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**ON POSSIBILITY TO MANAGE THE STRESSED STATE OF THE MEDIUM**

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Environmental aspects are the most important scientific and social problems. The obtained results allowed us to understand, to a certain extent, a physical mechanism of negative technogenic effects and conclude that environmental problems are more complicated and delicate than seemed to be at first sight, and that any large scale industrial activity should be controlled to avoid disturbance of natural balance and, therefore, significant economical damage. Unlike many specialists, we look at ecological problems not from mechanical and chemical pollution of the environment point of view but from the point of energy pollution, accumulation of additional tension therein, caused by uncontrolled industrial activities. Numerous negative effects are the consequences of changes in the state of the medium. Years of investigations allowed us to develop criteria of medium diagnostics, which can be used to approach, on a new methodical basis, the problem of environment protection. This is associated with understanding of a medium not as a static, but as a dynamic object, the parameters of which change constantly. The studies proved that if repeated, even low intensity external impacts following in certain consequence, the medium could change its characteristics and show high dynamic activity. Thus, appearance of induced seismic events can be caused by external impacts power of which is extremely lower than the power of the earthquake itself. One of the most important conclusions is that high power events can appear even in areas previously considered as aseismic. Non-controlled industrial activity on the territory with high tense sensitivity may lead to significant changes in seismicity reactions, activation of tectonic processes, increase of a medium's tension, appearance of vibration fields, manifestations of other geophysical fields, elastic and inelastic deformations. On the basis of received results, we developed a methodology to manage stressed state of the medium. Its practical application has been the Technology of influence on the oil field in order to increase oil production. The Technology is realized through applying vibroinfluences on the entire territory of an oil field and allows controlling stressed state of the medium. Most informatively changes of the stressed state of the medium are reflected in behavior of high frequency seismic waves, microseisms and variations of distributions of intensities of electromagnetic waves in all depths. During application of the Technology managed increasing of the stressed state of the medium led to rise of pressure inside the oil layers and level of oil extracted for a period of 6- 8 months and even longer. Consequently, managed decreasing of such stressed state led to quick decline of the oil production within 1-2 months. Thus, the Technology established on the real physical basis (and that is why really fundamental basis) allows to exert influence on the stressed state of the level to such extent that unlike all other methods that increase oil production by 1%-3%, our Technology increase the level of additional oil production by 15%-30%. All that proves the possibility of managing state of the medium on large areas.