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NOV - 6 2014

**Associate Director for ESH**  
Environment, Safety, and Health  
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**NMED  
Hazardous Waste Bureau**

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

Date: **NOV 03 2014**  
Refer To: **ADESH-14-116**

John Kieling, 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 Fact Sheets for CrEX-1**

Dear Mr. Kieling:

Enclosed please find two hard copies with electronic files of the Fact Sheets for CrEX-1.

If you have any questions, please contact Stephani Swickley at (505) 606-1628 (sfuller@lanl.gov) or Hai Shen at (505) 665-5046 (hai.shen@nnsa.doe.gov).

Sincerely,

Michael T. Brandt, DrPH, CIH, Associate Director  
Environment, Safety, and Health  
Los Alamos National Laboratory

Sincerely,

Peter Maggiore, Assistant Manager  
Environmental Projects Office  
Los Alamos Field Office



1100

MB/PM/DM/SS:sm

Enclosures: Two hard copies with electronic files – Fact Sheets for CrEX-1 (LA-UR-14-28123)

Cy: (w/enc.)

Hai Shen, DOE-NA-LA, MS A316  
Stephani Swickley, EP-CAP, MS M992  
Public Reading Room (EPRR)  
RPF (electronic copy)

Cy: (Letter and CD and/or DVD)

Laurie King, EPA Region 6, Dallas, TX  
Steve Yanicak, NMED-DOE-OB, MS M894  
Vern Christensen, Yellow Jacket Drilling  
Ted Ball, EP-CAP, MS M992  
PRS Database with ER ID

Cy: (w/o enc.)

Tom Skibitski, NMED-DOE-OB (date-stamped letter emailed)  
lasomailbox@nnsa.doe.gov  
Annette Russell, DOE-NA-LA (date-stamped letter emailed)  
David Rhodes, DOE-NA-LA (date-stamped letter emailed)  
Kimberly Davis Lebak, DOE-NA-LA (date-stamped letter emailed)  
Dave McInroy, EP-CAP (date-stamped letter emailed)  
Randy Erickson, ADEP (date-stamped letter emailed)  
Michael Brandt, ADESH (date-stamped letter emailed)

TOTAL LENGTH  
OF CASING AND SCREEN (FT) 1115.6  
DEPTH TO WATER  
FOLLOWING INSTALLATION (FT BGS) 997.2 (09/24/14)

DIAMETER OF BOREHOLE  
24.00 (IN) FROM 0 TO 55 (FT BGS)  
19.00 (IN) FROM 55 TO 475 (FT BGS)  
17.00 (IN) FROM 475 TO 816 (FT BGS)  
14.75 (IN) FROM 816 TO 1211 (FT BGS)

**SURFACE COMPLETION** (proposed)  
PROTECTIVE CASING  
TYPE STEEL SIZE (IN) 16  
PROTECTIVE POSTS INSTALLED YES  
SURFACE SEAL AND PAD  
CHECK FOR SETTLEMENT YES  
PAD MATERIAL CONCRETE  
REINFORCED WIRE MESH  
PAD DIMENSIONS (FT) 10 (L) 10 (W) 0.5 (H)

**SURFACE SEAL** 4.0 TO 59.8 (FT BGS)

**BENTONITE SEAL** 59.8 TO 979.3 (FT BGS)

**FINE SAND COLLAR** 979.3 TO 985.3 (FT BGS)

**FILTER PACK** 985.3 TO 1048.0 (FT BGS)

**SCREENED INTERVAL** 990.0 TO 1040.0 (FT BGS)

**BENTONITE SEAL** 1048.0 TO 1063.0 (FT BGS)

**FINE SAND COLLAR** 1063.0 TO 1066.0 (FT BGS)

**TAM PACKER** 1062.0 TO 1068.0 (FT BGS)

**FILTER PACK** 1066.0 TO 1096.2 (FT BGS)

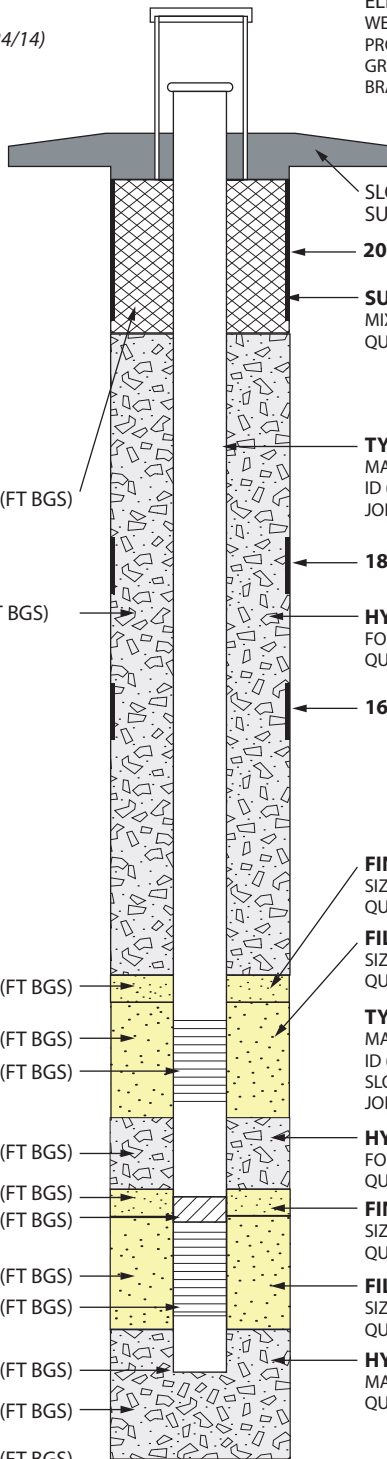
**SCREENED INTERVAL** 1070.0 TO 1090.0 (FT BGS)

**BOTTOM OF CASING** 1112.6 (FT BGS)

**BACKFILL** 1096.2 TO 1211.0 (FT BGS)

**BOTTOM OF BORING** 1211.0 (FT BGS)

LOCKING COVER



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

SLOPED CONCRETE PAD/  
SURFACE SEAL  
**20-IN CSG** 0 TO 55 (FT BGS)

**SURFACE SEAL**  
MIX (WT%) PORTLAND CEMENT 92 BENTONITE 8  
QUANTITY USED 90.0 FT<sup>3</sup> CALC 90.0 FT<sup>3</sup>

**TYPE OF CASING**  
MATERIAL PASSIVATED A304 STAINLESS STEEL  
ID (IN) 8.00 OD (IN) 8.625 (8%)  
JOINT TYPE WELDED

**18-IN CSG/SHOE** 470.0 TO 475.0 (FT BGS)

**HYDRATED BENTONITE SEAL**  
FORM 3/8-IN BENTONITE CHIP  
QUANTITY USED 1253.2 FT<sup>3</sup> CALC 1100.7 FT<sup>3</sup>

**16-IN CSG/SHOE** 811.0 TO 816.0 (FT BGS)

**FINE SAND COLLAR**  
SIZE/TYPE 20/40 SILICA  
QUANTITY USED 14.0 FT<sup>3</sup> CALC 4.7 FT<sup>3</sup>

**FILTER PACK SAND**  
SIZE/TYPE 10/20 SILICA  
QUANTITY USED 46.5 FT<sup>3</sup> CALC 49.4 FT<sup>3</sup>

**TYPE OF SCREEN(S)**  
MATERIAL A304 STAINLESS STEEL  
ID (IN) 8.00 OD (IN) 5.88 (5%)  
SLOT SIZE (IN) 0.040  
JOINT TYPE WELDED

**HYDRATED BENTONITE SEAL**  
FORM 3/8-IN BENTONITE CHIP  
QUANTITY USED 8.8 FT<sup>3</sup> CALC 11.7 FT<sup>3</sup>

**FINE SAND COLLAR**  
SIZE/TYPE 20/40 SILICA  
QUANTITY USED 4.5 FT<sup>3</sup> CALC 2.3 FT<sup>3</sup>

**FILTER PACK SAND**  
SIZE/TYPE 10/20 SILICA  
QUANTITY USED 23.0 FT<sup>3</sup> CALC 23.6 FT<sup>3</sup>

**HYDRATED BENTONITE BACKFILL**  
MATERIAL 3/8-IN BENTONITE CHIP  
QUANTITY USED 83.0 FT<sup>3</sup> CALC 129.5 FT<sup>3</sup>

**STAINLESS-STEEL CENTRALIZERS**  
USED YES BETWEEN  
LOWER AND UPPER SCREENS AND  
EVERY 40 FT FROM 10 FT ABOVE  
UPPER SCREEN TO 197 FT BGS

**WELL COMPLETION BEGAN**  
DATE 08/12/14 TIME 1235h  
**WELL COMPLETION FINISHED**  
DATE 08/17/14 TIME 1100h

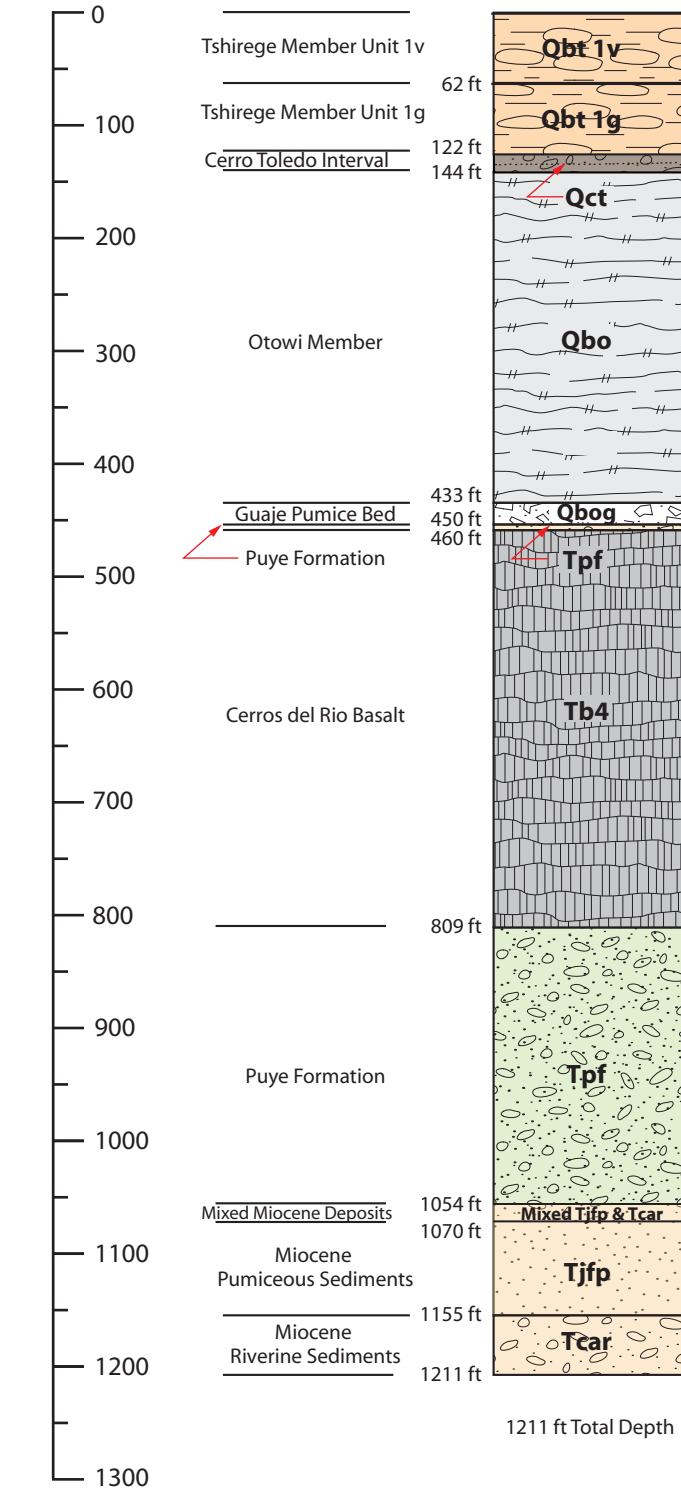


Drafted By: PTM  
Date: November 3, 2014  
File Name: CrEX-1\_AsBuiltDiagram\_FactSheet

**Well CrEX-1 As-Built Well Construction Diagram**  
Technical Area 05 (TA-05)  
Los Alamos National Laboratory  
Los Alamos, New Mexico

**Fact Sheet**  
NOT TO SCALE

DEPTH (FT BGS)



### DRILLING INFORMATION

#### DRILLING COMPANY/PERSONNEL:

Yellow Jacket Drilling  
A. Adams, A. Lamon, S. Walker, J. Saldana,  
S. Jorge, R. Hoyt

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

#### DRILLING METHOD:

- DUAL ROTARY WITH AIR AND WATER AND REVERSE CIRCULATION MUD ROTARY

#### DRILLING FLUID TYPE:

0–816 ft bgs 816–1211 ft bgs

- WATER  MUD
- AIR
- AQF-2 FOAMING AGENT

#### DRILLING START/FINISH:

DATE: 07/04/2014  
DATE: 08/04/2014

997.2 ft bgs (09/24/14)  
 (post well installation  
 before packer installation)



Drafted By: DB  
 Date: October 28, 2014  
 File Name: CrEX-1\_Lithology\_FactSheet

**Well Summary Data Sheet**  
**CrEX-1 Borehole Stratigraphy**  
 Technical Area 05 (TA-05)  
 Los Alamos National Laboratory  
 Los Alamos, New Mexico

**Fact Sheet**

NOT TO SCALE