



Department of
Job and Family Services

Workforce Development for the Oil and Gas Industry

A horizontal bar composed of three segments: a dark grey segment on the left, a lime green segment in the middle, and a dark red segment on the right.

Michelle L. Ball

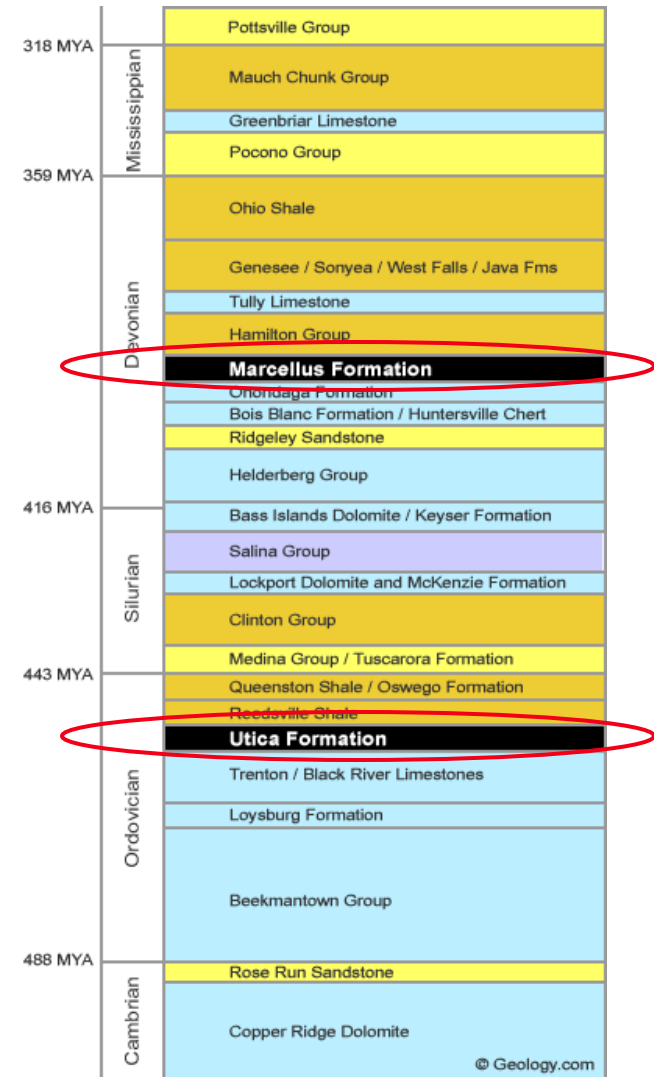
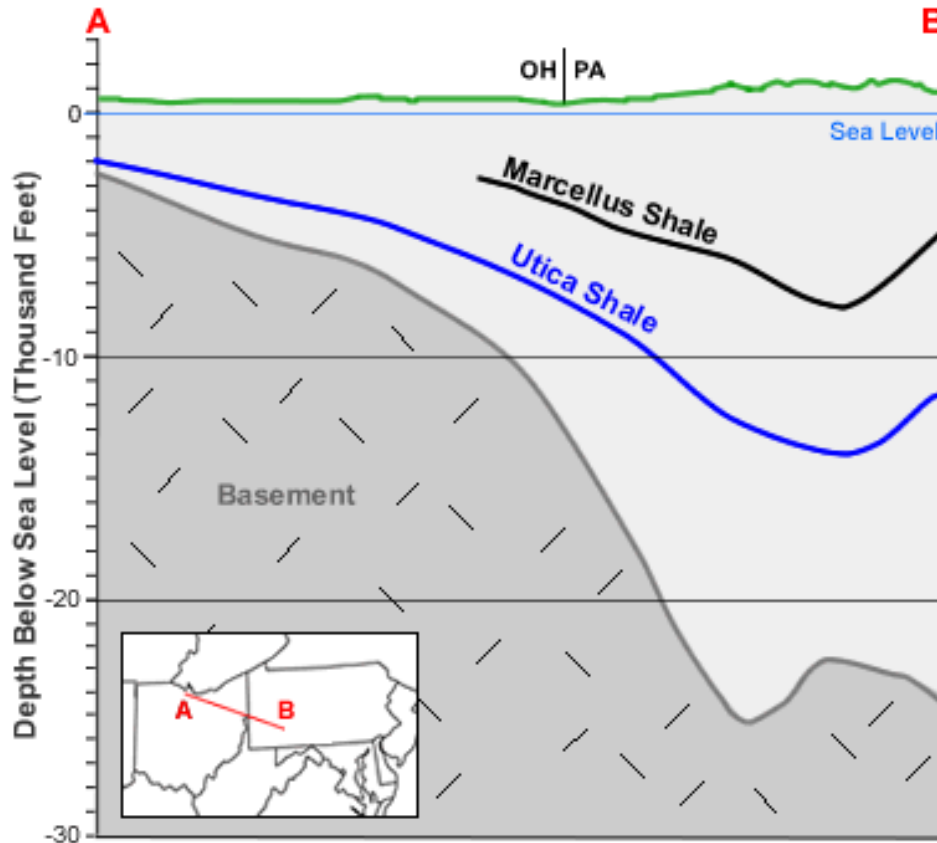
Office of Workforce Development
Ohio Department of Job & Family Services

Natural Gas “Boom”

- Ohio shale gas worth billions of dollars and 200,000 jobs
 - *Cleveland Plain Dealer*, Sept. 21, 2011
- Boom Town: What Brings Thousands of Jobs to One Ohio Town?
 - *ABC News*, Oct. 18, 2011
- Vast Resource Potential Has Operators Gearing Up to Test Utica Shale Formation
 - *The American Oil & Gas Reporter*, November 2011

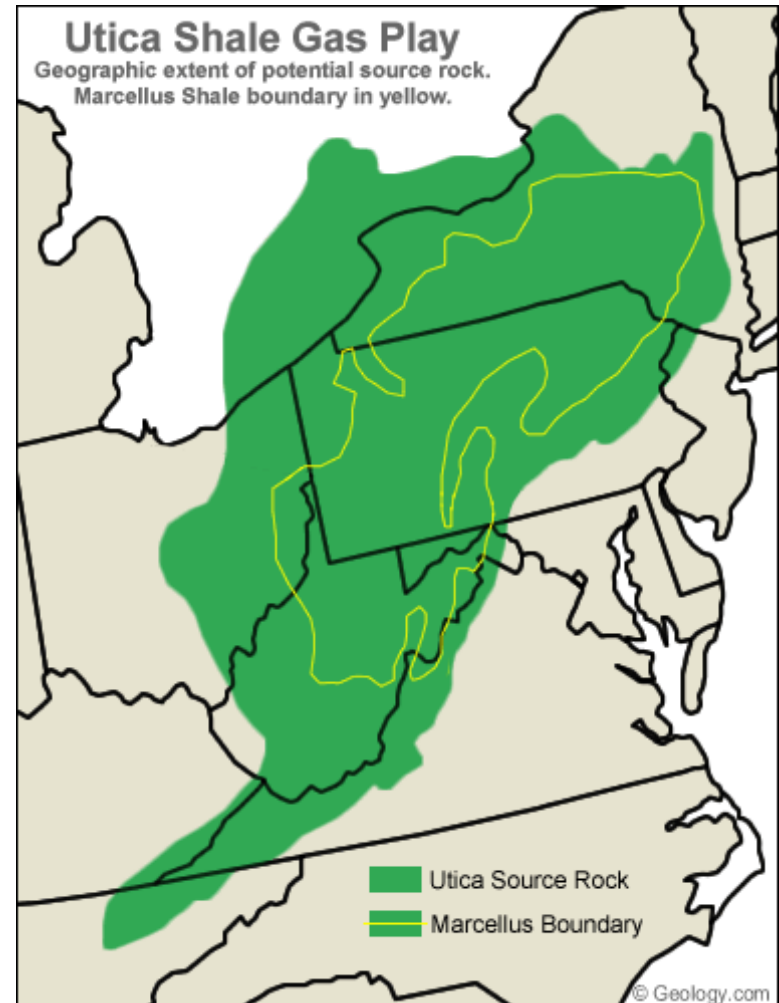
Shale in Ohio

Generalized Cross Section
Utica and Marcellus Shale
Ohio to Pennsylvania



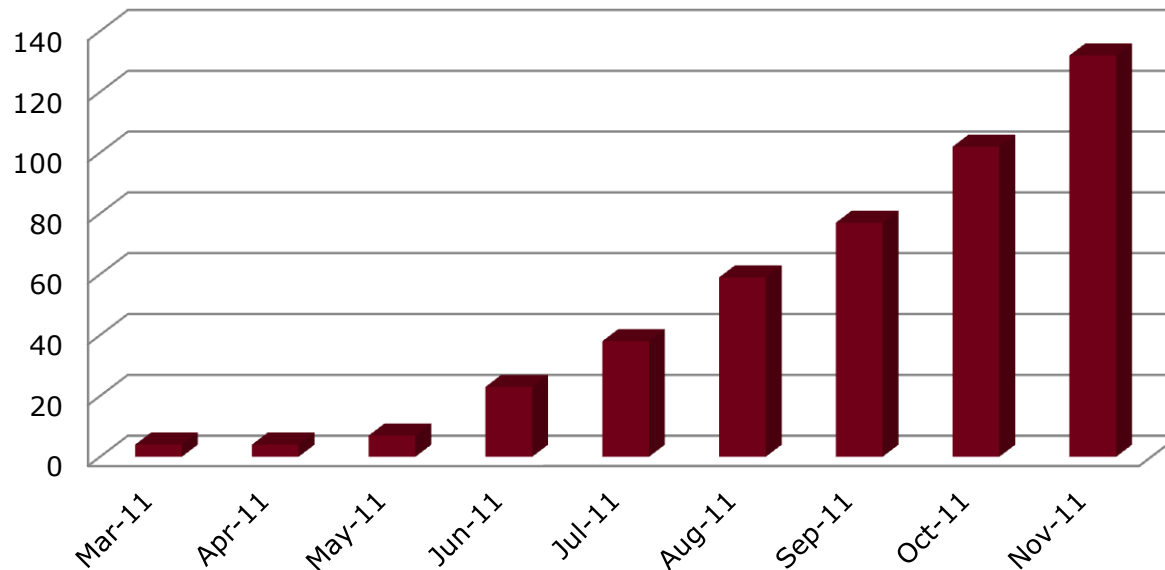
Shale in Ohio

- Utica shale covers nearly half of the state, while Marcellus shale covers Ohio's far eastern counties



Utica Shale Wells

**Ohio's Utica Shale:
Cumulative Drilling Permits Issued**




Updated for week of Nov. 20, 2011

Beyond Shale

- Increased occupational demand in the crude oil and natural gas industry as a whole
 - 65,000 active wells in Ohio
 - Average age of the existing workforce is 55
 - Majority of occupations are the same with the same training requirements

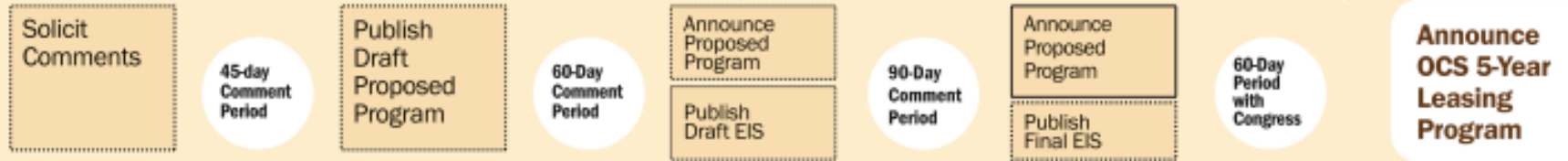
Workforce Development

- Develop a comprehensive workforce training and placement strategy in support of high priority occupations in the crude oil and natural gas drilling and production industry
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Leasing, Exploration and Development Process

Pre-Lease

Develop OCS 5-Year Program (18 to 24 months)



Planning for Specific Sale (1 year)

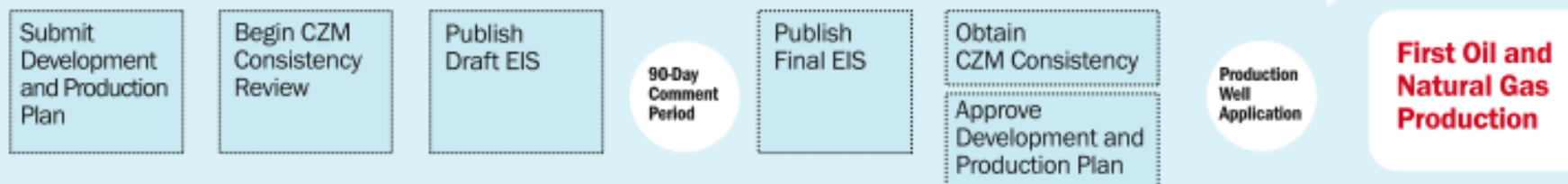


Post Lease

Exploration Plan Approval (18 to 24 months)



Development & Production Plan Approval (3 to 5 years)



Shale Occupations

- 43 direct occupations in three phases
 - Pre-drilling
 - Drilling
 - Post-drilling
- In Ohio, wages for occupations in all three phases vary
 - Low-skilled jobs like roustabouts average \$13/hr
 - Highly-skilled petroleum engineers average \$46/hr

Pre-Drilling

Shale Industry Occupations, Wages, and Education Requirements

#	Occupation	Phase	Ohio Median Wages (May, 2009)	# of Resumes in OMJ April 2011	Post Secondary/ Higher Education	Secondary/ Career and Technical Centers	Work Experience/ Certification
Pre-Drilling Phase	Civil Engineer	PreDrilling	\$ 35.13	10	x		
	Civil Engineering Tech	PreDrilling	\$ 22.40		x		
	Computer tech	PreDrilling	\$ 17.67	52	x		
	Environmental Engineers	PreDrilling	\$ 40.35	75	x		
	Environmental Technicians	PreDrilling	\$ 20.34	56	x		x
	Geologists	PreDrilling	\$ 30.50	42	x		
	Heavy Equipment Operators	Pre-Drilling	\$ 14.83	48	x	x	x
	Land Clearing	PreDrilling	\$ 16.75	2	x	x	
	Landmen	PreDrilling	\$ 39.31	5			x
	Lawyers	PreDrilling	\$ 50.73	8	x		
	Leasing Agents (Right-of-Way)	PreDrilling	\$ 39.31	12			x
	Legal Professionals	PreDrilling	\$ 21.25	25	x		
	Project Management	PreDrilling	\$ 47.89	50	x		x
	Surveyors	PreDrilling	\$ 28.03	76	x		x

Drilling

Shale Industry Occupations, Wages, and Education Requirements

#	Occupation	Phase	Ohio Median Wages (May, 2009)	# of Resumes in OMJ April 2011	Post Secondary/ Higher Education	Secondary/ Career and Technical Centers	Work Experience/ Certification
Drilling Phase	Casing Crews	Drilling	\$ 16.70	78			x
	Construction Managers	Drilling	\$ 47.89	58	x		x
	Diesel Technicians	Drilling	\$ 18.89	79	x		x
	Electricians	Drilling	\$ 23.85	63	x		x
	Frac Crews	Drilling	\$ 15.48	1		x	
	General Labor	Drilling	\$ 18.50	95		x	
	Landscapers	Drilling & Postdrilling	\$ 11.20	56		x	x
	Maintenance Technicians	Drilling	\$ 17.38	63		x	x
	Mudmen	Drilling	\$ 18.50	1	x	x	x
	Pipe Fitters	Drilling	\$ 23.51	108	x		x
	Pumpers	Drilling	\$ 16.70	53	x	x	x
	Purchasing Agents	Drilling	\$ 27.50	30	x		x
	Roughnecks	Drilling	\$ 13.46	5		x	x
	Roustabouts	Drilling	\$ 12.35	37			x
	Supervisors	Drilling	\$ 47.89	34	x		x
	Tool Pushers	Drilling	\$ 28.86	14			x
	Weld Inspectors	Drilling	\$ 25.79	64	x		x
	Welders	Drilling	\$ 16.91	326	x		x
	Well Logging	Drilling	\$ 16.70	51		x	x
	Well Technicians	Drilling	\$ 16.70	1	x		x
Wireline	Drilling	\$ 16.70	20		x	x	

Drilling / Rig Crew Occupations

- **Toolpusher**: location supervisor
- **Driller**: supervisor of rig crew
- **Derrickman**: in charge of the mud-processing area during periods of circulation
- **Motorman**: responsible for maintenance of engines
- **Roughneck**: low-ranking member of crew who performs semi-skilled and unskilled manual labor
- **Roustabout**: any unskilled manual laborer

Post-Drilling

Shale Industry Occupations, Wages, and Education Requirements

#	Occupation	Phase	Ohio Median Wages (May, 2009)	# of Resumes in OMJ April 2011	Post Secondary/ Higher Education	Secondary/ Career and Technical Centers	Work Experience/ Certification
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Post-Drilling Phase	Environmental Inspection	Postdrilling	\$ 23.46	46	x		x
	Pumpers/ Operators	Postdrilling	\$ 22.04	34	x		x
	Site Management	Postdrilling	\$ 28.86	59	x		x

Occupations in All Phases

Shale Industry Occupations, Wages, and Education Requirements							
#	Occupation	Phase	Ohio Median Wages (May, 2009)	# of Resumes in OMJ April 2011	Post Secondary/ Higher Education	Secondary/ Career and Technical Centers	Work Experience/ Certification
All Phases	CDL Drivers	All	\$ 18.84	253			x
	Heavy Equipment Maint Tech	All	\$ 21.62	33	x		x
	Office Management	All	\$ 23.09	72	x		x
	Office Operation Support	All	\$ 13.02	13	x	x	x
	Petroleum Engineers	All	\$ 46.31	43	x		

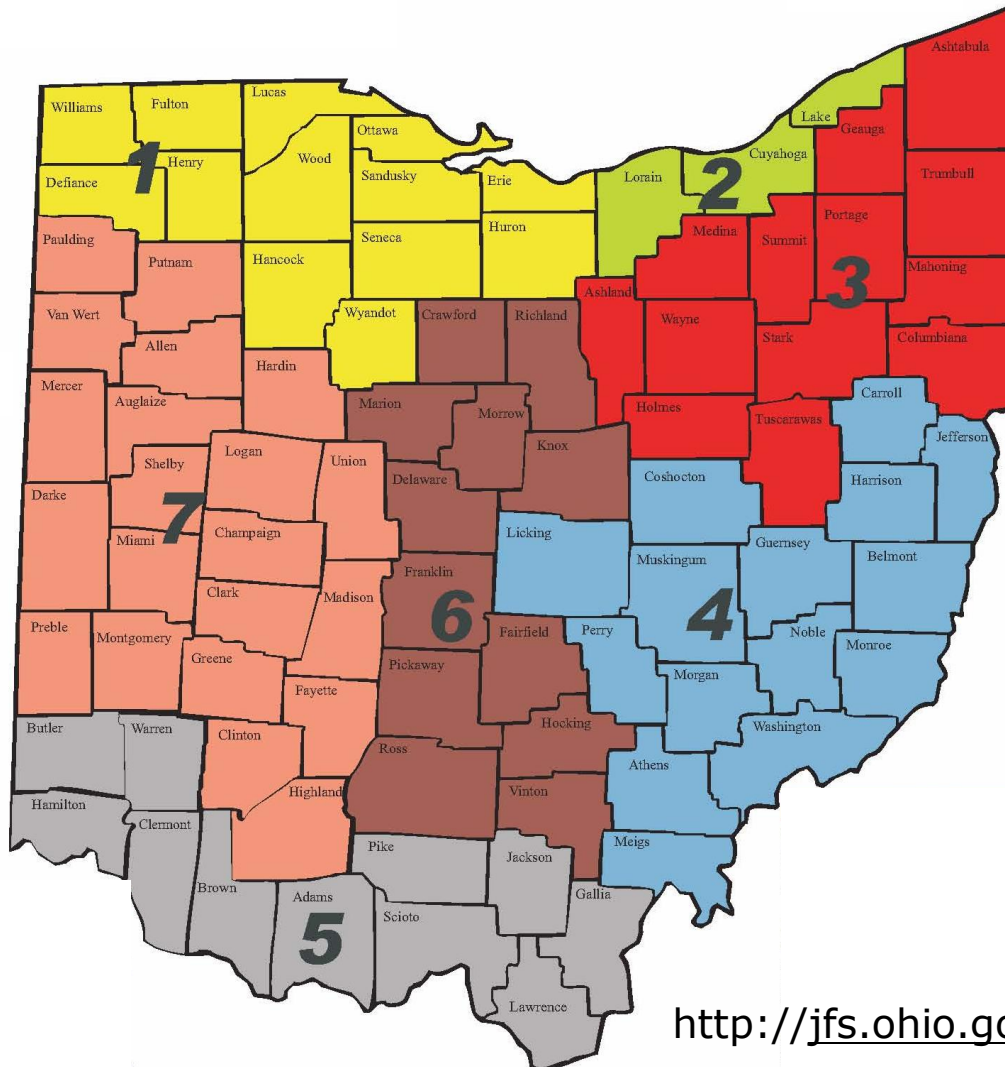
Training Needs

- Approximately, 75% of the direct workforce is comprised of occupations that require little formal post-secondary education
- Occupations rely heavily on previous, hands-on work experience and on-the-job training (OJT)

On-the-Job Training

- \$3.8 million National Emergency Grant to fund on-the-job training for prolonged unemployed dislocated workers
 - Laid off 158 days or longer
 - Not eligible for trade TAA
 - Reimbursement of up to 50% of trainee wages during training
 - Reimbursement of up to \$8,000 per trainee
 - Training can be up to 6 months in length

Regional Workforce Specialists



Regional Workforce Specialists' primary function is to work with Ohio employers to place dislocated workers in on-the-job training

One-Stop Centers

- ❑ Ohio has 90 local One-Stop offices
- ❑ Designed to assist job seekers, employers and youth with a wide range of workforce-related services
- ❑ <http://jfs.ohio.gov/owd/wia/wiamap.stm>

OhioMeansJobs.com

- Ohio's premier gateway for connecting employers with job seekers
- **OOGI** – Code for Ohio Oil and Gas Industry
 - Roughneck OOGI
 - Welder OOGI


Additional Workforce Strategies

- Implement enhancements to the WIA case management system (SCOTI)
 - Identify participants who are interested in the oil and gas industry
 - Identify participants enrolled and receiving services related to the oil and gas industry
- Secure funding to support training for occupations in the oil and gas industry

Meeting the Occupational Demand

- Statewide collaborative effort
 - Local Workforce Investment Areas and One-Stop Centers
 - Ohio Board of Regents
 - Post-secondary education institutions
 - Ohio Oil and Gas Association
 - Ohio Oil and Gas Energy Education Program
 - Ohio Department of Natural Resources
 - Ohio Environmental Protection Agency

Questions?



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