

# Oil and Gas Formation

OIL AND GAS PLAY A MAJOR ROLE IN OUR DAILY LIVES, FROM THE CARS WE DRIVE TO THE FOOD WE EAT.

## Ancient marine life

When plankton, algae and other marine organisms die, they sink to the bottom of the ocean. Over millions of years, sediment (mud, silt and sand) can bury the dead plants and animals in an anoxic environment (without oxygen).

## Rocks compressing

As more layers of sediment cover the organic material, the increasing heat and pressure change the fossils to a material called kerogen, and the sediment forms rocks.

## Future

Oil and gas are nonrenewable energy sources – they take a long time to replenish. Many everyday materials like plastic and clothing are created using fossil fuels. Our demands for oil and gas continue to increase and conventional sources are becoming scarce. But new technologies are allowing us to access unconventional reserves that were once impossible to tap into.

## Molecular change

When kerogen is under high temperatures and pressure, its carbon bonds are broken apart and form lightweight molecules called hydrocarbons. These form into either oil or gas depending on heat conditions. The oil and gas slowly seeps up through rock or sediment until it gets trapped by an impermeable layer, a fault or a fold.

Gas Reservoir

Oil Reservoir