"THE LARGEST ENGINEERING MALPRACTICE CASE EVER TRIED TO A JURY"

Judge James D. Whittemore

American Bar Association Forum on the

Construction Industry

Midwinter 2013

When: January 31, 2013
Where: Waldorf Astoria Naples, Naples, FL

SPEAKERS:

Miles Stanislaw

WTHF
WATT, TIEDER, HOFFAR
& FITZGERALD, L.L.P.®

Devo Seereeram Ph.D., P.E.

DEVO
Engineering

The Parties

UNITED STATES DISTRICT COURT, MIDDLE DISTRICT OF FLORIDA - TAMPA

TAMPA BAY WATER,
A Regional Water Supply Authority
Plaintiff,

v.

HDR ENGINEERING, INC., a Nebraska corporation;
CONSTRUCTION DYNAMICS GROUP, INC.,
a Maryland corporation; BARNARD CONSTRUCTION
COMPANY, INC., a Montana corporation;
ST. PAUL FIRE AND MARINE INSURANCE
COMPANY, a Minnesota corporation,
Defendants.

BARNARD CONSTRUCTION COMPANY, INC.,
a Montana corporation,
Third Party Plaintiff,

v.

MCDONALD CONSTRUCTION CORPORATION,
a Florida corporation,
Third Party Defendant.

The Project Size

Cost	=$125,000,000
Capacity	=15,000,000,000 gallons
Perimeter	=5 miles
Dimensions	= 300 ft wide X 60 ft high
Dirt	= 15,000,000 c/yd
Soil Cement	= 16 inches

The Project

The Design

DESIGN SECTION

The Problem

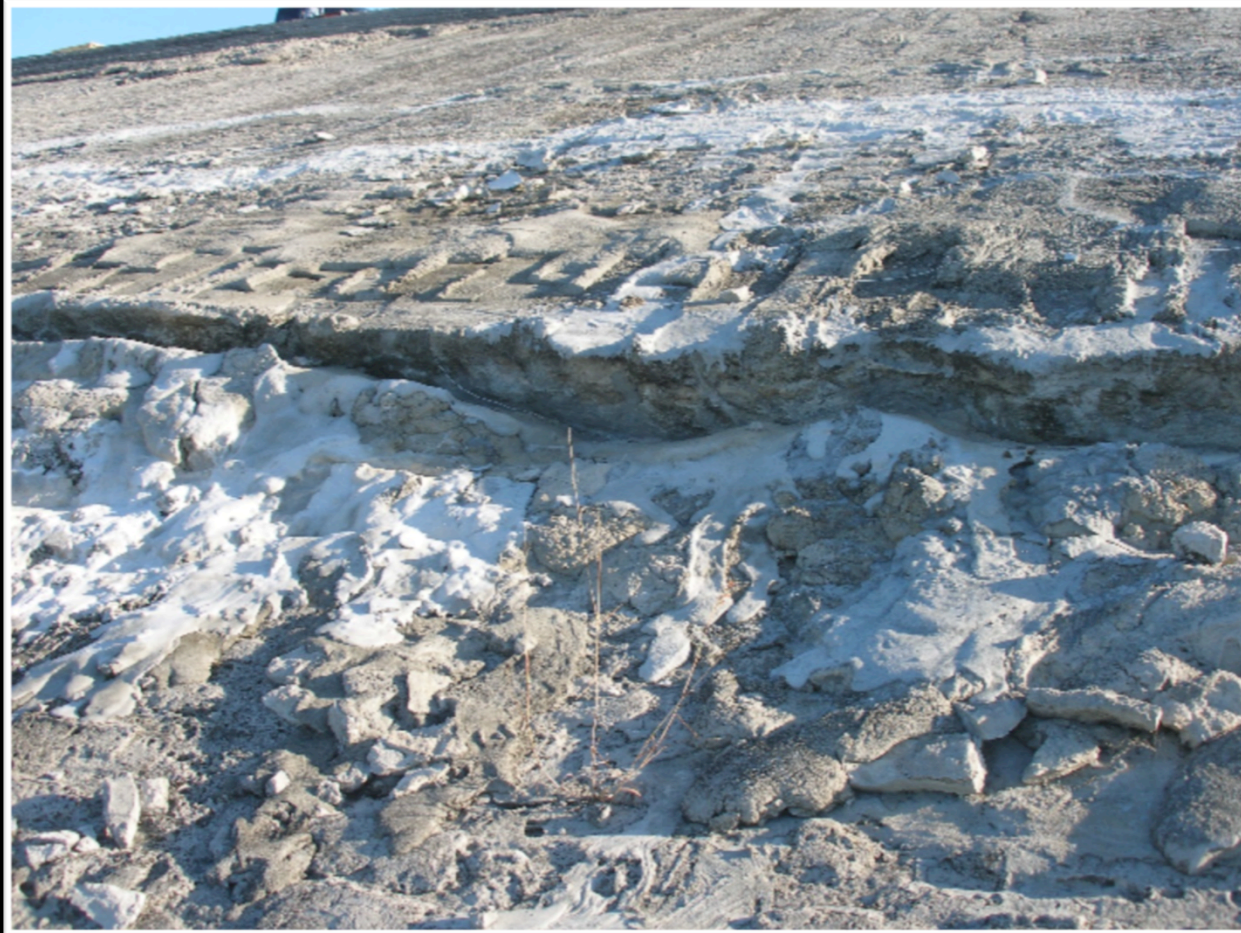
07.23.2007

The Problem

5-30-07
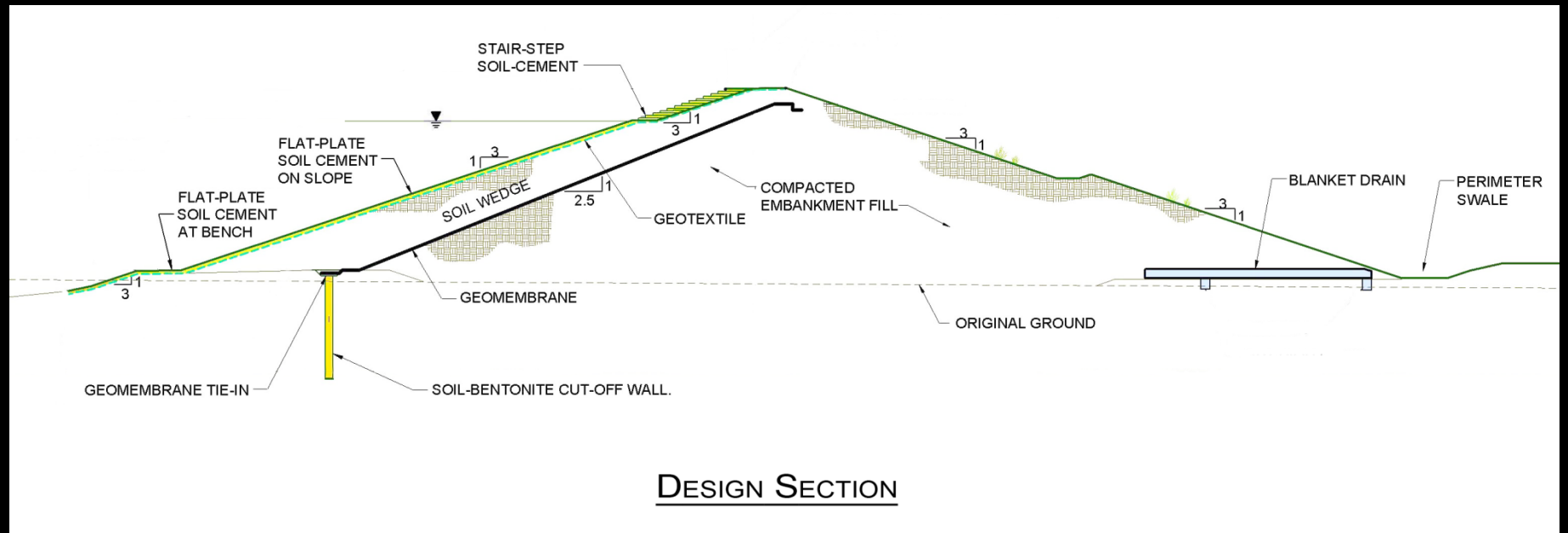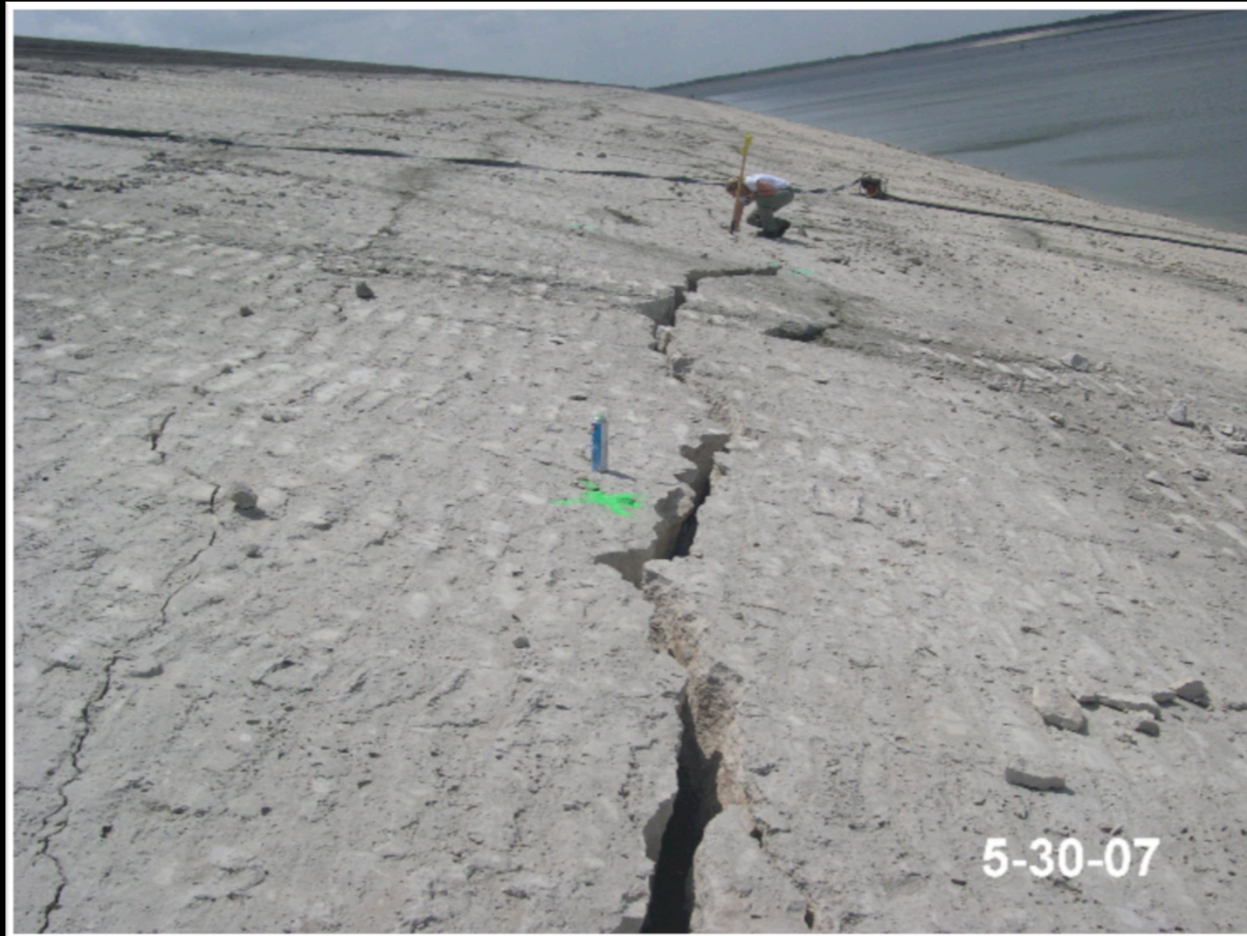
The Problem

The Problem

The Problem

The Problem

The Investigation

Technique	= Monitor / Instrumentation
Duration	= 3 years
Participants	= HDR and Black & Veatch
Cost	= $3,000,000
Result	= Cause – Yes / Fault - No

The TBW Claim

- Cost of Repair = $120,000,000

- Loss of Use / Water = $ 60,000,000

- Prejudgment Interest = $ 20,000,000

   TOTAL $200,000,000
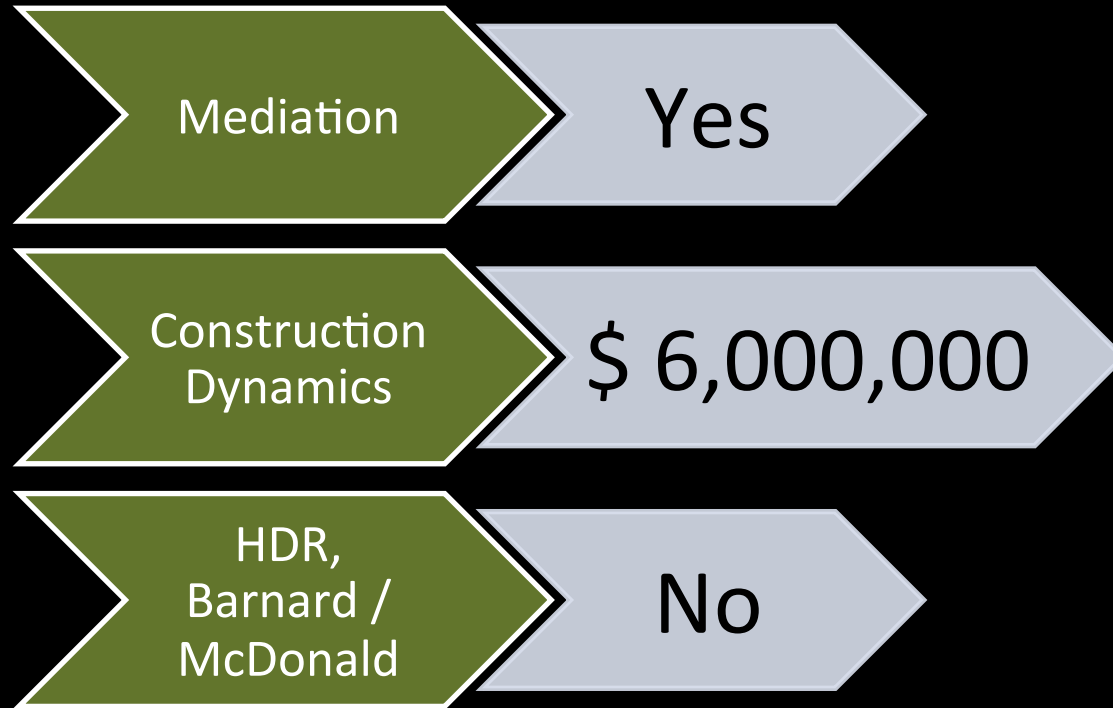
The Discovery

Sequence	= TBW expert reports first
Paper	=millions of pieces of paper
Lay depositions	= 30
Expert depositions	= 10
Barnard / McDonald Witness depositions	= 0

The First Settlement

Mediation	Yes
Construction Dynamics	$ 6,000,000
HDR, Barnard / McDonald	No

The "Controversial" Settelment
TBW – Barnard / McDonald

Impetus	Draft summary judgment motion
Basis	150 Undisputed facts
Negotiations	Yes
Terms	$750,000 - $5,000,000
Restrictions	Motions / Witnesses
150 Facts	Survive challenge
Result	Sua Sponte Summary Judgement Granted

The Aborted Settlement
TBW - HDR

Mediation	Yes
Amount	$ 30,000,000
TBW Vote No. 1	4 to 3
TBW Vote No. 2	0 to 9

The HDR Causation Theory

The HDR Causation Theory

The HDR Causation Theory

The Jury Trial

Duration	4 weeks
Deliberations	4 hours
Verdict	$ 0
Judgment: HDR	$ 20,000,000
Current status	Appeal to eleventh Circuit

WTHF
Watt, Tieder, Hoffar
& Fitzgerald, L.L.P.®

DEVO
Engineering

THE SCIENCE BEHIND THE STORY

By: Dr. Devo Seereeram, P.E.

# THREE COMPETING ROOT CAUSE FAILURE MECHANISMS EMERGED

The Incredible Hulk - proposed by TBW's geotechnical experts (uplift pressure lifting the soil-cement layer like a Hungarian weightlifter and dropping it back down to earth)

My Favorite Martian - proposed by HDR's geotechnical experts (differential hydrocompaction of the ballast layer on the liner due to wetting causing collapse of soil structure)

Get Smart - proposed by Barnard Construction's geotechnical experts (shallow rotational slope failures due to high pore pressure developing in embankment during reservoir drawdown)
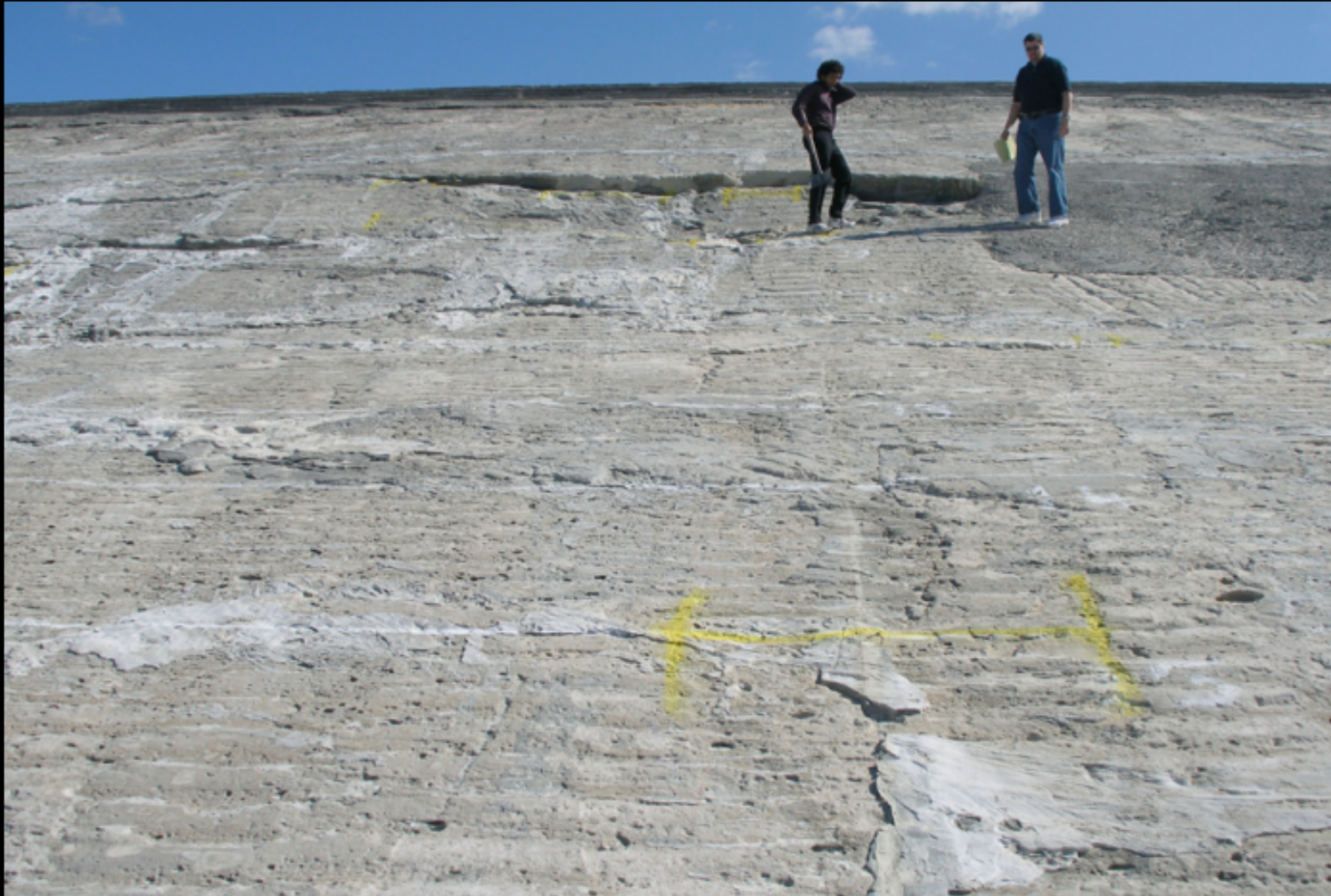
- *Example of Cracking and Subsidence of Soil-Cement*
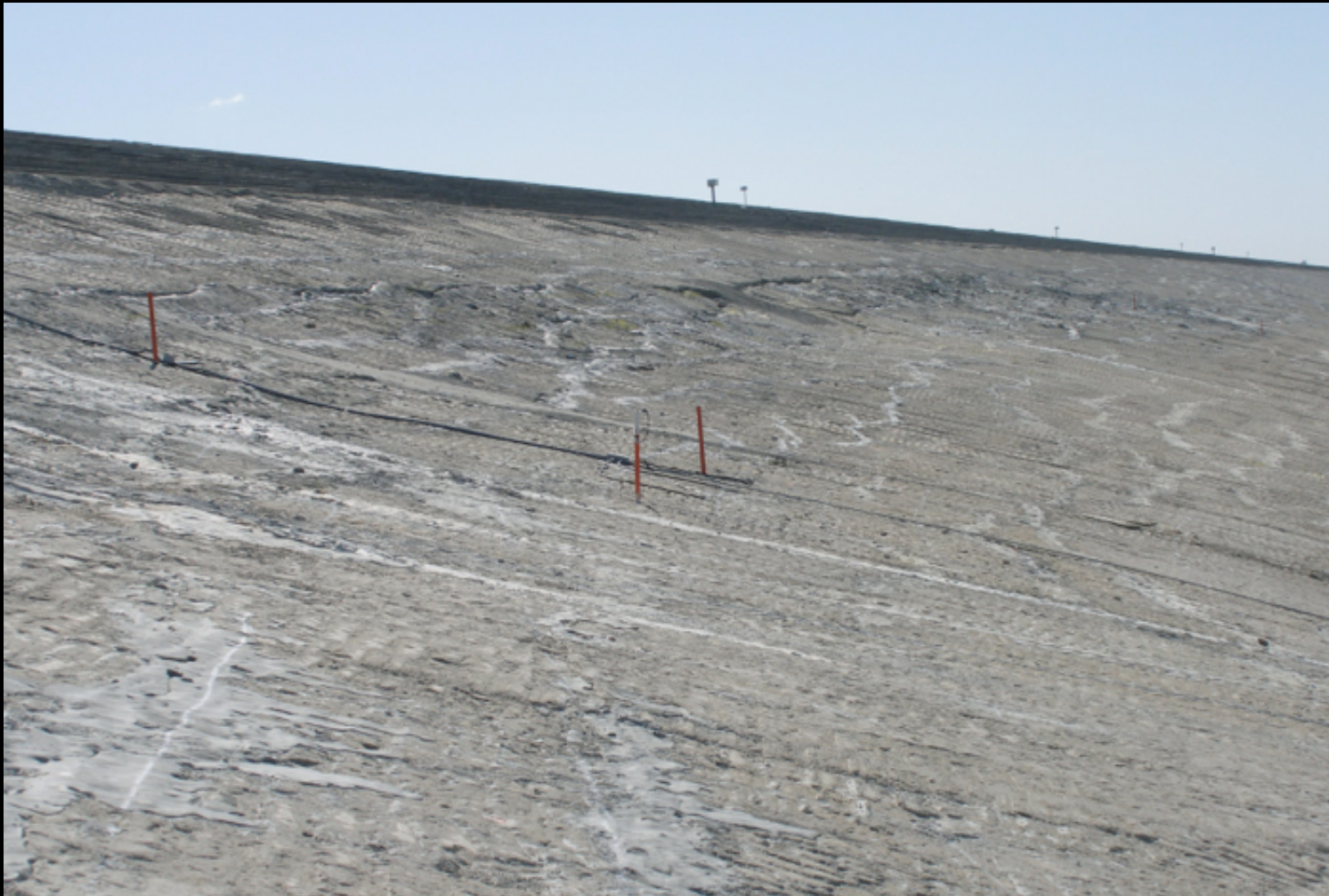
- *Example of Cracking and Subsidence of Soil-Cement*

Example of Cracking and Subsidence of Soil-Cement

- *Example of Test Pit Showing Shear Plane*

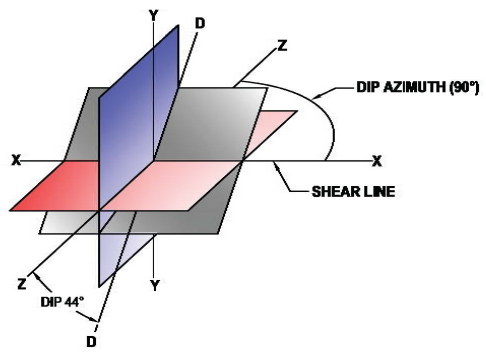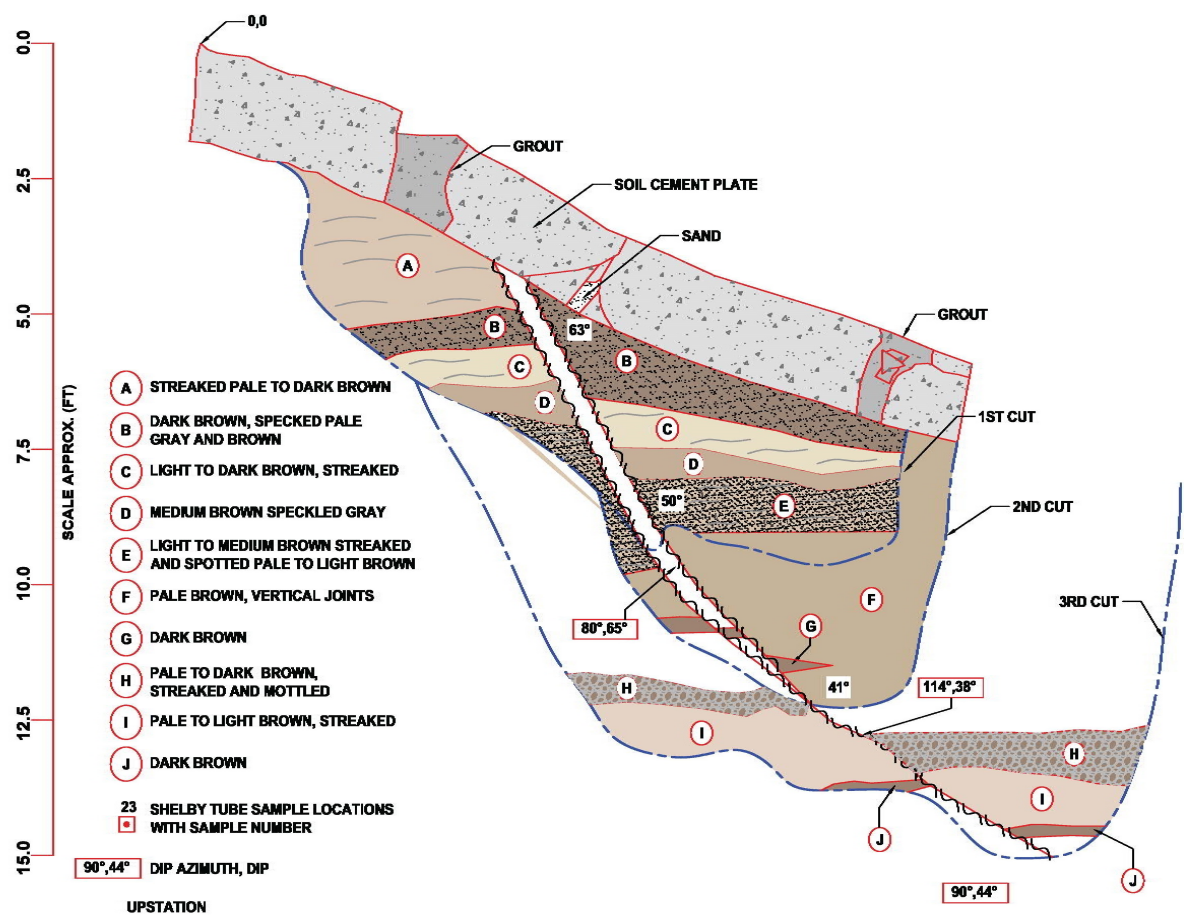Close-up view of the shear failure plane on the southern pit wall

View looking at the shear failure plane on the northern pit wall

Close-up view of the shear failure plane on the northern pit wall

- *Test Pit Cross Section*

X - SECTION A-A'

NOTE:

PLAN AND CROSS-SECTIONAL VIEWS WERE REPRODUCED
FROM BLACK AND VEATCH TEST PIT EXCAVATION PHASE 2
REPORT ISSUED ON APRIL 30, 2009

SCALE APPROX. (FT)

0.0
2.5
5.0
7.5
10.0
12.5
15.0

0,0

GROUT

SOIL CEMENT PLATE

SAND

GROUT

1ST CUT

2ND CUT

3RD CUT

63°
50°
80°,65°
41°
114°,38°
90°,44°

UPSTATION

(A) STREAKED PALE TO DARK BROWN

(B) DARK BROWN, SPECKED PALE GRAY AND BROWN

(C) LIGHT TO DARK BROWN, STREAKED

(D) MEDIUM BROWN SPECKLED GRAY

(E) LIGHT TO MEDIUM BROWN STREAKED AND SPOTTED PALE TO LIGHT BROWN

(F) PALE BROWN, VERTICAL JOINTS

(G) DARK BROWN

(H) PALE TO DARK BROWN, STREAKED AND MOTTLED

(I) PALE TO LIGHT BROWN, STREAKED

(J) DARK BROWN

23 SHELBY TUBE SAMPLE LOCATIONS WITH SAMPLE NUMBER

90°,44° DIP AZIMUTH, DIP

Y
D
Z
X
X
Z
Y
D
DIP 44°

DIP AZIMUTH (90°)

SHEAR LINE

WTHf
WATT, TIEDER, HOFFAR
& FITZGERALD, L.L.P.®

DEVO
Engineering

29

This slide includes movie file which
you can download separately from
www.devoeng.com

WTHF

DEVO
Engineering

WATT, TIEDER, HOFFAR
& FITZGERALD, L.L.P.®

This slide includes movie file which
you can download separately from
www.devoeng.com

Slope Failure

This slide includes movie file which you can download separately from www.devoeng.com
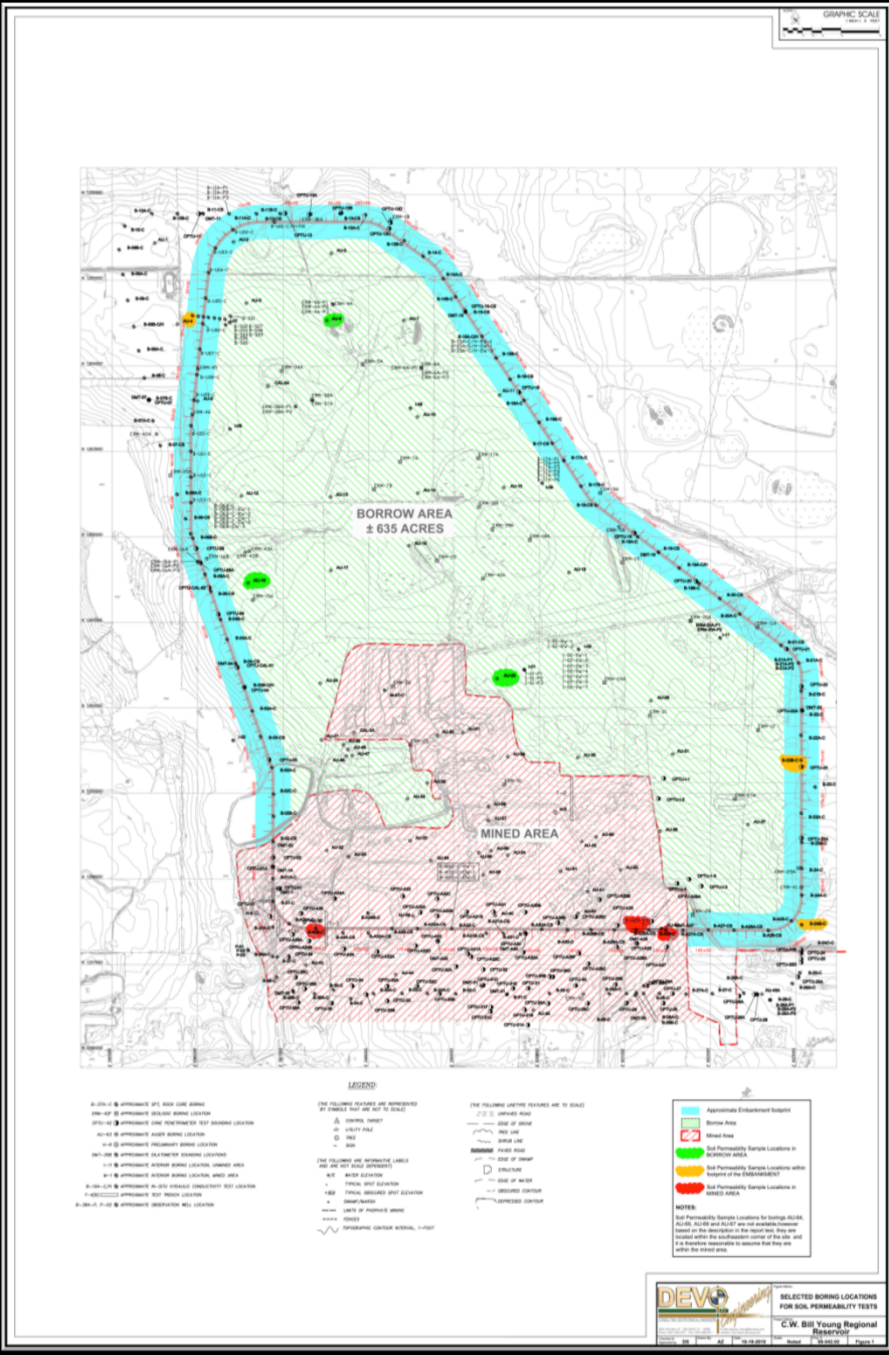
Soil Wedge Perm Tutorial

This slide includes movie file which
you can download separately from
www.devoeng.com

Pore Pressure

WTHF
WATT, TIEDER, HOFFAR
& FITZGERALD, L.L.P.®

DEVO
Engineering

33

This slide includes movie file which you can download separately from www.devoeng.com

Slope Stability Animation

WTHF
WATT, TIEDER, HOFFAR
& FITZGERALD, L.L.P.®

DEVO
Engineering

This slide includes movie file which
you can download separately from
www.devoeng.com

Laboratory hydro-compaction test

WTHF
WATT, TIEDER, HOFFAR
& FITZGERALD, L.L.P.®

DEVO
Engineering

35

This slide includes movie file which you can download separately from www.devoeng.com

03/25/2004

- *Trial Evidence Photos*

03/25/2004

- *Trial Evidence Photos*

WTHF
WATT, TIEDER, HOFFAR
& FITZGERALD, L.L.P.®

DEVO Engineering

39

03/25/2004

- *Trial Evidence Photos*

03/25/2004

- *Trial Evidence Photos*

03/25/2004

- *Trial Evidence Photos*

03/25/2004

- *Trial Evidence Photos*