Offsite

DEPARTMENT OF ENERGY
National Nuclear Security Administration
Los Alamos Site Office
Los Alamos, New Mexico 87544

OCT 25 2005

Certified Mail/Return Receipt

Mr. James P. Bearzi, Chief
NMED-Hazardous Waste Bureau
2905 Rodeo Park Drive East,
Building 1
Santa Fe, NM 87505-6303

RECEIVED
OCT 2005

Dear Mr. Bearzi:

Subject: Final Fact Sheet for Regional Well R-10

Enclosed are two copies of the Fact Sheet for Regional Well R-10, which was recently completed by Kleinfelder and Associates for the Department of Energy. If you have any questions regarding this report, please contact me at (505)606-0397, or Tom Whitacre at (505)665-5042.

Sincerely,

John C. Ordaz, P.E.
Assistant Manager
Office of Environmental Stewardship

ES: 6TW-001

Enclosures

cc w/enclosures:
John Young
NMED-Hazardous Waste Bureau
2905 Rodeo Park Drive East,
Building 1
Santa Fe, NM 87505-6303

Tom Whitacre, ES, LASO
Mat Johansen, ES, LASO
David Gregory, ES, LASO
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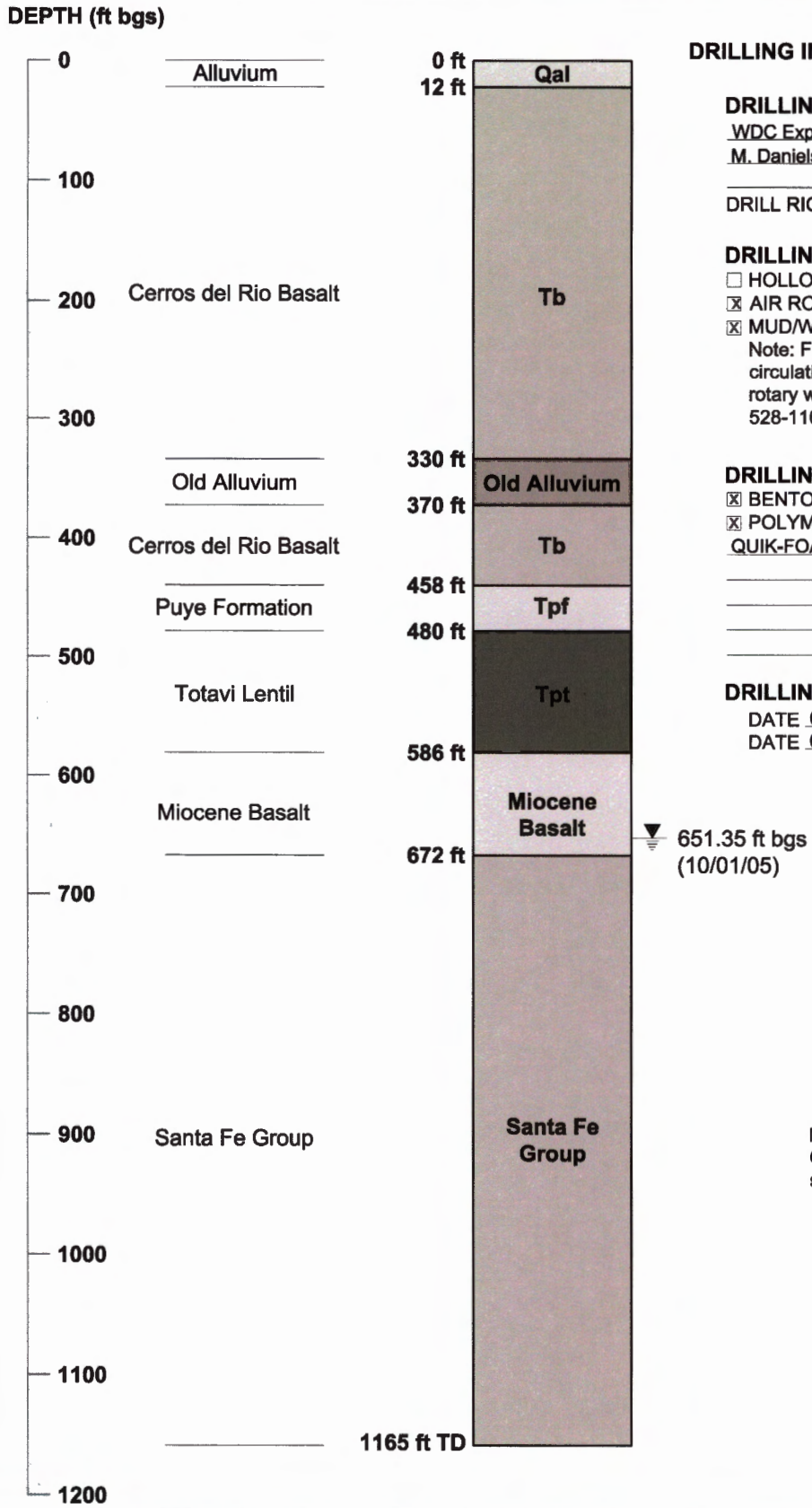
File

4164



DRILLING INFORMATION

DRILLING COMPANY/PERSONNEL

WDC Exploration & Wells
M. Daniels, J. Ward, A. Strain

DRILL RIG Speedstar 50k

DRILLING METHOD

- ☐ HOLLOW-STEM AUGER
- ☒ AIR ROTARY
- ☒ MUD/WATER ROTARY

Note: Fluid-assisted air rotary with normal circulation from 0-528 ft bgs and mud rotary with normal circulation from 528-1165 ft bgs.

DRILLING FLUID TYPE

- ☒ BENTONITE
- ☒ WATER
- ☒ POLYMER
- ☒ AIR

QUIK-FOAM®, QUIK-GEL®, DRISPAC®

DRILLING START / FINISH

DATE 08/23/05 TIME 15:15
DATE 09/16/05 TIME 16:35

Note:
Geologic contacts are preliminary and subject to change.

KLEINFELDER		WELL SUMMARY DATA SHEET **Characterization Well R-10** Sandia Canyon / San Ildefonso Pueblo Los Alamos, New Mexico	FIGURE **1**
Drawn By: C. Landon	Date: October 2005		
Project No.: 49436	Filename: 49436_01_0.dwg		
Scale: not-to-scale	Revision: –		

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TOTAL LENGTH OF CASING AND SCREEN 1086.8 FT

DEPTH TO WATER FOLLOWING INSTALLATION 651.35 FT BGS (10/01/05)

MONUMENT MARKER

PROTECTIVE CASING LOCKING COVER

WELL CAP

ELEVATION OF PROTECTIVE CASING (FT AMSL) _____

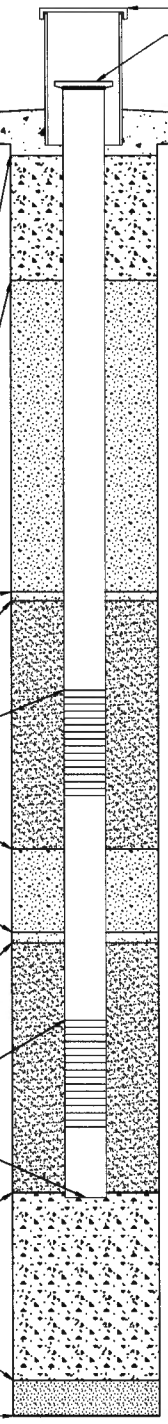
ELEVATION OF TOP WELL CASING (FT AMSL) _____

GROUND SURFACE ELEVATION (FT AMSL) _____

MONUMENT MARKER ELEVATION (FT AMSL) _____

PENDING

GROUND SURFACE



DIAMETER OF BOREHOLE

24" FROM 0 FT TO 17 FT BGS

15" FROM 17 FT TO 410 FT BGS

10.6" FROM 410 FT TO 1165 FT BGS

SURFACE COMPLETION INFORMATION

TYPE OF PROTECTIVE CASING

☐ STEEL SIZE

☐ _____

☐ PROTECTIVE POSTS INSTALLED

SURFACE SEAL AND PAD COMPLETION

☐ CHECKED FOR SETTLEMENT

MATERIAL USED:

REINFORCED

☐ YES

☐ NO

PAD DIMENSIONS

____FT (L) x ____FT (W) x ____FT (H)

PENDING

0.5 DEPTH TO TOP OF SURFACE SEAL (FT BGS)

72.5 DEPTH TO TOP OF BENTONITE SEAL (FT BGS)

866 DEPTH TO TOP OF SECONDARY FILTER PACK (FT BGS)

868 DEPTH TO TOP OF PRIMARY FILTER PACK (FT BGS)

874.1 - 897.1 DEPTH INTERVAL OF UPPER SCREEN (FT BGS)

907 DEPTH TO TOP OF BENTONITE SEAL (FT BGS)

1028 DEPTH TO TOP OF SECONDARY FILTER PACK (FT BGS)

1030.5 DEPTH TO TOP OF PRIMARY FILTER PACK (FT BGS)

1042.0 - 1065.0 DEPTH INTERVAL OF LOWER SCREEN (FT BGS)

1078.8 DEPTH TO BOTTOM OF CASING (FT BGS)

1077 DEPTH TO TOP OF BACKFILL (FT BGS)

1161 DEPTH TO TOP OF FORMATION COLLAPSE (FT BGS)

1165 DEPTH TO BOTTOM OF BORING (FT BGS)

SURFACE SEAL (0.5 - 72.5 FT BGS)

☒ BENTONITE 0.5% ☒ WATER 9.5%

☒ AGGREGATE 77.4% ☒ CEMENT 12.6%

ACTUAL VOLUME: 135 FT^3

CALCULATED VOLUME: 111 FT^3

METHOD INSTALLED

☒ POURED

BENTONITE SEAL (72.5 - 866 FT BGS)

☒ BENTONITE CHIPS

ACTUAL VOLUME: 515.21 FT^3

CALCULATED VOLUME: 586.8 FT^3

METHOD INSTALLED

☒ TREMIE

SECONDARY FILTER PACK (866 - 868 FT BGS)

☒ 20-40 SILICA SAND

ACTUAL VOLUME: 1.0 FT^3

CALCULATED VOLUME: 0.96 FT^3

METHOD INSTALLED

☒ TREMIE

PRIMARY FILTER PACK (868 - 907 FT BGS)

☒ 10-20 SILICA SAND

ACTUAL VOLUME: 16.0 FT^3

CALCULATED VOLUME: 18.7 FT^3

METHOD INSTALLED

☒ TREMIE

BENTONITE SEAL (907 - 1028 FT BGS)

☒ BENTONITE CHIPS

ACTUAL VOLUME: 41.0 FT^3

CALCULATED VOLUME: 58.2 FT^3

METHOD INSTALLED

☒ TREMIE

SECONDARY FILTER PACK (1028 - 1030.5 FT BGS)

☒ 20-40 SILICA SAND

ACTUAL VOLUME: 1.0 FT^3

CALCULATED VOLUME: 1.2 FT^3

METHOD INSTALLED

☒ TREMIE

PRIMARY FILTER PACK (1030.5 - 1077 FT BGS)

☒ 10-20 SILICA SAND

ACTUAL VOLUME: 20.25 FT^3

CALCULATED VOLUME: 22.3 FT^3

METHOD INSTALLED

☒ TREMIE

BACKFILL (1077 - 1161 FT BGS)

☒ 50% BENTONITE CHIPS / 50% 10/20 SILICA SAND

ACTUAL VOLUME: 41.3 FT^3

CALCULATED VOLUME: 52.2 FT^3

METHOD INSTALLED

☒ TREMIE

FORMATION COLLAPSE (1161 - 1165 FT BGS)

☒ SLOUGH

ACTUAL VOLUME: N/A

CALCULATED VOLUME: 2.46 FT^3

CENTRALIZERS USED

☒ YES AT: 771.2, 872.1, 885.1, 898.1, 939.1, 1040, 1053, 1066.1

☒ STAINLESS STEEL

TYPE OF CASING

☒ STAINLESS STEEL CASING DIAMETER

☐ SCHEDULE 40 PVC INSIDE: 4.5

☐ SCHEDULE 80 PVC OUTSIDE: 5.0

JOINT TYPE: API/LT

TYPE OF SCREEN

☒ STAINLESS STEEL CASING DIAMETER

☐ SCHEDULE 40 PVC INSIDE: 4.5

☐ SCHEDULE 80 PVC OUTSIDE: 5.2

Upper (874.1 - 897.1 FT BGS)

Lower (1042.0 - 1065.0 FT BGS)

JOINT TYPE: API/LT

SLOT SIZE: 0.02", Rod-based, wire wrapped

Notes:
A packer was installed on 09/26/05 to isolate the well screens until the sampling system was installed. Screens were isolated by packers during pumping.

WELL DEVELOPMENT INFORMATION

WELL COMPLETION BEGAN
DATE 09/20/05 TIME 16:20
WELL COMPLETION FINISHED
DATE 10/05/05 TIME 09:04

WELL DEVELOPMENT BEGAN
Upper Screen: DATE 10/01/05 TIME 16:20
Lower Screen: DATE 10/04/05 TIME 13:35
WELL DEVELOPMENT FINISHED
Upper Screen: DATE 10/03/05 TIME 17:20
Lower Screen: DATE 10/06/05 TIME 16:15

DEVELOPMENT METHOD
☒ SWABBING ☒ BAILING
☒ PUMPING
TOTAL PURGE VOLUME
UPPER SCREEN: 10,833.5 GALLONS
LOWER SCREEN: 19,276.5 GALLONS

PARAMETER MEASUREMENTS (ONGOING)
UPPER SCREEN
pH 8.31
TEMPERATURE 23.9 °C
SPECIFIC CONDUCTANCE 180 µS
TURBIDITY 4.81 NTU
LOWER SCREEN
pH 8.35
TEMPERATURE 23.3 °C
SPECIFIC CONDUCTANCE 183 µS
TURBIDITY 2.17 NTU

KLEINFELDER

Drawn By: C. Landon	Date: October 2005
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WELL SUMMARY DATA SHEET
Characterization Well R-10
Sandia Canyon / San Ildefonso Pueblo
Los Alamos, New Mexico

FIGURE **2**

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