

# United States Digital Oilfield Market By Process (Drilling Optimization, Production Optimization, Reservoir Optimization, and Others), By Technology (Internet of Things, Artificial Intelligence, Cloud Computing & Others) By Region, Competition Forecast and Opportunities, 2018-2028

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# **Abstracts**

United States Digital Oilfield Market is anticipated to grow at a steady pace in the forecast period, 2024-2028. There is an increasing focus on environmental sustainability and reducing carbon emissions in the oil and gas industry. Digital oilfield technologies help operators optimize energy consumption, reduce greenhouse gas emissions, and improve environmental performance by identifying the problems. In 2022, the updated U.S monthly crude oil supply data was published; according to which the US is producing 786,000 barrels per day (b/d).

Digital oilfields enable oil and fuel agencies to remotely detect and control essential activities at production centers. These technologies aim to enhance productiveness and performance in exploration and production (E&P) through minimizing gadget downtime and improving production optimization which is especially important in present scenario where oil and gas companies are seeking to streamline their charges to get over the Covid-led power demand shock.

Adoption of Visualization Tools and Al/ IoT in Oilfield

Digital Oilfield technology has gained momentum with the arrival of the Internet of Things (IoT). They use artificial intelligence (AI), predictive analytics, and visualization tools to generate statistics-pushed insights in real time to hurry up choice-making



approaches. The adoption is particularly noticeable in more recent tasks that use the cutting-edge technologies and system to extract hydrocarbons. Companies are trying to automate as many methods as viable to mitigate operational risks.

Creating a virtual oilfield could also help oil and gas companies adopt more environmentally friendly procedures. For instance, by detecting oil leaks, artificial intelligence and predictive analytics can help organizations reduce damage. Oil and petrol businesses may automate maintenance and manage equipment more effectively while also continuing to develop by investing in virtual oil area. This could make way for improved petrol performance and delivered oil and fuel costs. Oilfield service providers and commercial device manufacturers, who supply virtual solutions and offers to address difficult real world problems, fundamentally control the competitive environment of the digital oilfield.

# Real time Field Management in DOF

The usage of remote oil sands facilities has increased via machine-to-machine interfaces and real-time communication gaining traction, which allow central specialists to troubleshoot and monitor daily operations. Additionally, the utilization of IoT devices for monitoring reservoirs, smart wells, and drilling sites would be improved through ongoing industry collaboration between digital oilfield technology suppliers, IT service providers, and hardware manufacturers. The utilization of IoT devices for monitoring reservoirs, smart wells, and drilling sites would be improved via ongoing industry collaboration between digital oilfield technology suppliers, IT service providers, and hardware manufacturers. It is anticipated that this will effectively collect real-time data and enhance operating performance from upstream to downstream sectors. Industry expansion is anticipated to be helped by the availability of cutting-edge products like reservoir supervisory control, reservoir characterization as well as cutting-edge machinery like actuators, smart alarms, and sensors.

Additionally, software for digital oilfield production captures the behavior of the oilfield on the PC. For the course of the assets' entire lives, the applications serve as an online management system for the oil and gas company's assets. The digital oilfield solution from The Petroleum Experts offers an enterprise-level, vendor-neutral method for displaying reservoir, wellbore, and facility information.

US Central Government Initiatives Towards Oil & Gas Extraction

The US federal government conducted an auction of more than 80.9 million acres to be



leased for oil and gas extraction in 2021, with support from the policy and government plans. Operators are searching for novel approaches to embrace the 'digital oilfield age' for more effective and economical operations in the current market as the digital revolution spreads across nation. Quite apart from the fact that digitization has reduced overall OpEx and CapEx (capital expenditures) costs and assisted operators in weathering economic downturns.

During the period of 2017- 2035, total capital expenditures (CAPEX) for the construction of oil and gas infrastructure will range from USD 1.06 to USD 1.34 trillion. Over the projection, these investment levels translate to an average annual CAPEX of USD 56 to USD 71 billion (Exhibit ES-2). This covers investments in both new and existing oil and petrol storage facilities, oil producing facilities, refineries, and other infrastructure. Hence, the country's demand for the adoption of digital oilfield services has also significantly increased because of the recent development of shale plays, horizontal drilling, and fracking technologies. For instance, 92 million barrels of additional proven crude oil reserves were discovered and extended in 2020, largely by American operators drilling horizontal wells. These expansions are expected to drive offshore survey and production activity. Hence, the demand for digital oilfields solutions is anticipated to increase in the future.

# Interruption in the Decision-Making Process

One of the main obstacles for the oilfield sector is the time-consuming nature of real-time data collecting and useful analysis. It is challenging to compile extensive instructive data and present it as market-relevant information for wellheads. The gathering and analysis of the data require professional personnel with the appropriate experience and knowledge. The oil and gas industry's major players are concentrating on making new discoveries by utilizing the potential of precise and reliable data. Analytical instruments that are used for examining and analyzing data and define the potential of wellheads are costly processes. This means that the market expansion in the anticipated time frame is constrained by the delay in decision-making processes caused by analytical tools.

# Market Segmentation

The United States Digital Oilfield Market is segmented based on process, technology, and region. Based on process, the market is bifurcated into drilling optimization, production optimization, reservoir optimization, and others. Based on technology, the market is bifurcated into internet of things, artificial intelligence, cloud computing &



others. Based on region, the market is bifurcated into. Regionally, United States is divided into West, Midwest, Northeast, South.

Market Players

Main market players in the United States Digital Oilfield market are Schlumberger, Halliburton, Weatherford International Inc, Digi International, Microsoft, Baker Hughes, Rockwell Automation, Honeywell Process Solution, Emerson, National Oilwell Varco.

# Report Scope:

West

In this report, the United States Digital Oilfield Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

United States Digital Oilfield Market, By Process:

Drilling Optimization

Production Optimization

Reservoir Optimization

Others

United States Digital Oilfield Market, By Technology:

Internet of Things

Artificial Intelligence

Cloud Computing

Others

United States Digital Oilfield Market, By Region:



Midwest		
Northeast		
South		
Competitive Landscape		
Company Profiles: Detailed analysis of the major companies present in the United		

Available Customizations:

States Digital Oilfield Market.

With the given market data, TechSci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

**Company Information** 

Detailed analysis and profiling of additional market players (up to five).



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