

Heavy Oil

Comparison of High-Tech Oil Technology with Other Current Conventional Thermal Technologies

	Features of Method	Conventional Thermal Methods	High-Tech Oil Technology
1.	Steam – temperature, pressure	up to 370 °C, 18 MPa	-
2.	USC water – temperature, pressure	-	up to 650 °C, 55 MPa
3.	Irreversible molecular modification – light oil from heavy oil (no solvent required for transportation)	no	yes
4.	Phase change / volume increase in reservoir (additional fractures)	no	yes
5.	Ability for using catalysts to improve oil quality	no	yes
6.	Formation permeability increase	to a lesser extent	to a greater extent
7.	Re-energization of the reservoir	to a lesser extent	to a greater extent
8.	Increase of production rate / well flow rate	to a lesser extent	to a greater extent
9.	Depth of application	up to 1,800 m	up to 4,000 m
10.	Production of deep-lying ultra-heavy oil / bitumen	no	yes