

Environmental Law and Environmental Insurance



William J. Brady, Esq.
Partner - Grimshaw & Harring;
Adjunct Professor,
University of Denver Sturm College of Law



Pierre Andrieux
Professor Emeritus
Universite de Pierre et Marie Curie, Paris VI;
Formerly **Geophysicist**, CGG Veritas

**Grimshaw
& Harring**

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Recent Headlines

MONDAY, NOVEMBER 17, 1992

GREATER DENVER

TONIA TWICHELL, CITY EDITOR, 393.892.5201, E-MAIL: METRO@ROCKYMOUNTAINNEWS.COM

Extra!

THEY SAID IT

"The folks back home have it tougher than we do. They hear talk about another Vietnam. Well, my dad was in Vietnam, and this is not another Vietnam."

A soldier speaking to
Rep. Bob Boozier, in Cuba, who has spent the past three days on a fact-finding mission in Iraq.
Boozier 27A

MEDICAL MAGNETISM

CU has a new \$2 million instrument that measures magnetic activity in the brain. Researchers hope to find new people with mental disorders such as schizophrenia use different parts of the brain than do people without abnormalities. 6A

Federal Center site faces huge cleanup

Officials still trying to determine extent of contamination

Asbestos-covered pipes that once carried steam heat to that building still circumscribe the site. So a congressional proposal to open up the Denver Federal Center to private developers faces a huge hurdle—cleanup of the environment.

Health officials are conducting extensive studies into contamination at the Federal Center, which was a munitions plant during World War II and later replaced by government laboratories that conducted countless science experiments there.

The federal government already has spent nine years and \$12 million trying to identify all of the environmental problems on the square-mile site south of Sixth Avenue and west of Kipling Street, said

Cara Hoevet, spokeswoman for the U.S. General Services Administration, which runs the federal center. But a state health audit it will be five more years before the studies are complete and the full extent of contamination known.

Another \$15 million has been spent on cleaning up the only urgent health risk found so far: the leakage of 550 gallons of the solvent TCA into the groundwater. Any other significant problems found will be addressed immediately, said Howard Boltman, head of the hazardous materials section of the state health department.

Today, 600 people work in 77 buildings at the federal center, but one-third of the land is undeveloped. Another 15 to 20 buildings are empty,

unusable and slated for demolition. Several weeks ago, Rep. Bob Boozier and Sen. Ben Nighthorse Campbell introduced legislation that would allow private developers to take over all or part of the sprawling complex. Hearings on the bill are expected in the spring.

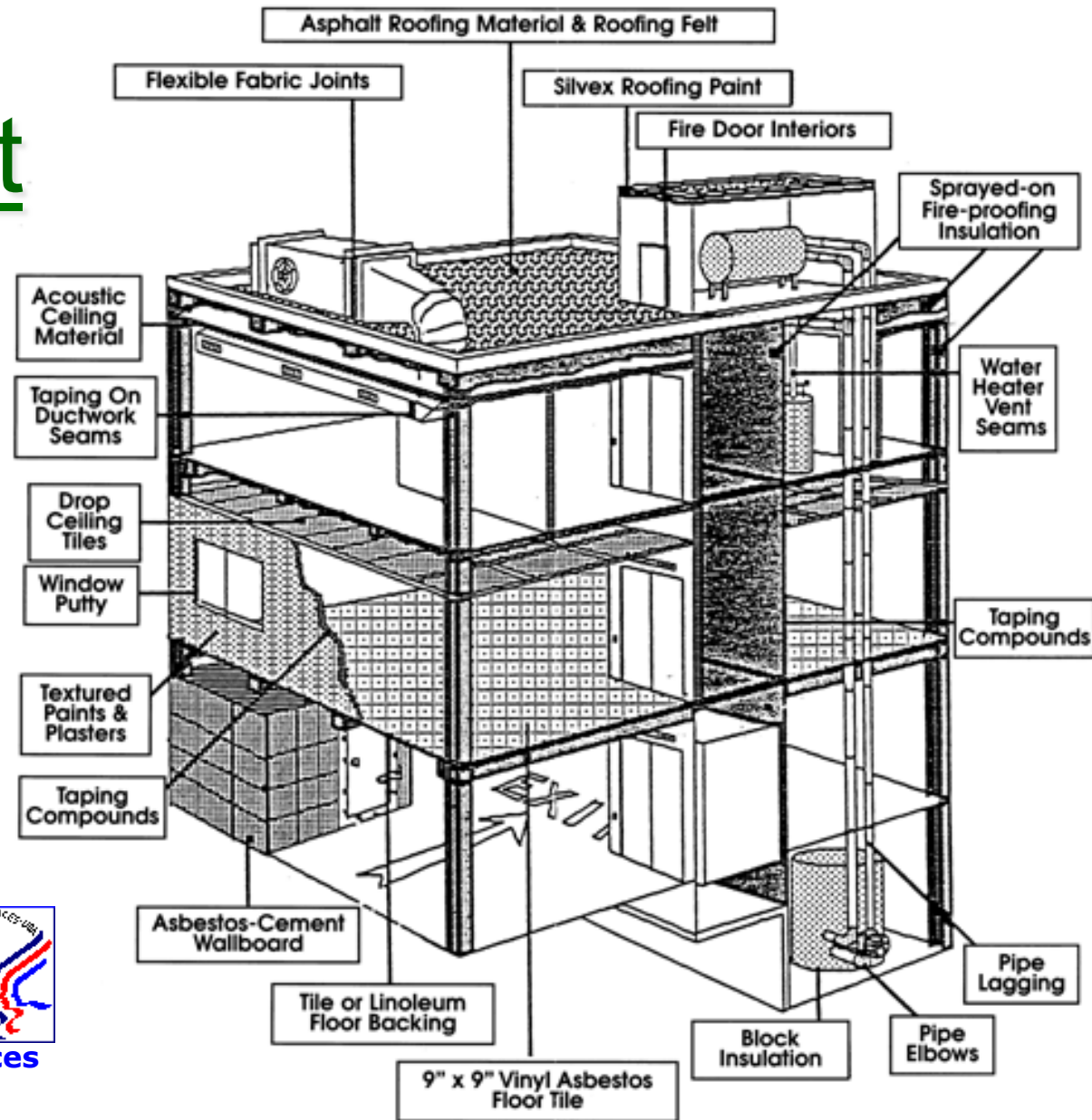
Lakewood Mayor Steve Berkowitz envisions a transformation of the campus of mostly worn federal offices and laboratories to a bustling commercial development of apartments, stores and federal and private offices served by light rail.

But environmental studies and a complete cleanup plan must be finished before the land could be trans-

Fig 1 in WASTE on 12A

[illegible]

Asbestos Abatement



Litigation Support

- ☞ Expert Witnesses: Engineers, Hazardous Waste, CERCLA, RCRA, Insurance Coverage



- ☞ Environmental Laws, Regulations and Policy at the National, State, Tribal, & Local levels



Washington, D.C. Federal
Lobbying, Government Relations
& Business Consulting



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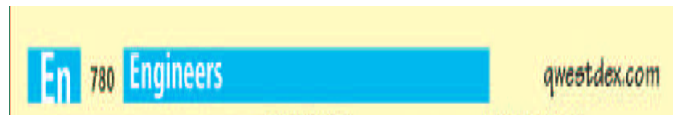


- ☞ Imaging and Graphics for Trial/Mediation Support



Engineering/Industry/Regulatory

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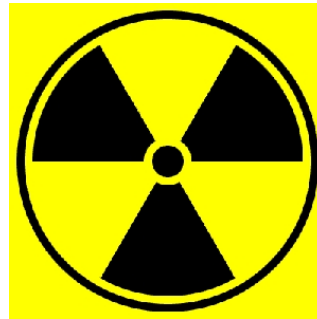
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Cator Ruma & Associates Co

- ❖ Chemical (13 Listings)
- ❖ Civil (Three Columns of Listings)
- ❖ Consulting (Two Pages of Listings)
- ❖ Drainage (14 Listings)
- ❖ Environmental (Three Columns '02; Full Page '03; 3 pages '08)
- ❖ Forensic (13 Listings)
- ❖ Geological/Geotech Soils (20 Listings)
- ❖ Land Planning (Two Listings)
- ❖ Material Handling & Process (One Listing)
- ❖ Metallurgical (12 Listings)
- ❖ Mining (10 Listings)
- ❖ Petroleum (34 Listings)
- ❖ Professional (16 Listings)
- ❖ Research & Development (35 Listings)
- ❖ Structural (Two & ½ Columns of Listings)
- ❖ Traffic & Transportation (One Column of Listings)
- ❖ Water Supply (One Column of Listings)

Environmental & Ecological Organizations, Services & Products

[illegible]

Environmental & Ecological Organizations

Access Fund The	2475 Broadway Boulder	303 545-6772
American Lands Alliance	2250 Baseline Rd Boulder	303 473-9525
COPIRG 199814 Boulder		303 449-2500
Center For Resources Management	500 E 8th Ave	303 832-6855
Citizens Coal Council	1706 S Pearl	303 722-9119
Clean Water Action	899 Logan	303 839-9866
Colorado Environmental Coalition	1536 Wynkoop St Denver	303 534-7404
Colorado Open Lands	274 Union Blvd Ste 320	303 988-2373
Colorado Public Interest Research Group	1530 Bure	303 573-7474
Colorado Wildlife Federation	445 Union Blvd Lakewood	303 987-0400
Conservation Fund The	1942 Broadway Ste 200 Boulder	303 444-4369
COPEEN-Co People's Environmental & Economic Network	2328 E 46 Av	303 292-1236
Destiny Resources	1668 Cole Blvd #205	303 232-6515
Dynamic Environmental Assoc	Emergreen	303 679-8896
EarthLinks	623 Fox	303 389-0085
Environmental Defense	2334 Broadway Boulder	303 440-4901
Foothills Nature Center	4221 Broadway Boulder	303 442-4288
Global Response	3546 Old Pearl Street Boulder	303 444-0306
Humanity Fund LLC	1085 Pearl St Suite 107 Boulder	303 444-3115
International Mountain Bicycling Association	1121 Broadway Boulder	303 545-9011
National Audubon Society	3109 28 St Boulder	303 415-0130
National Radon Safety Board	12654 W 87 Av	303 423-2674
National Wildlife Federation	2260 Baseline Rd Boulder	303 796-9001
Nature Conservancy	860 Broadway Boulder	303 444-1060
Nature Conservancy The	2484 Spruce Boulder	303 444-2950
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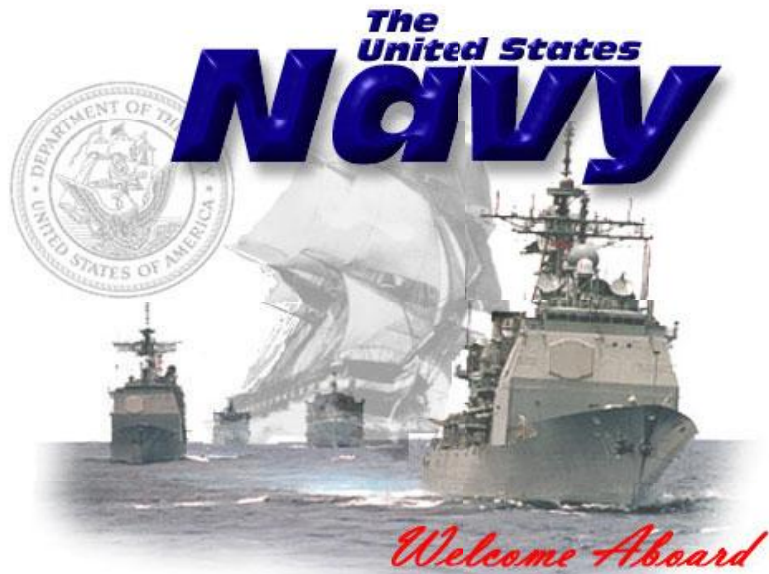
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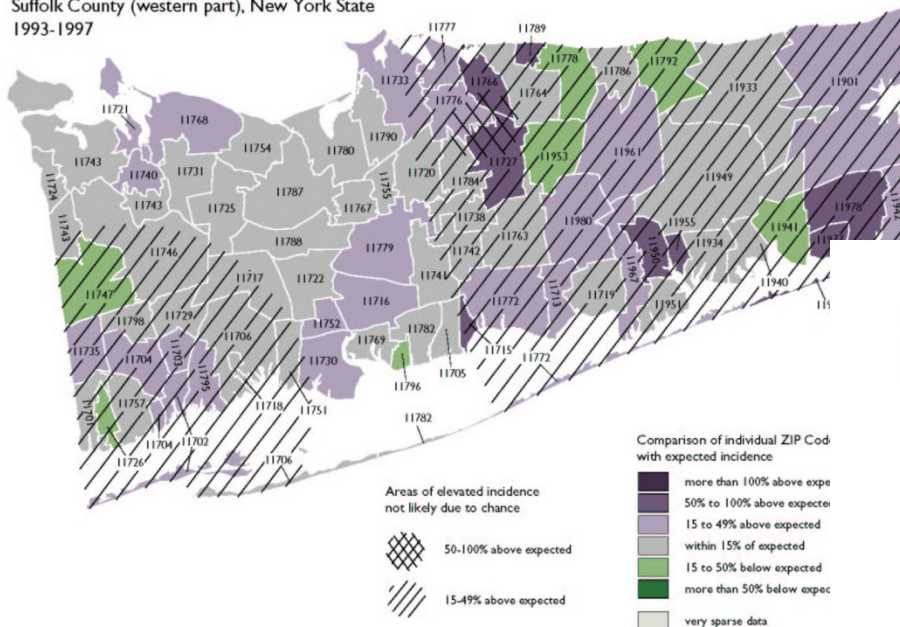
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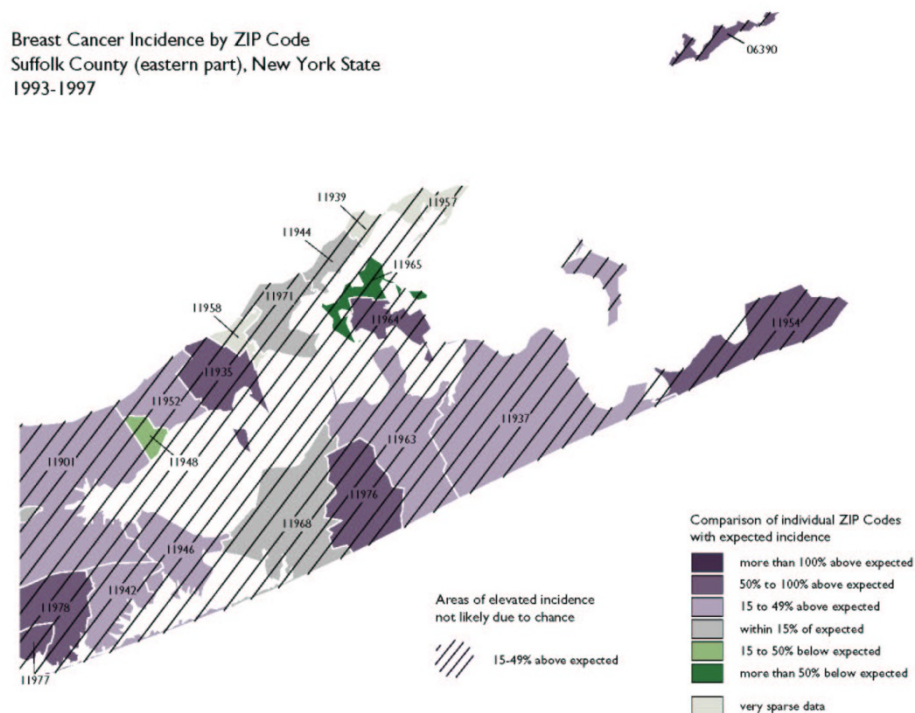


The Long Island Breast Cancer Study Project

Breast Cancer Incidence by ZIP Code
Suffolk County (western part), New York State
1993-1997



Breast Cancer Incidence by ZIP Code
Suffolk County (eastern part), New York State
1993-1997




United States Laws


- ❖ United States Army Corp of Engineers
- ❖ Armed Forces
- ❖ Bureau of Land Management
- ❖ Clean Water Act – Wetlands Regulations and 404 Permits
- ❖ Clean Air Act
- ❖ Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)
- ❖ National Environmental Policy Act (NEPA)
- ❖ Superfund Amendments and Reauthorization Act (Superfund) – Brownfields
- ❖ Emergency Planning & Community Right to Know Act (EPCRA)
- ❖ Environmental Protection Agency (EPA) – Environmental Compliance and Enforcement
- ❖ Federal Facilities Compliance Act (FFCA)
- ❖ Food Quality Protection Act
- ❖ Lobbying
- ❖ Occupational Safety & Health Administration (OSHA)
- ❖ Resources Conservation & Recovery Act (RCRA)
- ❖ Safe Drinking Water Act
- ❖ Toxic Substances Control Act (TSCA)
- ❖ Wetlands Regulation



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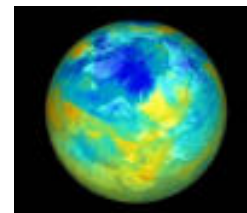
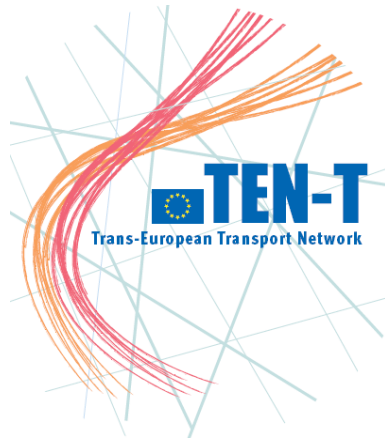
State, Local & Tribal Governments

- ❖ Colorado Department of Public Health & Environment (CDPHE)
- ❖ Clean Water Act
 - * National Pollution Discharge Elimination System
 - * Permits (NPDES)
- ❖ Clean Air Act
- ❖ Land Use/Planning
- ❖ Environmental Compliance & Enforcement



"the Water the Land
the Air
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Right to Protect"

International Environmental Law



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GEOSCIENCES

Three Tools or Disciplines:

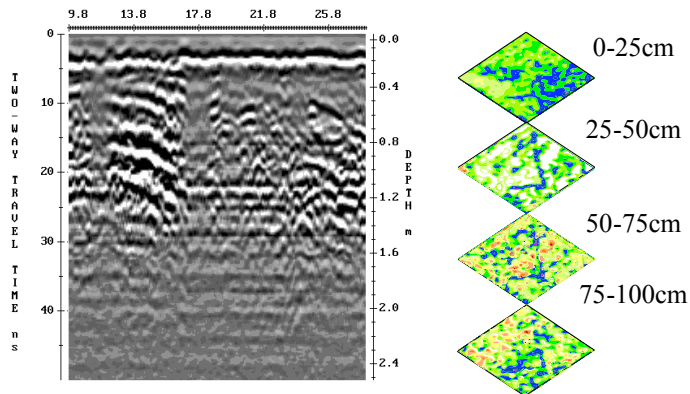
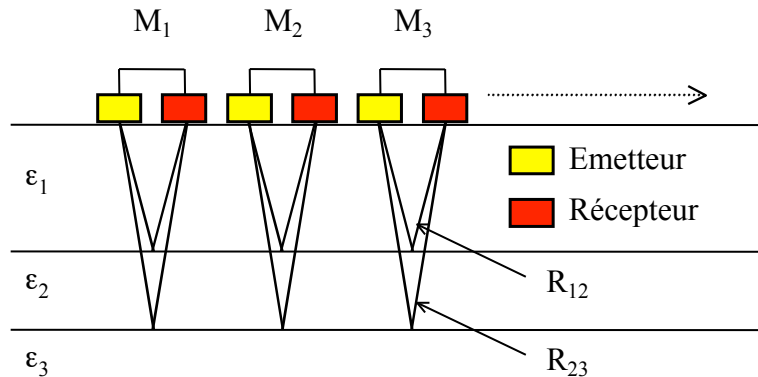
- ❖ Geology
- ❖ Geophysics
- ❖ Drilling and Sample Analysis

GEOPHYSICS

Three Recent Techniques for Environmental Applications:

- ❖ Georadar
- ❖ Spectral Induced Polarization
- ❖ Time Domain Electromagnetics

Georadar (GPR) - Principle



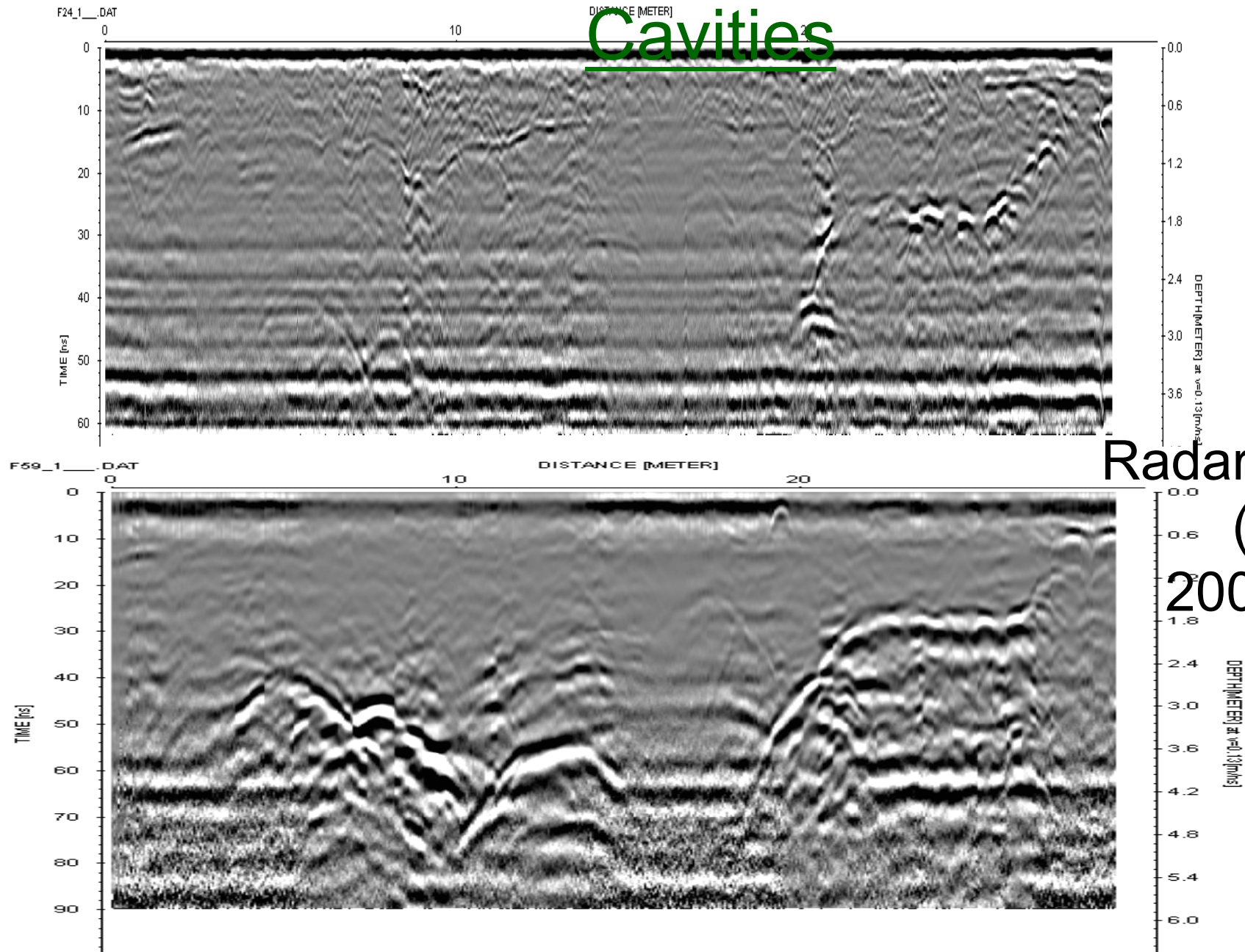
- Depth of investigation : 0;2 – 20 m
- Lateral resolution ~ 20cm
- Spacing between Lines : 50/25cm
- Spacing between Stations : 5 cm
- Rate of acquisition : <5km/h (1ha/2d)

Georadar:

Instrumentation (400 Mhz)

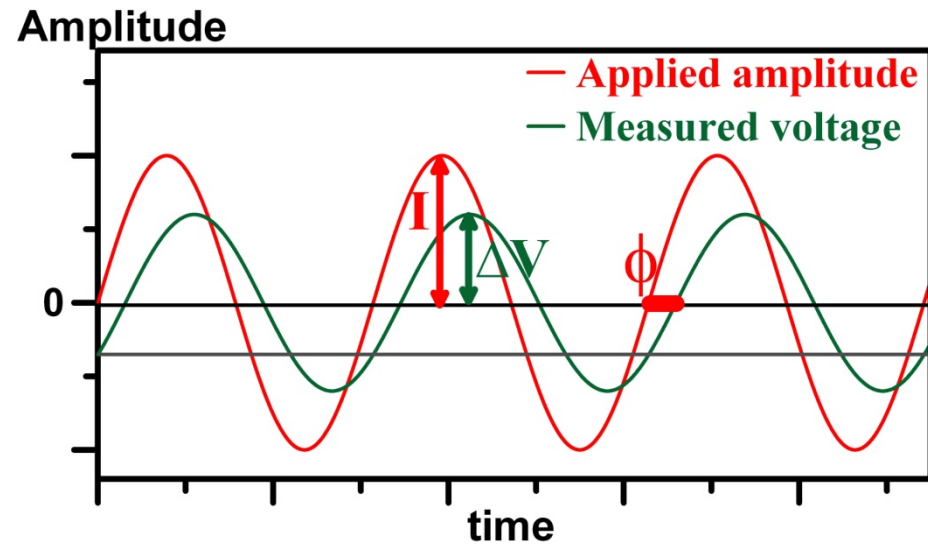


Georadar: Mapping Underground Cavities



Radargrams
(400 et
200 MHz)

complex Resistivity

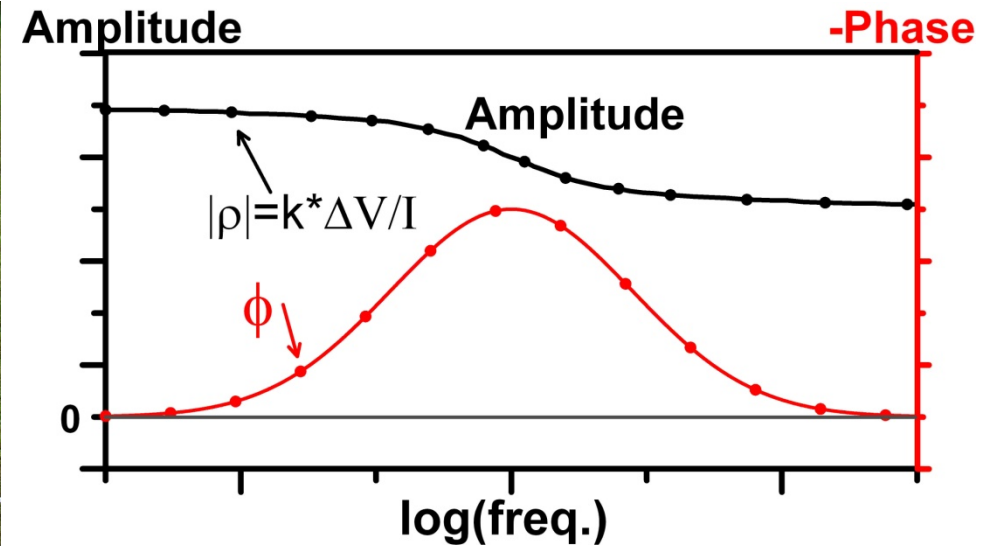


Spectral Induced Polarization (SIP) FUCHS instrument

Transfer Function

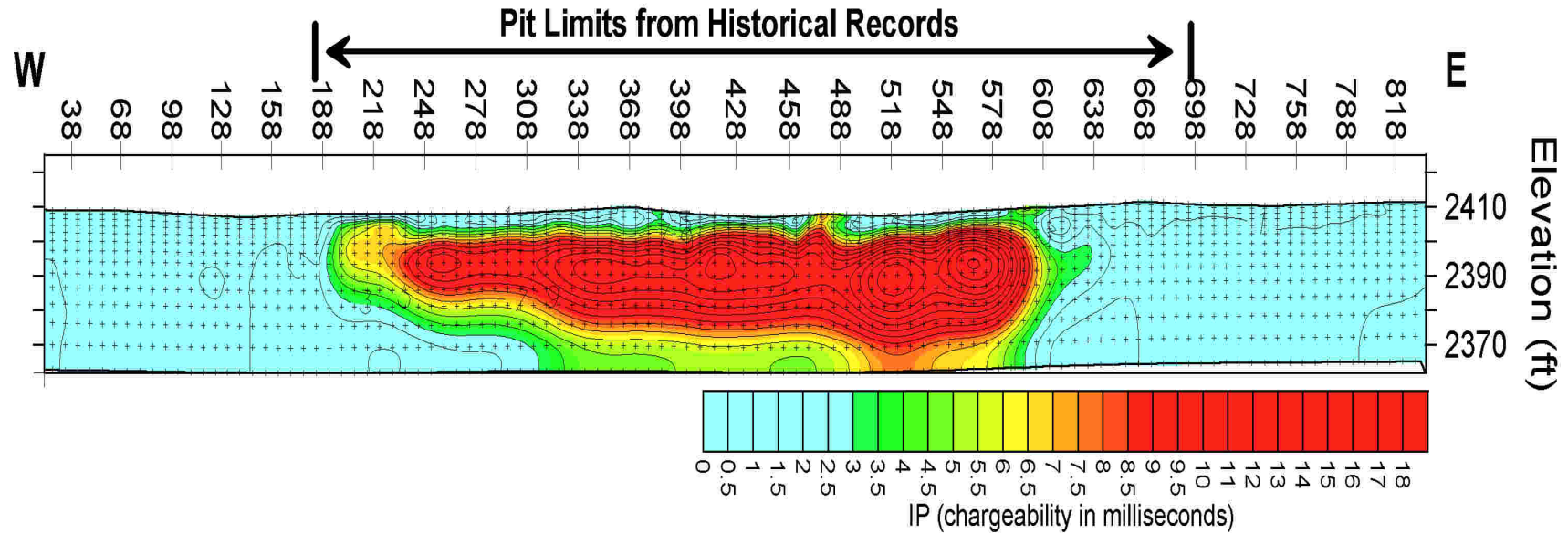
$$\rho^*(\omega) = |\rho(\omega)| e^{-j\varphi(\omega)}$$

$$= \rho'(\omega) + i\rho''(\omega)$$

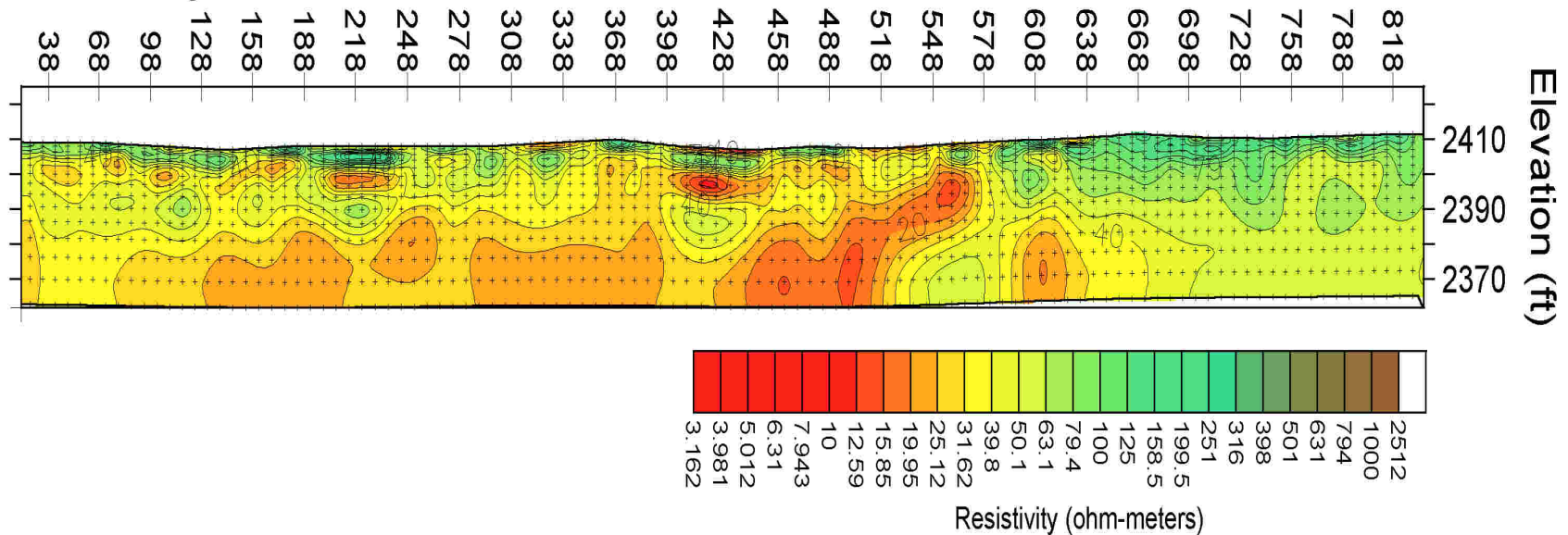


SIP / Resistivity: Mapping a Hidden Landfill

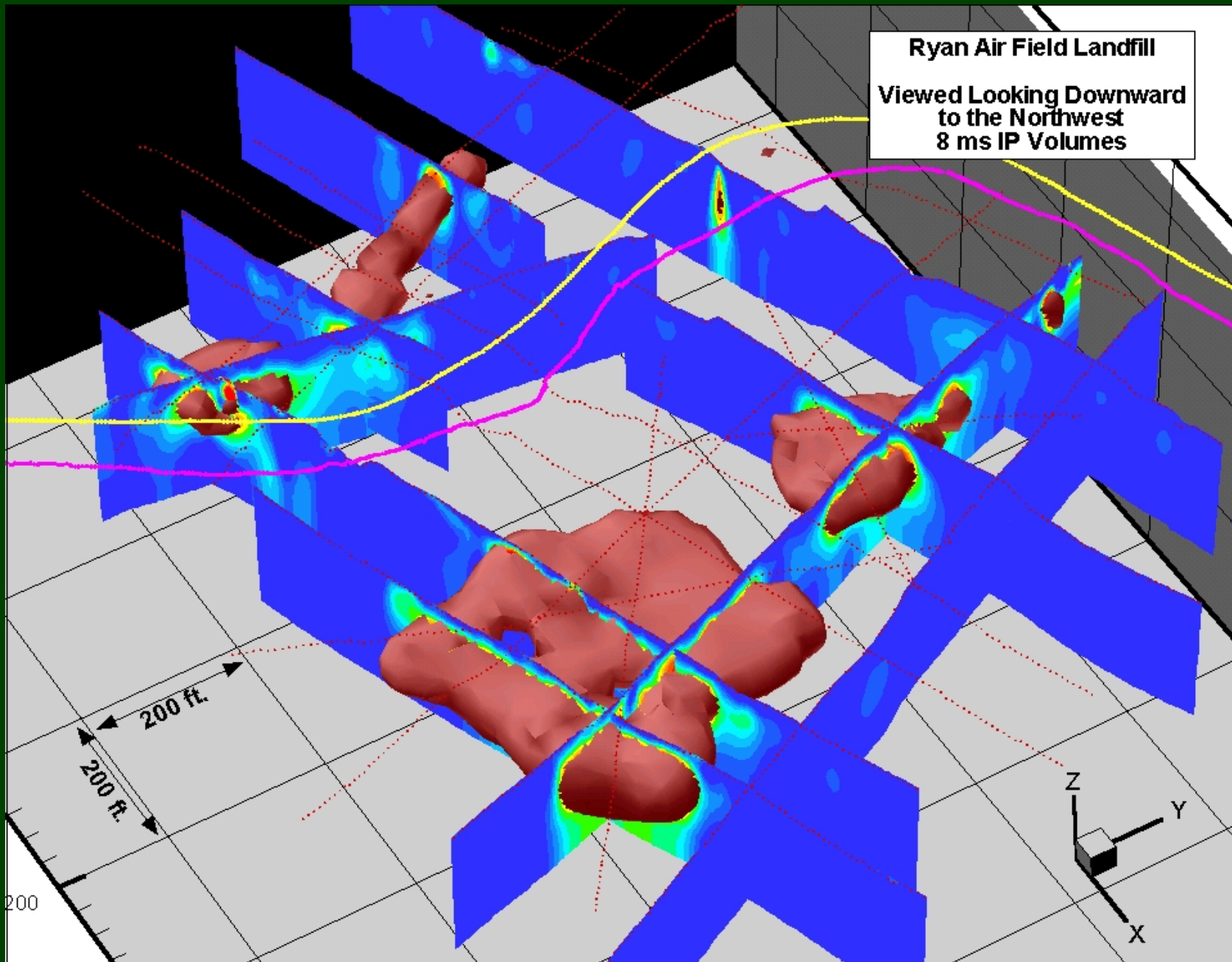
a. IP 2D Smooth-model Inversion Cross Section



b. Resistivity 2D Smooth-model Inversion Cross Section



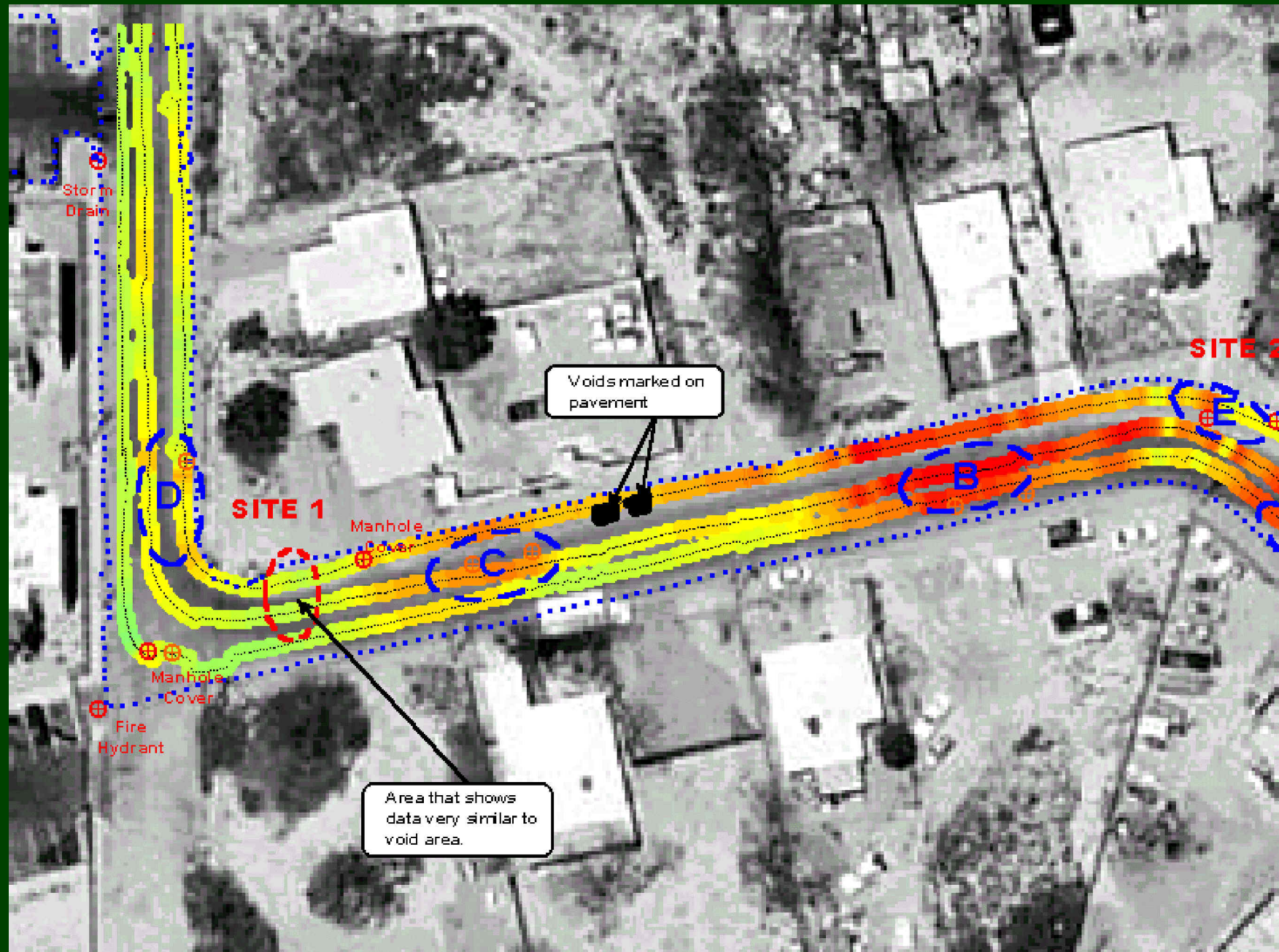
SIP: Mapping Hydrocarbon Pollution



TDEM: Instrumentation



TDEM: Mapping Leaking Sewers



TDEM: Result of Excavation



How much does it cost?

- ❖ Medium depths of investigations: 5-100 m

1/3 mile = 500 \$ / day

- ❖ Shallow investigations: 0.5-5 m

5-10 miles / day = 300 \$ / day

TNE in EU

- ❖ The Trans-European Transport Network Executive Agency (TEN-TEA)
- ❖ Collaborates with the Directorate-General Energy and Transport of the European Commission.
- ❖ Technical, administrative and financial management of public works and highway projects co-financed under the TNE transport networks' budget,
- ❖ Conformity of projects with transport policy rules and principles applicable to TNE infrastructures.
- ❖ Development will require the interconnection and interoperability of national networks.

An Ideal World

- ❖ Insurance world mirrors the technical / scientific world
- ❖ Environmental Audits: Field reconnaissance “due diligence” / investigation / survey of exposure pathways
- ❖ Geosciences = Geology + Geophysics + Drilling + Investigation + Lab Work / Analysis
- ❖ Selection of final pathway design
- ❖ Risk Assessment: Risks / Exposures defined
- ❖ Bidding of Project
- ❖ Risk Management: Exposures underwritten by Insurance

Environmental Insurance: Overview

- ❖ Comprehensive General Liability (CGL)
- ❖ Environmental Impairment (EIL)
- ❖ Pollution Legal Liability / Third-Party Indemnity (PLL)
- ❖ Cleanup Cost Cap / Stop Loss (CCC)
- ❖ Property Transfer: Owner / Seller Indemnity
- ❖ Director & Officers Liability Insurance (D&O)

Types of Policies and How U.S. Courts Interpret Them

- ❖ CGL: Coverage for past “occurrences” as defined under Standard Form policies.
- ❖ Occurrence is defined in Standard Form CGL policies as “an accident including a continuous or repeated exposure to conditions with results, *during the policy period*, in bodily injury or property damage *neither expected nor intended* from the *standpoint of the insured*.”

Standard Form CGL Policies

- ❖ Standard form Comprehensive General Liability, now commonly called Commercial General Liability (CGL), insurance policies are drafted on an industry-wide basis through clearinghouses in the United States and the London market.
- ❖ CGL policies contain common insuring agreements, definitions, exclusions, terms and conditions.
- ❖ CGL policies generally provide insurance:

for *all sums* the insured shall become legally obligated to pay as damages because of...*bodily injury and/or property damage* caused by an *occurrence*, including continuous and repeated exposure to such conditions.

The Pollution Exclusion – Operation of the “Sudden & Accidental” Clause

The 1973 Standard Form Comprehensive General Liability (CGL) Policy excludes from coverage:

Property damage arising out of the discharge, dispersal, release or escape of smoke, vapors, soot, fumes, acids, alkalies, toxic chemicals, liquids or gasses, waste materials or other irritants, contaminants, or pollutants into or upon land, the atmosphere, or any water course or body of water; but this exclusion does not apply if such discharge, dispersal, release or escape is sudden and accidental.

The net effect is as follows:

- 1) The CGL policy covers sudden and accident pollution and environmental impairment
- 2) Unless the pollution exclusion clause is declared ambiguous or unenforceable, the CGL policy does not cover gradual pollution and environmental impairment.

The Absolute Pollution Exclusion Clause

The 1986 absolute pollution exclusion clause was a concession by the insurance industry to court decisions declaring the “sudden and accidental” pollution exclusion unenforceable.

The 1986 Standard Form CGL policy absolute pollution exclusion reads as follows:

“Bodily injury” or “property damage” arising out of the actual, alleged or threatened discharge, dispersal, seepage, migration, release or escape of pollutants...and,

Any loss, cost or expense arising out of any request, demand or order...to respond to, or assess the effects of, pollutants, or

Claim or suit by or on behalf of a governmental authority for damages...in any way responding to or assessing the effects of pollutants.

How to Locate Lost Policies

Reconstructing coverage when insurance policies are lost or missing is permitted when trustworthy secondary evidence of coverage is located:

- ❖ Identifying witnesses
- ❖ Conducting an exhaustive search
- ❖ Creating an insurance coverage chart/profile
- ❖ Authenticating the documents evidencing coverage
- ❖ Memorializing testimony of older witnesses through videotape, depositions
- ❖ Contacting the insurance companies identified
- ❖ Filing notice of claim

Insurance Company's Duty to Defend

The duty to defend is broader than the duty to indemnify. Under the law of most U.S. states and in the London market, CGL policies will cover occurrences causing pollution damages when there is no intent to actively cause the damage.

When an insurance company seeks to avoid the duty to defend, courts place the burden on the insurer to establish any exclusions from coverage once the policyholder has established an occurrence.

The Duty to Indemnify

The duty to indemnify arises once an insurance company has been unable to sustain the burden of establishing the applicability of any exclusions from coverage.

In many U.S. jurisdictions and the London market, under the “sudden and accidental” pollution exclusion, coverage for abrupt releases and/or gradually occurring events of pollution is afforded so long as the pollution causing damages were unintended.

After the introduction of the “absolute” pollution exclusion, courts closely examine the nature of the “pollutant” and exclude coverage for industrial activities. “Non-industrial” activities are often covered even though the activity, product or agent contains small levels of hazardous constituents.

Environmental Impairment and Specialized Environmental Liability Insurance

- ❖ Pollution Legal Liability / Third-Party Indemnity (PLL)
- ❖ Cleanup Cost Cap / Stop Loss (CCC)
- ❖ Property Transfer: Owner / Seller Indemnity
- ❖ Pooling Insurance Resources

Commercial Pollution Legal Liability / Third-Party Indemnity (PLL)

- ❖ Provides property owners and operators across all industries with “claims made” coverage for pollution conditions on properties, disposal sites, contracting operations and transportation exposures.
- ❖ Responds to sudden, accidental, unintended and gradual pollution conditions.
- ❖ Covers third-party claims for bodily injury, property damage and cleanup costs.
- ❖ Covers defense of third-party claims.
- ❖ Limits typically available up to \$50,000,000

Cleanup Cost Cap / Stop Loss (CCC)

- ❖ “Claims made” coverage for cleanup cost overruns arising from a planned remediation.
- ❖ Coverage for unanticipated pollution conditions newly discovered during the remediation process.
- ❖ Coverage for cleanup costs that exceed the self-insured retention (SIR or deductible).
- ❖ Coverage available for both pre-approved remediation plans and plans in progress.
- ❖ Coverage available for on- and off-site cleanup.
- ❖ Limited typically to 10 years unless extraordinary circumstances exist.
- ❖ Limited typically to \$25,000,000.

Property Transfer: Owner / Seller

- ❖ “Claims made” coverage for property owners, buyers or sellers to mitigate environmental risks associated with real estate ownership or operations.
- ❖ Policy tailored to meet regulatory, contract, lender, landlord or investor requirements.
- ❖ Policy can assist in negotiations during a merger and acquisition by addressing a wide range of pollution conditions.
- ❖ Coverage for cleanup cost overruns arising from a planned remediation.
- ❖ Coverage for unanticipated pollution conditions newly discovered during the remediation process.
- ❖ Coverage for cleanup costs that exceed the self-insured retention (SIR or deductible).

Property Transfer: Owner / Seller (con' t)

- ❖ Coverage available for both pre-approved remediation plans and plans in progress.
- ❖ Coverage available for on- and off-site cleanup.
- ❖ Coverage for business interruption and loss of site value arising from pollution conditions.
- ❖ Coverage for sudden, accidental, unintended and gradual pollution.
- ❖ Properties are scheduled with specificity.
- ❖ Limited typically to 10 years unless extraordinary circumstances exist.
- ❖ Limited typically to \$50,000,000.

Pooling Insurance Resources

- ❖ Extent of risk / exposure may make magnitude of harm uncertain / uninsurable
- ❖ Insurance companies may lack capacity to cover risk
- ❖ Co-insurance / Reinsurance
- ❖ Pooling of capacity by multiple insurers (e.g. Nuclear Risk)
- ❖ Public / Private funding

The Directors and Officers (D&O) Liability Insurance Policy

- ❖ D&O liability policies cover directors and officers of a corporation when acting in their capacity as such.
- ❖ Dissolved or bankrupt corporations often expose directors and officers to personal liability in the absence of adequate corporate assets or insurance coverage.
- ❖ Modernly, PLL and CCC coverages are available to protect directors and officers.
- ❖ Older policies may afford protection.

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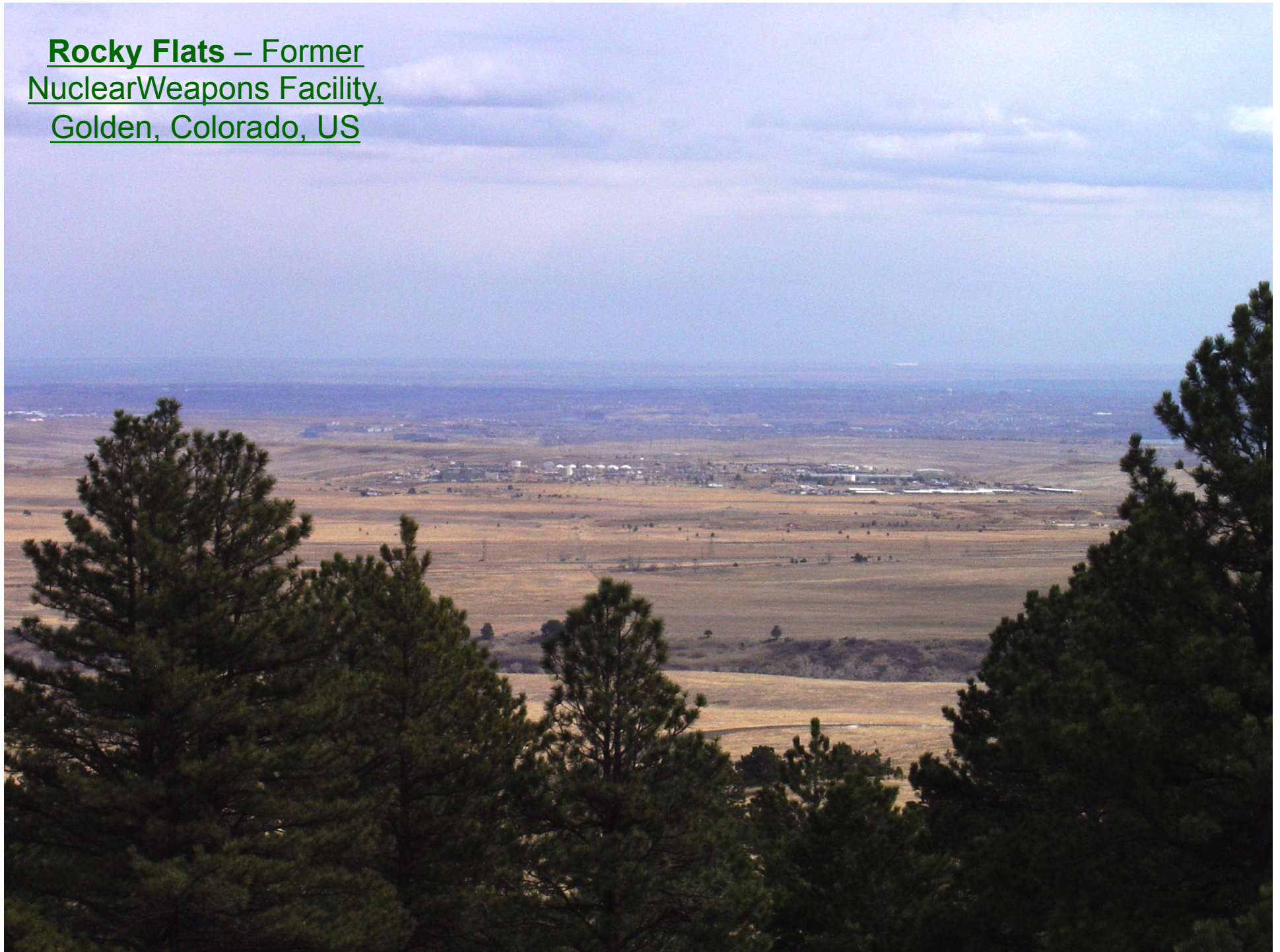
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