

# THE PETROLEUM CYCLES

The columns are the 6 cycles. The rows are the 6 separate stages.

## A New Industry: Post Civil War to the Guilded Age

## Oil's Coming of Age: The Guilded Age to Post WW1

## The War Years: Post WW1 to Korean War

## Oil's Golden Age: Korean War to 1970s

## Globalization Years: 1980s to GFC

## Energy Regression Years: GFC to Present

### War Ends, New Supply, Demand Slows Oil Capitulates

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The Civil War ends, oil is discovered in Titusville, Oil Creek, and Bradford PA. The industry is young and drillers produce at breakneck speeds with little regard or knowledge of the preservation of reserves. Oil plummets.

The panic of 1896 crimps demand. Standard Oil moves upstream & invests in Lima, IN. The center of U.S. oil production shifts west to OH, IN, CA and TX. A price war begins between Standard Oil, the Rothschilds, Nobles and other Russian producers. Russia production reaches 50% of global supply.

WW1 ends. Advances in technology aid discoveries in CA and OK. The Black Giant is discovered in TX. Venezuela's output rises to #2 globally. Bolsheviks ramp supply to repair economy. Great Depression ensues. Texas Railroad Commission rations supply. U.S. spare capacity = ~30% production.

WW2 ends. Seven Sisters increase Middle East production. From 1955-1960 USSR doubles production under the "Soviet Economic Offensive." Libya production enters the global stage. From 1946 to 1950 the U.S. grows domestic reserves by 21%. Oil prices leveled after 1950.

Cold War ends. Non-OPEC supply (N. Sea, Alaska, Mexico) increases. OECD shift to nuclear & coal. Japan develops LNG, U.S. vehicle efficiency improves. Volker's Fed strengthens USD & crushes commodities. Saudi/OPEC market share battle. Oil capitulates post Nov-1984 OPEC meeting.

Global Financial Crisis & GWOT ends. Horizontal drilling & fracking dramatically increase U.S. supply. Saudi & OPEC market share war vs N. American shale. Xi Jinping's China clamps down and de-globalization begins. Oil capitulates in 2014 & 2020.

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In response to Standard Oil's first consolidation attempt a la the South Improvement Company (SIC), refiners and producers protest and attempt an embargo of crude sales to Standard Oil & those tied to the SIC. Riots and instability breaks out in the oil regions of Pennsylvania.

Depressed prices & mismanaged Russian production ignites strife and civil unrest giving rise to the Bolsheviks and one Josef Stalin. A flood of Texas oil forces a wave of bankruptcies and consolidation. Ida Tarbell publishes her "History of Standard Oil" in McClures. Standard Oil Trust is broken up into ~40 companies.

Mexico nationalizes assets of Royal Dutch Shell, Std N.J. and SOCAL to form PEMEX. The Texas Rail Commission, a precursor to OPEC, is formed to regulate Texas production and stop the flow of "Hot Oil." Caspian output runs flat out and is mismanaged by the Bolsheviks.

The 1951-53 Iranian Revolution & "Old Mossy". The Six Day War of 1967 tries to use the "Oil Weapon" for the first time. The Shah nationalizes BP assets. Eisenhower institutes import quotas to protect Texas independents from cheap Middle East imports. OPEC is formed in 1960 in response to two posted price cuts.

Iran/Iraq Wars, Saddam accuses Kuwait of stealing oil, cheating on quotas and invades. Russia defaults on debt & oligarchs consolidate assets & power. In Latin America, the first Latam debt crisis occurs as oil export revenues drop but debt is denominated in a strong USD. A wave of bankruptcies hit the industry - S&L crisis.

U.S. shifting away from Saudi protection umbrella, Saudi/Yemen War, Saudi/Iranian conflicts and other Proxy Wars in the Middle East. Internal social & political instability in Iran on mishandling of the JCPOA. N. American shale producer bankruptcies. Putin approval rating slips to an all time low.

### Low Capital Spending & Consolidation

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Standard Oil consolidates refining & transportation via the failed South Improvement Company, the "Cleveland Massacre" of 1872 and purchase of refining assets in New York, Baltimore & Pittsburgh. Standard, the Nobels and Rothchilds contemplate a combination to control Russian production.

Royal Dutch (upstream) & Shell Transport & Trading (downstream) combine to compete with Standard Oil. Standard N.J. (Exxon) purchases a stake in Humble Oil to gain access to growing Texas production. Eastern financial interests purchase interests in Texas producers, i.e. Gulf, Humble & Texaco.

Capex CAGR declines from ~+20% to -5% as U.S. drilling activity drops by 2/3rds. Standard N.Y. buys Vacuum forming what eventually becomes Mobil Oil. The Seven Sisters form the Iraq Petroleum Company, via the "Red Line Agreement" & attempt to regulate prices under the "As-Is agreement" Texaco & SOCAL form Caltex.

Seven Sisters consolidate control of Middle East production & capex growth slows. Unocal purchases Pure Oil, Getty purchases Tidewater Oil & Skelly. SOCAL purchases Kyso. Exxon purchases remainder of Humble. Atlantic & Richfield merge to form ARCO which buys Sinclair Oil. OPEC now controls production.

Capital spending budgets are slashed. BP buys SOHIO, Amoco, ARCO & Burmah. Exxon & Mobil combine. Chevron buys Gulf, Texaco buys Getty. Mobil & Superior Oil. Total merges with PetroFina & Elf Acquitaine. Chevron in turn merges with Texaco. RDS purchases remainder of Shell Oil U.S.A.

IOC's & independents slash capex. CVX buys Noble & Atlas, OXY buys Anadarko, RDS buys BG Group, XOM buy shale assets. COP buys Concho, XOM & CVX contemplate a merger. OPEC+ is formed bringing Russia into the cartel for the first time.

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The Klondike Gold Rush in Alaska along with smaller discoveries in Washington, Colorado and British Columbia lead to an expansion in gold production. Gold was the monetary anchor of global currencies so a rapid growth in money supply and inflation developed.

WW1 set off a boom for U.S. supplies by the European Allies who pay for the import with a large influx of gold into the U.S. U.S. gold bullion swells by more than 2x thus increasing credit and the money supply. The belligerents would all abandon the gold standard relying instead on the printing press driving inflation higher.

During the War, the Fed played a subservient role to the Treasury by keeping rates pegged at low levels. Price controls during the war kept oil prices from rising. After the war, price controls were lifted in 1946 but the Fed did not end its inflationary peg until 1951 a la the Treasury-Fed Accord. Inflation takes off.

Large government spending programs under LBJ (The Great Society, Medicare, Medicaid) & the Vietnam War were continued under Nixon. Nixon closes the gold window in 1971 to combat inflation and stop the flow of gold reserves from the U.S. Under Burn's Fed, the dollar falls money supply and inflation take off.

The Bush 1 - Clinton era of tight money and a strong USD ends with the attacks of 9/11. Bush 2 finances the global war on terror by blowing out the deficit with war time spending and tax cuts. The era of the "Fed Put" culminating in the Global Financial Crisis.

Fiscal and monetary policy overreacts to COVID. In inflation-adjusted terms, fiscal spending is more than World War 2 and the Marshall Plan COMBINED! In conjunction, the Fed blows out the balance sheet and keeps its foot on the printing press letting the inflation cat out of the bag. *Federal Deficit balloons leading to YCC*

### New Demand Hub/Global Conflict

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New markets for refined product begin to take shape in the form of illumination oil and lubricants. German inventors (Benz & Daimler) introduce the automobile. The reunification of Germany under the Kaiser begins a global arms race vs. Britain thus pulling up demand for commodities.

New markets form with growth in autos and increased exports to Europe. British and the U.S. Navy transition from coal to oil. Britain and Germany compete for European hegemony leading to WW1. War is now mechanized. Churchill recognizes the strategic importance of oil and capitalizes Anglo-Persia later B.P.

WW2 dramatically increases demand (airplanes, armor, navy) especially high octane gasoline. Japan bombs Pearl Harbor to secure supplies from the East Indies. Battle of the Bulge, Stalingrad, and the Battle of El Alamein were all failed attempts by the Nazis to capture critical oil supplies to feed their Blitzkrieg machine.

Post WW2 reconstruction in Europe and Japanese industrialization. The golden age for U.S. demand. Cheap oil used in inefficient ways i.e. electricity generation and low mpg autos. Cuban Missile Crisis, Yom Kippur and other proxy wars between U.S. & USSR. U.S. spare capacity approaches zero and low inventories.

China continues reforms begun by Deng Xiaoping, joins the WTO becomes a net importer of commodities. Chinese demand outpaces rest of the world. Following the 9/11 attacks, the Global War on Terror begins. Putin consolidates power in Russia. Bush's dual deficits causes the dollar to fall and oil to rise.

*Sino-U.S. relationships sour leading to a cold/hot war in the Pacific/China Sea. Putin fights to keep NATO from doorsteps. Iran developing nuclear weapons. European energy import demand rises as the regions attempts to replace Russian hydrocarbon molecules. India surpasses China in population growth.*

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Fears start to emerge that the Pennsylvania oil regions would soon be depleted. Geologists warn of the industry coming to an end due to a lack of discoveries. Archibald of Standard Oil proclaims, "I will drink every gallon produced West of the Mississippi!"

Germany's unrestricted U-Boat campaign severely impacts Allies' supplies. Russian production declines due to the war and revolution. 1917-1920 saw a lack of new discoveries in the U.S. By 1921, Russian Production had fallen by 2/3s from its 1910 peak due to the revolution.

U.S. rationing of demand to help the war effort and price controls instituted. German U-Boats sinks shipping tonnage to constrain supply of oil to the East Coast. The Axis turn to alternative energy supplies. Japan sets out to obtain oil from synthetics. I.G. Farben & the Nazis explore Coal to Liquids. Price controls lifted after war and oil spikes.

U.S. reinforce Israeli forces in the Yom Kippur War and the Arab world responds with the '73-74 oil embargo. The '79 Iranian revolution. Companies hoard inventories fearing higher prices. Nationalization spreads. Gasoline lines & a lack of discoveries outside of OPEC.

U.S. imports reach ~60% of demand. OPEC spare capacity falls to ~1% of global demand. G.W. Bush states the U.S. is "addicted" to oil. Fears of a lack of discoveries. Drilling and development costs climb exponentially, Oil touches an all-time high of \$147.27/bbl. A series of financial crises - U.S. Subprime, & Euro Debt Crisis.

*Prices go parabolic surpassing \$147.27 high. Shales unable to fill the gap due to decline rates. History shows the supply that ended the last cycle is NEVER the same that ends the current cycle. Global Central Banks monetize the debt needed to bail out the consumer and support fiscal spending. Inflation rampant.*