

# An MMV Program for a Geologic Sequestration Project

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20+ years experience

Underground injection of hazardous waste

Pesticide and nutrient transport in groundwater

Groundwater/surface water interactions

Water resources assessment & management

Geologic carbon sequestration

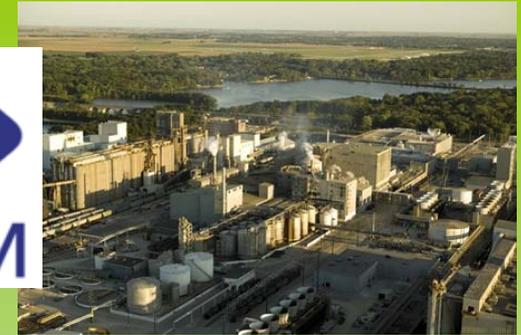


*Midwest Geological Sequestration Consortium*

[www.sequestration.org](http://www.sequestration.org)

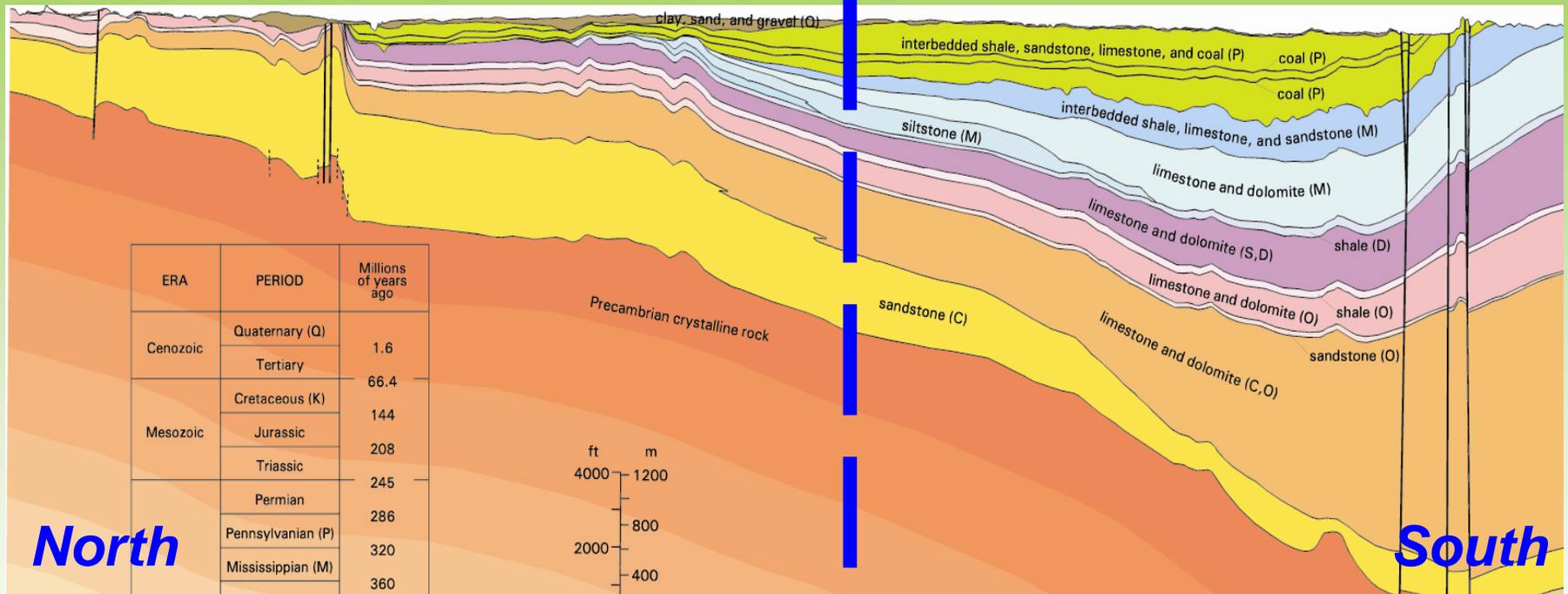
# Project Overview

- Inject 1 million tonnes of CO<sub>2</sub> over 3 years
- ADM supplying CO<sub>2</sub> from its ethanol fermentation unit
- Inject 1,000 tonnes/day into Mt. Simon Sandstone (deep saline aquifer)
- Mt. Simon is Cambrian age, basal sandstone in Illinois Basin



# Project Overview

- Mt. Simon is Cambrian age, basal sandstone in Illinois Basin



**Injection well location**



# Illinois Basin Stratigraphic Column (Leetaru, 2004)

Pennsylvanian coal seams

Mississippian sandstone and carbonate oil reservoirs

New Albany Shale

Maquoketa Shale

St. Peter Sandstone

Eau Claire Shale

Mt. Simon Sandstone

**Potential Seal**

**Potential Sink**

**Coal Bed Potential Sink and Seal**



# Sleipner reservoir model of CO<sub>2</sub> after 3 years



[www.iea.org/textbase/work/2004/](http://www.iea.org/textbase/work/2004/)



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# GW Monitoring at ADM

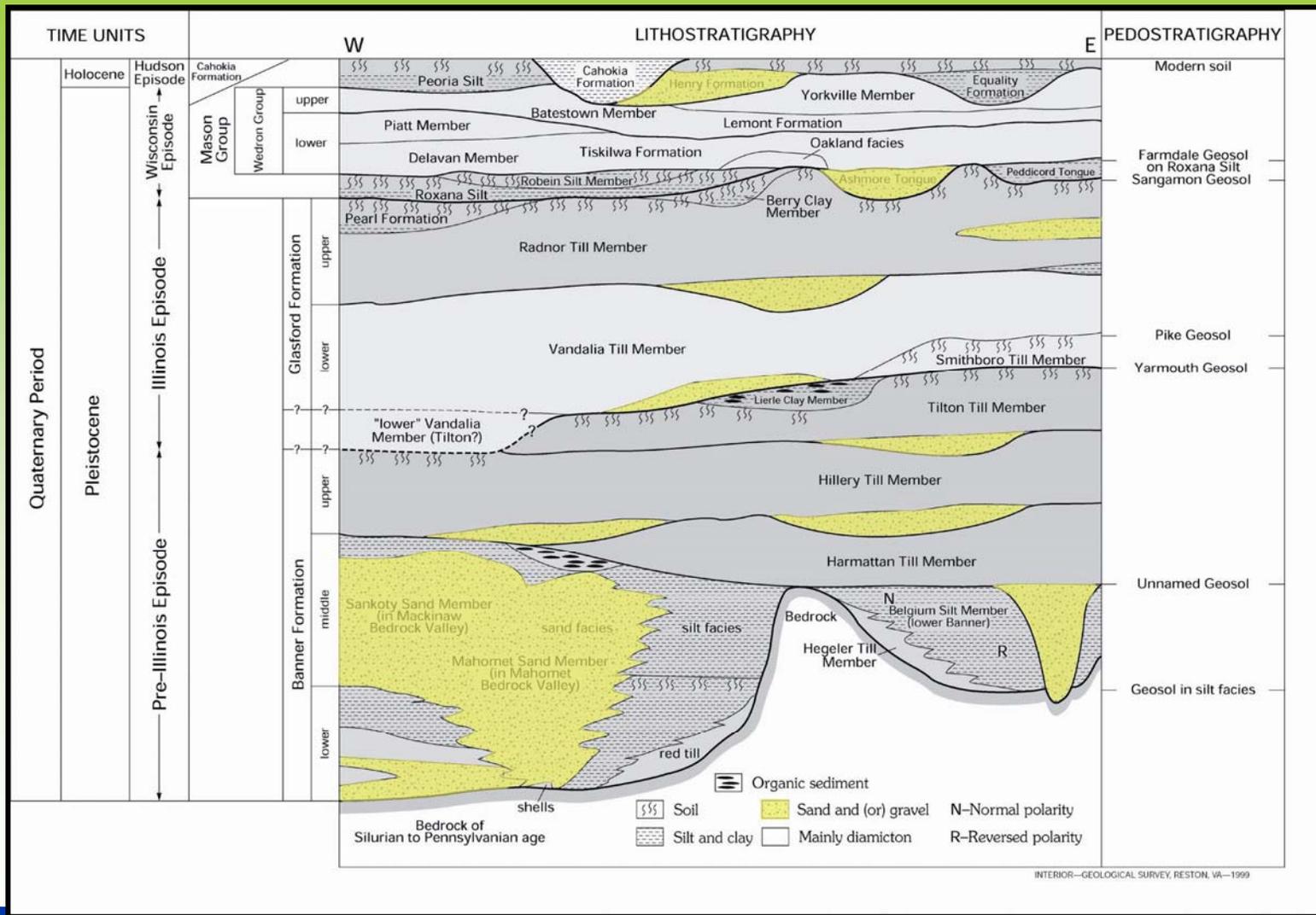


 ■ Shallow sand well  
■ Upper Glenard wells  
■ Deep well

**Illinois Basin - Decatur Site**  
Midwest Geological Sequestration Consortium  
QuickBird Satellite Image Map  
September 16, 2005

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# GW Monitoring at ADM



# GW Monitoring at ADM– GFLOW model

