



*Environmental Programs*  
P.O. Box 1663, MS M991  
Los Alamos, New Mexico 87545  
(505) 606-2337/FAX (505) 665-1812



*National Nuclear Security Administration*  
Los Alamos Site Office, MS A316  
Environmental Restoration Program  
Los Alamos, New Mexico 87544  
(505) 667-4255/FAX (505) 606-2132

*Date:* March 13, 2008  
*Refer To:* EP2008-0111

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

**Subject: Submittal of the R-36 Well Construction Diagram and Well Summary Data Sheet Borehole Stratigraphy Fact Sheets**

Dear Mr. Bearzi:

In accordance with the March 1, 2005, Compliance Order on Consent Schedule of Deliverables (Table XII-4), the U. S. Department of Energy and Los Alamos National Laboratory are submitting the attached R-36 Well Construction Diagram and Well Summary Data Sheet Borehole Stratigraphy Fact Sheets along with electronic files.

If you have any questions, please contact Mark Everett at (505) 667-5931 (meverett@lanl.gov) or Mat Johansen at (505) 665-5046 (mjohansen@doeal.gov).

Sincerely,

*fx*

Susan G. Stiger, Associate Director  
Environmental Programs  
Los Alamos National Laboratory

Sincerely,

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

SS/DG/PH/ME:sm

Enclosure: Two hard copies with electronic files –

- 1) R-36 Well Construction Diagram Fact Sheet
- 2) Well Summary Data Sheet R-36 Borehole Stratigraphy Fact Sheet

Cy: (w/enc.)

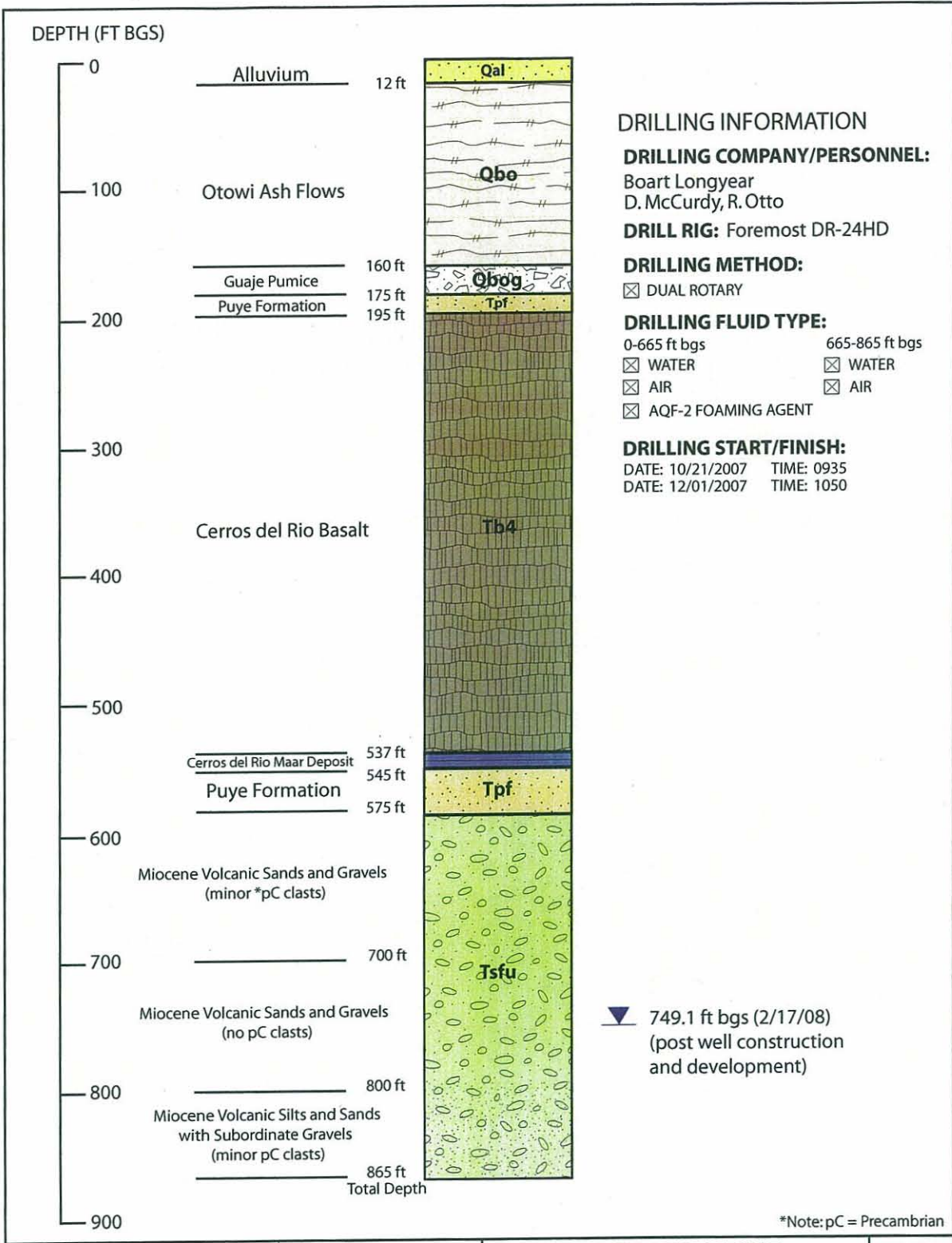
Mark C. Everett, EP-LWSP, MS M992  
RPF, MS M707 (with two CDs)  
Public Reading Room, MS M992

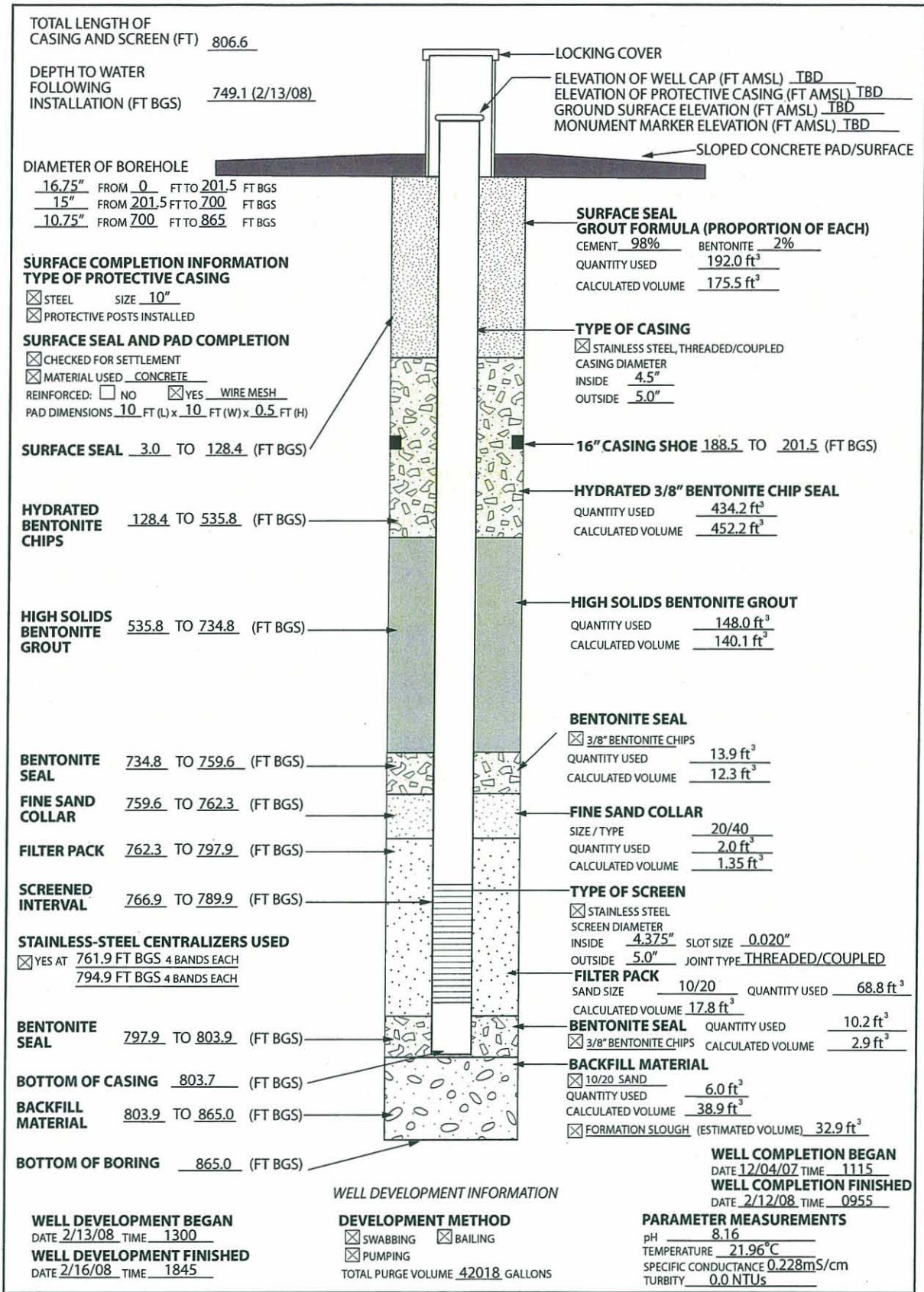
Cy: (Letter and CD only)

Laurie King, EPA Region 6, Dallas, TX  
Steve Yanicak, NMED-OB, White Rock, NM  
Mat Johansen, DOE-LASO, MS A316  
Dave Broxton, EES-9, MS T003  
Danny Katzman, EP-LWSP, MS M992  
Peggy Reneau, EP-WES, MS M992  
EP-LWSP File, MS M992

Cy: (w/o enc.)

Tom Skibitski, NMED-OB, Santa Fe, NM  
Bonita Eichorst, DOE-LASO (date-stamped letter emailed)  
Susan G. Stiger, ADEP, MS J591  
Carolyn A. Mangeng, ADEP, MS J591  
Alison M. Dorries, EP-WES, MS M992  
Paul R. Huber, EP-LWSP, MS M992  
IRM-RMMSO, MS A150





TOTAL LENGTH OF CASING AND SCREEN (FT) 806.6

DEPTH TO WATER FOLLOWING INSTALLATION (FT BGS) 749.1 (2/13/08)

LOCKING COVER

ELEVATION OF WELL CAP (FT AMSL) TBD

ELEVATION OF PROTECTIVE CASING (FT AMSL) TBD

GROUND SURFACE ELEVATION (FT AMSL) TBD

MONUMENT MARKER ELEVATION (FT AMSL) TBD

DIAMETER OF BOREHOLE

16.75" FROM 0 FT TO 201.5 FT BGS

15" FROM 201.5 FT TO 700 FT BGS

10.75" FROM 700 FT TO 865 FT BGS

**SURFACE COMPLETION INFORMATION**

**TYPE OF PROTECTIVE CASING**

STEEL SIZE 10"

PROTECTIVE POSTS INSTALLED

**SURFACE SEAL AND PAD COMPLETION**

CHECKED FOR SETTLEMENT

MATERIAL USED CONCRETE

REINFORCED:  NO  YES WIRE MESH

PAD DIMENSIONS 10 FT (L) x 10 FT (W) x 0.5 FT (H)

**SURFACE SEAL** 3.0 TO 128.4 (FT BGS)

**HYDRATED BENTONITE CHIPS** 128.4 TO 535.8 (FT BGS)

**HIGH SOLIDS BENTONITE GROUT** 535.8 TO 734.8 (FT BGS)

**BENTONITE SEAL** 734.8 TO 759.6 (FT BGS)

**FINE SAND COLLAR** 759.6 TO 762.3 (FT BGS)

**FILTER PACK** 762.3 TO 797.9 (FT BGS)

**SCREENED INTERVAL** 766.9 TO 789.9 (FT BGS)

**STAINLESS-STEEL CENTRALIZERS USED**

YES AT 761.9 FT BGS 4 BANDS EACH

794.9 FT BGS 4 BANDS EACH

**BENTONITE SEAL** 797.9 TO 803.9 (FT BGS)

**BOTTOM OF CASING** 803.7 (FT BGS)

**BACKFILL MATERIAL** 803.9 TO 865.0 (FT BGS)

**BOTTOM OF BORING** 865.0 (FT BGS)

**SURFACE SEAL GROUT FORMULA (PROPORTION OF EACH)**

CEMENT 98% BENTONITE 2%

QUANTITY USED 192.0 ft<sup>3</sup>

CALCULATED VOLUME 175.5 ft<sup>3</sup>

**TYPE OF CASING**

STAINLESS STEEL, THREADED/COUPLED

CASING DIAMETER

INSIDE 4.5"

OUTSIDE 5.0"

**16" CASING SHOE** 188.5 TO 201.5 (FT BGS)

**HYDRATED 3/8" BENTONITE CHIP SEAL**

QUANTITY USED 434.2 ft<sup>3</sup>

CALCULATED VOLUME 452.2 ft<sup>3</sup>

**HIGH SOLIDS BENTONITE GROUT**

QUANTITY USED 148.0 ft<sup>3</sup>

CALCULATED VOLUME 140.1 ft<sup>3</sup>

**BENTONITE SEAL**

3/8" BENTONITE CHIPS

QUANTITY USED 13.9 ft<sup>3</sup>

CALCULATED VOLUME 12.3 ft<sup>3</sup>

**FINE SAND COLLAR**

SIZE / TYPE 20/40

QUANTITY USED 2.0 ft<sup>3</sup>

CALCULATED VOLUME 1.35 ft<sup>3</sup>

**TYPE OF SCREEN**

STAINLESS STEEL

SCREEN DIAMETER

INSIDE 4.375" SLOT SIZE 0.020"

OUTSIDE 5.0" JOINT TYPE THREADED/COUPLED

**FILTER PACK**

SAND SIZE 10/20 QUANTITY USED 68.8 ft<sup>3</sup>

CALCULATED VOLUME 17.8 ft<sup>3</sup>

**BENTONITE SEAL** QUANTITY USED 10.2 ft<sup>3</sup>

3/8" BENTONITE CHIPS CALCULATED VOLUME 2.9 ft<sup>3</sup>

**BACKFILL MATERIAL**

10/20 SAND QUANTITY USED 6.0 ft<sup>3</sup>

CALCULATED VOLUME 38.9 ft<sup>3</sup>

FORMATION SLOUGH (ESTIMATED VOLUME) 32.9 ft<sup>3</sup>

**WELL DEVELOPMENT INFORMATION**

**WELL DEVELOPMENT BEGAN**

DATE 2/13/08 TIME 1300

**WELL DEVELOPMENT FINISHED**

DATE 2/16/08 TIME 1845

**DEVELOPMENT METHOD**

SWABBING  BAILING

PUMPING

TOTAL PURGE VOLUME 42018 GALLONS

**WELL COMPLETION BEGAN**

DATE 12/04/07 TIME 1115

**WELL COMPLETION FINISHED**

DATE 2/12/08 TIME 0955

**PARAMETER MEASUREMENTS**

pH 8.16

TEMPERATURE 21.96°C

SPECIFIC CONDUCTANCE 0.228 mS/cm

TURBIDITY 0.0 NTUs