

Open hole Cased hole

Plasma Impulse Technology to Enhance Oil Recovery in HTR Reserves



SCOPE OF APPLICATION

- Treating of oil and gas well perforation intervals in the late stages of development
- Treatment of filters at gas wells

FEATURES AND ADVANTAGES

A borehole source of directional periodic elastic oscillations with sufficient power (up to 96 MPa) to destroy the sealed space, increase the mobility of the borehole fluid, on the other hand, preserving the integrity of the cement ring.

In producing wells

- cleaning of perforated intervals from colmated rock particles and drilling mud residues, its filtrate, as well as sediments of salts and asphaltene in the porous medium.
- opening of natural reservoir fractures and formation of new ones.
- slight change in porosity with a significant increase in permeability

In injection wells

- injection profile control,
- for redistribution of injected fluid over interlayers it is not necessary to carry out isolation, drainage measures with the use of various surfactants

The effect lasts from 6 to 24 months and more, depending on reservoir properties and the stage of field development.

SPECIFICATIONS

Impulse parameters:

- Duration	50–55 μsec.
- Period	1 pulse per 35 seconds
- Power	Up to 96 MPa

Limitations on the type of well fluid

Temperature, °C	70
Pressure, MPa	25
Well diameter, mm	70–150
Tool length, mm	max 2700
Tool size, mm	52
Tool weight, kg	max 20