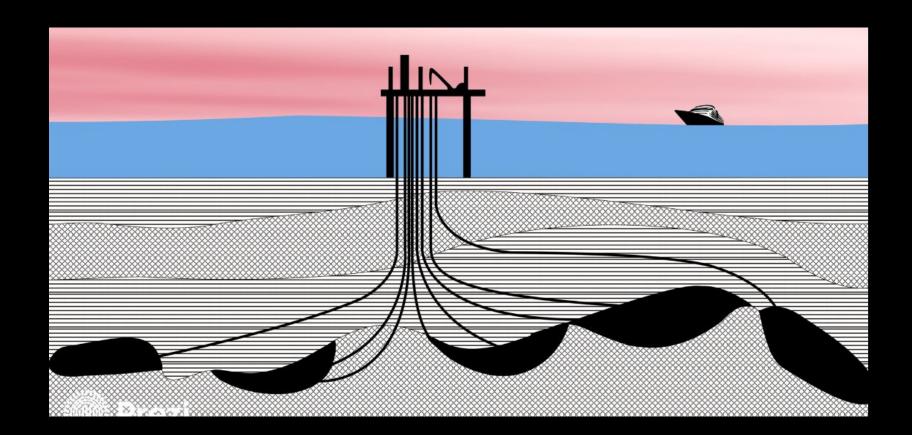


Directional drilling

A method of constructing wells in which they have a complex spatial profile, including a vertical upper interval, followed by sections with specified deviations from the vertical



History

Directional Drilling Challenges United States

First application: 1934, Conroe, Texas

Founders: John Eastman, Roman Hines, and George Feiling

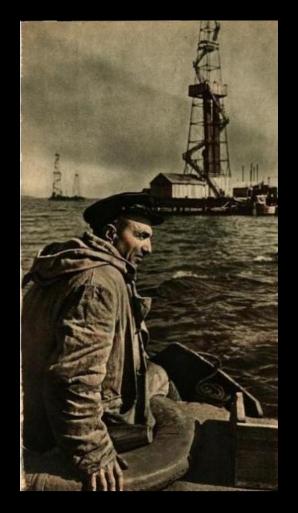
USSR

First application: onshore - 1941, Bibiheybat, offshore - 1946-1947,

Caspian Sea

Founder: Agha Neimatullah

Ага Нейматулла

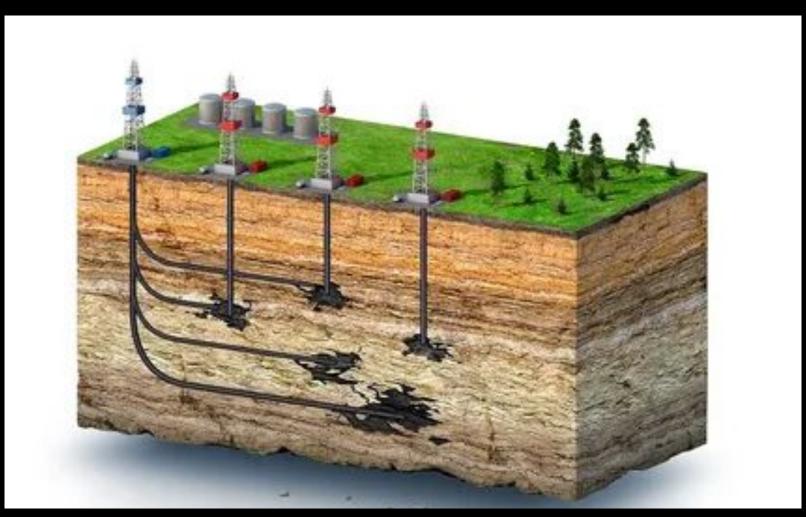


Directional Drilling Challenges

Efficient development of oil fields with low reservoir properties of the productive formation, horizontal orientation Significant reduction in the number of wells required for oil and gas field development

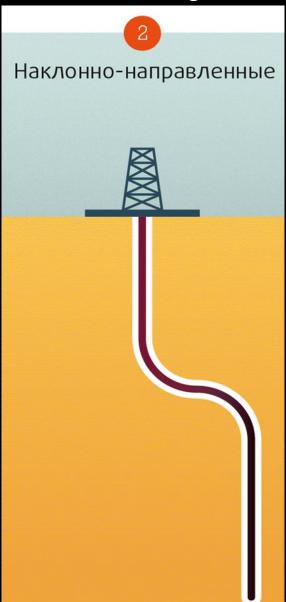
Extraction of high-viscosity oil from great depths; construction of geothermal plants in areas with low temperatures of

rock layers

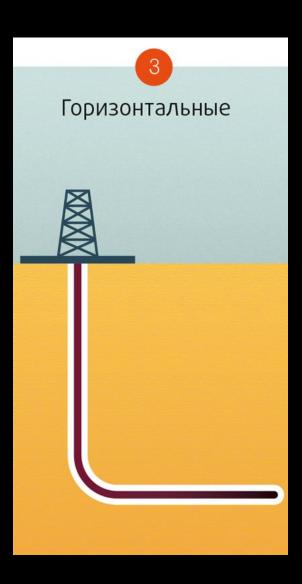


Types of drilling

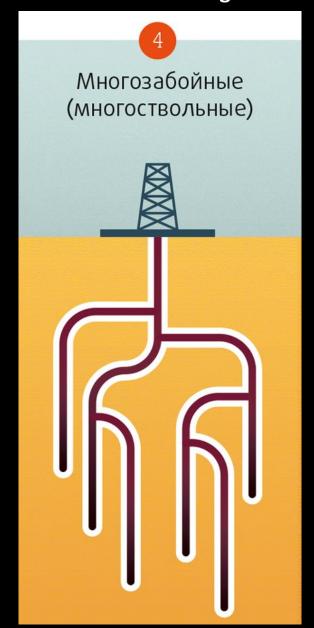
Slant drilling



Horizontal drilling



Multilateral drilling



Drilling Methods

- 1) Method of Typical Routes Multilateral drilling
- 2) Directional deflection of wells
- 3) Well deflection control through the use of various drill tool compounds

Drilling technology

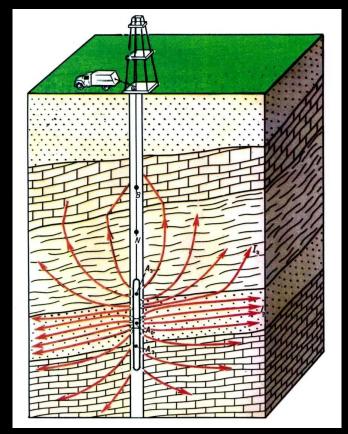


Grading system directional wells

Telemetry



Inclinometry



Advantages

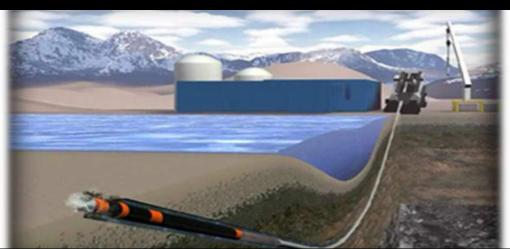
- 1. Possibility of drilling into deposits (deposits under cities, lakes, etc.)
- 2. Possibility of cluster drilling with one rig
- 3. Creation of killing wells in the prevention of accidents: disadvantages

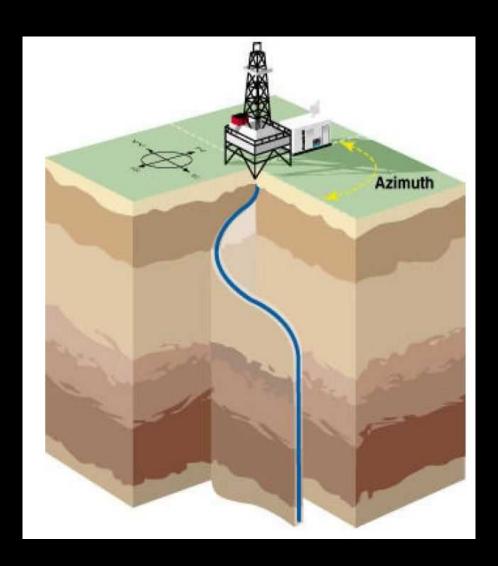
Disadvantages

- 1. The Need for Frequent Stops and Explorations
- 2. Slow Rock Drilling
- 3. The need for more sophisticated measurement tools
- 4. Complicating the prevention of sand ingress into the well

Applications







Company









Conclusion

Despite the numerous disadvantages of this method, it is used by some companies due to its advantages, according to which we use this technique not only as a method of drilling, but also as a way to prevent accidents, as well as for the study of hard-to-reach deposits