

**TOTAL LENGTH**

CASING AND SCREEN (ft) 871.49

**DEPTH TO WATER**

FOLLOWING INSTALLATION (ft bgs) 831.30 (11/16/09)

**DIAMETER OF BOREHOLE**

17.875 (in) FROM 0 TO 61.4 (ft bgs)  
17.0 (in) FROM 61.4 TO 1035 (ft bgs)  
9.875 (in) FROM 1035 TO 1350.5 (ft bgs)

**SURFACE COMPLETION INFORMATION**

PROTECTIVE CASING  
 TYPE STEEL SIZE 10.75 (in)  
 PAD AND PROTECTIVE POSTS INSTALLED XXXXXX  
 SURFACE SEAL AND PAD  
 CHECK FOR SETTLEMENT XXXXXX  
 PAD MATERIAL REINFORCED CONCRETE ~3500 psi  
 REINFORCED REBAR WITH 1/8-in WIRE MESH  
 PAD DIMENSIONS (ft) 10.0 (L) 10.0 (W) 0.5 (H)

**SURFACE SEAL** 3.0 TO 73.0 (ft bgs)

**HYDRATED BENTONITE CHIPS** 73.0 TO 832.0 (ft bgs)

**FINE SAND COLLAR** 832.0 TO 835.0 (ft bgs)

**FILTER PACK** 835.0 TO 866.0 (ft bgs)

**SCREENED INTERVAL** 840.0 TO 860.6 (ft bgs)

**BOTTOM OF CASING** 865.5 (ft bgs)

**PURE BENTONITE SEAL SLOUGH** 866.0 TO 890.0 (ft bgs)

**12-in ID STEEL CASING SLOUGH** 900.0 TO 1040.0 (ft bgs)

**BENTONITE SEAL** 900.0 TO 1284.0 (ft bgs)

**STAINLESS STEEL CENTRALIZERS USED**  
 YES AT 839.5 & 861.0 (ft bgs)

**SLOUGH** 1284.0 TO 1350.5 (ft bgs)

**BOTTOM OF BORING** 1350.5 (ft bgs)

LOCKING COVER

**ELEVATIONS (ft amsl)**

WELL CASING TBD  
 PROTECTIVE CASING TBD  
 GROUND SURFACE TBD  
 MONUMENT MARKER TBD

SLOPED CONCRETE SURFACE COMPLETION PAD

**SURFACE SEAL GROUT FORMULA (wt %)**  
 PORTLAND CEMENT (1) 94 LB BAG MIXED WITH (1) IDP-381 2 LB BAG  
 QUANTITY USED 355.7 ft<sup>3</sup>  
 CALCULATED VOLUME 180.4 ft<sup>3</sup>

**TYPE OF CASING**  
 MATERIAL STAINLESS STEEL  
 ID (in) 5.047 OD (in) 5.563  
 JOINT TYPE THREADED AND COUPLED

**HYDRATED 0.375-in BENTONITE CHIP SEAL**  
 QUANTITY USED 1033.4 ft<sup>3</sup>  
 CALCULATED VOLUME 1044.4 ft<sup>3</sup>

**FINE SAND COLLAR**  
 SIZE/TYPE 20/40  
 QUANTITY USED 4.0 ft<sup>3</sup>  
 CALCULATED VOLUME 1.9 ft<sup>3</sup>

**TYPE OF SCREEN(S)**  
 MATERIAL STAINLESS STEEL  
 ID (in) 5.047 OD (in) 5.563  
 SLOT SIZE (in) 0.020  
 JOINT TYPE THREADED AND COUPLED

**FILTER PACK**  
 SIZE/TYPE 10/20  
 QUANTITY USED 50.0 ft<sup>3</sup>  
 CALCULATED VOLUME 48.2 ft<sup>3</sup>

**PURE BENTONITE SEAL 0.375-in BENTONITE**  
 QUANTITY USED 32.2 ft<sup>3</sup>  
 CALCULATED VOLUME 29.6 ft<sup>3</sup>

**BENTONITE SEAL 0.375-in BENTONITE**  
 QUANTITY USED 366.1 ft<sup>3</sup>  
 CALCULATED VOLUME 343.2 ft<sup>3</sup>

**WELL DEVELOPMENT BEGAN**  
 Date 11-16-09 Time 0930  
**WELL DEVELOPMENT FINISHED**  
 Date 11-24-09 Time 1245

**DEVELOPMENT METHOD**  
 Swabbing  Bailing  
 Pumping  
 Total Purge Volume 2633.85 gal

**PARAMETER MEASUREMENTS**  
 pH 7.70  
 Temperature 14.42 °C  
 Specific Conductance 176.0 µS/cm  
 Turbidity 17.6 NTU

**WELL COMPLETION BEGAN**  
 Date 10-27-09 Time 0807  
**WELL COMPLETION FINISHED**  
 Date 11-15-09 Time 0750



**R-47i WELL CONSTRUCTION DIAGRAM (AS BUILT)**

TA-14

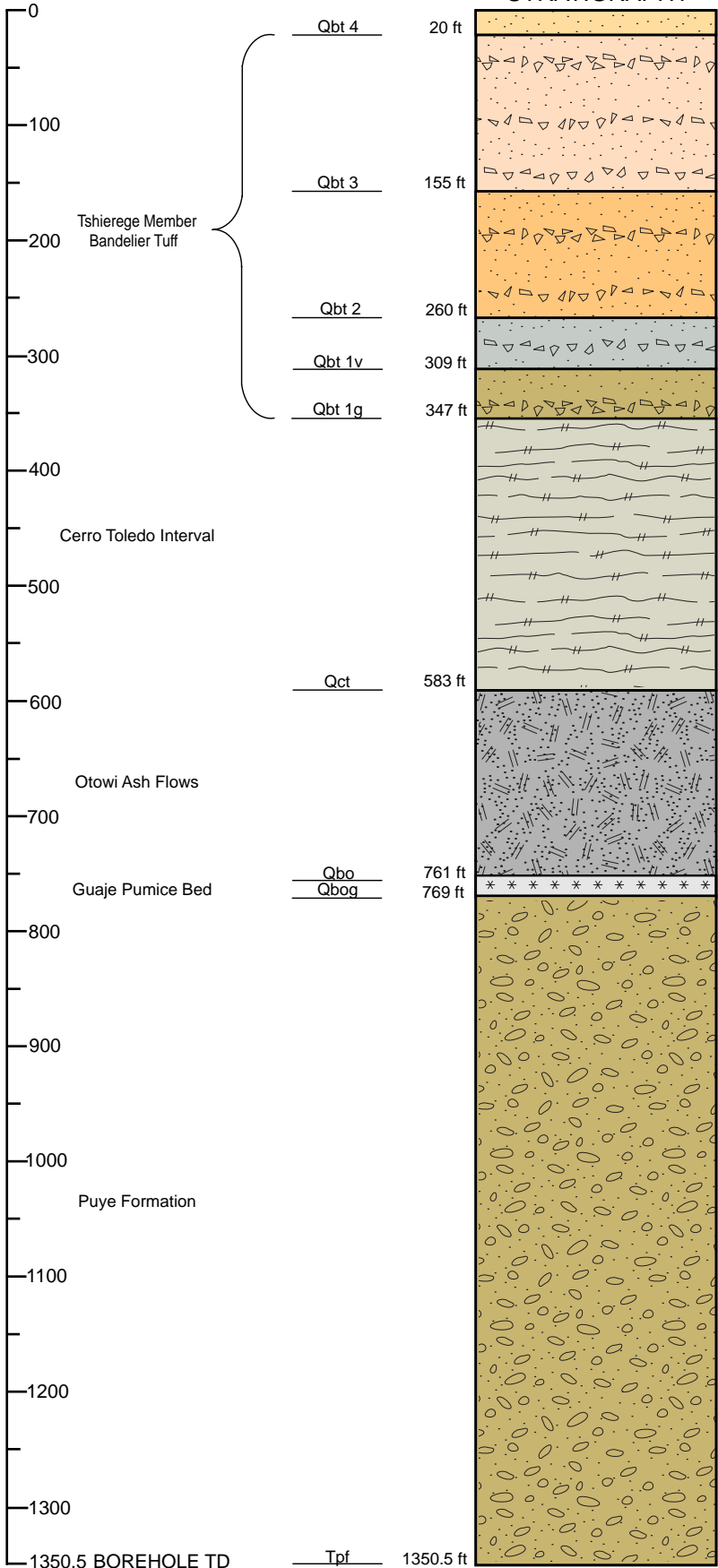
Los Alamos National Laboratory  
 Los Alamos, New Mexico

**FACT SHEET**

NOT TO SCALE

Depth (ft bgs)

**STRATIGRAPHY**



**DRILLING INFORMATION**

**DRILLING COMPANY/PERSONNEL:**

Layne Christensen Company  
H. Waddell, R. Wall

**DRILL RIG:** Schramm T130XD

**DRILLING METHOD:**

- AIR ROTARY
- DUAL ROTARY

**DRILLING FLUID TYPE**

- |   |   |
|---|---|
| 0.0 - 1175.0 ft bgs                             | 1175.0 - 1350.5 ft bgs                    |
| <input checked="" type="checkbox"/> WATER       | <input checked="" type="checkbox"/> WATER |
| <input checked="" type="checkbox"/> AIR         | <input checked="" type="checkbox"/> AIR   |
| <input checked="" type="checkbox"/> AQF-2 FOAM™ |   |

**DRILLING START/FINISH:**

DATE: 06/23/09 TIME: 1133  
DATE: 09/04/09 TIME: 1610

▼ 829.56 ft bgs (11/07/09)  
(prior to well installation)

