

Oil and Natural Gas Extraction



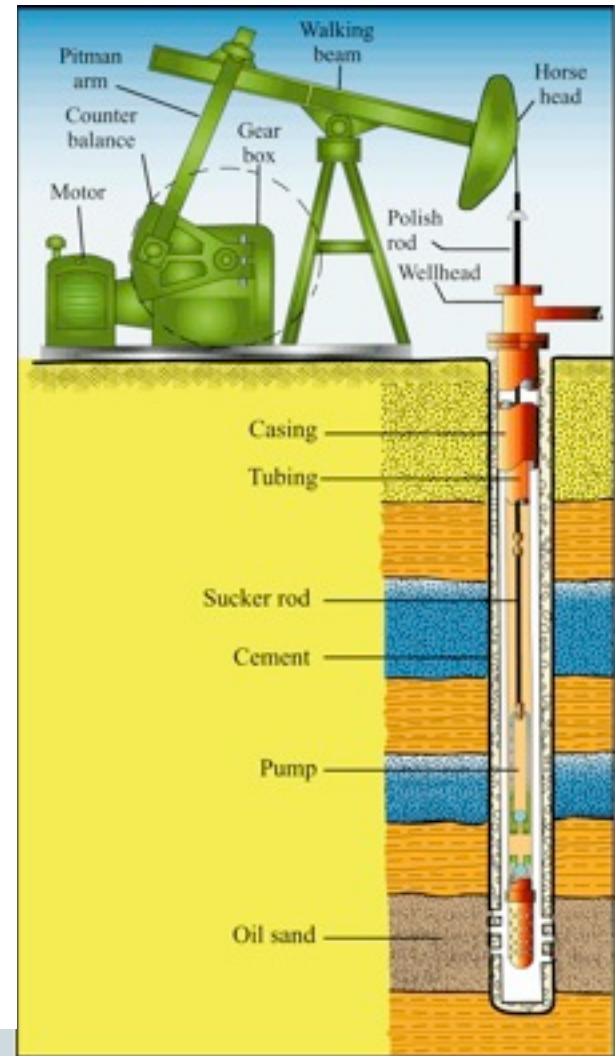
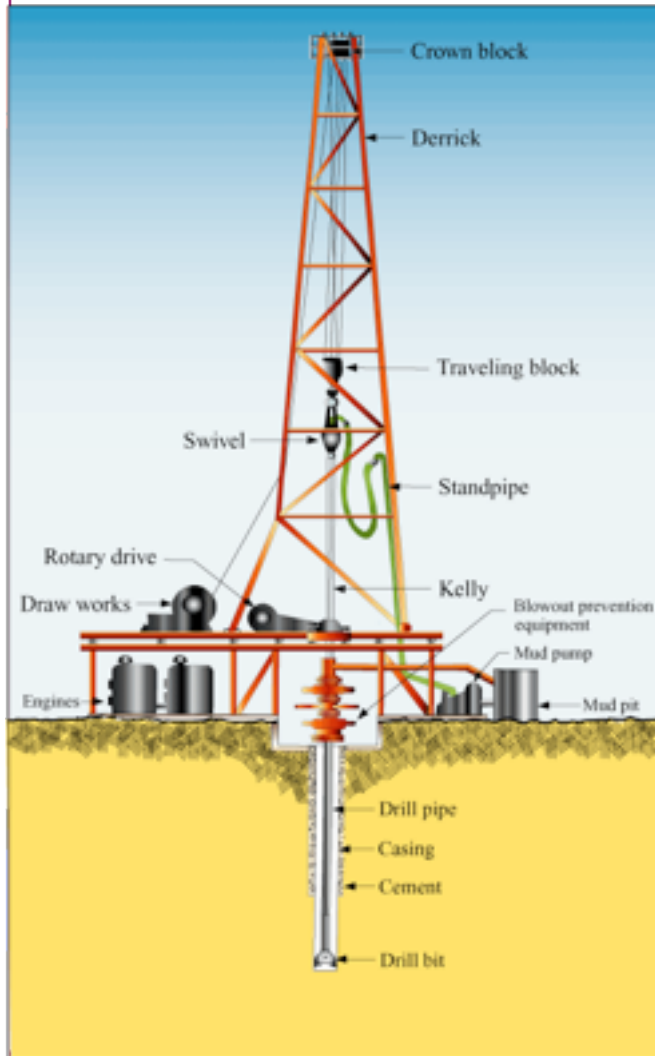
<http://earthref.org/SCC>

Scripps Classroom Connection

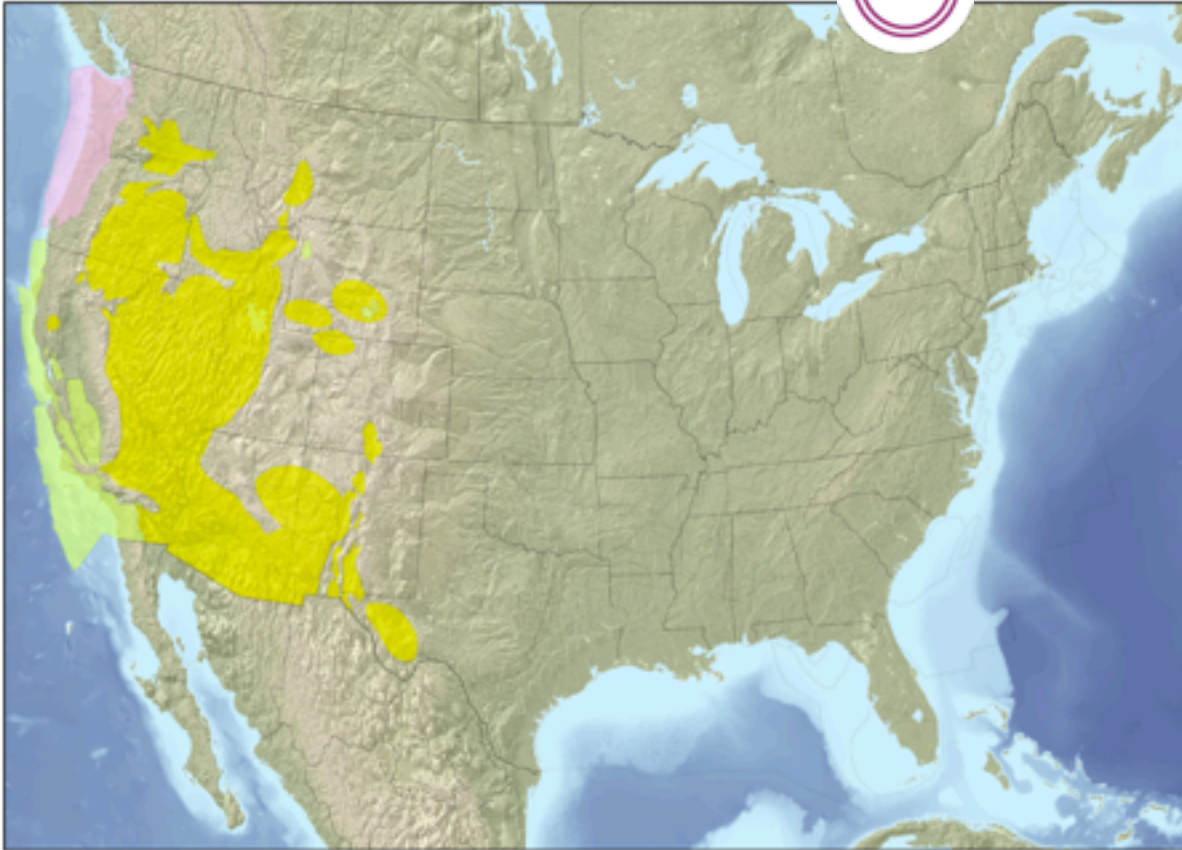
Drilling for Oil

Drilling Process

1. A “surface hole” is drilled to just above the expected oil reserve depth.
2. The hole is coated with a cement casing to prevent cave-ins.
3. Drilling continues.
4. Once oil is reached, an explosive charge is set to perforate the casing.
5. A packing device is set around the pipe to seal the hole just above the oil reservoir.



Drilling for Oil (offshore)



Movie Time!



- http://www.youtube.com/watch?v=bh_wNVUx9SI
- <http://www.youtube.com/watch?v=Ar79VQSa6xQ>
- http://www.youtube.com/watch?v=yvfMSe7sh_U

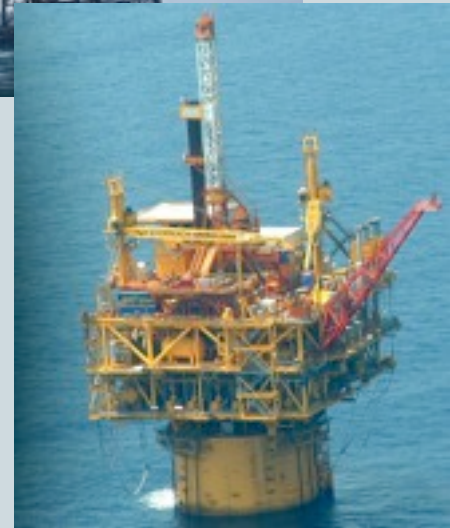
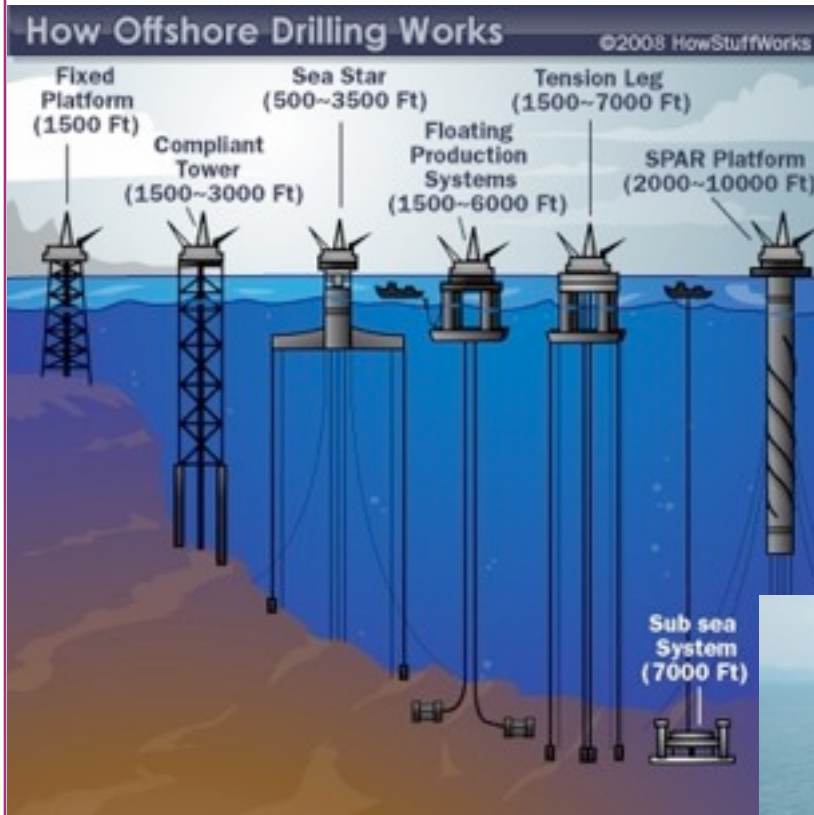
Offshore Drilling



<http://earthref.org/SCC>

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Drilling for Oil (offshore)



\$568 million →

<http://earthref.org/SCC>

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Drilling for Oil (offshore)

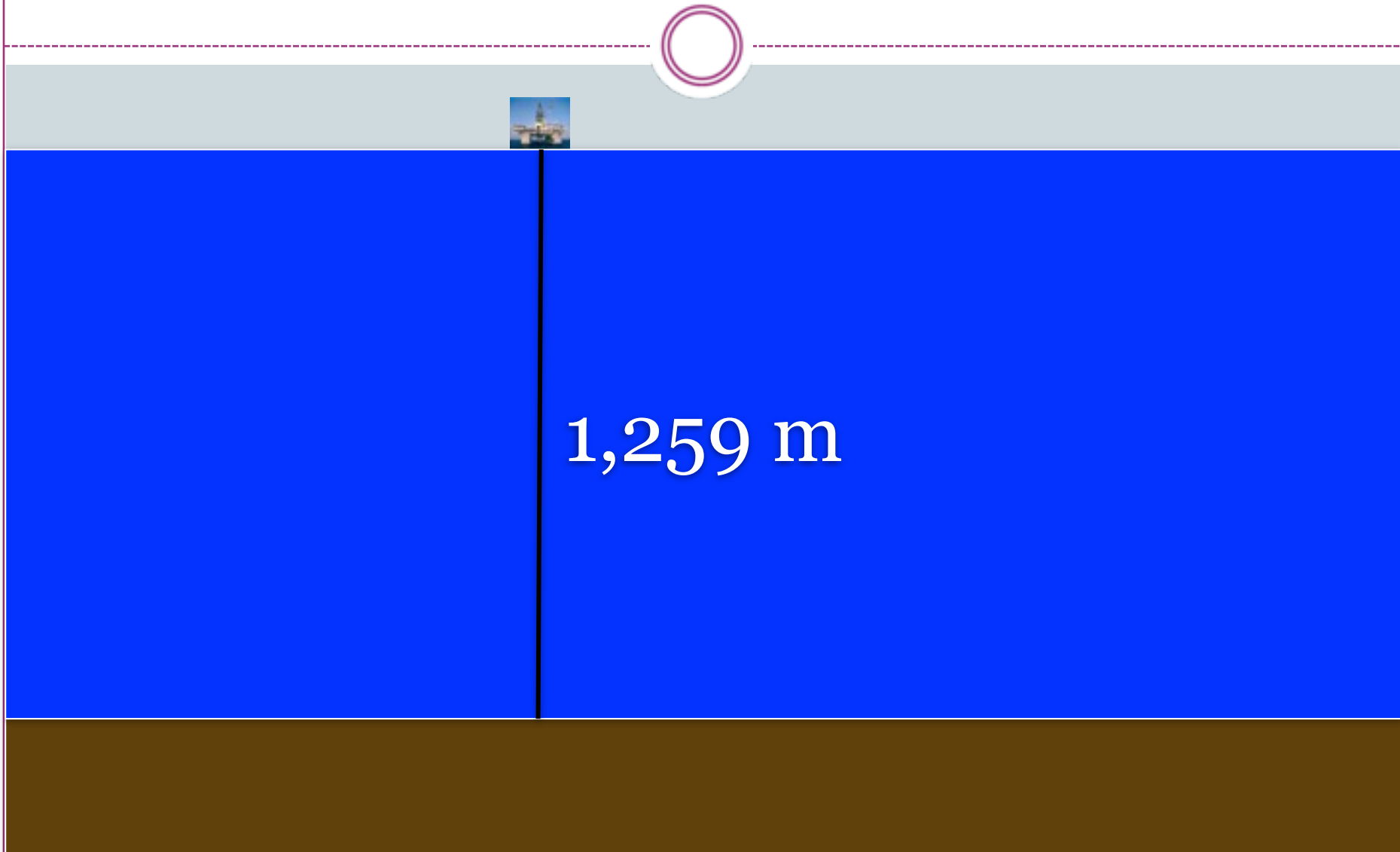


Deepwater Horizon Drilling Platform



Manhattan Life Insurance Building
(Tallest building in New York – 1894)

Drilling for Oil (offshore)



Drilling for Oil (offshore)



1,259 m

10,685 m



Oil Drilling Lab

Instructions:

Using the map you created from the seismic data of the region, drill for oil to make a profit!



You are a team of drilling engineers. Make as much profit as possible!

Wrap Up



- Drilling for oil offshore can be a complicated process
- It's very expensive, and resource intensive
- However, if the oil reservoir is large enough, drilling offshore can be profitable.