

SODA: Stop Offshore Drilling in the Atlantic



FORUM Offshore
Drilling in N.C.

July 31



Infrastructure of the Oil & Gas Industry

Peg Howell, SODA Volunteer

My first rig

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“Company Man”



Penrod 60

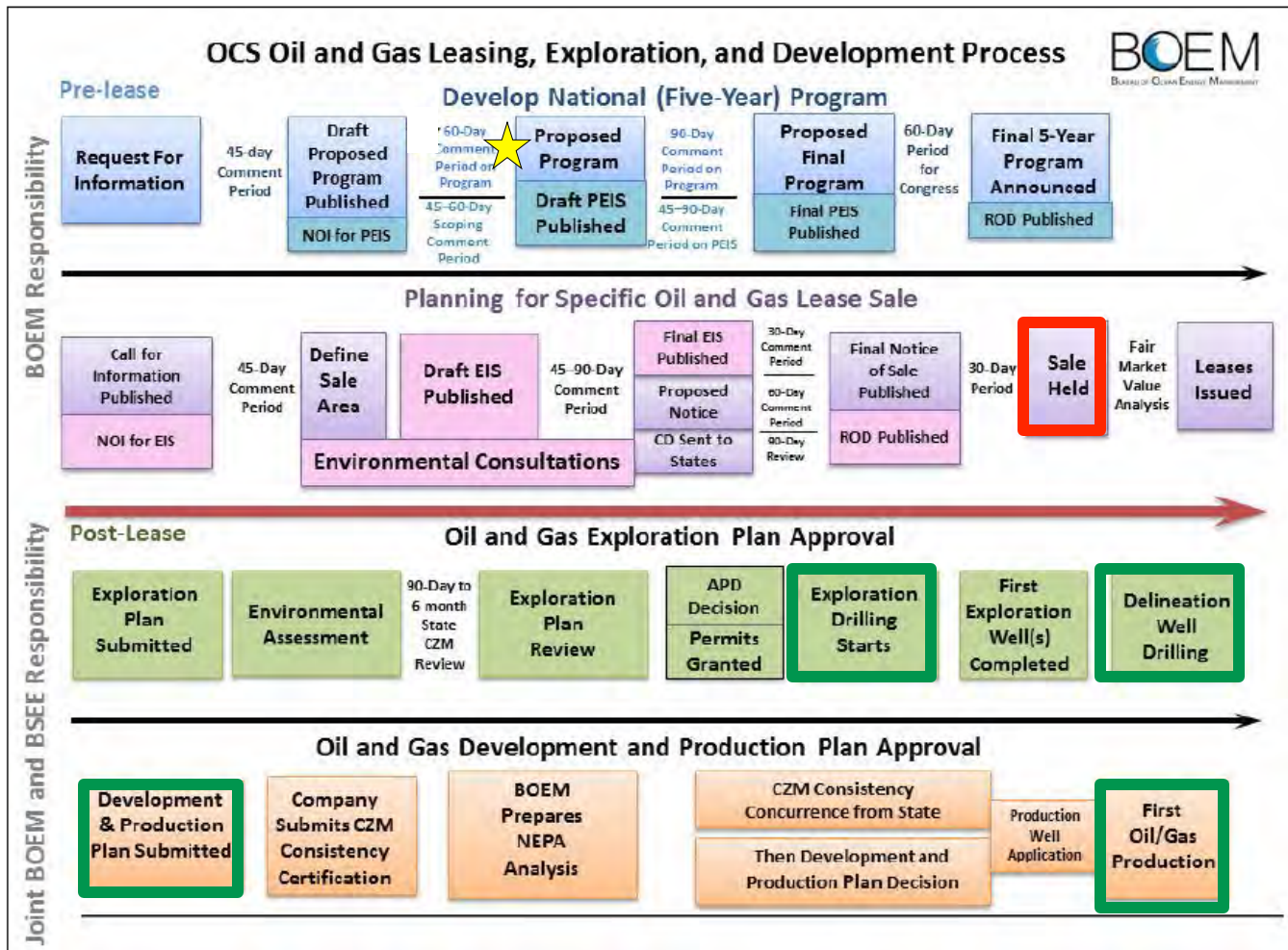
Objectives

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- ❑ Provide information about the on- and off-shore infrastructure that supports offshore drilling during:
 - Exploration
 - Delineation
 - Development
 - Production
- ❑ Examples of infrastructure

OCS Oil and Gas Leasing, Exploration and Development Process

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Key: APD=Application for Permit to Drill; CD=Consistency Determination; CZM=Coastal Zone Management; EIS=environmental impact statement; NEPA=National Environmental Policy Act; NOI=Notice of Intent; PEIS=programmatic environmental impact statement; ROD=Record of Decision.

Possible Mid & South Atlantic Timeline

2015-2016

(3-5 years)

~2017-2022

Atlantic sale in 2021

(5-10 years)

~2021-2028

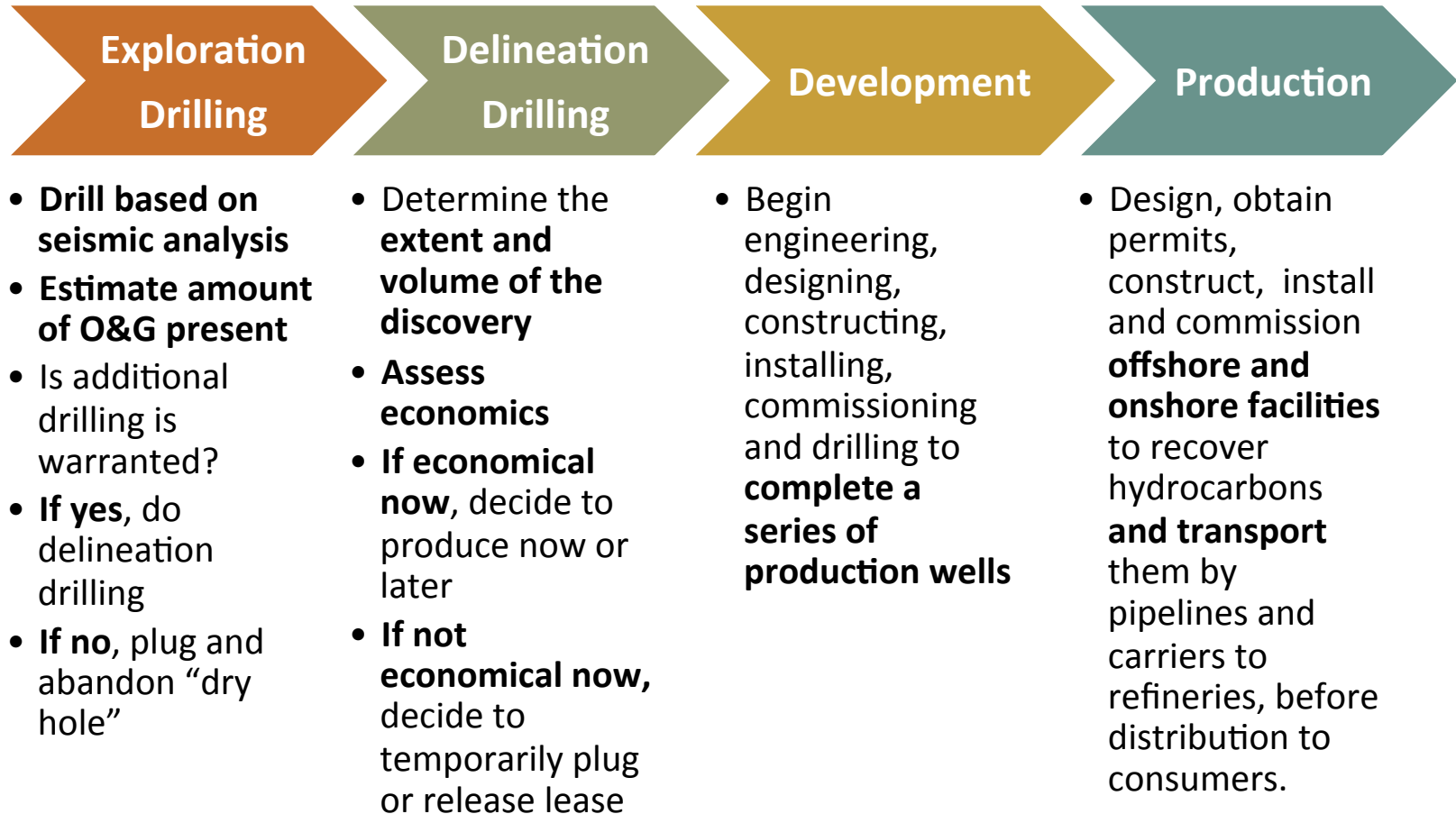
If find producible quantities...

(2-3 years)

Production begins ~2030

From prospect to pipeline

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Offshore Drilling & Production

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Up to
1500'

1000-2
000'

Up to 4000'

3000-7
500'

Ultra-
deep
water

Usually
>1000'

Fixed
Platform
(FP)

Compliant
Tower
(CT)

Tension Leg
Platform
(TLP)

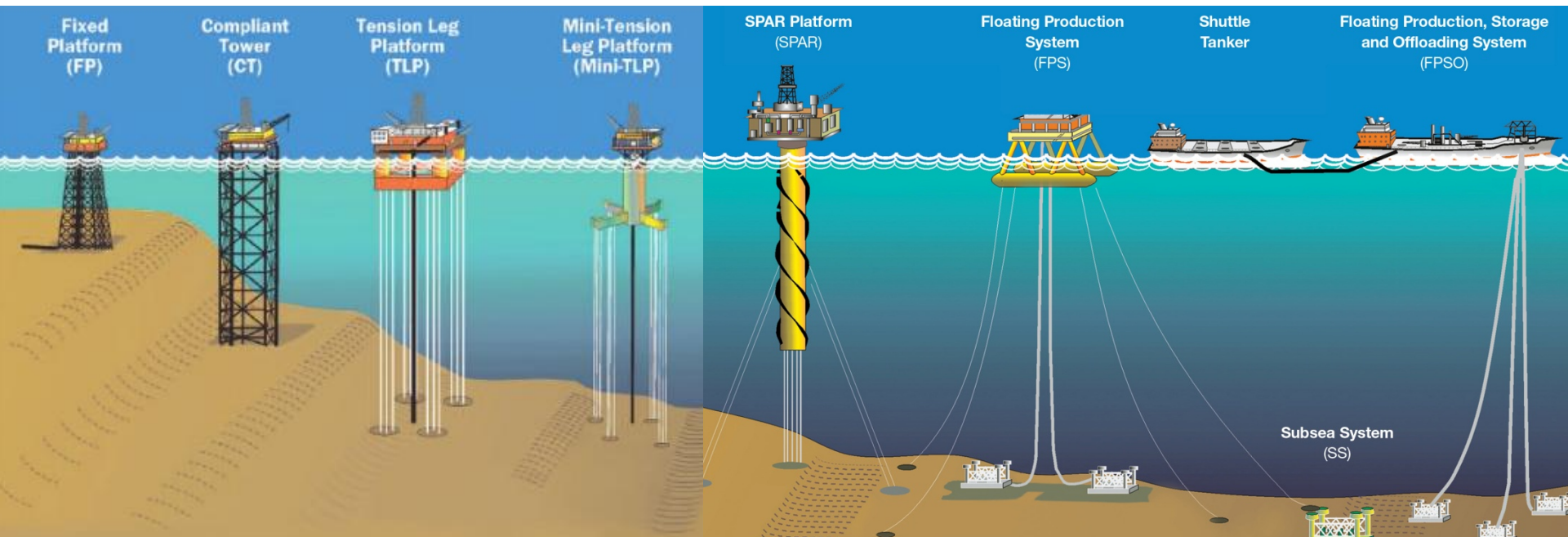
Mini-Tension
Leg Platform
(Mini-TLP)

SPAR Platform
(SPAR)

Floating Production
System
(FPS)

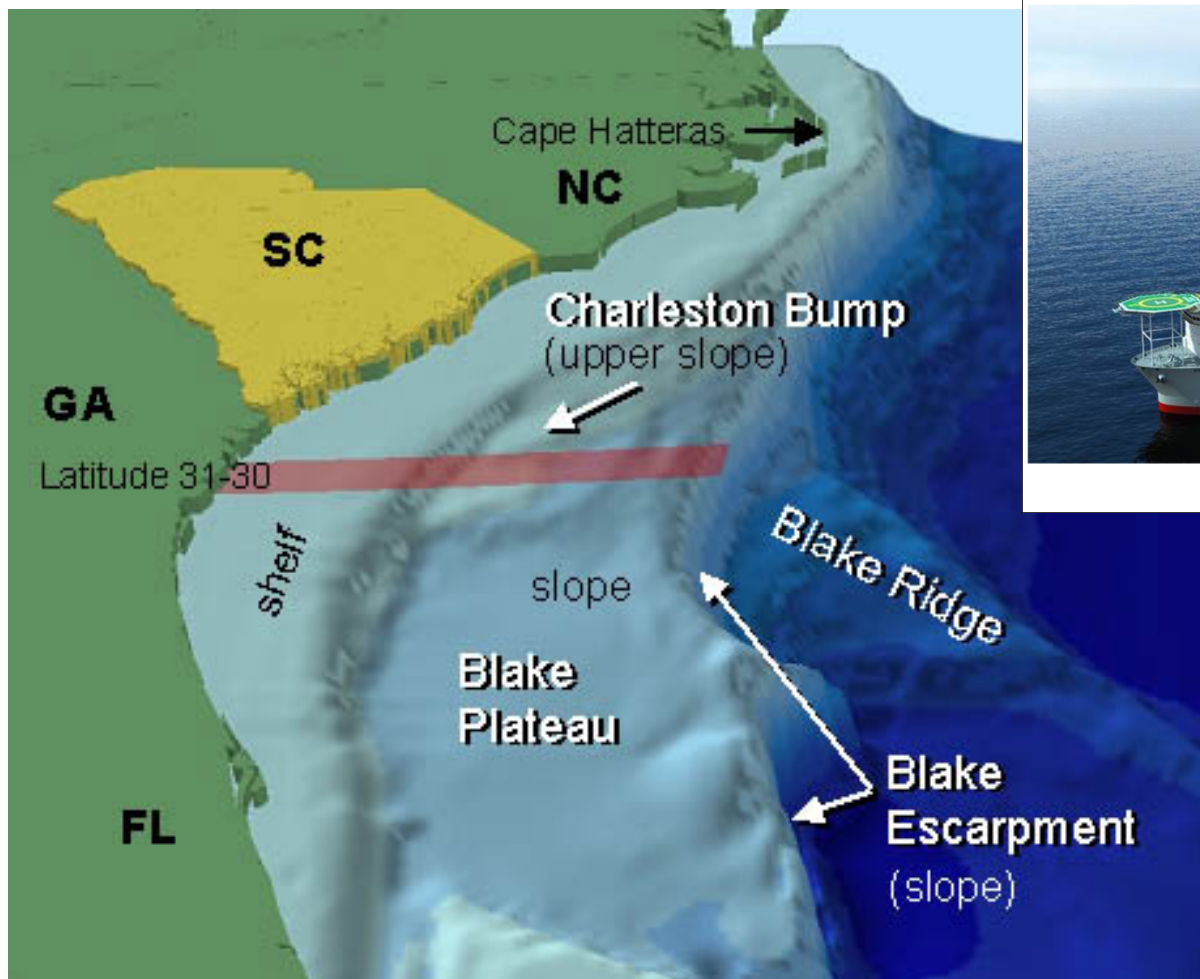
Shuttle
Tanker

Floating Production, Storage
and Offloading System
(FPSO)



Exploration drilling

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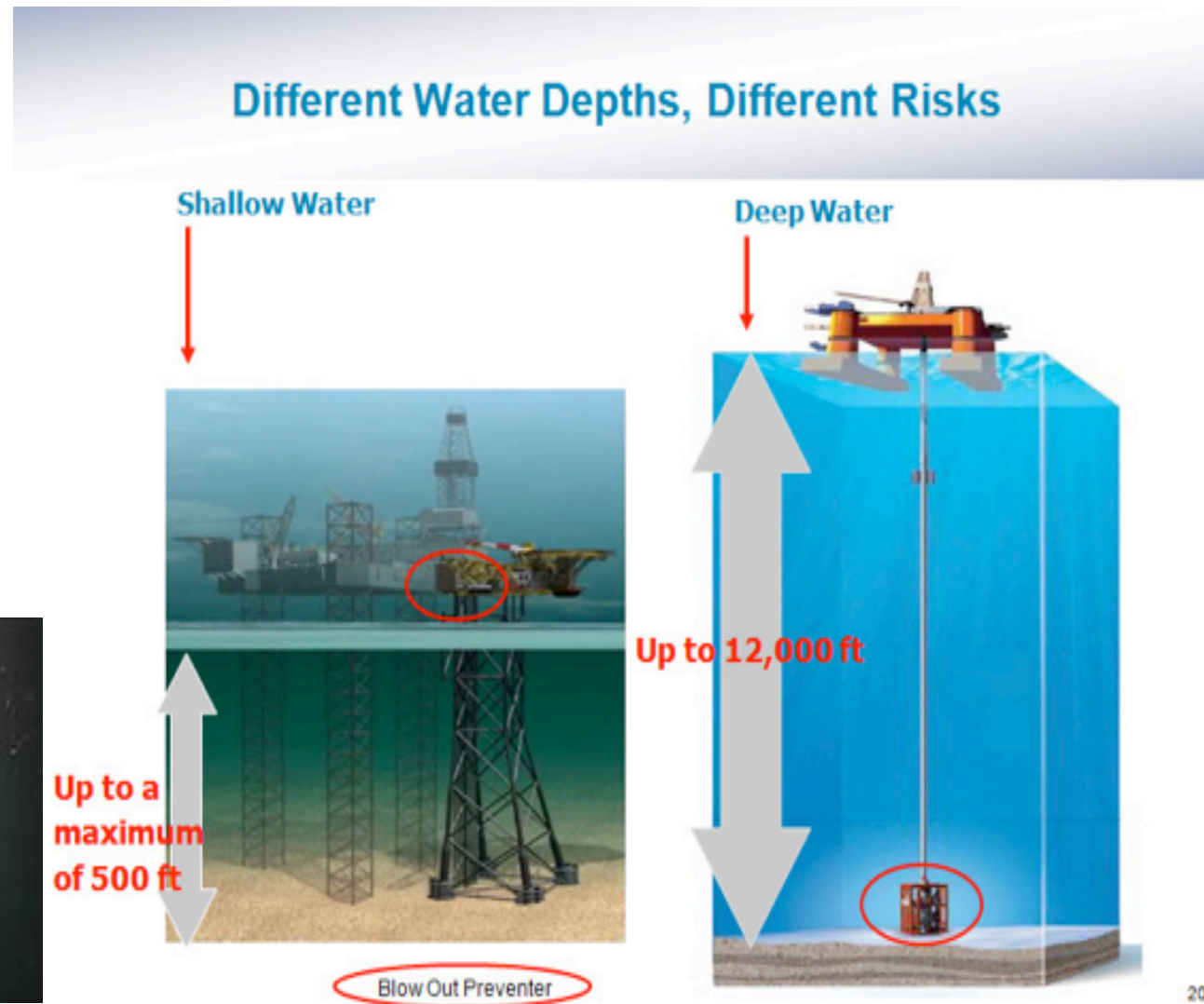
The Atwood Achiever Deepwater Drillship

- “...Water depths for the survey area will range from approximately **328 ft** to **over 16,404 ft.**”
 - Seismic company permit request

Deep water drilling is especially dangerous

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- “Production from deepwater projects is expected to account for **75 % of production in 2035**” -- API/Quest report
- Deepwater drilling is **especially dangerous**



You can't explore for gas only

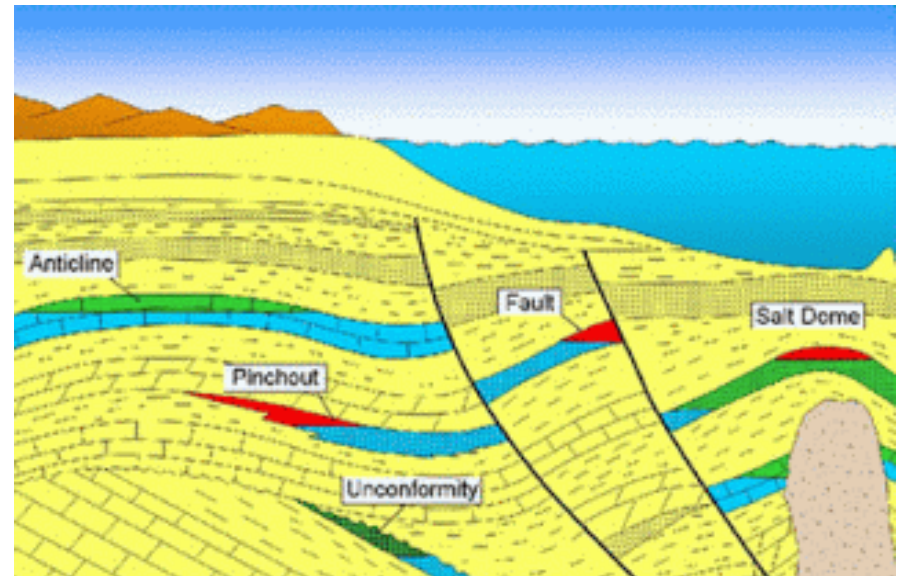
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Drilling Advocates Claim

1. We'll only produce the gas; **natural gas production is less risky** than oil

THE FACTS

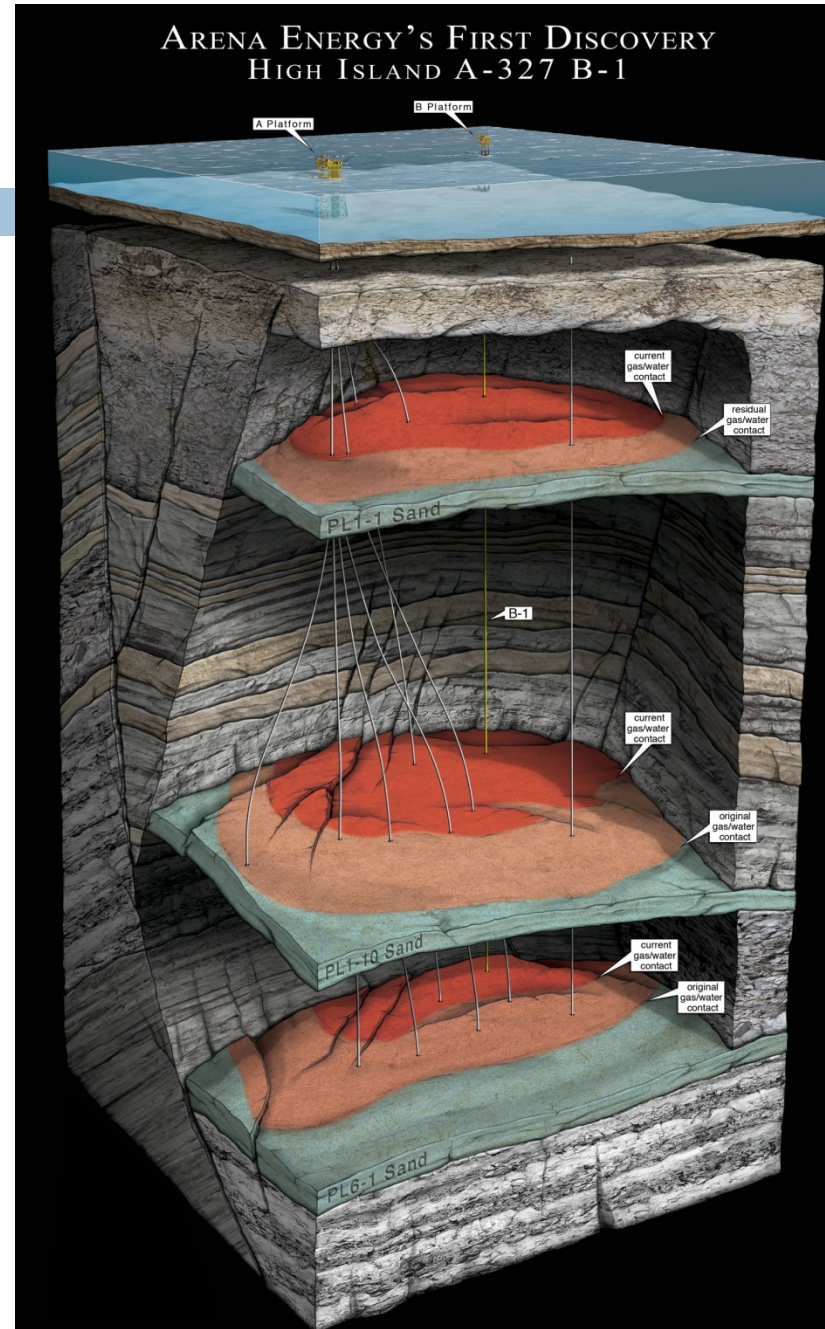
- **Oil and natural gas exist together;** you can't explore for gas only



Delineation Drilling

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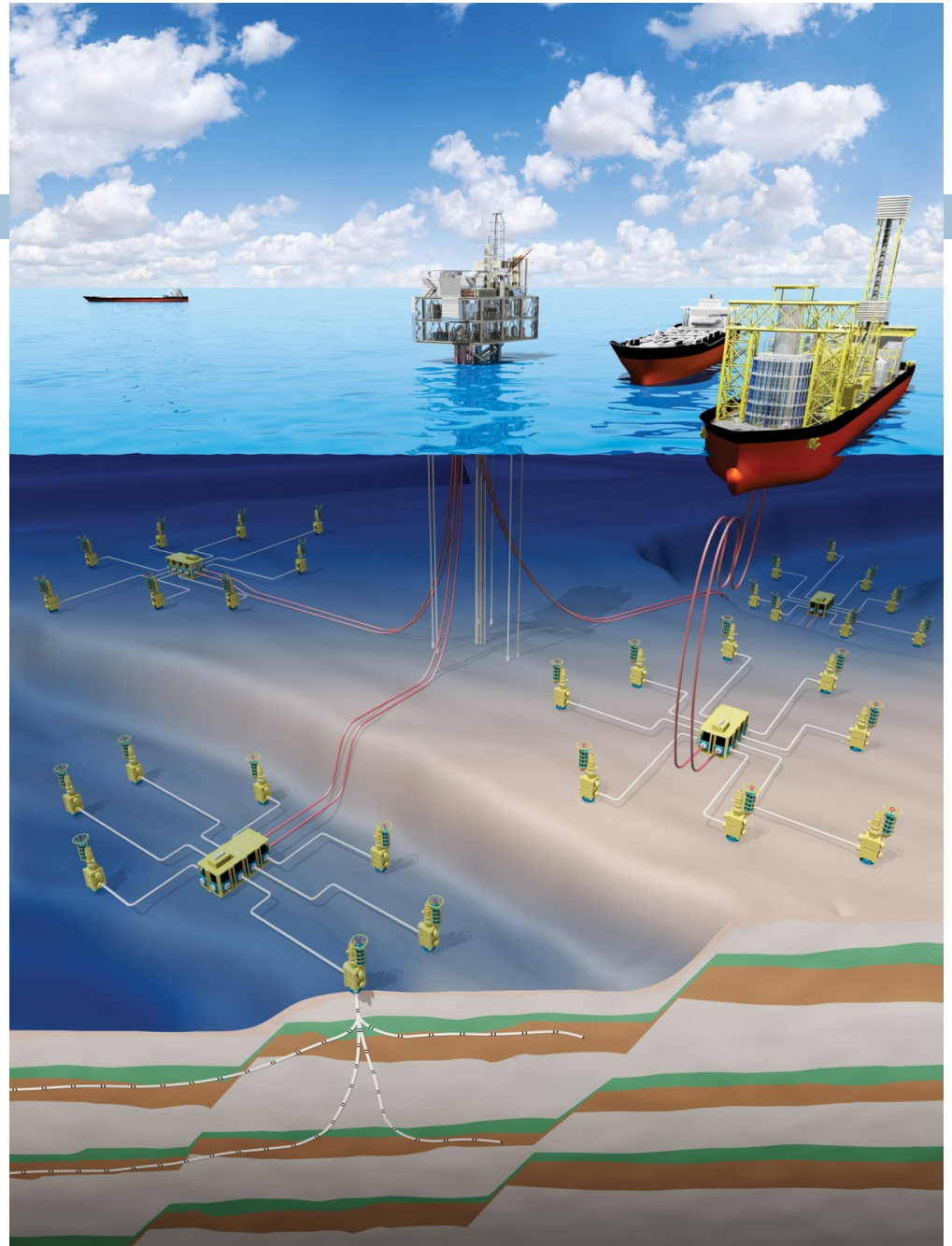
- Determine the **extent and volume of the discovery**
- **Assess economics**
- **If economical now**, decide to produce now or later
- **If not economical now**, decide to temporarily plug or release lease



Development

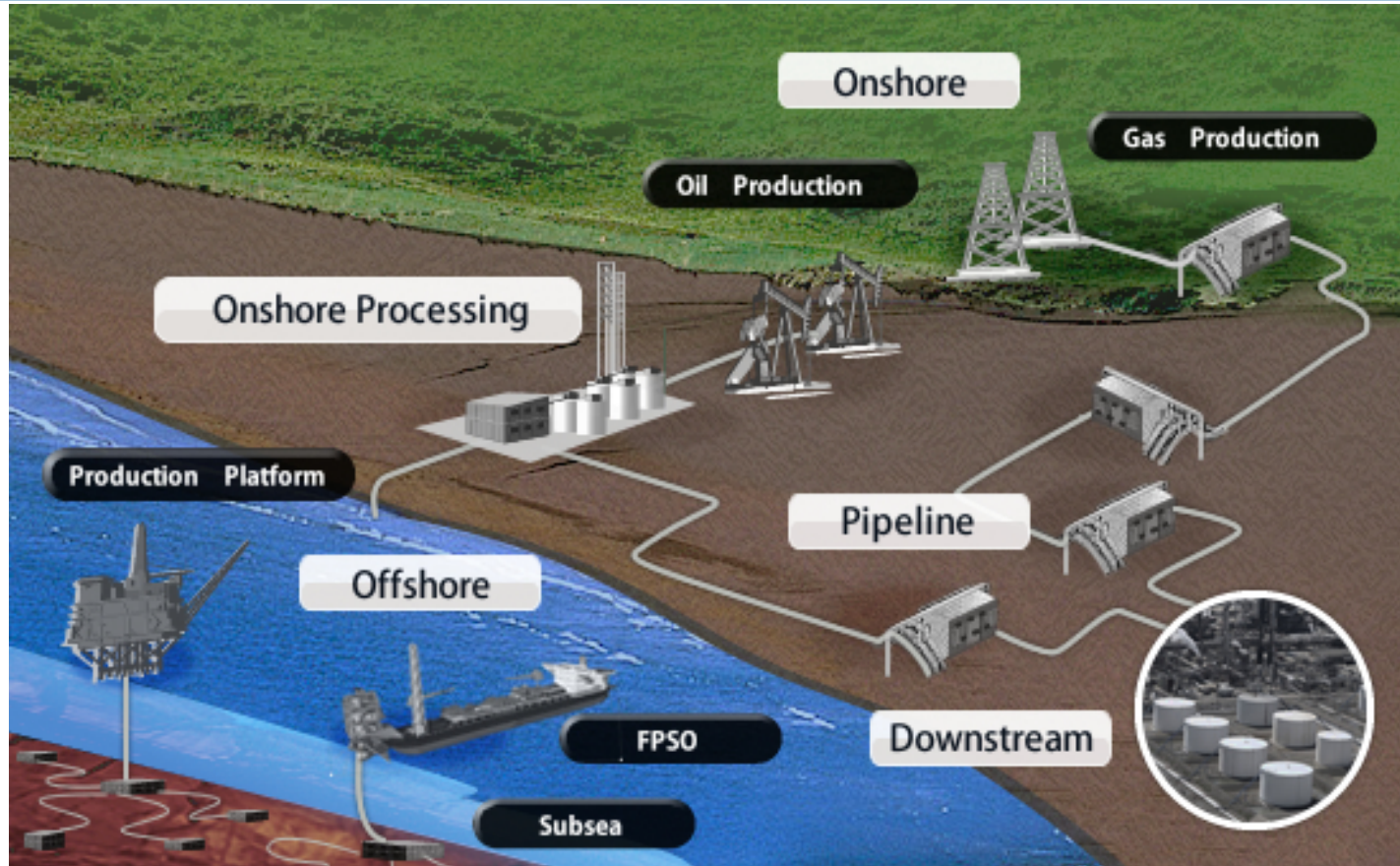
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Begin engineering,
designing,
constructing,
installing,
commissioning and
drilling to **complete**
a series of
production wells



How do we get production to shore?

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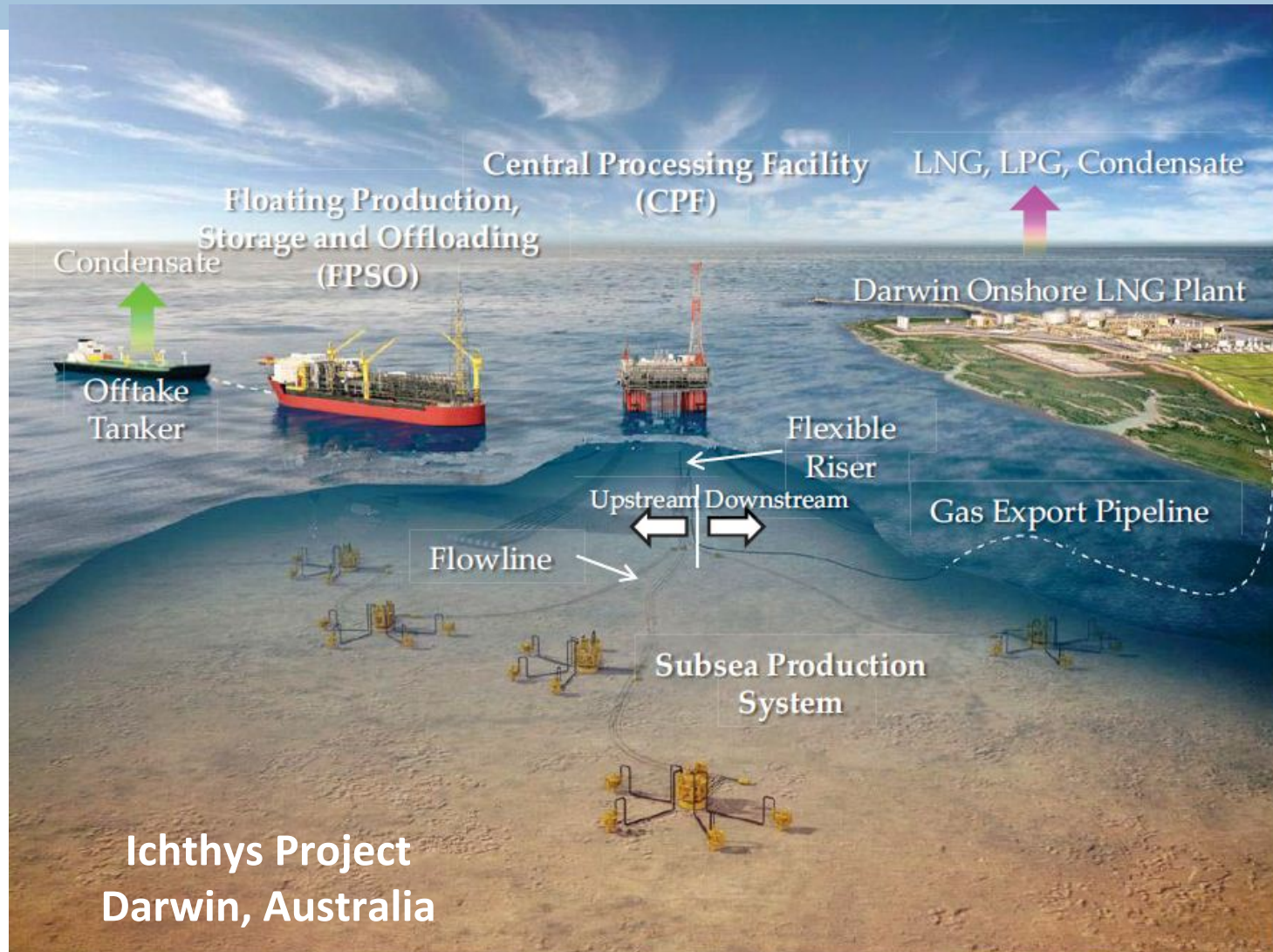


- Design, obtain permits, construct, install and commission **offshore and onshore facilities** to recover hydrocarbons **and transport** them by pipelines and carriers to refineries, before distribution to consumers.

<http://www.yokogawa.com/us/industries/oil-gas-upstream/>

Production: offshore to onshore

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Infrastructure will ruin our coastline

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Drilling Advocates Claim

- The Port of Georgetown can be a primary option for servicing related OCS development. We can be **the next “Port Fourchon”** (and please, make it happen as fast as you can!)

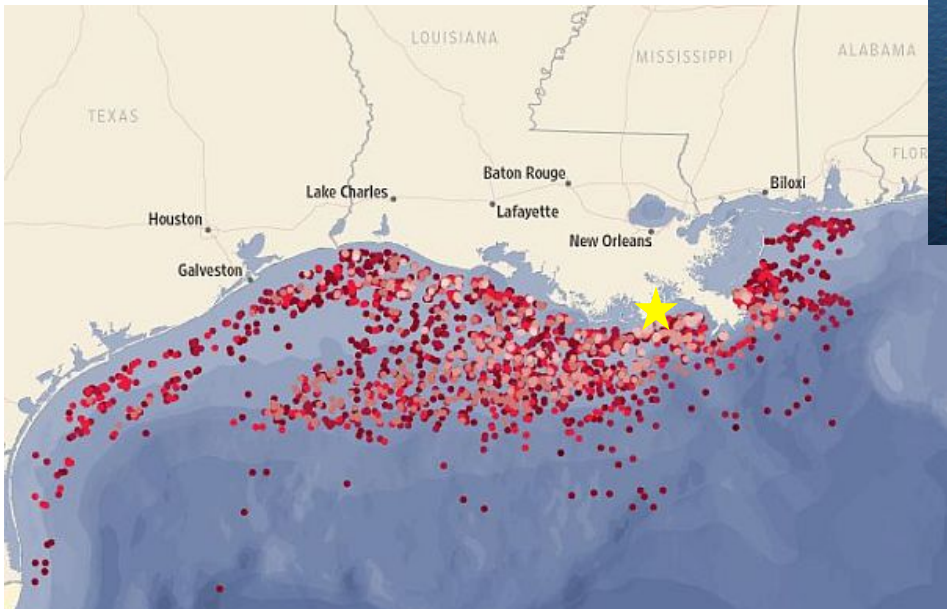
THE FACTS

- Making the Port of Georgetown the next Port Fourchon will create **industrialization and harm** to tourism, fishing, health, and the productivity of our coastline

Port of Georgetown, SC can be the next Port Fourchon, LA!

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- Port Fourchon has been in the making for 50+ years
- 1300 acre port - now adding another 4000 acres
- 250 oil field-related companies and LOOP (Louisiana Offshore Oil Port) pipeline

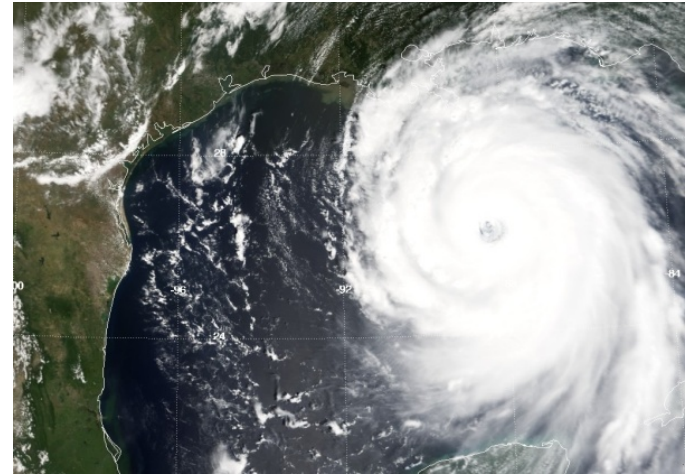


- Port Fourchon is **not a vacation destination**

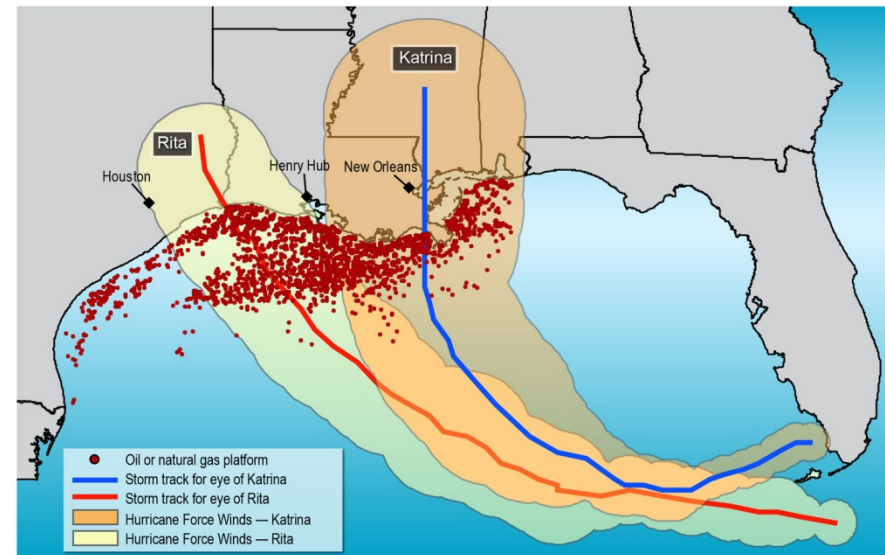
Hurricanes: Katrina & Rita

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- **More than 9 million gallons of oil** spilled from damaged offshore and coastal infrastructure
- **Over 100 offshore platforms** were totally destroyed
- **More than 450 seafloor pipeline breaks**
- Six weeks after Rita, **Tank Barge DBL 152** struck the unmarked ruins of an offshore oil platform that Rita had demolished
- **~2 million gallons of "slurry oil" dumped.** Only 5% of this oil was recovered.
- Oil footprint covered **over 70 square miles.**



Paths of Hurricanes Katrina and Rita Relative to Oil and Gas Production Facilities



Port Fourchon

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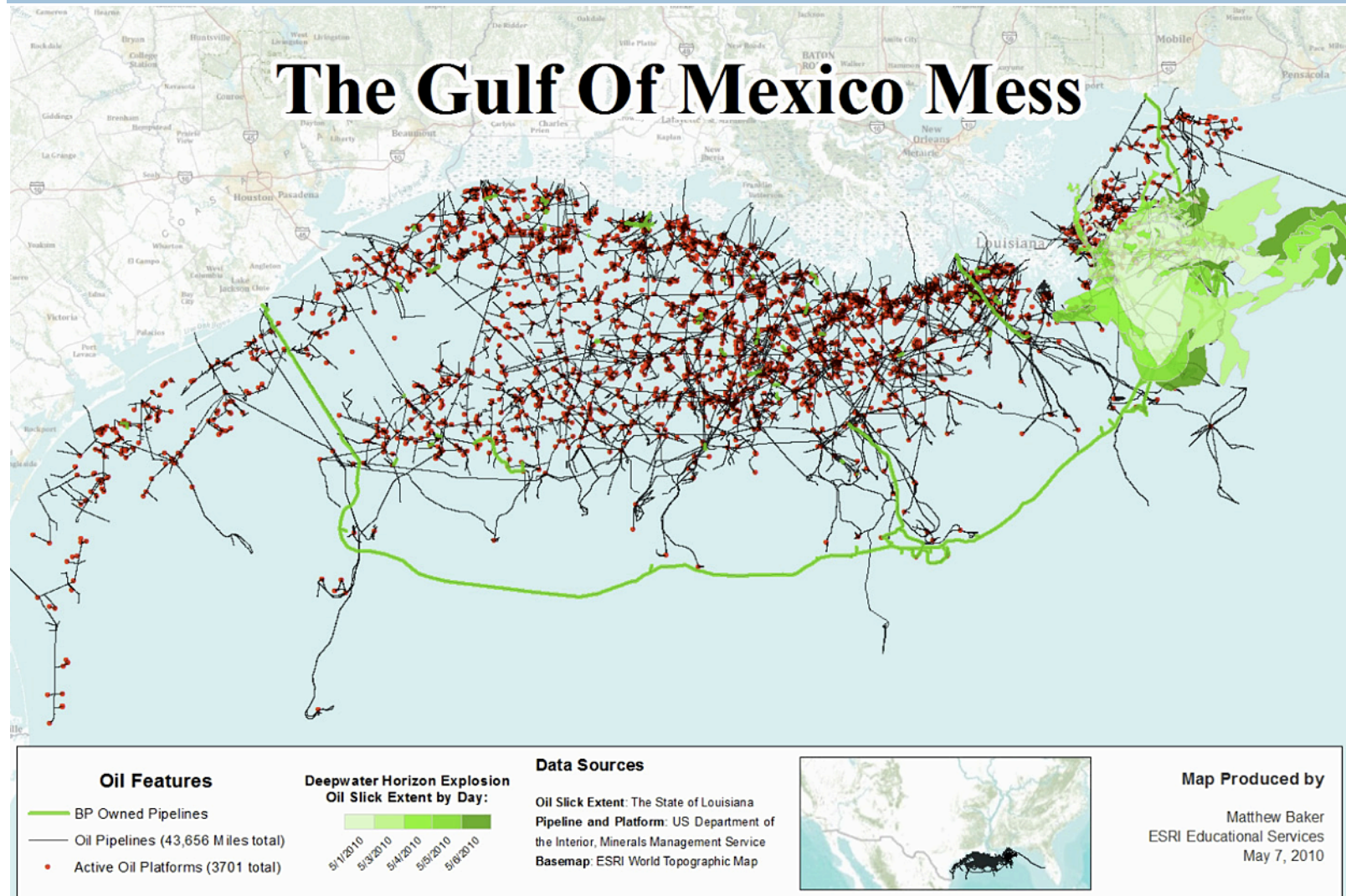
After Hurricane Katrina:



<https://youtu.be/e9gLNwcaWDE>

GoM infrastructure

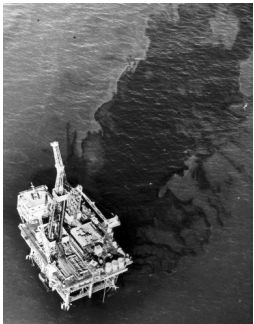
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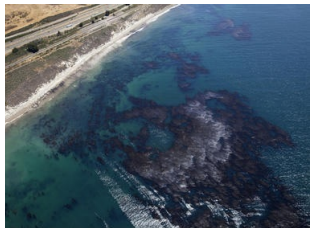
Every US Coast...



Exxon Valdez
11 million gallons
March 1989



Santa Barbara
3 million gallons
January 1969



Santa Barbara
pipeline break oil on
9 miles of beach
May 2015



The Atlantic coast would be no different



Galveston Bay oil spills
are routine -- averages
285 spills a year.



Oil Rig Explosion
Kills 4 in Gulf of Mexico
April 2015



Taylor Platform
Destroyed by Ivan
Leaking oil since 2004



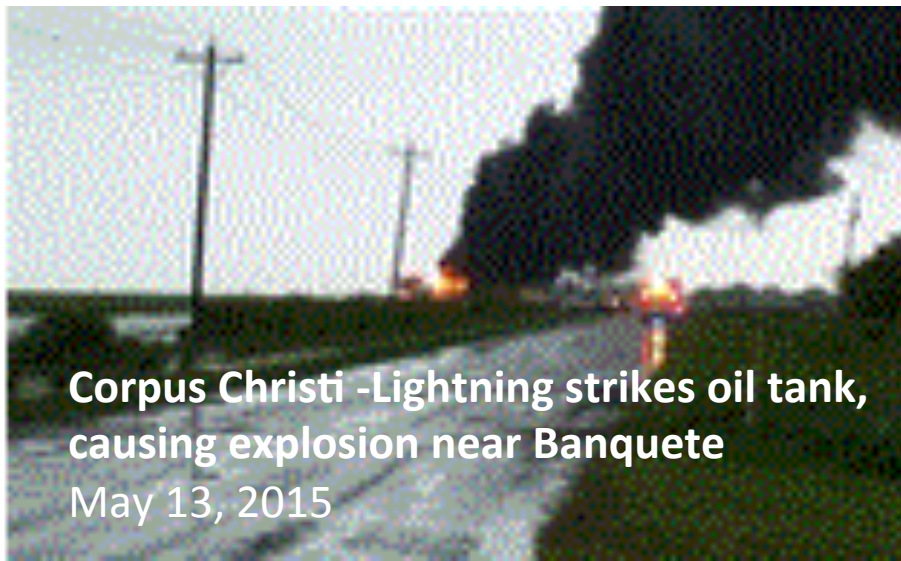
Deepwater Horizon
210 million gallons
April 2010



Hurricane Katrina
9 million gallons oil
100 rigs destroyed
450 pipeline breaks
August 2005

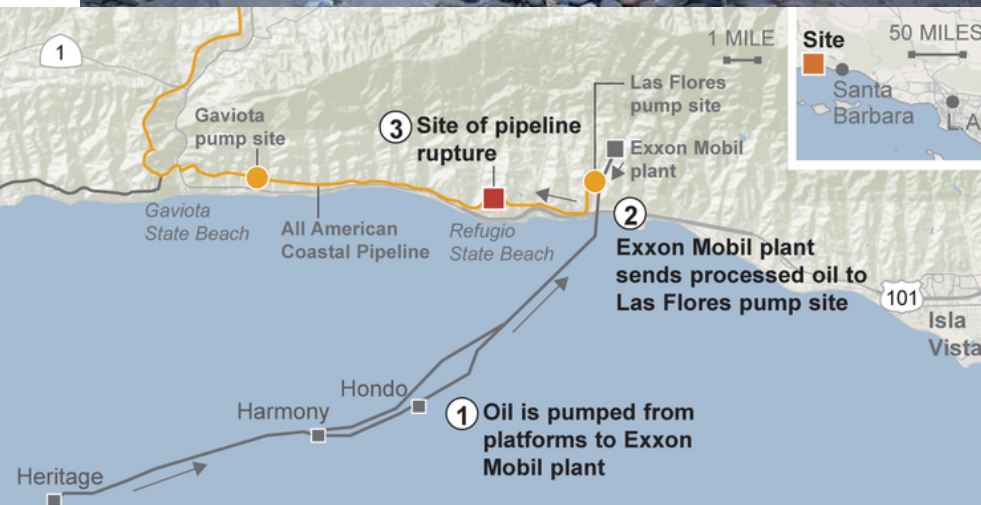
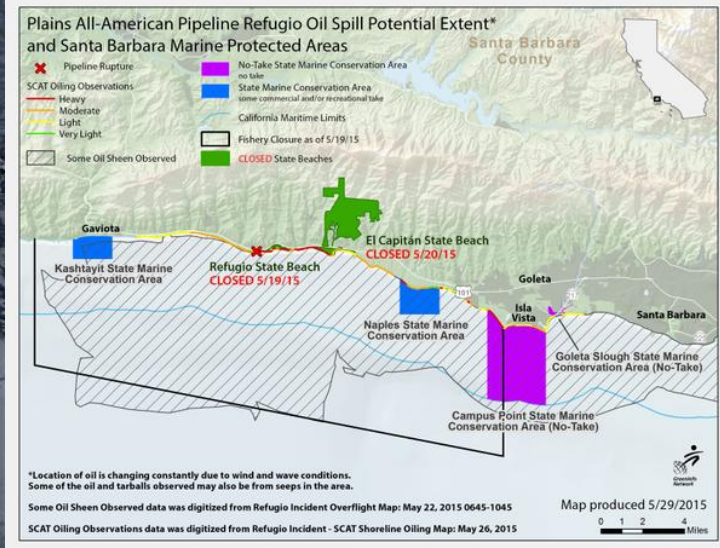
A small sample since March 23

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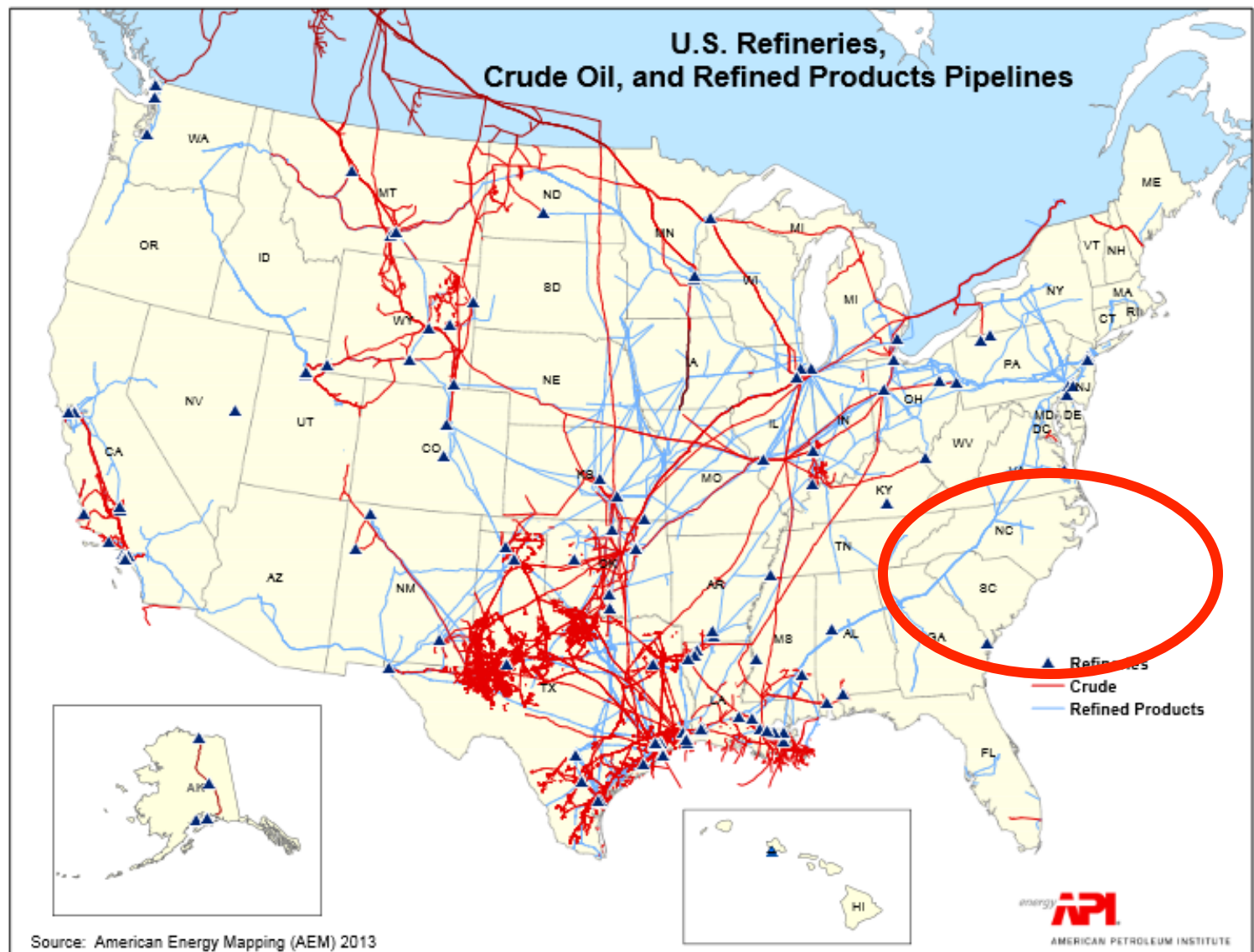
Santa Barbara, CA - May 20, 2015

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Production: onshore to refineries & pipelines

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Remember:

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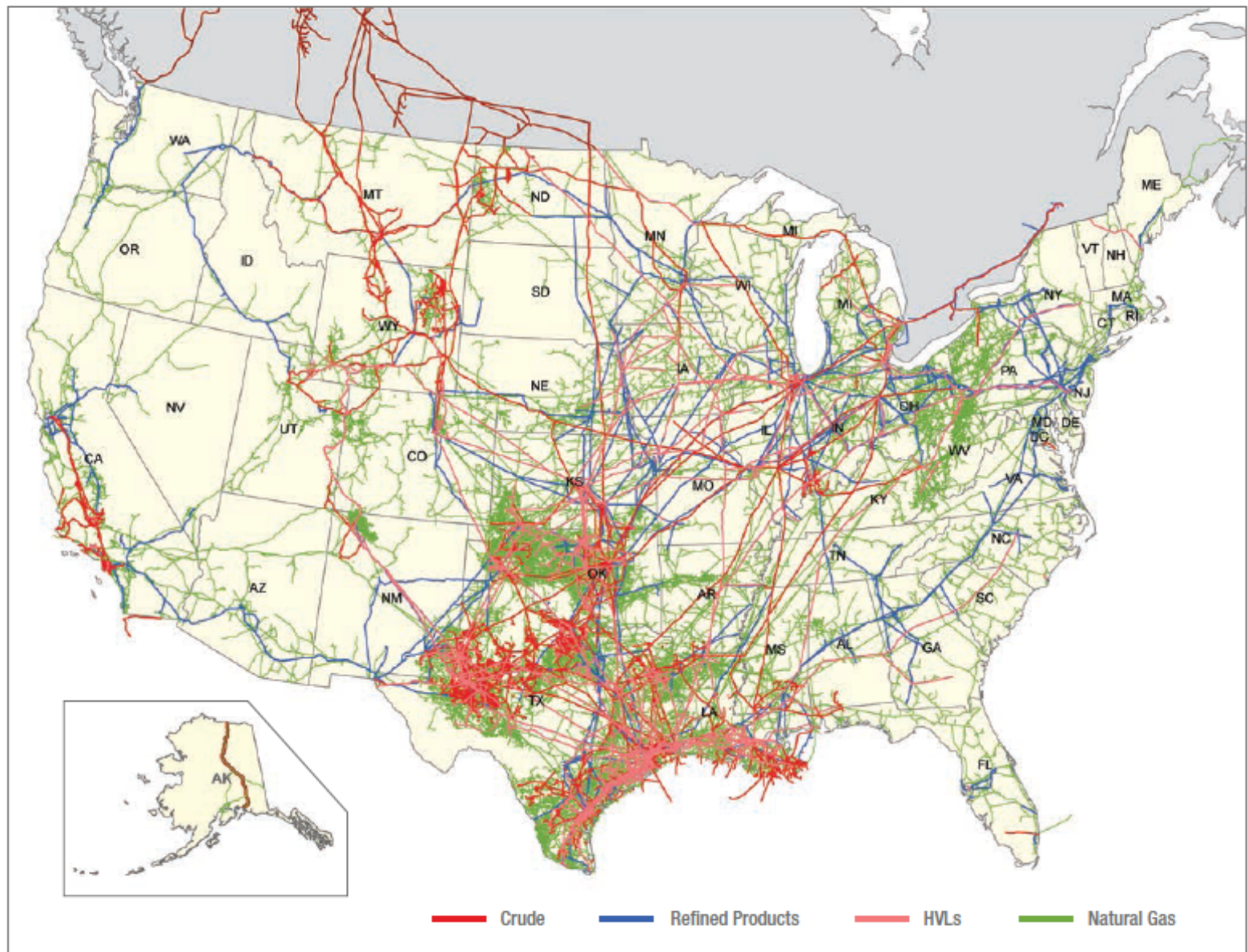
- ❑ Offshore drilling and the associated **industrial infrastructure will FOREVER harm our property values, our beaches, our coastline and our way of life.**
- ❑ It's not about energy independence, it's about **oil companies wanting east coast infrastructure for EXPORT.**
- ❑ **We MUST let our elected officials know we OPPOSE** seismic testing, offshore drilling and the infrastructure that comes with it. The time to take action is NOW.
- ❑ **This is *OUR* LEGACY.**

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Appendix

U.S. EXPANDING CRUDE OIL, REFINED PRODUCTS, LIQUIDS, AND NATURAL GAS PIPELINES TO MEET DEMAND

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SOUTH MARSH ISLAND 192

This diagram illustrates a geological cross-section of South Marsh Island. At the top, a small platform labeled "A Platform" sits on the surface. Below it, a thick sequence of sedimentary rocks is shown in a blocky, faulted arrangement. Key units include ANG-B, CRIS-S, LENTIC A, and CHIG-B. A prominent feature is a large, tilted, reddish-orange body labeled "A-1stk", which contains internal labels A-1, A-2, and A-3. This body is surrounded by green and yellowish layers. Other units visible are BHU-L-0, BHU-L-1, TEX-L, OVERTHROWING, and UNDERLYING. The base of the section shows a layer of "SALT". Dashed lines indicate faults or boundaries between different geological formations.