

Brief CV

*此表请提供中英翻译

English Name	Cai bo	中文姓名	才博	
Gender	Male	Title (Pro./Dr.)	Dr.	
Position (President...)	Deputy director	Country	China	
University/Department	Petroleum exploration & development research institute,Petrochina			
Personal Web Sites				
Research Area	Petroleum Engineering			
<p>Brief introduction of your research experience:</p> <p>Mainly engaged in design and field service of hydraulic fracturing treatment , Participate in and responsible for 38 subject. Field work involved in 10 oilfield company,such as Petrochina , Sinopec and Cnooc above 150 wells , Particularly in tight oil and gas and other unconventional reservoir, published 65 papers, EI/SCI index 23.</p>				
报告题目及摘要/ Title & Abstract *				
报告题目/Title:	<p>Current Situation and Developing Trend of Reservoir Stimulation Technology. in Oil and Gas 水力压裂技术进展</p>			

摘要/ Abstract:

The first hydraulic fracturing experiment was conducted in 1947 at the Hugoton gas field in Grant County of southwestern Kansas and the Chinese first hydraulic fracturing experiment was at Yumen oilfield in 1955. Since then, hydraulic fracturing has been used to stimulate approximately a million oil and gas wells. In the recent ten years ,the rapid development of unconventional oil and gas resources at home and abroad, lead to the second revolution of petroleum engineering technology, reservoir stimulation technology has become a powerful tool in the domain of unconventional oil and gas exploration and development. This paper reviews the new development and new feature of recent reservoir stimulation technology: Volume fracturing -a new technology which in order to "break" the formation of Seepage area and achieve the aim of "artificial" permeability has completely changed the stimulation pattern form plane model extended to three dimensional stereo stimulation; The establishment of 1 m³ physical simulation device and experiment method can enable us to detailed analysis of shale and other unconventional reservoir rock crack propagation law of crack fracture which can provides the new methods for further studies in this field; The research and development of low cost and low damage materials which can lower by more than 30%, at the same time the form the formation of the horizontal well multistage fracturing supporting tool, technology innovation, effectively support the technical requirements of horizontal well factory operation. In the mean while we put forward the development direction of reservoir stimulation technology, and points out that key technology of development the low permeability and unconventional resources.

1947年，人类历史上首次在堪萨斯西南部格兰特胡霍顿气田进行了水力压裂试验，1955年中国在玉门油田进行了首次压裂试验。从此水力压力成为了油气开发不可缺少的重要技术。近十年来,国内外非常规油气资源的迅猛发展，带动了石油工程技术的二次革命，储层改造技术已成为非常规油气勘探开发的“工程利器”。本文综述了近期储层改造技术的主要特点：以“打碎”储层形成“人造渗透率”的体积改造技术将以往的平面改造模式延伸到三维改造模式；1m³大型物理模拟装置及实验方法的建立，精细分析页岩等非常规储层岩石裂缝扩展规律，为进一步研究裂缝的起裂规律提供新的方法；低成本、低伤害等材料的研发，将成本降低30%以上，同时形成了相应的水平井多段改造配套装备及工具。技术的革新，有效支撑了水平井工厂化作业的技术需求。结合低渗透油气及非常规油气资源经济开发的需求，明确储层改造技术的下步发展方向及需要的关键技术。

*****All the columns need to be filled in.