

Chapter 1 : Oil reserves - Wikipedia

Based on data from OPEC at the beginning of the highest proved oil reserves including non-conventional oil deposits are in Venezuela (20% of global reserves), Saudi Arabia (18% of global reserves), Canada (13% of global reserves), and Iran (9%).

There are two oil shale types in Estonia—Dictyonema argillite claystone and kukersite. The thickness of the Dictyonema argillite layer varies from less than 0. They are not rich in heavy metals. The paper was based on the samples collected on the territory of Kohala Manor near Rakvere. In , there was a plan of construction of a large-scale shale oil plant in Estonia. The coming of World War I , coupled with a serious fuel crisis, accelerated these studies and [4] in , a group of geologists led by Nikolay Pogrebov were sent to Estonia to organize the mining of oil shale and its transportation to St. In June , the first tonnes of oil shale were mined in Pavandu and were delivered to the Saint Petersburg Polytechnical Institute for large-scale experiments. For large-scale oil shale utilization, construction of oil shale-fired power plants and shale oil thermal processing factories was planned. However, Germany occupied Estonia and the following Estonian War of Independence caused their cancellation. The year is considered the beginning of the Estonian oil shale industry. In , Russian paleontologist Mikhail Zalessky named kukersite oil shale after the Kukruse settlement. At the same time, several foreign investors started their oil shale activities in Estonia. Initially, oil shale was used primarily in the cement industry, for firing in locomotive furnaces, and as a household fuel. The first large industrial consumer of oil shale was the Kunda cement factory now Kunda Nordic Cement , which transferred its rotary kilns for cement production to oil shale firing in This facility was closed in At the beginning of World War II , the total capacity of oil shale power plants was These power plants used mainly furnaces with a movable-bar sloping grate Krull-Lomshakov or Ilmarine-type. In addition, between and two tunnel kilns were in operation. Because of the success of oil shale-based power generation, Estonian oil shale production peaked in at Both the overburden and the bed are at first broken up by blasting. Stripping is done with smaller excavators in opencasts with thin overburden using front end loaders and hydraulic excavators. Longwall mining , used earlier, was abandoned in s. Shale oil extraction See also: Narva Oil Plant In , Estonia was the largest shale oil producer in the world although it is expected that as of , China has taken that position. In , 10, tonnes of semi-coke were used for cement production.

Chapter 2 : Legacy Reserves' Oil Output Up +31% YOY; Commences Delaware Wolfcamp Drilling

About the Book. Oil-shale deposits constitute a large reserve of potentially usable fuel in Kansas. The State Geological Survey, as a part of its inventory of the State's fuel resources, undertook a study to determine, in a reconnaissance manner, the extent and quality of the State's oil-shale resources.

Classifications[edit] Schematic graph illustrating petroleum volumes and probabilities. Curves represent categories of oil in assessment. The relative degree of uncertainty can be expressed by dividing reserves into two principal classifications—“proven” or “proved” and “unproven” or “unproved”. Proven reserves are also known in the industry as “1P”. Securities and Exchange Commission allowed oil companies to report to investors. Companies listed on U. Since January the SEC now allows companies to also provide additional optional information declaring 2P both proven and probable and 3P proven plus probable plus possible provided the evaluation is verified by qualified third party consultants, though many companies choose to use 2P and 3P estimates only for internal purposes. They are sub-classified as probable and possible. Industry specialists refer to them as “P50” i. The sum of proven plus probable reserves is also referred to in the industry as “2P” proven plus probable. Reasons for classifying reserves as possible include varying interpretations of geology, reserves not producible at commercial rates, uncertainty due to reserve infill seepage from adjacent areas and projected reserves based on future recovery methods. The cumulative amount of proven, probable and possible resources are referred to in the industry as “3P” proven plus probable plus possible. The Russian category C2 includes probable and possible reserves. Unconventional oil resources are greater than conventional ones. United States not included. It incorporates the definitions for reserves, but adds categories for contingent resources and prospective resources. Contingent resources may include, for example, projects for which there are no viable markets, or where commercial recovery is dependent on technology under development, or where evaluation of the accumulation is insufficient to clearly assess commerciality. Prospective resources are those quantities of petroleum estimated, as of a given date, to be potentially recoverable from undiscovered accumulations by application of future development projects. Prospective resources have both an associated chance of discovery and a chance of development. The United States Geological Survey uses the terms technically and economically recoverable resources when making its petroleum resource assessments. Technically recoverable resources represent that proportion of assessed in-place petroleum that may be recoverable using current recovery technology, without regard to cost. Economically recoverable resources are technically recoverable petroleum for which the costs of discovery, development, production, and transport, including a return to capital, can be recovered at a given market price. Examples include extra heavy oil , oil sand , and oil shale deposits. Unlike “conventional resources”, in which the petroleum is recovered through wellbores and typically requires minimal processing prior to sale, unconventional resources require specialized extraction technology to produce. Moreover, the extracted petroleum may require significant processing prior to sale e. Estimation techniques[edit] Example of a production decline curve for an individual well The amount of oil in a subsurface reservoir is called oil in place OIP. This fraction is called the recovery factor. The portion that is not recoverable is not included unless and until methods are implemented to produce it. Extraction of petroleum and Oil in place Volumetric methods attempt to determine the amount of oil in place by using the size of the reservoir as well as the physical properties of its rocks and fluids. Then a recovery factor is assumed, using assumptions from fields with similar characteristics. OIP is multiplied by the recovery factor to arrive at a reserve number. Current recovery factors for oil fields around the world typically range between 10 and 60 percent; some are over 80 percent. The wide variance is due largely to the diversity of fluid and reservoir characteristics for different deposits. Materials balance method[edit] The materials balance method for an oil field uses an equation that relates the volume of oil, water and gas that has been produced from a reservoir and the change in reservoir pressure to calculate the remaining oil. It assumes that, as fluids from the reservoir are produced, there will be a change in the reservoir pressure that depends on the remaining volume of oil and gas. The method requires extensive pressure-volume-temperature analysis and an accurate pressure history of the field. The Y axis is a

semi log scale, indicating the rate of oil depletion green line , and gas depletion red line. The X axis is a coordinate scale, indicating time in years and displays the production decline curve. The top red line is the gas decline curve, which is a hyperbolic decline curve. Gas is measured in MCF thousand cubic feet in this case. The lower Blue line is the oil decline curve, which is an exponential decline curve. Oil is measured in BBL Oil barrels. Data is from actual sales, not pumped production. The dips to zero indicate there were no sales that month, likely because the oil well did not produce a full tank, and thus was not worth a visit from a tank truck. The upper right legend map displays CUM, which is the cumulative gas or oil produced. ULT is the ultimate recovery projected for the well. The decline curve method uses production data to fit a decline curve and estimate future oil production. The three most common forms of decline curves are exponential, hyperbolic, and harmonic. It is assumed that the production will decline on a reasonably smooth curve, and so allowances must be made for wells shut in and production restrictions. The curve can be expressed mathematically or plotted on a graph to estimate future production. It has the advantage of implicitly including all reservoir characteristics. It requires a sufficient history to establish a statistically significant trend, ideally when production is not curtailed by regulatory or other artificial conditions. As years pass, successive estimates of the ultimate recovery of fields tend to increase. The term reserve growth refers to the typical increases in estimated ultimate recovery that occur as oil fields are developed and produced. Relevant discussion may be found on the talk page. Please do not remove this message until conditions to do so are met. The specific problem is: The table in this section presently presents resources rather than reserves, according to SPE definition Please help improve this section if you can.

Chapter 3 : Is Shale The Future For Big Oil?

System in the Williston Basin: Rocky Mountain Association of Geologists, , p. Energy and Environmental Research Center, , Program to Determine the Uniqueness of Three Forks Bench Reserves, Determine Optimal Well Density in the Bakken Pool, and Optimize Bakken Production.

Seismic exploration and the first well followed later that year. The situation was transformed in December , when Phillips Petroleum discovered oil in Chalk of Danian age at Ekofisk , in Norwegian waters in the central North Sea. The Piper oilfield was discovered in and the Statfjord Field and the Ninian Field [7] in , with the Ninian reservoir consisting of Middle Jurassic sandstones at a depth of m subsea in a "westward tilted horst block". Off shore production, like that of the North Sea, became more economical after the oil crisis caused the world oil price to quadruple, followed by the oil crisis , causing another tripling in the oil price. Almost all of the structure was submerged. Total reserves of the field are estimated at 1. Production start is planned to happen in It is one of the largest discoveries made in the Norwegian Continental Shelf. Five countries are involved in oil production in the North Sea. All operate a tax and royalty licensing regime. The respective sectors are divided by median lines agreed in the late s: Each quadrant is divided into 30 blocks measuring 10 minutes of latitude and 12 minutes of longitude. Some blocks are divided further into part blocks where some areas are relinquished by previous licensees. The UK government has traditionally issued licences via periodic now annual licensing rounds. Blocks are awarded on the basis of the work programme bid by the participants. The UK government has actively solicited new entrants to the UKCS via "promote" licensing rounds with less demanding terms and the fallow acreage initiative, where non-active licences have to be relinquished. The NCS is also divided into quads of 1 degree by 1 degree. Norwegian licence blocks are larger than British blocks, being 15 minutes of latitude by 20 minutes of longitude 12 blocks in a quad. Like in Britain, there are numerous part blocks formed by re-licensing relinquished areas. The Danes also divide their sector of the North Sea into 1 degree by 1 degree quadrants. Their blocks, however, are 10 minutes latitude by 15 minutes longitude. Part blocks exist where partial relinquishment has taken place. Germany " Germany and the Netherlands share a quadrant and block grid" quadrants are given letters rather than numbers. The blocks are 10 minutes latitude by 20 minutes longitude. Germany has the smallest sector in the North Sea. Reserves and production[edit] The British and Norwegian sectors hold most of the remainder of the large oil reserves. The production is expected to fall to one-third of its peak by Sleipner reduces emissions of carbon dioxide by approximately one million tonnes a year; that is about oneth of total emissions. As of April , BP is considering a trial of large-scale sequestration of carbon dioxide stripped from power plant emissions in the Miller oilfield as its reserves are depleted.

Chapter 4 : How long will world's oil reserves last? 53 years, says BP - calendrierdelascience.com

North Sea oil is a mixture of hydrocarbons, comprising liquid petroleum and natural gas, produced from petroleum reservoirs beneath the North Sea.. In the petroleum industry, the term "North Sea" often includes areas such as the Norwegian Sea and the area known as "West of Shetland", "the Atlantic Frontier" or "the Atlantic Margin" that is not geographically part of the North Sea.

There are two oil shale types in Estoniaâ€”Dictyonema argillite claystone and kukersite. The thickness of the Dictyonema argillite layer varies from less than 0. Kukersite Fossils in Ordovician period kukersite oil shale, northern Estonia Kukersite is a light-brown marine-type oil shale of the lowest Upper Ordovician formation, named after the Kukruse settlement in Estonia. They are not rich in heavy metals. The paper was based on the samples collected on the territory of Kohala Manor near Rakvere. In , there was a plan of construction of a large-scale shale oil plant in Estonia. The coming of World War I , coupled with a serious fuel crisis, accelerated these studies and [4] in , a group of geologists led by Nikolay Pogrebov were sent to Estonia to organize the mining of oil shale and its transportation to St. In June , the first tonnes of oil shale were mined in Pavandu and were delivered to the Saint Petersburg Polytechnical Institute for large-scale experiments. For large-scale oil shale utilization, construction of oil shale-fired power plants and shale oil thermal processing factories was planned. However, Germany occupied Estonia and the following Estonian War of Independence caused their cancellation. The year is considered the beginning of the Estonian oil shale industry. In , Russian paleontologist Mikhail Zalessky named kukersite oil shale after the Kukruse settlement. At the same time, several foreign investors started their oil shale activities in Estonia. Initially, oil shale was used primarily in the cement industry, for firing in locomotive furnaces, and as a household fuel. The first large industrial consumer of oil shale was the Kunda cement factory now Kunda Nordic Cement , which transferred its rotary kilns for cement production to oil shale firing in This facility was closed in At the beginning of World War II , the total capacity of oil shale power plants was These power plants used mainly furnaces with a movable-bar sloping grate Krull-Lomshakov or Ilmarine-type. In addition, between and two tunnel kilns were in operation. Because of the success of oil shale-based power generation, Estonian oil shale production peaked in at Both the overburden and the bed are at first broken up by blasting. Stripping is done with smaller excavators in opencasts with thin overburden using front end loaders and hydraulic excavators. Longwall mining , used earlier, was abandoned in s. Shale oil extraction See also: Narva Oil Plant In , Estonia was the largest shale oil producer in the world although it is expected that as of , China has taken that position. In , 10, tonnes of semi-coke were used for cement production.

Chapter 5 : North Sea oil - Wikipedia

R-P ratios. At the rate of production and current reserves estimates, US has almost 12 years of oil production remaining. Excluding oil sands, Canada's reserves to production ratio is 4 years.

Chapter 6 : Oil shale in Estonia

Generated record quarterly oil production of 18, Bbls/d, a % increase relative to Q2'18, and 31% relative to Q3'17 The increase is due to additional oil production from our Permian Basin horizontal drilling operations and production attributable to the additional working interests under our amended and restated joint development agreement.

Chapter 7 : Oil shale in Estonia : Wikis (The Full Wiki)

In a report detailing the relationship of Big Oil and shale, Wood Mac's analysts forecast a bright future for both, with the share of shale oil in the supermajors' total production rising from.

Chapter 8 : Shale Oil Is Not A Ponzi Scheme: Evidence From Decline Curves | Seeking Alpha

Oil shale in Estonia is an important resource for the national calendar. The science.com's oil shale deposits account for just 17% of total deposits in the European Union but the country generates 90% of its power from this source.

Chapter 9 : Oil shale in Kansas (edition) | Open Library

Anonymous, , Report estimates shale oil resource: American Oil & Gas Reporter, v. 52, no. 5, p. ASTM, , Standard method of test for oil from oil shale: Annual Book of American Society for Testing and Materials (ASTM) Standards, Part 25, D, p.