SDMS DocID 2143408

Dimock: Cabot's presentation to PADEP
Humane Zia
to:
Ron Borsellino, Kathy Hodgkiss, Dennis Carney, Victoria Binetti, Helen Duteau, Walter Wilkie, Cecil Rodrigues, Gray.Heather, JohnJ Butler, Cynthia Metzger, Richard Fetzer, Rupert.Richard, Jennie Saxe
02/16/2012 07:33 AM
Cc:
Karen Johnson
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From: Humane Zia/R3/USEPA/US Sort List...

To: Ron Borsellino/R3/USEPA/US@EPA, Kathy Hodgkiss/R3/USEPA/US@EPA, Dennis Carney/R3/USEPA/US@EPA, Victoria Binetti/R3/USEPA/US@EPA, Helen Duteau/R3/USEPA/US@EPA, Walter Wilkie/R3/USEPA/US@EPA, Cecil Rodrigues/R3/USEPA/US@EPA, Gray.Heather@epa.gov, JohnJ Butler/R3/USEPA/US@EPA, Cynthia Metzger/ESC/R3/USEPA/US@EPA, Richard Fetzer/R3/USEPA/US@EPA, Rupert.Richard@epamail.epa.gov, Jennie Saxe/R3/USEPA/US@EPA

Cc: Karen Johnson/DC/USEPA/US@EPA

This is the presentation that Cabot apparently gave to PADEP, which Karen Johnson referred to yesterday a.m. Karen found it on the L drive, here:

Nonresponsive

-Humane

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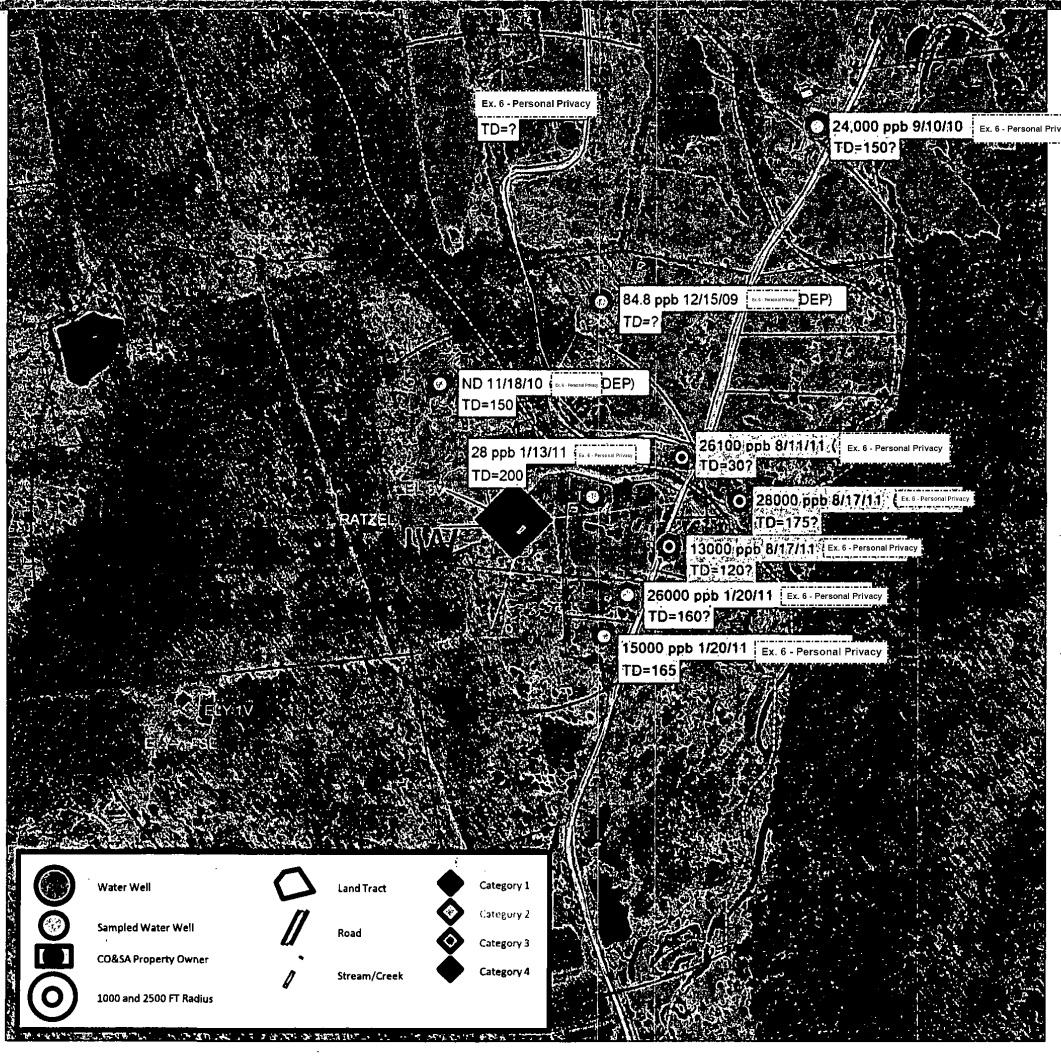
Nonresponsive 2/16/2012

Ratzel 2H - NW


Ex. 6 - Personal Privacy
TD=?
24,000 ppb 9/10/10 Ex. 6 - Personal Privacy
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TD=150
28 ppb 1/13/11
TD=200
26100 ppb 8/11/11 Ex. 6 - Personal Privacy
TD=30?
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TD=175?
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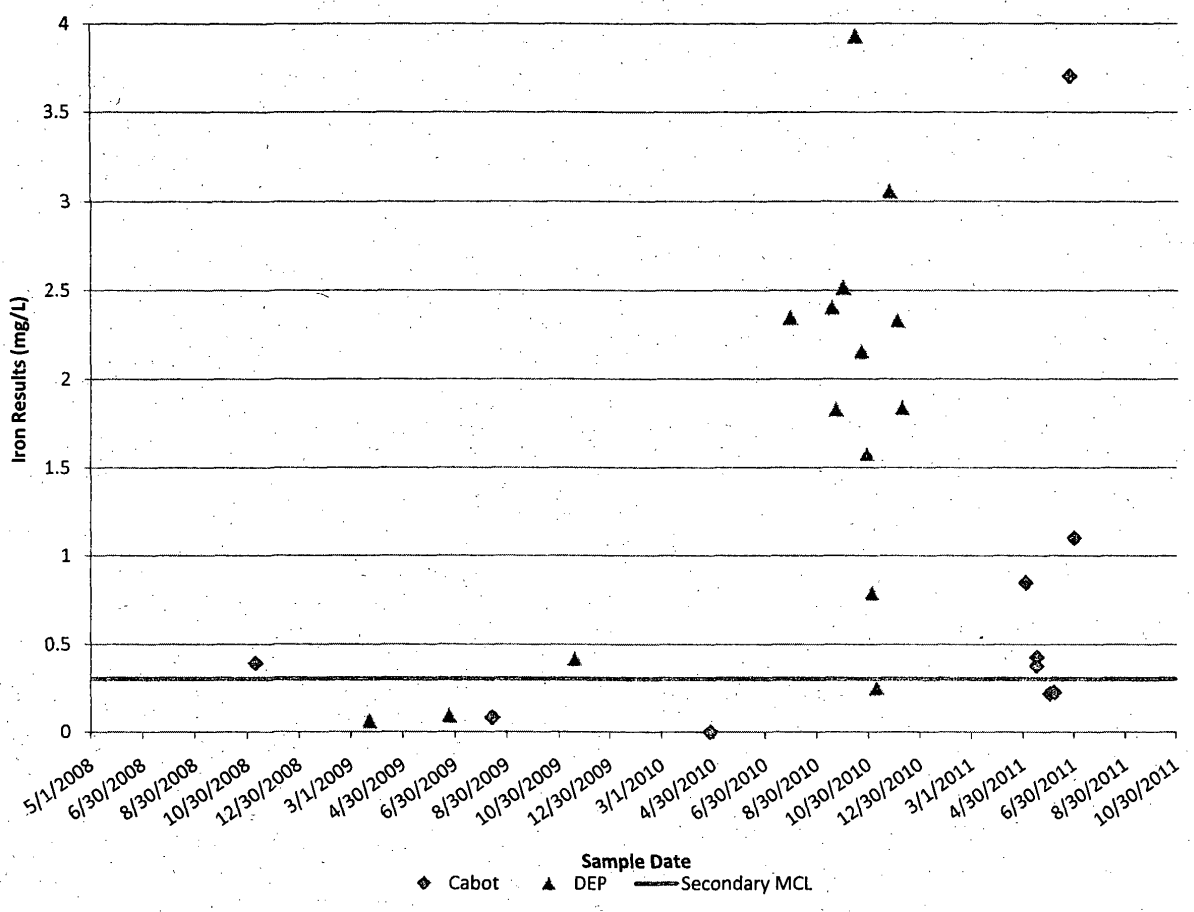
TD=120?
26000 ppb 1/20/11 Ex. 6 - Personal Privacy
TD=160?
15000 ppb 1/20/11 Ex. 6 - Personal Privacy
TD=165
RATZEL
Water Well
Sampled Water Well
CO&SA Property Owner
1000 and 2500 FT Radius
Land Tract
Road
Stream/Creek
Category 1
Category 2
Category 3
Category 4

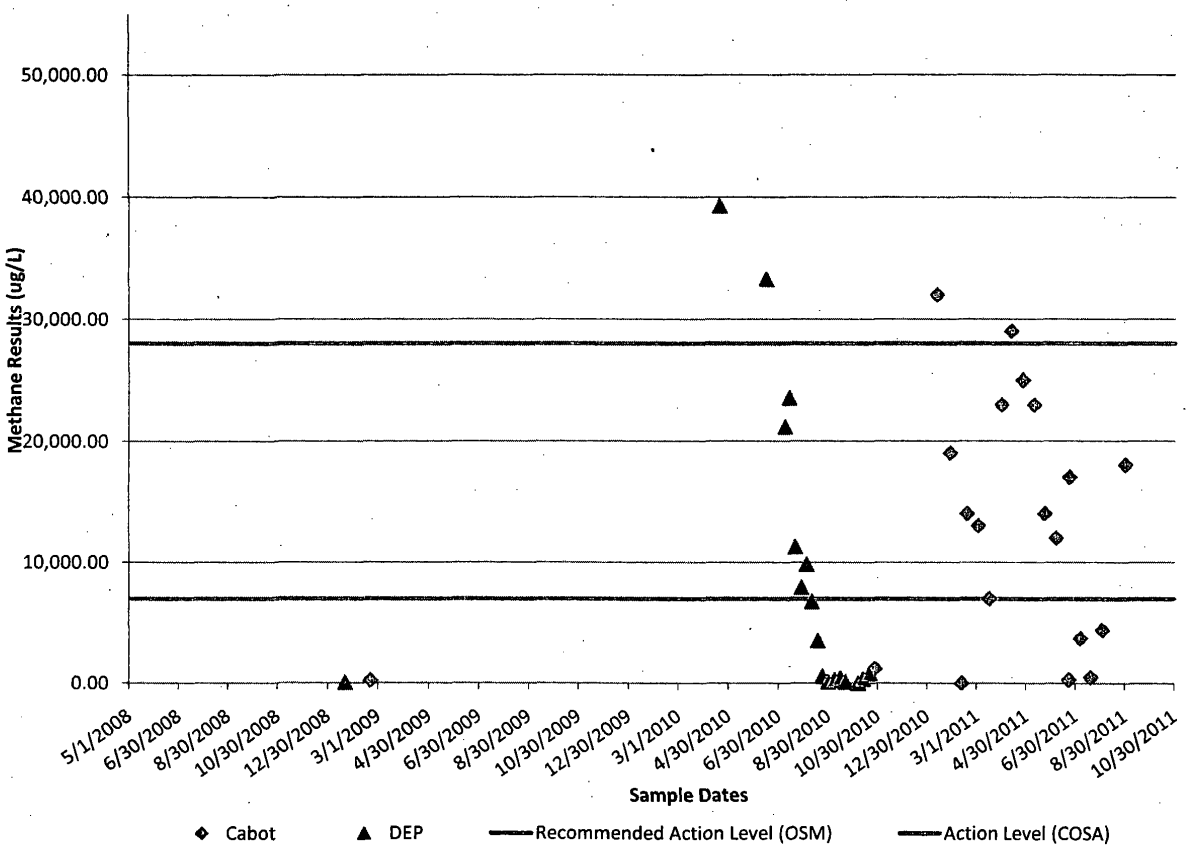
Ex. 6 - Personal Privacy

Iron Sample Results



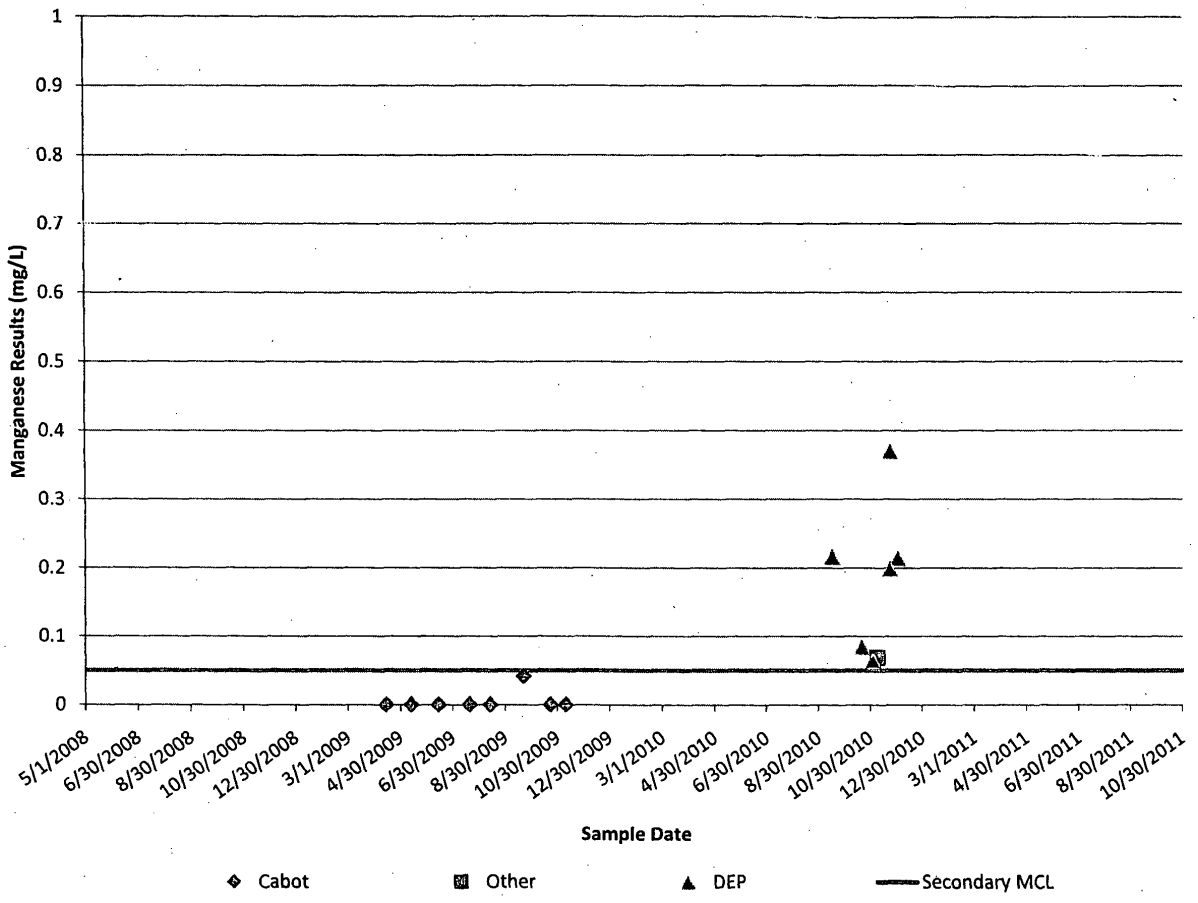
Ex. 6 - Personal Privacy

Methane Sample Results

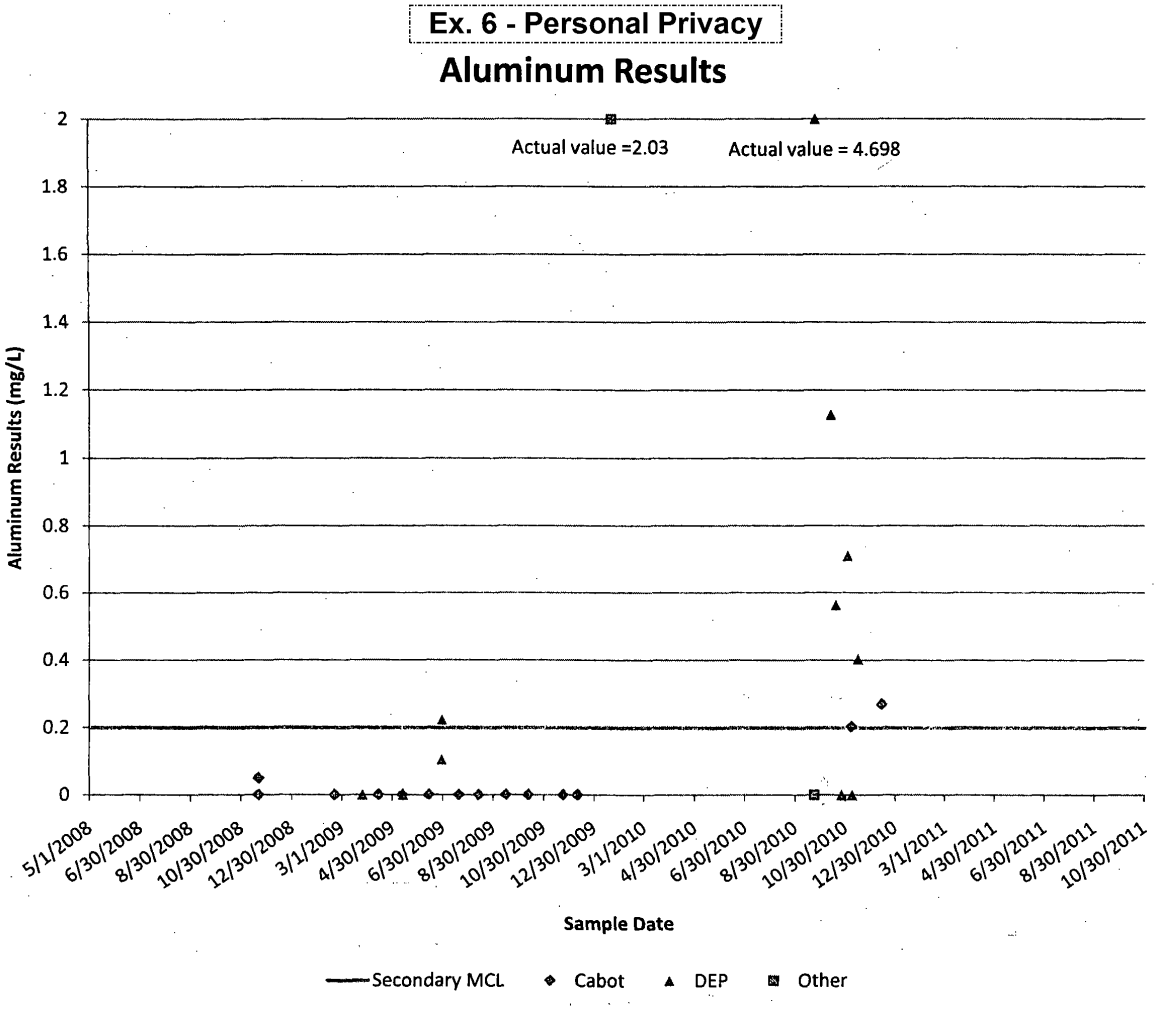


Ex. 6 - Personal Privacy

Manganese Sample Results



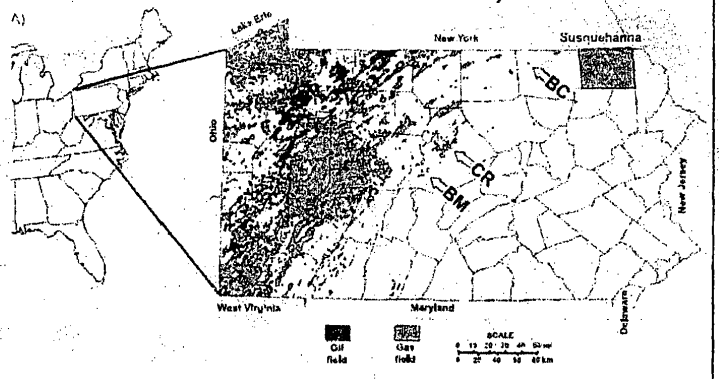
Ex. 6 - Personal Privacy — Al results



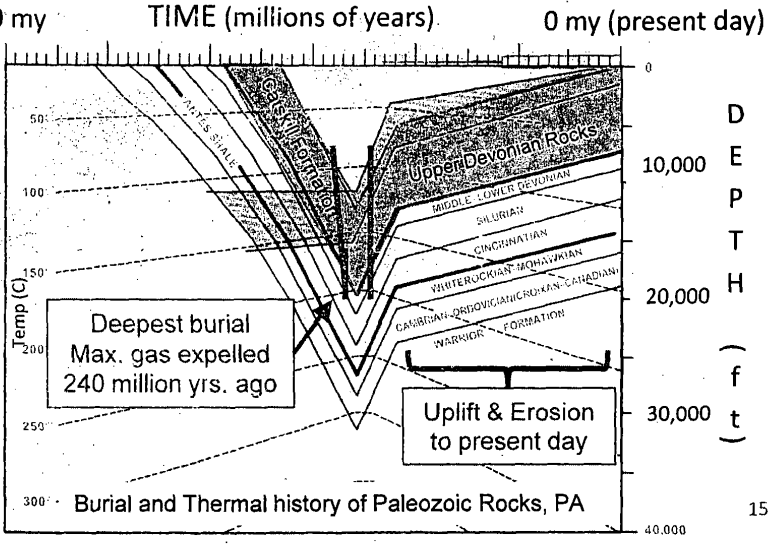
Upper Devonian burial depths, gas generation, uplift

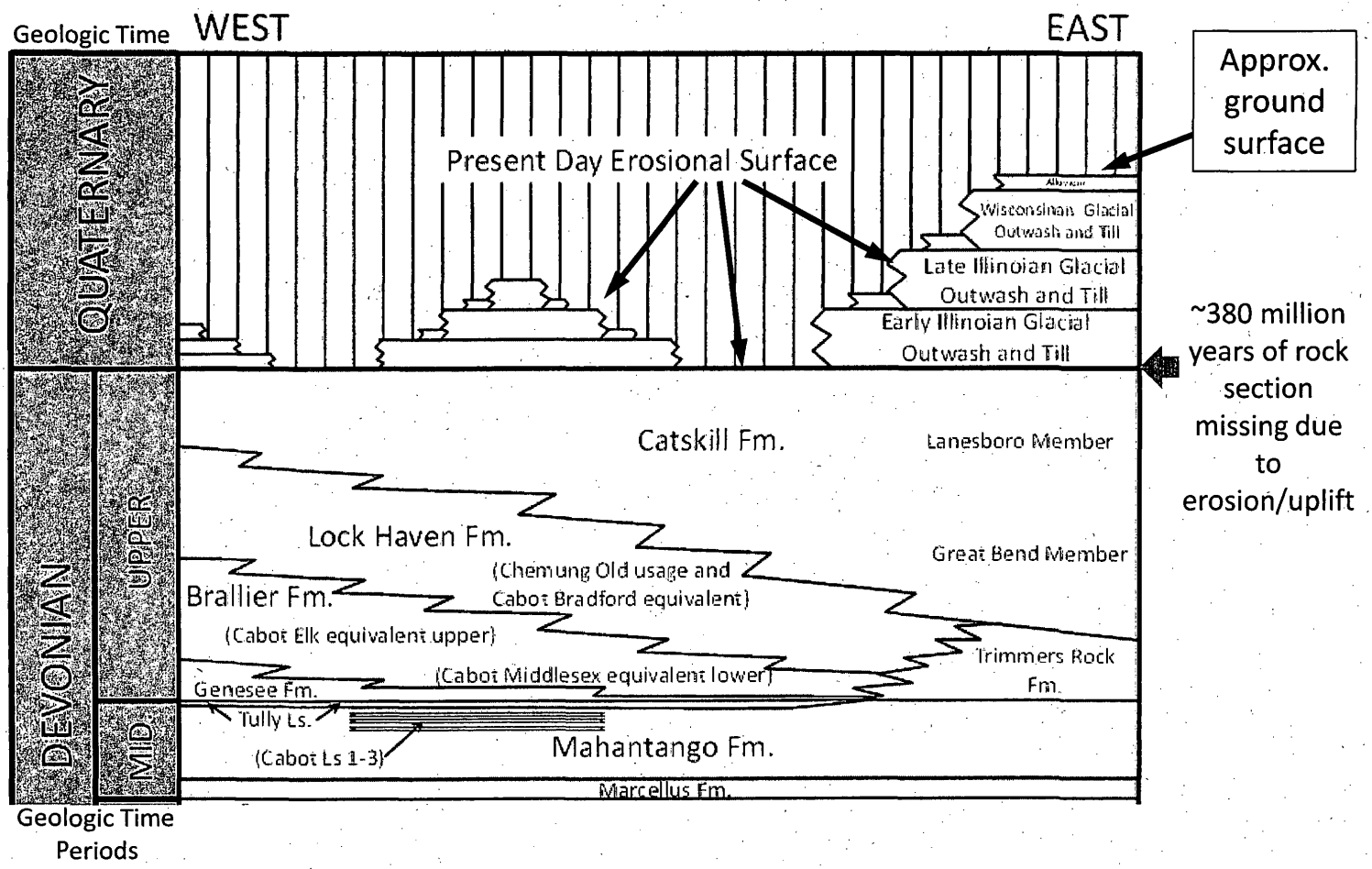
- Deposited ~380 My in marine and fluvial environments - sand, shales, organics
- Upper Devonian, Catskill Formation burial depths 5-6 km or 3-4 miles
- Deepest burial 290 to 270 My, placing organics in these rocks in the gas window
- Roughly 98% of any oil remaining at this time was cracked to gas
- Gas expelled from the Upper Devonian source rocks migrated and accumulated in the sandstones of the Catskill and Lock Haven Formations from about 270 to 240 My during deepest burial and initial uplift
- Successive uplift, orogenic events and glaciation removed the younger overburden exposing the Upper Devonian rocks at the surface in Susquehanna County and northeast Pennsylvania or ***exhumed this giant gas reservoir***

"shallow gas at or near surface – in northeastern Pennsylvania"



(Modified from Laughrey et al., 2004, Fig. 1A and 15)
BC Brace Creek; CR Council Run Field; BR Black Moshannon; Oil and gas fields.



Burial and Thermal history of Paleozoic Rocks, PA

Shallow Stratigraphy – Susquehanna County Area