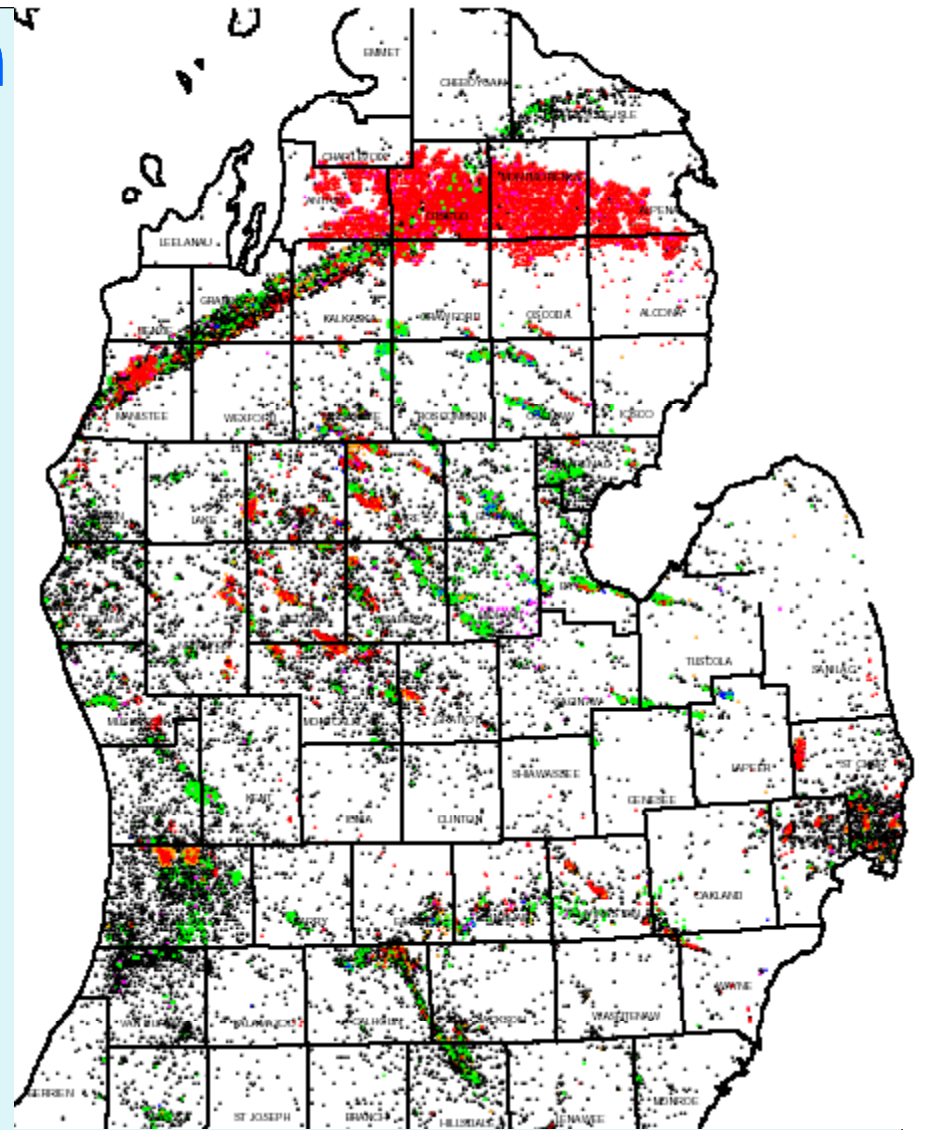
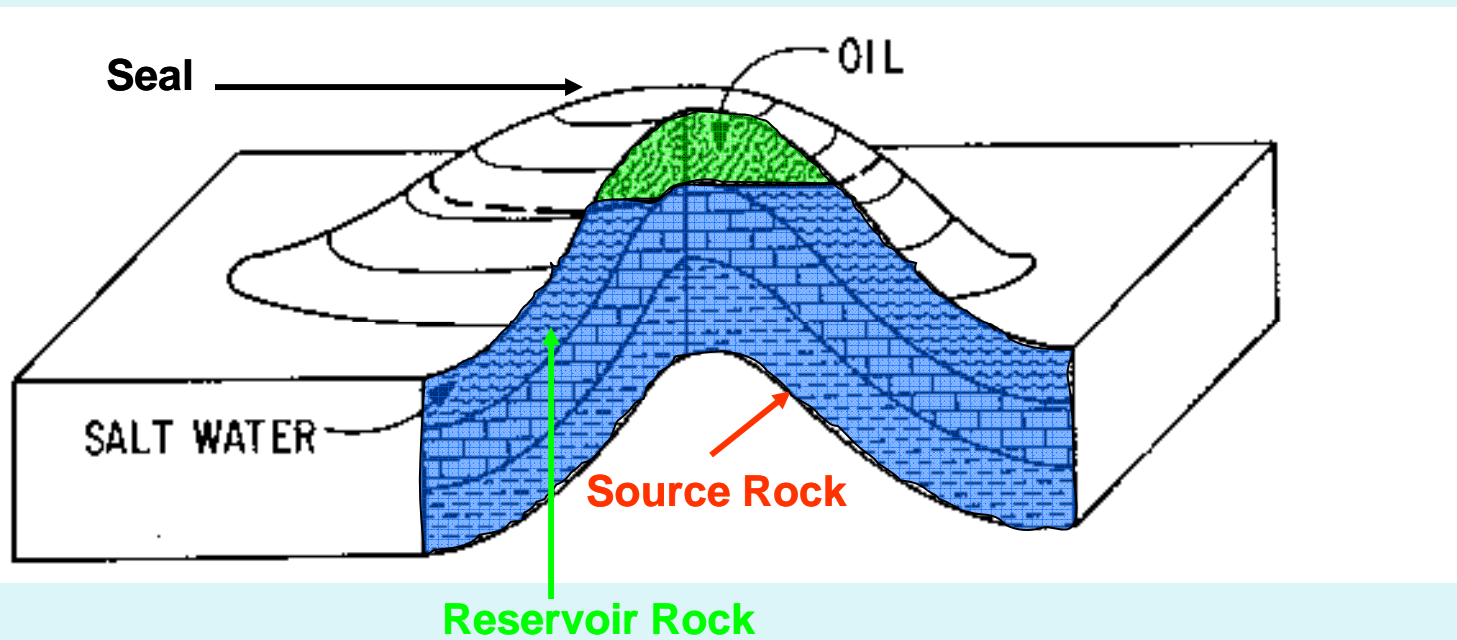


Oil and Gas in Michigan

- Ranks 17th out of 33 for Oil and 10th for Gas
- 52,000 Wells Drilled Since 1925
- 15,000 Oil Wells
- 13,000 Gas Wells
- Drilled Depths From a Few Hundred Feet to 17,466'
- Deepest Oil (10,515') and Gas (11,635') Wells
- Largest Gas Storage Capacity in U.S. (600 BCFG from 60 Fields)



Produced over 1.3 Billion Barrels of Oil and 6.9 Trillion Cu ft of gas Since 1925



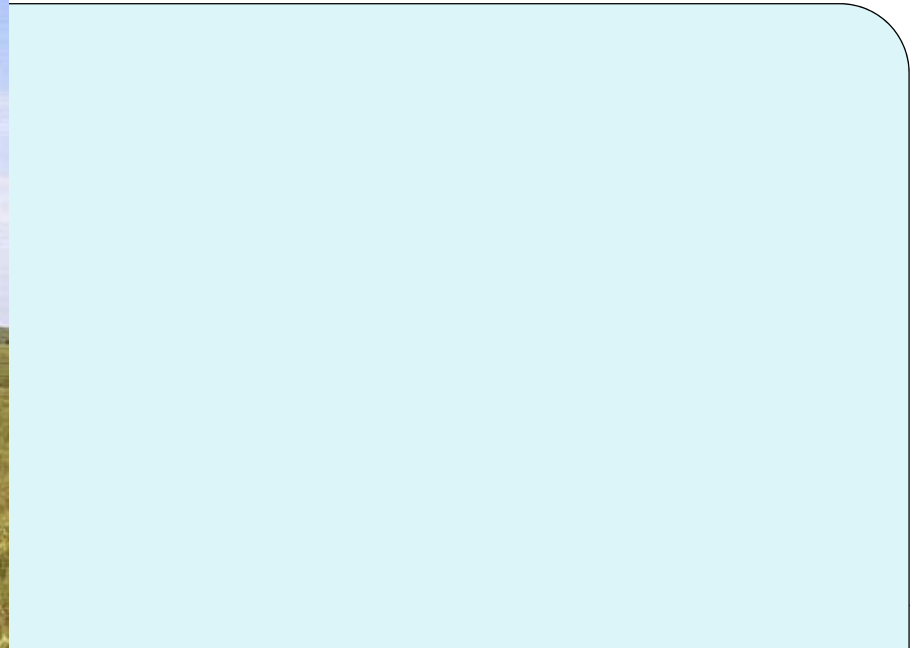
Structural Trap (Anticline)

Oil Reservoir

Seismic Data

- Shaker
- Geophones
- Recording Truck

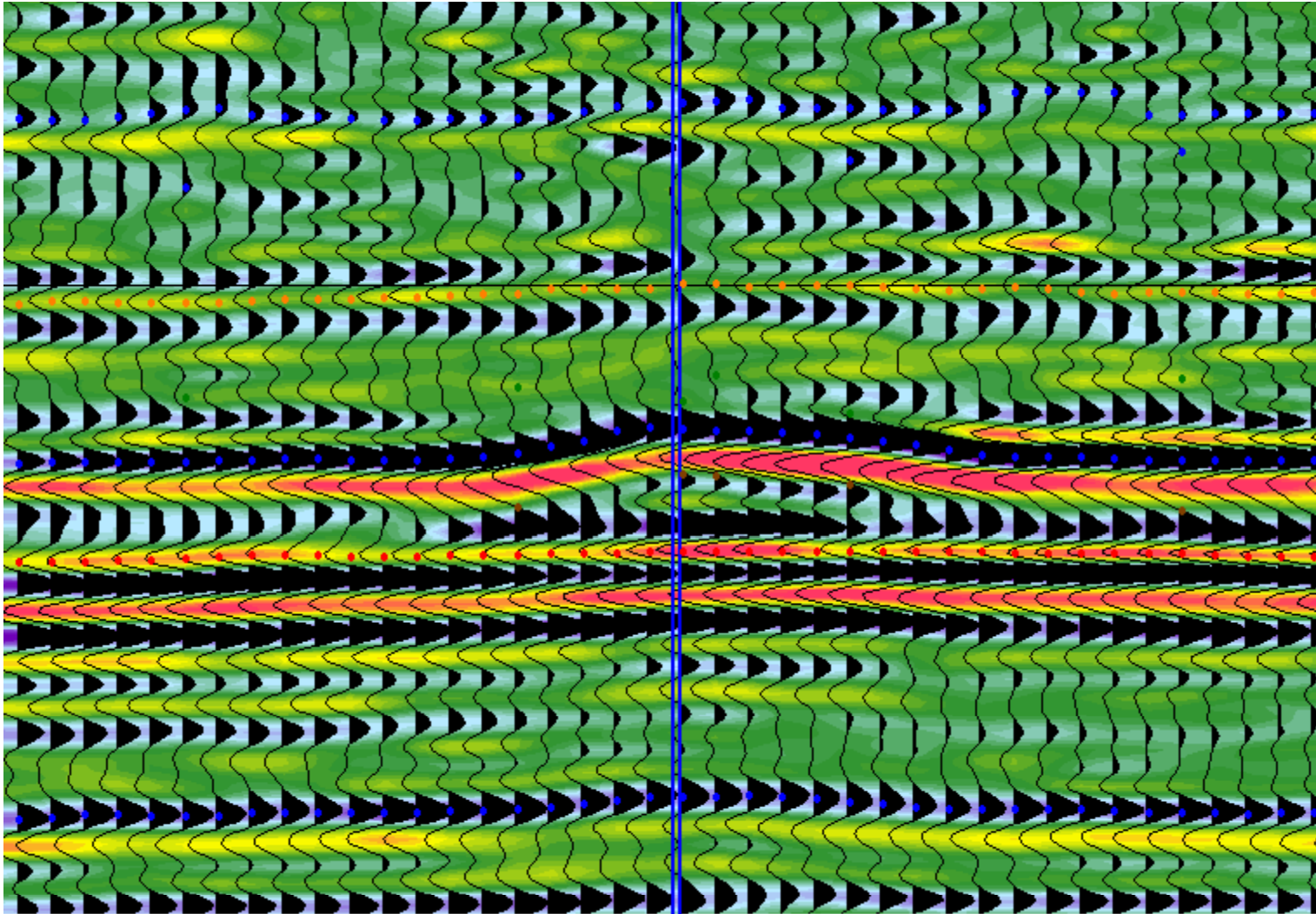




**Seismic Acquisition
Can Leave a “Light”
Footprint**



From Gerhard



Traverse

Salina G

A-2 Carb.

Clinton

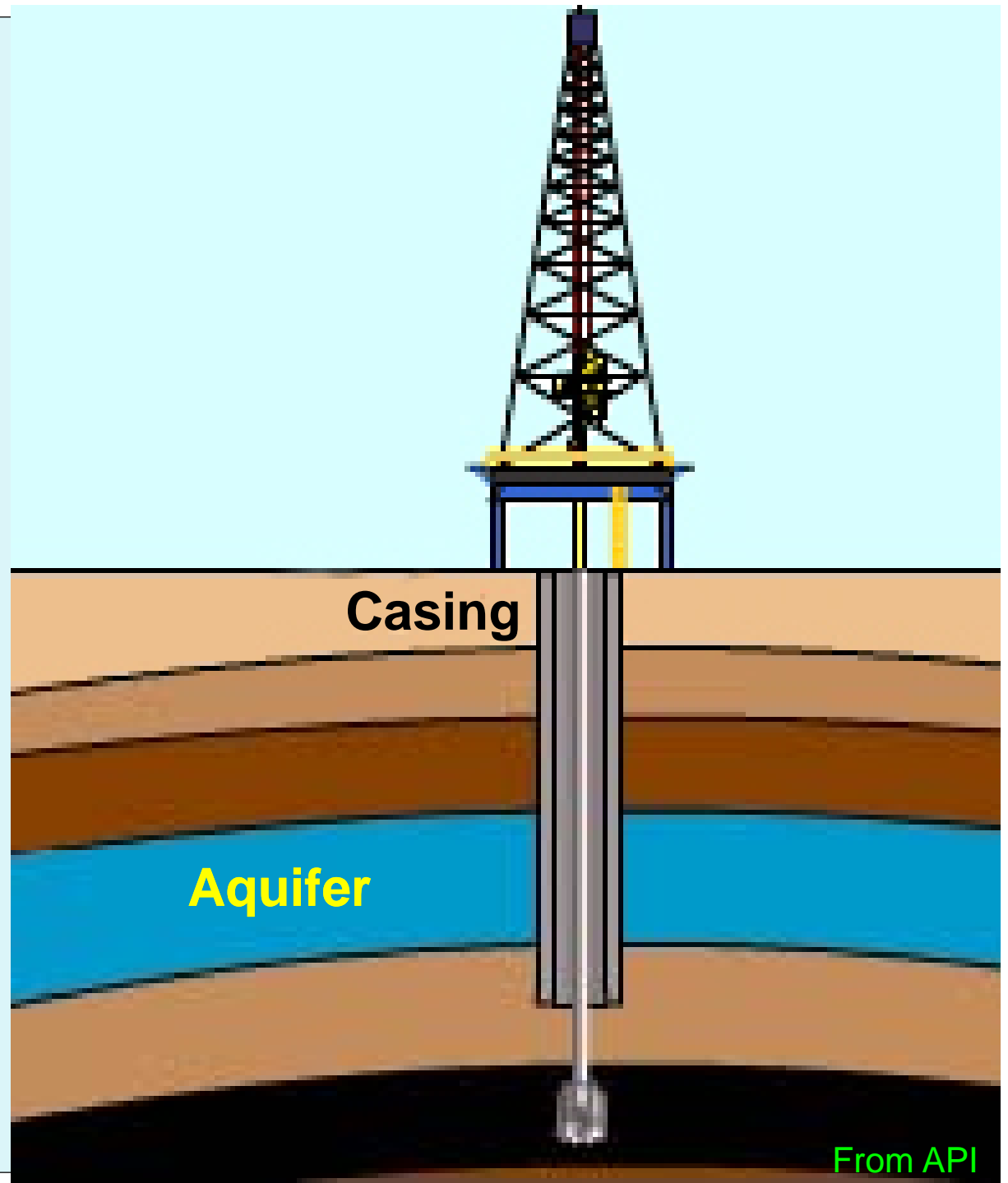
Trenton

S. Mich Niagaran Reef

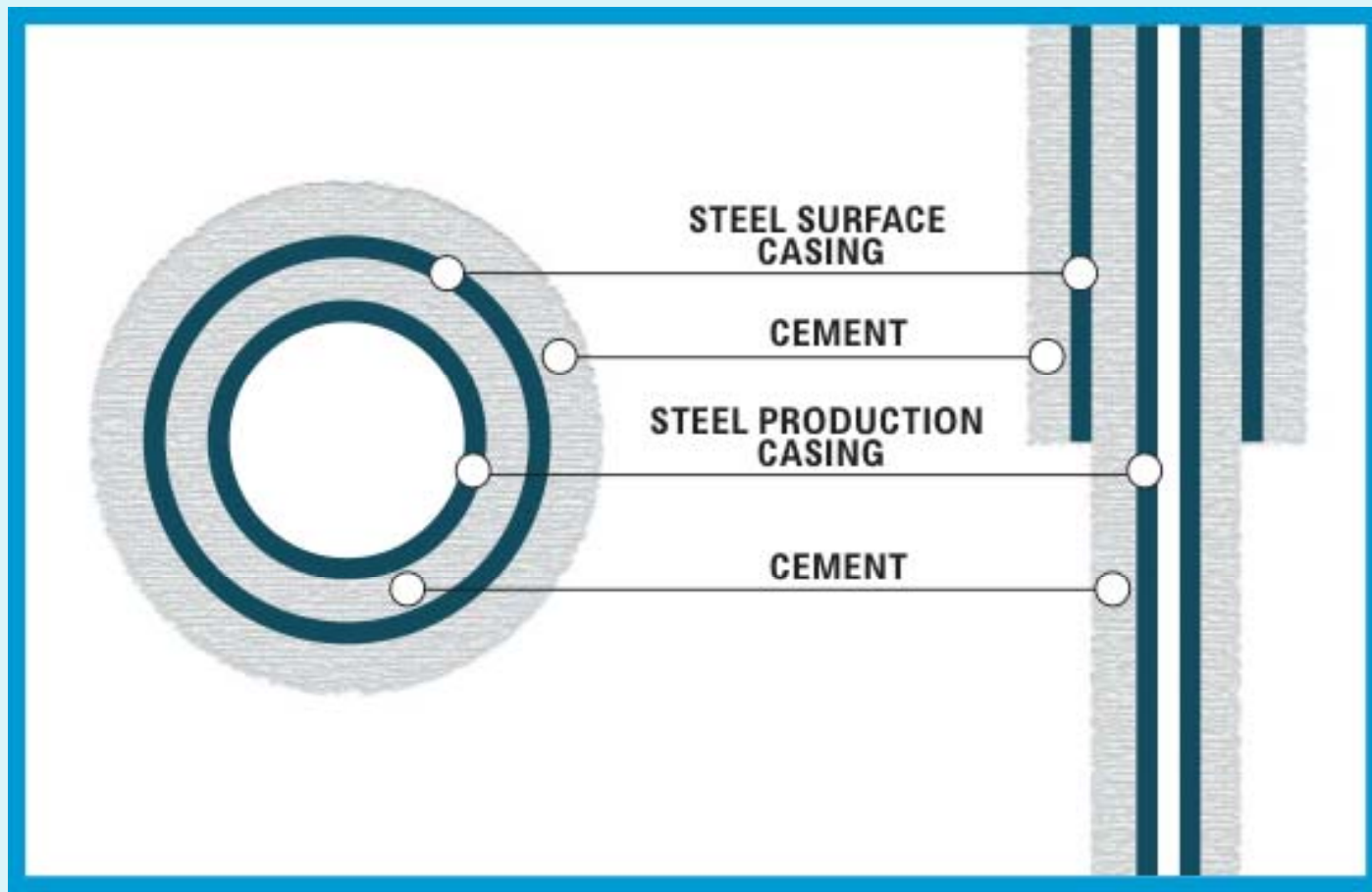
2-D E-W Profile Over Reef Crest

Protecting Our Drinking Water

Casing is Required to be Set at Least 100' Below a Fresh Water Aquifer



Groundwater Protection



Horizontal Drilling

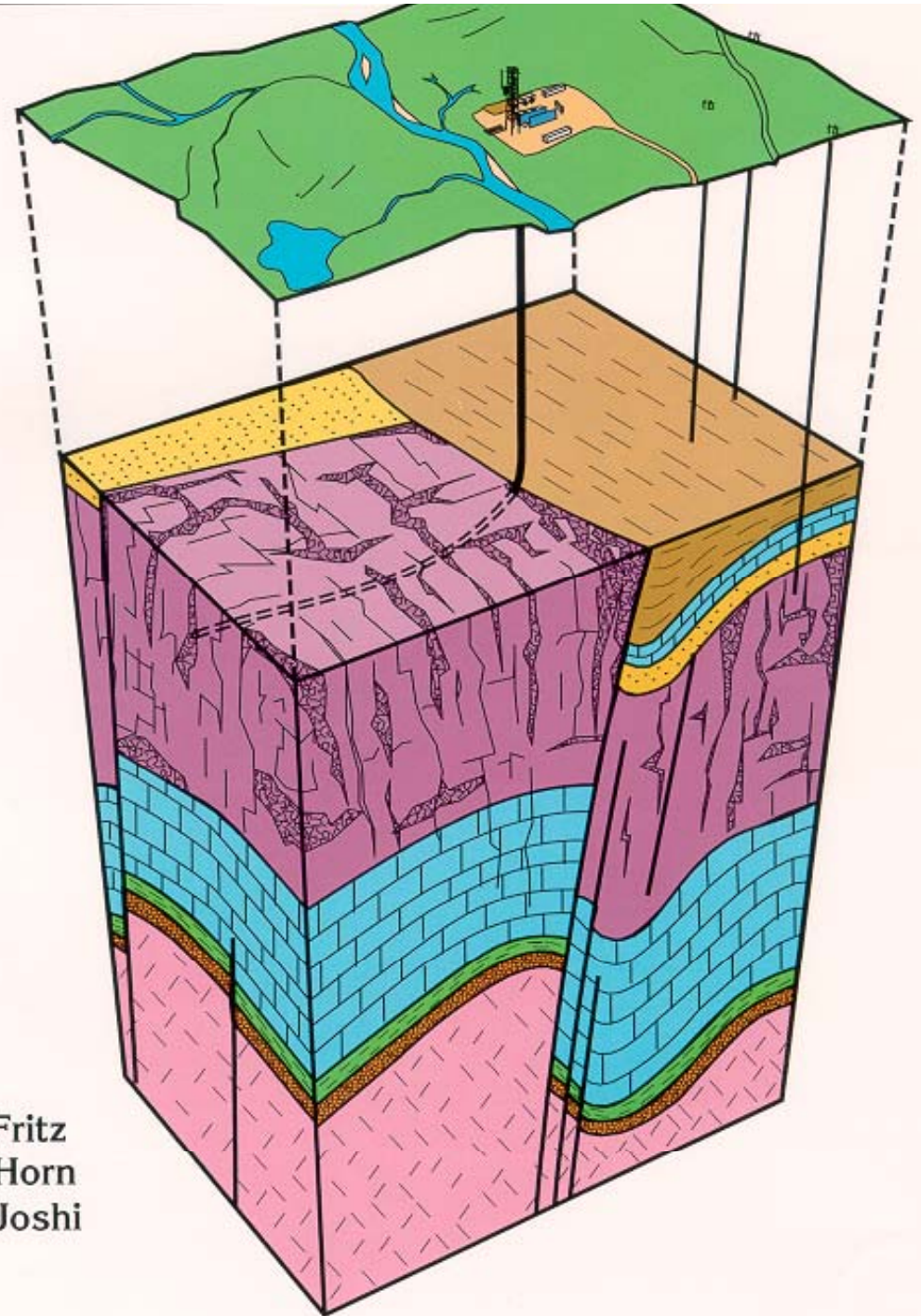
Environmentally
Sensitive Areas

Encounter More
Pay Thickness

Thin Reservoirs

Gas Storage Res.

EOR Applications

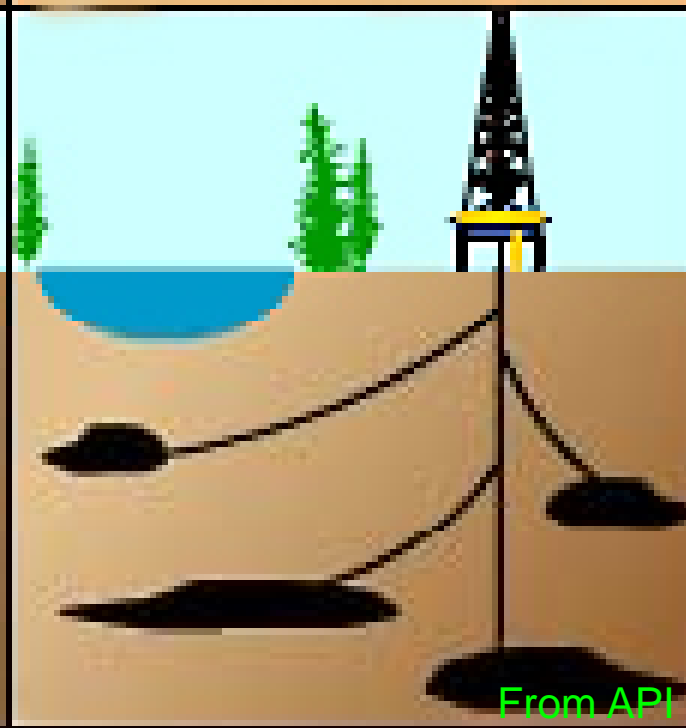
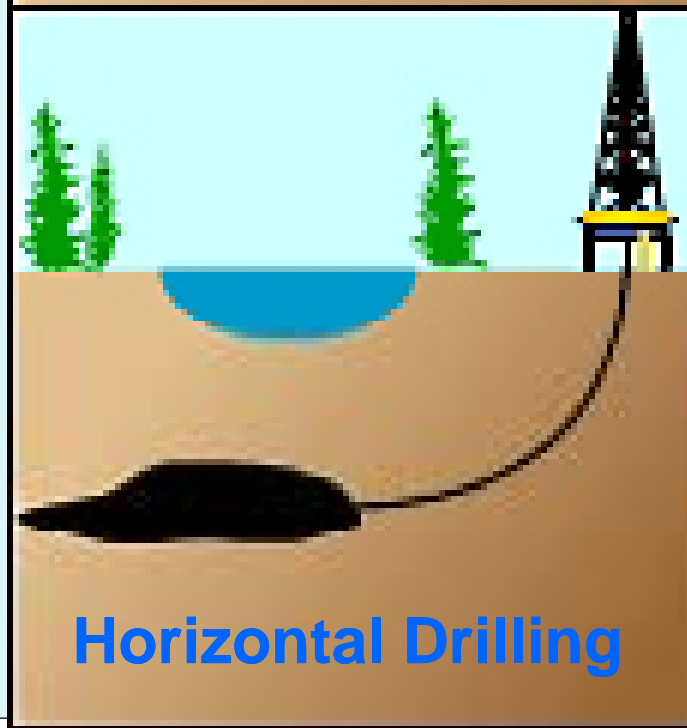


R.D. Fritz
M.K. Horn
S.D. Joshi

**Sometimes
We Cannot
Drill a Straight
Hole**

**Used For
Drilling in
Sensitive
Areas.**

**Results in
Fewer Wells,
Less
Environmental
Impact**



Pollution Prevention Measures Taken At All Oil and Gas Sites

Secondary Containment



At the wellhead



At production facilities



**All wellheads since
September 1996**



**All production facilities
since November 1989**

From
Wellman

Mackinac Co.



Kalkaska Co.



Michigan Natural Resources Trust Fund

Revenues from Oil & Gas help purchase land, develop beaches, parks, walks

Bay Co.



Keweenaw Co.



From Westbrook

**St. MSU & Troy #1-9
Oakland County, Michigan
Royalty Income**

| Year | Mich. State University Royalty | State of Michigan Royalty |
|------|-----------------------------------|------------------------------|
| 2003 | \$789,179 | \$728,473 |
| 2004 | \$958,864 | \$885,105 |
| 2005 | \$1,083,647 | \$1,000,289 |
| 2006 | \$731,338 | \$675,081 |
| 2007 | \$532,528 | \$491,564 |
| 2008 | \$592,017 | \$546,477 |
| 2009 | \$165,333 | \$152,615 |
| 2010 | \$170,430 | \$157,320 |
| 2011 | \$171,344 | \$158,164 |

Total

\$5,194,680

\$4,795,088

Total Royalty Paid Out

\$9,989,768

Average Royalty Per Year Paid Out

\$1,109,974

