

# BOEM Outer Continental Shelf Overview

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# The Outer Continental Shelf Lands Act

- Under the Outer Continental Shelf Lands Act (OCSLA), the Department of the Interior (DOI), Bureau of Ocean Energy Management (BOEM) and the Bureau of Safety and Environmental Enforcement (BSEE) have authority to regulate the development of mineral resources and certain other energy and marine related uses on the OCS.



# The Outer Continental Shelf

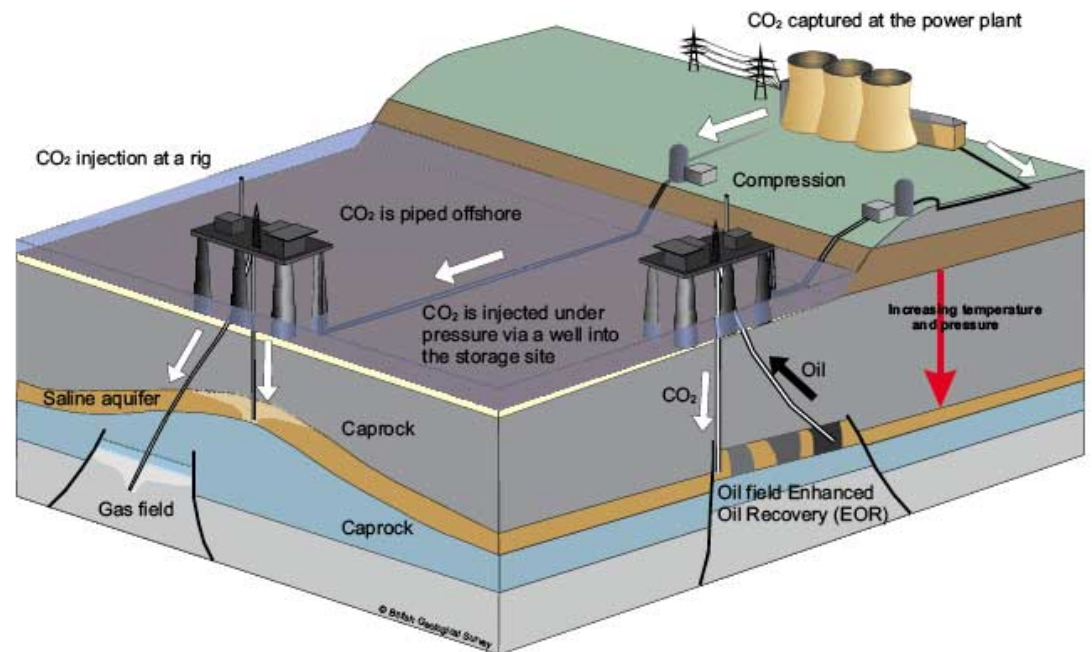
- The OCS includes an area consisting of 1.7 billion acres of submerged lands, subsoil, and seabed, lying between the seaward extent of the States' submerged lands and the seaward extent of Federal jurisdiction.
- For most areas, Federal jurisdiction begins 3 nautical miles from the shore baseline. However, for the State of Texas and the Gulf coast of Florida, Federal jurisdiction begins 9 nautical miles from the baseline and for the State of Louisiana Federal jurisdiction begins 3 imperial nautical miles from the baseline.



**OCS Planning Areas**

# OCSLA and CO<sub>2</sub>

- DOI has statutory authority under the OCSLA to permit the use and sequestration of CO<sub>2</sub> for EOR activities on existing oil and gas leases on the OCS.
- DOI has the statutory authority to permit the sequestration of CO<sub>2</sub> for certain types of projects.



<http://www.scotland.gov.uk/publications/2009/04/28114540/4>

# OCSLA and CO<sub>2</sub>

- Under Section 8(p)(1)(C) of the OCSLA (43 U.S.C. 1337)(p)(1)(C)), BOEM may issue leases, easements, and rights-of-way for activities that:
  - “produce or support production, transportation, or transmission of energy from sources other than oil and gas”
- In certain circumstances, Section 8(p)(1)(C) allows BOEM to issue leases for sub-seabed CO<sub>2</sub> sequestration...
  - Such as for the purpose of sub-seabed storage of CO<sub>2</sub> generated as a by-product of electricity production from an onshore coal-fired power plant.
- Under Section 8(p)(1)(C), BOEM would not be able to issue OCS leases for the purpose of sequestering CO<sub>2</sub> emitted from refineries, natural gas power plants, and non-energy industries (e.g. steel or cement).



# Offshore CO<sub>2</sub> Storage: Pros

- Capacity Potential – DOE assessments
- Distance from populated areas
- Very few to no USDWs – salinity is generally over the USEPA limit
- Reduced risk to USDWs
- Existing infrastructure – platforms, wells
- Plume and pressure management – relief wells
- Water column pressure
- G&G surveying for monitoring
- Extensive similar experience under O&G program (site characterization, drilling, environmental concerns, G&G surveying, etc.)
- For EOR statutory authority and regulatory framework



# Offshore CO<sub>2</sub> Storage: Challenges

- For pure geologic storage, only statutory authority; limited existing regulatory framework
- Statutory authority complex
- Long-term liability remains with operator
- Offshore is expensive
- Limited monitoring data/experience for sub-seabed CO<sub>2</sub> storage



# OCS Legal Requirements

- Outer Continental Shelf Lands Act (OSCLA) of 1953 with amendments in 2005
- National Environmental Policy Act (NEPA) of 1969
- Marine Mammal Protection Act (MMPA) of 1972
- Endangered Species Act (ESA) of 1973
- Clean Air Act (CAA) of 1970, as amended 2012
- Clean Water Act (CWA) of 1972, as amended in 1990
- Oil Pollution Act (OPA) of 1990
- Resource Conservation and Recovery Act (RCRA) of 1976, as amended in 1996
- Marine Plastic Pollution Research and Control Act (MPPRCA) of 1987
- Magnuson Fishery Conservation and Management Act (MFCMA) of 1976
- National Historic Preservation Act (NHPA) of 1966
- Coastal Zone Management Act (CZMA) of 1972, as amended in 1996
- Executive Order 11990 (1977), Protection of Wetland
- Executive Order 12898 (1998), Environmental Justice
- Code of Federal Regulations (CFR), 30 CFR Chapter II (BSEE) and Chapter V (BOEM)
- Department of the Interior Manual, Part 516

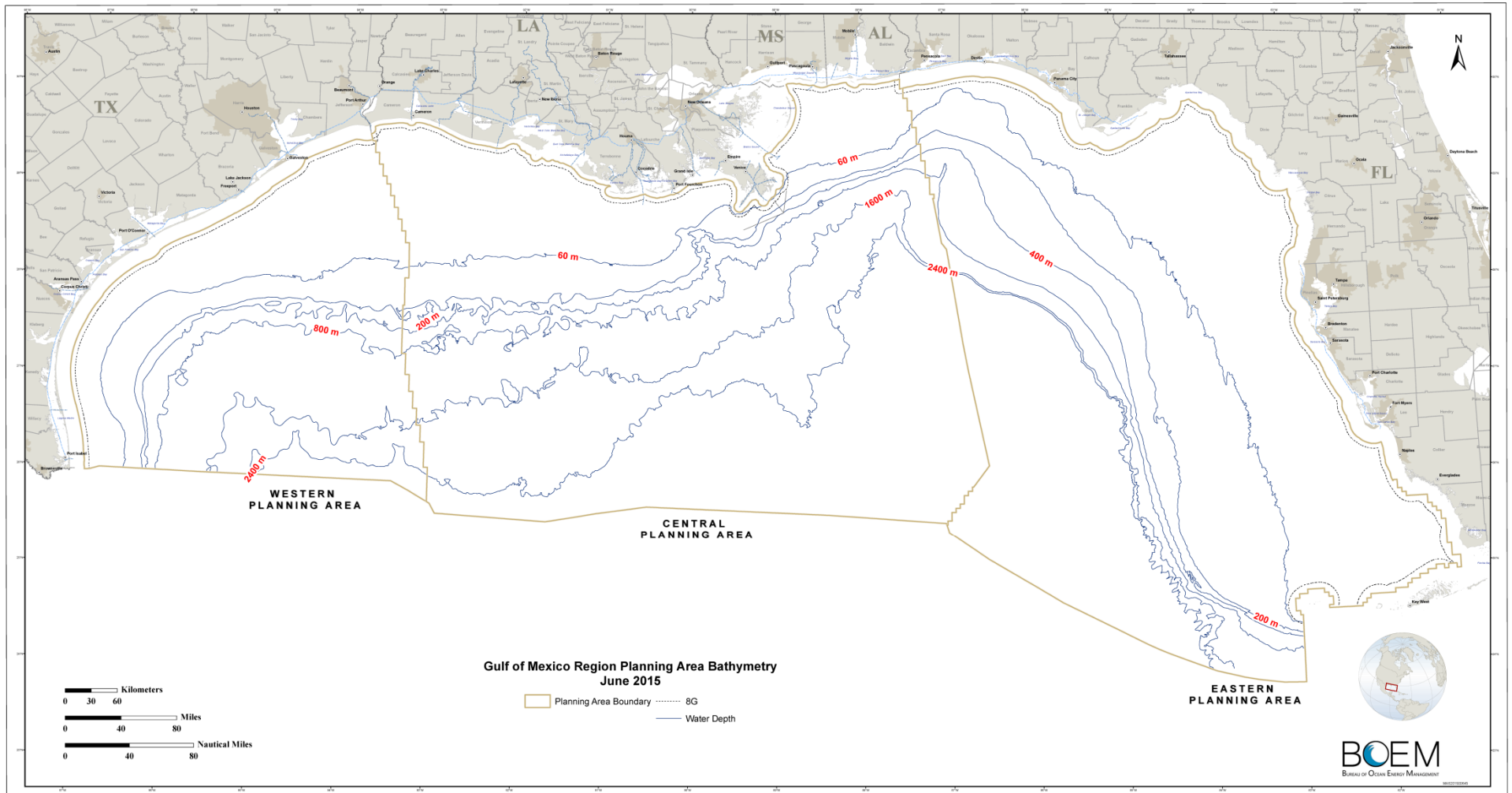




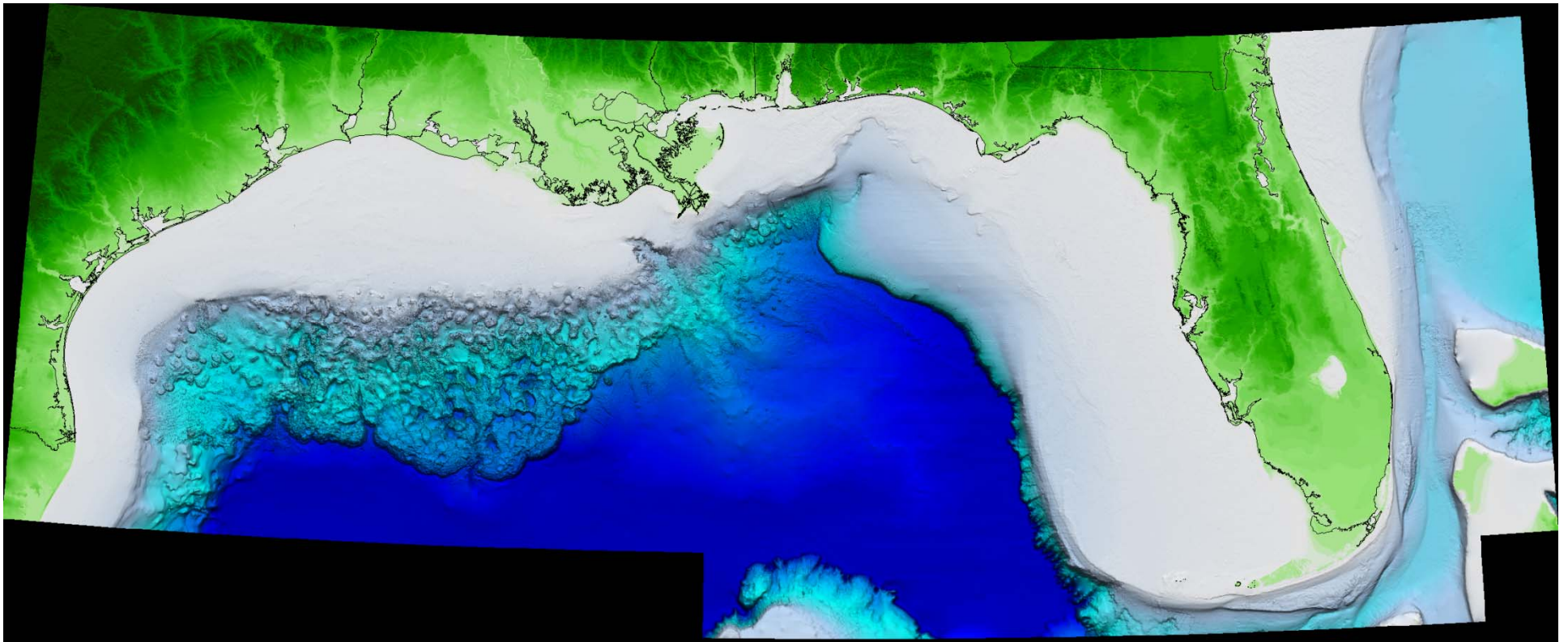
# The Offshore Environment

- **Critical Aspects of the OCS Offshore Environment:**
  - Physical Attributes:
    - Water Depth, Environmental Resources, Geology, etc.
  - Boundaries:
    - State vs. Federal, EEZ, Planning Areas, Lease Blocks, etc.
  - Legal Requirements:
    - Statutes, BOEM and BSEE Regulations, State, etc.
  - Infrastructure
  - OCS Pre- and Post-Lease Processes and Environmental Review
  - Other Uses
  - Cost

# GOM Bathymetry



# GOM Bathymetry



# OCS Active O&G Leases

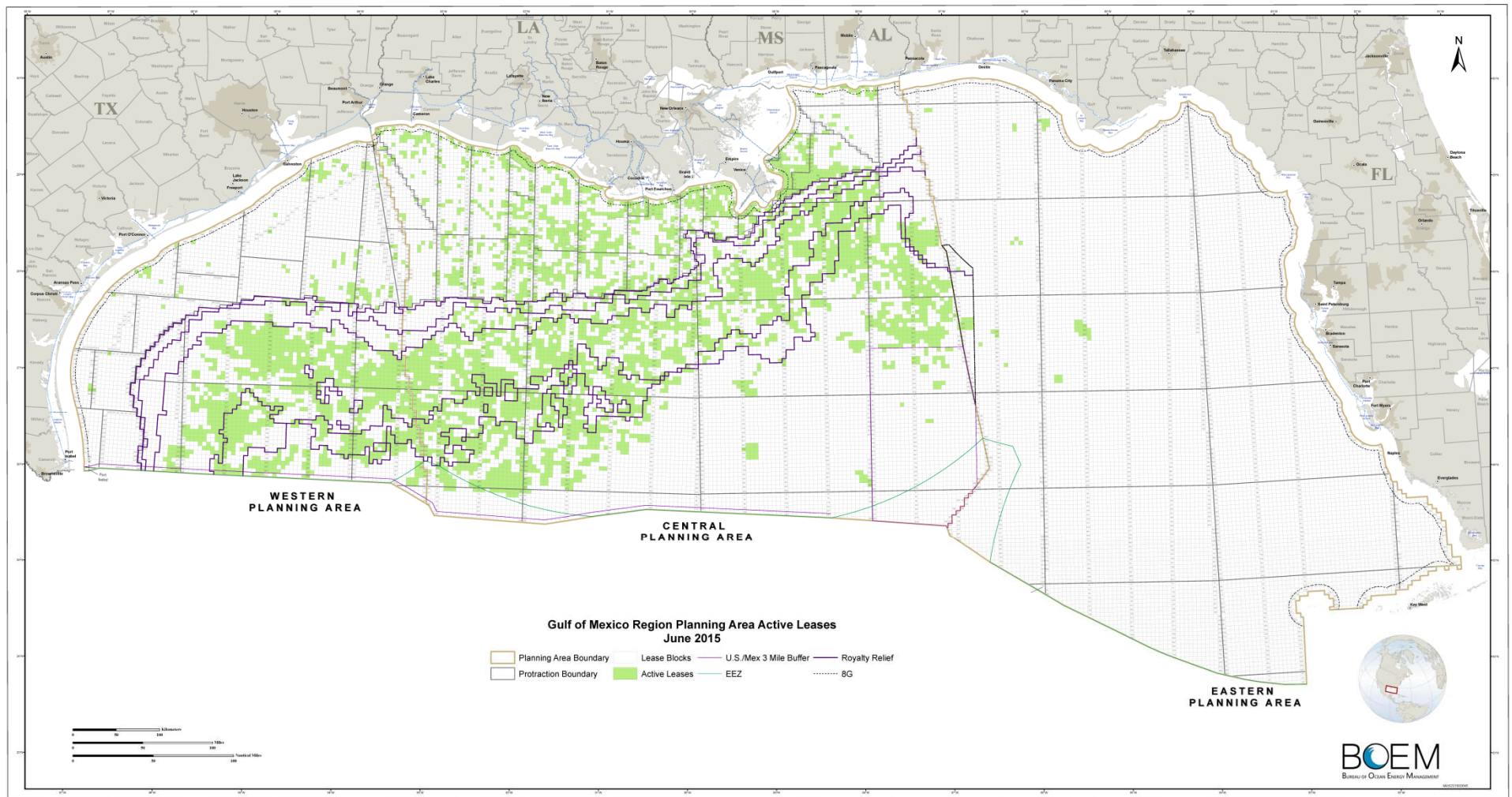
## Gulf of Mexico Active Leases by Water Depth (As of 07-29-2015)

Water Depth in Meters	Active Leases
0 to 200	1,327
201 to 400	87
401 to 800	194
801 to 1000	323
1000 and Above	3,018

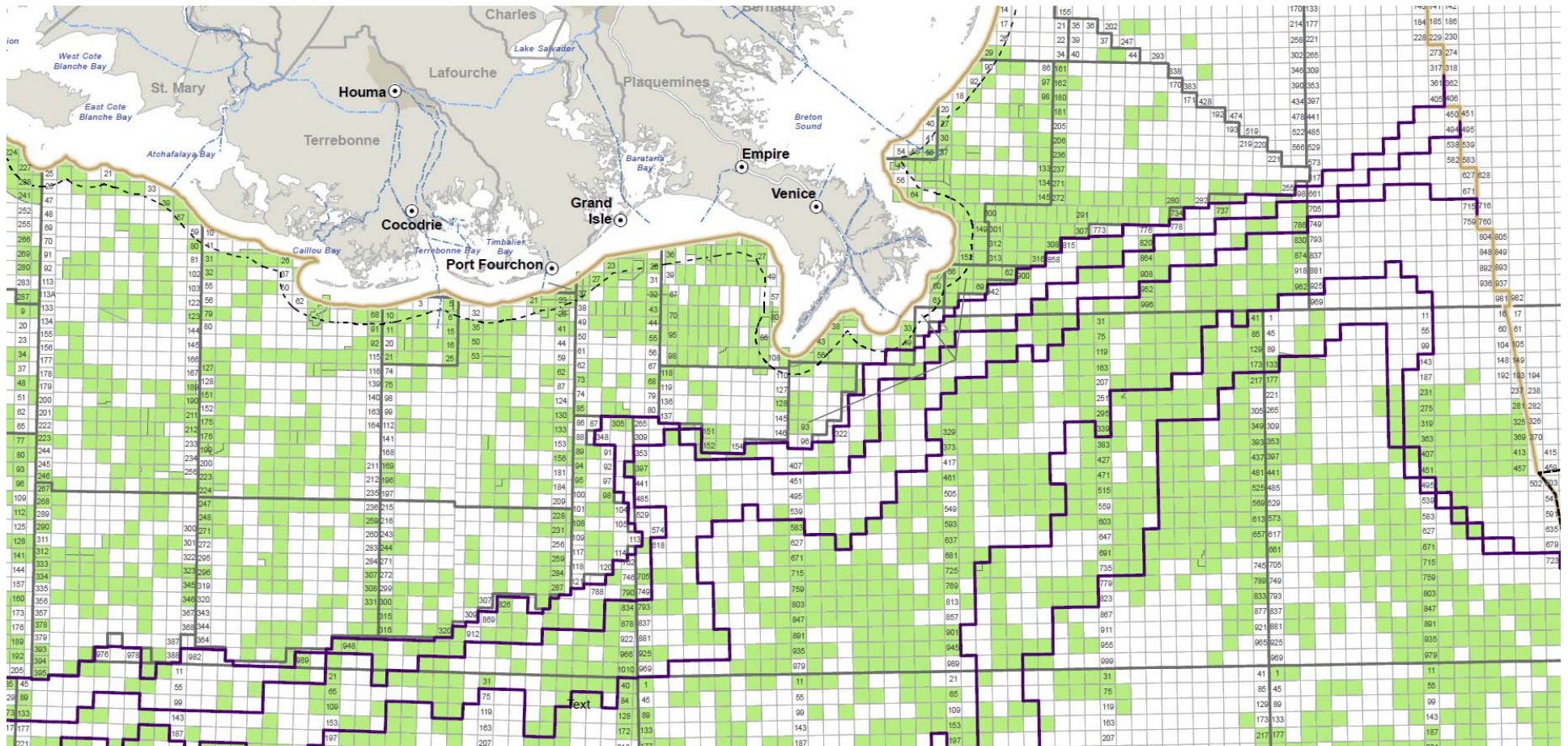
## Active Leases in Other OCS Regions

Pacific	43
Alaska	607
Atlantic	0

# GOM Planning Areas and Active Leases



# GOM Central Planning Area - Zoom



# Types of Offshore Drilling Rigs

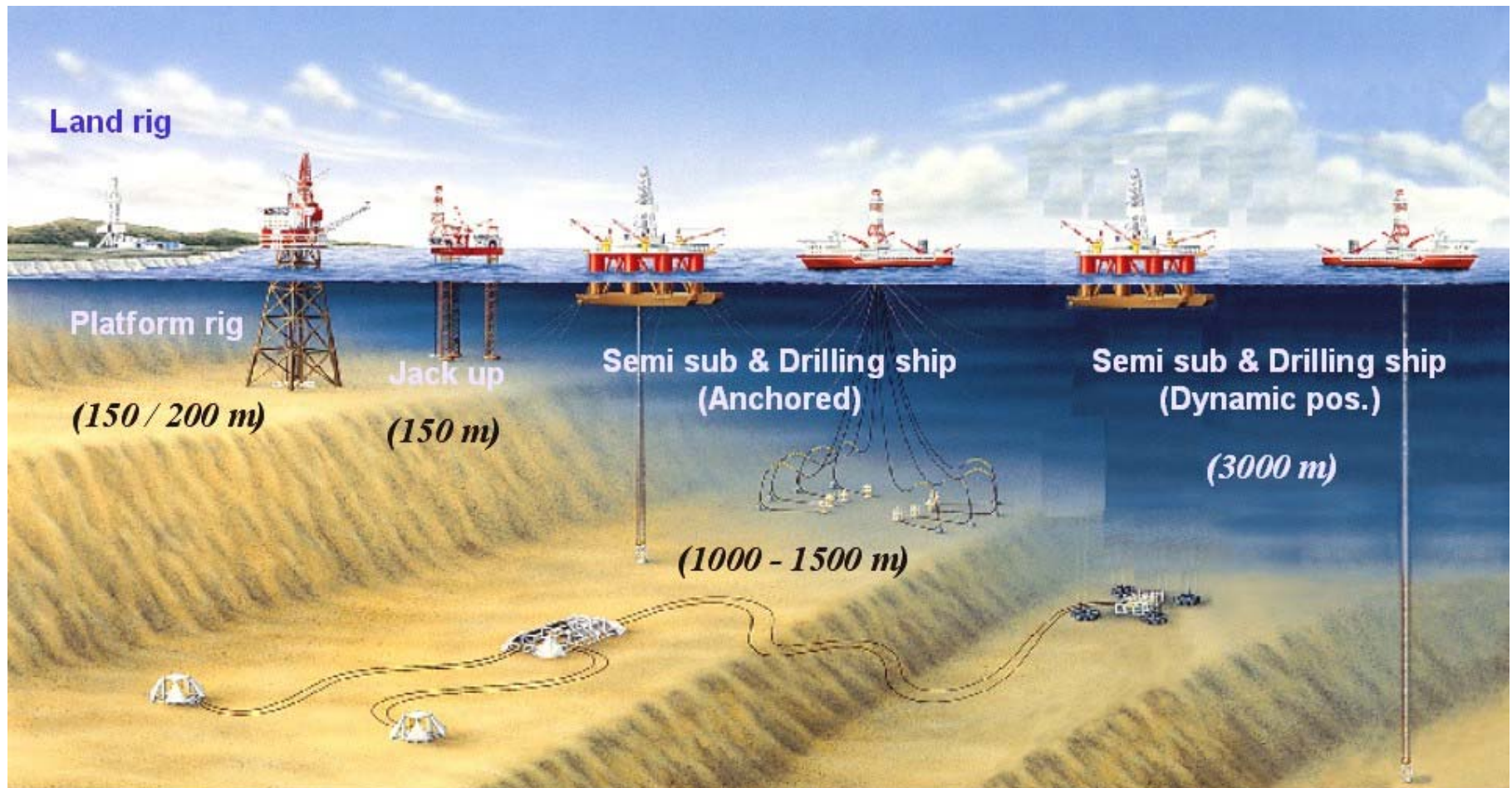


Photo Source: <http://magnific.biz/?p=3084>

# OCS Active O&G Drilling Rigs

## Gulf of Mexico Active Drilling Rigs (As of 07-29-2015)

Rig Type	Number	Water Depth (Ft)
Barge-Mounted	1	<26
Jack-Up	10	All <250
Platform	17	<1000 = 6 1,000-5,000 = 9 >5,000 = 2
Semisubmersible	11	1,000-5,000 = 4 >5,000 = 7
Drill Ship	33	<1000 = 3 1,000-5,000 = 15 >5,000 = 15
<b>TOTAL</b>	<b>72</b>	<b>&lt;1000 = 20</b> <b>1,000-5,000 = 28</b> <b>&gt;5,000 = 24</b>

## Drilling Rigs in Other OCS Regions

Pacific	1
Alaska	3
Atlantic	0

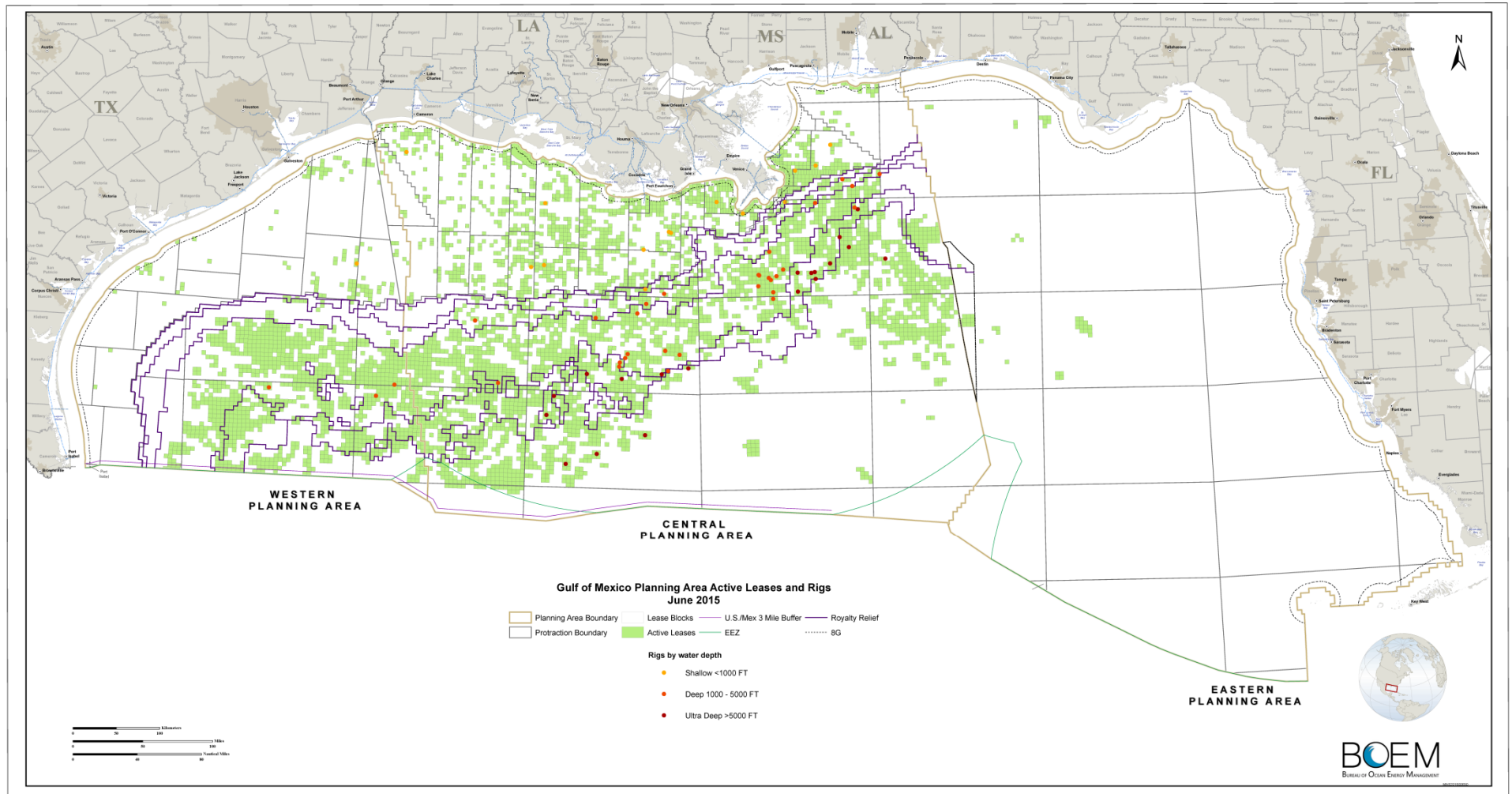
Active means operations are currently occurring; this includes drilling, workovers, or waiting on location.

[http://www.data.bsee.gov/homepg/data\\_center/leasing/WaterDepth/WaterDepth.asp](http://www.data.bsee.gov/homepg/data_center/leasing/WaterDepth/WaterDepth.asp)

[http://www.rigzone.com/data/rig\\_report.asp?rpt=reg](http://www.rigzone.com/data/rig_report.asp?rpt=reg)

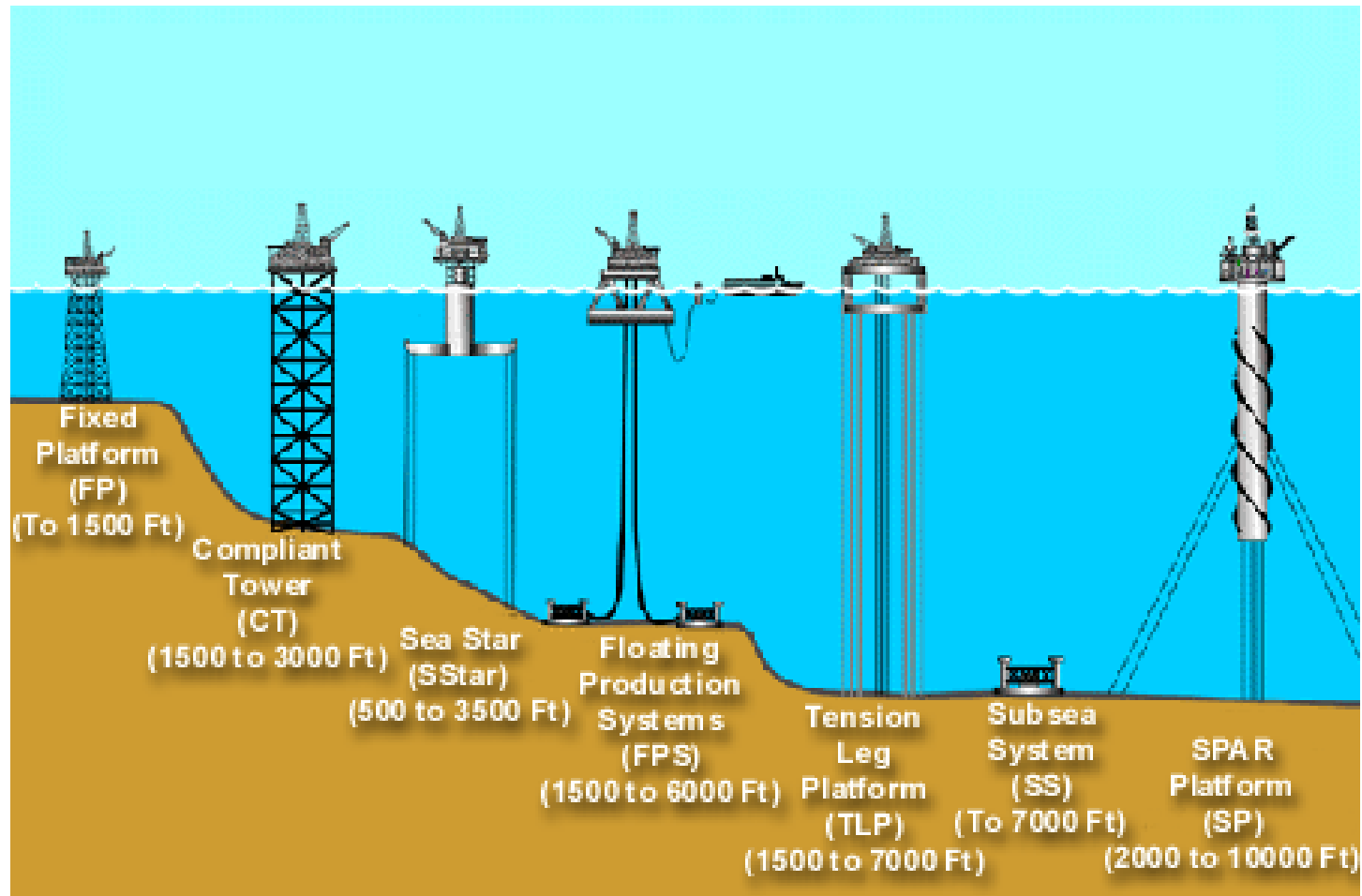


# GOM Drilling Rigs



# Types of OCS Platforms

- Platforms are installed for the production of oil and gas.

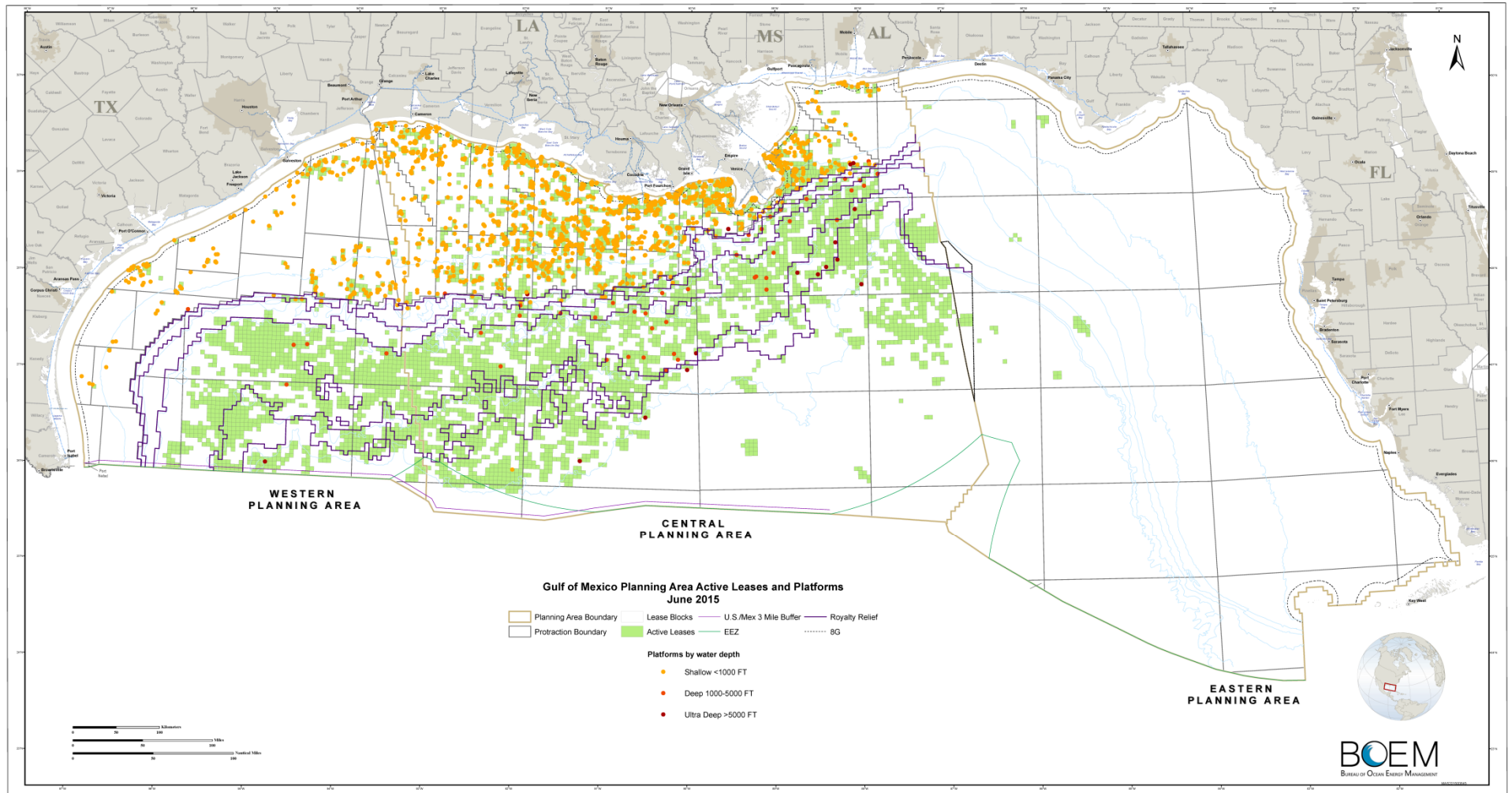


# OCS O&G Platforms

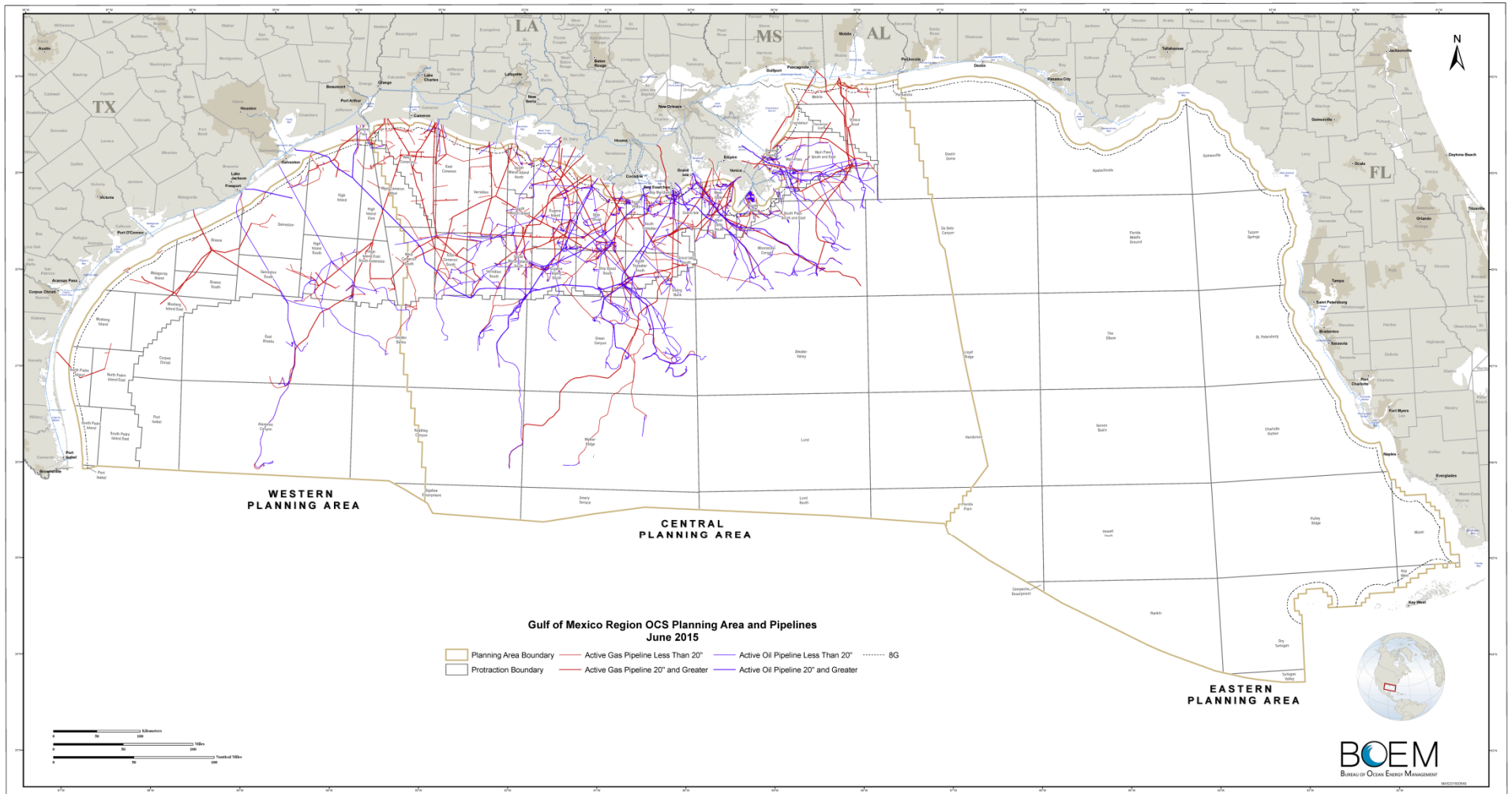
Gulf of Mexico Platforms by Water Depth (As of 07-29-2015)	
Water Depth in Meters	Active Platforms
0 to 200	2,308
201 to 400	20
401 to 800	10
801 to 1000	9
1000 and Above	28

Platforms in Other OCS Regions	
Pacific	23
Alaska	1
Atlantic	0

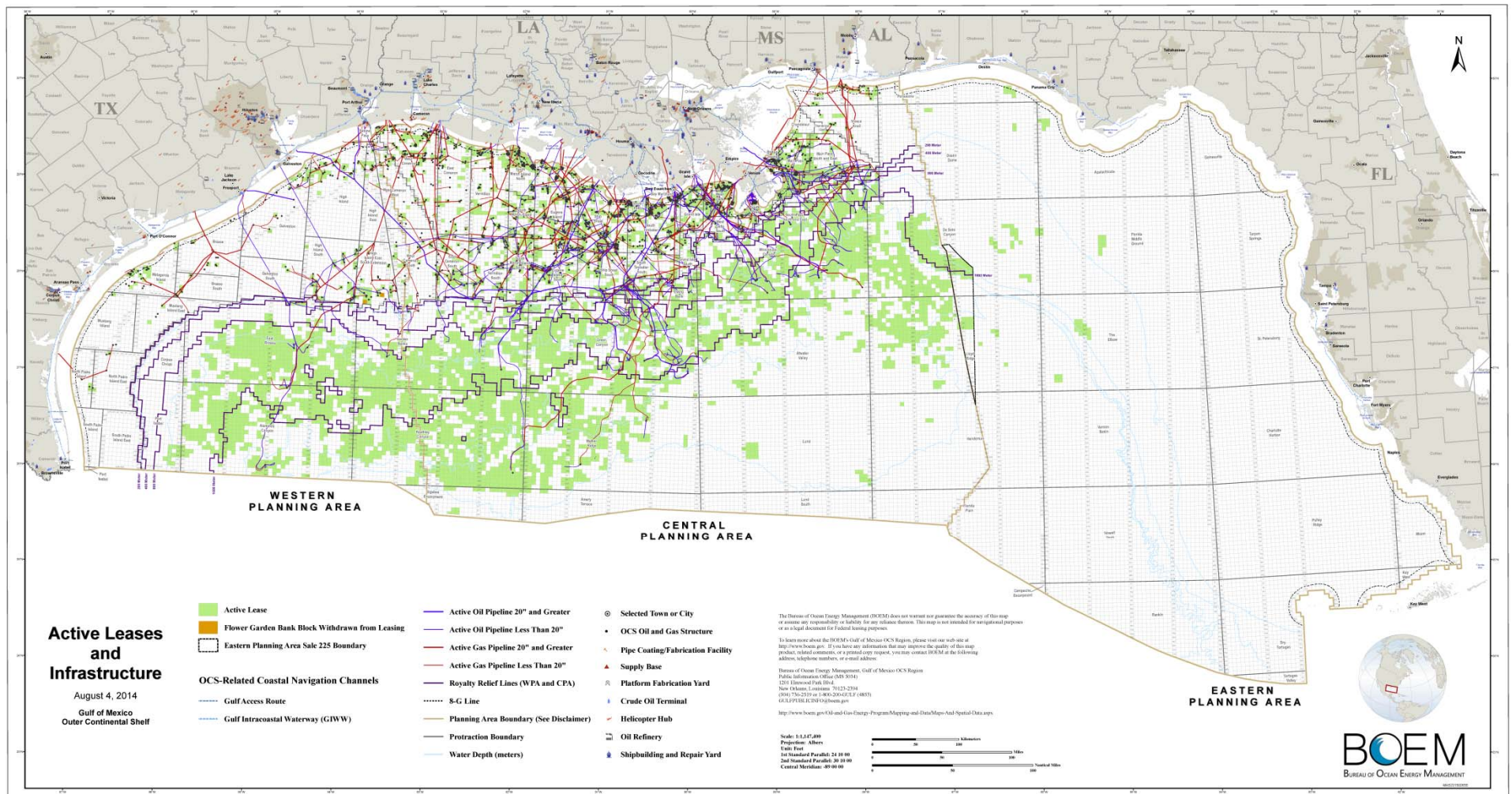
# GOM OCS Platforms



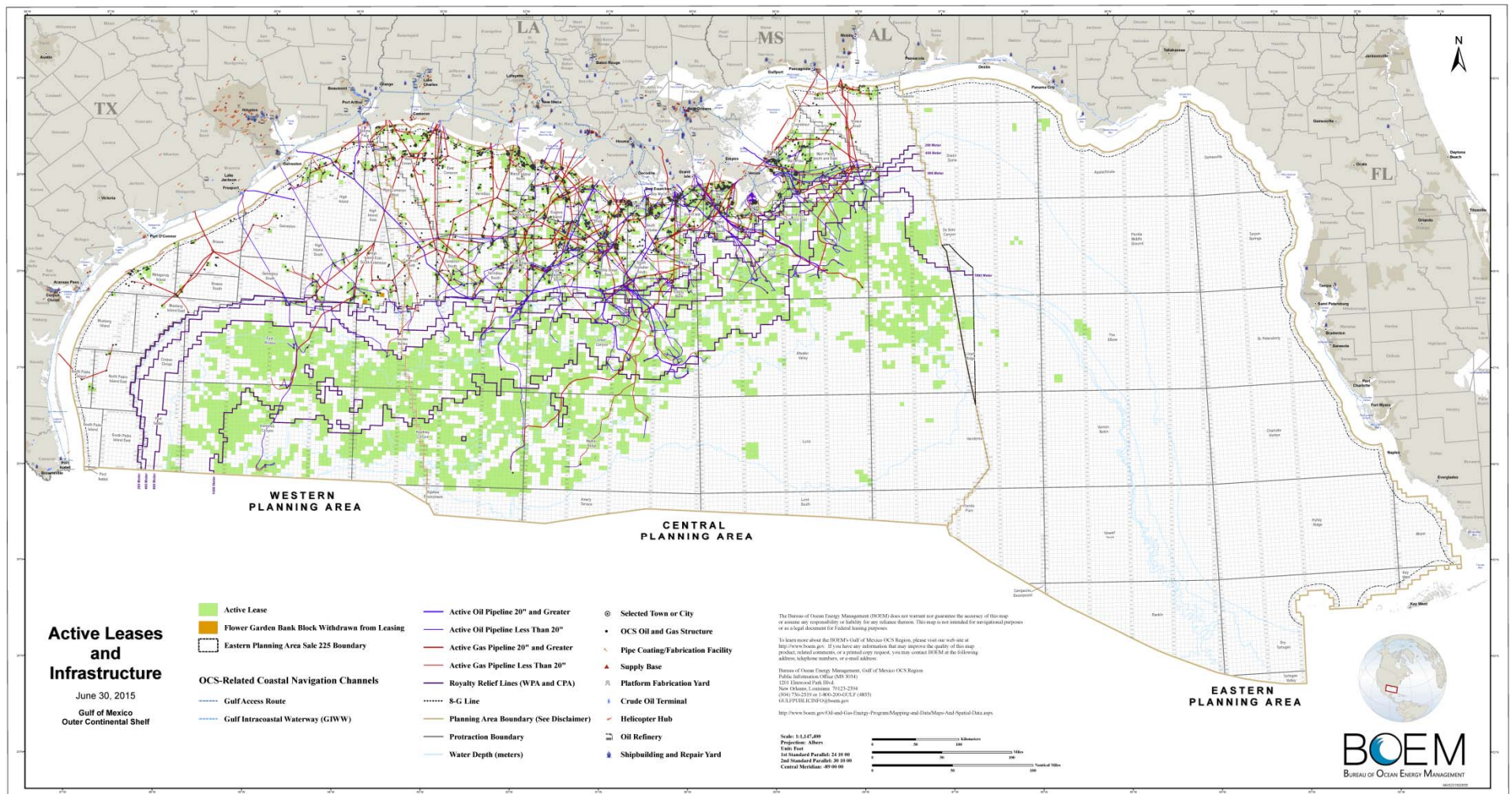
# GOM O&G Pipelines



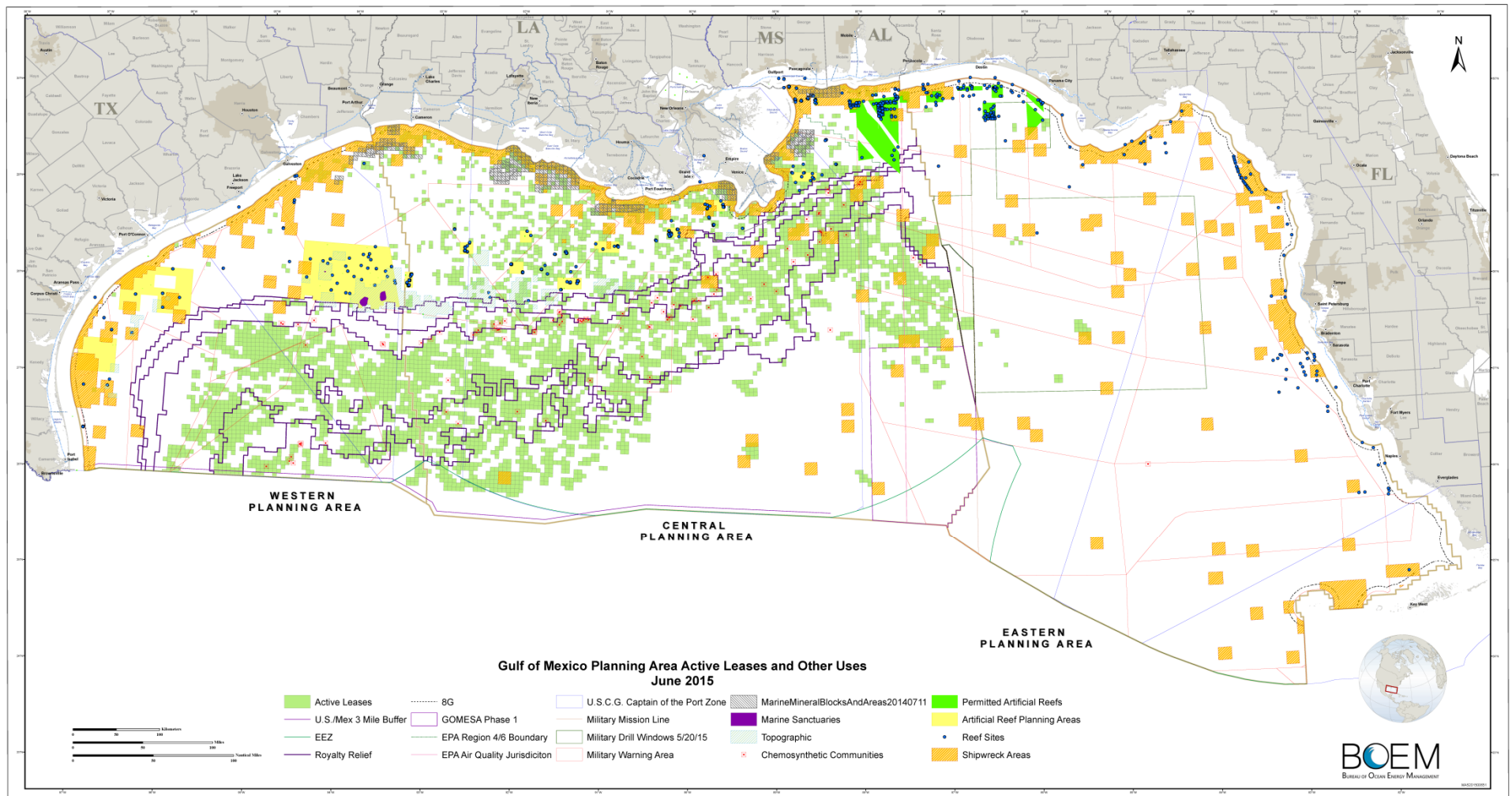
# The Offshore Environment - 08/14



# The Offshore Environment - 06/15



# GOM – Other Uses





# Questions?

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