

TA14



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National Nuclear Security Administration
Los Alamos Site Office, MS A316
Environmental Restoration Program
Los Alamos, New Mexico 87544
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Date: **DEC 17 2009**
Refer To: EP2009-0679

James Bearzi, Bureau Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6303

Subject: Notification of Completion of Well 47i and Submittal of the Well Completion Summary Fact Sheets for R-47i



Dear Mr. Bearzi:

Intermediate-perched aquifer well R-47i was completed per the Compliance Order on Consent (the Consent Order), Section IV.A.3.e.iv, on November 16, 2009.

Additionally, enclosed, please find the Well Completion Summary Fact Sheets for Well R-47i along with electronic files. This submittal is in accordance with the Consent Order Schedule of Deliverables (Table XII-4).

If you have any questions, please contact Mark Everett at (505) 667-5931 (meverett@lanl.gov) or Woody Woodworth at (505) 665-5820 (lwoodworth@doeal.gov).

Sincerely,

Michael J. Graham, Associate Director
Environmental Programs
Los Alamos National Laboratory

Sincerely,

David R. Gregory, Project Director
Environmental Operations
Los Alamos Site Office

MG/DG/DM/ME:sm

Enclosures: Two hard copies with electronic files – Well Summary Data Sheet R-47i Borehole Stratigraphy and R-47i As-Built Well Construction Diagram (LA-UR-09-8057)

Cy: (w/enc.)

Neil Weber, San Ildefonso Pueblo
Woody Woodworth, DOE-LASO, MS A316
Hai Shen, DOE-LASO, MS A316
Mark Everett, EP-LWSP, MS M992
RPF, MS M707 (with two CDs)
Public Reading Room, MS M992

Cy: (Letter and CD only)

Laurie King, EPA Region 6, Dallas, TX
Steve Yanicak, NMED-DOE-OB, MS M894
Heather Smith, North Wind, Los Alamos, NM
Kristine Smeltz, EP-WES, MS M992

Cy: (w/o enc.)

Tom Skibitski, NMED-OB, Santa Fe, NM
Annette Russell, DOE-LASO (date-stamped letter emailed)
Dave McInroy, EP-CAP, MS M992
Michael J. Graham, ADEP, MS M991
IRM-RMMSO, MS A150 (date-stamped letter emailed)

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 866.0 TO 890.0 (ft bgs)

SLOUGH 890.0 TO 900.0 (ft bgs)

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

SLOUGH 980.0 TO 1000.0 (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 ft³
CALCULATED VOLUME 180.4 ft³

← **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 ft³
CALCULATED VOLUME 1044.4 ft³

← **FINE SAND COLLAR**
SIZE/TYPE 20/40
QUANTITY USED 4.0 ft³
CALCULATED VOLUME 1.9 ft³

← **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 ft³
CALCULATED VOLUME 48.2 ft³

← **PURE BENTONITE SEAL**
0.375-in BENTONITE
QUANTITY USED 32.2 ft³
CALCULATED VOLUME 29.6 ft³

← **BENTONITE SEAL**
0.375-in BENTONITE
QUANTITY USED 366.1 ft³
CALCULATED VOLUME 343.2 ft³

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



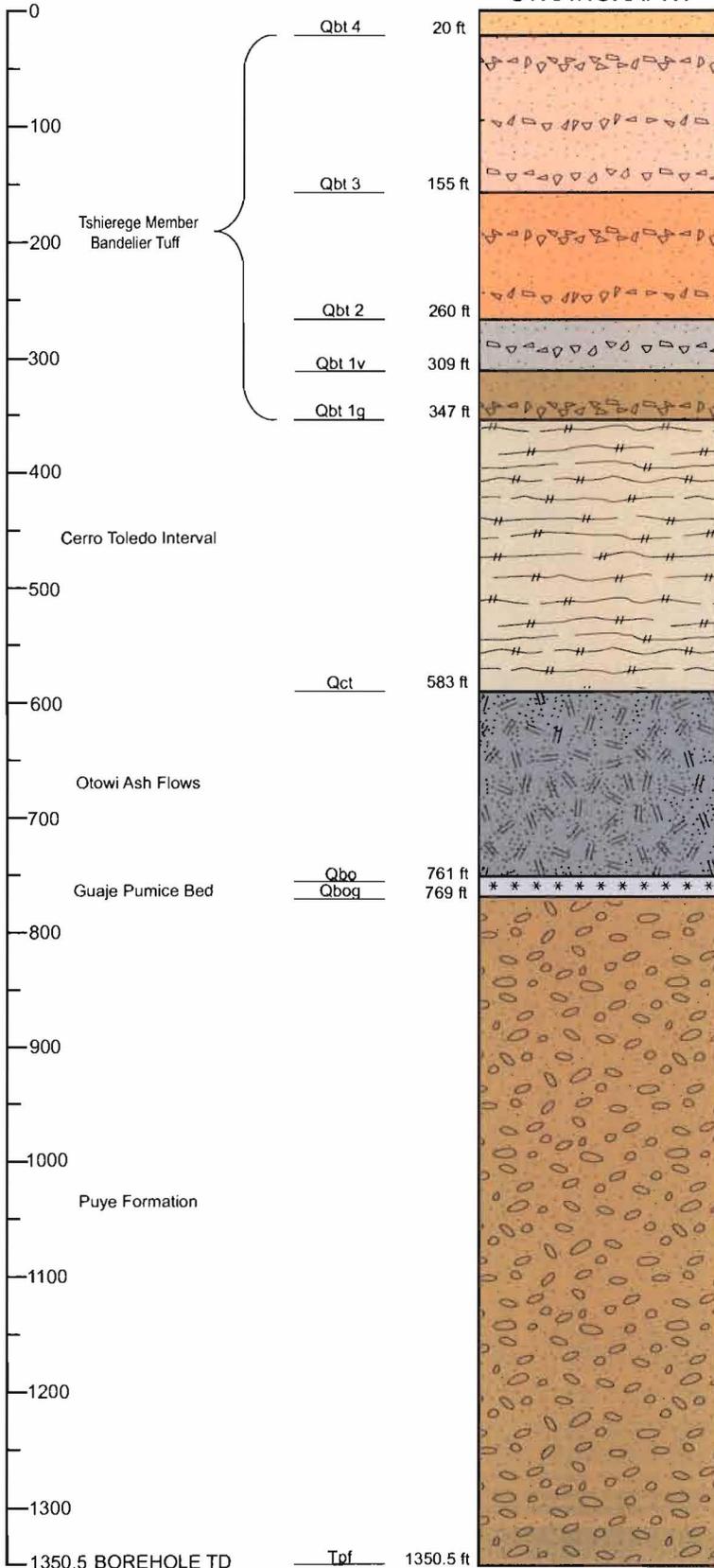
R-47i WELL CONSTRUCTION DIAGRAM (AS BUILT)

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Los Alamos National Laboratory
Los Alamos, New Mexico

FACT SHEET

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

- WATER
- AIR
- AQF-2 FOAM™
- WATER
- AIR

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)



R-47i WELL SUMMARY DATA SHEET

Borehole Stratigraphy

TA-14

Los Alamos National Laboratory

Los Alamos, New Mexico

FACT SHEET

NOT TO SCALE

Drafted by: North Wind, Inc. Date: December 16, 2009
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