



Making a full recovery - video transcript

Edward van den Heuvel, Business Development Manager, Chemical Enhanced Oil Recovery

"Well, in this world of surging oil prices, people may perceive that oil is running out. But in actual practice, that is not the case. Because when an oil field is left, still 70% of that oil remains. Only 30% is recovered with say, the current technologies.

"EOR is a special technology that tries to release more oil from the reservoir. If you look at a reservoir, the oil is trapped into the pores of the rock. So it's not a lake, it's trapped in the pores of the rock.

"And Shell Chemicals is developing detergents to kind of help release the oil from the rock to be able to produce it and to extract that from the existing reservoirs."

Robert Moene, Technical Programme Manager, Chemical Enhanced Oil Recovery

"The enhanced oil recovery works because we add a small percentage of detergent to the water that we put in the oil well. And in the oil well, that detergent will form an emulsion, a microemulsion in the ground with the oil.

"The role of the surfactant is to make sure that the microemulsion is being formed in the ground and that will push the oil forward into the production well.

"This is an example where you can see the microemulsion. It's in the middle here so that's a combination of water and oil.

"Every oil well is different in temperature, in composition, different types of oil, different types of rocks. So for every oil well, you need a different surfactant and in Shell Chemicals, we are very capable of making all these different detergents that are suited for those different oil fields.

"What we do here in Amsterdam and Houston in our laboratories is to synthesise, to manufacture different types of detergents. And those detergents are then tested in their effectiveness for enhanced oil recovery."

Edward van den Heuvel

“So there is a massive scope for EOR and a massive potential for this technology.

“About say 1% of improved recovery is equivalent to 20 to 30 billion barrels of oil and at today's consumption that means about a year's consumption of the world today. So it's a huge potential there.

“Shell Chemicals is developing those molecules to really try to squeeze out the last barrel out of a reservoir.”