

## Increasing the efficiency of reservoir development with complex geology

*Drilling of multilateral horizontal wells – a method of reservoirs development with a high degree of heterogeneity of productive horizons. ML TAML 1 practical experience.*

### ABSTRACT:

One of the methods to increase the Oil & Gas recovery factor is involving maximum reservoir volume in development. An additional challenge is a selection of the most efficient technology meeting the requirements of both geology and the economy of the project.

There is a widespread practice of horizontal well construction with a traced tendency for increasing the length of the horizontal section. In this case, the well trajectory is laid through the area of highly productive reservoirs with significant capacity. The result is the loss of a considerable share of separated/isolated plays saturated with hydrocarbons.

The introduction of multilateral wells allows starting development of previously unprofitable and economically inefficient reserves. Variation of structural design allows adapting to various geological conditions and opens additional options to optimize the economy of the entire project.

### PROJECT CHALLENGES:

- Intersect multiple targets, including heterogeneous reservoir and thin plays.
- Optimization of CAPEX.
- Increase of the gas recovery factor.

### MULTILATERAL TECHNOLOGY:

- TAML 1 system includes main bore and lateral well filter screens.
- A junction interval is within the area isolated by the lateral liner filter.
- The system is applied in the conditions of sloughing and unstable formations.

### RESULT:

- Successful construction of the pilot multilateral horizontal well using TAML1 technology.
- 4-fold increase of the initial flow rate as compared to the horizontal well (all other things being equal).
- Actual costs for well construction are reduced.
- Adverse environmental impact is reduced.
- Proven efficiency of the pilot well ensured construction of more multilateral wells.

