

REGULATION OF OIL AND GAS DEVELOPMENT IN MICHIGAN

Hal Fitch
Chief, Office of Oil, Gas,
and Minerals

Department of
Environmental Quality
PURE MICHIGAN

DEQ'S OIL & GAS REGULATORY AUTHORITY

PART 615 of 1994 PA 451 - NREPA

- Well Siting
- Drilling and Construction
- Production Operations
- Plugging and Site Restoration

OTHER REGULATORY AUTHORITY

- MPSC - pipelines and production rates in gas reservoirs
- DNR - leasing of state-owned lands for oil and gas
- Federal - Safe Drinking Water Act, Clean Water Act, Clean Air Act, etc.

LEGAL RIGHTS TO DEVELOP OIL AND GAS

- Ownership of oil and gas or other minerals is a constitutionally protected property right
- Minerals may be held separately from surface rights
- Owner or lessee of mineral rights has right to reasonable use of surface
- Denial of permit without good cause may constitute a taking of property

60,000 Oil & Gas Wells Since 1925

Active Wells:

- 4500 oil
- 11,000 gas
- 1300 water injection & disposal
- 3000 gas storage

OIL AND GAS WELLS SOUTHERN PENINSULA OF MICHIGAN

WELL SITING

Well density

- Drilling units –
- 40 to 640 acres/well, depending on depth and formation
- Setback from unit boundary

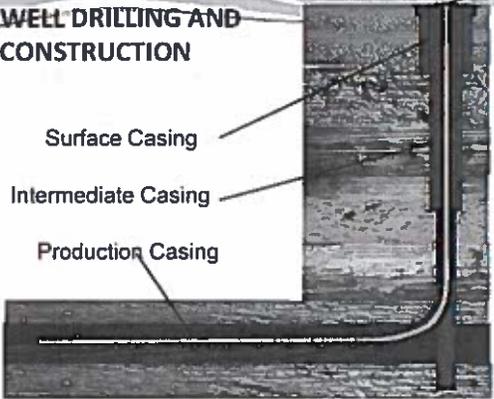
Typical 40-acre unit

WELL SITING

- **Setbacks from structures**
 - 300-foot general
 - 450-foot - city/township >70,000
- **Protection of sensitive features**
 - Wetlands
 - Water resources
 - T & E Species
 - Water supplies



WELL DRILLING AND CONSTRUCTION



Surface Casing

Intermediate Casing

Production Casing

WELL DRILLING AND CONSTRUCTION

- **Blowout Prevention Equipment**
- **Well completion**
 - Target zone treatment
 - Hydraulic fracturing
- **Spill containment**



PRODUCTION OPERATIONS

- **Set production rates to conserve oil & gas**
- **Requirements for piping, tanks, treatment equipment**
- **Secondary containment**
- **Spill reporting & cleanup**
- **Management of waste fluids**




PLUGGING AND SITE RESTORATION

- **Limits on inactive status**
- **Plugging requirements – cementing and casing removal**
- **Restoration of site to pre-drilling conditions**

ORPHAN WELL PROGRAM

- **\$1 - \$1.2 million/year from industry taxes**
- **Plug orphan wells & restore sites**
- **Plugged 340 wells since inception in 1995**



DEQ OVERSIGHT

- Inspections
 - 20,000 – 25,000 per year
- Records
- Spill reporting
 - Virtually all spills (no minimum volume)
- Cleanup standards
 - Same as for other industrial operations
- Program funding
 - Permit fee
 - Surveillance fee

ECONOMIC IMPACTS

- Private royalties - \$80 million
- Leases & royalties on State lands
 - Natural Resources Trust Fund/State Parks Endowment Fund
 - FY 2014: \$45.0 million
 - FY 2015: \$30.3 million
- Severance tax
 - FY 2013: \$59.5 million
 - FY 2014: \$61.0 million

