22	42.37	Cold Creek	79.5528
299-W15-2	0	33.22	Hanford	79.5528
299-W15-2	42.37	79.55	Ringold E	79.5528
299-W15-20	41.76	53.64	Cold Creek	74.676
299-W15-20	0	3.05	Fill	74.676
299-W15-20	3.05	41.76	Hanford	74.676
299-W15-20	53.65	74.68	Ringold E	74.676

Well Name	From	To	Lithology	Well Depth
299-W15-202	34.14	38.71	Cold Creek	53.6448
299-W15-202	0	4.27	Fill	53.6448
299-W15-202	4.27	34.14	Hanford	53.6448
299-W15-202	38.71	53.64	Ringold E	53.6448
299-W15-203	0	4.88	Fill	6.096
299-W15-203	4.88	6.1	Hanford	6.096
299-W15-216	32.92	36.58	Cold Creek	64.008
299-W15-216	0	4.27	Fill	64.008
299-W15-216	4.27	32.92	Hanford	64.008
299-W15-216	36.58	64.01	Ringold E	64.008
299-W15-217	34.44	37.61	Cold Creek	37.61232
299-W15-217	0	5.49	Fill	37.61232
299-W15-217	5.49	34.44	Hanford	37.61232
299-W15-218	32.61	36.58	Cold Creek	62.81928
299-W15-218	0	5.49	Fill	62.81928
299-W15-218	5.49	32.61	Hanford	62.81928
299-W15-218	36.58	62.82	Ringold E	62.81928
299-W15-219	33.53	36.88	Cold Creek	0
299-W15-219	0	3.96	Fill	0
299-W15-219	3.96	33.53	Hanford	0
299-W15-219	36.88	64.62	Ringold E	0
299-W15-22	31.09	36.58	Cold Creek	67.63512
299-W15-22	0	31.09	Hanford	67.63512
299-W15-22	38.41	67.63	Ringold E	67.63512
299-W15-22	36.58	38.4	Rtf	67.63512
299-W15-220	31.39	34.44	Cold Creek	0
299-W15-220	0	3.05	Fill	0
299-W15-220	3.05	31.39	Hanford	0
299-W15-220	34.44	61.26	Ringold E	0
299-W15-223	33.22	36.27	Cold Creek	0
299-W15-223	0	5.79	Fill	0
299-W15-223	5.79	33.22	Hanford	0
299-W15-225	31.6992	38.1	Cold Creek	141.732
299-W15-225	0	31.6992	Hanford	141.732
299-W15-225	38.1	124.968	Ringold E	141.732
299-W15-225	124.968	139.5984	Ringold LM	141.732
299-W15-226	33.528	45	Cold Creek	149.0472
299-W15-226	0	33.528	Hanford	149.0472
299-W15-226	45	133.8072	Ringold E	149.0472

Well Name	From	To	Lithology	Well Depth
299-W15-226	133.8072	146.4564	Ringold LM	149.0472
299-W15-227	41.7576	50.3	Cold Creek	156.0119
299-W15-227	0	41.7576	Hanford	156.0119
299-W15-227	50.3	138.7	Ringold E	156.0119
299-W15-227	138.7	151.2	Ringold LM	156.0119
299-W15-23	46.03	53.95	Cold Creek	73.152
299-W15-23	0	4.88	Fill	73.152
299-W15-23	4.88	46.02	Hanford	73.152
299-W15-23	53.95	73.15	Ringold E	73.152
299-W15-3	29.87	37.79	Cold Creek	74.676
299-W15-3	0	29.87	Hanford	74.676
299-W15-3	42.37	74.68	Ringold E	74.676
299-W15-3	37.8	42.37	Rtf	74.676
299-W15-32	32.31	36.88	Cold Creek	72.9996
299-W15-32	0	4.57	Fill	72.9996
299-W15-32	4.57	32.31	Hanford	72.9996
299-W15-32	36.88	73	Ringold E	72.9996
299-W15-36	29.57	37.49	Cold Creek	80.1624
299-W15-36	0	10.06	Fill	80.1624
299-W15-36	10.06	29.56	Hanford	80.1624
299-W15-36	37.49	80.16	Ringold E	80.1624
299-W15-38	29.26	34.14	Cold Creek	69.9516
299-W15-38	0	29.26	Hanford	69.9516
299-W15-38	34.14	69.95	Ringold E	69.9516
299-W15-39	32.31	35.36	Cold Creek	67.9704
299-W15-39	0	32.31	Hanford	67.9704
299-W15-39	35.36	67.97	Ringold E	67.9704
299-W15-4	27.74	37.19	Cold Creek	66.1416
299-W15-4	0	0.3	Fill	66.1416
299-W15-4	0.3	27.74	Hanford	66.1416
299-W15-4	37.19	66.14	Ringold E	66.1416
299-W15-40	29.57	38.1	Cold Creek	79.97952
299-W15-40	0	29.56	Hanford	79.97952
299-W15-40	40.23	79.98	Ringold E	79.97952
299-W15-40	38.1	40.23	Rtf	79.97952
299-W15-41	28.65	34.44	Cold Creek	72.8472
299-W15-41	0	0.3	Fill	72.8472
299-W15-41	0.3	28.65	Hanford	72.8472
299-W15-41	37.19	72.85	Ringold E	72.8472

Well Name	From	To	Lithology	Well Depth
299-W15-41	34.44	37.19	Rtf	72.8472
299-W15-42	35.66	39.93	Cold Creek	85.5665
299-W15-42	0	2.74	Fill	85.5665
299-W15-42	2.74	35.66	Hanford	85.5665
299-W15-42	49.38	85.56	Ringold E	85.5665
299-W15-42	39.93	49.38	Rtf	85.5665
299-W15-46	159.02	160.02	Basalt	160.02
299-W15-46	33.07	37.34	Cold Creek	160.02
299-W15-46	0	6.08	Fill	160.02
299-W15-46	6.08	33.07	Hanford	160.02
299-W15-46	144.2	159.02	Ringold A	160.02
299-W15-46	37.34	127.13	Ringold E	160.02
299-W15-46	127.13	144.2	Ringold LM	160.02
299-W15-48	31.61	44.35	Cold Creek	44.3484
299-W15-48	0	4.11	Fill	44.3484
299-W15-48	4.11	31.61	Hanford	44.3484
299-W15-49	50.9	132.59	Ringold E	132.588
299-W15-5	160.94	182.58	Basalt	182.5752
299-W15-5	34.14	42.06	Cold Creek	182.5752
299-W15-5	0	5.18	Fill	182.5752
299-W15-5	5.18	34.14	Hanford	182.5752
299-W15-5	146.92	160.94	Ringold A	182.5752
299-W15-5	42.06	130.45	Ringold E	182.5752
299-W15-5	130.46	146.91	Ringold LM	182.5752
299-W15-6	30.48	32.61	Cold Creek	124.968
299-W15-6	0	2.74	Fill	124.968
299-W15-6	2.74	30.48	Hanford	124.968
299-W15-6	36.58	124.97	Ringold E	124.968
299-W15-6	32.61	36.58	Rtf	124.968
299-W15-67	29.57	38.1	Cold Creek	45.72
299-W15-67	0	14.93	Fill	45.72
299-W15-67	14.94	29.56	Hanford	45.72
299-W15-67	38.1	45.72	Ringold E	45.72
299-W15-69	31.39	38.71	Cold Creek	45.72
299-W15-69	0	14.93	Fill	45.72
299-W15-69	14.94	31.39	Hanford	45.72
299-W15-69	38.71	45.72	Ringold E	45.72
299-W15-7	31.09	33.53	Cold Creek	106.68
299-W15-7	0	1.52	Fill	106.68

Well Name	From	To	Lithology	Well Depth
299-W15-7	1.52	31.09	Hanford	106.68
299-W15-7	37.8	106.68	Ringold E	106.68
299-W15-7	33.53	37.79	Rtf	106.68
299-W15-70	31.7	37.19	Cold Creek	45.72
299-W15-70	0	14.93	Fill	45.72
299-W15-70	14.94	31.7	Hanford	45.72
299-W15-70	37.19	45.72	Ringold E	45.72
299-W15-71	31.39	40.23	Cold Creek	45.72
299-W15-71	0	14.93	Fill	45.72
299-W15-71	14.94	31.39	Hanford	45.72
299-W15-71	40.23	45.72	Ringold E	45.72
299-W15-72	29.26	39.62	Cold Creek	45.72
299-W15-72	0	15.85	Fill	45.72
299-W15-72	15.85	29.26	Hanford	45.72
299-W15-72	39.62	45.72	Ringold E	45.72
299-W15-73	31.09	38.4	Cold Creek	45.72
299-W15-73	0	14.93	Fill	45.72
299-W15-73	14.94	31.09	Hanford	45.72
299-W15-73	38.41	45.72	Ringold E	45.72
299-W15-75	30.48	39.93	Cold Creek	45.72
299-W15-75	0	9.14	Fill	45.72
299-W15-75	9.14	30.48	Hanford	45.72
299-W15-75	39.93	45.72	Ringold E	45.72
299-W15-765	27.13	33.22	Cold Creek	0
299-W15-765	0	0.61	Fill	0
299-W15-765	0.61	27.13	Hanford	0
299-W15-765	38.22	81.38	Ringold E	0
299-W15-765	33.22	38.22	Rtf	0
299-W15-79	28.35	39.32	Cold Creek	45.72
299-W15-79	0	14.02	Fill	45.72
299-W15-79	14.02	28.35	Hanford	45.72
299-W15-79	42.37	45.72	Ringold E	45.72
299-W15-79	39.32	42.37	Rtf	45.72
299-W15-8	32.31	36.88	Cold Creek	62.7888
299-W15-8	0	7.01	Fill	62.7888
299-W15-8	7.01	32.31	Hanford	62.7888
299-W15-8	36.88	62.79	Ringold E	62.7888
299-W15-82	0	4.27	Fill	30.7848
299-W15-82	4.27	30.78	Hanford	30.7848

Well Name	From	To	Lithology	Well Depth
299-W15-84	34.75	39.01	Cold Creek	33.528
299-W15-84	0	5.79	Fill	33.528
299-W15-84	5.79	34.75	Hanford	33.528
299-W15-84	39.01	60.96	Ringold E	33.528
299-W15-85	0	4.27	Fill	32.3088
299-W15-85	4.27	32.31	Hanford	32.3088
299-W15-86	32	36.88	Cold Creek	43.8912
299-W15-86	0	5.18	Fill	43.8912
299-W15-86	5.18	32	Hanford	43.8912
299-W15-86	36.88	43.89	Ringold E	43.8912
299-W15-9	31.39	35.36	Cold Creek	59.436
299-W15-9	0	3.35	Fill	59.436
299-W15-9	3.35	31.39	Hanford	59.436
299-W15-9	35.36	59.44	Ringold E	59.436
299-W15-95	32	35.36	Cold Creek	31.06217
299-W15-95	0	3.35	Fill	31.06217
299-W15-95	3.35	32	Hanford	31.06217
299-W17-1	30.48	39.62	Cold Creek	70.29298
299-W17-1	0	30.48	Hanford	70.29298
299-W17-1	39.62	70.29	Ringold E	70.29298
299-W17-2	32.004	36.9	Cold Creek	143.256
299-W17-2	0	32.004	Hanford	143.256
299-W17-2	36.9	124.1	Ringold E	143.256
299-W17-2	124.1	136.6	Ringold LM	143.256
299-W17-3	37.7952	42.1	Cold Creek	149.9616
299-W17-3	0	37.7952	Hanford	149.9616
299-W17-3	44.8	135.6	Ringold E	149.9616
299-W17-3	135.6	146.6	Ringold LM	149.9616
299-W17-3	42.1	44.8	Rtf	149.9616
299-W18-1	38.1	44.5	Cold Creek	130.1496
299-W18-1	0	1.52	Fill	130.1496
299-W18-1	1.52	38.1	Hanford	130.1496
299-W18-1	50.9	130.15	Ringold E	130.1496
299-W18-1	44.5	50.9	Rtf	130.1496
299-W18-10	41.21	48.8	Cold Creek	67.056
299-W18-10	0	2.5	Fill	67.056
299-W18-10	2.5	41.21	Hanford	67.056
299-W18-10	48.8	67.06	Ringold E	67.056
299-W18-11	40.3	47.3	Cold Creek	67.056

Well Name	From	To	Lithology	Well Depth
299-W18-11	0	4.6	Fill	67.056
299-W18-11	4.6	40.29	Hanford	67.056
299-W18-11	47.3	67.06	Ringold E	67.056
299-W18-149	0	4	Fill	28.0416
299-W18-149	4	28.04	Hanford	28.0416
299-W18-15	36.27	49.38	Cold Creek	75.5904
299-W18-15	0	36.27	Hanford	75.5904
299-W18-15	49.38	75.59	Ringold E	75.5904
299-W18-150	36.9	39.01	Cold Creek	39.0144
299-W18-150	0	4	Fill	39.0144
299-W18-150	4	36.9	Hanford	39.0144
299-W18-158	38.41	39.93	Cold Creek	39.9288
299-W18-158	0	3.66	Fill	39.9288
299-W18-158	3.66	38.4	Hanford	39.9288
299-W18-159	35.66	39.62	Cold Creek	39.624
299-W18-159	0	5.79	Fill	39.624
299-W18-159	5.79	35.66	Hanford	39.624
299-W18-16	37.8	45.4	Cold Creek	106.0704
299-W18-16	0	5.5	Fill	106.0704
299-W18-16	5.5	37.8	Hanford	106.0704
299-W18-16	45.4	106.07	Ringold E	106.0704
299-W18-163	38.1	49.68	Cold Creek	49.6824
299-W18-163	0	4.88	Fill	49.6824
299-W18-163	4.88	38.1	Hanford	49.6824
299-W18-164	38.7	45.4	Cold Creek	46.6344
299-W18-164	0	5.2	Fill	46.6344
299-W18-164	5.2	38.7	Hanford	46.6344
299-W18-164	45.42	46.63	Ringold E	46.6344
299-W18-165	37.49	41.18	Cold Creek	41.148
299-W18-165	0	3.96	Fill	41.148
299-W18-165	3.96	37.49	Hanford	41.148
299-W18-166	37.1	41.76	Cold Creek	41.7576
299-W18-166	0	3.6	Fill	41.7576
299-W18-166	3.6	37.1	Hanford	41.7576
299-W18-168	36.5	39.93	Cold Creek	39.9288
299-W18-168	0	3.3	Fill	39.9288
299-W18-168	3.3	36.5	Hanford	39.9288
299-W18-169	35.2	40.23	Cold Creek	40.2336
299-W18-169	0	5.5	Fill	40.2336

Well Name	From	To	Lithology	Well Depth
299-W18-169	5.5	35.2	Hanford	40.2336
299-W18-170	0	3	Fill	9.144
299-W18-170	3	9.14	Hanford	9.144
299-W18-171	37.8	41.45	Cold Creek	41.4528
299-W18-171	0	7.3	Fill	41.4528
299-W18-171	7.3	37.8	Hanford	41.4528
299-W18-173	0	3.9	Fill	15.5448
299-W18-173	3.9	15.54	Hanford	15.5448
299-W18-174	36.58	40.23	Cold Creek	40.09949
299-W18-174	0	4.27	Fill	40.09949
299-W18-174	4.27	36.58	Hanford	40.09949
299-W18-175	36.3	39.62	Cold Creek	39.624
299-W18-175	0	3	Fill	39.624
299-W18-175	3	36.3	Hanford	39.624
299-W18-19	38.1	42.37	Cold Creek	76.2
299-W18-19	0	38.1	Hanford	76.2
299-W18-19	42.37	76.2	Ringold E	76.2
299-W18-20	32.92	39.93	Cold Creek	76.2
299-W18-20	0	1.52	Fill	76.2
299-W18-20	1.52	32.92	Hanford	76.2
299-W18-20	39.93	76.2	Ringold E	76.2
299-W18-21	0	35.66	Hanford	69.1896
299-W18-22	35.36	45.72	Cold Creek	138.684
299-W18-22	0	35.36	Hanford	138.684
299-W18-22	45.72	135.33	Ringold E	138.684
299-W18-22	135.33	138.68	Ringold LM	138.684
299-W18-246	40.7	46	Cold Creek	70.104
299-W18-246	0	3.8	Fill	70.104
299-W18-246	3.8	40.7	Hanford	70.104
299-W18-246	46	70.1	Ringold E	70.104
299-W18-248	38.41	42.34	Cold Creek	0
299-W18-248	0	3.35	Fill	0
299-W18-248	3.35	38.4	Hanford	0
299-W18-249	39.9	44.81	Cold Creek	0
299-W18-249	0	1.8	Fill	0
299-W18-249	1.8	39.9	Hanford	0
299-W18-252	38.1	42.67	Cold Creek	0
299-W18-252	0	3.66	Fill	0
299-W18-252	3.66	38.1	Hanford	0

Well Name	From	To	Lithology	Well Depth
299-W18-252	42.67	69.49	Ringold E	0
299-W18-26	45.11	53.64	Cold Creek	76.16952
299-W18-26	0	45.11	Hanford	76.16952
299-W18-26	56.69	76.17	Ringold E	76.16952
299-W18-26	53.65	56.69	Rtf	76.16952
299-W18-27	42.98	47.55	Cold Creek	72.6948
299-W18-27	0	42.98	Hanford	72.6948
299-W18-27	47.55	72.69	Ringold E	72.6948
299-W18-28	41.76	47.24	Cold Creek	70.13448
299-W18-28	0	41.76	Hanford	70.13448
299-W18-28	47.24	70.13	Ringold E	70.13448
299-W18-29	39.01	45.11	Cold Creek	45.72
299-W18-29	0	2.44	Fill	45.72
299-W18-29	2.44	39.01	Hanford	45.72
299-W18-29	45.11	45.72	Ringold E	45.72
299-W18-30	35.05	39.93	Cold Creek	71.7804
299-W18-30	0	35.05	Hanford	71.7804
299-W18-30	39.93	71.78	Ringold E	71.7804
299-W18-31	34.44	39.62	Cold Creek	69.37248
299-W18-31	0	34.44	Hanford	69.37248
299-W18-31	39.62	69.37	Ringold E	69.37248
299-W18-32	35.97	46.02	Cold Creek	68.58
299-W18-32	0	35.97	Hanford	68.58
299-W18-32	46.03	68.58	Ringold E	68.58
299-W18-33	38.1	46.33	Cold Creek	70.54901
299-W18-33	0	2.13	Fill	70.54901
299-W18-33	2.13	38.1	Hanford	70.54901
299-W18-33	46.33	70.55	Ringold E	70.54901
299-W18-56	36.3	44.2	Cold Creek	45.72
299-W18-56	0	3.1	Fill	45.72
299-W18-56	3.1	36.3	Hanford	45.72
299-W18-56	44.2	45.72	Ringold E	45.72
299-W18-57	36.3	43.9	Cold Creek	45.72
299-W18-57	0	2.8	Fill	45.72
299-W18-57	2.8	36.3	Hanford	45.72
299-W18-57	43.9	45.5	Rtf	45.72
299-W18-58	37.8	45.4	Cold Creek	45.72
299-W18-58	0	2.8	Fill	45.72
299-W18-58	2.8	37.8	Hanford	45.72

Well Name	From	To	Lithology	Well Depth
299-W18-59	35	43.9	Cold Creek	45.72
299-W18-59	0	1.2	Fill	45.72
299-W18-59	1.2	35	Hanford	45.72
299-W18-59	43.9	45.72	Ringold E	45.72
299-W18-6	37.7	45.4	Cold Creek	91.44
299-W18-6	0	4.2	Fill	91.44
299-W18-6	4.2	37.7	Hanford	91.44
299-W18-6	45.4	91.44	Ringold E	91.44
299-W18-60	37.2	43.3	Cold Creek	45.72
299-W18-60	0	6.1	Fill	45.72
299-W18-60	6.1	37.2	Hanford	45.72
299-W18-61	35.97	41.45	Cold Creek	45.72
299-W18-61	0	4.57	Fill	45.72
299-W18-61	4.57	35.97	Hanford	45.72
299-W18-61	41.45	45.72	Ringold E	45.72
299-W18-62	37.25	43.34	Cold Creek	46.0248
299-W18-62	0	5.85	Fill	46.0248
299-W18-62	5.85	37.25	Hanford	46.0248
299-W18-63	37.2	44.81	Cold Creek	45.72
299-W18-63	0	5.21	Fill	45.72
299-W18-63	5.21	37.2	Hanford	45.72
299-W18-63	44.81	45.72	Ringold E	45.72
299-W18-64	37.83	42.4	Cold Creek	45.72
299-W18-64	0	5.21	Fill	45.72
299-W18-64	5.21	37.83	Hanford	45.72
299-W18-65	35.36	41.15	Cold Creek	45.72
299-W18-65	0	4.88	Fill	45.72
299-W18-65	4.88	35.36	Hanford	45.72
299-W18-65	41.15	45.72	Ringold E	45.72
299-W18-66	38.13	42.12	Cold Creek	45.72
299-W18-66	0	1.83	Fill	45.72
299-W18-66	1.83	38.13	Hanford	45.72
299-W18-66	42.12	45.72	Ringold E	45.72
299-W18-7	40.6	47.3	Cold Creek	91.44
299-W18-7	0	4.3	Fill	91.44
299-W18-7	4.3	40.6	Hanford	91.44
299-W18-7	47.3	91.44	Ringold E	91.44
299-W18-76	0	3.29	Fill	5.9436
299-W18-76	3.29	5.94	Hanford	5.9436

Well Name	From	To	Lithology	Well Depth
299-W18-77	0	2.8	Fill	7.62
299-W18-77	2.8	7.62	Hanford	7.62
299-W18-78	0	3.6	Fill	5.1816
299-W18-78	3.6	5.18	Hanford	5.1816
299-W18-79	0	2.96	Fill	7.0104
299-W18-79	2.96	7.01	Hanford	7.0104
299-W18-80	0	3	Fill	6.5532
299-W18-80	3	6.55	Hanford	6.5532
299-W18-81	0	3	Fill	12.4968
299-W18-81	3	12.5	Hanford	12.4968
299-W18-82	40.5	44.5	Cold Creek	0
299-W18-82	0	0.5	Fill	0
299-W18-82	0.5	40.5	Hanford	0
299-W18-85	39.6	45.72	Cold Creek	45.72
299-W18-85	0	1.5	Fill	45.72
299-W18-85	1.5	39.6	Hanford	45.72
299-W18-86	41.1	45.72	Cold Creek	45.72
299-W18-86	0	1.5	Fill	45.72
299-W18-86	1.5	41.1	Hanford	45.72
299-W18-87	37.8	45.72	Cold Creek	45.72
299-W18-87	0	1.5	Fill	45.72
299-W18-87	1.5	37.8	Hanford	45.72
299-W18-88	38.41	45.72	Cold Creek	45.72
299-W18-88	0	4.57	Fill	45.72
299-W18-88	4.57	38.4	Hanford	45.72
299-W18-89	38.71	44.2	Cold Creek	45.72
299-W18-89	0	38.71	Hanford	45.72
299-W18-89	44.2	45.72	Ringold E	45.72
299-W18-9	40.4	48.1	Cold Creek	67.056
299-W18-9	0	40.4	Hanford	67.056
299-W18-9	51.8	67.06	Ringold E	67.056
299-W18-9	48.1	51.8	Rtf	67.056
299-W18-93	40.8	42.67	Cold Creek	42.672
299-W18-93	0	3.8	Fill	42.672
299-W18-93	3.8	40.8	Hanford	42.672
299-W18-94	0	1.8	Fill	24.384
299-W18-94	1.8	24.38	Hanford	24.384
299-W18-95	0	2.4	Fill	24.384
299-W18-95	2.4	24.38	Hanford	24.384

Well Name	From	To	Lithology	Well Depth
299-W18-96	41.7	44.84	Cold Creek	24.384
299-W18-96	0	2.1	Fill	24.384
299-W18-96	2.1	41.7	Hanford	24.384
299-W18-98	0	1.9	Fill	24.384
299-W18-98	1.9	24.38	Hanford	24.384
299-W18-99	40.3	41.15	Cold Creek	41.148
299-W18-99	0	2.8	Fill	41.148
299-W18-99	2.8	40.3	Hanford	41.148
299-W19-1	37.8	44.81	Cold Creek	91.7448
299-W19-1	0	37.79	Hanford	91.7448
299-W19-1	44.81	91.74	Ringold E	91.7448
299-W19-10	169.47	174.65	Basalt	174.6504
299-W19-10	41.15	51.21	Cold Creek	174.6504
299-W19-10	0	41.15	Hanford	174.6504
299-W19-10	147.83	169.47	Ringold A	174.6504
299-W19-10	51.21	139.6	Ringold E	174.6504
299-W19-10	139.6	147.83	Ringold LM	174.6504
299-W19-12	36.58	47.24	Cold Creek	76.2
299-W19-12	0	1.22	Fill	76.2
299-W19-12	1.22	36.58	Hanford	76.2
299-W19-12	47.24	76.2	Ringold E	76.2
299-W19-13	51.82	54.86	Cold Creek	76.2
299-W19-13	0	51.82	Hanford	76.2
299-W19-13	54.86	76.2	Ringold E	76.2
299-W19-14	49.38	52.43	Cold Creek	76.2
299-W19-14	0	49.38	Hanford	76.2
299-W19-14	52.43	76.2	Ringold E	76.2
299-W19-15	44.81	50.6	Cold Creek	86.868
299-W19-15	0	44.81	Hanford	86.868
299-W19-15	53.65	86.87	Ringold E	86.868
299-W19-15	50.6	53.64	Rtf	86.868
299-W19-16	42.67	50.9	Cold Creek	86.868
299-W19-16	0	42.67	Hanford	86.868
299-W19-16	50.9	86.87	Ringold E	86.868
299-W19-17	48.77	56.39	Cold Creek	109.1184
299-W19-17	0	48.77	Hanford	109.1184
299-W19-17	56.39	109.12	Ringold E	109.1184
299-W19-18	48.77	55.78	Cold Creek	110.3376
299-W19-18	0	48.77	Hanford	110.3376

Well Name	From	To	Lithology	Well Depth
299-W19-18	55.78	110.34	Ringold E	110.3376
299-W19-2	48.16	61.87	Cold Creek	91.44
299-W19-2	0	48.16	Hanford	91.44
299-W19-2	73.15	91.44	Ringold E	91.44
299-W19-2	61.88	73.15	Rtf	91.44
299-W19-22	0	42.67	Hanford	43.2816
299-W19-27	46.94	53.03	Cold Creek	70.104
299-W19-27	0	3.05	Fill	70.104
299-W19-27	3.05	46.94	Hanford	70.104
299-W19-27	56.08	70.1	Ringold E	70.104
299-W19-27	53.04	56.08	Rtf	70.104
299-W19-3	54.26	58.83	Cold Creek	91.7448
299-W19-3	0	54.25	Hanford	91.7448
299-W19-3	58.83	91.74	Ringold E	91.7448
299-W19-31	36.58	42.67	Cold Creek	68.67144
299-W19-31	0	36.58	Hanford	68.67144
299-W19-31	42.67	68.67	Ringold E	68.67144
299-W19-32	38.1	45.72	Cold Creek	68.00088
299-W19-32	0	38.1	Hanford	68.00088
299-W19-32	45.72	68	Ringold E	68.00088
299-W19-4	166.42	167.64	Basalt	167.64
299-W19-4	50.6	74.37	Cold Creek	167.64
299-W19-4	0	1.83	Fill	167.64
299-W19-4	1.83	50.6	Hanford	167.64
299-W19-4	142.04	166.42	Ringold A	167.64
299-W19-4	80.16	135.33	Ringold E	167.64
299-W19-4	135.33	142.04	Ringold LM	167.64
299-W19-4	74.37	80.16	Rtf	167.64
299-W19-41	38.71	44.5	Cold Creek	80.6196
299-W19-41	0	38.71	Hanford	80.6196
299-W19-41	44.5	80.62	Ringold E	80.6196
299-W19-42	35.36	43.28	Cold Creek	80.83296
299-W19-42	0	35.36	Hanford	80.83296
299-W19-42	43.28	80.83	Ringold E	80.83296
299-W19-44	40.17	45.87	Cold Creek	82.9056
299-W19-44	0	0.76	Fill	82.9056
299-W19-44	0.76	40.17	Hanford	82.9056
299-W19-44	47.24	82.91	Ringold E	82.9056
299-W19-44	45.87	47.24	Rtf	82.9056

Well Name	From	To	Lithology	Well Depth
299-W19-45	40.54	46.94	Cold Creek	81.10728
299-W19-45	0	40.54	Hanford	81.10728
299-W19-45	46.94	81.11	Ringold E	81.10728
299-W19-47	37.8	44.2	Cold Creek	81.9912
299-W19-47	0	2.44	Fill	81.9912
299-W19-47	2.44	37.79	Hanford	81.9912
299-W19-47	44.2	81.99	Ringold E	81.9912
299-W19-8	174.04	178.31	Basalt	178.308
299-W19-8	53.65	64.31	Cold Creek	178.308
299-W19-8	0	0.3	Fill	178.308
299-W19-8	0.3	53.64	Hanford	178.308
299-W19-8	149.66	174.04	Ringold A	178.308
299-W19-8	64.31	132.28	Ringold E	178.308
299-W19-8	132.28	149.66	Ringold LM	178.308
299-W22-1	39.01	45.72	Cold Creek	93.2688
299-W22-1	0	0.3	Fill	93.2688
299-W22-1	0.3	39.01	Hanford	93.2688
299-W22-10	0	42.06	Hanford	95.0976
299-W22-11	34.75	46.33	Cold Creek	93.8784
299-W22-11	0	1.52	Fill	93.8784
299-W22-11	1.52	34.75	Hanford	93.8784
299-W22-11	46.33	93.88	Ringold E	93.8784
299-W22-15	40.54	49.07	Cold Creek	81.6864
299-W22-15	0	40.54	Hanford	81.6864
299-W22-15	52.73	81.69	Ringold E	81.6864
299-W22-15	49.07	52.73	Rtf	81.6864
299-W22-17	45.42	47.24	Cold Creek	79.5528
299-W22-17	0	45.41	Hanford	79.5528
299-W22-17	47.24	79.55	Ringold E	79.5528
299-W22-19	59.13	69.49	Cold Creek	137.16
299-W22-19	0	0.91	Fill	137.16
299-W22-19	0.91	59.13	Hanford	137.16
299-W22-19	69.5	137.16	Ringold E	137.16
299-W22-2	39.62	46.33	Cold Creek	93.5736
299-W22-2	0	39.62	Hanford	93.5736
299-W22-2	46.33	93.57	Ringold E	93.5736
299-W22-24	172.82	175.26	Basalt	175.26
299-W22-24	41.45	66.14	Cold Creek	175.26
299-W22-24	0	41.45	Hanford	175.26

Well Name	From	To	Lithology	Well Depth
299-W22-24	150.88	172.82	Ringold A	175.26
299-W22-24	73.15	141.73	Ringold E	175.26
299-W22-24	141.73	150.88	Ringold LM	175.26
299-W22-24	66.14	73.15	Rtf	175.26
299-W22-27	170.39	174.35	Basalt	174.3456
299-W22-27	41.15	47.24	Cold Creek	174.3456
299-W22-27	0	41.15	Hanford	174.3456
299-W22-27	153.93	170.38	Ringold A	174.3456
299-W22-27	57.91	136.55	Ringold E	174.3456
299-W22-27	136.55	153.92	Ringold LM	174.3456
299-W22-27	47.24	57.91	Rtf	174.3456
299-W22-38	41.15	47.85	Cold Creek	71.0184
299-W22-38	0	41.15	Hanford	71.0184
299-W22-38	57.91	71.02	Ringold E	71.0184
299-W22-38	47.85	57.91	Rtf	71.0184
299-W22-39	39.01	45.11	Cold Creek	68.06184
299-W22-39	0	1.52	Fill	68.06184
299-W22-39	1.52	39.01	Hanford	68.06184
299-W22-39	45.81	68.06	Ringold E	68.06184
299-W22-39	45.11	45.81	Rtf	68.06184
299-W22-44	45.87	47.24	Cold Creek	74.9808
299-W22-44	0	0.3	Fill	74.9808
299-W22-44	0.3	45.87	Hanford	74.9808
299-W22-44	57.91	74.98	Ringold E	74.9808
299-W22-44	47.24	57.91	Rtf	74.9808
299-W22-45	36.27	47.24	Cold Creek	73.152
299-W22-45	0	1.52	Fill	73.152
299-W22-45	1.52	36.27	Hanford	73.152
299-W22-45	53.04	73.15	Ringold E	73.152
299-W22-45	47.24	53.03	Rtf	73.152
299-W22-46	38.41	45.72	Cold Creek	73.4568
299-W22-46	0	1.52	Fill	73.4568
299-W22-46	1.52	38.4	Hanford	73.4568
299-W22-46	51.82	73.46	Ringold E	73.4568
299-W22-46	45.72	51.82	Rtf	73.4568
299-W22-47	41.76	44.81	Cold Creek	106.2533
299-W22-47	0	1.52	Fill	106.2533
299-W22-47	1.52	41.76	Hanford	106.2533
299-W22-47	44.81	106.25	Ringold E	106.2533

Well Name	From	To	Lithology	Well Depth
299-W22-48	41.15	45.41	Cold Creek	75.8952
299-W22-48	0	41.15	Hanford	75.8952
299-W22-48	58.52	75.9	Ringold E	75.8952
299-W22-48	45.42	58.52	Rtf	75.8952
299-W22-49	0	45.72	Hanford	72.8472
299-W22-49	45.72	72.85	Ringold E	72.8472
299-W22-50	38.71	43.59	Cold Creek	166.7256
299-W22-50	0	0.3	Fill	166.7256
299-W22-50	0.3	38.71	Hanford	166.7256
299-W22-50	43.59	140.21	Ringold E	166.7256
299-W22-50	140.21	166.73	Ringold LM	166.7256
299-W22-85	0	1.52	Fill	0
299-W22-89	34.7472	47.5	Cold Creek	101.3765
299-W22-89	0	34.7472	Hanford	101.3765
299-W22-90	41.148	45.4	Cold Creek	96.6216
299-W22-90	0	41.148	Hanford	96.6216
299-W22-90	45.4	54.9	Rtf	96.6216
299-W22-91	36.8808	42.8	Cold Creek	93.66504
299-W22-91	0	36.8808	Hanford	93.66504
299-W22-92	40.8432	49.1	Cold Creek	93.69552
299-W22-92	0	40.8432	Hanford	93.69552
299-W22-92	49.1	59.7	Rtf	93.69552
299-W22-95	0	43.59	Hanford	0
299-W22-95	43.59	47.54	Cold Creek	0
299-W22-95	58.82	59.5	Ringold E	0
299-W22-95	47.54	58.82	Rtf	0
299-W23-1	41.15	48.77	Cold Creek	79.8576
299-W23-1	0	0.3	Fill	79.8576
299-W23-1	0.3	41.15	Hanford	79.8576
299-W23-1	48.77	79.86	Ringold E	79.8576
299-W23-10	37.8	44.5	Cold Creek	71.628
299-W23-10	0	1.83	Fill	71.628
299-W23-10	1.83	37.79	Hanford	71.628
299-W23-10	44.5	71.63	Ringold E	71.628
299-W23-100	0	15.85	Fill	22.86
299-W23-100	15.85	22.86	Hanford	22.86
299-W23-105	0	15.24	Fill	32.004
299-W23-105	15.24	32	Hanford	32.004
299-W23-106	0	15.24	Fill	22.86

Well Name	From	To	Lithology	Well Depth
299-W23-106	15.24	22.86	Hanford	22.86
299-W23-108	37.8	39.62	Cold Creek	39.624
299-W23-108	0	15.54	Fill	39.624
299-W23-108	15.54	37.79	Hanford	39.624
299-W23-109	0	15.54	Fill	22.86
299-W23-109	15.54	22.86	Hanford	22.86
299-W23-11	37.8	47.85	Cold Creek	71.628
299-W23-11	0	0.91	Fill	71.628
299-W23-11	0.91	37.79	Hanford	71.628
299-W23-11	49.38	71.63	Ringold E	71.628
299-W23-11	47.85	49.38	Rtf	71.628
299-W23-113	0	15.24	Fill	22.86
299-W23-113	15.24	22.86	Hanford	22.86
299-W23-114	0	15.54	Fill	22.86
299-W23-114	15.54	22.86	Hanford	22.86
299-W23-115	0	15.54	Fill	22.86
299-W23-115	15.54	22.86	Hanford	22.86
299-W23-117	0	15.85	Fill	22.86
299-W23-117	15.85	22.86	Hanford	22.86
299-W23-119	0	15.54	Fill	22.86
299-W23-119	15.54	22.86	Hanford	22.86
299-W23-121	0	16.15	Fill	38.1
299-W23-121	16.15	38.1	Hanford	38.1
299-W23-125	39.62	41.15	Cold Creek	41.148
299-W23-125	0	16.46	Fill	41.148
299-W23-125	16.46	39.62	Hanford	41.148
299-W23-13	37.49	46.02	Cold Creek	66.50736
299-W23-13	0	3.05	Fill	66.50736
299-W23-13	3.05	37.49	Hanford	66.50736
299-W23-13	46.03	66.51	Ringold E	66.50736
299-W23-132	35.05	42.67	Cold Creek	42.672
299-W23-132	0	16.76	Fill	42.672
299-W23-132	16.76	35.05	Hanford	42.672
299-W23-133	0	15.24	Fill	30.48
299-W23-133	15.24	30.48	Hanford	30.48
299-W23-135	39.62	42.67	Cold Creek	42.672
299-W23-135	0	15.85	Fill	42.672
299-W23-135	15.85	39.62	Hanford	42.672
299-W23-136	0	15.85	Fill	30.48

Well Name	From	To	Lithology	Well Depth
299-W23-136	15.85	30.48	Hanford	30.48
299-W23-137	38.71	42.67	Cold Creek	42.672
299-W23-137	0	14.63	Fill	42.672
299-W23-137	14.63	38.71	Hanford	42.672
299-W23-138	0	15.85	Fill	30.48
299-W23-138	15.85	30.48	Hanford	30.48
299-W23-139	0	15.85	Fill	30.48
299-W23-139	15.85	30.48	Hanford	30.48
299-W23-14	39.01	50.29	Cold Creek	68.39712
299-W23-14	0	0.91	Fill	68.39712
299-W23-14	0.91	39.01	Hanford	68.39712
299-W23-14	53.04	68.4	Ringold E	68.39712
299-W23-14	50.29	53.03	Rtf	68.39712
299-W23-140	0	15.85	Fill	30.48
299-W23-140	15.85	30.48	Hanford	30.48
299-W23-141	0	15.24	Fill	30.48
299-W23-141	15.24	30.48	Hanford	30.48
299-W23-142	0	15.24	Fill	30.48
299-W23-142	15.24	30.48	Hanford	30.48
299-W23-143	38.1	42.67	Cold Creek	42.672
299-W23-143	0	15.85	Fill	42.672
299-W23-143	15.85	38.1	Hanford	42.672
299-W23-144	0	16.15	Fill	30.48
299-W23-144	16.15	30.48	Hanford	30.48
299-W23-15	41.15	47.24	Cold Creek	68.58
299-W23-15	0	41.15	Hanford	68.58
299-W23-15	47.24	68.58	Ringold E	68.58
299-W23-16	44.2	49.38	Cold Creek	72.2376
299-W23-16	0	1.83	Fill	72.2376
299-W23-16	1.83	44.2	Hanford	72.2376
299-W23-16	49.38	72.24	Ringold E	72.2376
299-W23-163	0	12.5	Fill	30.48
299-W23-163	12.5	30.48	Hanford	30.48
299-W23-17	39.32	48.16	Cold Creek	70.95744
299-W23-17	0	3.05	Fill	70.95744
299-W23-17	3.05	39.32	Hanford	70.95744
299-W23-17	48.16	70.96	Ringold E	70.95744
299-W23-171	0	12.5	Fill	30.48
299-W23-171	12.5	30.48	Hanford	30.48

Well Name	From	To	Lithology	Well Depth
299-W23-19	38.1	48.77	Cold Creek	74.9808
299-W23-19	0	18.59	Fill	74.9808
299-W23-19	18.59	38.1	Hanford	74.9808
299-W23-19	48.77	74.98	Ringold E	74.9808
299-W23-2	36.58	47.24	Cold Creek	71.9328
299-W23-2	0	16.15	Fill	71.9328
299-W23-2	16.15	36.58	Hanford	71.9328
299-W23-2	47.24	71.93	Ringold E	71.9328
299-W23-3	38.1	47.85	Cold Creek	70.7136
299-W23-3	0	15.24	Fill	70.7136
299-W23-3	15.24	38.1	Hanford	70.7136
299-W23-3	47.85	70.71	Ringold E	70.7136
299-W23-4	43.59	51.82	Cold Creek	91.44
299-W23-4	0	43.59	Hanford	91.44
299-W23-4	51.82	91.44	Ringold E	91.44
299-W23-5	36.58	47.24	Cold Creek	76.2
299-W23-5	0	0.3	Fill	76.2
299-W23-5	0.3	36.58	Hanford	76.2
299-W23-5	51.82	76.2	Ringold E	76.2
299-W23-5	47.24	51.82	Rtf	76.2
299-W23-51	38.1	45.72	Cold Creek	45.72
299-W23-51	0	38.1	Hanford	45.72
299-W23-52	39.32	45.72	Cold Creek	45.72
299-W23-52	0	0.3	Fill	45.72
299-W23-52	0.3	39.32	Hanford	45.72
299-W23-53	39.01	45.72	Cold Creek	45.72
299-W23-53	0	39.01	Hanford	45.72
299-W23-54	38.1	45.72	Cold Creek	45.72
299-W23-54	0	38.1	Hanford	45.72
299-W23-55	38.1	45.72	Cold Creek	45.72
299-W23-55	0	38.1	Hanford	45.72
299-W23-56	41.15	45.72	Cold Creek	45.72
299-W23-56	0	41.15	Hanford	45.72
299-W23-57	39.62	45.72	Cold Creek	45.72
299-W23-57	0	39.62	Hanford	45.72
299-W23-58	0	15.85	Fill	30.7848
299-W23-58	15.85	30.78	Hanford	30.7848
299-W23-6	38.1	46.63	Cold Creek	76.2
299-W23-6	0	16.15	Fill	76.2

Well Name	From	To	Lithology	Well Depth
299-W23-6	16.15	38.1	Hanford	76.2
299-W23-6	51.82	76.2	Ringold E	76.2
299-W23-6	46.63	51.82	Rtf	76.2
299-W23-62	0	15.85	Fill	30.7848
299-W23-62	15.85	30.78	Hanford	30.7848
299-W23-64	36.27	38.1	Cold Creek	38.1
299-W23-64	0	15.24	Fill	38.1
299-W23-64	15.24	36.27	Hanford	38.1
299-W23-65	0	15.85	Fill	38.1
299-W23-65	15.85	38.1	Hanford	38.1
299-W23-66	37.49	38.4	Cold Creek	38.4048
299-W23-66	0	16.46	Fill	38.4048
299-W23-66	16.46	37.49	Hanford	38.4048
299-W23-67	0	15.85	Fill	38.4048
299-W23-67	15.85	38.4	Hanford	38.4048
299-W23-68	0	15.85	Fill	38.1
299-W23-68	15.85	38.1	Hanford	38.1
299-W23-69	0	15.85	Fill	38.1
299-W23-69	15.85	38.1	Hanford	38.1
299-W23-7	36.58	49.07	Cold Creek	76.2
299-W23-7	0	36.58	Hanford	76.2
299-W23-7	51.82	76.2	Ringold E	76.2
299-W23-7	49.07	51.82	Rtf	76.2
299-W23-70	0	15.85	Fill	38.1
299-W23-70	15.85	38.1	Hanford	38.1
299-W23-72	0	16.15	Fill	30.48
299-W23-72	16.15	30.48	Hanford	30.48
299-W23-73	0	15.54	Fill	26.8224
299-W23-73	15.54	26.82	Hanford	26.8224
299-W23-74	0	15.54	Fill	22.86
299-W23-74	15.54	22.86	Hanford	22.86
299-W23-75	0	15.85	Fill	22.86
299-W23-75	15.85	22.86	Hanford	22.86
299-W23-77	0	15.85	Fill	22.86
299-W23-77	15.85	22.86	Hanford	22.86
299-W23-78	0	16.15	Fill	22.86
299-W23-78	16.15	22.86	Hanford	22.86
299-W23-79	0	16.46	Fill	22.86
299-W23-79	16.46	22.86	Hanford	22.86

Well Name	From	To	Lithology	Well Depth
299-W23-8	39.62	50.29	Cold Creek	71.628
299-W23-8	0	39.62	Hanford	71.628
299-W23-8	50.29	71.63	Ringold E	71.628
299-W23-80	36.58	41.15	Cold Creek	41.148
299-W23-80	0	16.46	Fill	41.148
299-W23-80	16.46	36.58	Hanford	41.148
299-W23-83	0	15.85	Fill	22.86
299-W23-83	15.85	22.86	Hanford	22.86
299-W23-86	0	16.15	Fill	22.86
299-W23-86	16.15	22.86	Hanford	22.86
299-W23-9	36.58	48.77	Cold Creek	71.628
299-W23-9	0	3.05	Fill	71.628
299-W23-9	3.05	36.58	Hanford	71.628
299-W23-9	51.51	71.63	Ringold E	71.628
299-W23-9	48.77	51.51	Rtf	71.628
299-W23-92	39.93	41.15	Cold Creek	41.148
299-W23-92	0	15.54	Fill	41.148
299-W23-92	15.54	39.93	Hanford	41.148
299-W23-93	0	15.54	Fill	22.86
299-W23-93	15.54	22.86	Hanford	22.86
299-W23-94	0	15.24	Fill	41.148
299-W23-94	15.24	41.15	Hanford	41.148
299-W23-96	0	15.24	Fill	22.86
299-W23-96	15.24	22.86	Hanford	22.86
299-W23-99	39.01	41.15	Cold Creek	41.148
299-W23-99	0	15.54	Fill	41.148
299-W23-99	15.54	39.01	Hanford	41.148
299-W26-14	41.15	51.21	Cold Creek	79.3943
299-W26-14	0	0.3	Fill	79.3943
299-W26-14	0.3	41.15	Hanford	79.3943
299-W26-14	58.52	79.39	Ringold E	79.3943
299-W26-14	51.21	58.52	Rtf	79.3943
299-W27-2	53.04	61.26	Cold Creek	132.588
299-W27-2	0	0.91	Fill	132.588
299-W27-2	0.91	53.03	Hanford	132.588
299-W27-2	67.36	128.93	Ringold E	132.588
299-W27-2	128.93	132.59	Ringold LM	132.588
299-W27-2	61.27	67.36	Rtf	132.588
299-W5-1	142.95	143	Basalt	142.9512

Well Name	From	To	Lithology	Well Depth
299-W5-1	7.31	54.8	Cold Creek	142.9512
299-W5-1	0	7.31	Hanford	142.9512
299-W5-1	115.82	142.95	Ringold A	142.9512
299-W5-1	54.8	115.82	Ringold E	142.9512
299-W6-1	138.69	145.09	Basalt	145.0848
299-W6-1	12.5	18.59	Cold Creek	145.0848
299-W6-1	0	1.83	Fill	145.0848
299-W6-1	1.83	12.5	Hanford	145.0848
299-W6-1	129.85	138.68	Ringold A	145.0848
299-W6-1	30.18	129.85	Ringold E	145.0848
299-W6-1	18.59	30.17	Rtf	145.0848
299-W6-13	8.0772	28.3	Cold Creek	137.4648
299-W6-13	0	8.0772	Hanford	137.4648
299-W6-13	31.7	117.3	Ringold E	137.4648
299-W6-13	28.34	31.7	Rtf	137.4648
299-W6-13	117.34	137.14	Ringold A	137.4648
299-W6-14	17.3736	27.4	Cold Creek	145.0238
299-W6-14	0	17.3736	Hanford	145.0238
299-W6-14	27.4	115.5	Ringold E	145.0238
299-W6-14	115.52	144.78	Ringold A	145.0238
299-W6-14	144.78	214.14	Basalt	145.0238
299-W6-15	0	47.25	Hanford	146.8984
299-W6-15	47.25	131.064	Ringold E	146.8984
299-W6-15	131.064	146.31	Ringold A	146.8984
299-W6-15	146.31	146.6	Basalt	146.8984
299-W6-2	17.98	29.56	Cold Creek	75.5904
299-W6-2	0	17.98	Hanford	75.5904
299-W6-2	29.57	75.59	Ringold E	75.5904
299-W6-3	18.59	26.82	Cold Creek	134.4168
299-W6-3	0	18.59	Hanford	134.4168
299-W6-3	129.54	134.42	Ringold A	134.4168
299-W6-3	29.87	129.54	Ringold E	134.4168
299-W6-3	26.82	29.87	Rtf	134.4168
299-W6-6	9.14	18.59	Cold Creek	143.8656
299-W6-6	0	0.3	Fill	143.8656
299-W6-6	0.3	9.14	Hanford	143.8656
299-W6-6	134.11	143.87	Ringold A	143.8656
299-W6-6	33.22	134.11	Ringold E	143.8656
299-W6-6	18.59	33.22	Rtf	143.8656

Well Name	From	To	Lithology	Well Depth
299-W7-3	144.48	145.33	Basalt	145.2982
299-W7-3	10.36	24.38	Cold Creek	145.2982
299-W7-3	0	10.36	Hanford	145.2982
299-W7-3	111.25	144.48	Ringold A	145.2982
299-W7-3	32	111.25	Ringold E	145.2982
299-W7-3	24.38	32	Rtf	145.2982
299-W9-1	45.42	56.08	Cold Creek	89.916
299-W9-1	0	45.41	Hanford	89.916
299-W9-1	58.83	89.92	Ringold E	89.916
299-W9-1	56.08	58.83	Rtf	89.916
299-W9-2	43.8912	50.6	Cold Creek	99.06
299-W9-2	0	43.8912	Hanford	99.06
299-W9-2	50.6	55.5	Rtf	99.06
699-21-30B	217.93	297.18	Basalt	297.18
699-21-30B	12.19	68.58	Cold Creek	297.18
699-21-30B	0	1.52	Fill	297.18
699-21-30B	1.52	12.19	Hanford	297.18
699-21-30B	195.07	217.93	Ringold A	297.18
699-21-30B	83.82	128.02	Ringold E	297.18
699-21-30B	128.02	195.07	Ringold LM	297.18
699-21-30B	68.58	83.82	Rtf	297.18
699-23-33	192.03	210.31	Basalt	168.2496
699-23-33	15.24	60.96	Cold Creek	168.2496
699-23-33	0	1.22	Fill	168.2496
699-23-33	1.22	15.24	Hanford	168.2496
699-23-33	164.59	192.03	Ringold A	168.2496
699-23-33	67.06	112.78	Ringold E	168.2496
699-23-33	112.78	164.59	Ringold LM	168.2496
699-23-33	60.96	67.06	Rtf	168.2496
699-24-33	21.34	40.84	Cold Creek	50.1396
699-24-33	0	5.18	Fill	50.1396
699-24-33	5.18	21.34	Hanford	50.1396
699-24-33	40.84	50.14	Ringold E	50.1396
699-24-34A	0	21.94	Hanford	42.672
699-24-35	0	2.44	Fill	44.3484
699-24-35	2.44	31.09	Hanford	44.3484
699-24-46	48.77	64.01	Cold Creek	207.8736
699-24-46	0	48.77	Hanford	207.8736
699-24-46	64.01	147.83	Ringold E	207.8736

Well Name	From	To	Lithology	Well Depth
699-24-46	147.83	184.41	Ringold LM	207.8736
699-25-31	173.74	248.72	Basalt	248.7168
699-25-31	13.72	47.85	Cold Creek	248.7168
699-25-31	0	13.72	Hanford	248.7168
699-25-31	152.4	173.74	Ringold A	248.7168
699-25-31	47.85	96.32	Ringold E	248.7168
699-25-31	96.32	152.4	Ringold LM	248.7168
699-25-33A	48.4	56.2	Cold Creek	77.724
699-25-33A	0	48.4	Hanford	77.724
699-25-33A	56.21	77.72	Ringold E	77.724
699-25-33B	47.24	60.96	Cold Creek	73.09104
699-25-33B	0	47.24	Hanford	73.09104
699-25-33B	60.96	73.15	Ringold E	73.09104
699-25-55	68.34	82.94	Cold Creek	96.012
699-25-55	0	2.06	Fill	96.012
699-25-55	2.06	68.34	Hanford	96.012
699-26-29A	216.41	220.07	Basalt	220.0656
699-26-29A	25.91	57	Cold Creek	220.0656
699-26-29A	0	4.57	Fill	220.0656
699-26-29A	4.57	25.91	Hanford	220.0656
699-26-29A	193.55	216.41	Ringold A	220.0656
699-26-29A	74.68	128.02	Ringold E	220.0656
699-26-29A	128.02	193.55	Ringold LM	220.0656
699-26-29A	57	74.68	Rtf	220.0656
699-26-33	0	41.15	Hanford	44.8056
699-26-35A	44.2	46.33	Cold Creek	46.482
699-26-35A	0	44.2	Hanford	46.482
699-26-35C	0	40.23	Hanford	64.3128
699-26-35D	45.72	61.87	Cold Creek	70.104
699-26-35D	0	45.72	Hanford	70.104
699-26-35D	61.88	70.1	Ringold E	70.104
699-28-30	217.93	292.61	Basalt	292.608
699-28-30	19.81	60.96	Cold Creek	292.608
699-28-30	0	6.1	Fill	292.608
699-28-30	6.1	19.81	Hanford	292.608
699-28-30	201.17	217.93	Ringold A	292.608
699-28-30	86.87	161.54	Ringold E	292.608
699-28-30	161.55	201.17	Ringold LM	292.608
699-28-30	60.96	86.87	Rtf	292.608

Well Name	From	To	Lithology	Well Depth
699-28-40	33.53	54.86	Cold Creek	143.256
699-28-40	0	33.53	Hanford	143.256
699-28-40	54.86	114.91	Ringold E	143.256
699-29-78	180.32	182.88	Basalt	182.88
699-29-78	38.61	51.41	Cold Creek	182.88
699-29-78	0	2.1	Fill	182.88
699-29-78	2.1	38.61	Hanford	182.88
699-29-78	158.42	180.32	Ringold A	182.88
699-29-78	51.41	135.21	Ringold E	182.88
699-29-78	135.21	158.41	Ringold LM	182.88
699-29-83	170.18	173.43	Basalt	173.4312
699-29-83	21.37	34.77	Cold Creek	173.4312
699-29-83	0	1.68	Fill	173.4312
699-29-83	1.68	21.37	Hanford	173.4312
699-29-83	137.88	170.18	Ringold A	173.4312
699-29-83	34.77	114.97	Ringold E	173.4312
699-29-83	114.98	137.88	Ringold LM	173.4312
699-31-31	36.58	60.96	Cold Creek	197.8152
699-31-31	0	3.05	Fill	197.8152
699-31-31	3.05	36.58	Hanford	197.8152
699-31-31	60.96	172.21	Ringold E	197.8152
699-31-31	172.21	197.82	Ringold LM	197.8152
699-31-53A	0	1.86	Fill	148.4376
699-31-53A	1.86	87.54	Hanford	148.4376
699-31-65	0	1.86	Fill	137.16
699-31-65	1.86	65.24	Hanford	137.16
699-31-84A	184.71	1340.53	Basalt	0
699-31-84A	0	22.55	Hanford	0
699-31-84A	148.74	184.71	Ringold A	0
699-31-84A	22.56	117.35	Ringold E	0
699-31-84A	117.35	148.74	Ringold LM	0
699-32-32	219.46	219.49	Basalt	#N/A
699-32-32	10.67	67.67	Cold Creek	#N/A
699-32-32	0	4.57	Fill	#N/A
699-32-32	4.57	10.67	Hanford	#N/A
699-32-32	176.79	219.46	Ringold A	#N/A
699-32-32	67.67	153.92	Ringold E	#N/A
699-32-32	153.93	176.79	Ringold LM	#N/A
699-32-42	0	7.62	Fill	39.0144

Well Name	From	To	Lithology	Well Depth
699-32-42	7.62	36.58	Hanford	39.0144
699-32-62	0	2.13	Fill	152.7048
699-32-72A	174.65	176.79	Basalt	176.784
699-32-72A	55.17	59.44	Cold Creek	176.784
699-32-72A	0	55.17	Hanford	176.784
699-32-72A	138.69	174.65	Ringold A	176.784
699-32-72A	73.15	124.36	Ringold E	176.784
699-32-72A	124.36	138.68	Ringold LM	176.784
699-32-72A	59.44	73.15	Rtf	176.784
699-33-42	0	6.1	Fill	38.4048
699-33-42	6.1	35.05	Hanford	38.4048
699-33-42	35.05	38.4	Ringold E	38.4048
699-33-56	0	2.08	Fill	134.112
699-33-56	2.08	88.23	Hanford	134.112
699-33-56	88.23	123.03	Ringold E	134.112
699-34-41B	0	51.82	Hanford	54.5592
699-34-58B	0	94.48	Hanford	107.2896
699-34-58B	94.48	123.44	Ringold E	107.2896
699-34-58B	123.44	130	Ringold LM	107.2896
699-35-57	0	2.59	Fill	106.68
699-35-57	2.59	91.74	Hanford	106.68
699-35-58	0	3.05	Fill	106.68
699-35-58	3.05	88.39	Hanford	106.68
699-35-66A	0	80.8	Hanford	137.16
699-35-66A	135.8	137.16	Ringold A	137.16
699-35-66A	80.8	121.49	Ringold E	137.16
699-35-66A	121.49	135.8	Ringold LM	137.16
699-35-78B	176.79	194.46	Basalt	194.4624
699-35-78B	32	48.77	Cold Creek	194.4624
699-35-78B	0	32	Hanford	194.4624
699-35-78B	149.35	176.79	Ringold A	194.4624
699-35-78B	48.77	126.19	Ringold E	194.4624
699-35-78B	126.19	149.35	Ringold LM	194.4624
699-36-46P	158.19	162.46	Basalt	162.4584
699-36-46P	0	88.7	Hanford	162.4584
699-36-46P	132.59	158.19	Ringold A	162.4584
699-36-46P	88.7	109.73	Ringold E	162.4584
699-36-46P	109.73	132.59	Ringold LM	162.4584
699-36-46Q	0	108.81	Hanford	137.7696

Well Name	From	To	Lithology	Well Depth
699-36-46R	0	109.12	Hanford	116.4336
699-36-58A	0	95.1	Hanford	109.728
699-36-58B	0	1.98	Fill	106.68
699-36-58B	1.98	92.66	Hanford	106.68
699-36-61B	167.64	173.13	Basalt	173.1264
699-36-61B	0	97.54	Hanford	173.1264
699-36-61B	145.09	167.64	Ringold A	173.1264
699-36-61B	97.54	121.31	Ringold E	173.1264
699-36-61B	121.31	145.09	Ringold LM	173.1264
699-36-63A	0	80.77	Hanford	0
699-36-70A	44.81	67.06	Cold Creek	134.112
699-36-70A	0	44.81	Hanford	134.112
699-36-70A	67.06	131.67	Ringold E	134.112
699-36-70A	131.68	134.11	Ringold LM	134.112
699-37-36	128.02	131.06	Basalt	131.064
699-37-36	25.48	46.48	Cold Creek	131.064
699-37-36	0	25.48	Hanford	131.064
699-37-36	49.26	60.08	Ringold E	131.064
699-37-36	46.48	49.26	Rtf	131.064
699-37-43	155.15	157.58	Basalt	157.5816
699-37-43	73.46	86.26	Cold Creek	157.5816
699-37-43	0	73.46	Hanford	157.5816
699-37-43	129.54	155.14	Ringold A	157.5816
699-37-43	120.7	121.92	Ringold E	157.5816
699-37-43	121.92	129.54	Ringold LM	157.5816
699-37-43	86.26	120.7	Rtf	157.5816
699-37-47A	157.58	218.45	Basalt	0
699-37-47A	0	86.87	Hanford	0
699-37-47A	133.81	157.58	Ringold A	0
699-37-47A	86.87	111.25	Ringold E	0
699-37-47A	111.25	133.81	Ringold LM	0
699-37-82B	183.49	191.11	Basalt	191.1096
699-37-82B	21.95	33.53	Cold Creek	191.1096
699-37-82B	0	3.35	Fill	191.1096
699-37-82B	3.35	21.94	Hanford	191.1096
699-37-82B	149.96	183.49	Ringold A	191.1096
699-37-82B	33.53	122.83	Ringold E	191.1096
699-37-82B	122.84	149.96	Ringold LM	191.1096
699-37-83	188.06	190.81	Basalt	0

Well Name	From	To	Lithology	Well Depth
699-37-83	0	45.72	Hanford	0
699-37-83	150.88	188.06	Ringold A	0
699-37-83	45.72	124.05	Ringold E	0
699-37-83	124.06	150.88	Ringold LM	0
699-37-84	188.67	190.81	Basalt	190.8048
699-37-84	25.91	31.39	Cold Creek	190.8048
699-37-84	0	25.91	Hanford	190.8048
699-37-84	153.62	188.67	Ringold A	190.8048
699-37-84	32	127.41	Ringold E	190.8048
699-37-84	127.41	153.62	Ringold LM	190.8048
699-37-84	31.39	32	Rtf	190.8048
699-37-89	0	45.41	Hanford	198.12
699-37-89	160.02	199.34	Ringold A	198.12
699-37-89	45.42	134.42	Ringold E	198.12
699-37-89	134.42	160.02	Ringold LM	198.12
699-37-92	205.74	209.7	Basalt	209.7024
699-37-92	14.33	35.66	Cold Creek	209.7024
699-37-92	0	14.32	Hanford	209.7024
699-37-92	162.16	205.74	Ringold A	209.7024
699-37-92	35.66	129.85	Ringold E	209.7024
699-37-92	129.85	162.15	Ringold LM	209.7024
699-38-34A	108.21	114.3	Basalt	114.3
699-38-34A	16.76	36.58	Cold Creek	114.3
699-38-34A	0	3.05	Fill	114.3
699-38-34A	3.05	16.76	Hanford	114.3
699-38-34A	83.82	108.2	Ringold A	114.3
699-38-34A	51.82	53.34	Ringold E	114.3
699-38-34A	53.34	83.82	Ringold LM	114.3
699-38-34A	36.58	51.82	Rtf	114.3
699-38-61	0	100.58	Hanford	0
699-38-65	160.33	163.37	Basalt	163.3728
699-38-65	73.46	85.95	Cold Creek	163.3728
699-38-65	0	73.46	Hanford	163.3728
699-38-65	137.77	160.33	Ringold A	163.3728
699-38-65	85.95	121.01	Ringold E	163.3728
699-38-65	121.01	137.77	Ringold LM	163.3728
699-38-70	56.39	60.96	Cold Creek	125.8824
699-38-70	0	1.52	Fill	125.8824
699-38-70	1.52	56.39	Hanford	125.8824

Well Name	From	To	Lithology	Well Depth
699-38-70	74.68	120.4	Ringold E	125.8824
699-38-70	120.4	125.88	Ringold LM	125.8824
699-38-70	60.96	74.68	Rtf	125.8824
699-38-70B	52.12	85.04	Cold Creek	145.8468
699-38-70B	0	2.13	Fill	145.8468
699-38-70B	2.13	52.12	Hanford	145.8468
699-38-70B	139.3	145.85	Ringold A	145.8468
699-38-70B	85.04	136.86	Ringold E	145.8468
699-38-70B	136.86	139.29	Ringold LM	145.8468
699-39-39	0	36.27	Hanford	64.6176
699-39-79	38.1	45.72	Cold Creek	89.916
699-39-79	0	6.1	Fill	89.916
699-39-79	6.1	38.1	Hanford	89.916
699-39-79	45.72	89.92	Ringold E	89.916
699-40-32	98.45	112.78	Basalt	112.776
699-40-32	12.19	39.62	Cold Creek	112.776
699-40-32	0	1.52	Fill	112.776
699-40-32	1.52	12.19	Hanford	112.776
699-40-32	77.72	98.45	Ringold A	112.776
699-40-32	39.62	77.72	Ringold LM	112.776
699-40-33A	84.74	86.26	Basalt	86.2584
699-40-33A	0	35.05	Hanford	86.2584
699-40-33A	63.4	84.73	Ringold A	86.2584
699-40-33A	35.05	63.4	Ringold LM	86.2584
699-40-33C	85.35	85.37	Basalt	48.768
699-40-33C	0	33.53	Hanford	48.768
699-40-33C	62.79	85.34	Ringold A	48.768
699-40-33C	33.53	62.79	Ringold LM	48.768
699-40-36	82.3	85.34	Basalt	85.344
699-40-36	0	34.44	Hanford	85.344
699-40-36	60.05	82.3	Ringold A	85.344
699-40-36	34.44	60.05	Ringold LM	85.344
699-40-39	0	38.1	Hanford	64.67856
699-40-39	38.1	60.96	Ringold LM	64.67856
699-40-40A	0	35.66	Hanford	69.1896
699-40-40A	58.52	69.19	Ringold A	69.1896
699-40-40A	35.66	58.52	Ringold LM	69.1896
699-40-62	0	0.91	Fill	117.0432
699-40-62	0.91	95.4	Hanford	117.0432

Well Name	From	To	Lithology	Well Depth
699-40-62	95.4	114	Ringold E	117.0432
699-40-62	114	117.04	Ringold LM	117.0432
699-40-65	82.91	85.04	Cold Creek	139.9032
699-40-65	0	1.83	Fill	139.9032
699-40-65	1.83	82.91	Hanford	139.9032
699-40-65	131.98	139.9	Ringold A	139.9032
699-40-65	85.04	111.25	Ringold E	139.9032
699-40-65	111.25	131.98	Ringold LM	139.9032
699-40-80	166.73	170.38	Basalt	170.3832
699-40-80	27.13	45.72	Cold Creek	170.3832
699-40-80	0	27.13	Hanford	170.3832
699-40-80	149.35	166.73	Ringold A	170.3832
699-40-80	45.72	133.5	Ringold E	170.3832
699-40-80	133.5	149.35	Ringold LM	170.3832
699-40-84	183.4	189.13	Basalt	189.1284
699-40-84	22.49	29.49	Cold Creek	189.1284
699-40-84	0	2.13	Fill	189.1284
699-40-84	2.13	22.49	Hanford	189.1284
699-40-84	145.9	183.4	Ringold A	189.1284
699-40-84	35.05	123.69	Ringold E	189.1284
699-40-84	123.7	145.9	Ringold LM	189.1284
699-40-84	29.49	34.99	Rtf	189.1284
699-41-31	94.49	102.11	Basalt	102.108
699-41-31	0	1.52	Fill	102.108
699-41-31	1.52	24.38	Hanford	102.108
699-41-31	73.15	94.49	Ringold A	102.108
699-41-31	32	38.1	Ringold E	102.108
699-41-31	38.1	73.15	Ringold LM	102.108
699-41-35	75.29	79.25	Basalt	79.248
699-41-35	0	30.78	Hanford	79.248
699-41-35	52.73	75.29	Ringold A	79.248
699-41-35	30.79	52.73	Ringold LM	79.248
699-41-40	0	37.19	Hanford	53.67528
699-41-40	37.19	50.29	Ringold LM	53.67528
699-41-42	102.11	104.52	Basalt	104.5159
699-41-42	0	69.49	Hanford	104.5159
699-41-42	76.81	102.11	Ringold A	104.5159
699-41-42	69.5	76.81	Ringold LM	104.5159
699-42-37	76.2	81.69	Basalt	81.6864

Well Name	From	To	Lithology	Well Depth
699-42-37	0	28.65	Hanford	81.6864
699-42-37	39.62	75.9	Ringold A	81.6864
699-42-37	28.65	39.62	Ringold LM	81.6864
699-42-39A	0	42.06	Hanford	54.89448
699-42-39A	52.73	54.89	Ringold A	54.89448
699-42-39A	42.06	52.73	Ringold LM	54.89448
699-42-39B	0	40.84	Hanford	65.8368
699-42-39B	53.04	65.84	Ringold A	65.8368
699-42-39B	40.84	53.03	Ringold LM	65.8368
699-42-40A	0	38.62	Hanford	53.6448
699-42-40A	43.22	53.64	Ringold A	53.6448
699-42-40A	38.62	43.22	Ringold LM	53.6448
699-42-40C	66.45	119.48	Basalt	119.4816
699-42-40C	0	38.62	Hanford	119.4816
699-42-40C	42.61	66.45	Ringold A	119.4816
699-42-40C	38.62	42.61	Ringold LM	119.4816
699-42-42A	92.66	332.84	Basalt	332.8416
699-42-42A	0	57	Hanford	332.8416
699-42-42A	63.4	92.66	Ringold A	332.8416
699-42-42A	57	63.4	Ringold LM	332.8416
699-42-42B	0	47.85	Hanford	76.2
699-42-42B	55.47	76.2	Ringold A	76.2
699-42-42B	47.85	55.47	Ringold LM	76.2
699-42-67	0.91	36.57	Hanford	159.828
699-42-67	126.5	156.0576	Ringold A	159.828
699-42-67	82.3	115.2	Ringold E	159.828
699-42-67	0	0.91	Fill	159.828
699-42-67	36.57	82.3	Cold Creek	159.828
699-42-67	115.22	126.5	Ringold LM	159.828
699-42-67	156.06	159.8	Basalt	159.828
699-43-40	0	1.52	Fill	41.7576
699-43-40	1.52	37.49	Hanford	41.7576
699-43-41E	0	37.19	Hanford	45.78096
699-43-41F	0	37.19	Hanford	54.102
699-43-41F	43.28	54.1	Ringold A	54.102
699-43-41F	37.19	43.28	Ringold LM	54.102
699-43-41G	0	37.19	Hanford	61.35624
699-43-41G	43.28	61.36	Ringold A	61.35624
699-43-41G	37.19	43.28	Ringold LM	61.35624

Well Name	From	To	Lithology	Well Depth
699-43-41H	0	1.83	Fill	43.84548
699-43-41H	1.83	28.65	Hanford	43.84548
699-43-42	64.31	67.97	Basalt	67.9704
699-43-42	0	45.72	Hanford	67.9704
699-43-42	46.94	64.31	Ringold A	67.9704
699-43-42	45.72	46.94	Ringold LM	67.9704
699-43-42J	0	48.16	Hanford	54.864
699-43-42K	76.2	80.16	Basalt	80.1624
699-43-42K	0	48.16	Hanford	80.1624
699-43-42K	55.47	76.2	Ringold A	80.1624
699-43-42K	48.16	55.47	Ringold LM	80.1624
699-43-43	0	52.73	Hanford	54.864
699-43-44	48.77	63.39	Ringold A	64.3128
699-43-44	63.39	122	Basalt	64.3128
699-43-67B	0	57.91	Hanford	155.2255
699-43-67B	57.91	78.02	Cold Creek	155.2255
699-43-67B	78.02	109.73	Ringold E	155.2255
699-43-67B	109.73	120.4	Ringold LM	155.2255
699-43-67B	120.4	150.87	Ringold A	155.2255
699-43-67B	150.87	155.22	Basalt	155.2255
699-43-69	152.4	152.86	Basalt	152.8572
699-43-69	29.26	34.75	Cold Creek	152.8572
699-43-69	0	0.61	Fill	152.8572
699-43-69	0.61	29.26	Hanford	152.8572
699-43-69	120.4	152.4	Ringold A	152.8572
699-43-69	74.68	110.95	Ringold E	152.8572
699-43-69	110.95	120.4	Ringold LM	152.8572
699-43-69	34.75	74.68	Rtf	152.8572
699-43-84	171.3	176.79	Basalt	176.784
699-43-84	18.59	28.65	Cold Creek	176.784
699-43-84	0	18.59	Hanford	176.784
699-43-84	148.13	171.3	Ringold A	176.784
699-43-84	28.65	132.89	Ringold E	176.784
699-43-84	132.89	148.13	Ringold LM	176.784
699-43-91B	210.92	550.17	Basalt	0
699-43-91B	171.3	210.92	Ringold A	0
699-43-91B	141.12	171.3	Ringold LM	0
699-44-39B	52.43	55.44	Basalt	55.44312
699-44-39B	0	38.1	Hanford	55.44312

Well Name	From	To	Lithology	Well Depth
699-44-39B	38.1	52.43	Ringold A	55.44312
699-44-42	0	49.68	Hanford	52.7304
699-44-43B	0	48.77	Hanford	53.84597
699-44-43B	48.77	53.85	Ringold A	53.84597
699-44-64P	134.72	137.77	Basalt	137.7696
699-44-64P	0	82.91	Hanford	137.7696
699-44-64P	102.11	134.72	Ringold A	137.7696
699-44-64P	82.91	96.62	Ringold E	137.7696
699-44-64P	96.62	102.11	Ringold LM	137.7696
699-44-67	103.63	112.17	Ringold LM	147.0355
699-44-67	0	1.52	Fill	147.0355
699-44-67	1.52	60.35	Hanford	147.0355
699-44-67	60.35	68.58	Cold Creek	147.0355
699-44-67	68.58	103.63	Ringold E	147.0355
699-44-67	112.17	143.56	Ringold A	147.0355
699-44-67	143.56	146.15	Basalt	147.0355
699-45-30	0	1.52	Fill	35.052
699-45-30	1.52	10.68	Hanford	35.052
699-45-42	57.91	59.44	Basalt	59.436
699-45-42	0	49.38	Hanford	59.436
699-45-42	49.38	57.91	Ringold A	59.436
699-45-67	0	63	Hanford	128.3208
699-45-67	63	98	Ringold E	128.3208
699-45-67	98	113	Ringold LM	128.3208
699-45-67B	0	16.46	Hanford	137.3886
699-45-67B	16.46	60.96	Cold Creek	137.3886
699-45-67B	60.96	96.01	Ringold E	137.3886
699-45-67B	96.01	112.78	Ringold LM	137.3886
699-45-67B	112.78	135.64	Ringold A	137.3886
699-45-69A	6.71	31.09	Cold Creek	112.1664
699-45-69A	0	0.61	Fill	112.1664
699-45-69A	0.61	6.7	Hanford	112.1664
699-45-69A	102.72	112.17	Ringold A	112.1664
699-45-69A	63.7	97.54	Ringold E	112.1664
699-45-69A	97.54	102.72	Ringold LM	112.1664
699-45-69A	31.09	63.7	Rtf	112.1664
699-45-69C	138.69	138.72	Basalt	138.684
699-45-69C	10.97	32	Cold Creek	138.684
699-45-69C	0	10.97	Hanford	138.684

Well Name	From	To	Lithology	Well Depth
699-45-69C	111.25	138.68	Ringold A	138.684
699-45-69C	67.06	102.11	Ringold E	138.684
699-45-69C	102.11	111.25	Ringold LM	138.684
699-45-69C	32	67.06	Rtf	138.684
699-45-78	154.84	222.51	Basalt	222.504
699-45-78	27.43	32	Cold Creek	222.504
699-45-78	0	27.43	Hanford	222.504
699-45-78	147.83	154.84	Ringold A	222.504
699-45-78	40.23	134.42	Ringold E	222.504
699-45-78	134.42	147.83	Ringold LM	222.504
699-45-78	32	40.23	Rtf	222.504
699-46-31	116.44	174.65	Basalt	174.6504
699-46-31	10.67	39.62	Cold Creek	174.6504
699-46-31	0	10.67	Hanford	174.6504
699-46-31	99.06	116.43	Ringold A	174.6504
699-46-31	39.62	71.63	Ringold E	174.6504
699-46-31	71.63	99.06	Ringold LM	174.6504
699-46-32	61.57	129.54	Basalt	129.54
699-46-32	7.62	25.91	Cold Creek	129.54
699-46-32	0	3.05	Fill	129.54
699-46-32	3.05	7.62	Hanford	129.54
699-46-32	53.65	61.57	Ringold A	129.54
699-46-32	25.91	53.64	Ringold LM	129.54
699-46-33	18.29	83.21	Basalt	83.2104
699-46-33	7.62	15.24	Cold Creek	83.2104
699-46-33	0	7.62	Hanford	83.2104
699-46-33	15.24	18.29	Ringold A	83.2104
699-46-85B	215.5	220.37	Basalt	220.3704
699-46-85B	63.7	67.67	Cold Creek	220.3704
699-46-85B	0	63.7	Hanford	220.3704
699-46-85B	188.37	215.5	Ringold A	220.3704
699-46-85B	86.56	173.74	Ringold E	220.3704
699-46-85B	173.74	188.37	Ringold LM	220.3704
699-46-85B	67.67	86.56	Rtf	220.3704
699-47-35A	31.09	32.61	Basalt	32.6136
699-47-35A	0	11	Hanford	32.6136
699-47-35A	11	31.09	Ringold A	32.6136
699-47-35B	30.48	32.92	Basalt	32.9184
699-47-35B	0	10.36	Hanford	32.9184

Well Name	From	To	Lithology	Well Depth
699-47-35B	10.36	30.48	Ringold A	32.9184
699-47-42	22.25	600.77	Basalt	600.7608
699-47-42	0	16.46	Hanford	600.7608
699-47-42	16.46	22.25	Ringold A	600.7608
699-47-46A	53.04	63.09	Basalt	63.0936
699-47-46A	0	53.03	Hanford	63.0936
699-47-50	65.53	89.92	Basalt	89.916
699-47-50	0	65.53	Hanford	89.916
699-47-51	48.46	50.9	Basalt	50.9016
699-47-51	0	48.46	Hanford	50.9016
699-47-60	0	68.88	Hanford	87.4776
699-47-80B	161.85	498.35	Basalt	0
699-48-35	50.29	138.68	Basalt	138.684
699-48-35	4.88	12.19	Cold Creek	138.684
699-48-35	0	1.52	Fill	138.684
699-48-35	1.52	4.88	Hanford	138.684
699-48-35	38.1	50.29	Ringold A	138.684
699-48-35	12.19	15.24	Ringold E	138.684
699-48-35	15.24	38.1	Ringold LM	138.684
699-48-48A	62.48	1725.49	Basalt	1725.473
699-48-48A	0	62.48	Hanford	1725.473
699-48-48B	62.48	1005.85	Basalt	1005.84
699-48-48B	0	62.48	Hanford	1005.84
699-48-50B	63.86	65.59	Basalt	65.59296
699-48-50B	36.88	56.39	Cold Creek	65.59296
699-48-50B	0	36.88	Hanford	65.59296
699-48-50B	56.39	63.86	Ringold A	65.59296
699-48-71	0	1.52	Fill	92.964
699-48-71	1.52	51.82	Hanford	92.964
699-48-77A	138.23	139.51	Basalt	139.507
699-48-77A	6.86	18.29	Cold Creek	139.507
699-48-77A	0	6.86	Hanford	139.507
699-48-77A	102.41	138.23	Ringold A	139.507
699-48-77A	25.15	102.41	Ringold E	139.507
699-48-77A	18.29	25.15	Rtf	139.507
699-48-77C	131.98	133.26	Basalt	133.2586
699-48-77C	6.4	18.9	Cold Creek	133.2586
699-48-77C	0	0.49	Fill	133.2586
699-48-77C	0.49	6.4	Hanford	133.2586

Well Name	From	To	Lithology	Well Depth
699-48-77C	97.84	131.98	Ringold A	133.2586
699-48-77C	24.99	97.84	Ringold E	133.2586
699-48-77C	18.9	24.99	Rtf	133.2586
699-49-31	118.87	205.74	Basalt	205.74
699-49-31	13.72	54.86	Cold Creek	205.74
699-49-31	0	1.52	Fill	205.74
699-49-31	1.52	13.72	Hanford	205.74
699-49-31	79.25	89.92	Ringold E	205.74
699-49-31	89.92	118.87	Ringold LM	205.74
699-49-31	54.86	79.25	Rtf	205.74
699-49-32A	0	1.52	Fill	30.48
699-49-32A	1.52	25.91	Hanford	30.48
699-49-32B	47.24	103.33	Basalt	103.3272
699-49-32B	15.24	22.86	Cold Creek	103.3272
699-49-32B	0	1.52	Fill	103.3272
699-49-32B	1.52	15.24	Hanford	103.3272
699-49-32B	22.86	47.24	Ringold LM	103.3272
699-49-33	22.25	108.51	Basalt	108.5088
699-49-33	7.92	22.25	Cold Creek	108.5088
699-49-33	0	1.52	Fill	108.5088
699-49-33	1.52	7.92	Hanford	108.5088
699-49-34	24.38	25.91	Basalt	25.908
699-49-34	0	1.52	Fill	25.908
699-49-34	1.52	24.38	Hanford	25.908
699-49-55B	41.15	69.19	Basalt	69.1896
699-49-55B	0	32	Hanford	69.1896
699-49-57A	49.38	51.21	Basalt	51.2064
699-49-57A	0	0.91	Fill	51.2064
699-49-57A	0.91	31.7	Hanford	51.2064
699-49-57A	31.7	49.38	Cold Creek	51.2064
699-49-57B	49.53	70.22592	Basalt	70.22592
699-49-79	25.6	27.43	Cold Creek	88.392
699-49-79	0	25.6	Hanford	88.392
699-49-79	27.43	35.66	Rtf	88.392
699-50-42	19.81	38.1	Basalt	38.1
699-50-42	0	11.58	Hanford	38.1
699-50-42	11.58	19.81	Ringold A	38.1
699-50-45	11.58	54.25	Basalt	54.2544
699-50-45	0	0.61	Fill	54.2544

Well Name	From	To	Lithology	Well Depth
699-50-45	0.61	11.58	Hanford	54.2544
699-50-48A	33.83	52.73	Basalt	52.7304
699-50-48A	0	33.83	Hanford	52.7304
699-50-48B	33.83	76.2	Basalt	76.2
699-50-48B	0	33.83	Hanford	76.2
699-50-53A	47.7	56.39	Basalt	56.388
699-50-53A	0	47.7	Hanford	56.388
699-50-53B	47.49	68.58	Basalt	68.58
699-50-53B	0	47.49	Hanford	68.58
699-50-56	49.07	50.05	Basalt	50.04816
699-50-56	27.43	49.07	Cold Creek	50.04816
699-50-56	0	27.43	Hanford	50.04816
699-50-59	50.96	52.79	Basalt	52.79136
699-50-59	0	50.96	Hanford	52.79136
699-50-85	181.36	182.88	Basalt	182.88
699-50-85	27.13	35.66	Cold Creek	182.88
699-50-85	0	27.13	Hanford	182.88
699-50-85	162.16	181.36	Ringold A	182.88
699-50-85	64.62	145.09	Ringold E	182.88
699-50-85	145.09	162.15	Ringold LM	182.88
699-50-85	35.66	64.62	Rtf	182.88
699-50-96	218.85	337.11	Basalt	337.1088
699-50-96	0	74.98	Hanford	337.1088
699-50-96	192.03	218.85	Ringold A	337.1088
699-50-96	74.98	170.99	Ringold E	337.1088
699-50-96	170.99	192.03	Ringold LM	337.1088
699-50-99	142.04	222.51	Basalt	222.504
699-50-99	0	72.54	Hanford	222.504
699-50-99	140.82	142.04	Ringold A	222.504
699-50-99	72.54	139.6	Ringold E	222.504
699-50-99	139.6	140.82	Ringold LM	222.504
699-51-36B	10.67	174.65	Basalt	174.6504
699-51-36B	0	9.14	Hanford	174.6504
699-51-36B	9.14	10.67	Rtf	174.6504
699-51-36C	14.33	152.71	Basalt	183.4896
699-51-36C	0	1.52	Fill	183.4896
699-51-36C	1.52	14.32	Hanford	183.4896
699-51-36D	7.62	213.36	Basalt	213.36
699-51-36D	0	1.52	Fill	213.36

Well Name	From	To	Lithology	Well Depth
699-51-36D	1.52	7.62	Hanford	213.36
699-51-46	0	3.96	Hanford	51.2064
699-51-63	55.78	56.27	Basalt	56.26608
699-51-63	0	54.25	Hanford	56.26608
699-51-75	115.83	116.43	Basalt	116.4336
699-51-75	0	30.48	Hanford	116.4336
699-52-30	6.1	7.62	Cold Creek	54.864
699-52-30	0	6.1	Hanford	54.864
699-52-30	25.91	54.86	Ringold E	54.864
699-52-30	7.62	25.91	Rtf	54.864
699-52-46A	15.54	68.58	Basalt	68.58
699-52-46A	0	10.67	Hanford	68.58
699-52-46A	10.67	15.54	Ringold LM	68.58
699-52-48	8.53	60.05	Basalt	60.0456
699-52-48	0	1.52	Fill	60.0456
699-52-48	1.52	8.53	Hanford	60.0456
699-52-52	45.72	275.24	Basalt	275.2344
699-52-52	0	45.72	Hanford	275.2344
699-52-54	51.02	51.39	Basalt	51.38928
699-52-54	0	51.02	Hanford	51.38928
699-52-55	54.01	55.87	Basalt	55.86984
699-52-55	43.28	54.01	Cold Creek	55.86984
699-52-55	0	0.91	Fill	55.86984
699-52-55	0.91	43.28	Hanford	55.86984
699-52-55B	53.8	89	Basalt	89.0016
699-52-55B	45.72	53.8	Cold Creek	89.0016
699-52-55B	0	1.52	Fill	89.0016
699-52-55B	1.52	45.72	Hanford	89.0016
699-52-57	48.68	50.44	Basalt	50.4444
699-52-57	32.46	48.68	Cold Creek	50.4444
699-52-57	0	32.46	Hanford	50.4444
699-53-35	12.19	23.17	Cold Creek	45.1104
699-53-35	0	1.22	Fill	45.1104
699-53-35	1.22	12.19	Hanford	45.1104
699-53-35	23.17	34.14	Ringold E	45.1104
699-53-35	34.14	45.1	Ringold LM	45.1104
699-53-47B	8.84	14.02	Basalt	14.0208
699-53-47B	0	8.84	Hanford	14.0208
699-53-48A	13.11	16.15	Basalt	16.1544

Well Name	From	To	Lithology	Well Depth
699-53-48A	0	0.3	Fill	16.1544
699-53-48A	0.3	11.28	Hanford	16.1544
699-53-48B	13.41	13.44	Basalt	13.4112
699-53-48B	11.28	13.41	Cold Creek	13.4112
699-53-48B	0	11.28	Hanford	13.4112
699-53-50	10.97	59.13	Basalt	59.1312
699-53-50	0	10.97	Hanford	59.1312
699-53-55A	77.72	138.68	Basalt	138.684
699-53-55A	0	77.72	Hanford	138.684
699-54-34	45.72	50.9	Basalt	50.9016
699-54-34	18.29	41.15	Cold Creek	50.9016
699-54-34	0	4.88	Fill	50.9016
699-54-34	4.88	18.29	Hanford	50.9016
699-54-34	41.15	45.72	Ringold E	50.9016
699-54-45A	0	30.91	Hanford	32.004
699-54-48	28.65	30.78	Basalt	30.7848
699-54-48	0	19.2	Hanford	30.7848
699-54-48	19.2	28.65	Ringold LM	30.7848
699-54-49	17.98	18.9	Basalt	18.8976
699-54-49	15.85	17.98	Cold Creek	18.8976
699-54-49	0	15.85	Hanford	18.8976
699-54-57	55.17	97.84	Basalt	97.8408
699-54-57	0	55.17	Hanford	97.8408
699-55-40	0	19.81	Hanford	44.196
699-55-40	19.81	37.49	Ringold E	44.196
699-55-44	0	1.52	Fill	48.768
699-55-44	1.52	30.48	Hanford	48.768
699-55-44	42.67	48.77	Ringold A	48.768
699-55-44	30.48	42.67	Ringold LM	48.768
699-55-50A	29.5	33.53	Basalt	33.528
699-55-50A	0	23.41	Hanford	33.528
699-55-50A	23.41	29.5	Ringold A	33.528
699-55-50B	27.4	28.96	Basalt	28.956
699-55-50B	0	21.91	Hanford	28.956
699-55-50B	21.91	27.4	Ringold A	28.956
699-55-50C	0	1.52	Fill	18.288
699-55-50C	1.52	5.57	Hanford	18.288
699-55-50D	27.74	30.48	Basalt	30.48
699-55-50D	0	1.52	Fill	30.48

Well Name	From	To	Lithology	Well Depth
699-55-50D	1.52	27.74	Hanford	30.48
699-55-55	89.61	95.1	basalt	0
699-55-55	0	89.61	Hanford	0
699-55-57	51.82	54.86	Basalt	54.864
699-55-57	0	0.61	Fill	54.864
699-55-57	0.61	51.82	Hanford	54.864
699-55-60A	0	71.02	Hanford	71.0184
699-55-65C	42.67	44.5	Basalt	44.5008
699-55-65C	0	41.15	Hanford	44.5008
699-55-70	0	14.93	Hanford	62.484
699-55-70	27.43	62.48	Ringold A	62.484
699-55-70	14.94	27.43	Ringold E	62.484
699-55-76	67.97	72.54	Basalt	72.5424
699-55-76	0	44.81	Hanford	72.5424
699-55-76	44.81	67.97	Ringold A	72.5424
699-55-89	0	24.38	Hanford	71.628
699-55-95	156.06	161.54	Basalt	161.544
699-55-95	0	65.53	Hanford	161.544
699-55-95	141.43	156.06	Ringold A	161.544
699-55-95	65.53	115.21	Ringold E	161.544
699-55-95	115.22	141.43	Ringold LM	161.544
699-56-40A	18.59	68.58	Basalt	68.58
699-56-40A	0	1.52	Fill	68.58
699-56-40A	1.52	18.59	Hanford	68.58
699-56-40B	19.66	121.01	Basalt	166.116
699-56-40B	0	19.66	Hanford	166.116
699-56-40C	18.29	146.27	Basalt	146.304
699-56-40C	0	18.29	Hanford	146.304
699-56-41	15.24	125.58	Basalt	125.5776
699-56-41	0	15.24	Hanford	125.5776
699-56-42A	27.43	74.68	Basalt	74.676
699-56-42A	0	27.43	Hanford	74.676
699-56-42B	30.48	76.2	Basalt	76.2
699-56-42B	0	28.96	Hanford	76.2
699-56-42B	28.96	30.48	Ringold A	76.2
699-56-42C	28.96	108.05	Basalt	107.8992
699-56-42C	0	28.96	Hanford	107.8992
699-56-42D	14.63	204.22	Basalt	204.216
699-56-42D	0	14.63	Hanford	204.216

Well Name	From	To	Lithology	Well Depth
699-56-42E	25.91	213.36	Basalt	213.36
699-56-42E	0	25.91	Hanford	213.36
699-56-42F	12.19	158.5	Basalt	158.496
699-56-42F	0	12.19	Hanford	158.496
699-56-43	16.15	47.24	Basalt	47.244
699-56-43	0	16.15	Hanford	47.244
699-56-51	30.79	32	Basalt	32.004
699-56-51	0	30.78	Hanford	32.004
699-56-53	30.48	82.3	Basalt	82.296
699-56-53	0	30.48	Hanford	82.296
699-57-41A	22.86	156.06	Basalt	156.0576
699-57-41A	0	22.86	Hanford	156.0576
699-57-41B	19.81	140.51	Basalt	140.5128
699-57-41B	0	19.81	Hanford	140.5128
699-57-41C	18.29	131.06	Basalt	0
699-57-41C	0	18.29	Hanford	0
699-57-41E	10.67	167.95	Basalt	167.64
699-57-41E	0	10.67	Hanford	167.64
699-57-41F	24.38	185.32	Basalt	185.3184
699-57-41F	0	24.38	Hanford	185.3184
699-57-42	10.67	121.92	Basalt	121.92
699-57-42	0	10.67	Hanford	121.92
699-57-83A	104.55	108.2	Basalt	108.204
699-57-83A	0	64.01	Hanford	108.204
699-57-83A	82.3	104.55	Ringold A	108.204
699-57-83A	64.01	65.53	Ringold E	108.204
699-57-83A	65.53	82.3	Ringold LM	108.204
699-58-40	0.61	137.16	Basalt	137.16
699-58-40	0	0.61	Fill	137.16
699-58-41A	6.04	83.52	Basalt	83.5152
699-58-41A	0	6.03	Fill	83.5152
699-58-41B	22.86	68.58	Basalt	68.58
699-58-41B	0	4.57	Fill	68.58
699-58-41B	4.57	22.86	Hanford	68.58
699-58-41C	29.26	31.39	Basalt	39.624
699-58-41C	0	4.57	Fill	39.624
699-58-41C	4.57	29.26	Hanford	39.624
699-58-41D	4.57	24.38	Basalt	24.0792
699-58-41D	0	4.57	Hanford	24.0792

Well Name	From	To	Lithology	Well Depth
699-58-41E	3.05	118.87	Basalt	118.872
699-58-41E	0	3.05	Fill	118.872
699-58-41F	21.34	182.88	Basalt	182.88
699-58-41F	0	1.52	Fill	182.88
699-58-41F	1.52	21.34	Hanford	182.88
699-59-44	4.57	21.34	Basalt	21.336
699-59-44	0	4.57	Hanford	21.336
699-59-80B	56.08	60.35	Basalt	60.3504
699-59-80B	0	22.55	Hanford	60.3504
699-59-80B	22.56	56.08	Ringold A	60.3504
699-60-53E	0	45.72	Basalt	45.72
699-60-53F	0	88.39	Basalt	88.392
699-60-57	44.2	47.24	Basalt	47.244
699-60-57	0	40.54	Hanford	47.244
699-60-57	40.54	44.2	Ringold A	47.244
699-60-59	54.86	475.8	Basalt	0
699-60-59	0	54.86	Hanford	0
699-60-60	38.71	39.04	Basalt	39.0144
699-60-60	0	38.71	Hanford	39.0144
699-61-53	0	117.35	Basalt	117.348
699-61-55A	0	75.9	Basalt	75.8952
699-61-55B	0	99.67	Basalt	0
699-61-57	0	179.53	Basalt	179.5272
699-61-62	55.17	57.3	Basalt	57.3024
699-61-62	0	0.61	Fill	57.3024
699-61-62	0.61	40.54	Hanford	57.3024
699-61-62	40.54	55.17	Rtf	57.3024
699-61-66	65.53	68.58	Basalt	68.58
699-61-66	0	65.53	Hanford	68.58
699-62-53	7.92	138.99	Basalt	138.9888
699-62-53	0	7.92	Hanford	138.9888
699-63-51	0	6.1	Hanford	10.9728
699-63-51	6.1	7.62	Ringold E	10.9728
699-63-55	34.14	38.1	Basalt	38.1
699-63-55	0	0.3	Fill	38.1
699-63-55	0.3	34.14	Hanford	38.1
699-63-58	36.58	40.54	Basalt	40.5384
699-63-58	0	36.58	Hanford	40.5384
699-63-90	73.15	77.11	Basalt	77.1144

Well Name	From	To	Lithology	Well Depth
699-63-90	0	41.15	Hanford	77.1144
699-63-90	50.29	73.15	Ringold A	77.1144
699-63-90	41.15	42.98	Ringold E	77.1144
699-63-90	42.98	50.29	Ringold LM	77.1144
699-65-50	175.26	178.31	Basalt	178.308
699-65-50	0	31.09	Hanford	178.308
699-65-50	168.86	175.26	Ringold A	178.308
699-65-50	54.86	76.2	Ringold E	178.308
699-65-50	76.2	168.86	Ringold LM	178.308
699-65-50	31.09	54.86	Rtf	178.308
C3103	0	7.01	Fill	67.818
C3103	7.01	66.45	Hanford	67.818
C3104	0	66.14	Hanford	80.3148
C3245	0	5.49	Fill	78.9432
C3245	5.49	78.94	Hanford	78.9432
C3246	0	10.06	Fill	93.8784
C3246	10.06	93.88	Hanford	93.8784
C3247	0	13.72	Fill	98.7552
C3247	13.72	30.1	Hanford	98.7552
C3830	30.6	35.58	Cold Creek	35.5854
C3830	0	15.85	Fill	35.5854
C3830	15.85	30.6	Hanford	35.5854
C3832	31.39	34.81	Cold Creek	34.80816
C3832	0	13.72	Fill	34.80816
C3832	13.72	31.39	Hanford	34.80816
C4106	0	3.96	Fill	84.7344
C4106	3.96	84.73	Hanford	84.7344
C4160	0	8.23	Fill	97.8408
C4160	8.23	29.82	Hanford	97.8408
C4297	0	12.19	Fill	59.61888
C4297	12.19	60.05	Hanford	59.61888
C4545	0	5.79	Fill	80.6196
C4545	5.79	74.83	Hanford	80.6196
C4562	164.06	164.29	Basalt	164.2872
C4562	0	0.3	Fill	164.2872
C4562	0.3	87.4	Hanford	164.2872
C4562	137.16	164.06	Ringold A	164.2872
C4562	87.4	115.52	Ringold E	164.2872
C4562	115.52	137.16	Ringold LM	164.2872

Well Name	From	To	Lithology	Well Depth
C4666	0	0.3	Fill	119.0549
C4666	0.3	86.26	Hanford	119.0549
C4666	86.26	115.21	Ringold E	119.0549
C4666	115.22	119.18	Ringold LM	119.0549
C4993	109.12	430.08	Basalt	430.0728
C4993	71.93	88.39	Cold Creek	430.0728
C4993	0	0.09	Fill	430.0728
C4993	0.09	71.93	Hanford	430.0728
C4993	88.39	109.12	Ringold A	430.0728
C4996	106.38	447.39	Basalt	447.3854
C4996	77.72	92.66	Cold Creek	447.3854
C4996	0	1.37	Fill	447.3854
C4996	1.37	77.72	Hanford	447.3854
C4996	92.66	106.38	Ringold A	447.3854
C4997	116.74	437.61	Basalt	437.6014
C4997	77.88	97.23	Cold Creek	437.6014
C4997	0	5.12	Fill	437.6014
C4997	5.12	77.88	Hanford	437.6014
C4997	97.23	116.74	Ringold A	437.6014
C4998	116.44	426.72	Basalt	426.72
C4998	76.2	98.15	Cold Creek	426.72
C4998	0	2.74	Fill	426.72
C4998	2.74	76.2	Hanford	426.72
C4998	98.15	116.43	Ringold A	426.72
C5941	0	4.88	Fill	90.3732
C5941	4.88	90.53	Hanford	90.3732
CC_U3_Pwell10	57.9	70.9	Cold Creek	#N/A
CC_U3_Pwell10	0	57.9	Hanford	#N/A
CC_U3_Pwell11	50.03	65.03	Cold Creek	#N/A
CC_U3_Pwell11	0	50.03	Hanford	#N/A
CC_U3_Pwell12	47.94	62.94	Cold Creek	#N/A
CC_U3_Pwell12	0	47.94	Hanford	#N/A
CC_U3_Pwell13	45.42	60.42	Cold Creek	#N/A
CC_U3_Pwell13	0	45.42	Hanford	#N/A
CC_U3_Pwell14	45.62	60.62	Cold Creek	#N/A
CC_U3_Pwell14	0	45.62	Hanford	#N/A
CC_U3_Pwell15	0	98.74	Hanford	#N/A
CC_U3_Pwell16	0	46.09	Hanford	#N/A
Fault Well 1	149.96	156.06	Basalt	#N/A

Well Name	From	To	Lithology	Well Depth
Fault Well 1	132.28	149.96	Ringold A	#N/A
Fault Well 10	114.91	121.01	Basalt	#N/A
Fault Well 10	111.25	114.91	Ringold A	#N/A
Fault Well 10	92.2	111.25	Ringold LM	#N/A
Fault Well 11	110.03	116.13	Basalt	#N/A
Fault Well 12	103.02	109.12	Basalt	#N/A
Fault Well 13	116.74	122.83	Basalt	#N/A
Fault Well 13	100.28	116.74	Ringold A	#N/A
Fault Well 14	113.39	119.48	Basalt	#N/A
Fault Well 14	96.93	113.39	Ringold A	#N/A
Fault Well 15	106.99	113.08	Basalt	#N/A
Fault Well 15	90.53	106.99	Ringold A	#N/A
Fault Well 16	101.19	107.29	Basalt	#N/A
Fault Well 16	82.91	101.19	Ringold A	#N/A
Fault Well 17	94.79	100.89	Basalt	#N/A
Fault Well 17	76.2	94.79	Ringold A	#N/A
Fault Well 18	85.95	92.05	Basalt	#N/A
Fault Well 18	68.58	85.95	Ringold A	#N/A
Fault Well 19	76.51	82.6	Basalt	#N/A
Fault Well 19	64.31	76.5	Ringold A	#N/A
Fault Well 2	143.26	149.35	Basalt	#N/A
Fault Well 2	126.19	143.26	Ringold A	#N/A
Fault Well 20	68.58	75.59	Basalt	#N/A
Fault Well 20	60.96	68.58	Ringold A	#N/A
Fault Well 21	63.09	69.19	Basalt	#N/A
Fault Well 21	53.95	63.09	Ringold A	#N/A
Fault Well 22	57.91	64.01	Basalt	#N/A
Fault Well 22	55.47	57.91	Ringold A	#N/A
Fault Well 23	54.86	60.96	Basalt	#N/A
Fault Well 24	52.12	58.22	Basalt	#N/A
Fault Well 25	51.21	57.3	Basalt	#N/A
Fault Well 26	49.07	55.17	Basalt	#N/A
Fault Well 3	138.38	144.48	Basalt	#N/A
Fault Well 3	121.31	138.38	Ringold A	#N/A
Fault Well 4	126.8	132.89	Basalt	#N/A
Fault Well 4	109.42	126.8	Ringold A	#N/A
Fault Well 4	78	109.42	Ringold LM	#N/A
Fault Well 5	123.14	129.24	Basalt	#N/A
Fault Well 5	105.46	123.14	Ringold A	#N/A

Well Name	From	To	Lithology	Well Depth
Fault Well 5	75.2	105.46	Ringold LM	#N/A
Fault Well 6	118.57	124.66	Basalt	#N/A
Fault Well 6	101.5	118.57	Ringold A	#N/A
Fault Well 6	71.99	101.5	Ringold LM	#N/A
Fault Well 7	117.96	124.05	Basalt	#N/A
Fault Well 7	99.98	117.96	Ringold A	#N/A
Fault Well 7	71.2	99.97	Ringold LM	#N/A
Fault Well 8	116.44	122.53	Basalt	#N/A
Fault Well 8	101.19	116.43	Ringold A	#N/A
Fault Well 8	74.71	101.19	Ringold LM	#N/A
Fault Well 9	117.96	124.05	Basalt	#N/A
Fault Well 9	107.6	117.96	Ringold A	#N/A
Fault Well 9	84.4	107.59	Ringold LM	#N/A
H_U1_Pwell1	0	98.52	Hanford	#N/A
H_U1_Pwell10	0	51.82	Hanford	#N/A
H_U1_Pwell11	0	58.08	Hanford	#N/A
H_U1_Pwell12	0	50.96	Hanford	#N/A
H_U1_Pwell2	0	102.77	Hanford	#N/A
H_U1_Pwell3	0	111.33	Hanford	#N/A
H_U1_Pwell4	0	109.6	Hanford	#N/A
H_U1_Pwell5	0	89.97	Hanford	#N/A
H_U1_Pwell6	0	48.59	Hanford	#N/A
H_U1_Pwell7	0	63.82	Hanford	#N/A
H_U1_Pwell8	0	47.37	Hanford	#N/A
H_U1_Pwell9	0	48.16	Hanford	#N/A
ra_control1	0	46	Hanford	#N/A
ra_control10	0	61	Hanford	#N/A
ra_control11	0	68	Hanford	#N/A
ra_control12	0	72	Hanford	#N/A
ra_control13	0	69	Hanford	#N/A
ra_control14	0	60	Hanford	#N/A
ra_control15	0	41	Hanford	#N/A
ra_control16	0	11	Hanford	#N/A
ra_control2	0	47	Hanford	#N/A
ra_control20	0	57	Hanford	#N/A
ra_control21	0	58	Hanford	#N/A
ra_control22	0	54	Hanford	#N/A
ra_control23	0	57	Hanford	#N/A
ra_control24	0	59	Hanford	#N/A

Well Name	From	To	Lithology	Well Depth
ra_control25	0	10	Hanford	#N/A
ra_control27	0	152	Hanford	#N/A
ra_control28	0	95	Hanford	#N/A
ra_control29	0	116	Hanford	#N/A
ra_control3	0	51	Hanford	#N/A
ra_control30	0	41	Hanford	#N/A
ra_control31	0	50	Hanford	#N/A
ra_control32	0	50	Hanford	#N/A
ra_control33	0	50	Hanford	#N/A
ra_control4	0	54	Hanford	#N/A
ra_control5	0	55	Hanford	#N/A
ra_control7	0	27	Hanford	#N/A
ra_control8	0	23	Hanford	#N/A
ra_control9	0	18	Hanford	#N/A
rlm_control10	0	115	Hanford	#N/A
rlm_control11	0	115	Hanford	#N/A
rlm_control12	0	110	Hanford	#N/A
rlm_control13	0	110	Hanford	#N/A
rlm_control14	0	110	Hanford	#N/A
rlm_control15	0	110	Hanford	#N/A
rlm_control16	0	46	Hanford	#N/A
rlm_control16	46	120	Ringold A	#N/A
rlm_control17	0	98	Hanford	#N/A
rlm_control17	98	100	Ringold A	#N/A
rlm_control18	0	98	Hanford	#N/A
rlm_control18	98	100	Ringold A	#N/A
rlm_control3	0	77	Hanford	#N/A
rlm_control3	77	120	Ringold A	#N/A
rlm_control4	0	73	Hanford	#N/A
rlm_control4	73	120	Ringold A	#N/A
rlm_control5	0	72	Hanford	#N/A
rlm_control5	72	120	Ringold A	#N/A
rlm_control6	0	70	Hanford	#N/A
rlm_control6	70	120	Ringold A	#N/A
rlm_control7	0	68	Hanford	#N/A
rlm_control7	86	120	Ringold A	#N/A
rtf_control1	0	85	Hanford	#N/A
rtf_control2	0	85	Hanford	#N/A
rtf_control3	0	85	Hanford	#N/A

Well Name	From	To	Lithology	Well Depth
rtf_control4	0	85	Hanford	#N/A
699-43-91B	0	12.19	Hanford	0
699-43-91B	12.19	42.67	Cold Creek	0
699-43-91B	42.67	141.12	Ringold E	0
299-E28-19	0	96.01	Hanford	100.584
399-1-14B	0	14.325	Hanford	36.4236
399-1-14B	14.325	33.069	Ringold E	36.4236
399-1-14B	33.069	36.4236	Ringold LM	36.4236
399-1-4	0	13.715	Hanford	30.7848
399-1-4	13.715	30.7848	Ringold E	30.7848
699-17-26G	0	9.144	Hanford	235.6104
699-17-26G	9.144	64.481	Cold Creek	235.6104
699-17-26G	64.481	81.682	Rtf	235.6104
699-17-26G	81.682	129.838	Ringold E	235.6104
699-17-26G	129.838	199.025	Ringold LM	235.6104
699-17-26G	199.025	220.299	Ringold A	235.6104
699-20-E12	0	18.897	Hanford	108.8136
699-20-E12	18.897	21.945	Cold Creek	108.8136
699-20-E12	21.9456	29.595	Rtf	108.8136
699-20-E12	29.595	76.806	Ringold E	108.8136
699-20-E12	76.806	99.665	Ringold LM	108.8136
699-24-46	184.41	203.39	Ringold A	207.8736
699-24-46	203.39	207.8736	Basalt	207.8736
699-32-26	76.92047	132.58	Ringold E	217.932
699-32-26	132.58	184.2105	Ringold LM	217.932
699-32-62	2.13	67.3	Hanford	152.7048
699-32-62	67.3	121.8	Ringold E	152.7048
699-32-62	121.8	142.3	Ringold LM	152.7048
699-32-62	142.3	152.7	Ringold A	152.7048
699-36-E3	35.85882	79.488	Ringold E	114.3
699-36-E3	79.488	96.586	Ringold LM	114.3
699-36-E3	96.586	98.08	Ringold A	114.3
699-36-E3	98.08	99.34282	Basalt	114.3
699-39-E2	0	12.19	Hanford	74.676
699-39-E2	12.19	38.098	Cold Creek	74.676
699-39-E2	38.098	45.71	Ringold LM	74.676
699-39-E2	45.71	56.385	Ringold A	74.676
699-39-E2	56.385	74.676	Basalt	74.676
699-40-13	0	28.955	Hanford	153.6192

Well Name	From	To	Lithology	Well Depth
699-40-13	28.955	47.4654	Cold Creek	153.6192
699-40-13	47.4654	55.776	Rtf	153.6192
699-40-13	55.776	85.34	Ringold E	153.6192
699-40-13	85.34	113.99	Ringold LM	153.6192
699-40-13	113.99	147.821	Ringold A	153.6192
699-40-13	147.821	153.6192	Basalt	153.6192
699-41-31	24.38	32	Cold Creek	102.108
699-46-3	0	13.715	Hanford	98.4504
699-46-3	13.715	33.526	Rtf	98.4504
699-46-3	33.526	41.146	Ringold E	98.4504
699-46-3	41.146	92.045	Ringold LM	98.4504
699-46-3	92.045	98.45	Basalt	98.4504
699-S11-E12A	0	18.287	Hanford	85.9536
699-S11-E12A	18.287	35.05	Ringold E	85.9536
699-S11-E12A	35.05	64.005	Ringold LM	85.9536
699-S11-E12A	64.005	85.9569	Basalt	85.9536
699-S24-19	0	7.31	Hanford	27.1272
699-S24-19	7.31	14.02	Ringold E	27.1272
699-S24-19	14.02	113.1	Basalt	27.1272
699-S4-E16	0	7.62	Hanford	59.1312
699-S4-E16	7.62	45.718	Ringold E	59.1312
699-S4-E16	45.718	47.547	Ringold LM	59.1312
699-S8-19	0	34.14	Hanford	45.1104
699-S8-19	34.14	46.1104	Ringold E	45.1104
399-1-1	0	23.4696	Hanford	23.4696
399-1-1	23.4696	24.4696	Ringold E	23.4696
399-1-10A	0	1.524	Fill	13.716
399-1-10A	1.524	13.716	Hanford	13.716
399-1-10A	13.716	14.716	Ringold E	13.716
399-1-11	0	12.8016	Hanford	14.41704
399-1-11	12.8016	15.41704	Ringold E	14.41704
399-1-12	0	3.3528	Fill	19.812
399-1-12	3.3528	14.05128	Hanford	19.812
399-1-12	14.05128	20.812	Ringold E	19.812
399-1-14A	0	0.762	Fill	15.24
399-1-14A	0.762	14.3256	Hanford	15.24
399-1-16A	0	1.2192	Fill	14.478
399-1-16A	1.2192	14.478	Hanford	14.478
399-1-16A	14.478	15.478	Ringold E	14.478

Well Name	From	To	Lithology	Well Depth
399-1-17A	0	12.4968	Hanford	12.4968
399-1-17A	12.4968	13.4968	Ringold E	12.4968
399-1-24	0	13.8016	Hanford	12.8016
399-1-25	0	14.69136	Hanford	15.24
399-1-25	14.69136	16.24	Ringold E	15.24
399-1-26	0	14.7828	Hanford	15.3924
399-1-26	14.7828	16.3924	Ringold E	15.3924
399-1-27	0	14.6304	Hanford	15.24
399-1-27	14.6304	16.24	Ringold E	15.24
399-1-28	0	13.3444	Hanford	12.3444
399-1-29	0	14.9352	Hanford	15.5448
399-1-29	14.9352	16.5448	Ringold E	15.5448
399-1-30	0	15.17904	Hanford	15.3924
399-1-30	15.17904	16.3924	Ringold E	15.3924
399-1-31	0	14.7828	Hanford	15.5448
399-1-31	14.7828	16.5448	Ringold E	15.5448
399-1-32	0	14.7828	Hanford	15.3924
399-1-32	14.7828	16.3924	Ringold E	15.3924
399-1-33	0	13.1064	Hanford	14.0208
399-1-33	13.1064	15.0208	Ringold E	14.0208
399-1-34	0	11.8872	Hanford	15.3924
399-1-34	11.8872	16.3924	Ringold E	15.3924
399-1-35	0	11.8872	Hanford	14.9352
399-1-35	11.8872	15.9352	Ringold E	14.9352
399-1-36	0	14.478	Hanford	15.24
399-1-36	14.478	16.24	Ringold E	15.24
399-1-38	0	15.84376	Hanford	14.84376
399-3-1	0	2.4384	Fill	23.7744
399-3-1	2.4384	14.3256	Hanford	23.7744
399-3-1	14.3256	24.7744	Ringold E	23.7744
399-3-8	0	3.6576	Fill	14.6304
399-3-8	3.6576	14.6304	Hanford	14.6304
399-3-8	14.6304	15.6304	Ringold E	14.6304
399-4-10	0	11.5824	Hanford	18.288
399-4-10	11.5824	19.288	Ringold E	18.288
399-4-2	0	0.6096	Fill	12.4968
399-4-2	0.6096	12.8016	Hanford	12.4968
399-4-2	12.8016	13.4968	Ringold E	12.4968
399-4-8	0	21.9456	Hanford	21.9456

Well Name	From	To	Lithology	Well Depth
399-4-8	21.9456	22.9456	Ringold E	21.9456
399-4-9	0	19.812	Hanford	19.812
399-4-9	19.812	20.812	Ringold E	19.812
399-8-4	0	19.812	Hanford	19.812
699-20-E5P	0	30.1752	Hanford	142.0368
699-20-E5P	30.1752	92.0496	Ringold E	142.0368
699-20-E5P	92.0496	97.536	Ringold LM	142.0368
699-20-E5P	97.536	144.0368	Basalt	142.0368
699-26-15A	0	3.048	Fill	106.68
699-26-15A	3.048	32.004	Hanford	106.68
699-26-15A	32.004	107.68	Ringold E	106.68
699-2-6A	0	33.8328	Hanford	42.91584
699-2-6A	33.8328	43.91584	Ringold E	42.91584
699-2-7	0	37.1856	Hanford	60.96
699-3-45	0	39.9288	Hanford	53.34
699-3-45	39.9288	55.34	Basalt	53.34
699-48-18	0	0.6096	Fill	26.2128
699-48-18	0.6096	23.1648	Hanford	26.2128
699-48-18	23.1648	27.2128	Ringold E	26.2128
699-4-E6	0	1.524	Fill	28.956
699-4-E6	1.524	18.288	Hanford	28.956
699-4-E6	18.288	29.956	Ringold E	28.956
699-8-32	0	51.5112	Hanford	62.1792
699-8-32	51.5112	63.1792	Ringold E	62.1792
699-S12-3	0	1.524	Fill	33.528
699-S12-3	1.524	13.4112	Hanford	33.528
699-S12-3	13.4112	34.528	Ringold E	33.528
699-S19-11	0	28.956	Hanford	36.576
699-S19-11	28.956	37.576	Ringold E	36.576
699-S19-E14	0	3.59664	Fill	14.3256
699-S19-E14	3.59664	15.3256	Hanford	14.3256
699-S22-E9A	0	1.3716	Fill	13.62456
699-S22-E9A	1.3716	14.62456	Hanford	13.62456
699-S27-E14	45.72	52.816	Ringold LM	51.816
699-S27-E9C	0	0.6096	Fill	61.5696
699-S27-E9C	0.6096	14.3256	Hanford	61.5696
699-S27-E9C	14.3256	35.2044	Ringold E	61.5696
699-S27-E9C	35.2044	62.5696	Ringold LM	61.5696
699-S28-E12	0	13.716	Hanford	18.01368

Well Name	From	To	Lithology	Well Depth
699-S28-E12	13.716	19.01368	Ringold E	18.01368
699-S29-E16B	0	0.9144	Fill	36.1188
699-S29-E16B	0.9144	17.9832	Hanford	36.1188
699-S29-E16B	17.9832	30.48	Ringold E	36.1188
699-S29-E16B	30.48	37.1188	Ringold LM	36.1188
699-S6-E4A	0	24.384	Hanford	35.6616
699-S6-E4A	24.384	36.6616	Ringold E	35.6616
699-S6-E4B	0	21.6408	Hanford	30.48
699-S6-E4B	21.6408	31.48	Ringold E	30.48
699-S6-E4D	0	19.812	Hanford	43.2816
699-S6-E4D	19.812	44.2816	Ringold E	43.2816
699-S6-E4E	0	18.288	Hanford	36.576
699-S6-E4E	18.288	37.576	Ringold E	36.576
299-W18-23	54.1	77.724	Ringold E	77.724
299-W18-23	48	54.1	Cold Creek	77.724
299-W18-23	0	48	Hanford	77.724
299-W18-24	52.49	73.152	Ringold E	73.152
299-W18-24	47.91	52.49	Rtf	73.152
299-W18-24	40.29	47.91	Cold Creek	73.152
299-W18-24	0	40.29	Hanford	73.152
299-W18-247	39.89	69.1896	Cold Creek	69.1896
299-W18-247	0	2.99	Fill	69.1896
299-W18-247	2.99	39.89	Hanford	69.1896
299-W22-1	45.72	93.27	Ringold E	93.2688
299-W7-2	24.9	25.394	Rtf	71.9328
299-W7-2	9.6	24.9	Cold Creek	71.9328
299-W7-2	0	9.6	Hanford	71.9328
299-W7-4	29.5	71.628	Ringold E	71.628
299-W7-4	21.79	29.5	Rtf	71.628
299-W7-4	14.2	21.79	Cold Creek	71.628
299-W7-4	0	14.2	Hanford	71.628
299-W7-5	21.92	69.7992	Ringold E	69.7992
299-W7-5	9.69	21.92	Cold Creek	69.7992
299-W7-5	0	9.69	Hanford	69.7992
299-W7-6	21.79	74.00544	Ringold E	74.00544
299-W7-6	5	21.79	Cold Creek	74.00544
299-W7-6	0	5	Hanford	74.00544
699-32-42	36.58	39.01	Fill	39.0144
299-W15-15	53.033	77.724	Ringold E	77.724

Well Name	From	To	Lithology	Well Depth
299-W15-15	42.365	53.033	Cold Creek	77.724
299-W15-15	0	42.365	Hanford	77.724
699-2-33A	92.54452	128.01	Ringold LM	142.0368
699-2-33A	128.01	143.03	Ringold A	142.0368
699-2-E19	73.6032	87.778	Ringold A	87.7824
699-49-55B	32	41.15	Ringold A	69.1896
699-S4-E16	47.547	59.13	Basalt	59.1312
399-1-14A	14.3256	16.24	Ringold E	15.24
399-8-4	19.812	20.812	Ringold E	19.812
299-W18-21	43.1	69.1896	Ringold E	69.1896
299-W18-21	35.66	43.1	Cold Creek	69.1896
299-W21-1	68.61	107.2896	Ringold E	107.2896
299-W21-1	52.21	68.61	Cold Creek	107.2896
299-W21-1	0	52.21	Hanford	107.2896
399-1-5	0	1.83	Fill	13.716
399-1-5	1.83	13.11	Hanford	13.716
399-1-5	13.11	13.716	Ringold E	13.716
399-3-11	18.282	21.9456	Ringold E	21.9456
399-3-32	0	3.01	Fill	19.2024
399-3-32	3.01	17.063	Hanford	19.2024
399-3-32	17.063	19.2024	Ringold E	19.2024
399-3-9	0	6.1	Fill	21.336
399-3-9	6.1	16.453	Hanford	21.336
399-3-9	16.453	21.336	Ringold E	21.336
399-4-14	0	2.29	Fill	41.4528
399-4-14	2.29	20.416	Hanford	41.4528
399-4-14	39.618	41.4528	Ringold LM	41.4528
399-4-7	0	5.79	Fill	47.244
399-4-7	5.79	25.91	Hanford	47.244
399-4-7	25.91	35.97	Ringold E	47.244
399-4-7	35.97	47.244	Ringold LM	47.244
399-5-1	0	0.61	Fill	31.0896
399-5-1	0.61	18.9	Hanford	31.0896
699-20-18A	188.7093	207.264	Basalt	207.264
699-43-9	0	3.048	Fill	67.056
699-43-9	3.048	28.96	Hanford	67.056
699-43-9	28.96	50.29	Cold Creek	67.056
699-43-9	50.29	67.056	Basalt	67.056
699-47-92A	225.55	230.13	Basalt	230.124

Well Name	From	To	Lithology	Well Depth
699-47-92A	53.95	82.21	Cold Creek	230.124
699-47-92A	0	53.95	Hanford	230.124
699-47-92A	195.38	225.55	Ringold A	230.124
699-47-92A	83.21	168.25	Ringold E	230.124
699-47-92A	168.25	195.38	Ringold LM	230.124
699-S29-E12	13.72	24.384	Ringold E	24.384
699-S29-E12	0	13.72	Hanford	24.384
699-S30-E15A	19.806	24.384	Ringold E	24.384
699-S3-25	0	9.14	Fill	53.0352
699-S27-E14	0	18.9	Hanford	51.816
699-S27-E14	18.9	45.72	Ringold E	51.816
699-20-18A	67.70332	110.3753	Ringold E	207.264
699-20-18A	110.3753	172.8593	Ringold LM	207.264
699-S27-E9C	62.5696	63.5696	Basalt	61.5696
399-3-3	0	16.458	Hanford	53.34
399-3-3	16.458	39.622	Ringold E	53.34
399-3-3	39.622	53.34	Ringold LM	53.34
399-4-5	0	25.907	Hanford	59.7408
399-4-5	25.907	46.327	Ringold E	59.7408
399-4-5	46.327	59.89	Ringold LM	59.7408
399-4-5	59.89	60.1	Basalt	59.7408
699-18-21	68.572	75.282	Rtf	230.124
699-18-21	75.282	128.01	Ringold E	230.124
699-18-21	128.01	195.062	Ringold LM	230.124
699-18-21	195.062	213.352	Ringold A	230.124
699-35-6	0	47.242	Hanford	161.544
699-35-6	47.242	60.957	Rtf	161.544
699-35-6	60.957	77.72	Ringold E	161.544
699-35-6	77.72	118.866	Ringold LM	161.544
699-35-6	153.393	161.544	Basalt	161.544
699-S3-25	9.14	41.451	Hanford	53.0352
699-S3-25	41.451	53.033	Ringold E	53.0352
699-35-6	118.866	152.393	Ringold A	161.544
399-2-23	0	4.88	Fill	18.288
399-2-23	4.88	16.46	Hanford	18.288
399-2-23	16.46	18.288	Ringold E	18.288
399-2-27	0	3.05	Fill	19.3548
399-2-27	3.05	15.54	Hanford	19.3548
399-2-27	15.54	19.3548	Ringold E	19.3548

Well Name	From	To	Lithology	Well Depth
399-3-10	0	16.76	Hanford	20.4216
399-3-10	16.76	20.4216	Ringold E	20.4216
399-3-19	0	3.96	Fill	31.5468
399-3-19	3.96	25.3	Hanford	31.5468
399-3-2	0	3.05	Fill	31.0896
399-3-2	3.05	14.02	Hanford	31.0896
399-3-2	14.02	27.43	Ringold E	31.0896
399-3-2	27.43	31.0896	Ringold LM	31.0896
399-4-1	19.501	30.7848	Ringold E	30.7848
399-6-1	0	0.61	Fill	30.7848
399-6-1	0.61	17.07	Hanford	30.7848
399-6-1	17.07	30.7848	Ringold E	30.7848
399-1-13B	35.351	37.73424	Ringold LM	37.73424
399-1-15	0	1.37	Fill	14.6304
399-1-15	1.37	13.406	Hanford	14.6304
399-1-15	13.406	14.6304	Ringold E	14.6304
399-1-2	18.343	30.7848	Ringold E	30.7848
399-1-21B	32.913	35.052	Ringold LM	35.052
399-1-23	0	0.304	Fill	35.3568
399-1-23	0.304	16.149	Hanford	35.3568
399-1-23	30.474	35.3568	Ringold LM	35.3568
399-1-3	0	3.35	Fill	31.242
399-1-3	3.35	13.405	Hanford	31.242
399-1-3	13.405	32.242	Ringold E	31.242
399-1-7	0	15.85	Hanford	22.86
399-1-7	15.85	22.86	Ringold E	22.86
399-2-1	14.33	23.4696	Ringold E	23.4696
399-2-10	0	3.05	Fill	20.574
399-2-10	3.05	18.13	Hanford	20.574
399-2-10	18.13	20.574	Ringold E	20.574
399-2-14	0	3.05	Fill	18.288
399-2-14	3.05	16.606	Hanford	18.288
399-2-14	16.606	18.288	Ringold E	18.288
399-2-17	0	3.05	Fill	19.2024
399-2-17	3.05	16.911	Hanford	19.2024
399-2-17	16.911	19.2024	Ringold E	19.2024
399-2-2	18.282	19.812	Ringold E	19.812
399-2-28	0	2.44	Fill	19.812
399-2-28	2.44	17.216	Hanford	19.812

Well Name	From	To	Lithology	Well Depth
399-2-28	17.216	19.812	Ringold E	19.812
399-2-3	0	18.29	Hanford	19.812
399-2-3	18.29	19.812	Ringold E	19.812
399-2-8	0	2.74	Fill	18.288
399-2-8	2.74	16.149	Hanford	18.288
399-2-8	16.149	18.288	Ringold E	18.288
399-2-9	0	2.74	Fill	19.812
399-2-9	2.74	18.13	Hanford	19.812
399-2-9	18.13	19.812	Ringold E	19.812
399-8-1	0	3.05	Fill	31.0896
399-8-1	3.05	20.72	Hanford	31.0896
399-8-1	20.72	31.0896	Ringold E	31.0896
399-8-3	0	2.13	Fill	31.0896
399-8-3	26.817	31.0896	Ringold LM	31.0896
699-S19-E13	0	4.57	Fill	24.384
699-S19-E13	4.57	23.16	Hanford	24.384
699-S19-E13	23.16	24.384	Ringold E	24.384
699-S20-E10	0	16.36	Hanford	19.6596
699-S20-E10	16.36	19.6596	Ringold E	19.6596
699-2-7	37.1856	61.96	Ringold E	60.96
399-3-19	25.3	31.5468	Ringold E	31.5468
399-8-3	2.13	17.977	Hanford	31.0896
699-41-20	0	4.57	Fill	151.4856
699-41-20	4.57	24.38	Hanford	151.4856
699-41-20	24.38	51.82	Cold Creek	151.4856
699-41-20	51.82	112.78	Ringold E	151.4856
699-41-20	112.78	129.54	Ringold LM	151.4856
699-41-20	129.54	141.73	Ringold A	151.4856
699-41-20	141.73	151.4856	Basalt	151.4856
699-46-21B	0	23.1	Hanford	102.7176
699-46-21B	23.1	36.79	Rtf	102.7176
699-46-21B	36.79	79.8	Ringold E	102.7176
699-46-21B	79.8	102.7176	Ringold LM	102.7176
699-31-23	0	18.29	Hanford	90.8304
699-31-23	18.29	61.53112	Cold Creek	90.8304
699-51-75	80.77	115.83	Ringold A	116.4336
699-51-75	30.48	80.77	Ringold E	116.4336
699-47-60	83.56	87.48	Basalt	87.4776
699-47-60	68.88	83.56	Ringold A	87.4776

Well Name	From	To	Lithology	Well Depth
299-E33-339	67.6656	85.04	Cold Creek	0
299-E33-339	1.83	67.6656	Hanford	0
299-W15-49	39.0144	46.9392	Cold Creek	132.588
299-W15-49	0	39.0144	Hanford	132.588
299-W15-49	46.9392	50.9	Rtf	132.588
299-W22-85	39.0144	48.1584	Cold Creek	0
299-W22-85	1.52	39.0144	Hanford	0
299-W22-85	53.0352	79.27848	Ringold E	0
299-W22-85	48.1584	53.0352	Rtf	0
499-S1-7B	0	4.572	Fill	197.8152
499-S1-7B	4.572	45.72	Hanford	197.8152
499-S1-7B	45.72	143.256	Ringold E	197.8152
499-S1-7B	143.256	155.448	Ringold LM	197.8152
499-S1-7B	155.448	181.356	Ringold A	197.8152
499-S1-7B	181.356	182.356	Basalt	197.8152
699-10-30A	0	67.42176	Hanford	237.744
699-10-30A	67.42176	105.5218	Ringold E	237.744
699-10-30A	105.5218	122.3162	Ringold LM	237.744
699-10-30A	122.3162	154.3202	Ringold A	237.744
699-10-30A	154.3202	155.3202	Basalt	237.744
699-11-23A	0	13.716	Hanford	230.124
699-11-23A	13.716	70.104	Cold Creek	230.124
699-11-23A	70.104	141.732	Ringold E	230.124
699-11-23A	141.732	164.592	Ringold LM	230.124
699-11-23A	164.592	205.74	Ringold A	230.124
699-11-23A	205.74	206.74	Basalt	230.124
699-11-45A	0	51.816	Hanford	115.824
699-11-45A	51.816	68.58	Ringold E	115.824
699-11-45A	68.58	94.48	Ringold LM	115.824
699-11-45A	94.48	114.3	Ringold A	115.824
699-11-45A	114.3	115.3	Basalt	115.824
699-1-18	0	1.524	Fill	106.68
699-1-18	1.524	38.1	Hanford	106.68
699-1-18	38.1	106.68	Ringold E	106.68
699-11-E4E	0	33.528	Hanford	199.9488
699-11-E4E	33.528	99.06	Ringold E	199.9488
699-11-E4E	99.06	126.492	Ringold LM	199.9488
699-11-E4E	126.492	141.732	Ringold A	199.9488
699-11-E4E	141.732	199.9488	Basalt	199.9488

Well Name	From	To	Lithology	Well Depth
699-12-1A	0	18.16608	Hanford	257.8913
699-12-1A	18.16608	75.46848	Ringold E	257.8913
699-12-1A	75.46848	140.3604	Ringold LM	257.8913
699-12-1A	140.3604	152.2476	Ringold A	257.8913
699-12-1A	152.2476	257.848	Basalt	257.8913
699-12-4D	0	15.8496	Hanford	45.72
699-12-4D	15.8496	45.72	Ringold E	45.72
699-12-4D	45.72	46.72	Ringold LM	45.72
699-13-1A	0	20.574	Hanford	74.676
699-13-1A	20.574	74.676	Ringold E	74.676
699-13-1B	0	13.1064	Hanford	71.3232
699-13-1B	13.1064	71.3232	Ringold E	71.3232
699-13-26	0	6.096	Fill	249.936
699-13-26	6.096	35.052	Hanford	249.936
699-13-26	35.052	62.484	Cold Creek	249.936
699-13-26	62.484	80.772	Rtf	249.936
699-13-26	80.772	169.164	Ringold E	249.936
699-13-26	169.164	201.168	Ringold LM	249.936
699-13-26	201.168	225.552	Ringold A	249.936
699-13-26	225.552	249.936	Basalt	249.936
699-13-2B	0	27.432	Hanford	266.7
699-13-2B	27.432	36.576	Rtf	266.7
699-13-2B	36.576	88.392	Ringold E	266.7
699-13-2B	88.392	141.732	Ringold LM	266.7
699-13-2B	141.732	266.7	Ringold A	266.7
699-13-3A	0	15.24	Hanford	23.74392
699-13-3A	15.24	23.7744	Ringold E	23.74392
699-14-38	0	32.85744	Hanford	129.54
699-14-38	32.85744	53.85816	Ringold E	129.54
699-14-38	115.4582	127.955	Ringold A	129.54
699-14-E3E	0	32.004	Hanford	191.7192
699-14-E3E	32.004	38.1	Rtf	191.7192
699-14-E3E	38.1	86.868	Ringold E	191.7192
699-14-E3E	86.868	120.396	Ringold LM	191.7192
699-14-E3E	120.396	134.7216	Ringold A	191.7192
699-14-E3E	134.7216	191.7192	Basalt	191.7192
699-15-15A	0	45.72	Hanford	220.0656
699-15-15A	45.72	65.532	Cold Creek	220.0656
699-15-15A	65.532	77.724	Rtf	220.0656

Well Name	From	To	Lithology	Well Depth
699-15-15A	77.724	147.828	Ringold E	220.0656
699-15-15A	147.828	198.12	Ringold LM	220.0656
699-15-15A	198.12	220.0656	Ringold A	220.0656
699-15-26	0	4.572	Fill	106.68
699-15-26	4.572	38.1	Hanford	106.68
699-15-26	38.1	68.8848	Cold Creek	106.68
699-15-26	68.8848	85.344	Rtf	106.68
699-15-26	85.344	106.68	Ringold E	106.68
699-15-E13	0	1.8288	Fill	388.0104
699-15-E13	1.8288	21.0312	Hanford	388.0104
699-15-E13	21.0312	50.9016	Ringold E	388.0104
699-15-E13	50.9016	73.152	Ringold LM	388.0104
699-15-E13	73.152	91.98864	Ringold A	388.0104
699-15-E13	91.98864	388.0104	Basalt	388.0104
699-16-23	0	19.812	Hanford	240.792
699-16-23	19.812	72.26808	Cold Creek	240.792
699-16-23	72.26808	89.06256	Rtf	240.792
699-16-23	89.06256	136.276	Ringold E	240.792
699-16-23	136.276	201.4728	Ringold LM	240.792
699-16-23	201.4728	219.1817	Ringold A	240.792
699-16-23	219.1817	240.792	Basalt	240.792
699-16-30A	0	18.288	Hanford	277.368
699-16-30A	18.288	47.244	Cold Creek	277.368
699-16-30A	47.244	100.584	Ringold E	277.368
699-16-30A	263.652	277.368	Basalt	277.368
699-20-39	0	4.572	Fill	192.6336
699-20-39	4.572	33.528	Hanford	192.6336
699-20-39	33.528	48.768	Cold Creek	192.6336
699-20-39	48.768	102.169	Ringold E	192.6336
699-20-39	102.169	176.2658	Ringold LM	192.6336
699-20-39	176.2658	187.4825	Ringold A	192.6336
699-20-39	187.4825	193.6336	Basalt	192.6336
299-E13-20	124.968	143.56	Ringold LM	181.6608
299-E13-20	96.01	124.968	Ringold E	181.6608
299-E28-1	60.05	99.06	Cold Creek	99.06
299-W11-3	44.196	100.58	Ringold E	100.584
299-W11-6	51.82	94.1	Ringold E	95.0976
299-W22-89	47.5	101.3765	Ringold E	101.3765
299-W22-92	59.7	99.06	Ringold E	93.69552

Well Name	From	To	Lithology	Well Depth
299-W7-1	32.9184	43.5964	Rtf	74.676
299-W7-1	18.288	32.9184	Cold Creek	74.676
299-W7-1	0	18.288	Hanford	74.676
299-W7-1	43.5964	75.68	Ringold E	74.676
299-W8-1	21.9456	36.2712	Cold Creek	82.4484
299-W8-1	36.2712	46.3296	Rtf	82.4484
299-W8-1	46.3296	83.45	Ringold E	82.4484
299-W8-1	0	21.9456	Hanford	82.4484
399-5-1	18.9	33.0896	Ringold E	31.0896
699-28-40	114.91	136.2456	Ringold LM	143.256
699-28-40	136.2456	143.256	Ringold A	143.256
699-35-57	91.74	106.68	Ringold E	106.68
699-35-58	88.39	106.68	Ringold E	106.68
699-36-58A	95.1	110	Ringold E	109.728
699-36-58B	92.66	110	Ringold E	106.68
699-39-39	36.27	64.62	Ringold LM	64.6176
699-40-0	0	3.048	Fill	114.3
699-40-0	3.048	15.24	Hanford	114.3
699-40-0	15.24	21.336	Cold Creek	114.3
699-40-0	21.336	62.484	Rtf	114.3
699-40-0	62.484	80.772	Ringold E	114.3
699-40-0	80.772	96.012	Ringold LM	114.3
699-40-0	96.012	116.3	Basalt	114.3
699-40-2	0	32.3088	Hanford	123.444
699-40-2	32.3088	35.9664	Cold Creek	123.444
699-40-2	35.9664	47.244	Ringold E	123.444
699-42-21	0	18.288	Hanford	145.9992
699-42-21	18.288	35.9664	Cold Creek	145.9992
699-42-21	35.9664	99.06	Ringold E	145.9992
699-42-21	99.06	126.492	Ringold LM	145.9992
699-42-21	126.492	138.684	Ringold A	145.9992
699-42-21	138.684	147.9992	Basalt	145.9992
699-46-21C	0	22.86	Hanford	54.864
699-46-21C	22.86	35.9664	Rtf	54.864
699-46-21C	35.9664	56.864	Ringold E	54.864
699-48-71	51.82	93.97	Ringold E	92.964
699-55-65C	41.15	42.67	Ringold E	44.5008
299-W11-3	32	44.196	Cold Creek	100.584
299-W11-3	0.61	32	Hanford	100.584

Well Name	From	To	Lithology	Well Depth
699-14-38	127.955	129.54	Basalt	129.54
699-25-26	0	13.716	Hanford	208.788
699-25-26	13.716	59.7408	Cold Creek	208.788
699-25-26	59.7408	112.776	Ringold E	208.788
699-25-26	112.776	167.64	Ringold LM	208.788
699-25-26	167.64	185.928	Ringold A	208.788
699-25-26	185.928	185.9599	Basalt	208.788
699-16-30A	100.584	229.0877	Ringold LM	277.368
699-16-30A	229.0877	263.652	Ringold A	277.368
699-37-36	60.08	73.152	Ringold LM	131.064
699-37-36	73.152	128.02	Ringold A	131.064
699-40-1	40.94673	95.2195	Ringold LM	128.016
699-40-1	95.2195	128.016	Basalt	128.016
699-40-2	47.244	108.204	Ringold LM	123.444
699-40-2	108.204	123.444	Basalt	123.444
699-42-30	21.7862	40.2316	Cold Creek	141.4272
699-42-30	40.2316	80.4633	Ringold E	141.4272
699-42-30	80.4633	107.4352	Ringold LM	141.4272
699-42-30	126.3322	141.4272	Basalt	141.4272
699-49-57B	0	32.612	Hanford	70.22592
699-49-57B	32.612	49.53	cold Creek	70.22592
299-W9-2	55.5	99.06	Ringold E	99.06
299-E28-30	0	89.912	Hanford	114.4829
299-E28-30	89.912	111.5568	Ringold A	114.4829
699-14-38	53.85816	115.4582	Ringold LM	129.54

Attachment B

Geologic Unit Depth Changes for Model Depth Discrepancies of Greater than or Equal to One Meter

Comprehensive Tops Checks for CP_EXP Model:
- 0.25 m tolerance (1 m difference between model tops and Geocontacts DB based on CCU, RwIC and R/M)

- 299-E25-42
  - CCU diff = 1.0912; No other picks in geocon. DB.
    Replace with GCDB in LF lithology.
    * Model value matches last of GCDB pick. Not altered!
- 299-E25-46
  - CCU diff = 1.9106; Appears FS value is closer to CCU pick in GeoCDB but still off by 0.7658
    Replace with GCDB in LF lithology.
    * Model value matches GCDB best est. Not altered!
- 299-E33-338
  - CCU diff = 2.0486; checked model and adjacent wells have CCU top ~10 m deeper similar to current geocontacts depth. Replace with GCDB pick.
    * Model value matches GCDB best est. Not altered!

— 299-E33339;
CCV diff = 1.0354; same issue as E33-38.
✓ Replace with GCDB in LF lithology.

— 299-E33-50;
CCVdiff = 1.1952; Depth in model (currently) is exactly the same as GCDB depth.
✓ Leave current LF lithology depth in place.
* Using an alternative to best est. from GCDB. Not altered.

— 299-W11-37;
CCVdiff = 1.04; Depth in model (currently) is exactly the same as GCDB depth (as is Ruji).
✓ Leave current LF lithology depth in place.

— 299-W11-28;
CCVdiff = 1.0724, Exactly the same as W11-27 done.
✓ Leave current LF lithology depth in place.

— 299-W14-12;
CCVdiff = 1.0348, like 299-W11-28 done!
✓ Leave current LF lithology depth in place.

— 299-W15-38;
CCVdiff = 3.8102; like W14-12 above!
note.
✓ ~~Replace with GCDB in LF lithology~~
= GCDB. Not altered

- 299-W15-49: see previous entry!
  - CCU diff: 13.8964;
    ✓ Replace with Geocontract DB in LF!
    * changed values to best est.
- 299-W18-27:
  - CCU diff: 1.0032; see above
    see above
- 299-W18-29:
  - CCU diff: 1.0576; see above
    see above
- 299-W18-30:
  - CCU diff: 1.0275; see above
    see above
- 299-W22-1:
  - CCU diff: 12.5836; GCDB value (best est.) is much better than in model. GCDB has 2 best estimates. Will choose one for consistency:
    ✓ Replace with Geocontract DB in LF!
    * best est in GCDB used!
- 299-W22-85
  - CCU diff: 1.3266; see W18-30 et al.
    ~~see W18-30 et al.~~
    * ✓ changed to GCDB best est.

over ⇒

• Remember to convert column AC to meters.

— 299-W23-15
• CCU diff = 1.0378, see above!
see above!

— 299-W26-12
• CCU diff = 1.0404 see above! Not in model!
see above!

— 299-W6-3
• CCU diff = 1.0072 see above!
see above! (GCDB has RIM but model doesn't.)

— 299-W7-4
• CCU diff = 9.5378; GCDB much closer to FS value.
Replace with GCDB in LF lithology.
* model corresponds with GCDB Thorne 06, unchanged

— 699-30-39
• CCU diff = 1.007; CCU — same as in GCDB
Rwie — actually in model is 49.654
but in GCDB = 48.7680.
Replace with GCDB in LF lithology;
* used Hindsey 1995 from GCDB!
used full CCU and Rwie from Jindrich 95
but used RIM, Rwia + TOB from
Thorne 06.

• 299-E28-30 Ringold unit A top adjusted 89.912 m on 06-26-2014.

Attachment C

Software Installation and Checkout Form for Leapfrog Hydro®

CHPRC SOFTWARE INSTALLATION AND CHECKOUT FORM

Software Owner Instructions:
Complete Fields 1-13, then run test cases in Field 14. Compare test case results listed in Field 15 to corresponding Test Report outputs. If results are the same, sign and date Field 19. If not, resolve differences and repeat above steps.

Software Subject Matter Expert Instructions:
Assign test personnel. Approve the installation of the code by signing and dating Field 21, then maintain form as part of the software support documentation.

GENERAL INFORMATION:

1. Software Name: Leapfrog Hydro Software Version No.: 2.1.1

EXECUTABLE INFORMATION:

2. Executable Name (include path):

   C:\Program Files\ARANZ Geo\Leapfrog Hydro 2.1\bin\Hydro.exe

3. Executable Size (bytes):

COMPILATION INFORMATION:

4. Hardware System (i.e., property number or ID):

   Vendor Supplied

5. Operating System (include version number):

   Vendor Supplied

INSTALLATION AND CHECKOUT INFORMATION:

6. Hardware System (i.e., property number or ID):

   Intera 0474

7. Operating System (include version number):

   Windows 7 Professional

8. Open Problem Report? ◉ No ○ Yes PR/CR No.

TEST CASE INFORMATION:

9. Directory/Path:

   \\BLUE\Files\scratch\LeapfrogTests

10. Procedure(s):

    CHPRC-01754 Rev. 0, Leapfrog Hydro Software Test Plan

11. Libraries:

    N/A

12. Input Files:

    Per CHPRC-01754

13. Output Files:

    Per CHPRC-01754

14. Test Cases:

    Vendor Installation Package, TC1, TC2, TC3, TC4, TC5

15. Test Case Results:

    All Pass

16. Test Performed By:

17. Test Results: ◉ Satisfactory, Accepted for Use ○ Unsatisfactory

18. Disposition (include HISI update):

    Accepted ADDED TO HISI –

CHPRC SOFTWARE INSTALLATION AND CHECKOUT FORM (continued)

1. Software Name: Leapfrog Hydro — Software Version No.: 2.1.1

Prepared By:

19.	William E. Nichols	22 MAY 2014
Software Owner (Signature)	Print	Date

20. Test Personnel:

	Travis Hammond	22 May 2014
Sign	Print	Date
Sign	Print	Date
Sign	Print	Date

Approved By:

21. N/R	(PER SOFTWARE MANAGEMENT PLAN)	
Software SME (Signature)	Print	Date

A-6005-149 (REV 0)