

Hot Water

Recently I met with a Petroleum Engineer and Cal Poly San Luis Obispo Professor, Mason Medizade to discuss this project. We talked about the injection of steam into wells to heat heavy crude oil so that it becomes thin enough for extraction. He is in favor of steam injection, which is currently the best available technology for extracting heavy crude oil and is currently being used throughout CA. In the Huasna Basin steam has historically been required to extract the heavy oil found there according to Division of Oil and Gas well logs. In their project description, Exceleron points out that steam is being used on other fields in the same Monterey Formation as the Huasna Field, for example in San Ardo, Monterey County. It really sounds to me like steam injection is the way to go for this project.

So why has Exceleron proposed the use of hot water injection in the project description instead of steam injection? They believe the oil to be thin enough to not require the extra heat from steam. But this is only an assumption, and well logs show otherwise. They claim that there are not enough local power sources to heat steam, but Chevron is demonstrating the use of solar concentrators to produce steam onsite from the sun's energy. So why again, are they proposing to use hot water?

One reason is that steam requires more energy to produce than hot water, so steam leads to more fuel usage, more air emissions, more GHG emissions. If Exceleron proposed steam their would be greater environment impacts than with hot water. So by choosing hot water, they are choosing the best-case scenario with the least impacts. But what if hot water fails, (which history shows it will) and steam is needed. Then the impacts of this project will be drastically increased, and the EIR analysis of hot water will be worthless.

I ask that an independent petroleum engineer such as Mason, who I met with, review hot water injection for technical feasibility. I ask that we assume the worse case environmental scenario, that steam is needed, instead of assuming the best-case scenario, hot water.

The project description also lacks a description of how scale and other sediments from some of the produced water will be heated and reinjected into the formation. During heating changes in temperature and pressure often cause precipitation and scale formation in heaters and boilers from dissolved solids. Over time the scale needs to be removed and disposed of. In the Monterey formation there are Naturally Occuring Radioactive Materials associated with the bedrock and these could be present in boiler and heat exchanger scale. Please account for the presence and handling of these dangerous materials in the project description and EIR.