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Date: February 6, 2001
Refer to: ER2001-0094

Mr. John Young, Corrective Action Project Leader
Permits Management Program
NMED – Hazardous Waste Bureau
2044 A Galisteo
Santa Fe, NM 87502

SUBJECT: WELL COMPLETION FACT SHEETS FOR R-22 AND CDV-R-15-3

Dear Mr. Young:

Enclosed are two copies of well completion fact sheets for Hydrogeologic Workplan well R-22, located in the Mortandad Canyon Watershed and TA-16-260 Corrective Measures Study (CMS) well CdV-R-15-3, which is located in the Water Canyon Watershed. Their format is based on the R-12 fact sheet that was recently, informally reviewed and approved by your bureau.

If you have any questions, please call Dave McInroy at (505) 667-0819 or Gene Turner at (505) 665-5820.

Sincerely,

Julie A. Canepa, Program Manager
Los Alamos National Laboratory
Environmental Restoration

Sincerely,

Theodore J. Taylor, Project Manager
Department of Energy
Los Alamos Area Office

JC/TT/NR/vn

Enclosure: (1) Well R-22 Fact Sheet (ER2001-0079)
(2) Well CdV-R-3 Fact Sheet (ER2000-0078)

6283

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TA-16-260 CMS and Characterization Well CdV-R-15-3 Fact Sheet

Location:
TA-15, downgradient from PRS 16-021(c)-99

Ground surface elevation: 7258.9 ft asl
NAD 83 Survey coordinates (center top of protective box):
x: 1762349.2 y: 1623221.0
z: 7260.9 ft asl

Drilling:
Fluid-assisted, air, dual wall reverse circulation
Phase 1 start date: 1/19/00
Phase 1 end date: 1/20/00
Phase 2 start date: 3/17/00
Phase 2 end date: 4/26/00

Borehole drilled to 1722 ft

Data collection:
Field hydraulic testing: Slug tests in 3 deepest screens
Groundwater samples submitted for geochem. and cont. characterization: 6
Geologic properties: Mineralogy, petrography, and chemistry (10)
Borehole logs: Lithologic, video, caliper, array induction, natural gamma ray, natural gamma ray spectrum, continuous deviation, combinable magnetic resonance, triple litho density, raw formation microimager, raw accelerator neutron porosity, temperature, spinner

Contaminants in borehole samples:
Perched groundwater: TNT byproducts
Regional groundwater: none

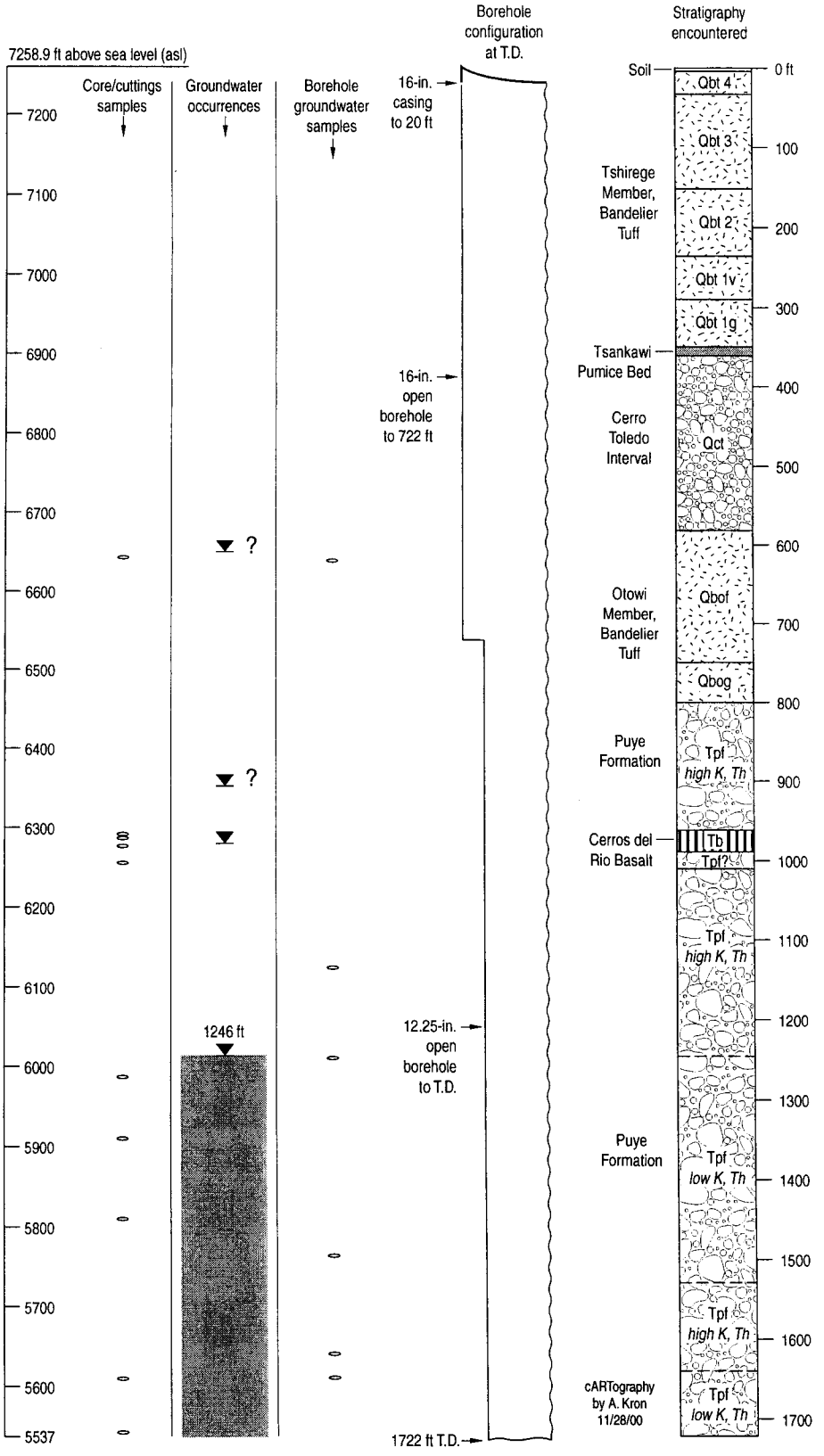
Compilation of data and analysis:
LA-UR-00-4527, ER ID 67328

Well construction:
Drilling completed: 4/26/00
Well installed: 6/9/00
Well developed: 8/4/00
Westbay installed: 9/16/00
Casing: 16-in. casing to 20 ft
Number of screens: 6
4.5-in. I.D., .25-in. wall ss: 0.010-in. slot for all screens
Screen placements:
Screen #1: 617.7–624.5 ft
Screen #2: 800.8–807.8 ft
Screen #3: 964.8–980.9 ft
Screen #4: 1235.1–1278.9 ft
Screen #5: 1348.4–1355.3 ft
Screen #6: 1637.9–1644.8 ft

Well development consisted of wire brushing, bailing and pumping each screen, and bailing and pumping the sump.

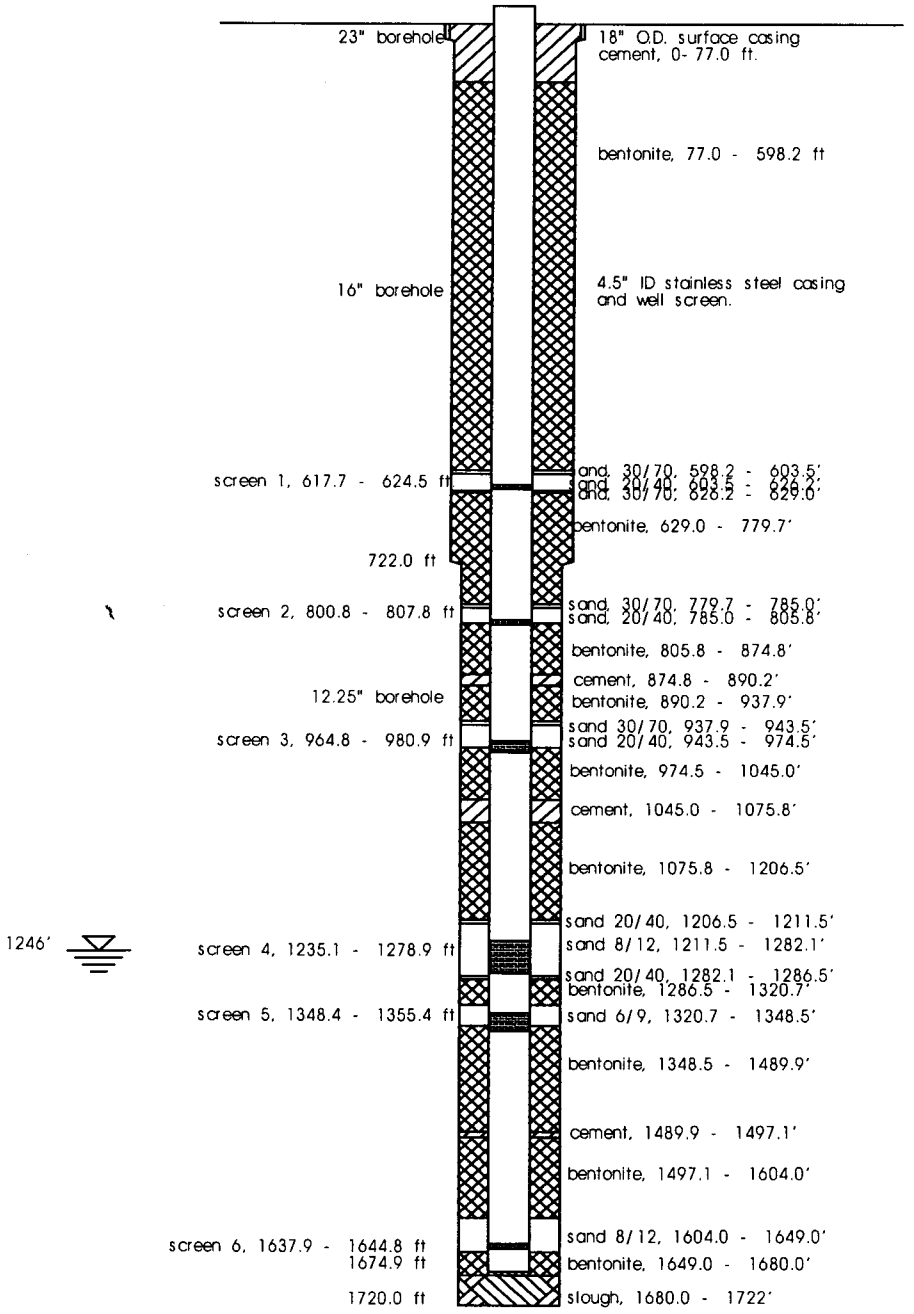
Groundwater occurrences were determined by recognition of water produced while drilling and by video observation. Static water levels were determined after the borehole was rested. During Phase 2 drilling, the upper perched zone was isolated from the lower vadose zone by landing 13.625-in. casing at a depth of 722 ft.

Geologic contacts were determined by examination of cuttings, interpretation of geophysical logs, and analysis of geologic samples by petrography and rock chemistry.



Construction, stratigraphic, and hydrologic information for well CdV-R-15-3

Drawing is NOT TO SCALE.
All depths are feet below ground surface.



Centralizer depth

540'
616'
645'
683'
799'
809'
866'
963'
982'
1040'
1137'
1195'
1234'
1289'
1347'
1423'
1462'
1501'
1540'
1578'
1617'
1655'

NOTE: The screen intervals list the footages of the pipe perforations, not the tops and bottoms of the screen joints. Backfill depths are tagged, not from natural gamma logs.

As- built completion diagram of well CdV- R15- 3.

Characterization Well R-22:

Location: TA-54, Mesita del Buey near White Rock, NM.

NAD 83 Survey coordinates (brass marker in NW corner of cement pad):
x:1645324.4 E y: 1757111.1 N
z: 6650.5 ft asl

Drilling: hollow stem auger and fluid-assist air rotary reverse circulation with casing advance
Phase 1 Start date: 8/17/00
Phase 1 End date: 8/21/00
Phase 2 Start date: 9/8/00
Phase 2 End date: 10/11/00

Borehole drilled to 1489 ft

Data collection:
Hydrologic properties:
Field Hydraulic Testing: Slug tests conducted on screens 2, 3, 4, and 5.
Cores/cuttings submitted for geochemical and contaminant characterization: (0)
Groundwater samples submitted for geochem and cont. characterization: (2)
Geologic properties:
Mineralogy, petrography, and chemistry (28)
Borehole logs:
Lithologic (0-1489 ft)
Video (LANL tool) 187-254 ft and 580-740 ft.
Natural gamma (LANL tool): cased 0-1330 ft, open hole 1330-1475 ft.
Schlumberger Logs (0-1330 ft cased, 1330-1477 ft open hole):Neutron porosity, Spectral Gamma, Gamma-Gamma Density, and Elemental Capture Spectroscopy

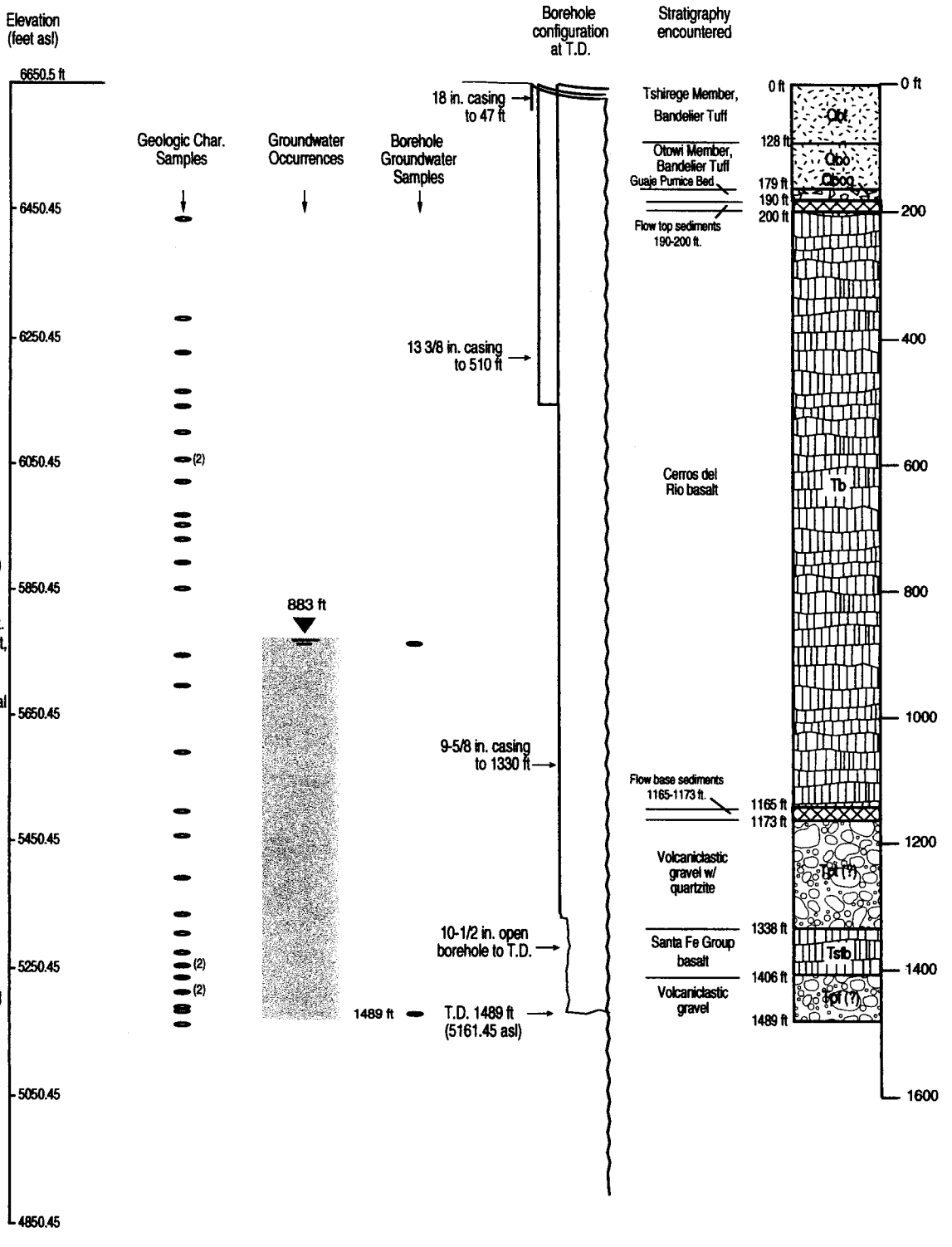
Contaminants Detected in Borehole Samples:
Regional groundwater: borehole screening data indicate tritium above background.

Well construction:
Drilling Completed: 10/11/00
Contract Geophysics: 10/13/00
Well Constructed: 10/17/00-11/03/00
Well Developed: 11/04/00-11/14/00
Westbay Installed: 12/07/00-12/10/00

Casing: 4.5-in I.D. stainless steel with external couplings

Number of Screens: 5
4.5-in I.D. pipe based, s.s. wire-wrapped; 0.010-in slot

Screen (perforated pipe interval):
Screen #1 - 872.3 ft to 914.2 ft
Screen #2 - 947.0 ft to 988.9 ft
Screen #3 - 1272.2 ft to 1278.9 ft
Screen #4 - 1378.2 ft to 1384.9 ft
Screen #5 - 1447.3 ft to 1452.3 ft



Well development consisted of brushing, bailing, and pumping each screen; and bailing and pumping the sump. Pump development was conducted with a single packer inflated below each targeted screen.

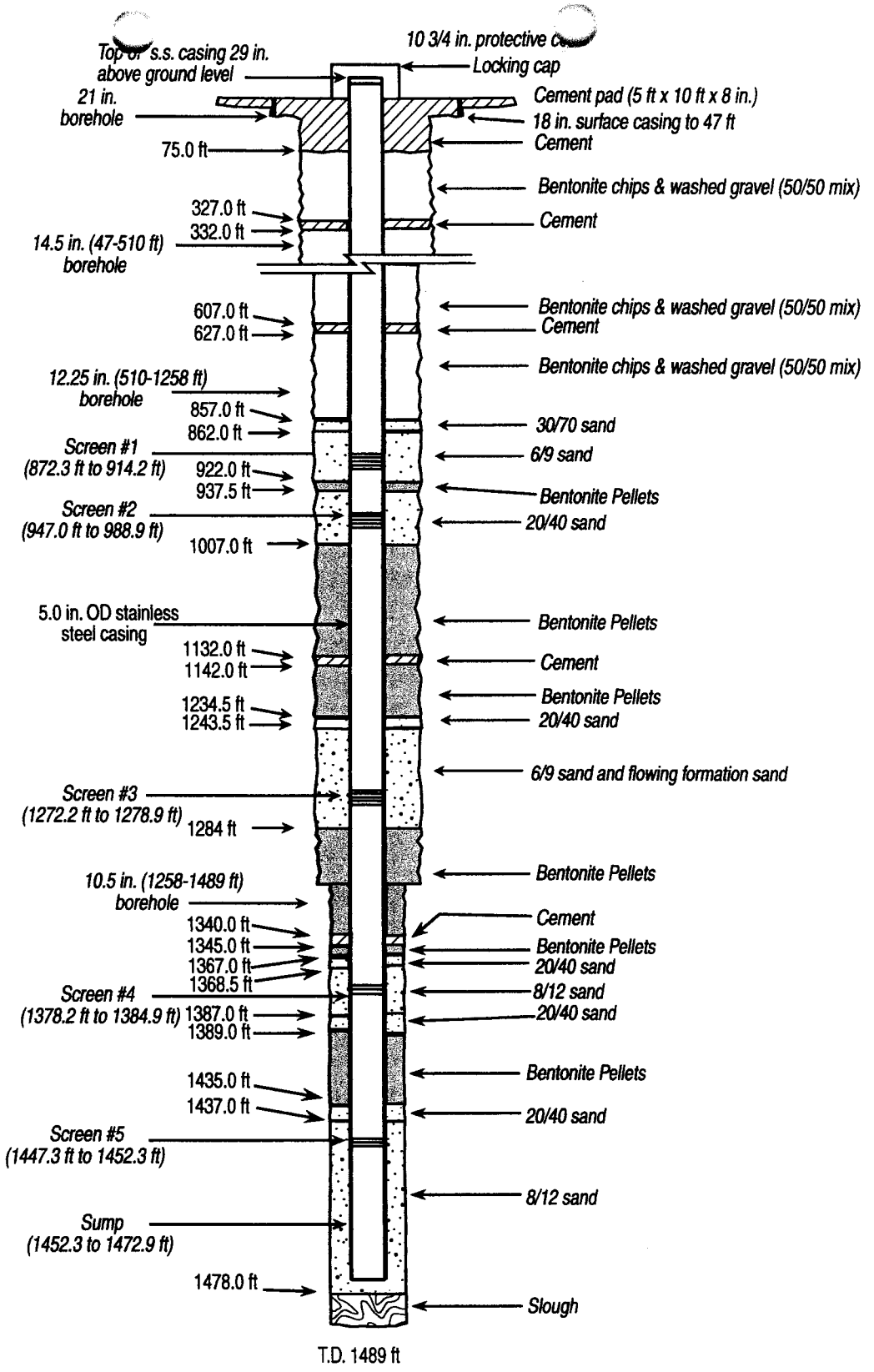
Groundwater occurrence was determined by recognition of first water produced while drilling. Static water levels were determined after the borehole was rested.

Geologic contacts determined by examination of cuttings and interpretation of natural gamma logs. Contacts may be refined by analysis of geologic samples by petrography and rock chemistry.

Construction, stratigraphic, and hydrologic information for Hydrogeologic Workplan characterization well R-22.

Drawing Not to Scale

All depths feet below ground surface



Note: The screen intervals list the footages of the pipe perforations, not the tops and bottoms of screen joints.

As-built well completion diagram of Well R-22.