
Oil & Gas Law

Class 26:

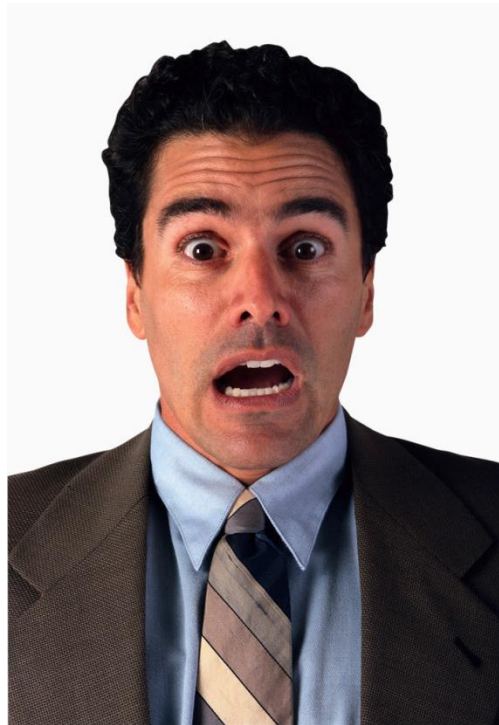
**New Developments / Review –
Fracing, Horizontal Drilling and Garza**

ADMIN STUFF ...

- Evaluations
- TH, April 24: Optional review session
- Recognitions
- **Final Exam!!!**



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Final Exam



“Tests make you nervous and break out in *what*?”



Final Exam – 1: Basics

■ Details

- TH 5/8, 6:00-9:00 PM; Location: TU2 – 144

■ Format

- 18-25 M/C and FitB Questions
- 2-3 essay questions (if 3, 1 essay could be replaced by a “medium length” question)

■ **SIMPLE CALCULATORS PERMITTED ...**

- **NOT** smartphones (or Internet-connected devices)



Final Exam – 2: Scope

■ Per Syllabus

□ RoC/Corr. Rts./ Reg. Resp.	31
□ OGL	27
□ L'or Convey.	23
□ L'ee Convey.	15
□ New Dev.	4
□	—
■	100

■ Modified (approx.)

□ RoC/Corr. Rts./ Reg. Resp.	20
□ OGL	30-33
□ L'or Convey.	25-28
□ L'ee Convey.	18-20
□ New Dev.	4
□	—
■	100

Shale, Fracing & HZ Drilling – Intro

- Unprecedented opportunity and challenges
- A “technological revolution”
- Formations once thought to be uneconomical are now very profitable
- Evolution occurring at high speed



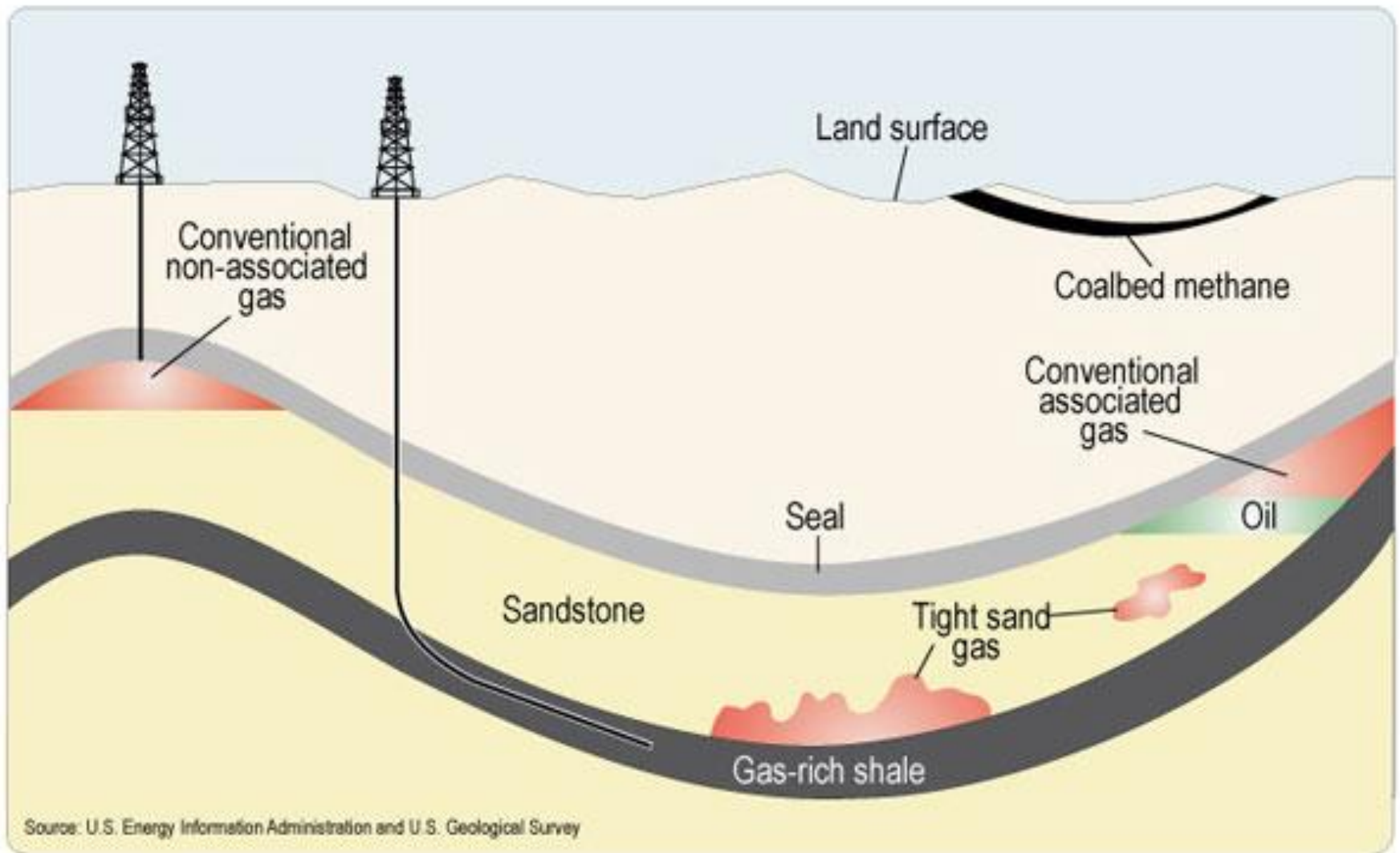
Shale, Fracing & HZ Drilling – Intro

- ***3 factors?***
- Technical advances in HZ drilling
- Technical advances in fracing
- Higher gas prices

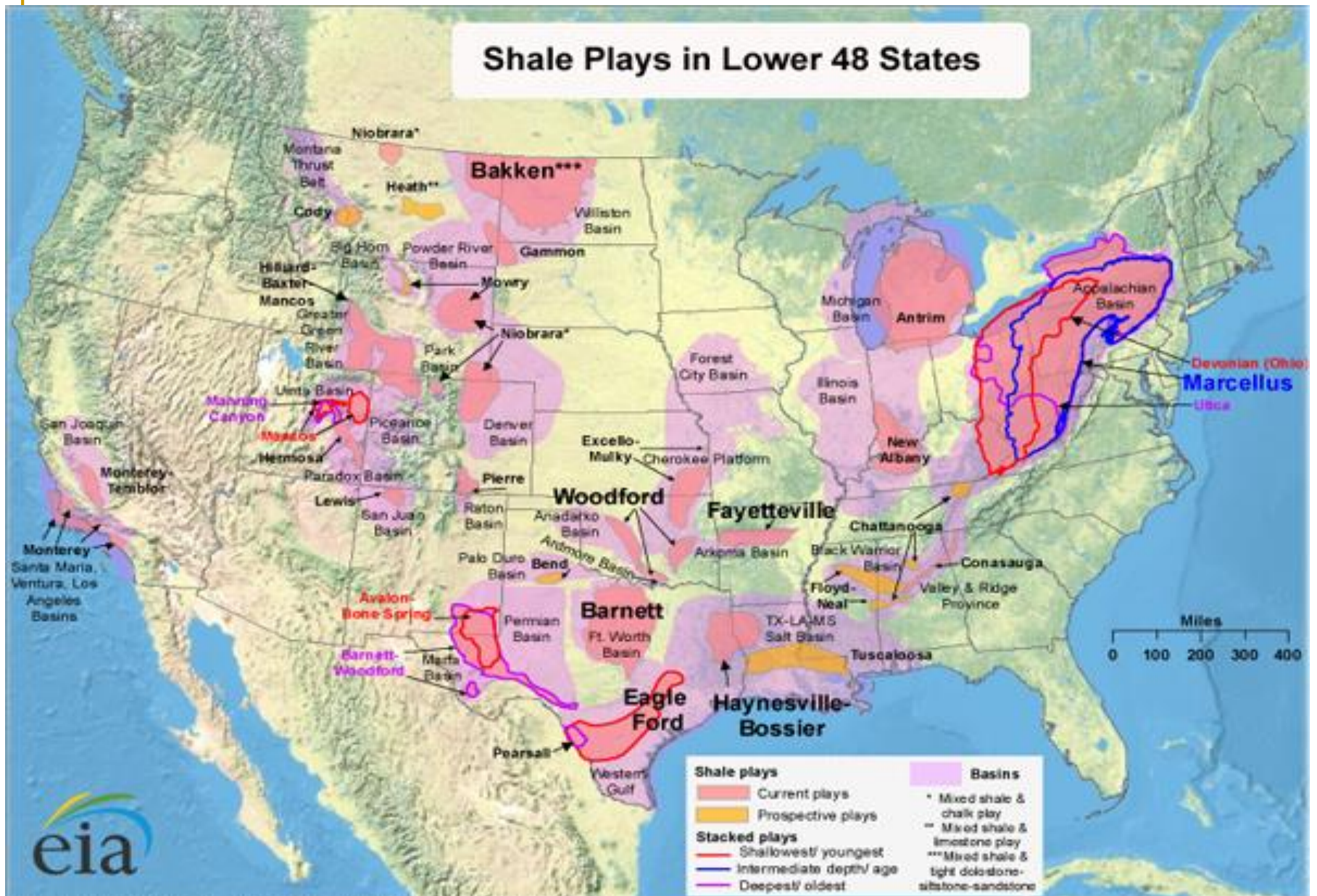
What IS Shale?

- a very fine-grained sedimentary rock that (unlike traditional granite- or sandstone-based formations) can be easily broken into thin, parallel layers
- shale can contain a large amount of natural gas
 - but the gas not necessarily mobile
- natural gas produced from shale is one of several "unconventional" sources of natural gas
 - other unconventional sources include natural gas produced from coalbeds and from "tight" (impermeable) sandstone or chalk formations.

Natural Gas

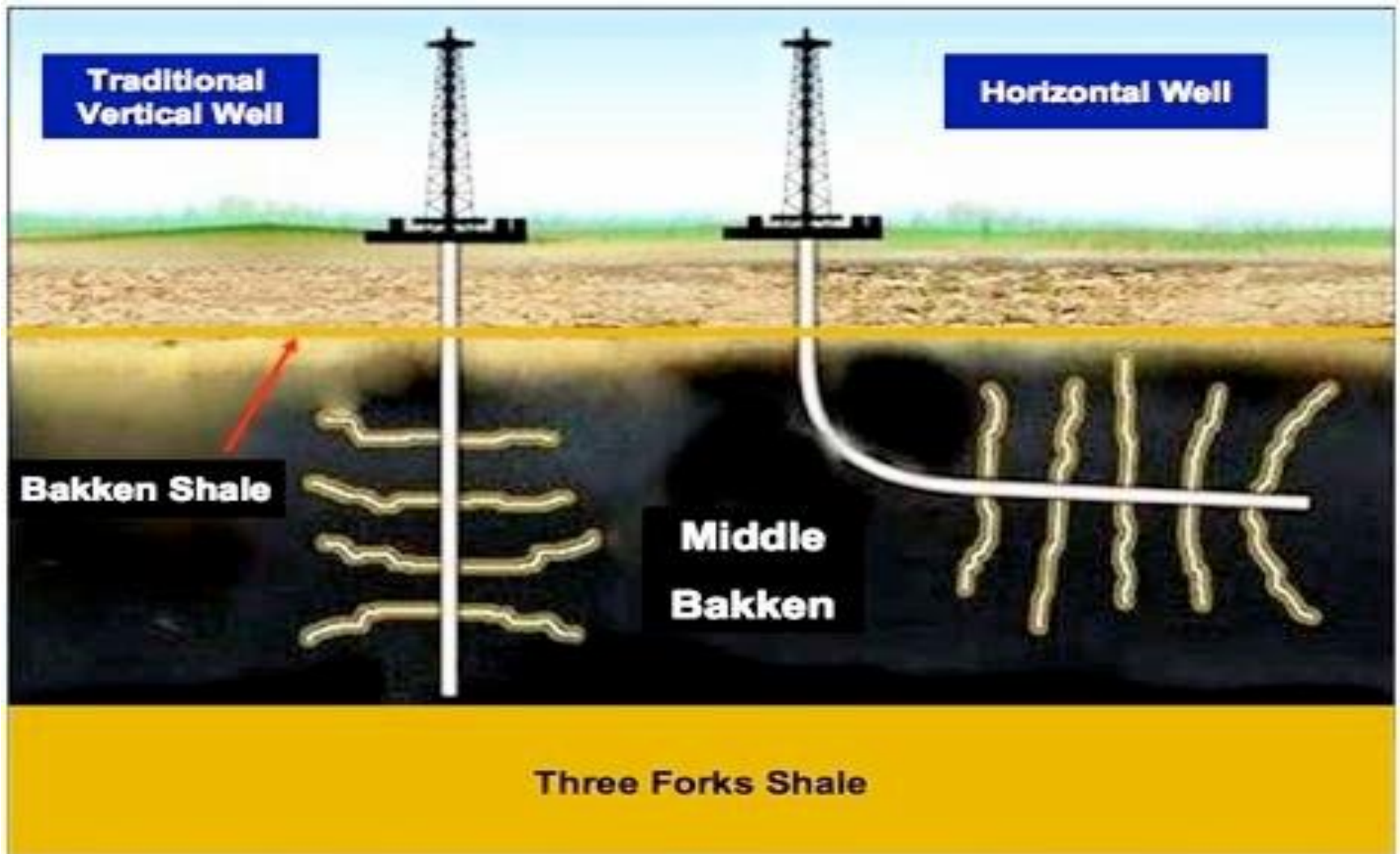


Shale Plays in Lower 48 States

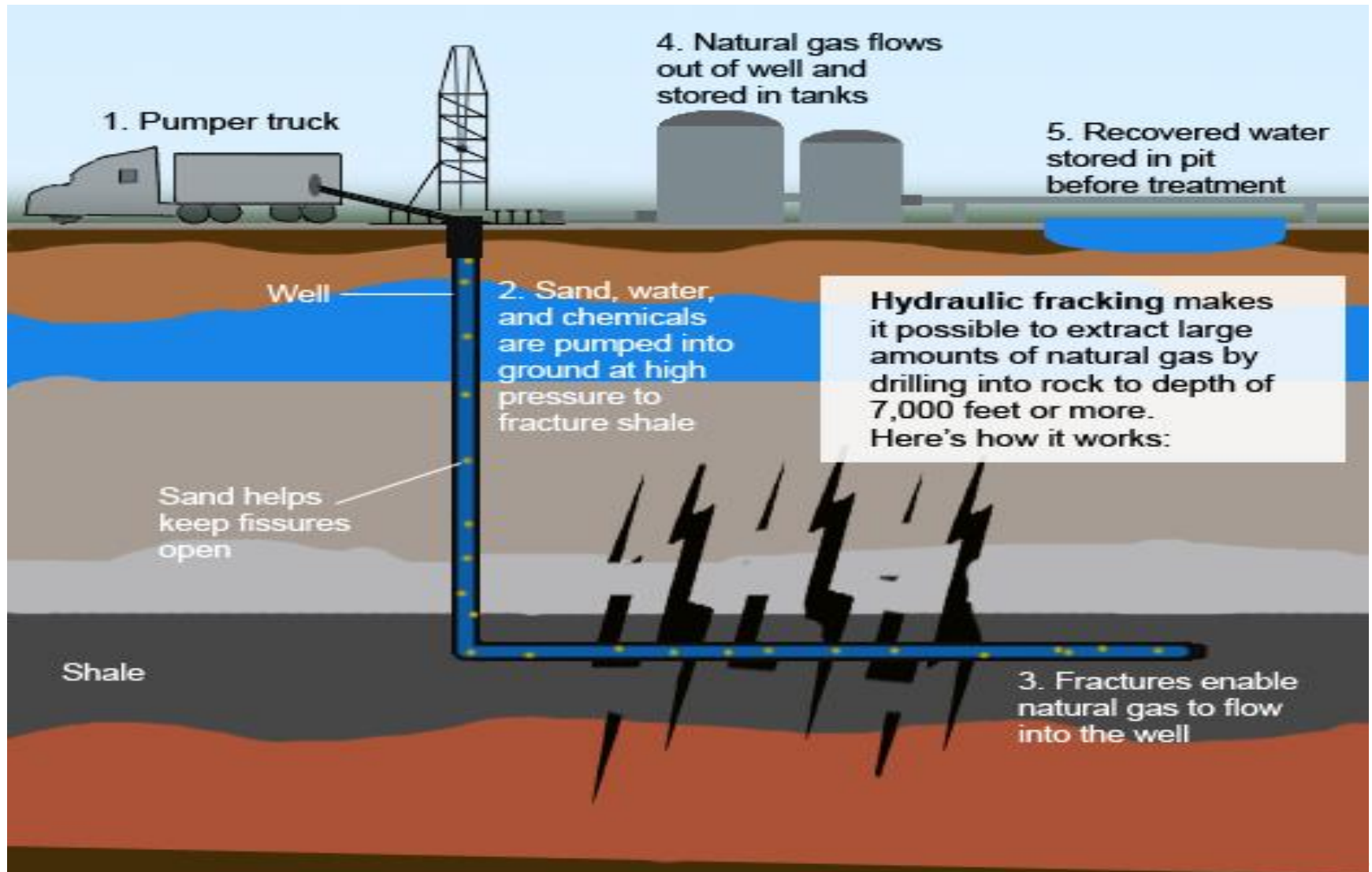


Source: Energy Information Administration based on data from various published studies.
Updated: May 9, 2011

Horizontal Drilling and Fracing



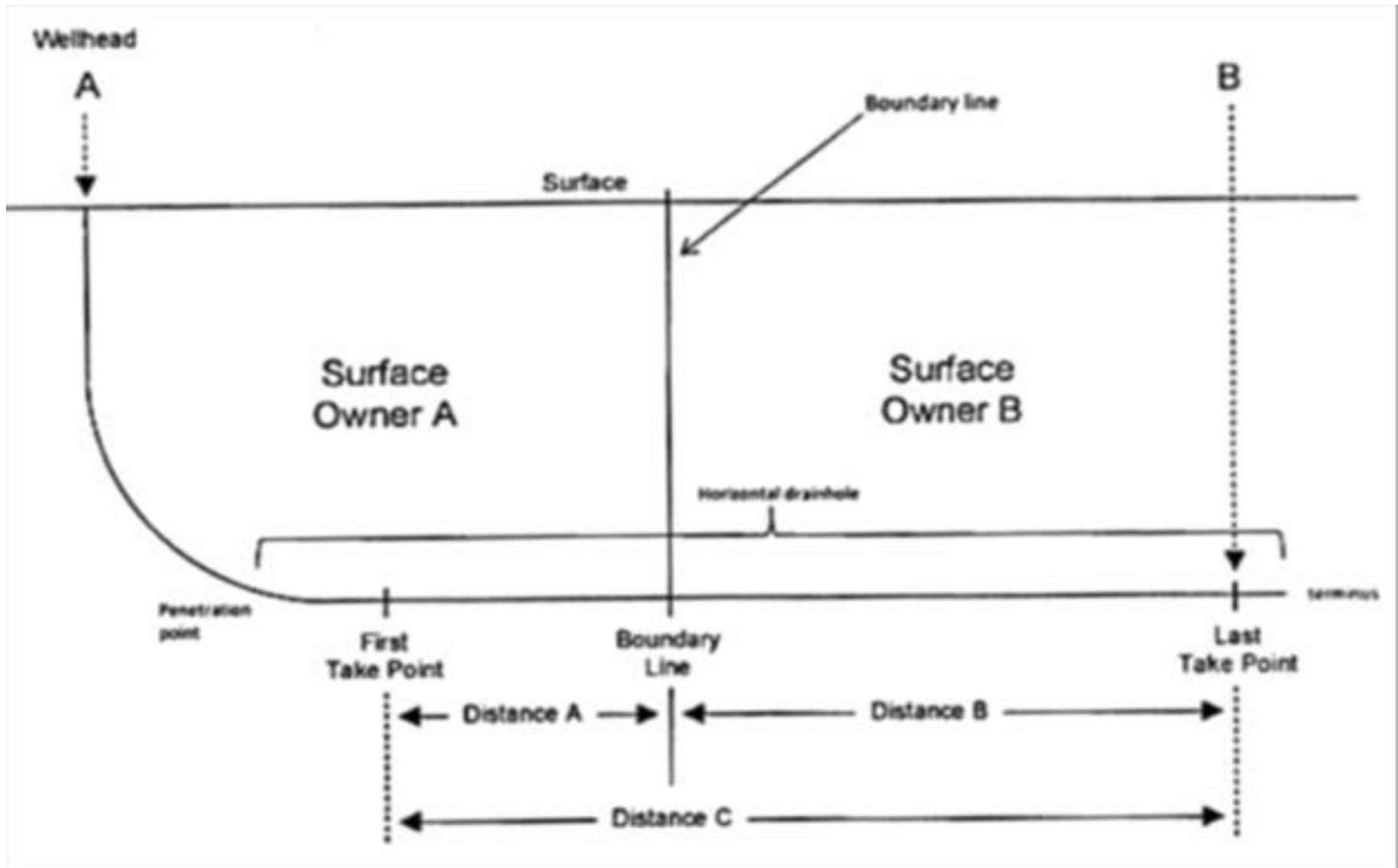
Fracing



HZ Drilling

- Why it's so profitable:
 - HZ drlg exposes more of the producing portion of the reservoir over what vertical drlg does
 - → efficiency gains can be exponential
 - More source rock exposed = higher prod. rates
 - tens / 100+ feet → many hundreds / thousands of feet
 - Operators produce more of the reservoir **before** they have to move to secondary recovery operations
 - Access more formation(s) with fewer surface locations
 - Inaccessible areas now accessible
 - Parks, cemeteries, business districts/downtown areas, rivers, residential neighborhoods, etc.
 - 6-8 horizontal wells = 16 vertical wells

HZ Drilling: Terminology



HZ Drilling: State Regulation

- Statewide Rule 86 (vs. Rules 37 / 38)
 - Adopted in 1990
 - 1st reg of its kind in US
- Terminology
 - Correlative Interval
 - Penetration Point
 - Terminus
 - Horizontal Drainhole – all pts must comply w/ applicable lease line and spacing requirements
- 2 tables that add more acreage to Rule 38
- Density limits

Fracing & HZ Drilling

- Unprecedented opportunity → **challenges**
 - ❑ Water use / access
 - ❑ Environmental (chemical injection)
 - ❑ Environmental (other effects)
 - ❑ Drilling / prod. in urban areas
 - ❑ **Litigation**
 - ❑ Technological changes coming faster than ability of the legal system to keep up
 - ❑ Higher capital / operating costs

Challenges are what make life interesting.

Overcoming them is what makes it meaningful.



HZ Drilling – Litigation Issues

- Because HZ drilling crosses multiple tracts of land, the associated issues then to focus on the kinds of issues we see where we have multiple mineral owners, royalty holders, etc.
- ***What situations have we seen this?***
- **Pooling / Unitization !!!**

HZ Drilling – Litigation Issues

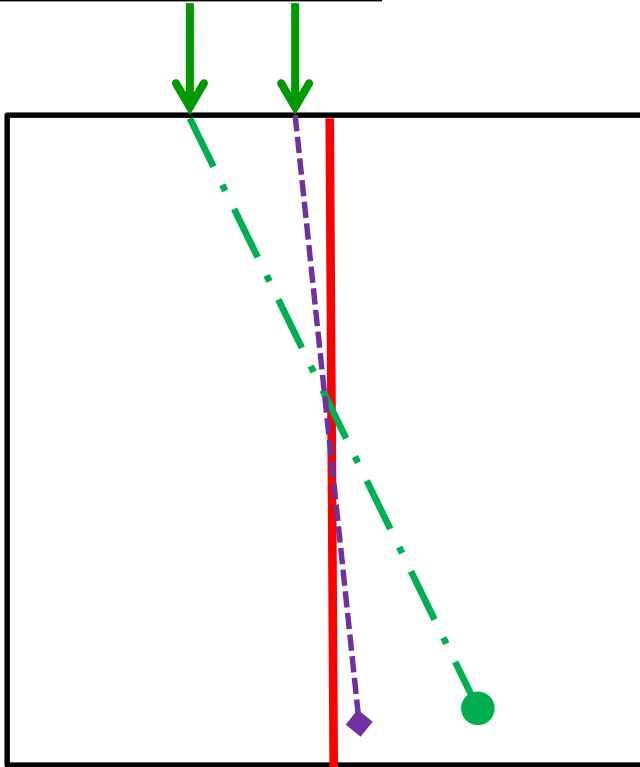
- OGLs w/ different (or conflicting) pooling cl.
- Older OGL forms that don't comply / accommodate HZ drilling
- OGL partially expired (Pugh clause)
- Multiple OGLs for different depths
- Sharing / allocating royalties from the spacing unit – wellbore length, not acreage
- NPRI owners: HZ well crosses multiple tracts; t/f there are multiple “drillsite tracts” and each NPRI owner can elect in or out
- *Subsurface Trespass*

Subsurface Trespass [from CL 3]

- Based on common law principles of above-ground trespass → **WHAT'S THE ISSUE?**
- **Considerations:**
 - ❑ What is crossing the property line
 - ❑ What kind of formation / zone is being entered
 - ❑ Remedy sought
 - ❑ Good faith vs. bad faith – affects damages
 - ❑ Trespasser's intent: irrelevant (except re good / bad faith)

Subsurface Trespass [from CL 3]

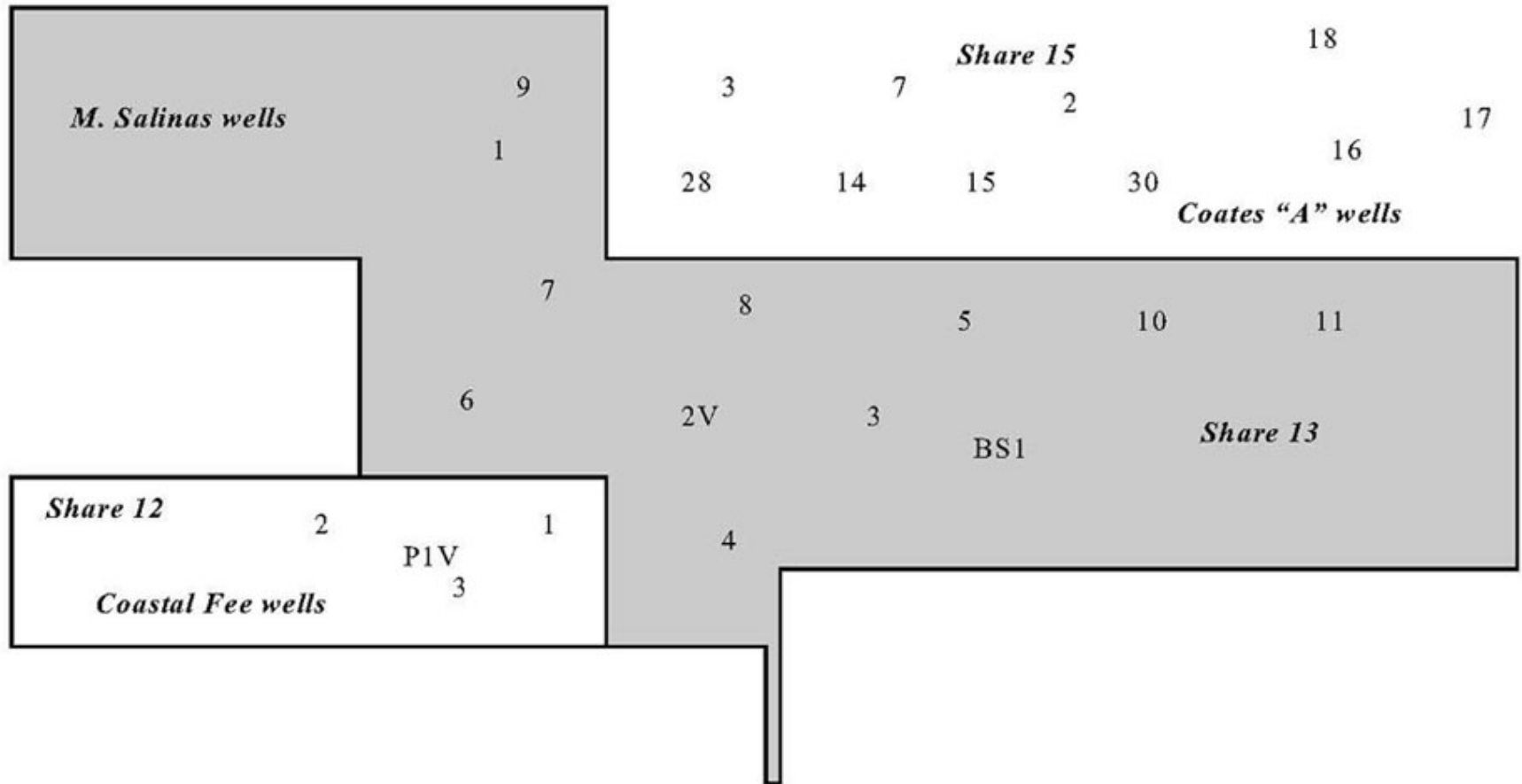
- In O&G context, TX Sup. Ct. considered such a situation in 1950 (Hastings Oil Co. v. Texas Co.)
 - Sfce Locations



2008 ...

- ... a momentous year in TX oil & gas law !!
- August – Garza
- November – Wagner Brown v. Sheppard

Coastal v. Garza – Prop. Map



Garza

■ ***Relevant facts?***

- ❑ Share 13 well 3 – strong producer
- ❑ Share 12 well 1 – drilled as close to Share 13 as regs allow
- ❑ Share 12 well 1 fraced – hydraulic length designed to reach 1,000 ft.
- ❑ 80-acre unit (73 ac. from Share 13; 7 from Share 12 → Share 13 wells 2V and 4 included, but NO WELLS from Share 12)
- ❑ Tr. Ct. judgment = \$15 million → industry fear that increasingly common act would lead to liability
 - Amici briefs from “every corner of the industry”

■ ***Issues?***

Garza: 5 Issues

(not incl. the procedural one re standing)

- **1.** Can a Lessor w/ a reversionary interest (i.e., the Lease still exists) sue for trespass? **YES**
- **2.** Is subsurface fracing that extends into other property a trespass? **AVOIDED**
- **3.** Breach of the I/C to develop and to protect vs. drainage **Damages analysis**
- **4.** Bad faith pooling **Damages analysis**
- **5.** What is the measure of damages?

Garza: Rulings

- Avoided addressing whether fracing can constitute subsurface trespass
 - Instead: trespass needs injury, and under the RoC Garza had no injury
- 4 reasons not to change the RoC
 - Mineral owner being drained already has recourse
 - Usurps RRC authority
 - Determining the value of O&G drained by fracing is not the kind of issue litigation can address
 - RoC shouldn't be changed, b/c no one in the industry appears to want or need the change

Garza: Other Interesting Points 1

- **p. 72:** “The ‘H & H Doctrine’ has no place in the modern world.” – quoting from the Causby case in FN 9
- **p. 77 (dissent):** “... maximizing recovery via fracing is essential; enshrining trespass liability for fracing is not. ... Open-ended liability [would ensure] that much of our State’s undeveloped energy supplies would stay that way – undeveloped. TX O&G law favors drilling wells ... Amid soaring demand and sagging supply, Texas common law must accommodate cutting-edge technologies able to extract untold reserves from unconventional fields.”

Garza: Other Interesting Points 2

- **pp. 74 (Maj.) and 90 (dissent):**
differentiating between a deviated well that bottoms on another's property and a fractured well
- **p. 73:** “The rule of capture is a cornerstone of the oil and gas industry and is fundamental both to property rights and to state regulation.”

Garza: Aftermath & the “Real” Lessons Learned

- “no one in the industry appears to want or need ...” a decision which would create liability for frac projects
- ➡ \$ and the TX O&G industry win
- April 2013: W Va Federal Ct. rejects Garza
 - ❑ Stone v. Chesapeake Appalachia, LLC
 - ❑ “hydraulic fracturing under the land of a neighboring property without that party’s consent is not protected by the ‘rule of capture’, but rather constitutes an actionable trespass.”

Objectives – from Course Overview

- ...understand the concepts involved in leasing property for oil and gas exploration, development and production
- ...possess a basic knowledge of the oil and gas business and its essential terminology
- ...recognize and understand the business and legal issues found in fundamental oil and gas documents, such as leases, farmout agreements, and joint operating agreements
- ...recognize legal issues and legal problems within the framework of the oil & gas industry, and determine which legal principle(s) will apply
- ...answer, in a passing fashion, a Bar Exam question involving oil and gas