

TOTAL LENGTH OF CASING AND SCREEN (FT) 633.1  
 DEPTH TO WATER FOLLOWING INSTALLATION (FT BGS) 616.4 (10/17/09)  
 DIAMETER OF BOREHOLE  
 16 (IN) FROM 0 TO 351.6 (FT BGS)  
 12 (IN) FROM 351.6 TO 632.7 (FT BGS)

ELEVATIONS (FT AMSL)  
 WELL CAP TBD  
 PROTECTIVE CASING TBD  
 GROUND SURFACE TBD  
 MONUMENT MARKER TBD

**SURFACE COMPLETION**

PROTECTIVE CASING  
 TYPE STEEL SIZE (IN) 10  
 PROTECTIVE POSTS INSTALLED YES  
 SURFACE SEAL AND PAD  
 CHECK FOR SETTLEMENT YES  
 PAD MATERIAL CONCRETE  
 REINFORCED MESH  
 PAD DIMENSIONS (FT) 10 (L) 10 (W) 0.5 (H)

**UPPER SURFACE SEAL** 3.0 TO 250.1 (FT BGS)

**BENTONITE SEAL** 250.1 TO 348.2 (FT BGS)

**LOWER SURFACE SEAL** 348.2 TO 559.2 (FT BGS)

**BENTONITE SEAL** 559.2 TO 612.0 (FT BGS)

**FINE SAND COLLAR** 612.0 TO 614.0 (FT BGS)

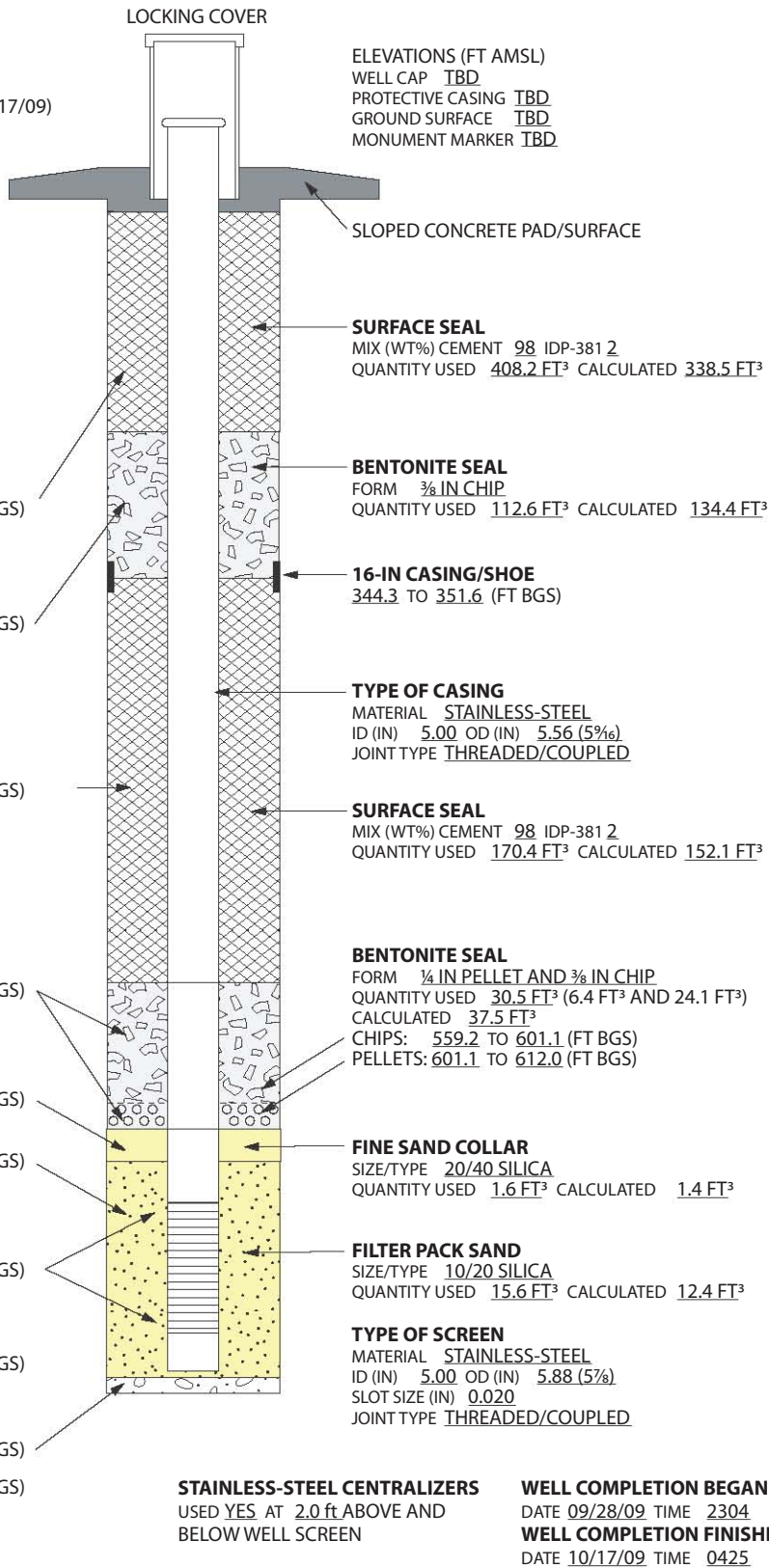
**FILTER PACK** 614.0 TO 631.2 (FT BGS)

**SCREENED INTERVAL** 619.0 TO 629.0 (FT BGS)

**BOTTOM OF CASING** 630.2 (FT BGS)

**SLOUGH** 631.2 TO 633.0 (FT BGS)

**BOTTOM OF BORING** 633.0 (FT BGS)



**SURFACE SEAL**  
 MIX (WT%) CEMENT 98 IDP-381 2  
 QUANTITY USED 408.2 FT<sup>3</sup> CALCULATED 338.5 FT<sup>3</sup>

**BENTONITE SEAL**  
 FORM 3/8 IN CHIP  
 QUANTITY USED 112.6 FT<sup>3</sup> CALCULATED 134.4 FT<sup>3</sup>

**16-IN CASING/SHOE**  
344.3 TO 351.6 (FT BGS)

**TYPE OF CASING**  
 MATERIAL STAINLESS-STEEL  
 ID (IN) 5.00 OD (IN) 5.56 (5<sup>9</sup>/<sub>16</sub>)  
 JOINT TYPE THREADED/COUPLED

**SURFACE SEAL**  
 MIX (WT%) CEMENT 98 IDP-381 2  
 QUANTITY USED 170.4 FT<sup>3</sup> CALCULATED 152.1 FT<sup>3</sup>

**BENTONITE SEAL**  
 FORM 1/4 IN PELLET AND 3/8 IN CHIP  
 QUANTITY USED 30.5 FT<sup>3</sup> (6.4 FT<sup>3</sup> AND 24.1 FT<sup>3</sup>)  
 CALCULATED 37.5 FT<sup>3</sup>  
 CHIPS: 559.2 TO 601.1 (FT BGS)  
 PELLETS: 601.1 TO 612.0 (FT BGS)

**FINE SAND COLLAR**  
 SIZE/TYPE 20/40 SILICA  
 QUANTITY USED 1.6 FT<sup>3</sup> CALCULATED 1.4 FT<sup>3</sup>

**FILTER PACK SAND**  
 SIZE/TYPE 10/20 SILICA  
 QUANTITY USED 15.6 FT<sup>3</sup> CALCULATED 12.4 FT<sup>3</sup>

**TYPE OF SCREEN**  
 MATERIAL STAINLESS-STEEL  
 ID (IN) 5.00 OD (IN) 5.88 (5<sup>7</sup>/<sub>8</sub>)  
 SLOT SIZE (IN) 0.020  
 JOINT TYPE THREADED/COUPLED

**STAINLESS-STEEL CENTRALIZERS**  
 USED YES AT 2.0 ft ABOVE AND  
 BELOW WELL SCREEN

**WELL COMPLETION BEGAN**  
 DATE 09/28/09 TIME 2304  
**WELL COMPLETION FINISHED**  
 DATE 10/17/09 TIME 0425

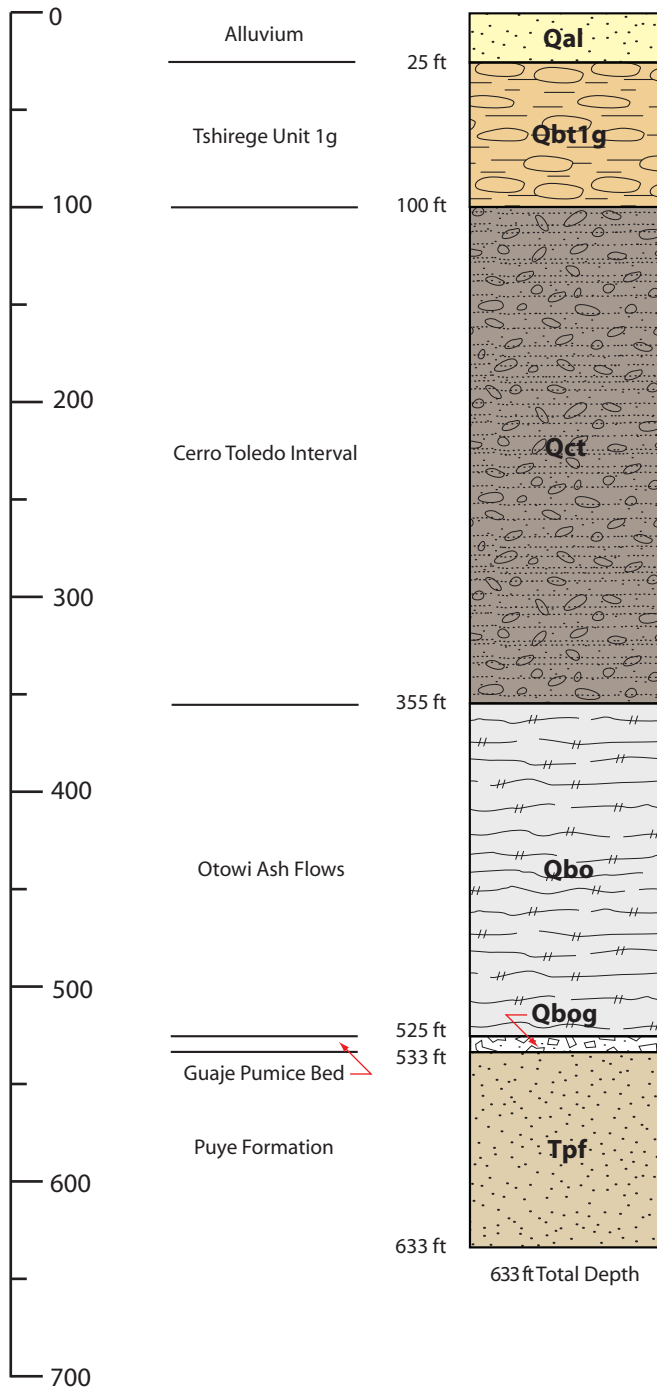


Drafted By: TPMC  
 Project Number: 80004  
 Date: November 09, 2009  
 File Name: R27i\_AsBuilt\_WellConstruction

**WELL R-27i AS-BUILT WELL CONSTRUCTION**  
 Water Canyon  
 Los Alamos National Laboratory  
 Los Alamos, New Mexico

**Fact Sheet**  
 NOT TO SCALE

DEPTH (FT BGS)



**DRILLING INFORMATION**

**DRILLING COMPANY/PERSONNEL:**

Boart Longyear  
G. Burton, M. Cross (Drillers)

**DRILL RIG:** Foremost DR-24HD

**DRILLING METHOD:**

DUAL ROTARY

**DRILLING FLUID TYPE:**

0-507 ft bgs	507-633 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 FOAMING AGENT	

**DRILLING START/FINISH:**

DATE: 09/10/2009 TIME: 0116  
DATE: 09/24/2009 TIME: 2227

▼ 616.4 ft bgs 10/17/09  
after well installation



Drafted By: TPMC  
Project Number: 8000X

Date: November 09, 2009  
Filename: R27i\_Lithology\_FactSheet

**R-27i BOREHOLE STRATIGRAPHY**

Water Canyon (TA-39)  
Los Alamos National Laboratory  
Los Alamos, New Mexico

**FACT SHEET**  
NOT TO SCALE