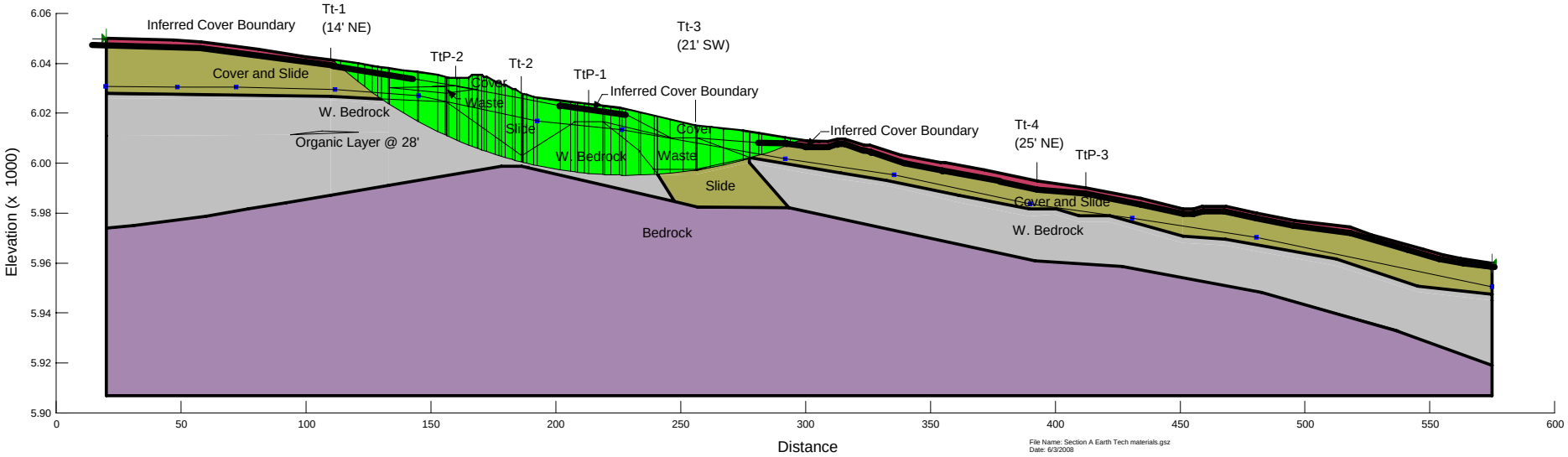

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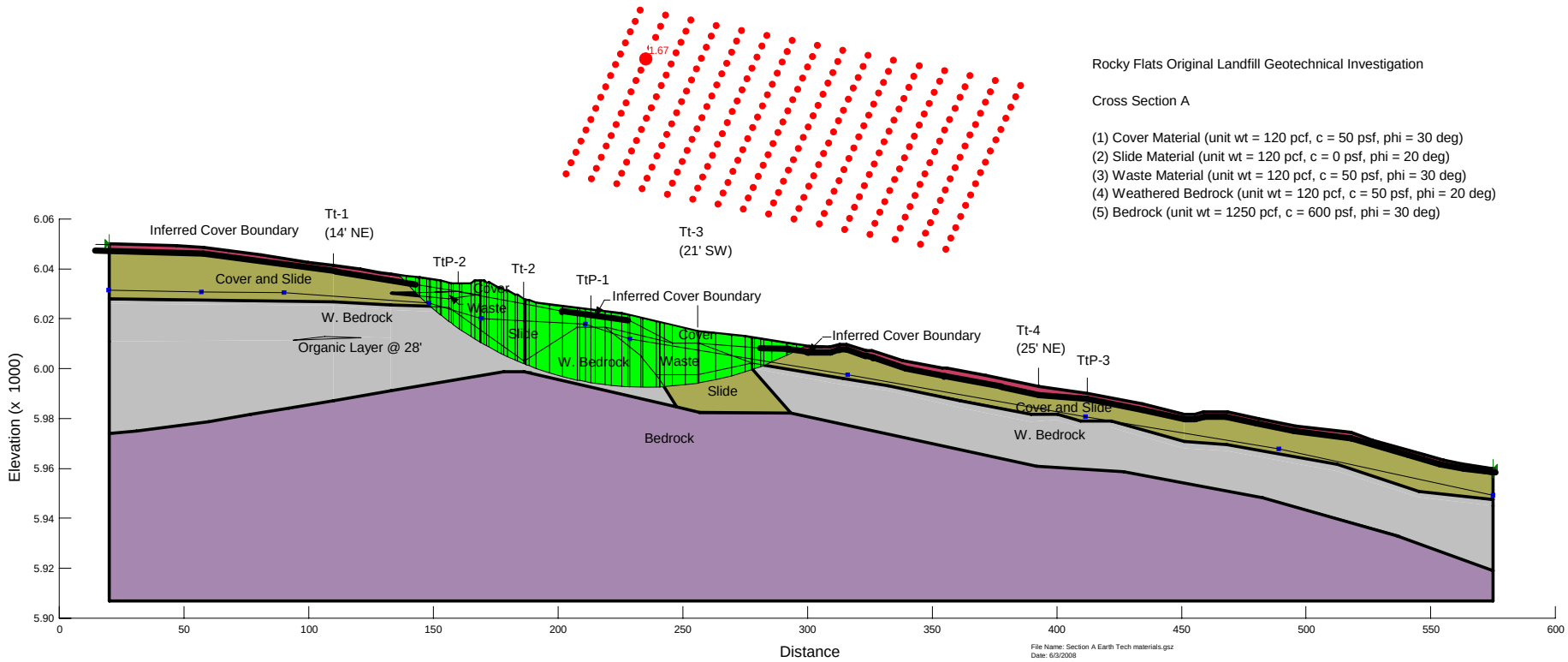
Section A
Slope Stability Upper Section
Earth Tech Material Properties
Figure E-1



Project No: 181750

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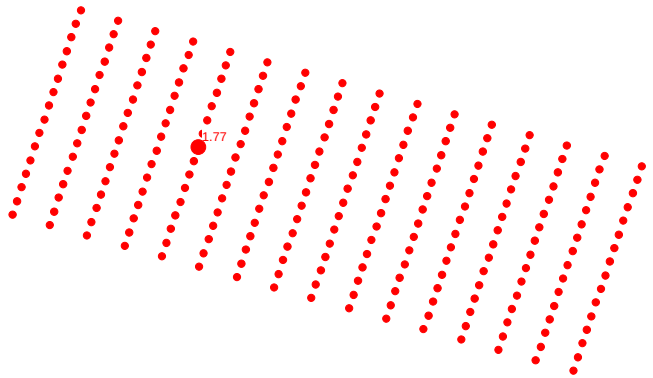
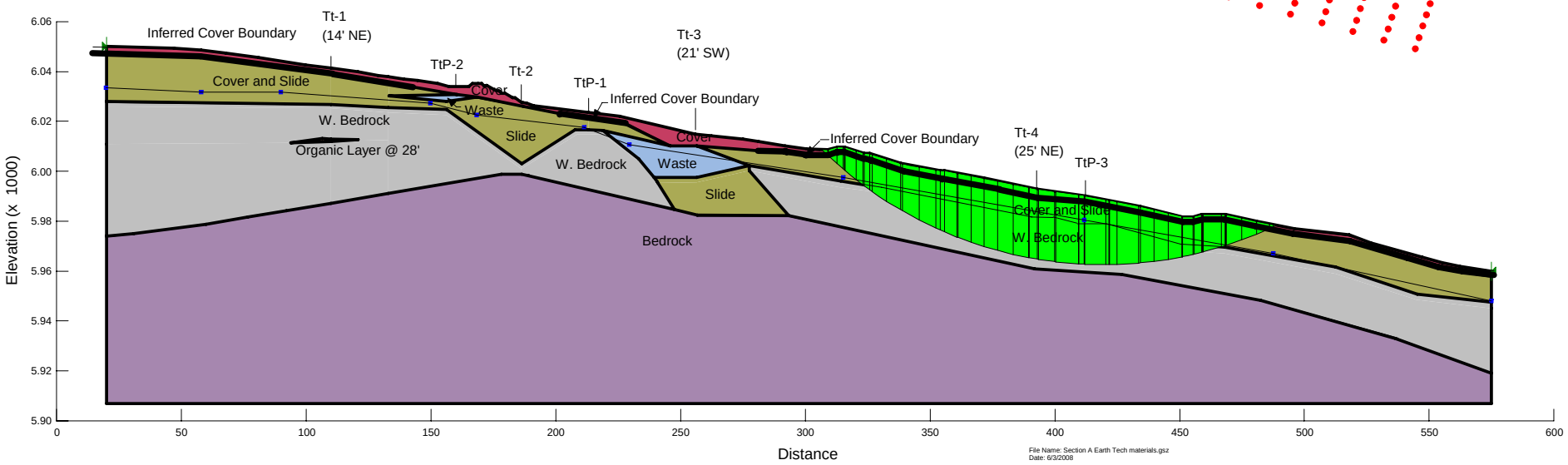
Section A
Slope Stability Middle Section
Earth Tech Material Properties
Figure E-2

Rocky Flats Original Landfill Geotechnical Investigation

Cross Section A

(1) Cover Material (unit wt = 120 pcf, c = 50 psf, phi = 30 deg)
(2) Slide Material (unit wt = 120 pcf, c = 0 psf, phi = 20 deg)
(3) Waste Material (unit wt = 120 pcf, c = 50 psf, phi = 30 deg)
(4) Weathered Bedrock (unit wt = 120 pcf, c = 50 psf, phi = 20 deg)
(5) Bedrock (unit wt = 1250 pcf, c = 600 psf, phi = 30 deg)





Project No: 181750

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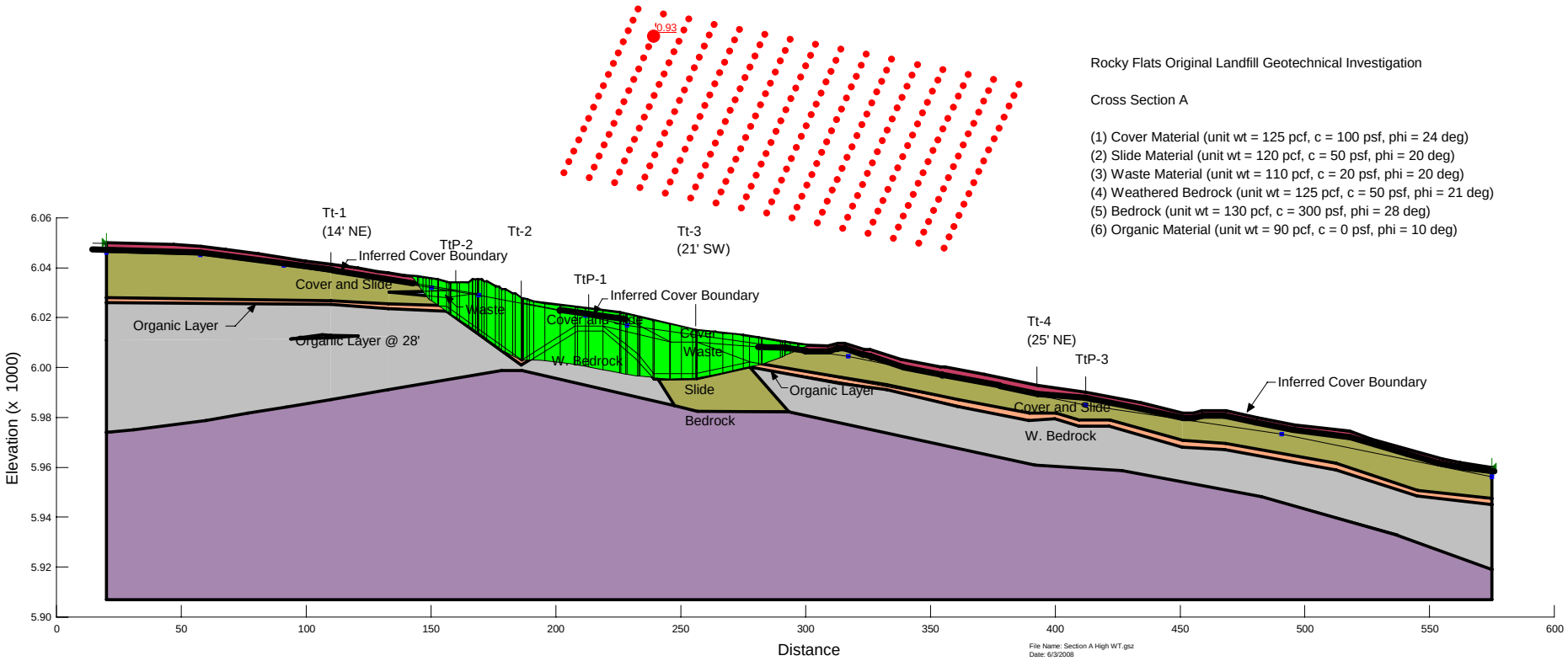
Section A
Slope Stability Lower Section
Earth Tech Material Properties
Figure E-3



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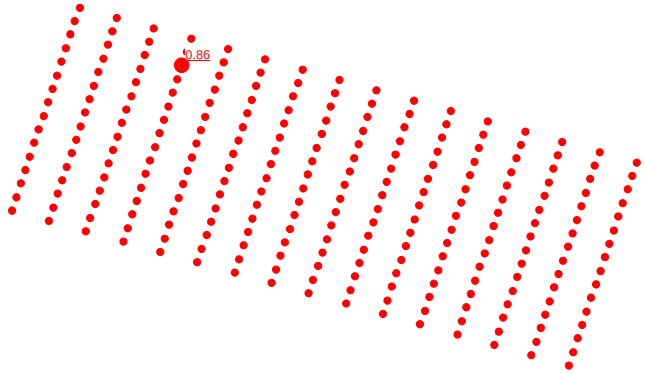
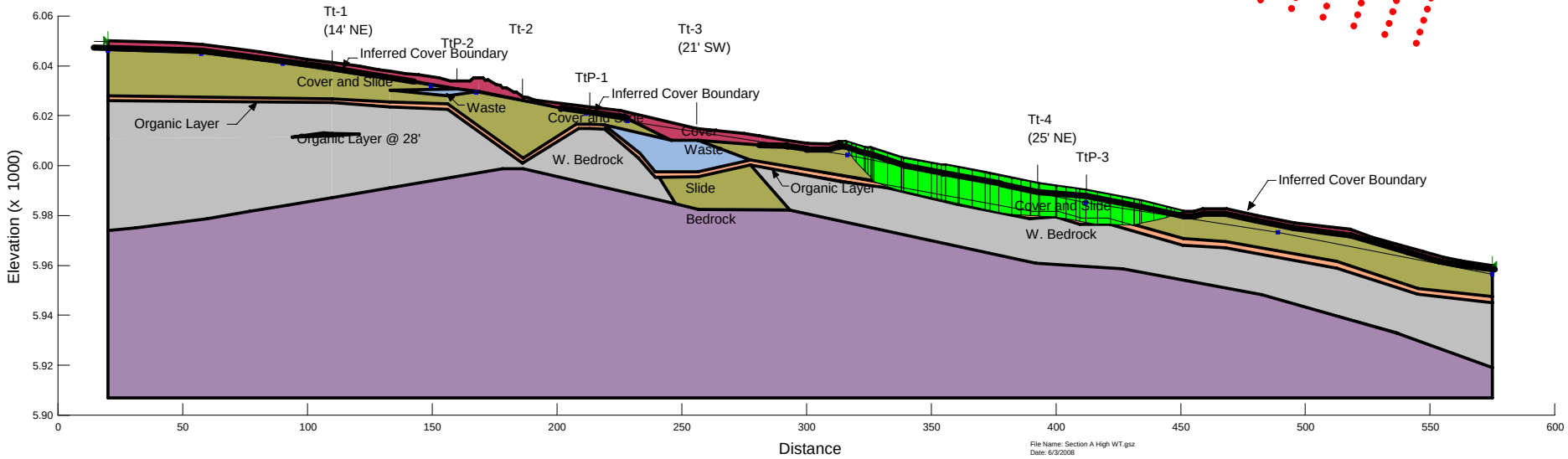
Section A
Slope Stability Upper Section
TetraTech Material Properties – High Water Table
Figure E-4

Rocky Flats Original Landfill Geotechnical Investigation

Cross Section A

(1) Cover Material (unit wt = 125 pcf, c = 100 psf, phi = 24 deg)
(2) Slide Material (unit wt = 120 pcf, c = 50 psf, phi = 20 deg)
(3) Waste Material (unit wt = 110 pcf, c = 20 psf, phi = 20 deg)
(4) Weathered Bedrock (unit wt = 125 pcf, c = 50 psf, phi = 21 deg)
(5) Bedrock (unit wt = 130 pcf, c = 300 psf, phi = 28 deg)
(6) Organic Material (unit wt = 90 pcf, c = 0 psf, phi = 10 deg)





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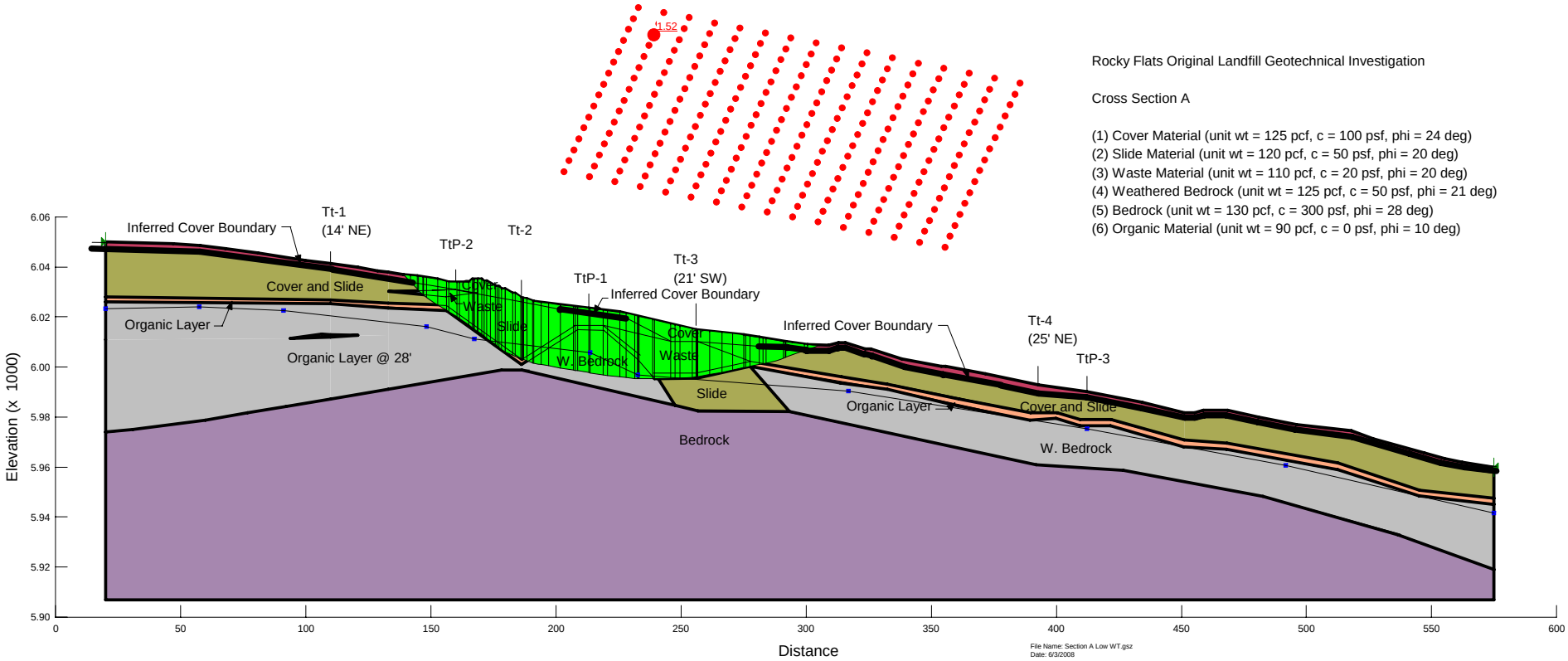
Section A
Slope Stability Lower Section
TetraTech Material Properties – High Water Table
Figure E-5



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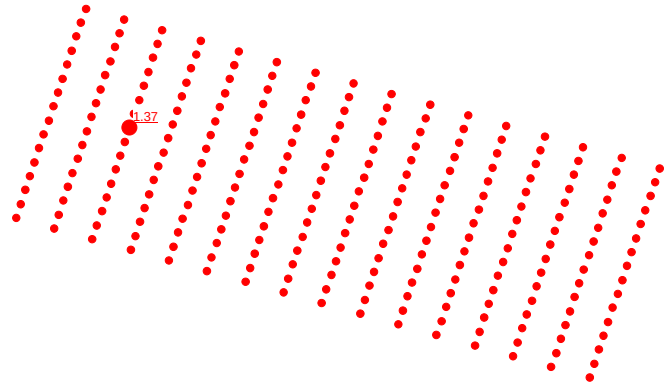
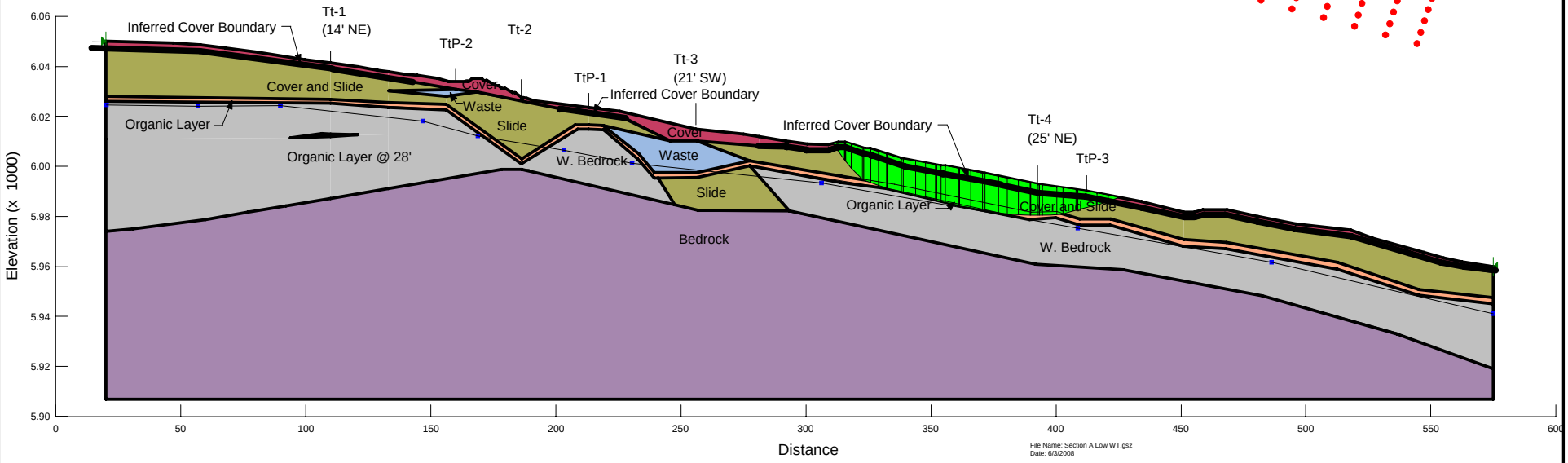
Section A
Slope Stability Upper Section
TetraTech Material Properties – Low Water Table
Figure E-6

Rocky Flats Original Landfill Geotechnical Investigation

Cross Section A

(1) Cover Material (unit wt = 125 pcf, c = 100 psf, phi = 24 deg)
(2) Slide Material (unit wt = 120 pcf, c = 50 psf, phi = 20 deg)
(3) Waste Material (unit wt = 110 pcf, c = 20 psf, phi = 20 deg)
(4) Weathered Bedrock (unit wt = 125 pcf, c = 50 psf, phi = 21 deg)
(5) Bedrock (unit wt = 130 pcf, c = 300 psf, phi = 28 deg)
(6) Organic Material (unit wt = 90 pcf, c = 0 psf, phi = 10 deg)





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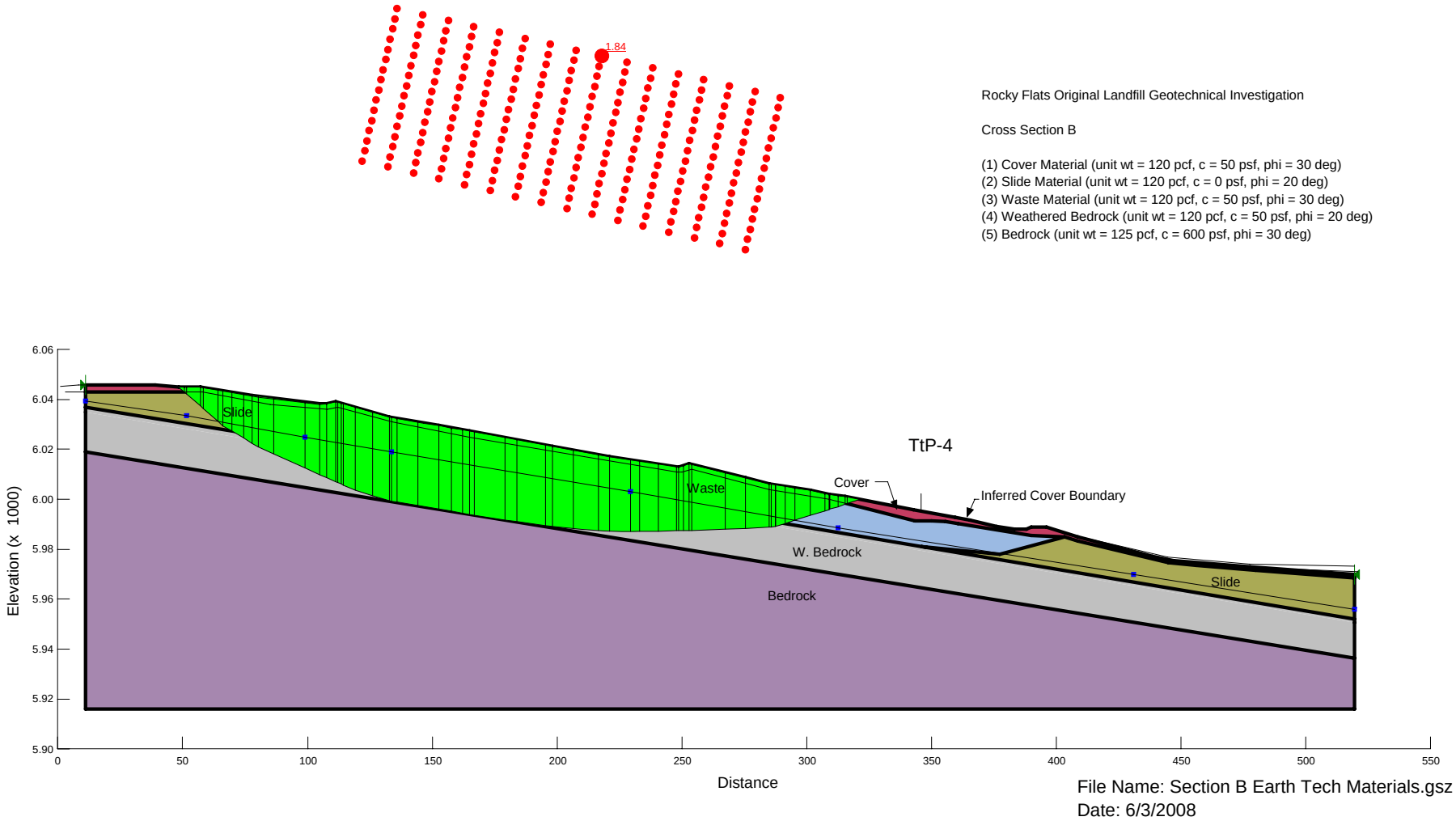
Section A
Slope Stability Lower Section
TetraTech Material Properties – Low Water Table
Figure E-7



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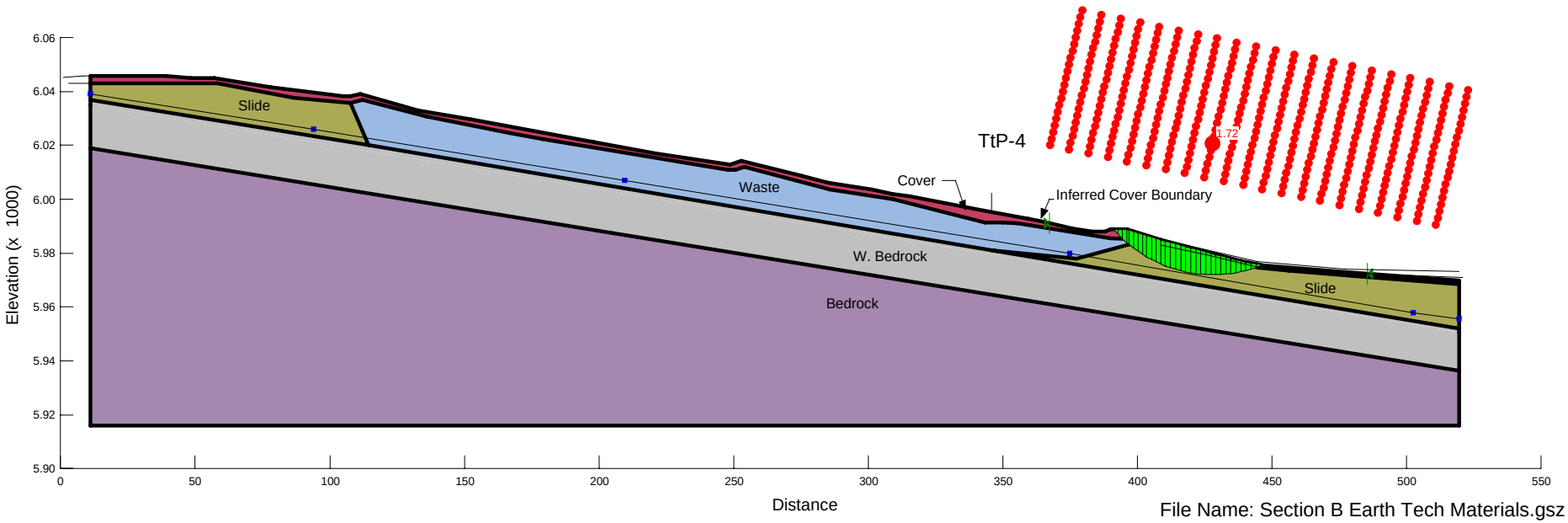
Section B
Slope Stability Upper Section
Earth Tech Material Properties
Figure E-8

Rocky Flats Original Landfill Geotechnical Investigation

Cross Section B

(1) Cover Material (unit wt = 120 pcf, c = 50 psf, phi = 30 deg)
(2) Slide Material (unit wt = 120 pcf, c = 0 psf, phi = 20 deg)
(3) Waste Material (unit wt = 120 pcf, c = 50 psf, phi = 30 deg)
(4) Weathered Bedrock (unit wt = 120 pcf, c = 50 psf, phi = 20 deg)
(5) Bedrock (unit wt = 125 pcf, c = 600 psf, phi = 30 deg)



File Name: Section B Earth Tech Materials.gsz
Date: 6/3/2008

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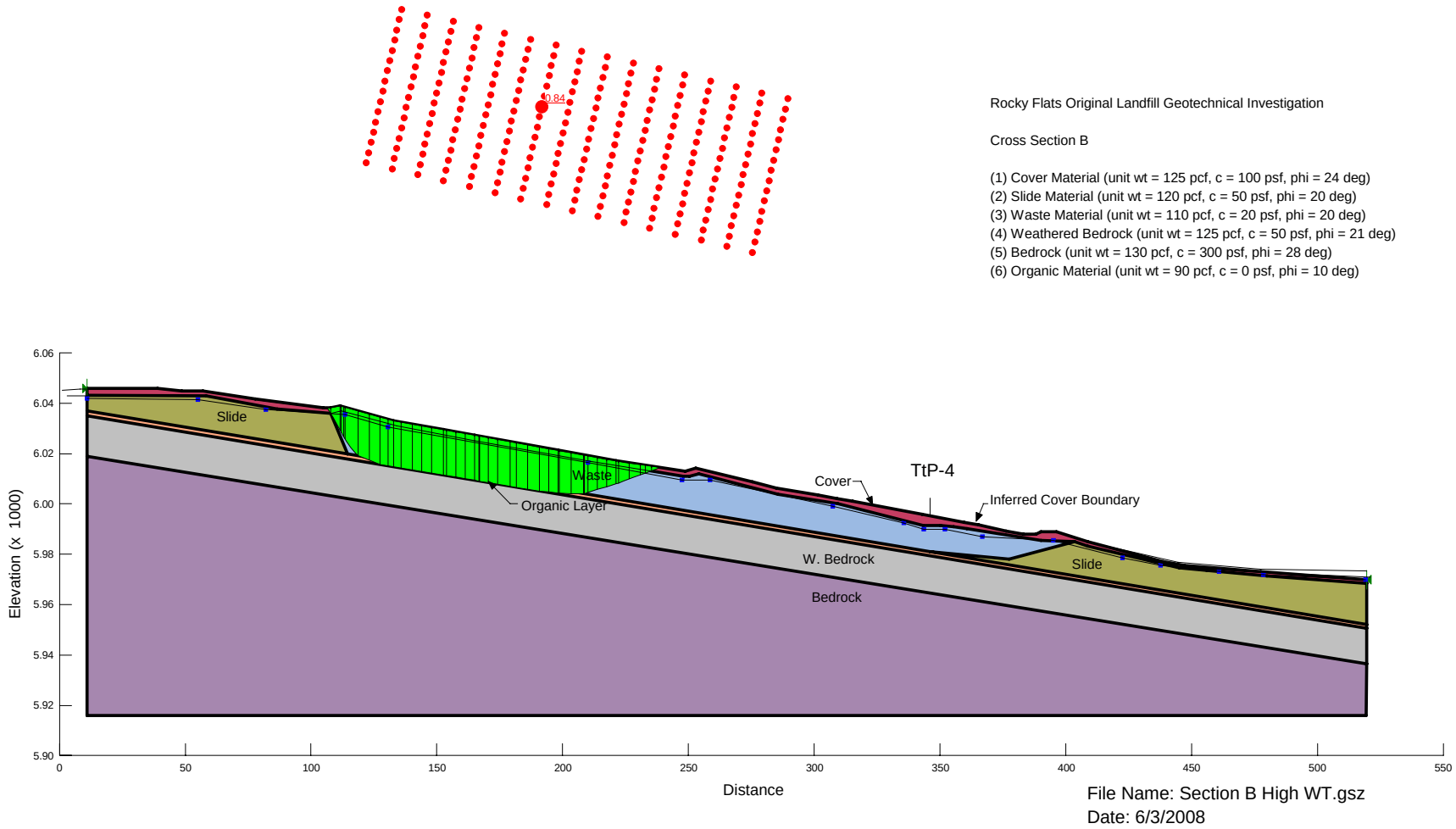
Section B
Slope Stability Lower Section
Earth Tech Material Properties
Figure E-9



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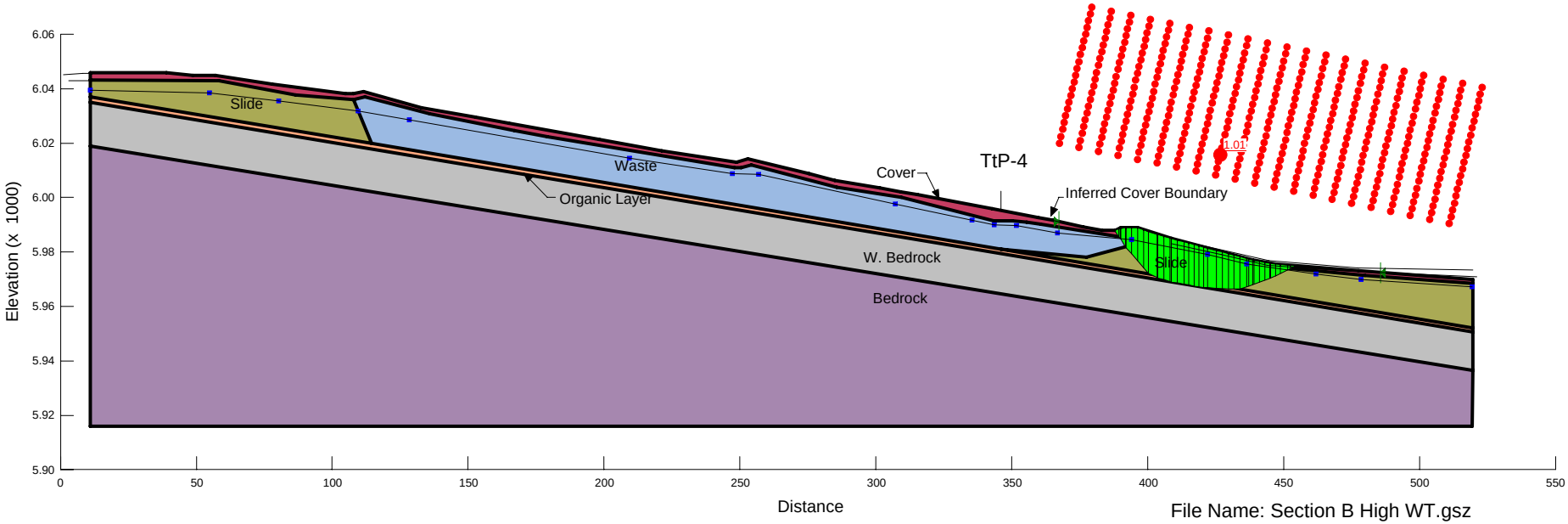
Section B
Slope Stability Upper Section
TetraTech Material Properties – High Water Table
Figure E-10

Rocky Flats Original Landfill Geotechnical Investigation

Cross Section B

(1) Cover Material (unit wt = 125 pcf, c = 100 psf, phi = 24 deg)
(2) Slide Material (unit wt = 120 pcf, c = 50 psf, phi = 20 deg)
(3) Waste Material (unit wt = 110 pcf, c = 20 psf, phi = 20 deg)
(4) Weathered Bedrock (unit wt = 125 pcf, c = 50 psf, phi = 21 deg)
(5) Bedrock (unit wt = 130 pcf, c = 300 psf, phi = 28 deg)
(6) Organic Material (unit wt = 90 pcf, c = 0 psf, phi = 10 deg)



File Name: Section B High WT.gsz
Date: 6/3/2008

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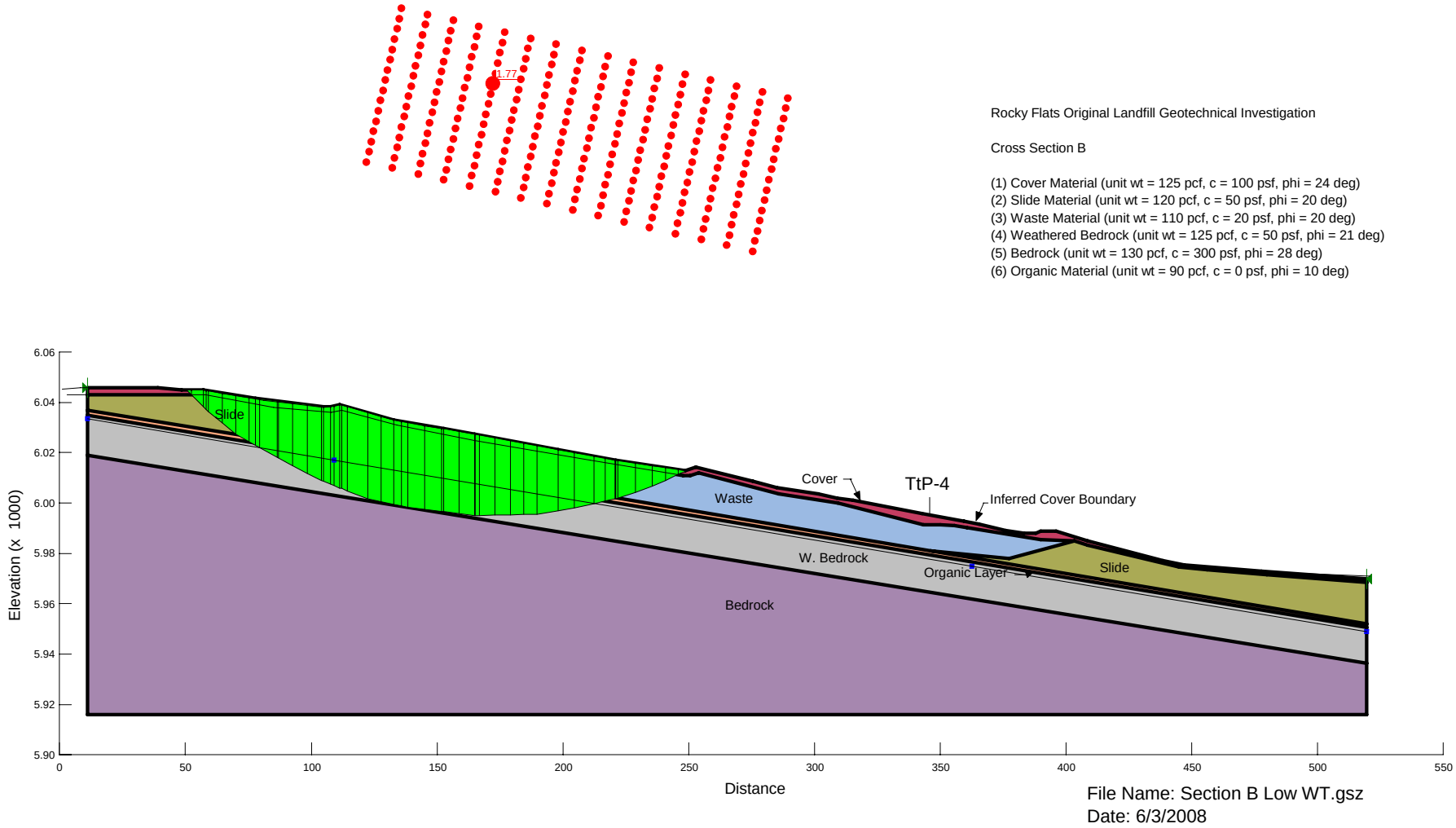
Section B
Slope Stability Lower Section
TetraTech Material Properties – High Water Table
Figure E-11



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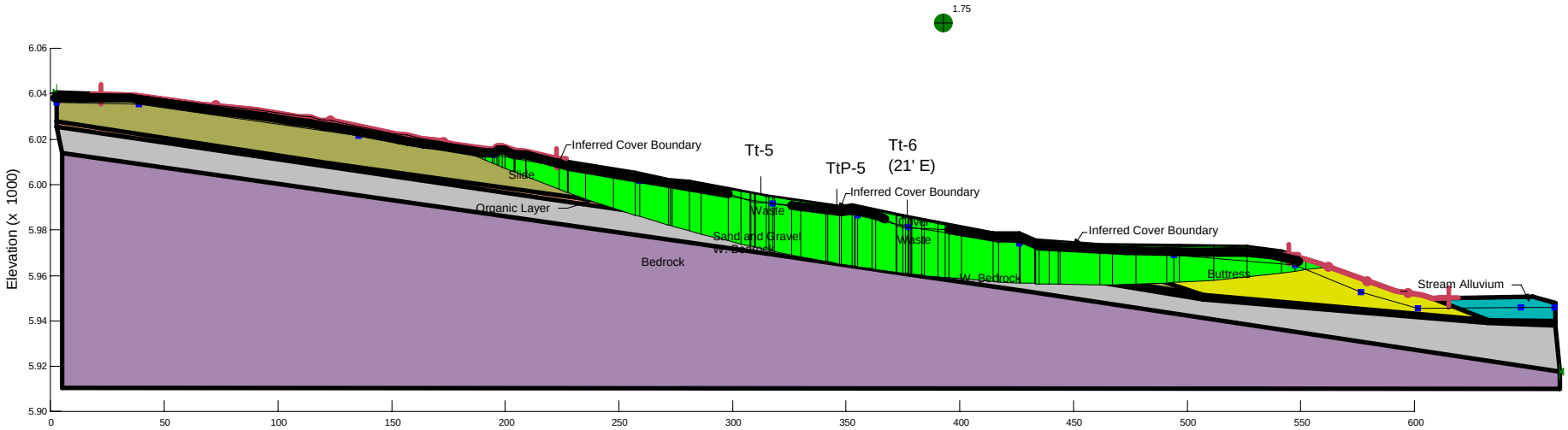
Section B
Slope Stability Upper Section
TetraTech Material Properties – Low Water Table
Figure E-12

Rocky Flats Original Landfill Geotechnical Investigation

Cross Section C

(1) Cover Material (unit wt = 125 pcf, c = 100 psf, phi = 24 deg)
(2) Slide Material (unit wt = 120 pcf, c = 50 psf, phi = 20 deg)
(3) Waste Material (unit wt = 110 pcf, c = 20 psf, phi = 20 deg)
(4) Weathered Bedrock (unit wt = 125 pcf, c = 50 psf, phi = 21 deg)
(5) Bedrock (unit wt = 130 pcf, c = 300 psf, phi = 28 deg)
(6) Organic Material (unit wt = 90 pcf, c = 0 psf, phi = 10 deg)
(7) Buttress Material (unit wt = 130 pcf, c = 50 psf, phi = 33 deg)
(8) Stream Alluvium (unit wt = 125 pcf, c = 0 psf, phi = 33 deg)



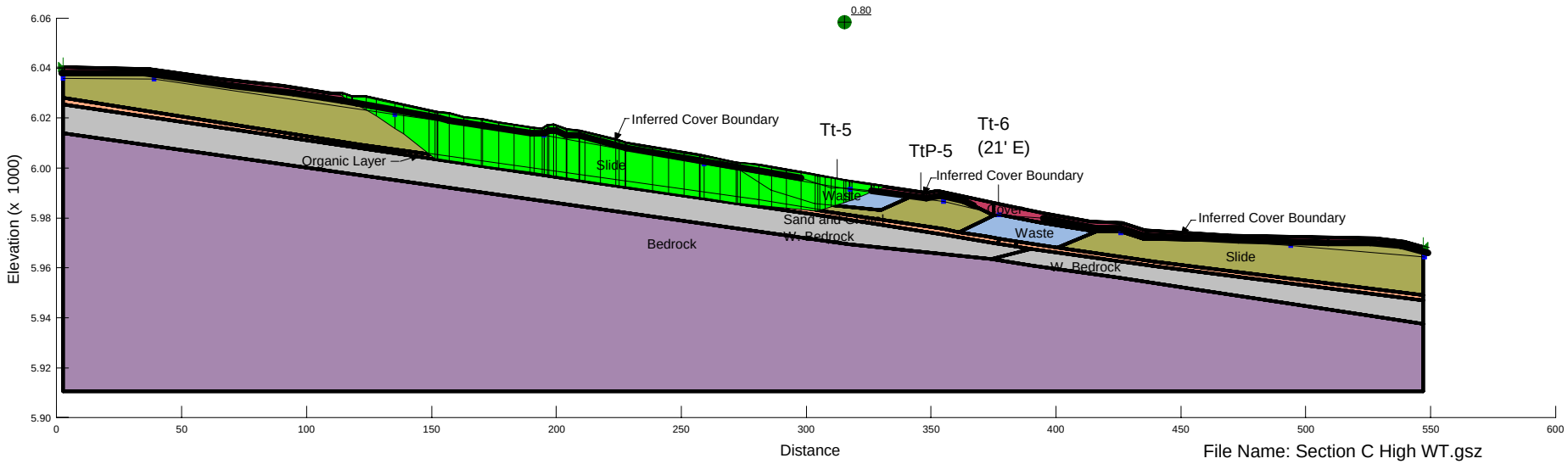
File Name: Section C Global.gsz
Date: 6/3/2008

Section C
Slope Stability Full Section
Earth Tech Material Properties
Figure E-13

Rocky Flats Original Landfill Geotechnical Investigation

Cross Section C

(1) Cover Material (unit wt = 125 pcf, c = 100 psf, phi = 24 deg)
(2) Slide Material (unit wt = 120 pcf, c = 50 psf, phi = 20 deg)
(3) Waste Material (unit wt = 110 pcf, c = 20 psf, phi = 20 deg)
(4) Weathered Bedrock (unit wt = 125 pcf, c = 50 psf, phi = 21 deg)
(5) Bedrock (unit wt = 130 pcf, c = 300 psf, phi = 28 deg)
(6) Organic Material (unit wt = 90 pcf, c = 0 psf, phi = 10 deg)



File Name: Section C High WT.gsz
Date: 6/3/2008

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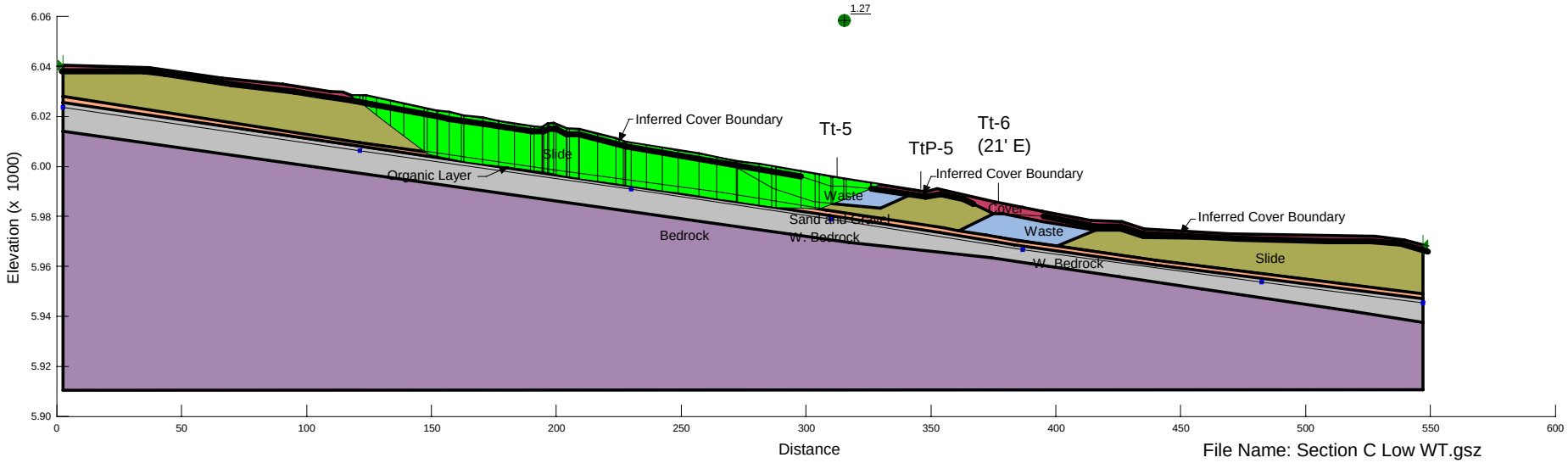
Section C
Slope Stability Upper Section
TetraTech Material Properties – High Water Table
Figure E-14

Rocky Flats Original Landfill Geotechnical Investigation

Cross Section C

(1) Cover Material (unit wt = 125 pcf, c = 100 psf, phi = 24 deg)
(2) Slide Material (unit wt = 120 pcf, c = 50 psf, phi = 20 deg)
(3) Waste Material (unit wt = 110 pcf, c = 20 psf, phi = 20 deg)
(4) Weathered Bedrock (unit wt = 125 pcf, c = 50 psf, phi = 21 deg)
(5) Bedrock (unit wt = 130 pcf, c = 300 psf, phi = 28 deg)
(6) Organic Material (unit wt = 90 pcf, c = 0 psf, phi = 10 deg)



File Name: Section C Low WT.gsz
Date: 6/3/2008

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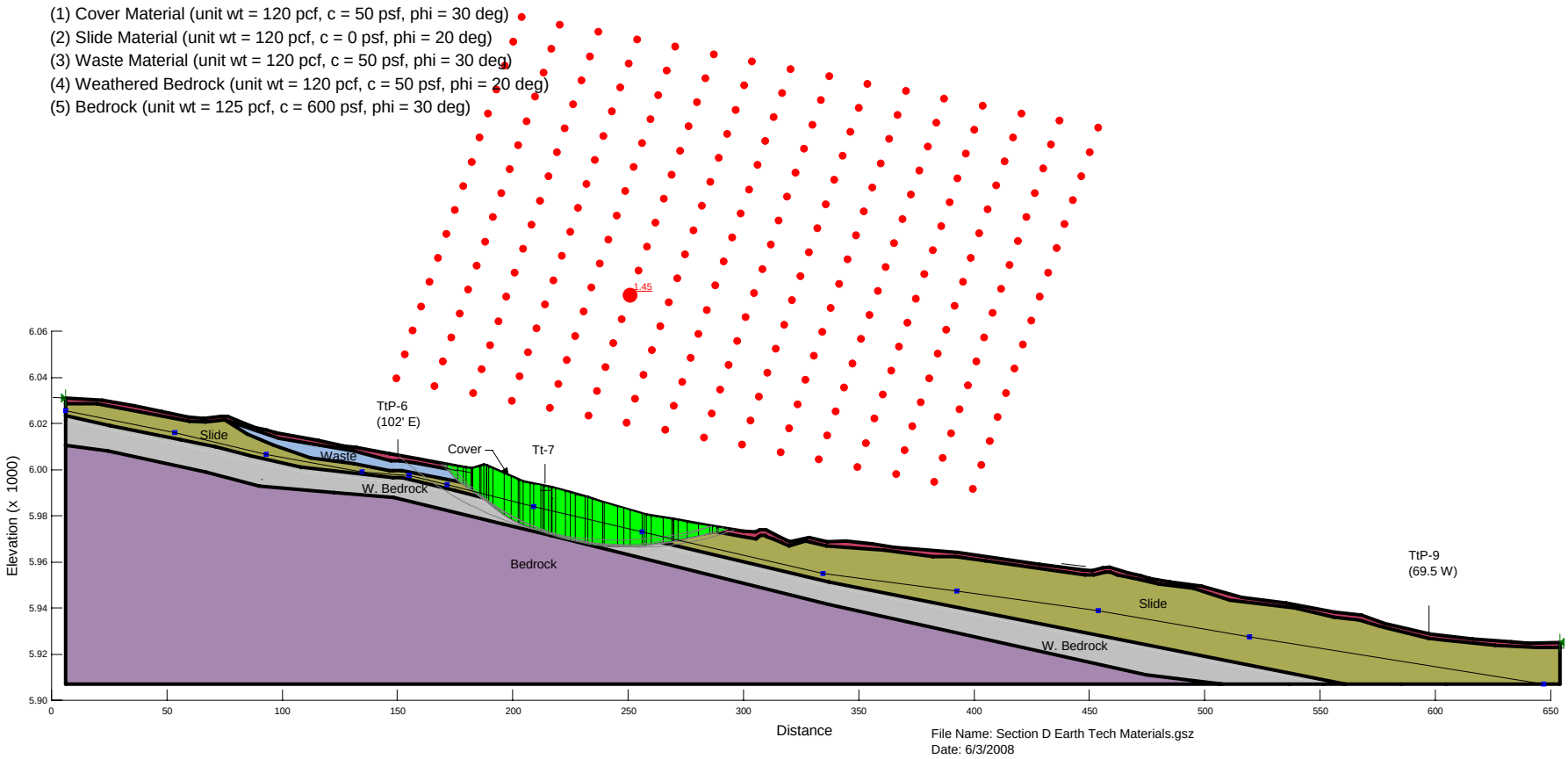
Section C
Slope Stability Upper Section
TetraTech Material Properties – Low Water Table
Figure E-15

Rocky Flats Original Landfill Geotechnical Investigation

Cross Section D

(1) Cover Material (unit wt = 120 pcf, c = 50 psf, phi = 30 deg)
(2) Slide Material (unit wt = 120 pcf, c = 0 psf, phi = 20 deg)
(3) Waste Material (unit wt = 120 pcf, c = 50 psf, phi = 30 deg)
(4) Weathered Bedrock (unit wt = 120 pcf, c = 50 psf, phi = 20 deg)
(5) Bedrock (unit wt = 125 pcf, c = 600 psf, phi = 30 deg)



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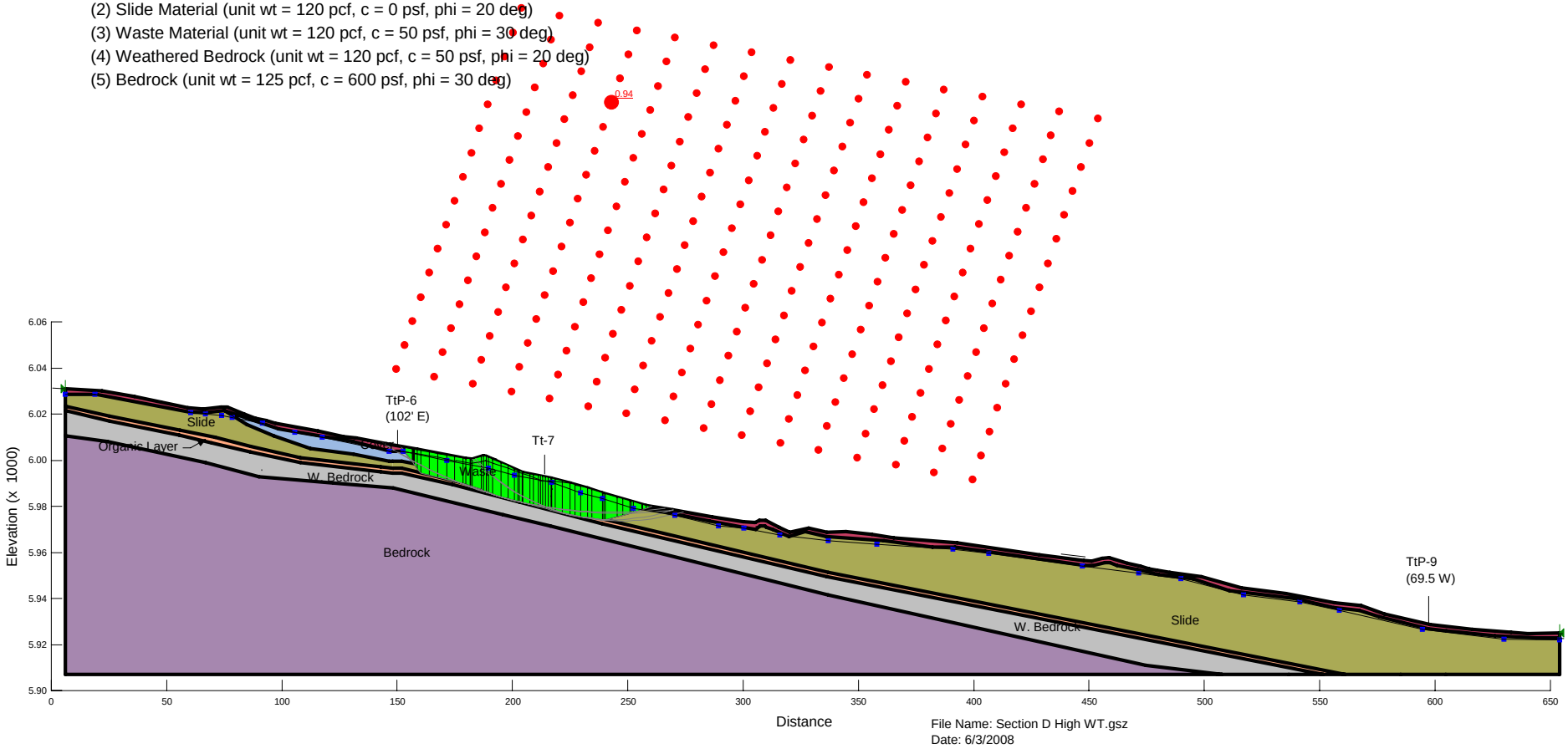
Section D
Slope Stability Upper Section
Earth Tech Material Properties
Figure E-16

Rocky Flats Original Landfill Geotechnical Investigation

Cross Section D

(1) Cover Material (unit wt = 120 pcf, c = 50 psf, phi = 30 deg)
(2) Slide Material (unit wt = 120 pcf, c = 0 psf, phi = 20 deg)
(3) Waste Material (unit wt = 120 pcf, c = 50 psf, phi = 30 deg)
(4) Weathered Bedrock (unit wt = 120 pcf, c = 50 psf, phi = 20 deg)
(5) Bedrock (unit wt = 125 pcf, c = 600 psf, phi = 30 deg)



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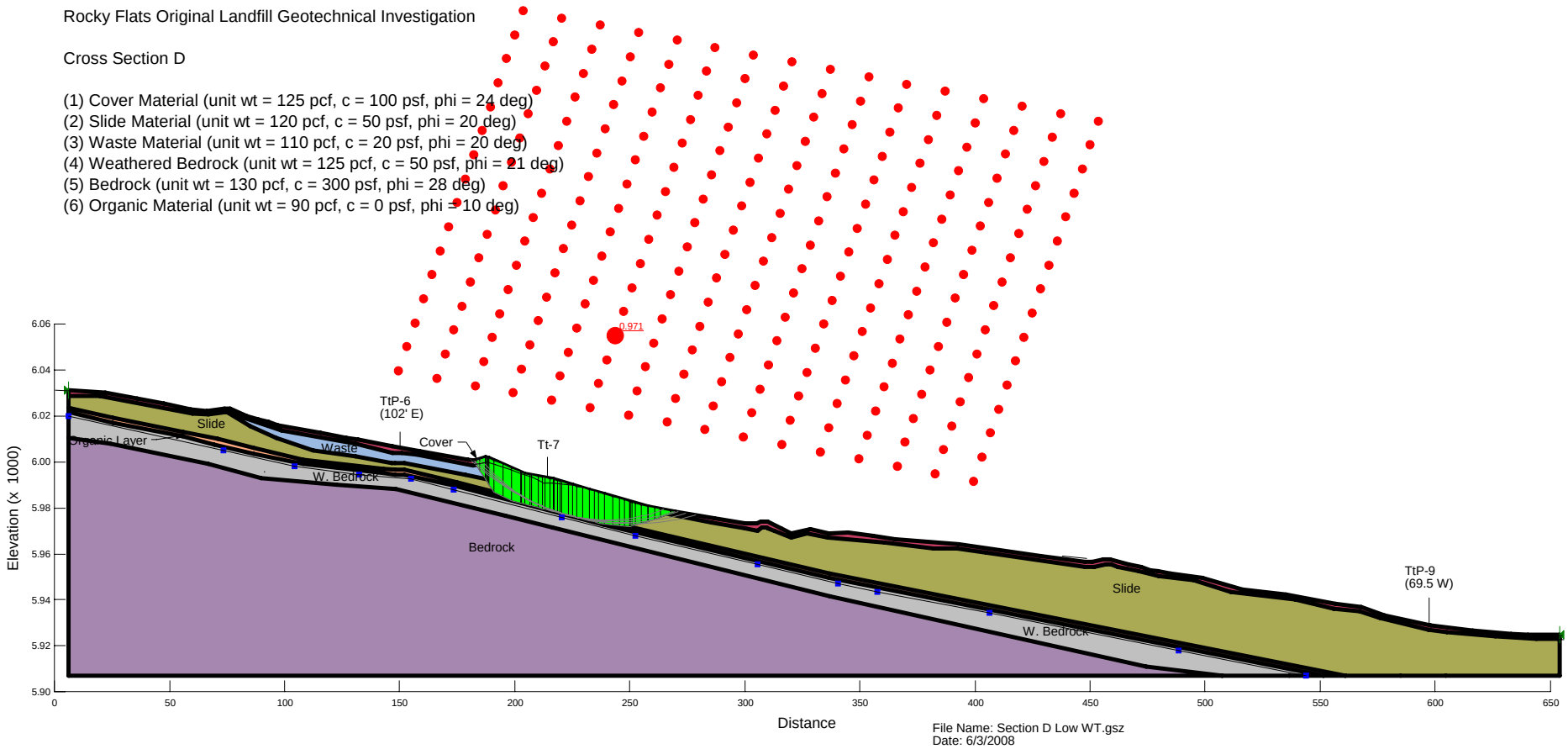
Section D
Slope Stability Upper Section
TetraTech Material Properties – High Water Table
Figure E-17

Rocky Flats Original Landfill Geotechnical Investigation

Cross Section D

(1) Cover Material (unit wt = 125 pcf, c = 100 psf, phi = 24 deg)
(2) Slide Material (unit wt = 120 pcf, c = 50 psf, phi = 20 deg)
(3) Waste Material (unit wt = 110 pcf, c = 20 psf, phi = 20 deg)
(4) Weathered Bedrock (unit wt = 125 pcf, c = 50 psf, phi = 21 deg)
(5) Bedrock (unit wt = 130 pcf, c = 300 psf, phi = 28 deg)
(6) Organic Material (unit wt = 90 pcf, c = 0 psf, phi = 10 deg)



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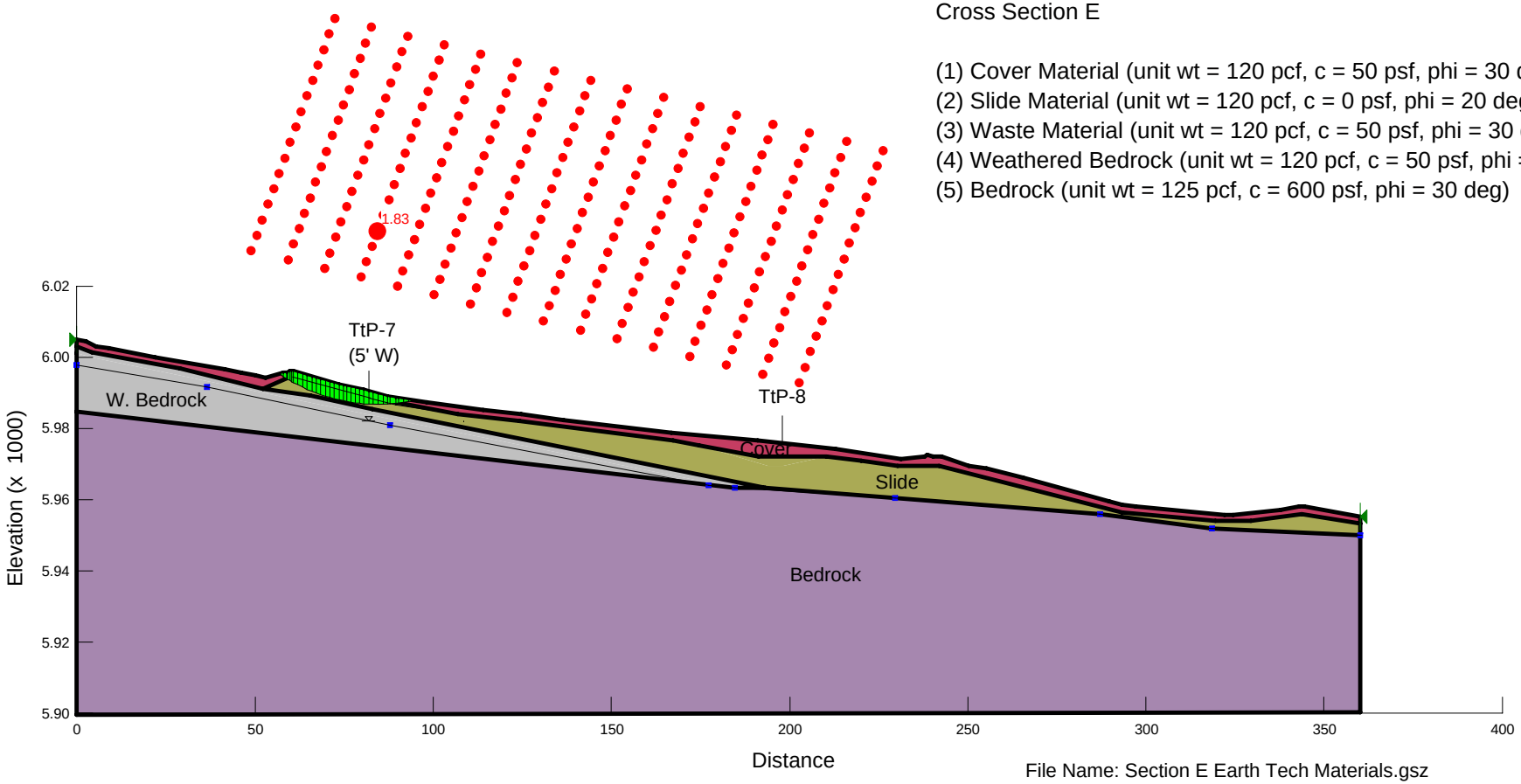
Section D
Slope Stability Upper Section
TetraTech Material Properties – Low Water Table
Figure E-18

Rocky Flats Original Landfill Geotechnical Investigation

Cross Section E

(1) Cover Material (unit wt = 120 pcf, c = 50 psf, phi = 30 deg)
(2) Slide Material (unit wt = 120 pcf, c = 0 psf, phi = 20 deg)
(3) Waste Material (unit wt = 120 pcf, c = 50 psf, phi = 30 deg)
(4) Weathered Bedrock (unit wt = 120 pcf, c = 50 psf, phi = 20 deg)
(5) Bedrock (unit wt = 125 pcf, c = 600 psf, phi = 30 deg)



File Name: Section E Earth Tech Materials.gsz
Date: 6/3/2008

Project No: 181750

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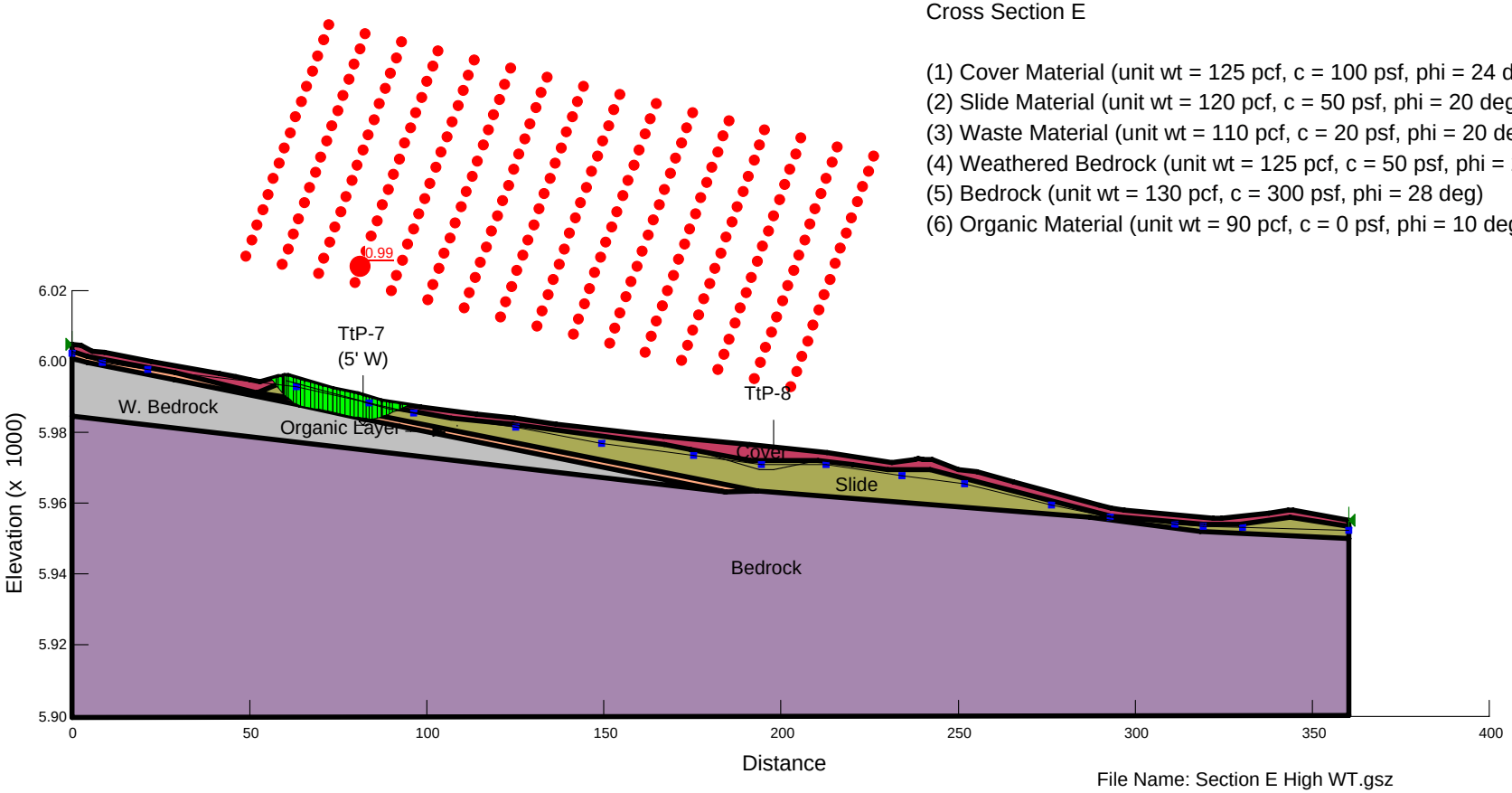
Section E
Slope Stability Upper Section
Earth Tech Material Properties
Figure E-19

Rocky Flats Original Landfill Geotechnical Investigation

Cross Section E

(1) Cover Material (unit wt = 125 pcf, c = 100 psf, phi = 24 deg)
(2) Slide Material (unit wt = 120 pcf, c = 50 psf, phi = 20 deg)
(3) Waste Material (unit wt = 110 pcf, c = 20 psf, phi = 20 deg)
(4) Weathered Bedrock (unit wt = 125 pcf, c = 50 psf, phi = 21 deg)
(5) Bedrock (unit wt = 130 pcf, c = 300 psf, phi = 28 deg)
(6) Organic Material (unit wt = 90 pcf, c = 0 psf, phi = 10 deg)



File Name: Section E High WT.gsz
Date: 6/3/2008

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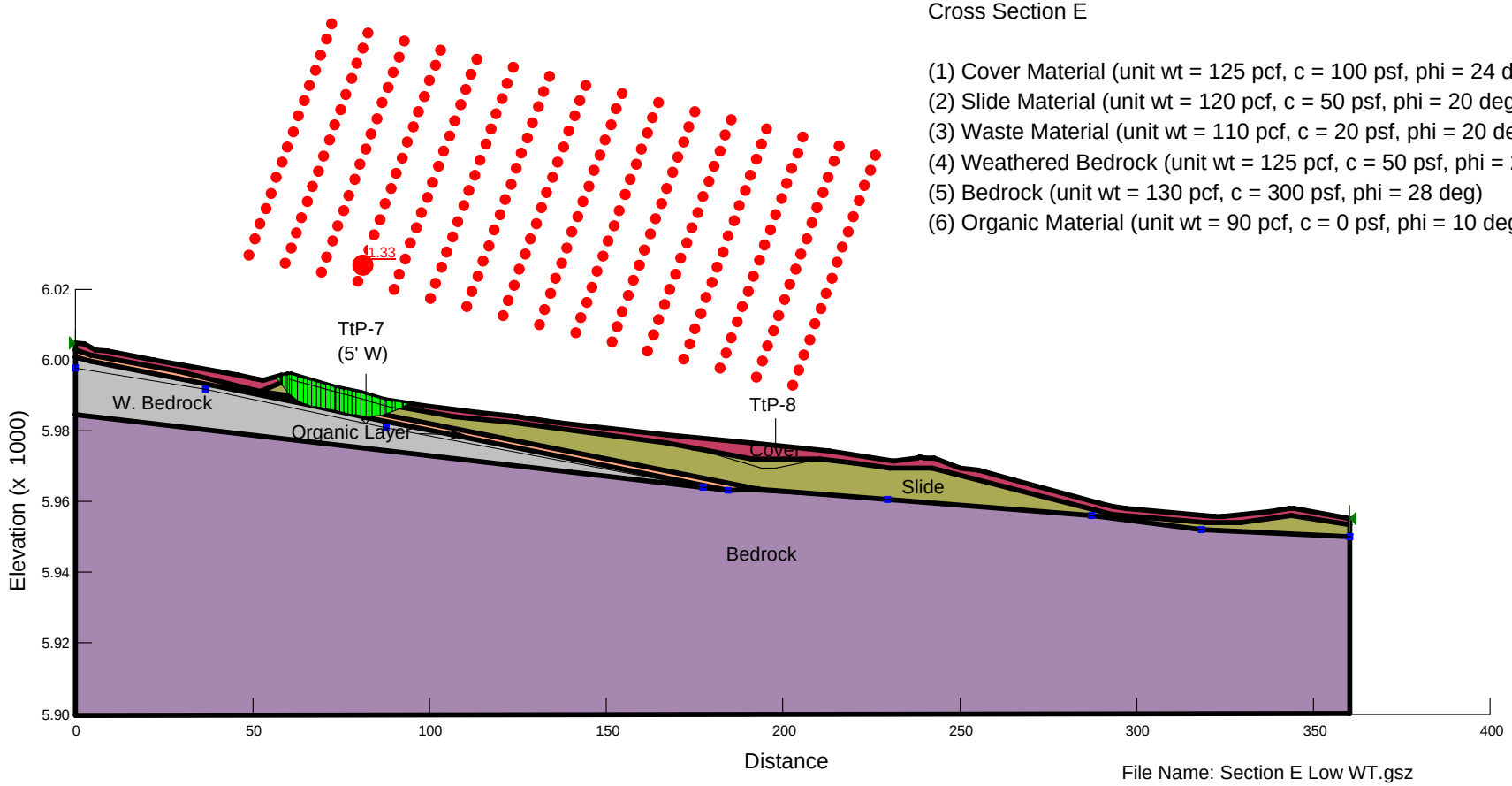
Section E
Slope Stability Upper Section
TetraTech Material Properties – High Water Table
Figure E-20

Rocky Flats Original Landfill Geotechnical Investigation

Cross Section E

(1) Cover Material (unit wt = 125 pcf, c = 100 psf, phi = 24 deg)
(2) Slide Material (unit wt = 120 pcf, c = 50 psf, phi = 20 deg)
(3) Waste Material (unit wt = 110 pcf, c = 20 psf, phi = 20 deg)
(4) Weathered Bedrock (unit wt = 125 pcf, c = 50 psf, phi = 21 deg)
(5) Bedrock (unit wt = 130 pcf, c = 300 psf, phi = 28 deg)
(6) Organic Material (unit wt = 90 pcf, c = 0 psf, phi = 10 deg)



File Name: Section E Low WT.gsz
Date: 6/3/2008

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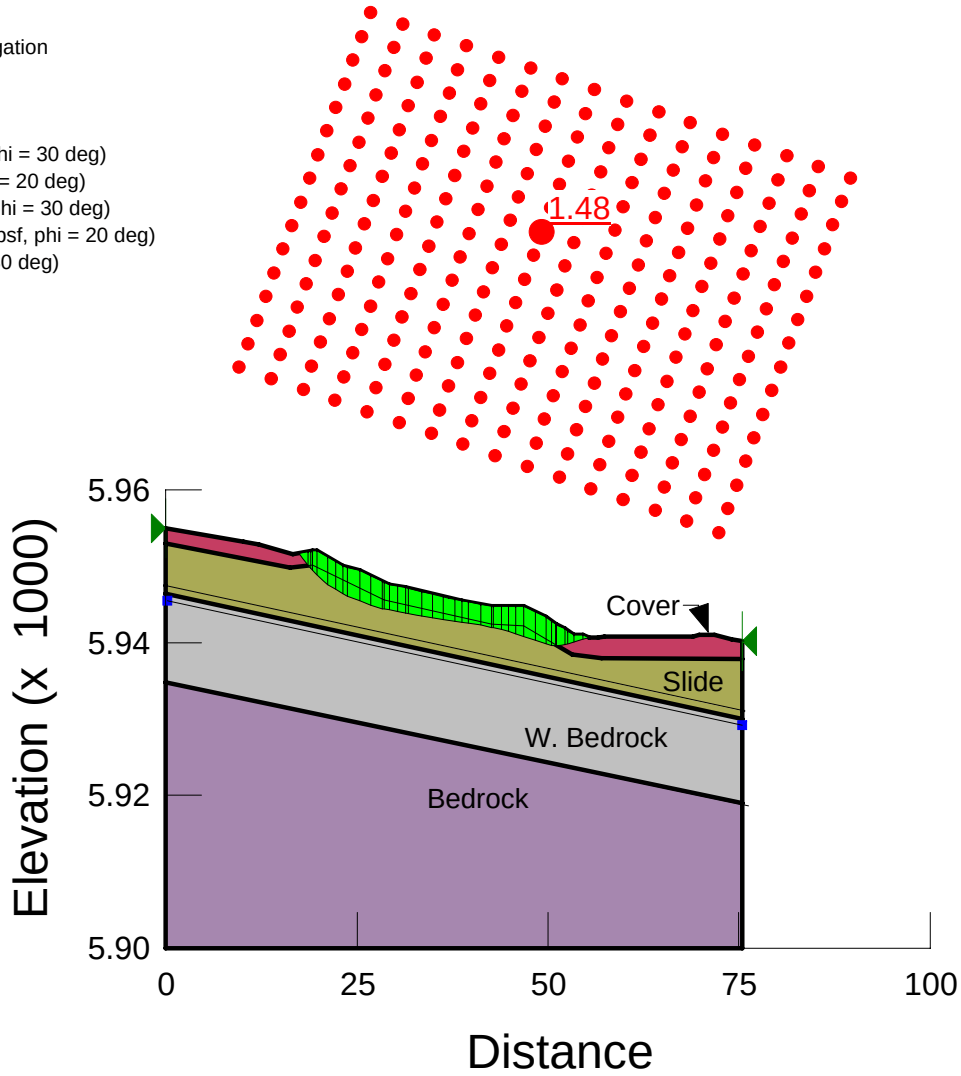
Section E
Slope Stability Upper Section
TetraTech Material Properties – Low Water Table
Figure E-21

Rocky Flats Original Landfill Geotechnical Investigation

Cross Section F

(1) Cover Material (unit wt = 120 pcf, c = 50 psf, phi = 30 deg)
(2) Slide Material (unit wt = 120 pcf, c = 0 psf, phi = 20 deg)
(3) Waste Material (unit wt = 120 pcf, c = 50 psf, phi = 30 deg)
(4) Weathered Bedrock (unit wt = 120 pcf, c = 50 psf, phi = 20 deg)
(5) Bedrock (unit wt = 125 pcf, c = 600 psf, phi = 30 deg)



File Name: Section F Earth Tech Materials.gsz
Date: 6/3/2008

Project No: 181750

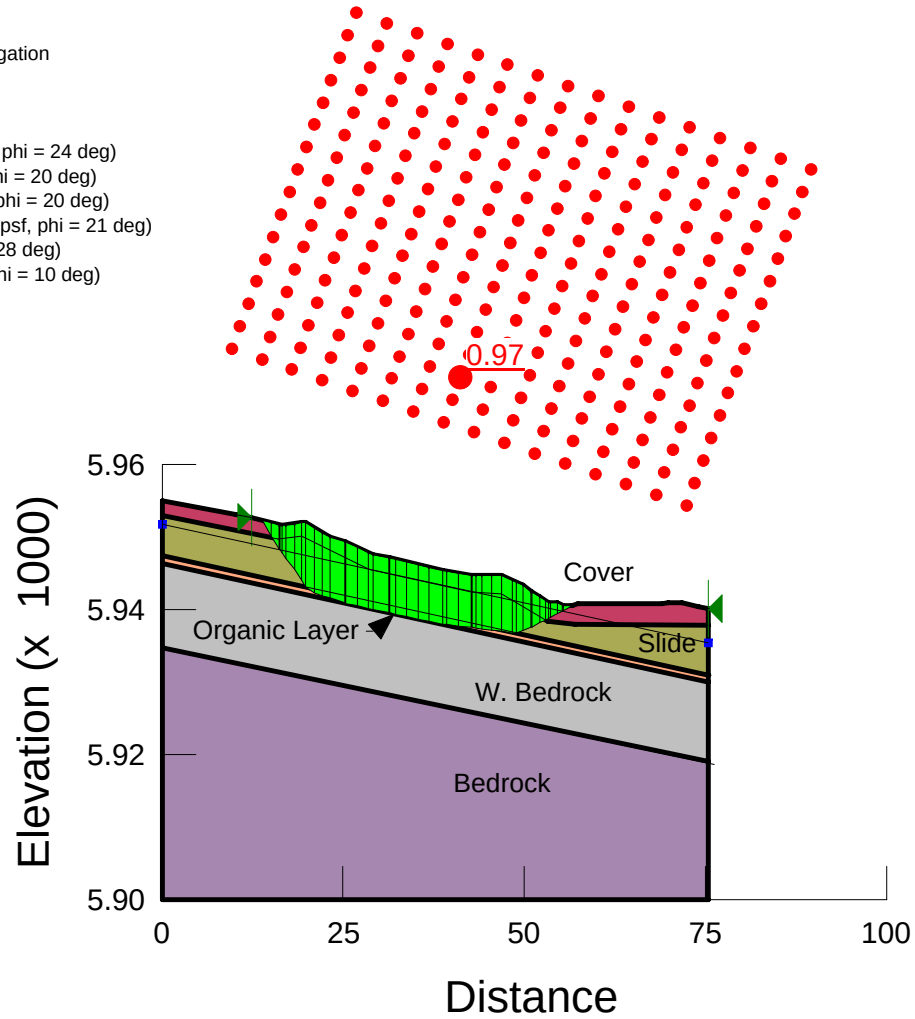
May 2008

Section F
Slope Stability
Earth Tech Material Properties
Figure E-22

Rocky Flats Original Landfill Geotechnical Investigation

Cross Section F

(1) Cover Material (unit wt = 125 pcf, c = 100 psf, phi = 24 deg)
(2) Slide Material (unit wt = 120 pcf, c = 50 psf, phi = 20 deg)
(3) Waste Material (unit wt = 120 pcf, c = 50 psf, phi = 20 deg)
(4) Weathered Bedrock (unit wt = 125 pcf, c = 50 psf, phi = 21 deg)
(5) Bedrock (unit wt = 130 pcf, c = 300 psf, phi = 28 deg)
(6) Organic Material (unit wt = 90 pcf, c = 0 psf, phi = 10 deg)



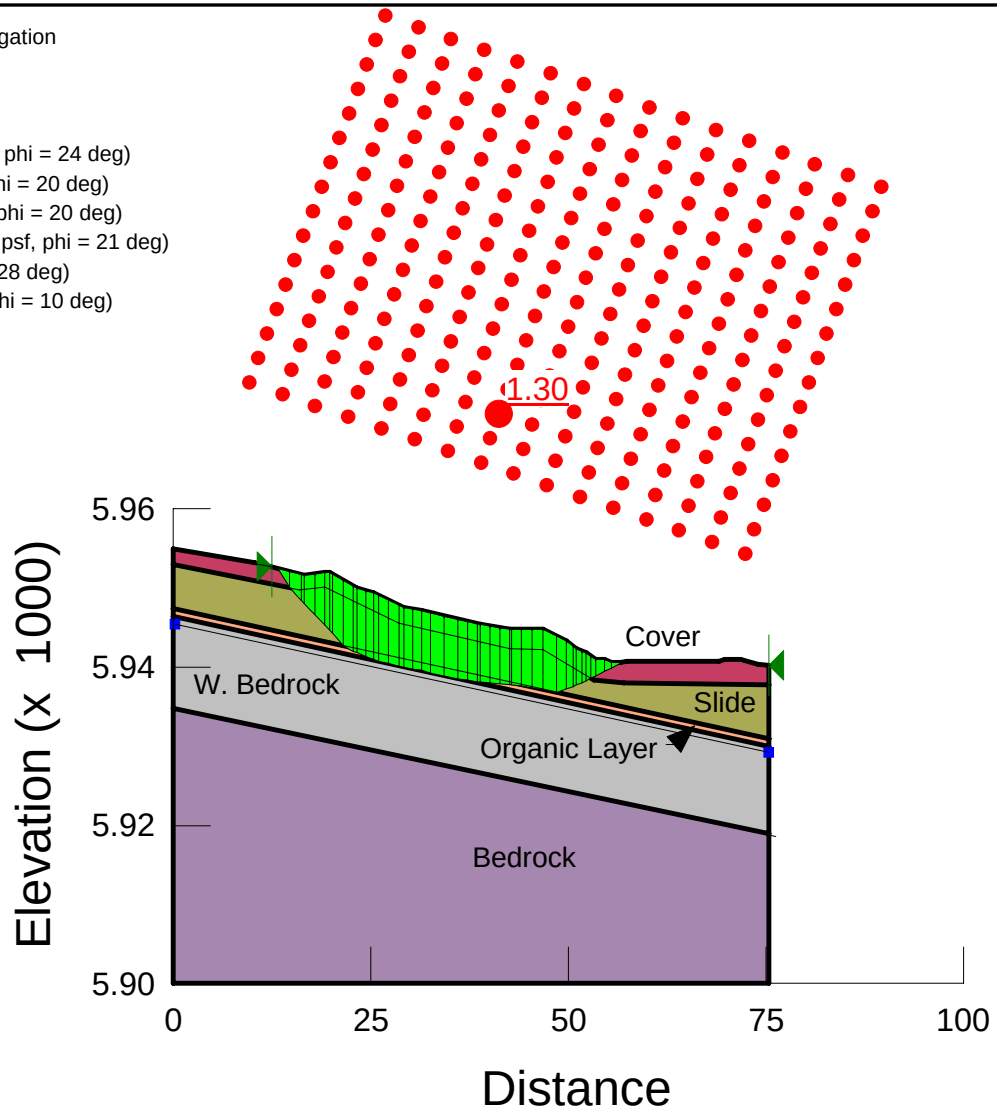
File Name: Section F High WT.gsz
Date: 6/3/2008

Section F
Slope Stability
TetraTech Material Properties – High Water Table
Figure E-23

Rocky Flats Original Landfill Geotechnical Investigation

Cross Section F

(1) Cover Material (unit wt = 125 pcf, c = 100 psf, phi = 24 deg)
(2) Slide Material (unit wt = 120 pcf, c = 50 psf, phi = 20 deg)
(3) Waste Material (unit wt = 120 pcf, c = 50 psf, phi = 20 deg)
(4) Weathered Bedrock (unit wt = 125 pcf, c = 50 psf, phi = 21 deg)
(5) Bedrock (unit wt = 130 pcf, c = 300 psf, phi = 28 deg)
(6) Organic Material (unit wt = 90 pcf, c = 0 psf, phi = 10 deg)



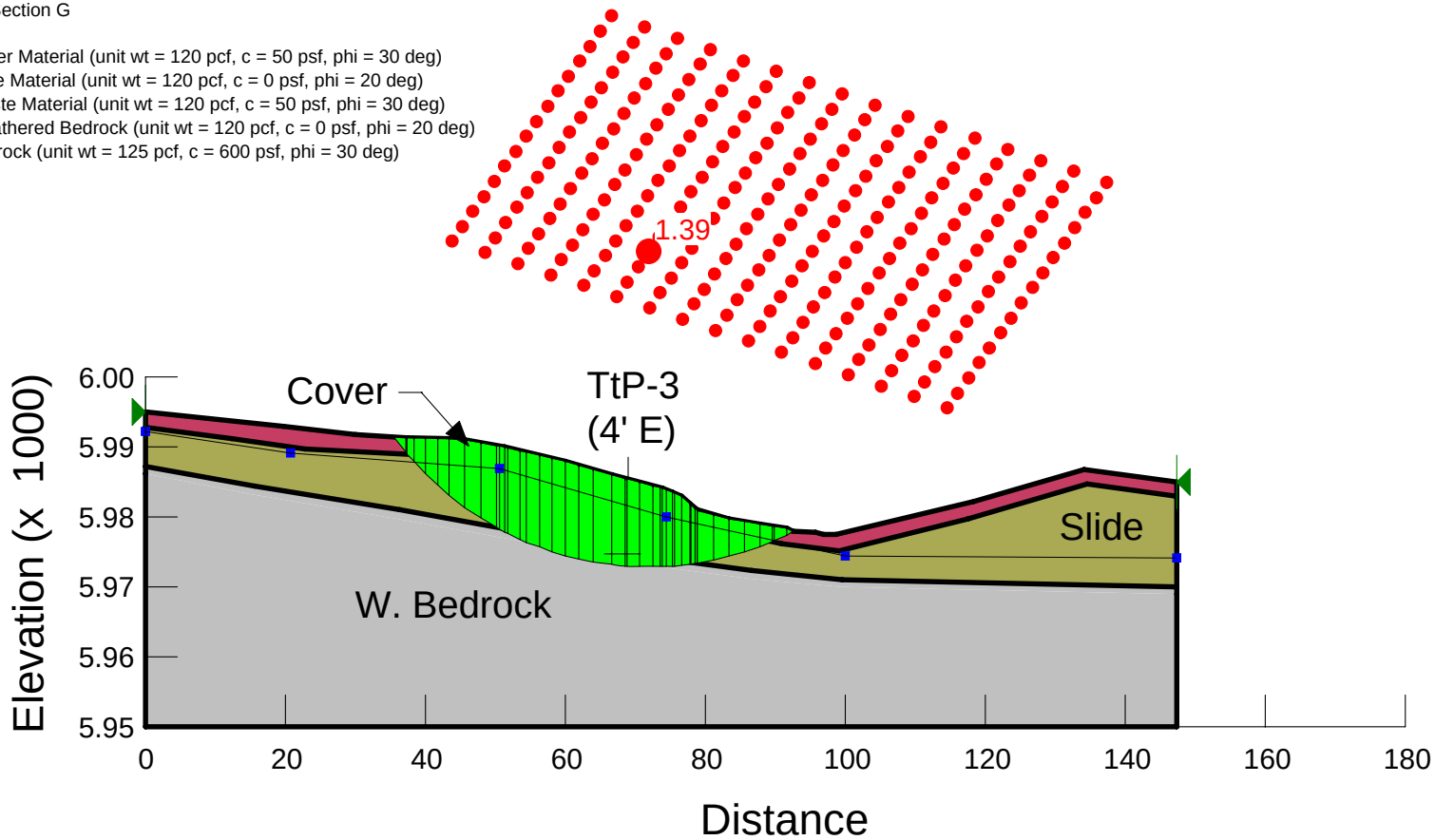
File Name: Section F Low WT.gsz
Date: 6/3/2008

Section F
Slope Stability Upper Section
TetraTech Material Properties – Low Water Table
Figure E-24

Rocky Flats Original Landfill Geotechnical Investigation

Cross Section G

(1) Cover Material (unit wt = 120 pcf, c = 50 psf, phi = 30 deg)
(2) Slide Material (unit wt = 120 pcf, c = 0 psf, phi = 20 deg)
(3) Waste Material (unit wt = 120 pcf, c = 50 psf, phi = 30 deg)
(4) Weathered Bedrock (unit wt = 120 pcf, c = 0 psf, phi = 20 deg)
(5) Bedrock (unit wt = 125 pcf, c = 600 psf, phi = 30 deg)



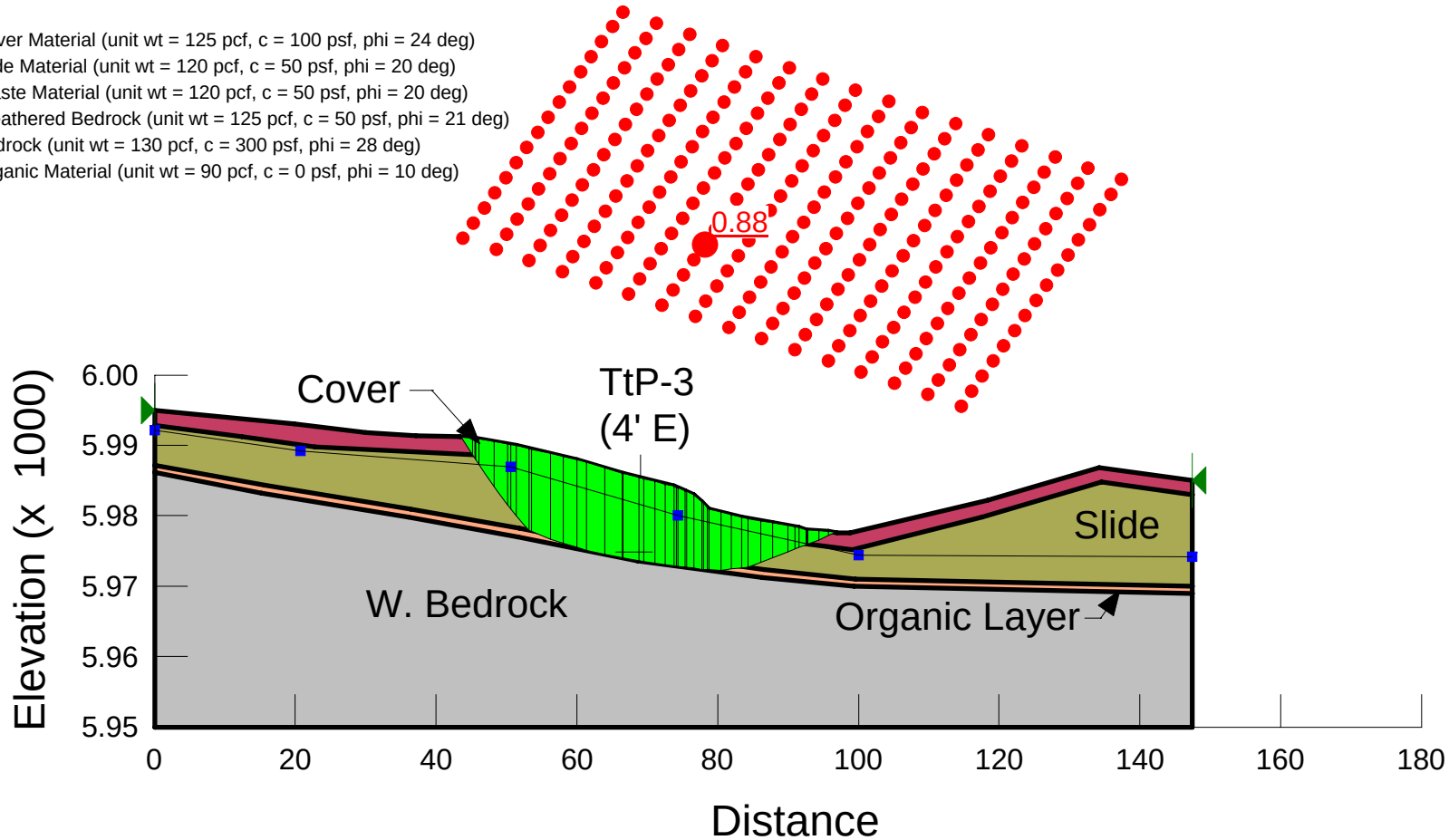
File Name: Section G Earth Tech Materials.gsz
Date: 6/3/2008

Section G
Slope Stability
Earth Tech Material Properties
Figure E-25

Rocky Flats Original Landfill Geotechnical Investigation

Cross Section G

(1) Cover Material (unit wt = 125 pcf, c = 100 psf, phi = 24 deg)
(2) Slide Material (unit wt = 120 pcf, c = 50 psf, phi = 20 deg)
(3) Waste Material (unit wt = 120 pcf, c = 50 psf, phi = 20 deg)
(4) Weathered Bedrock (unit wt = 125 pcf, c = 50 psf, phi = 21 deg)
(5) Bedrock (unit wt = 130 pcf, c = 300 psf, phi = 28 deg)
(6) Organic Material (unit wt = 90 pcf, c = 0 psf, phi = 10 deg)



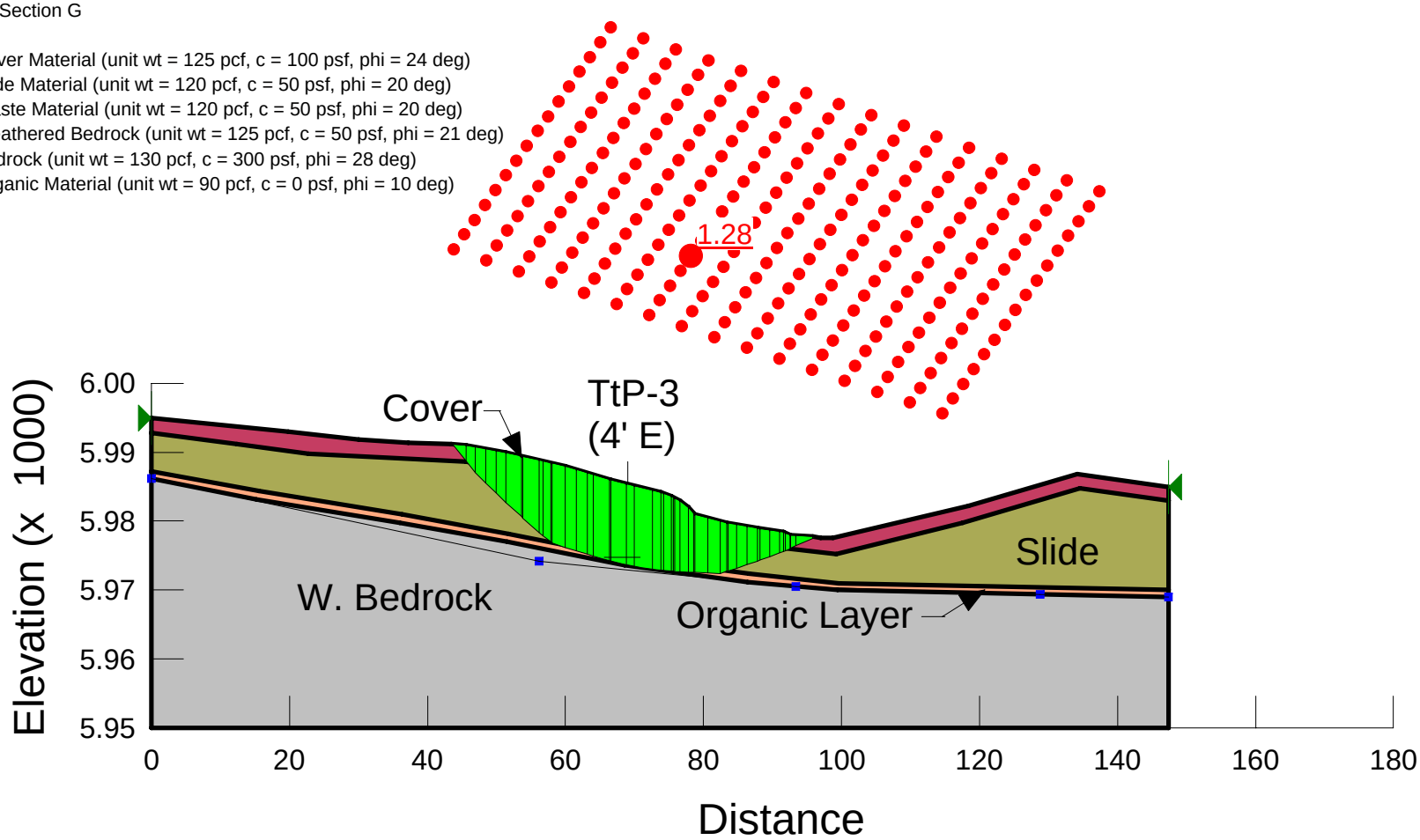
File Name: Section G High WT.gsz
Date: 6/3/2008

Section G
Slope Stability
TetraTech Material Properties – High Water Table
Figure E-26

Rocky Flats Original Landfill Geotechnical Investigation

Cross Section G

(1) Cover Material (unit wt = 125 pcf, c = 100 psf, phi = 24 deg)
(2) Slide Material (unit wt = 120 pcf, c = 50 psf, phi = 20 deg)
(3) Waste Material (unit wt = 120 pcf, c = 50 psf, phi = 20 deg)
(4) Weathered Bedrock (unit wt = 125 pcf, c = 50 psf, phi = 21 deg)
(5) Bedrock (unit wt = 130 pcf, c = 300 psf, phi = 28 deg)
(6) Organic Material (unit wt = 90 pcf, c = 0 psf, phi = 10 deg)



File Name: Section G Low WT.gsz
Date: 6/3/2008

Section G
Slope Stability Upper Section
TetraTech Material Properties – Low Water Table
Figure E-27