

Everything You Need to Know About the Oil and Natural Gas Industry and Taxes

An overview of how the industry works, how much it pays in taxes, and how it benefits the U.S. economy

Glossary

- **Upstream** – everything that occurs before the oil is refined; exploration, drilling, extraction, storage, shipping, etc.
- **Downstream** – the refining, selling, and distribution of product.
- **Independent** – a company which is only involved in the exploration and production (upstream) segment of the industry.
- **Integrated** – A company engaged in all phases of the oil business; production, transportation, refining, and marketing (upstream & downstream).

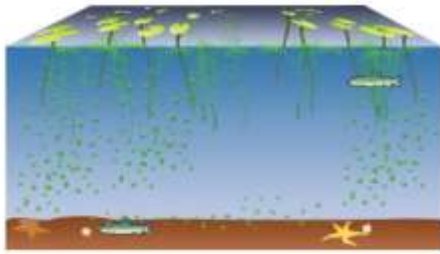
General Tax Terms

- Revenues – Cost of Goods Sold = Gross Income
- Gross Income – Deductions = Taxable Income
- Taxable Income x Tax Rate = Tax Amount
- Tax Amount – Credits = Total Taxes Paid
- Deduction vs. Credit

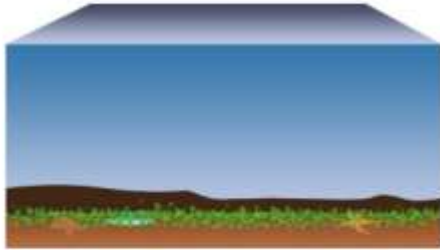
Taxes/Revenue and the Industry

- Between 2004 and 2008 the industry:
 - Incurred over \$300 billion in income taxes with almost half being paid to the US government.
 - Incurred over \$60 billion in other taxes to federal and state governments (property, sales & use, severance).
 - Collected and remitted over \$350 billion in motor fuel excise taxes.
- The industry paid over \$30 billion in rents royalties and fees in 2008 and 2009.
- Overall, the industry generates almost \$100 million a day to the federal government.

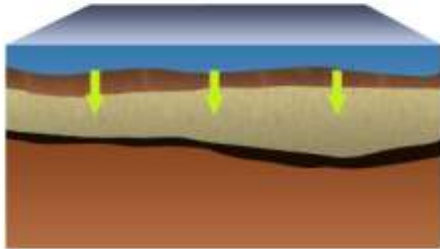
What are we looking for?



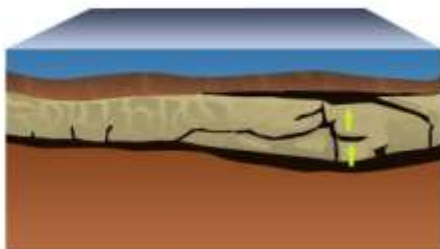
1. Marine plants and animals die and sink to the bottom of the seabed.



2. The plant and animal layer gets covered with mud.



3. Over time, more sediment creates pressure, compressing the dead plants and animals into oil.



4. Oil moves up through porous rocks and eventually forms a reservoir.

Oil is decayed organic matter that becomes embedded and over time, extreme pressure, high temperatures and lack of oxygen transform this matter into oil.

Oil is found in reservoirs in sedimentary rock.



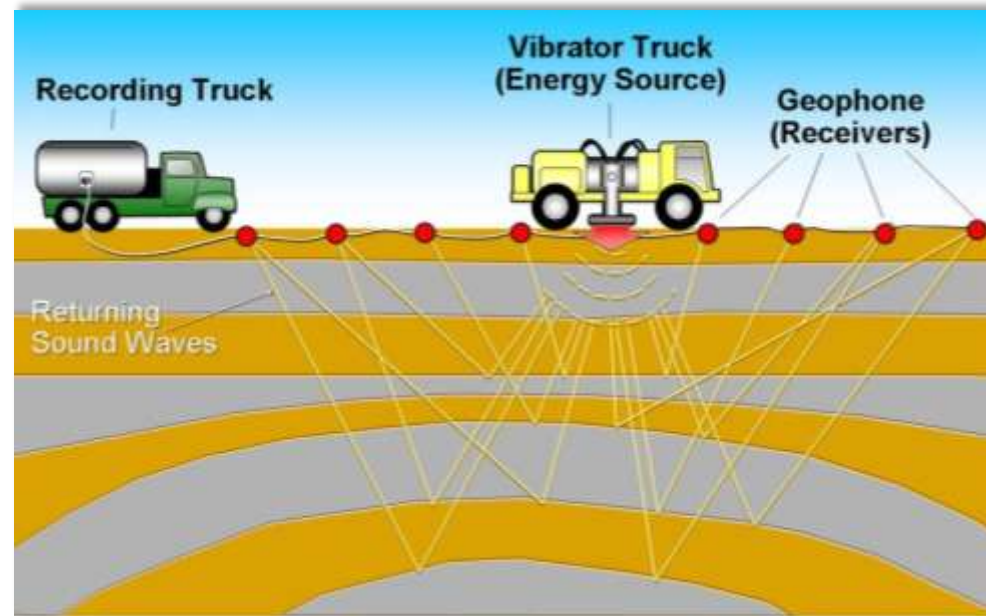
These “reservoir rocks” hold the oil like a sponge, confined by other non-porous layers that essentially form a trap.

Where is it found?

- All over the world.
- Companies driven by:
 - Location and size of the resource
 - Costs of developing resource
 - Fiscal terms in acquiring rights to resource

Exploration

Crude oil is found using seismic, sonic, and satellite imagery to pinpoint geographic profiles under the earth's surface known to produce oil.



Returning sound waves differ when bounced off hard, non-porous rock and oil-bearing rocks like sandstone.

Exploration Cost Recovery

- Geological and geophysical (G&G) surveys are used to locate and identify properties with the potential to produce oil and natural gas using state of the art technology.
 - Can be very expensive depending upon the technology used.
 - Further analysis and processing done after the G&G is developed.
- According to EIA, in 5 years between 2003-2008:
 - Around 60 seismic crews operating on average in US.
 - Companies paid well over \$5 billion in G&G costs.
- G&G costs are a business expense. Current law allows for:
 - 2 year amortization for non-integrateds.
 - 7 years for major integrated companies.

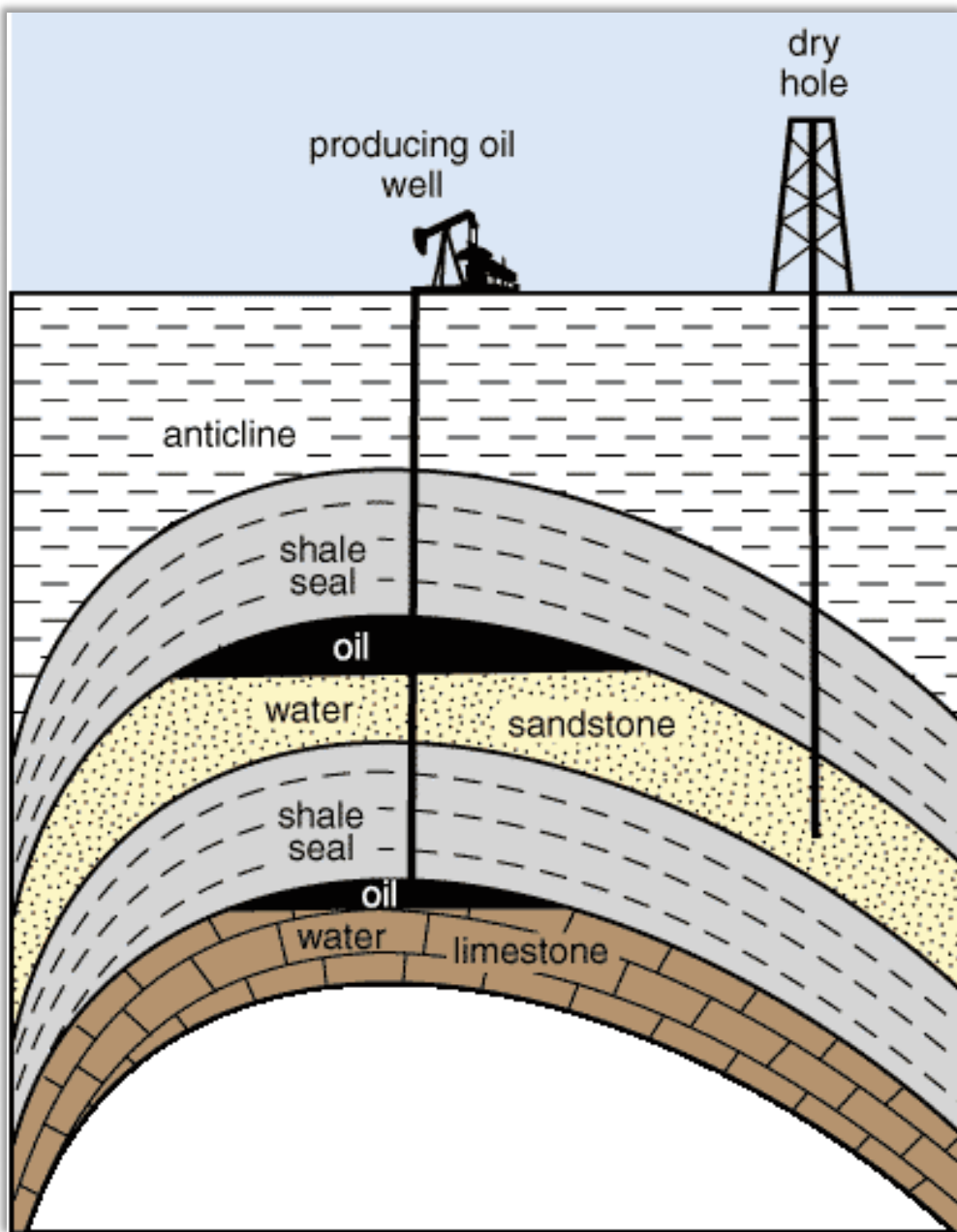
Lease Acquisitioning

- Once you've identified a prospect, you have to lease the land.
- Lease from governments or from private individuals.
 - Lease bonus associated with securing right.
 - Royalty from production.
- Oil & gas companies paid from 2004-2008:
 - \$58.9 billion in U.S. on acquiring unproved acreage.
 - \$12.3 billion in federal offshore lease sale bonus bids.

Source: EIA: Performance Profiles of Major Energy Producers 2008 Table T-15 & BOEMRE

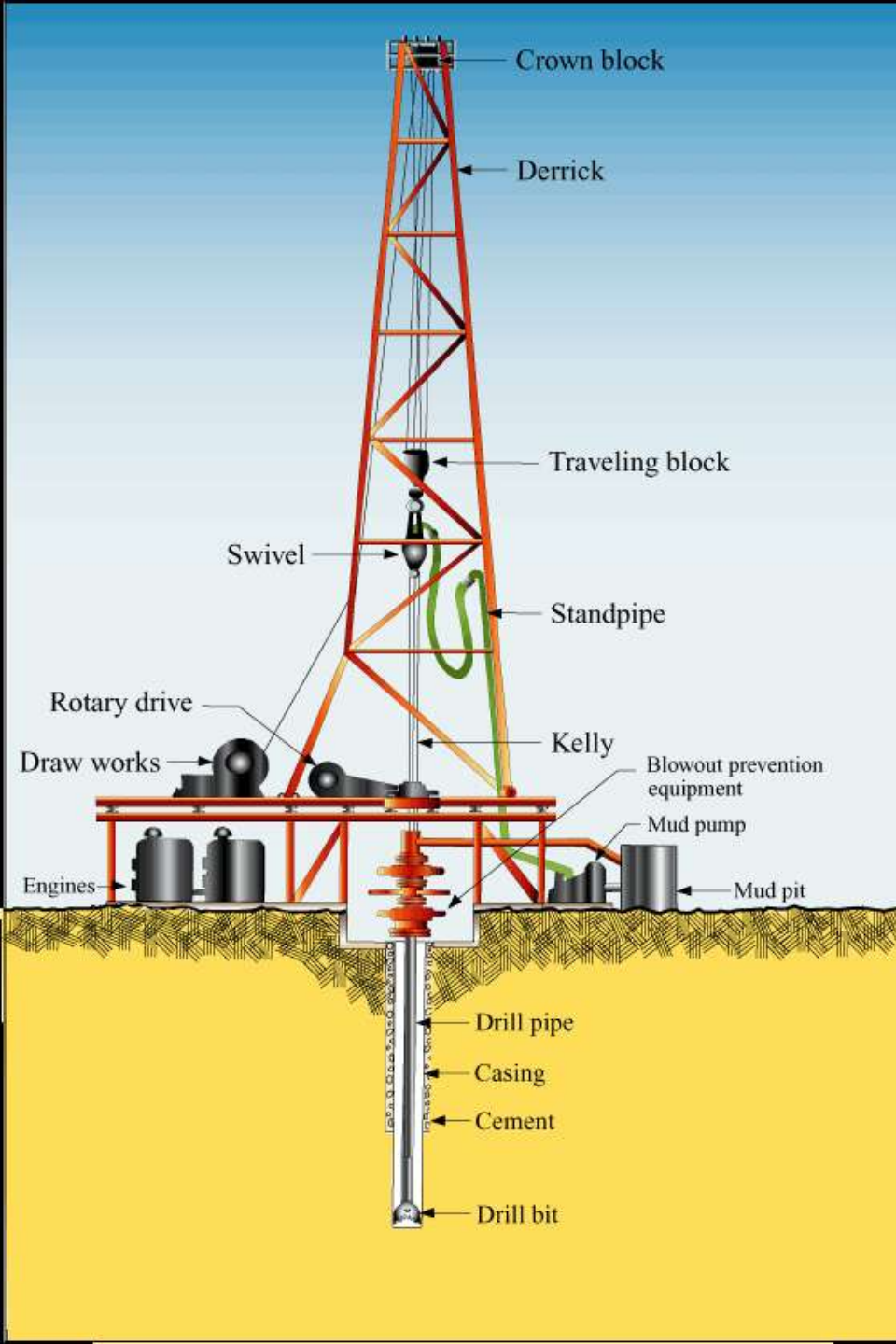
Acquisition Cost Recovery

- No set identifiable life over which to recover acquisition costs.
- Tax code allows for the depletion concept to be used.
 - Two types.
 - Must generally wait until the acreage is producing for recovery to begin.
- Cost Depletion: $(\text{Units Sold}) / (\text{Units Sold} + \text{Reserves}) \times \text{Adjusted Basis}$
- Percentage Depletion: set percentage of gross income from mineral property allowed as deduction.
 - Available for wide range of natural deposits at different rates (oil and gas at 15%).
 - Limitations for oil and gas:
 - Only available to small independent producers.
 - Limited to average of 1,000 bpd production.



Despite all the advances in technology, we still don't know what is down there and where it is until we invest the capital, time and labor to determine if the well is going to be a "producing well" or a "dry hole."

Diagram of a standard above ground drilling operation.



Drilling Steps

1. Obtaining permits
2. Setting up the drilling site
3. Placing drilling rig and setting pilot hole
4. Drill in sections and filling well bore with steel or cement casing to stabilize the well
5. Log the well (test presence of hydrocarbons)
6. Complete well
7. Perforation

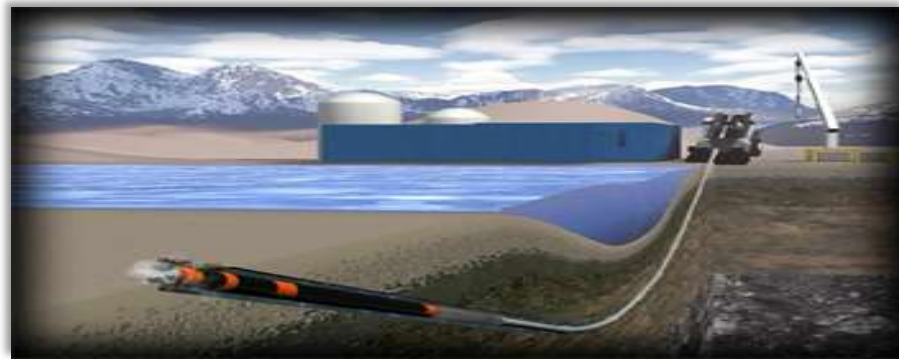
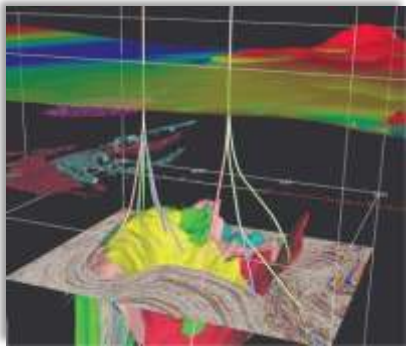


Drilling Costs

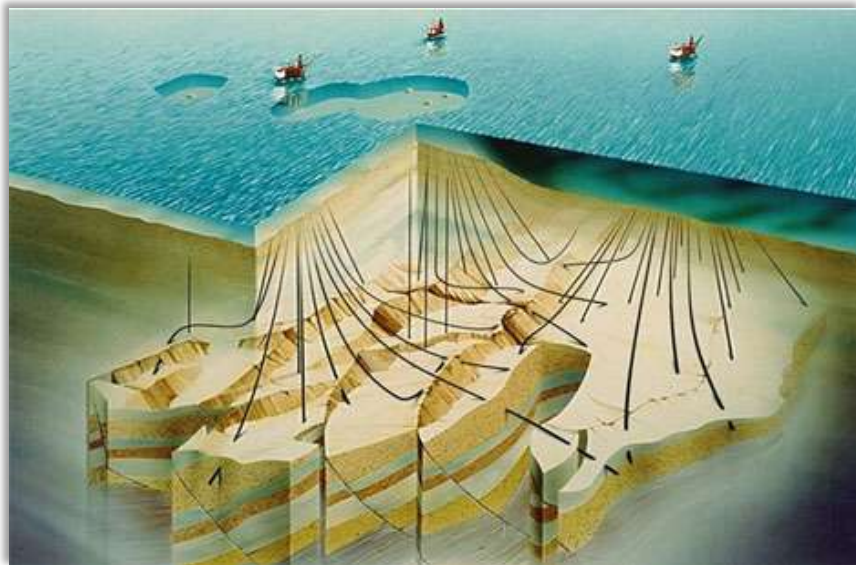
- When companies drill, they incur two types of costs:
 - Non-salvageable: labor, site preparation, engineering, design, etc.
 - Tangible: equipment and other physical assets.
- Non-salvageable or “intangible” costs typically represent 60-80% of the cost of the well.

Tax Treatment of Drilling Costs

- Tangible costs are recovered through depreciation.
- Intangible costs (“IDC”):
 - Since 1913, companies have been able to recover these costs by deducting them.
 - Independents can expense 100% in year one;
 - Integrations may expense 70% in year one and recover the remainder over 5 years.
 - Policy consistent with how other businesses are able to treat similar business costs to help manage risk:
 - R&D for tech industries;
 - Mine development costs.



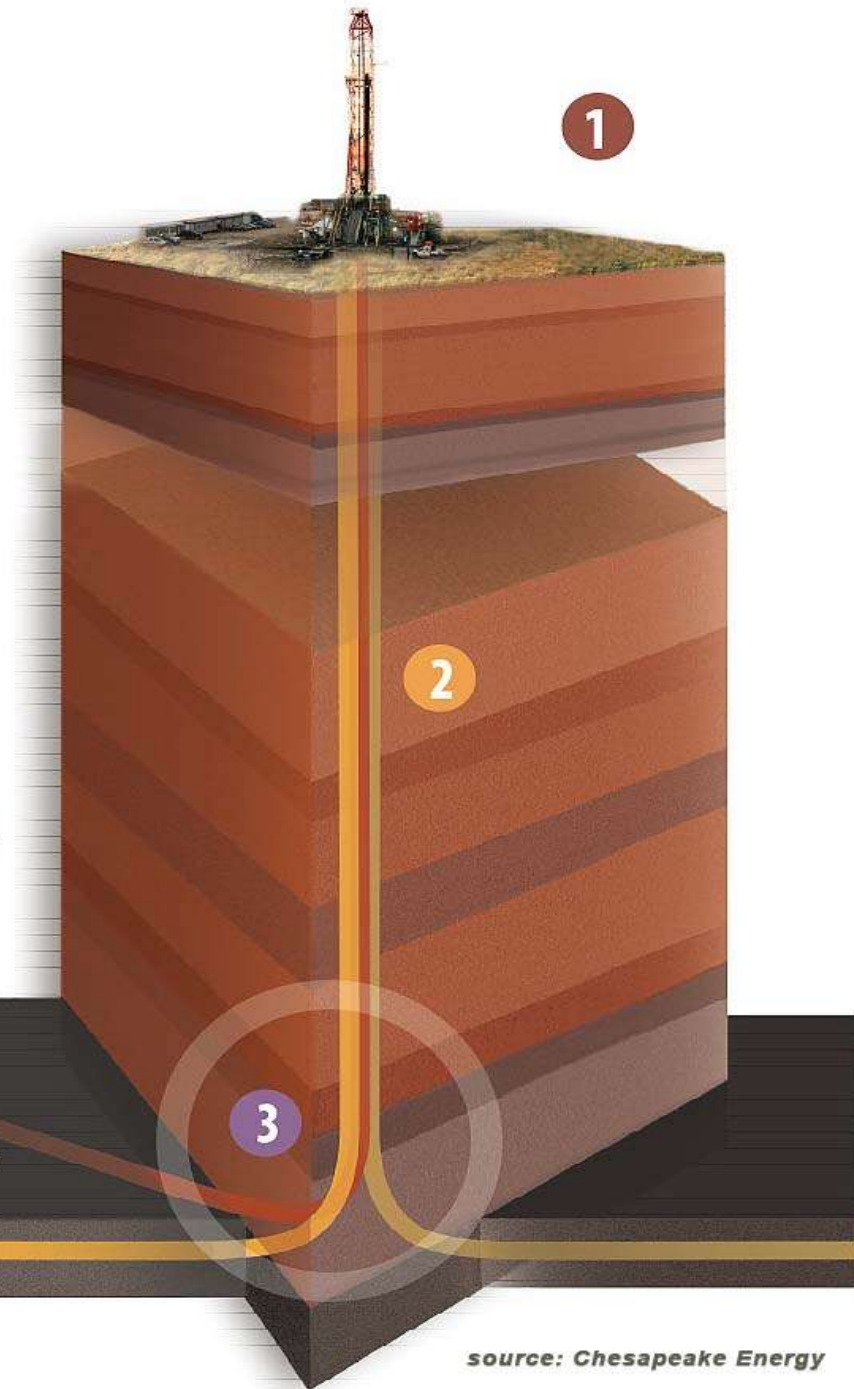
Innovation leads to new drilling technologies...



Going Horizontal:

Steps in Horizontal Drilling

1. Stake location, bid construction work, prepare location and padsite, and bring in drilling rig and equipment.
2. Spud and drill vertical portion of well using conventional methods.
3. Drill kick-off (curved) section, with the use of a downhole motor mounted directly above the bit, in order to make the turn from vertical to horizontal. Downhole instruments called MWD (measurement while drilling) packages transmit sensor readings upward, allowing operators at the surface to build the angle.
4. Drill horizontal wellbore, still using MWD to hold the angle and direction.
5. Case off the horizontal lateral with steel casing to allow for completion and fracture stimulation, preparing the well for production.



IDC means jobs, jobs, jobs.



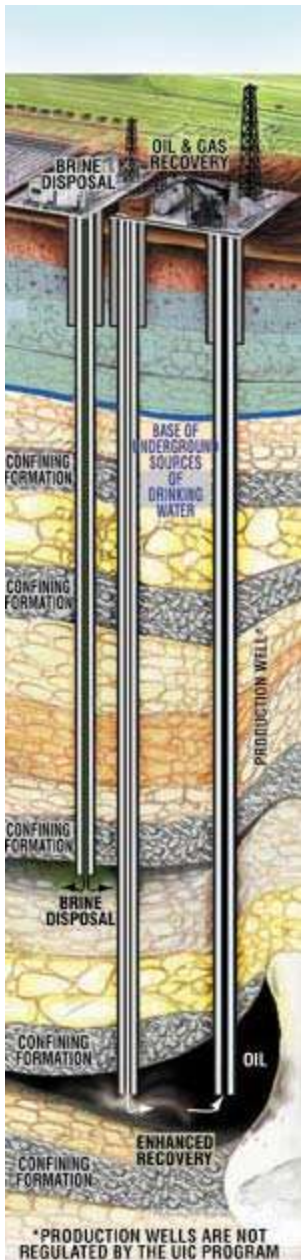
Represents portion of capital to drill next well and economic impact of repeal is substantial.

Tax recovery would be over life of well.

The repeal of IDC place thousands of jobs at risk:

- 58,000 direct, indirect, and induced US jobs are at risk in 2011
- 165,000 total direct, indirect, and induced US jobs are at risk by 2020

Secondary Recovery & Injectants



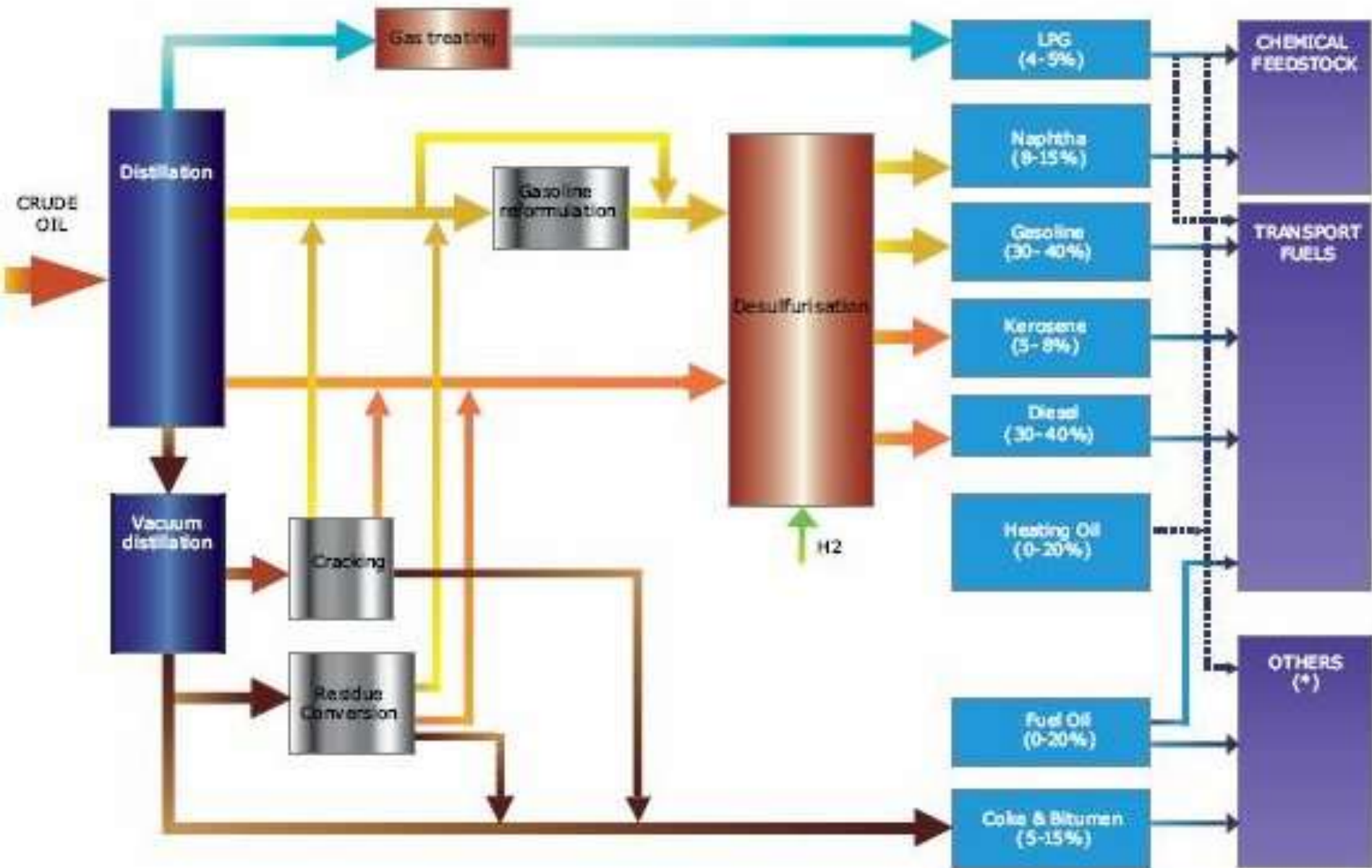
- An oil well's natural pressure can only sustain production for a limited amount of time.
- When natural pressure stops, producers must inject gases – such as CO₂, natural gas, or nitrogen – to re-pressurize the reservoir to maintain recovery.
 - Oil industry is the basis for much of the current carbon sequestration technology.
 - Currently, the cost for tertiary injectant is deducted in year one (Sec 193).

So you have oil...

...now what do you do with it?



Refine it into many products used every single day.



(*) HEATING, SOLID FUELS, LUBRICANTS, ASPHALTS, PACKAGING

Major Refinery Products

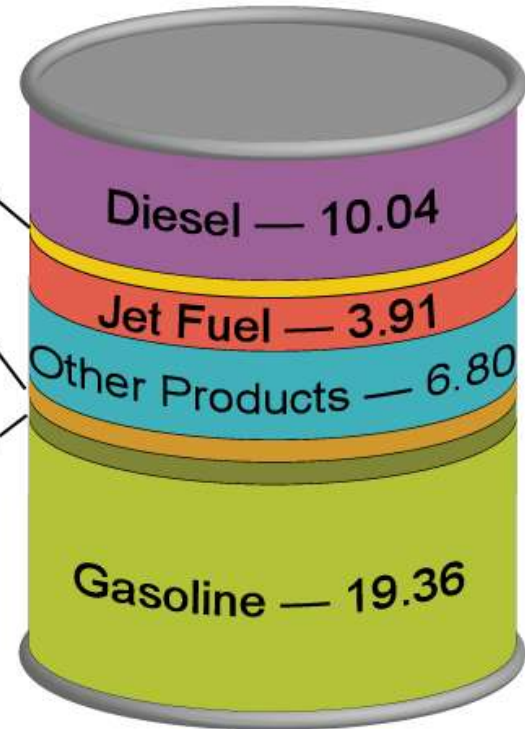
1. Gasoline
2. Kerosene
3. Liquefied Petroleum Gas
4. Distillate Fuels
5. Residual Fuels
6. Coke
7. Asphalt
8. Solvents
9. Petrochemicals
10. Lubricants

Products Made from a Barrel of Crude Oil (Gallons) (2009)

Other Distillates
(heating oil) — 1.24

Heavy Fuel Oil
(Residual) — 1.68

Liquefied
Petroleum Gases
(LPG) — 1.72



Refining Industry and Taxes

- Depreciation
- Section 179C – 50% expensing of some refining investments
- Section 199
- Use of the LIFO accounting method

Sec. 199: Domestic Manufacturers Deduction

- Passed in 2004, to try and retain manufacturing and spur job creation.
- Allows taxpayers to claim a deduction equal to a percentage of US production.
 - Production includes manufacturing, production, growing and extraction
 - Percentage phased in over time and generally equates to a US rate cut.
- Every US industry that qualifies receives a 9% deduction today (3% rate cut) – except the oil and gas industry – which was capped in 2008 at 6%.

Inventory (LIFO)

Most all US oil and gas manufacturers use a method of accounting called LIFO (last-in, first-out).



This is an asset-management and valuation method that assumes oil and gas produced or acquired in inventory last (most recent), are the ones that are used, sold or disposed of first.

The LIFO accounting method is merely a way to determine income for companies that anticipate inflation or rising prices over the course of their operations that has been in use for over 70 years.

Repealing LIFO would require companies to redirect cash or sell assets in order to cover the tax payment.

Then it's out the door...

What Consumers are Paying for at the Gasoline Pump



Source: Average of gasoline components from January through November 2010 as reported by EIA.

US Companies Operating Abroad

- Driven by resource location:
 - Unlike other industries that can establish factories in any country that yields the best cost-benefit analysis, we have to go to the resource.
 - Mostly deal with foreign governments to secure resource.
- Dealing with foreign governments:
 - Access contracts usually allow for some type of accelerated cost recovery.
 - Countries require royalties or government profit share of production.
 - All governments impose income taxes.

The Foreign Tax Credit

- US imposes a worldwide tax system:
 - Taxes all income earned,
 - The US is the only OECD country using this system.
- Fairness of worldwide system depends upon adequate foreign tax credit mechanism.
 - Foreign taxes offset US tax on same income.
 - Avoids double taxation.
- What is a “dual capacity” taxpayer?
 - Taxpayer that makes payments to a foreign government as well as pays taxes.
 - US concern – credit for taxes only.
 - **Dual capacity rules –**
 - **Taxpayers must prove tax meets US definition of tax, and**
 - **Prove that it is not a payment for some other benefit.**

Foreign Tax Credit and DCT Example

	Current		FY 2012 Proposal	
	US Based Oil Companies	Other Competitors*	US Based Oil Companies	Other Competitors*
Host Country Tax				
Profit	100	100	100	100
Resource Tax Rate	35%	35%	35%	35%
Corporate Tax Rate**	10%	10%	10%	10%
Host Country Tax	(35)	(35)	(35)	(35)
Host AFIT Profit	65	65	65	65
Home Country Tax				
Profit Subject to Tax	100	N/A	75	N/A
Home Tax Rate	35%	N/A	35%	N/A
Tentative Tax	(35)	N/A	(26)	N/A
Foreign Tax Credit	35	N/A	10	N/A
Residual Tax	0	N/A	(16)	N/A
Total AFIT Profit	65	65	49	65
Effective Tax Rate	35%	35%	51%	35%

* Other competitors are not taxed on profit earned outside their home country

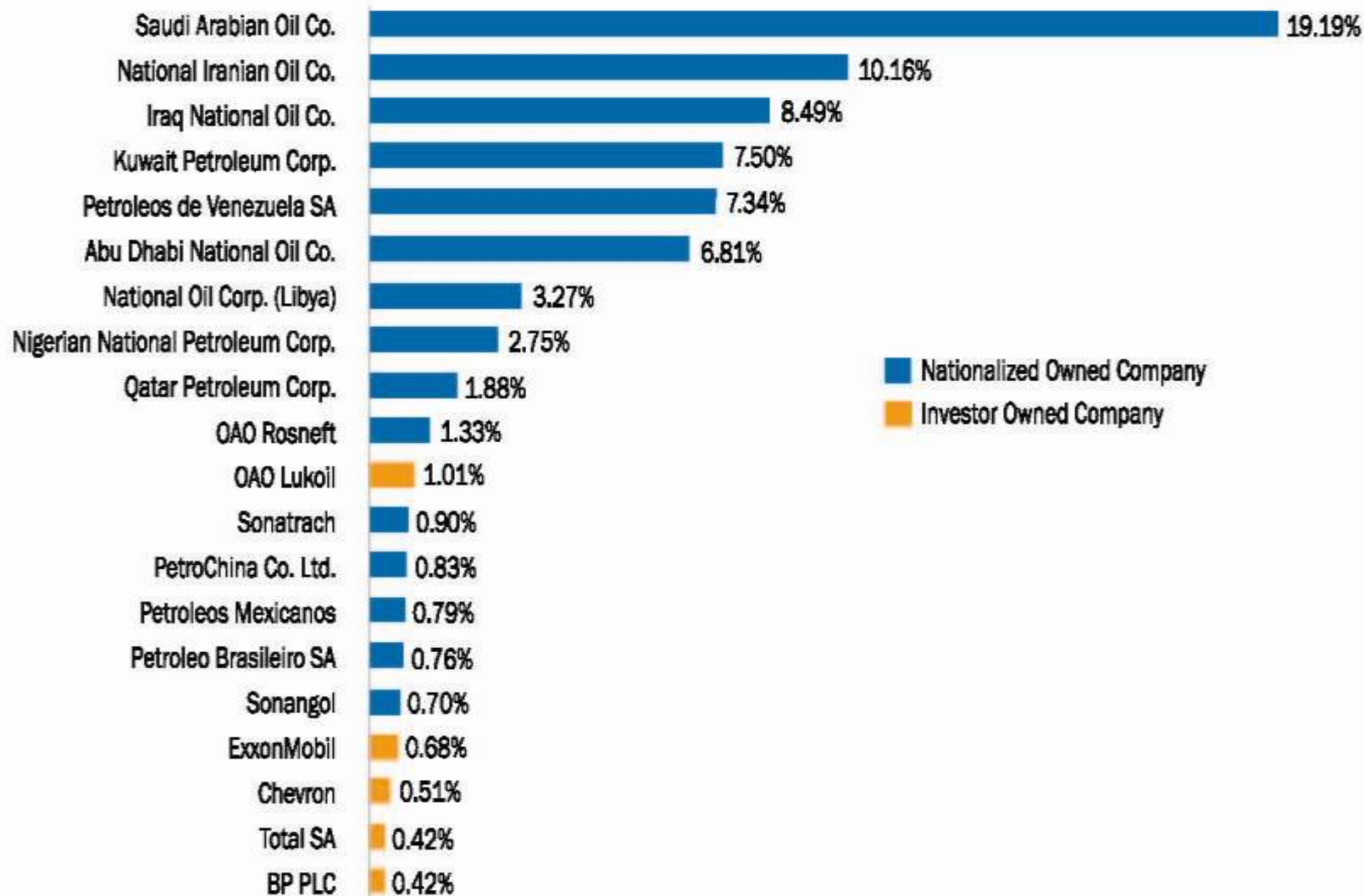
** Local corporate rate is replaced with a resource tax for all extractive industry taxpayers

Fast Facts

- Top 5 oil producing countries, in order:
 1. Russia
 2. Saudi Arabia
 3. **United States**
 4. Iran
 5. China
- Top 5 oil consuming countries, in order:
 1. **United States**
 2. China
 3. Japan
 4. India
 5. Russia
- Top 5 oil exporters to US in order:
 1. Canada - 21%
 2. Mexico - 10%
 3. Venezuela - 9%
 4. Saudi Arabia - 9%
 5. Nigeria - 7%

Source: 2009 EIA.

2009 Largest Oil and Gas Companies (percent of worldwide reserves)

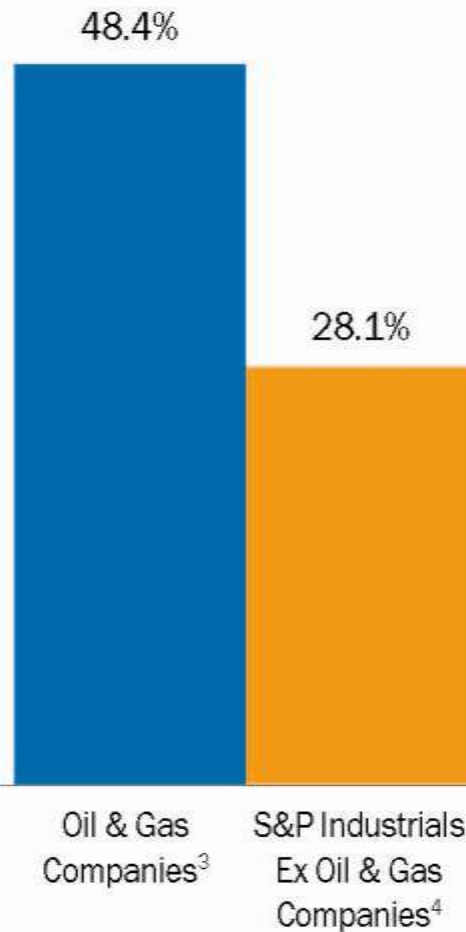


Source: Calculated from World Reserves of 1.3 trillion barrels as of January 1, 2010 according to *Oil & Gas Journal*, December 6, 2010 and leading companies according to: *Oil & Gas Journal*, September 6, 2010.

America's Oil & Gas Industry

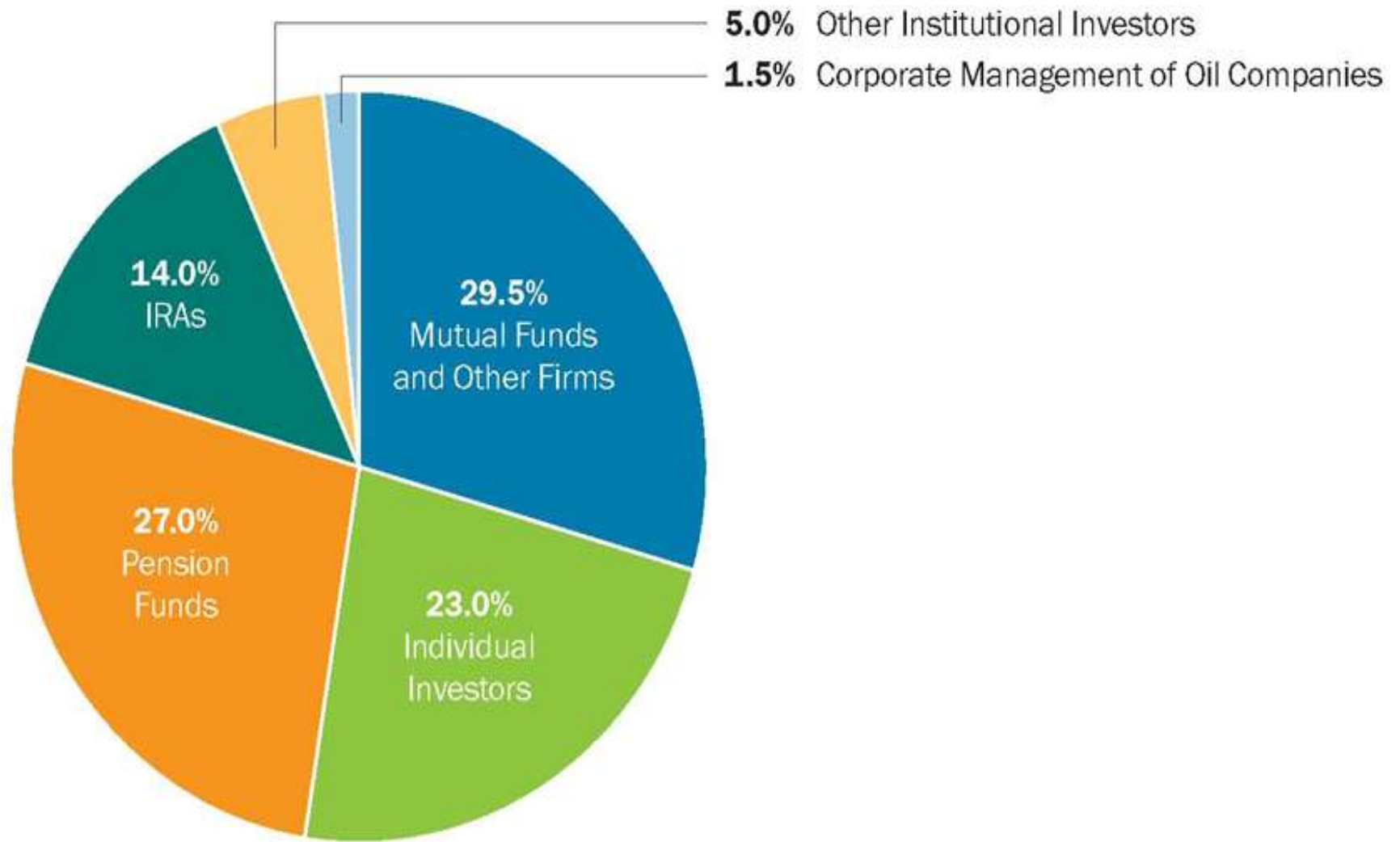
- The industry supports 9.2 million jobs throughout the economy.
 - The national average oil & gas upstream salary is \$96,844/year – more than **DOUBLE** the average annual salary of all occupations.
- Industry contributes 7.5% of total GDP.
- Production:
 - America produces 2 billion barrels of crude per year.
 - Between 2005 and mid 2010:
 - North Dakota production, including Bakken oil reserve region increased 122%, and
 - Domestic natural gas production has increased 16%

Income Tax Expenses as Share of Net Income Before Income Taxes (2009)



Source: Compustat North America Database (January 2010 update).

Who Owns "Big Oil?" (Holdings of Oil Stocks, 2007)



Source: *The Distribution of Ownership of U.S. Oil and Natural Gas Companies*, SONECON, September 2007

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