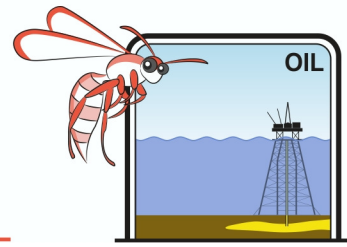


## Pressure & Depth Of Burial - Student Activity



Hydrocarbon (oil and gas) migration occurs as a response to pressure from overlying rocks, sediment and water.

We shall see how pressure increases with depth.

Materials per student or group

- 1 clear clean plastic bottle with cap
- 1 thumb tack or nail
- Water
- Sink or outside area where splashing can occur

1. Fill the bottle with water and screw the cap on tight
2. Lay the filled bottle on its side and make three punctures evenly spaced down one side of the bottle
3. Mark these positions on the bottle diagram on the right
4. Making sure the holes are pointing away from you lift the bottle by the cap
5. Draw the trajectory of the three streams of water on the diagram on the right



Explain why the three streams of water were shaped differently

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Would oil and gas at depth under the earth be affected the same way as water?

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Why do some oil wells “blow” when they are first drilled?

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### **Interesting facts**

***Mine walls and roofs have to be reinforced because of pressure from overlying rock.***

***Temperature also rises with depth. The World’s deepest mine, Tona Tona in S. Africa reached 3.9km in 2011. In the deeps, the rock face can reach 60°C and miners would die without air conditioning.***