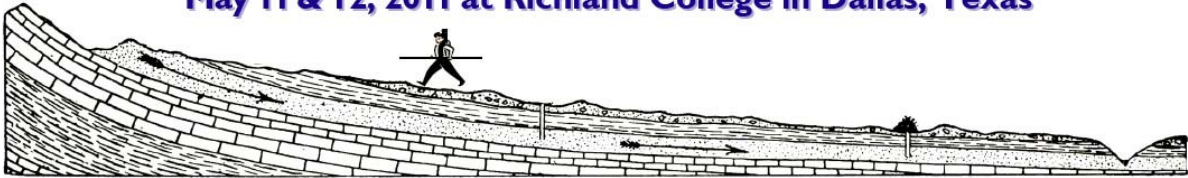


**EPA Geophysical Techniques Workshop for Shallow Ground Water
May 11 & 12, 2011 at Richland College in Dallas, Texas**



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Wednesday, May 11, 2011 MORNING: General Theory of Techniques

8:00 Welcoming Remarks

The Problem...and the Solution

8:15 Overview of Workshop

- 1) Why Electrical Techniques?
- 2) What are the challenges?

8:30 Impacts of Petroleum Production

8:45 Common Earth Approach to Site Characterization Problems

- 1) Bring the Data Together
- 2) Mismatches are the most important part of the datasets

9:00 The Basics

Integrated Geophysical Approaches – Overview of Approach

- 1) Planning (Web or In-person)
- 2) QA/QC (QAPP)
- 3) Acquisition/Field Procedures
- 4) Processing
- 5) Visualization
- 6) Interpretation (Web meeting)
- 7) Confirmation
- 8) Integration /Reinterpretation (Common Earth) (Web meeting)
- 9) Remedial Design Using Integrated Site Characterization Data

} Planning
Thurs A.M.

} Field Demo
Weds P.M.

} Integration
Thurs A.M

9:30 Basic of Electrical Methods

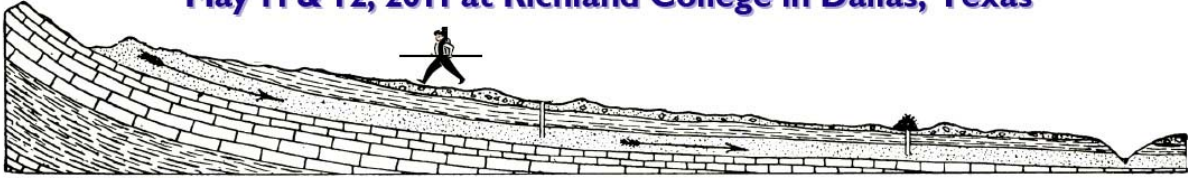
- 1) Basic physics
- 2) Expected Values
- 3) Fluids vs. Solids vs. Bulk

10:00 Basics of Visualization

- 1) The CSI Effect
- 2) Approaches
- 3) The computer as a contouring tool (2D and 3D)

10:15 COFFEE BREAK

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Wednesday, May 11, 2011 MORNING: General Theory Of Techniques

Three (3) Electrical Approaches

10:30 Ground-based EM techniques

- 1) Tool types
- 2) Best uses
- 3) Tool selection
- 4) Limitations

11:05 Electrical Resistivity Imaging

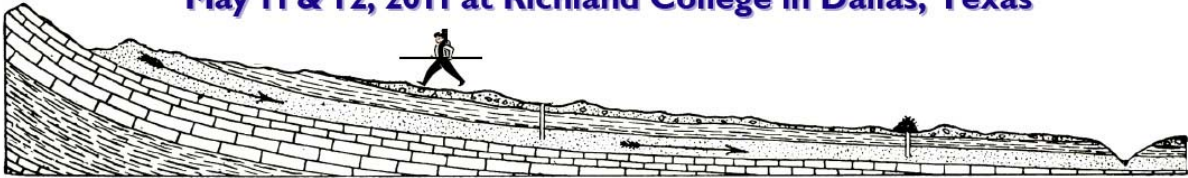
- 1) Tool
- 2) Best uses
- 3) Limitations

11:40 Airborne EM techniques

- 1) Tool
- 2) Best uses
- 3) Limitations

12:00 – 1:00 LUNCH

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Wednesday, May 11, 2011 AFTERNOON: Field Demonstrations

1:00 Field Demonstration Introduction

1) Round Robin Approach

- a. EM tools
- b. ERI tools
- c. Airborne EM tools
- d. Visualization tools

2) Additional time available after Round Robin at 7 pm or next day

1:10 Field demonstration Round I

1:55 Field demonstration Round II

2:40 Field demonstration Round III

3:25 Field demonstration Round IV

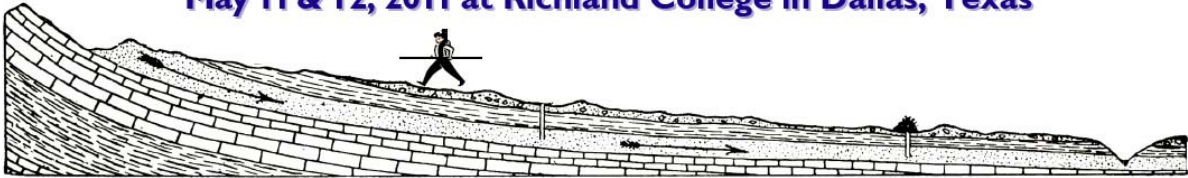
Vendor/Demo List and Locations Included in Workshop Handouts

4:00 **BREAK - MIGRATE TO HOTEL**

5:00 Working dinner (separate charge for dinner) w/ vendor displays and poster session (*at Crowne Plaza Dallas, Near the Galleria*)

7:00 **END FOR EVENING** (Processing session for today's data/ additional demos w/ vendors/ other if desired in poster room)

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Thursday, May 12, 2011 MORNING: Planning And Integration

8:00 Overview of Day's Activities/ Announcements

Planning

8:15 Planning Projects/ Geophysical QAPPs

- 1) Objectives
- 2) Budget
- 3) Examples

9:00 **FACILITY BREAK**

9:10 Test Case I – Small impact area ~1 acre

- 1) 4 groups –at least 1 geophysicist per group, 1 budget person?
- 2) Plan approach

9:25 Review Groups' approach to Test Case I

9:45 Test Case II – Large impact area >1 acre

- 1) 4 groups –at least 1 geophysicist per group, 1 budget person?
- 2) Plan approach

10:00 Review Groups' approach to Test Case II

10:15 **COFFEE BREAK**

Common Earth Modeling

10:30 Common Earth Data Integration

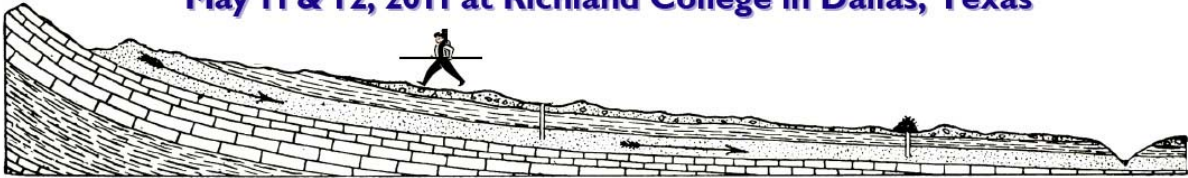
1. Bringing the data together
2. Dealing with the inevitable mismatches

11:15 Data Modeling

1. Electrical models
2. Visualization models

12:00 – 1:00 **LUNCH**

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Thursday, May 12, 2011 AFTERNOON: Case Studies

Case Studies

1:00 Case Studies Introduction

(NOTE: All case studies must present a puzzle or problem that is left to discussion on approach, not just what happened. For each talk, what is the "teachable moment?"; Especially on the project planning side or data integration side)

1:10-1:35 Randall Ross – Harden City Site

1:35-2:00 Todd Halihan – Harden City Site

2:00-2:25 TBA

2:25 COFFEE BREAK

2:45-3:10 TBA

3:10-3:35 TBA

3:35-4:00 Wrap up session and dispensing continuing education certificates.

4:00 END OF WORKSHOP
