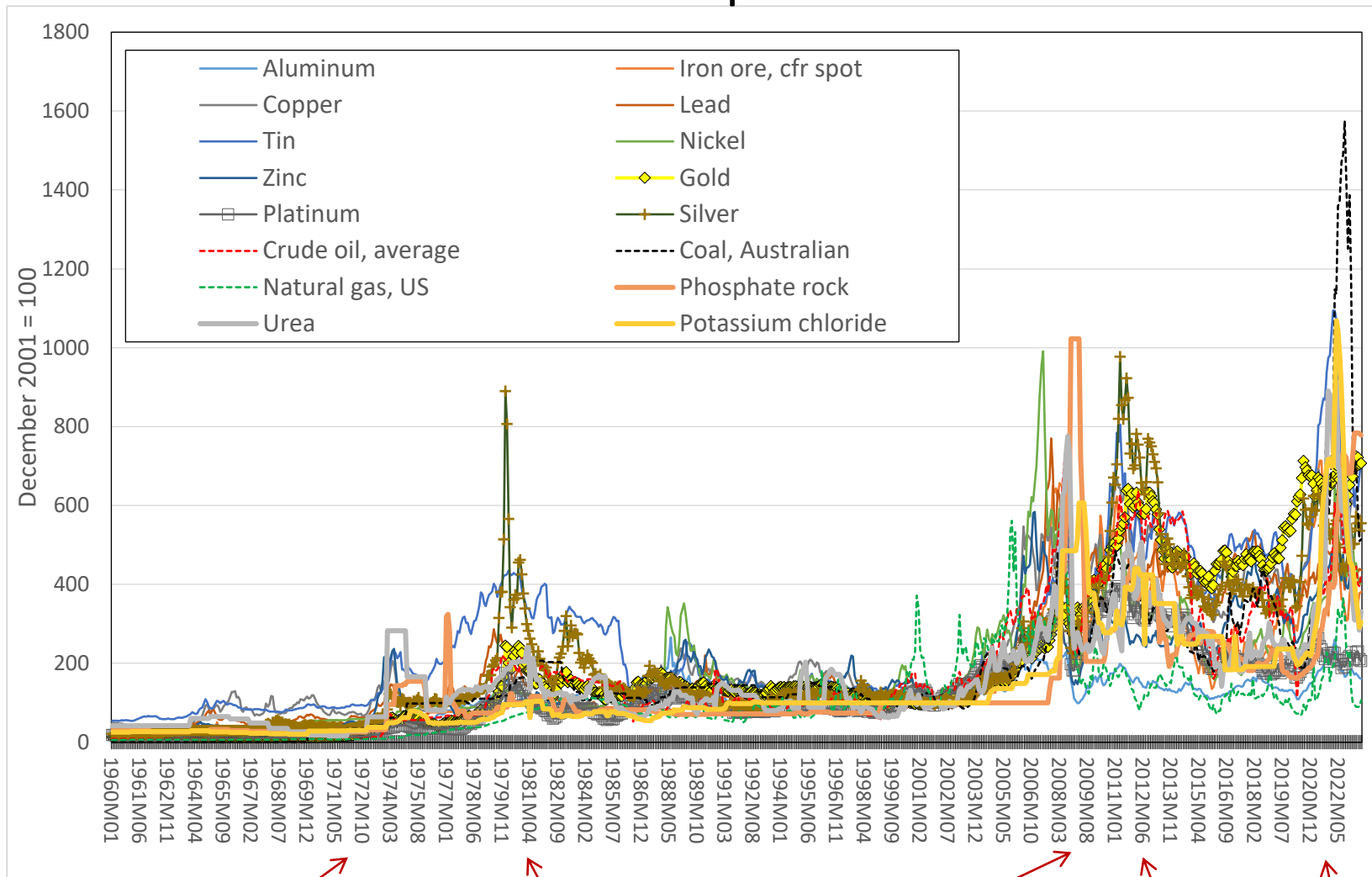


The industrial system started to correct to a new equilibrium in 2005



\$USD decouples from gold standard

1979 Iran oil embargo

Global Financial Crisis (GFC)

Q.E. era

Covid-19

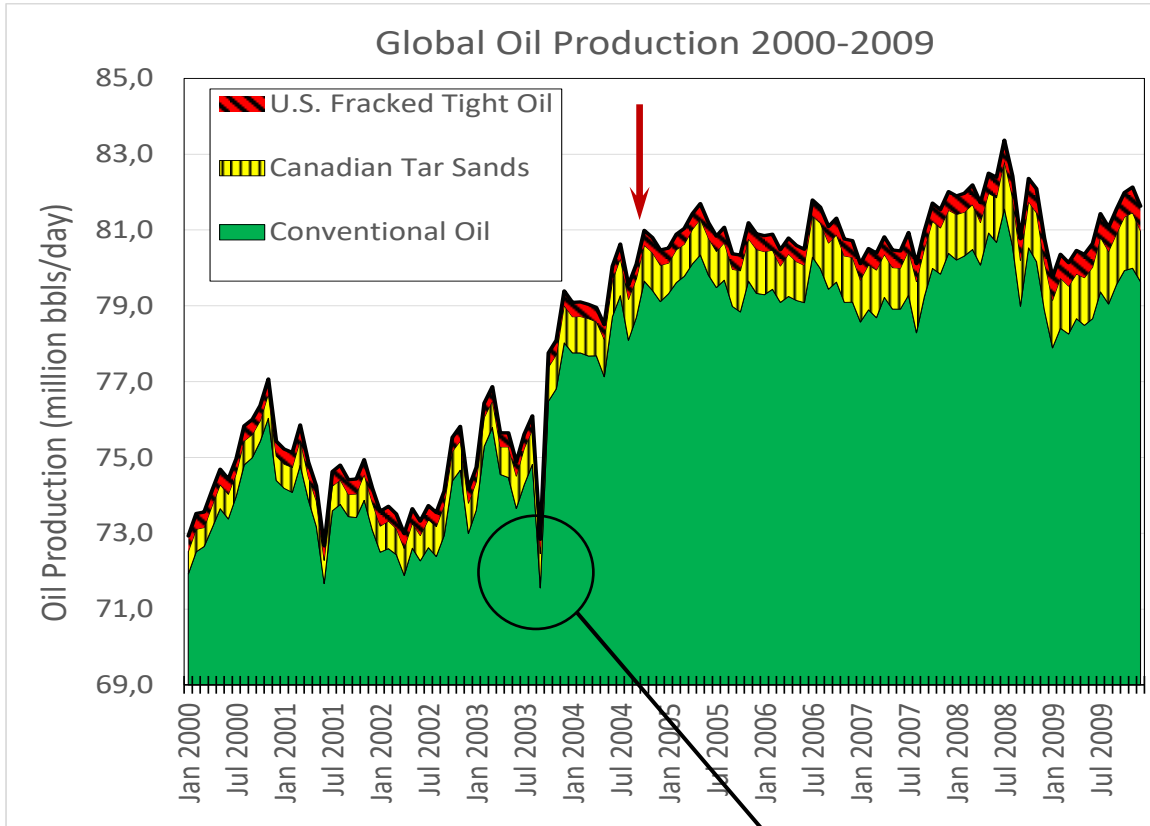
A case can be made that this blow out was a chain reaction started in the oil industry

A major economic correction (GFC 2008) did not resolve the problems

The change started something like 19 years in our past

What happened in 2005?

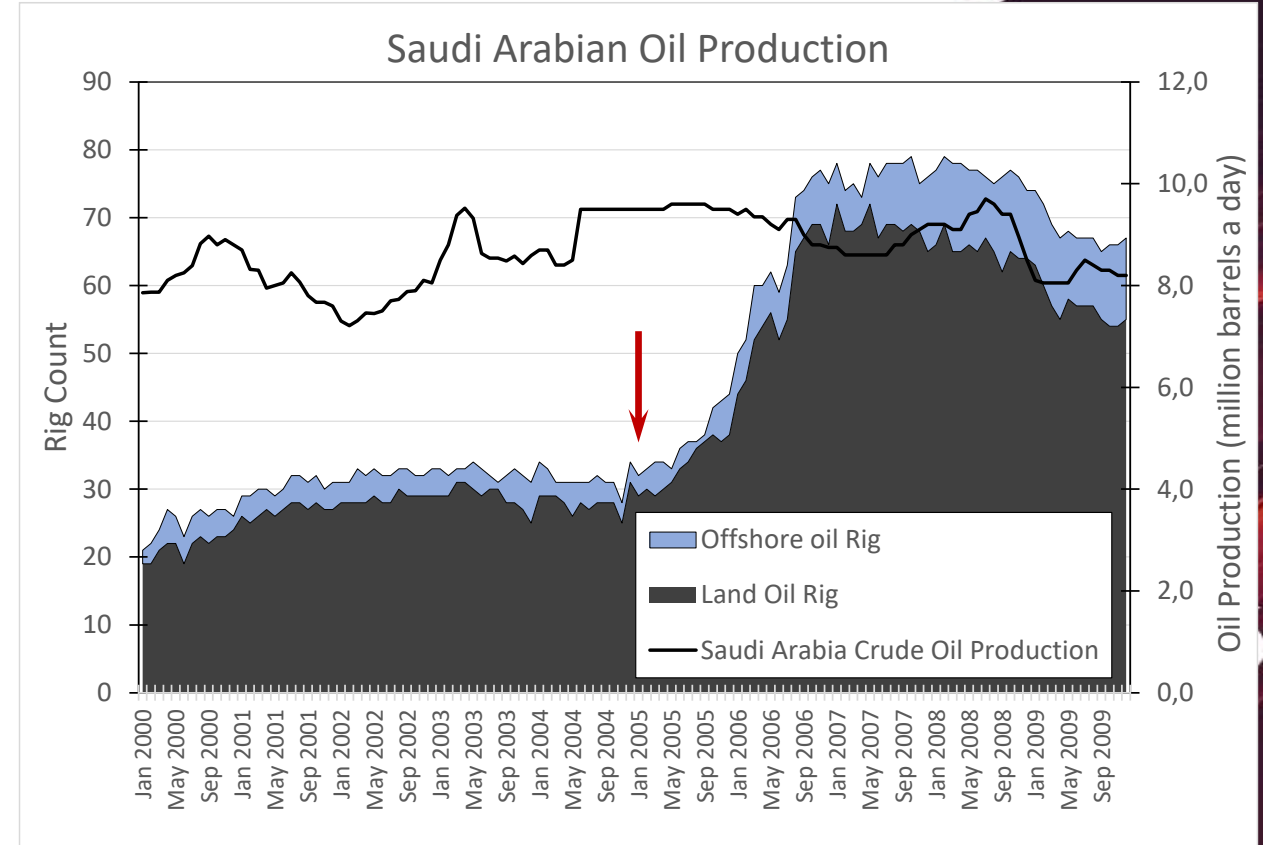
Oil supply was not able to expand and plateaued, yet demand continued to increase after a short pause



(Source: EIA monthly oil production statistics 2019, Canadian Association of Petroleum Producers 2019, Shale Profile 2019)

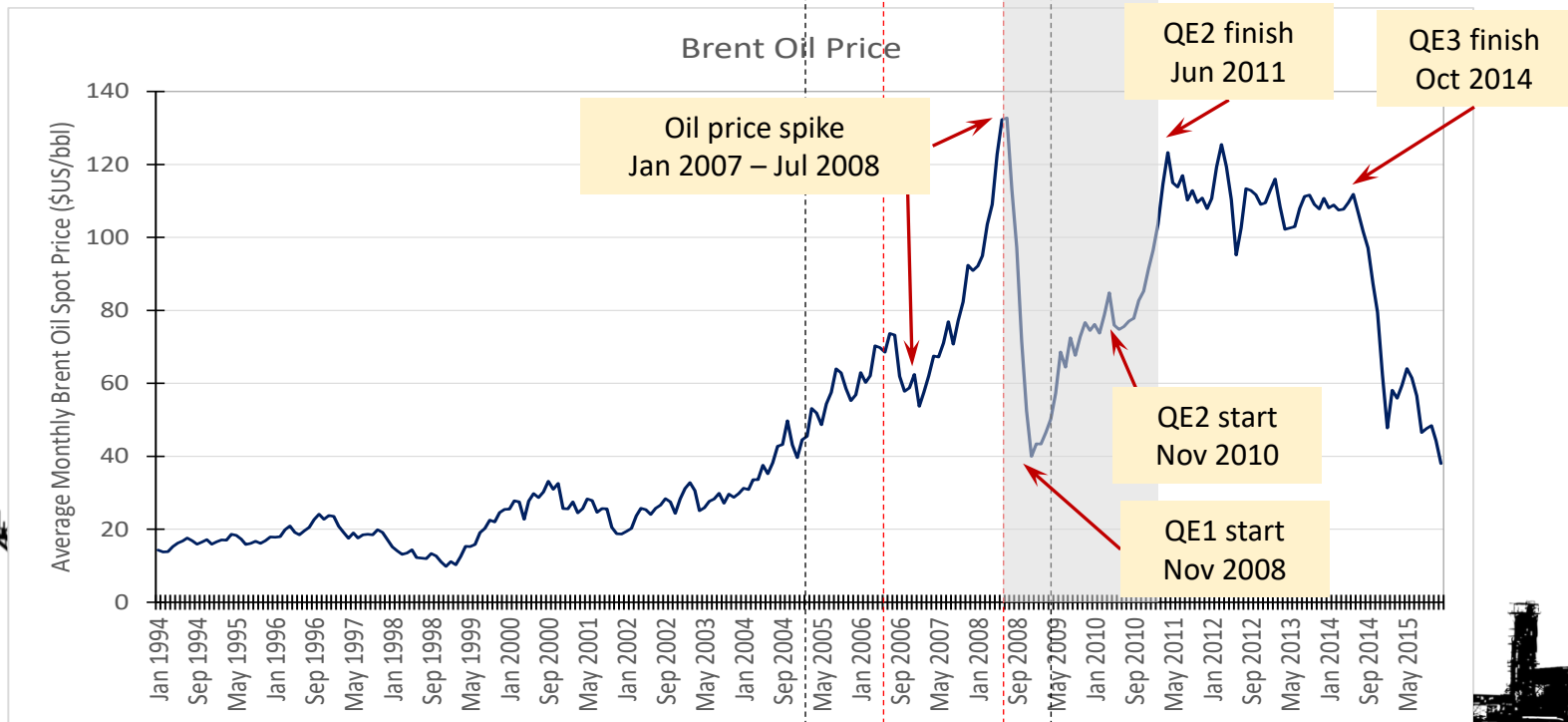
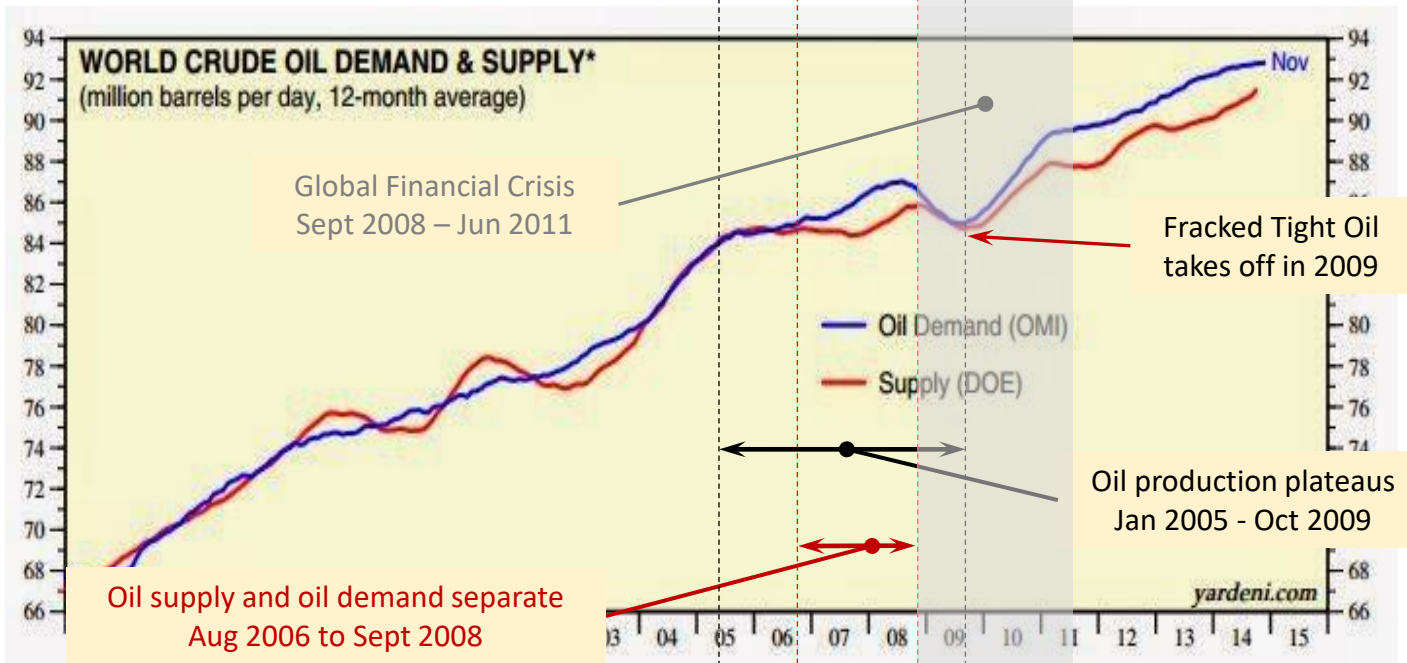
Iraq war starts in March 2003
4.6 million barrels a day go offline

The global industry 'Swing' producer, Saudi Arabia was not able to increase supply

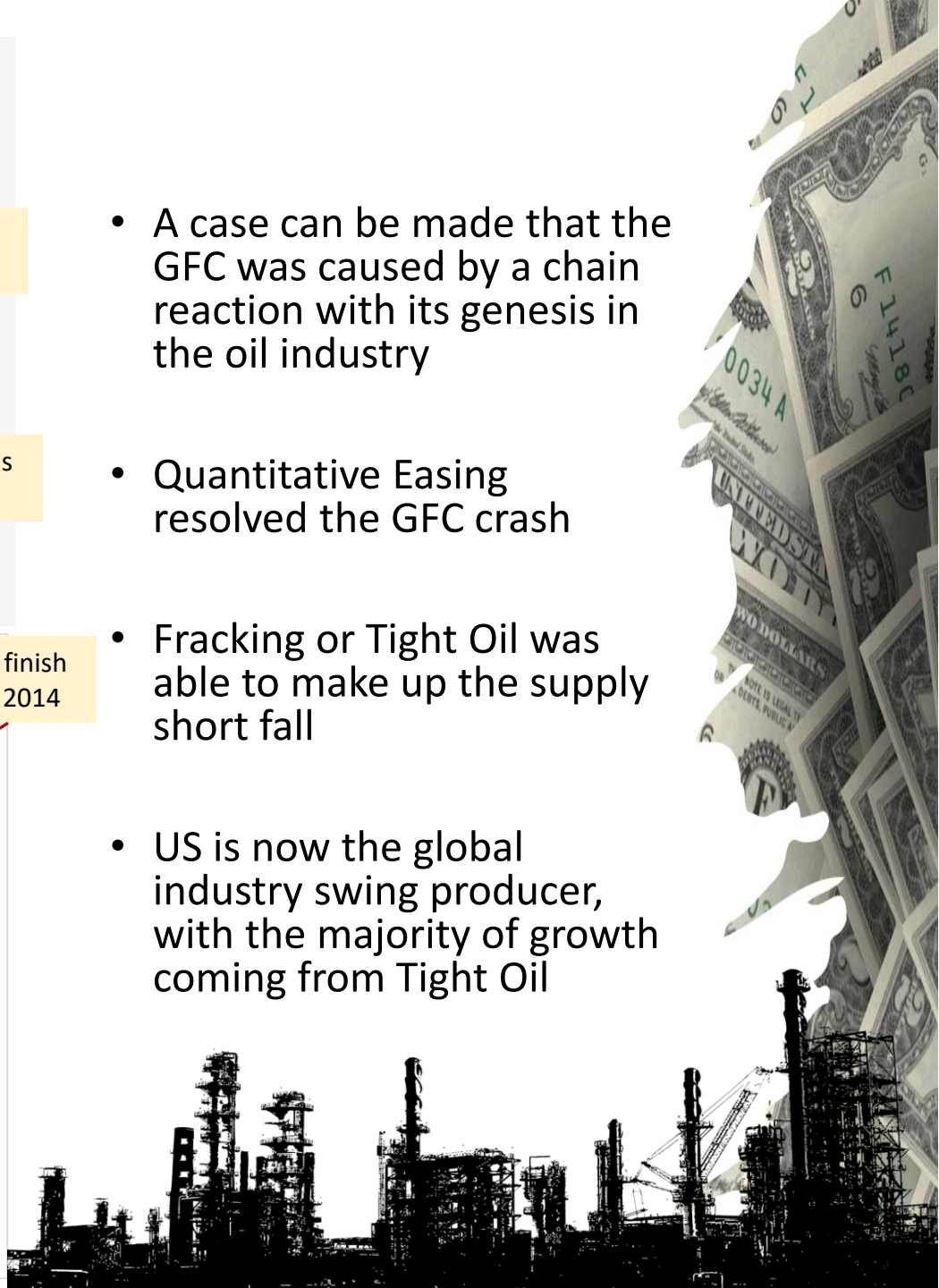


(Source: Baker Hughes Rig Count data, EIA monthly production data)

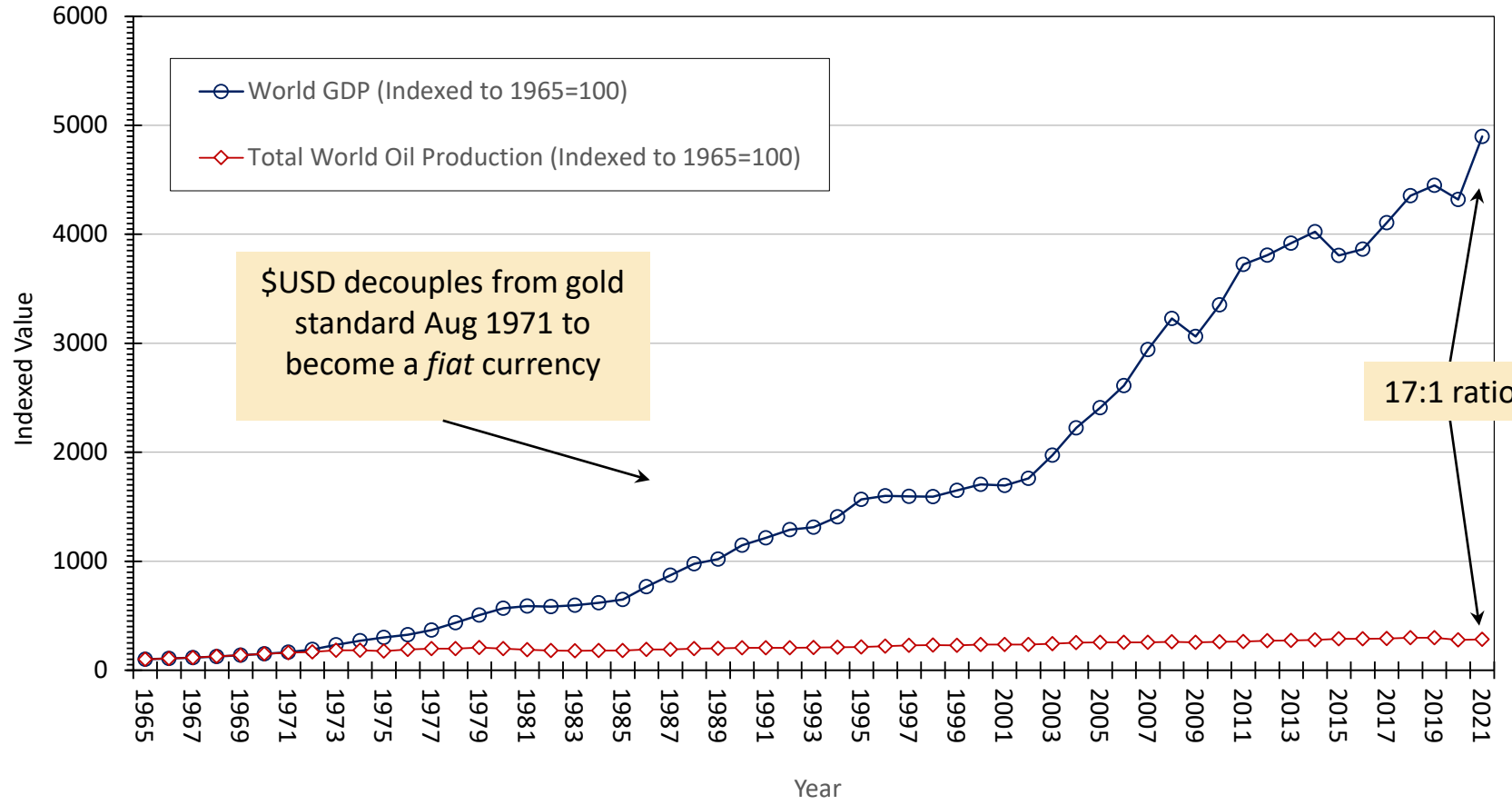
146% increase in rig count in exchange
for -4.2% decrease in oil production



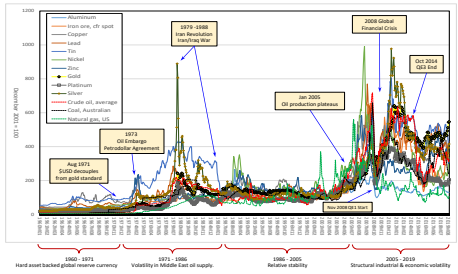
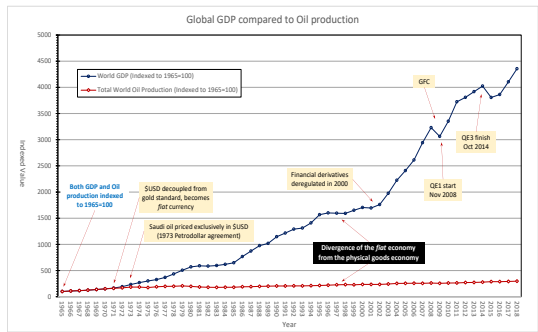
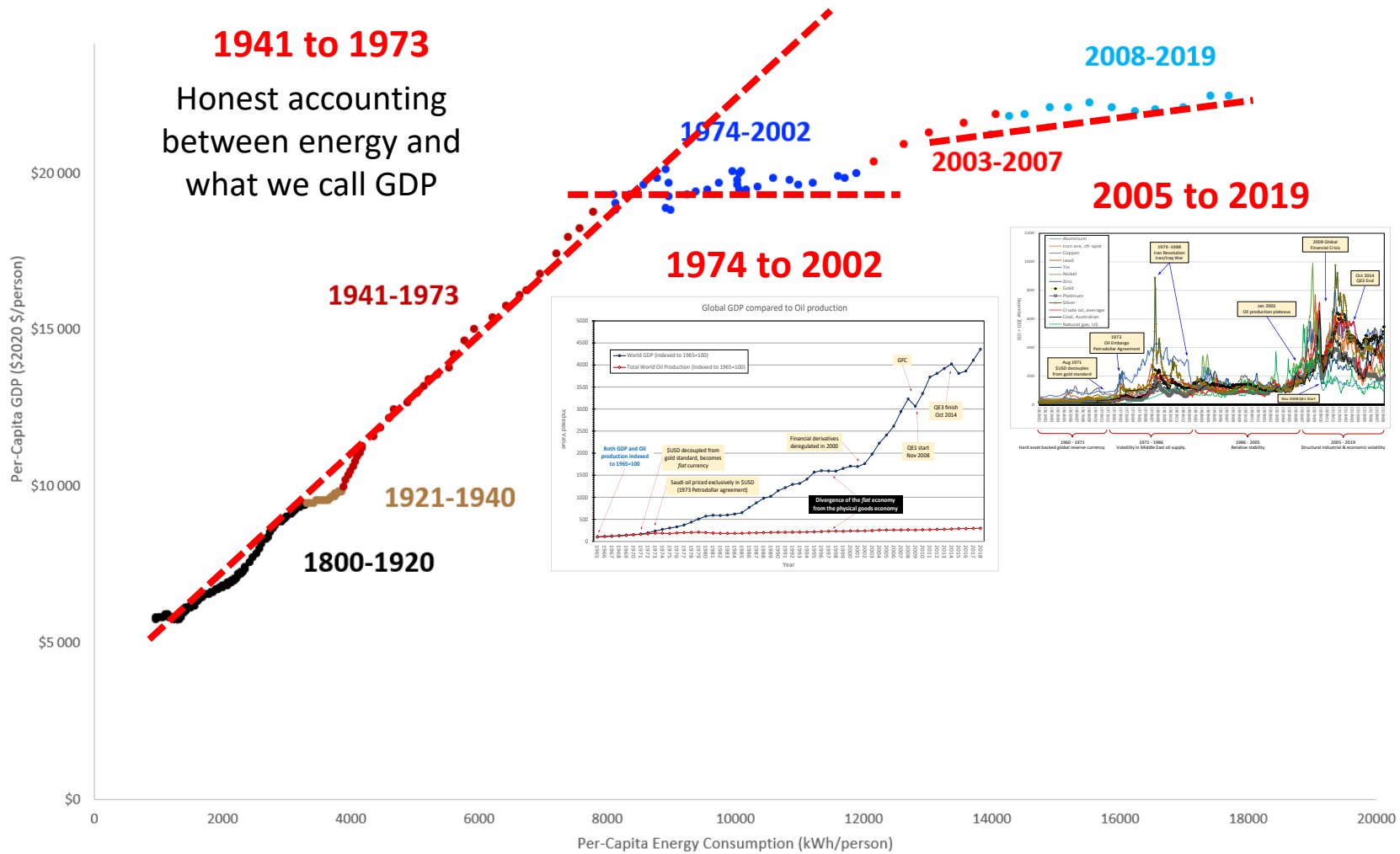
- A case can be made that the GFC was caused by a chain reaction with its genesis in the oil industry
- Quantitative Easing resolved the GFC crash
- Fracking or Tight Oil was able to make up the supply short fall
- US is now the global industry swing producer, with the majority of growth coming from Tight Oil



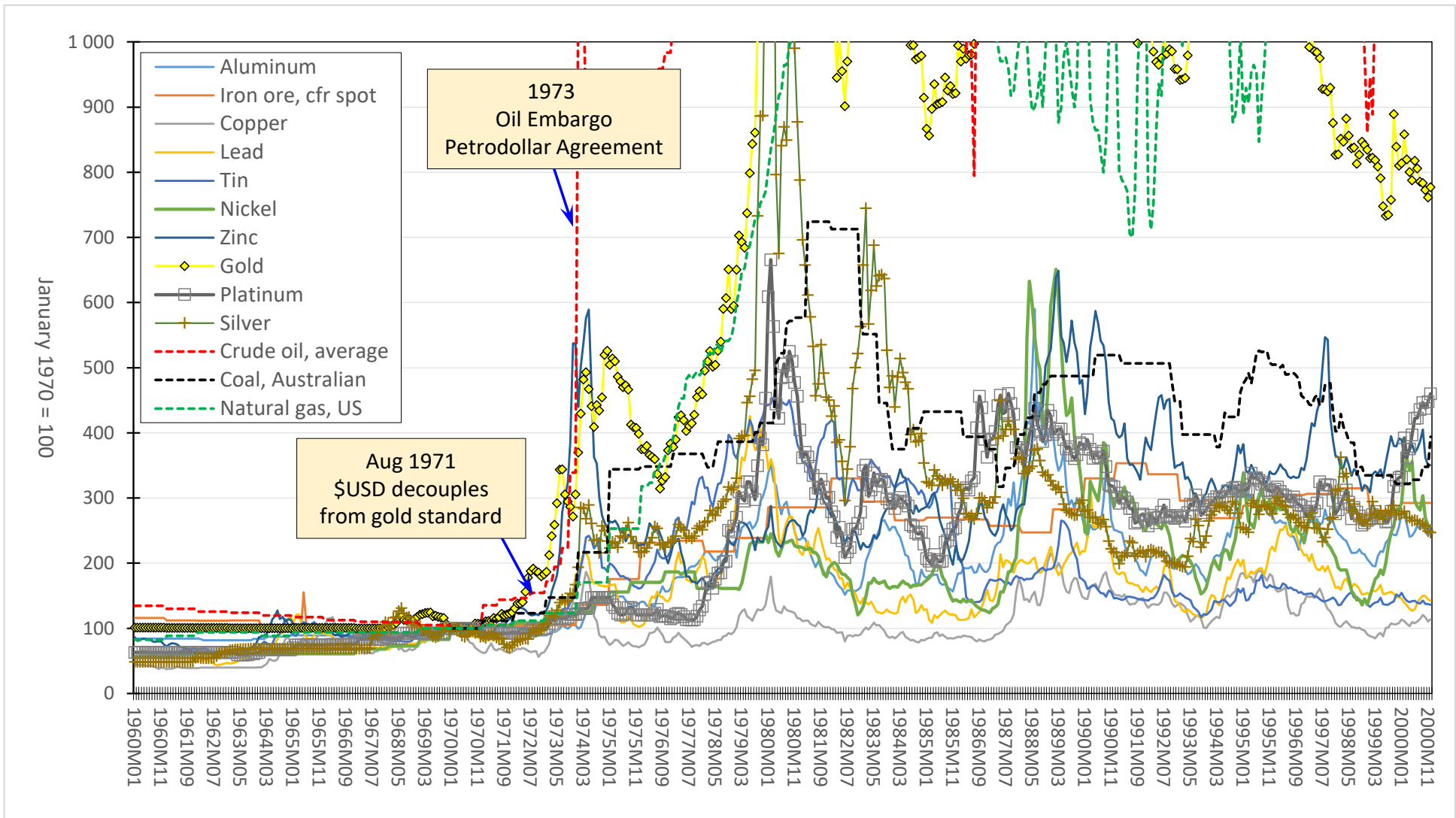
Global GDP compared to Oil production (1965 to 2021)



World per-capita GDP increased almost 1:1 with energy consumption from 1800-1973
GDP gains have been modest with ever-increasing energy consumption after 1973



Source: FRED, OWID, World Bank & Labyrinth Consulting Services, Inc
 Labyrinth/Climate Change/OWID/ OWID PRIMARY ENERGY CONSUMPTION_global-energy-substitution

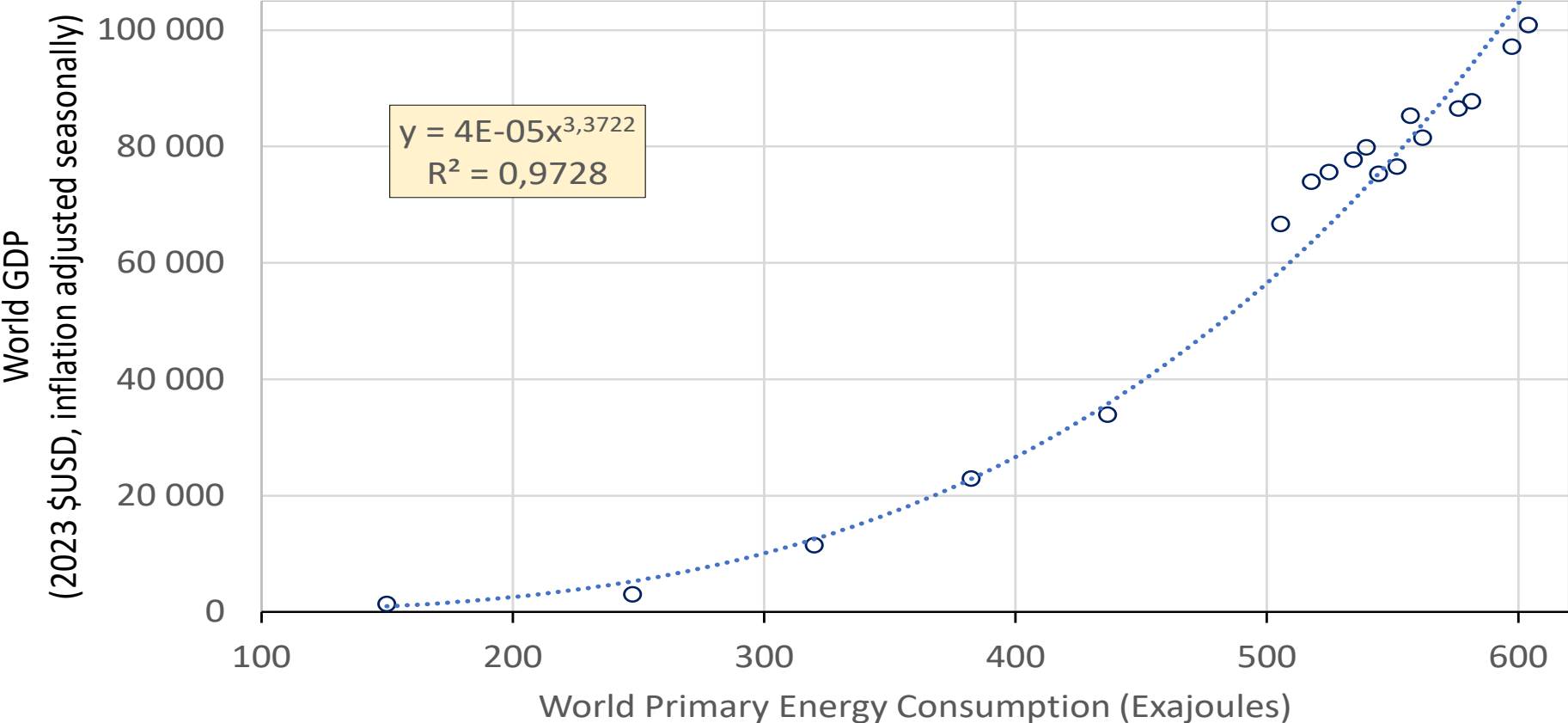


1960 - 1971
Hard asset backed global reserve currency

1971 - 1986
Volatility in Middle East oil supply.

1986 - 2005
Relative stability

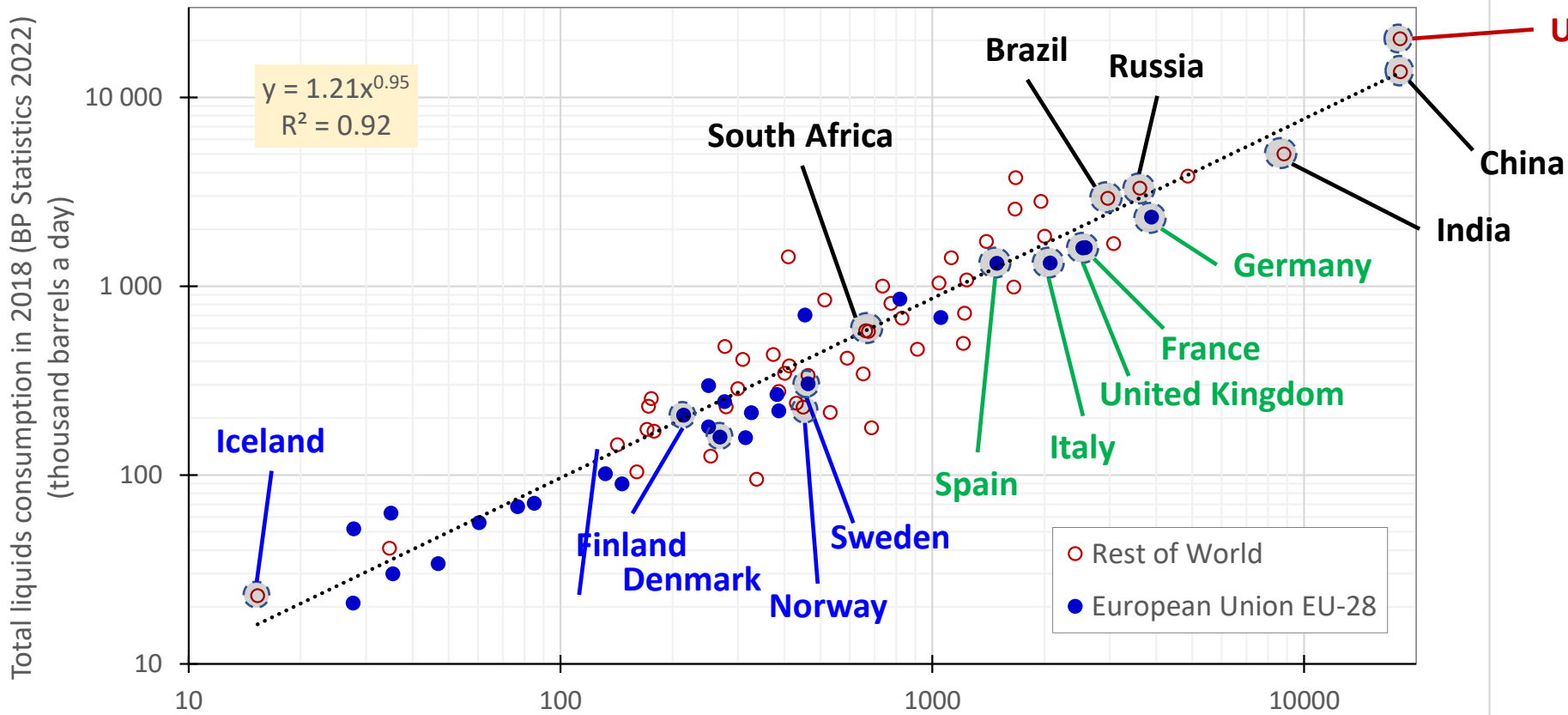
Primary energy consumption vs World GDP (1960 to 2022)



World GDP in 2023, seasonally adjusted US Dollars (vertical axis) (World Bank, OECD) plotted against the world energy consumption from 1960 to 2022 (horizontal axis) (BP Statistics)



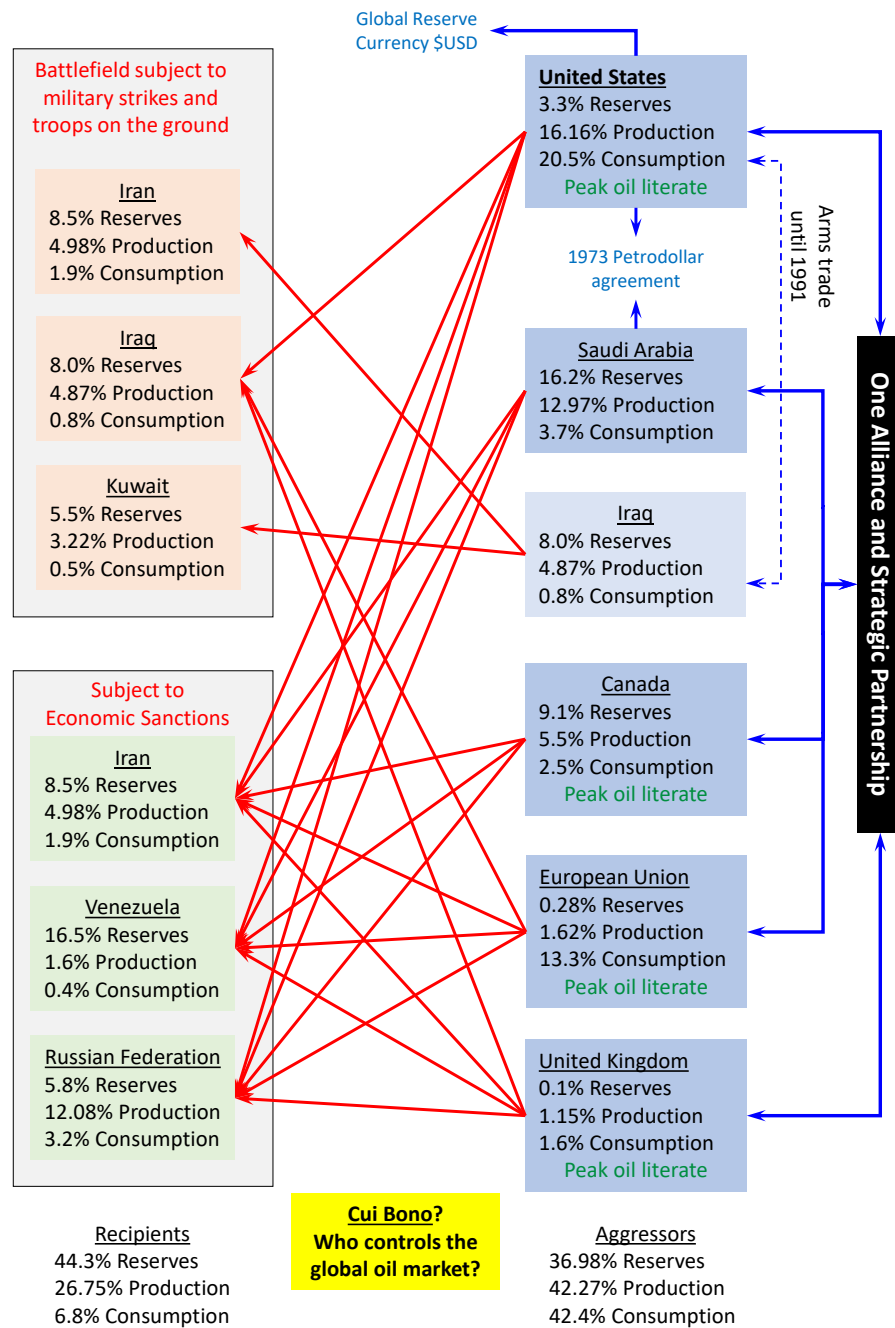
GDP vs. Total Liquids Consumption in 2018



2018 Gross Domestic Product (GDP) (billions) adjusted for price changes over time (inflation) and price differences between countries – it is measured in international-\$billions in 2011 prices (Our World in Data)

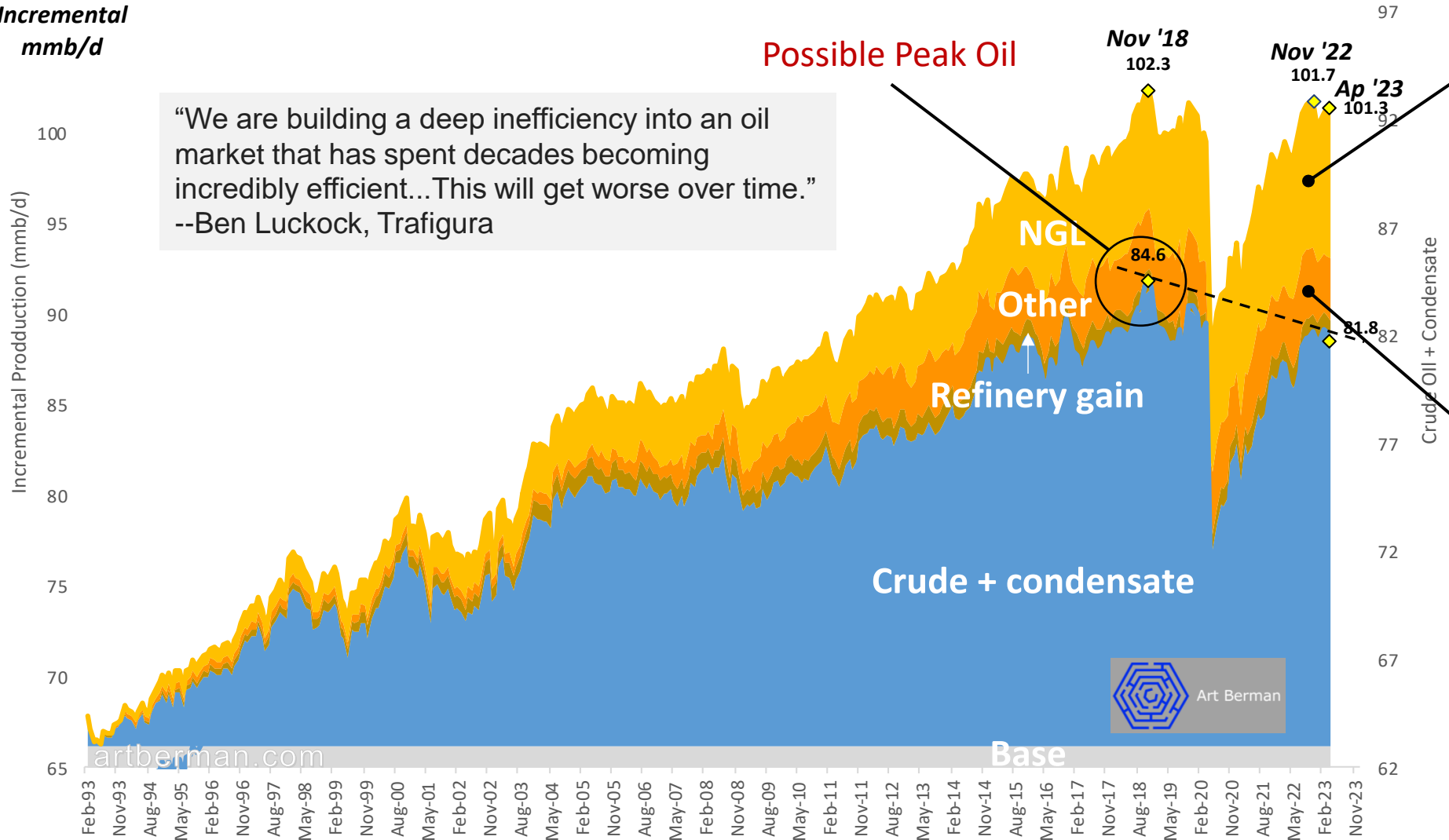
Developed from previous work, Labyrinth Consulting Services, Inc., Art Berman





**World liquids production reached 0.5 mmb/d less than its peak 2018 level in late 2022
 but crude oil + condensate is almost 3 mmb/d less than in 2018
 April total liquids are about 1 mmb/d less than in November 2018**

Incremental
mmb/d

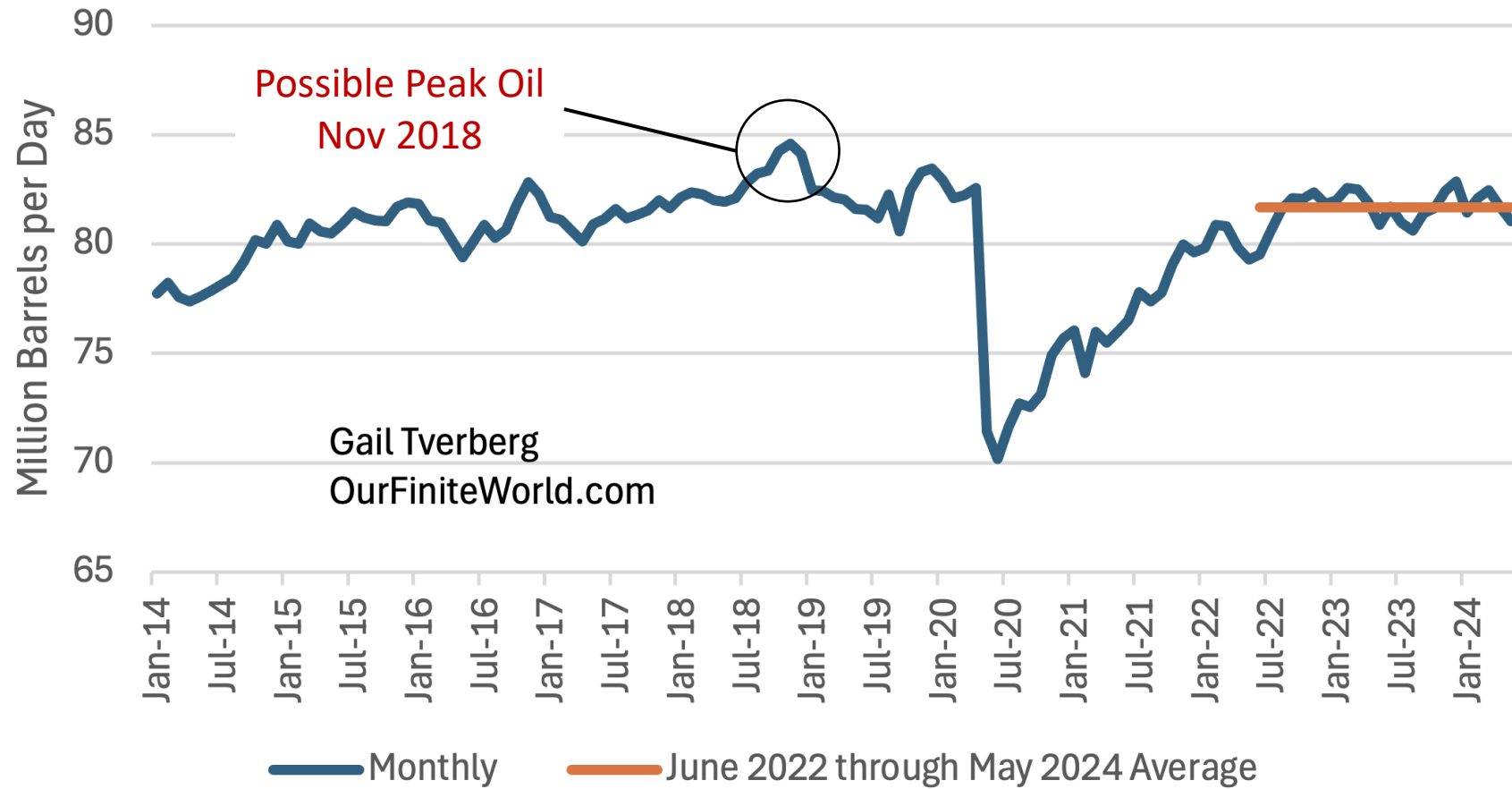


Natural gas liquid
derived gasoline

Biofuels



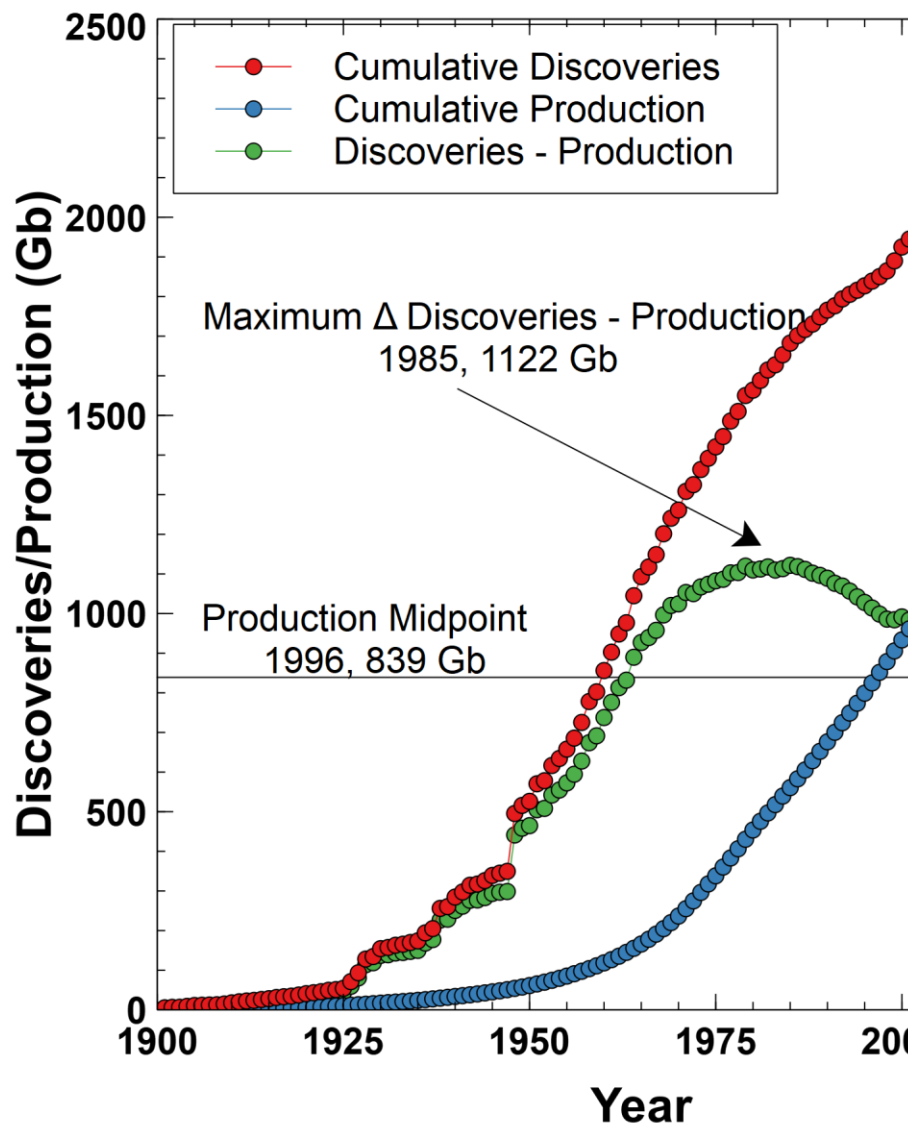
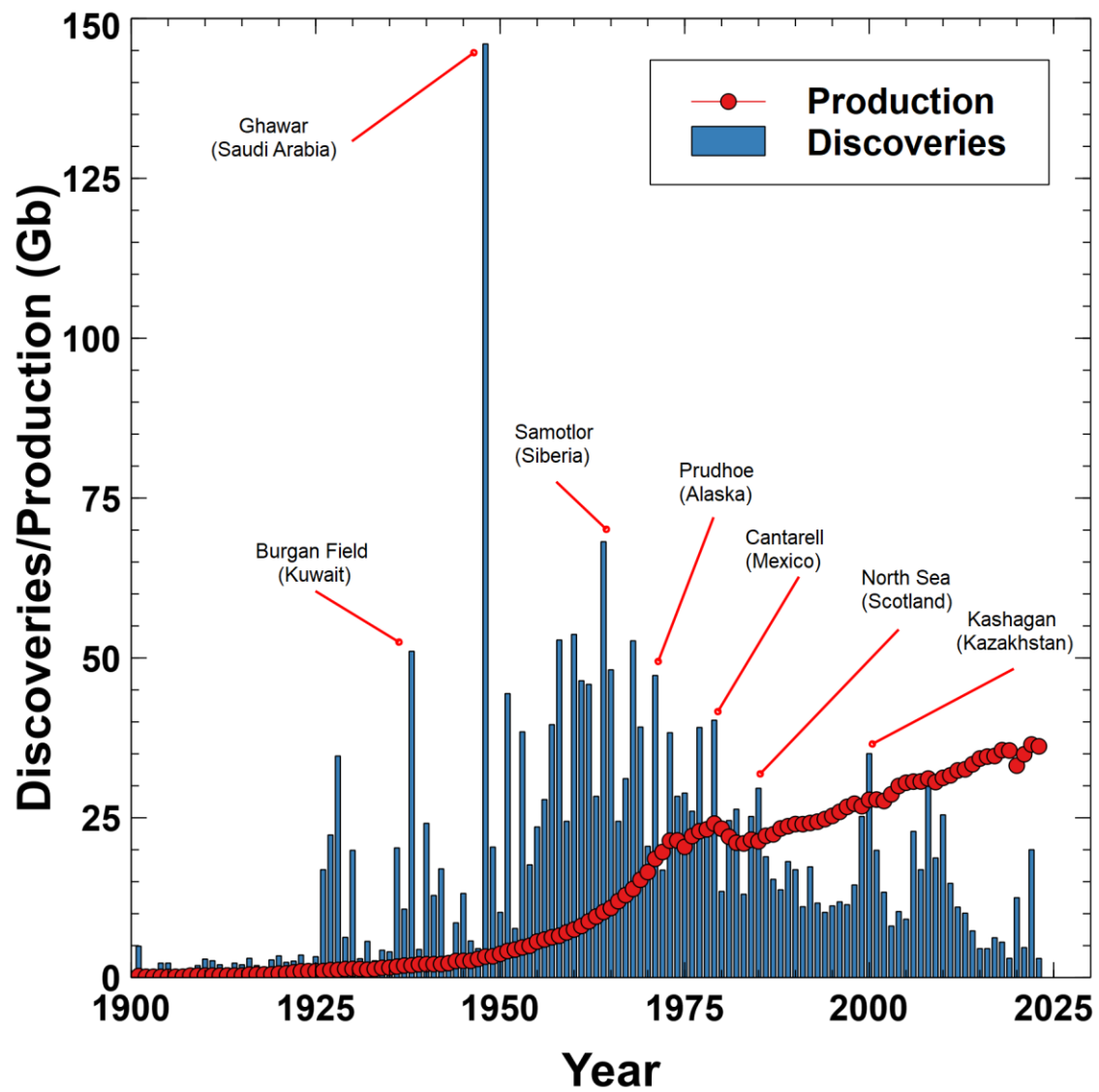
World: Crude Oil Production



<https://ourfiniteworld.com/2024/09/11/crude-oil-extraction-may-be-well-past-peak/>

81% of existing oil reserves are being annually depleted at a rate ranging between 5 to 15%

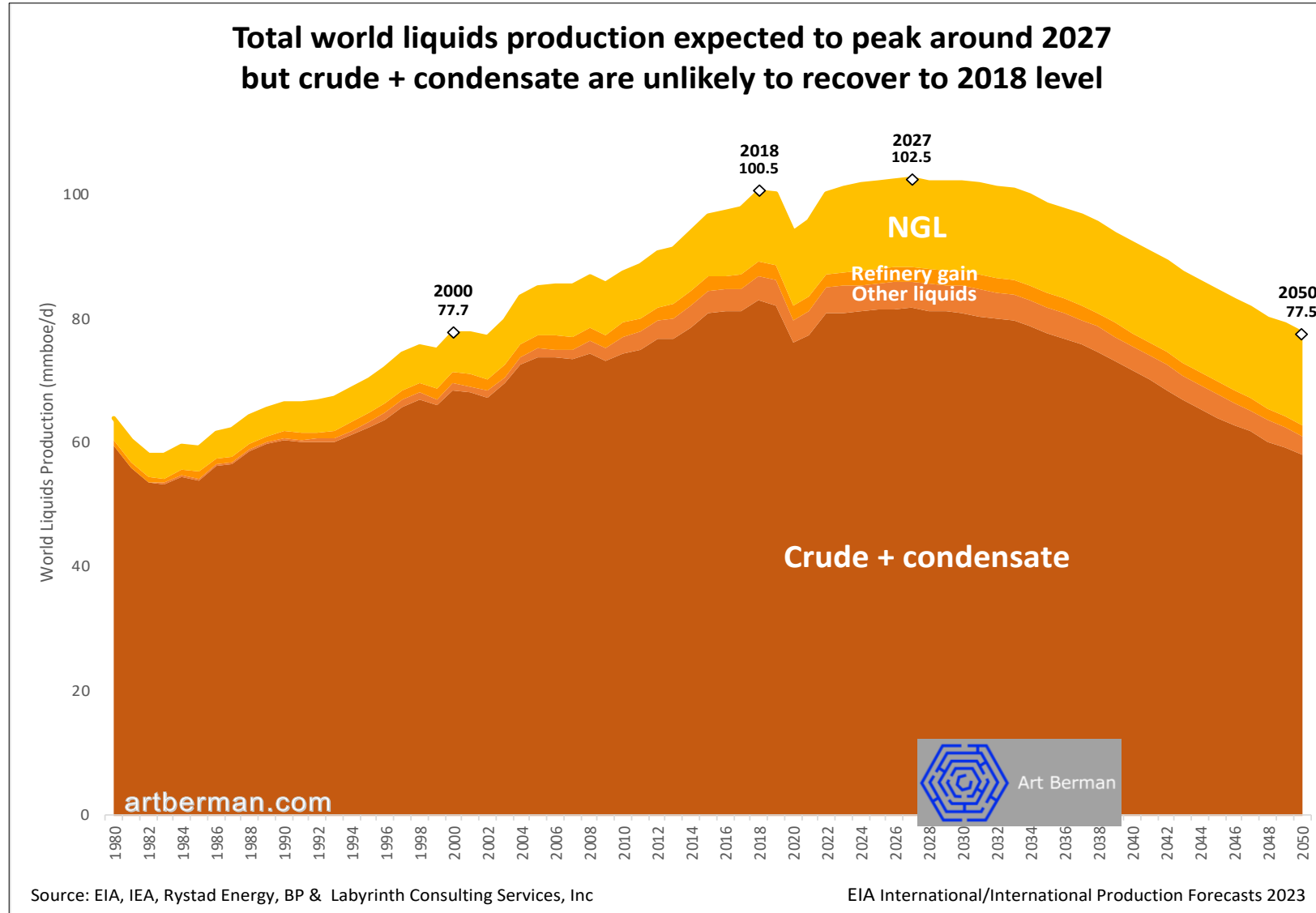




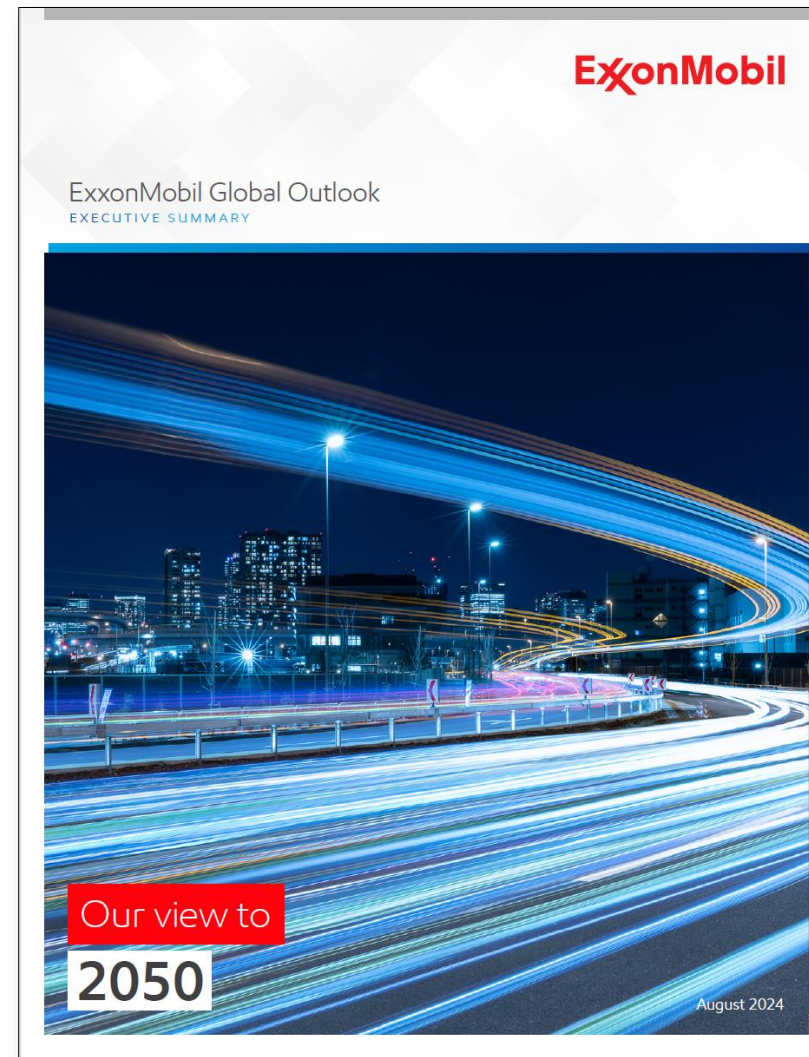
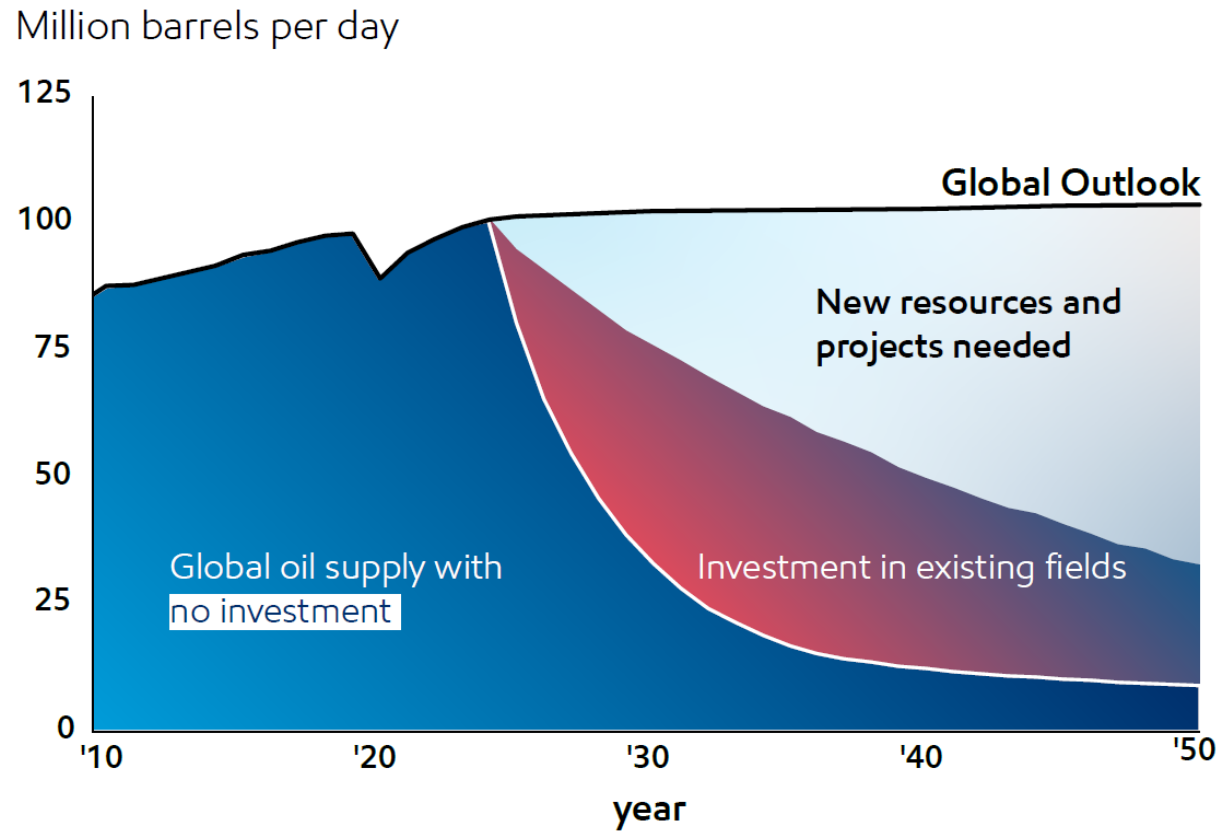
Source: John Peach, MIT Lincoln Laboratory (ret.)



Oils ain't oils....



Fossil fuels are being phased out



<https://corporate.exxonmobil.com/sustainability-and-reports/global-outlook>



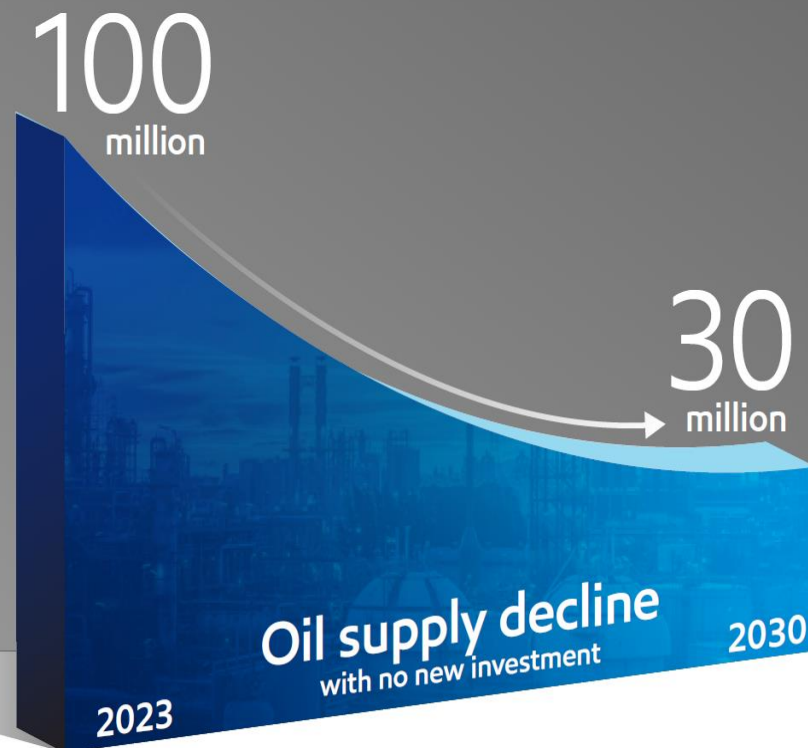
Fossil fuels are being phased out

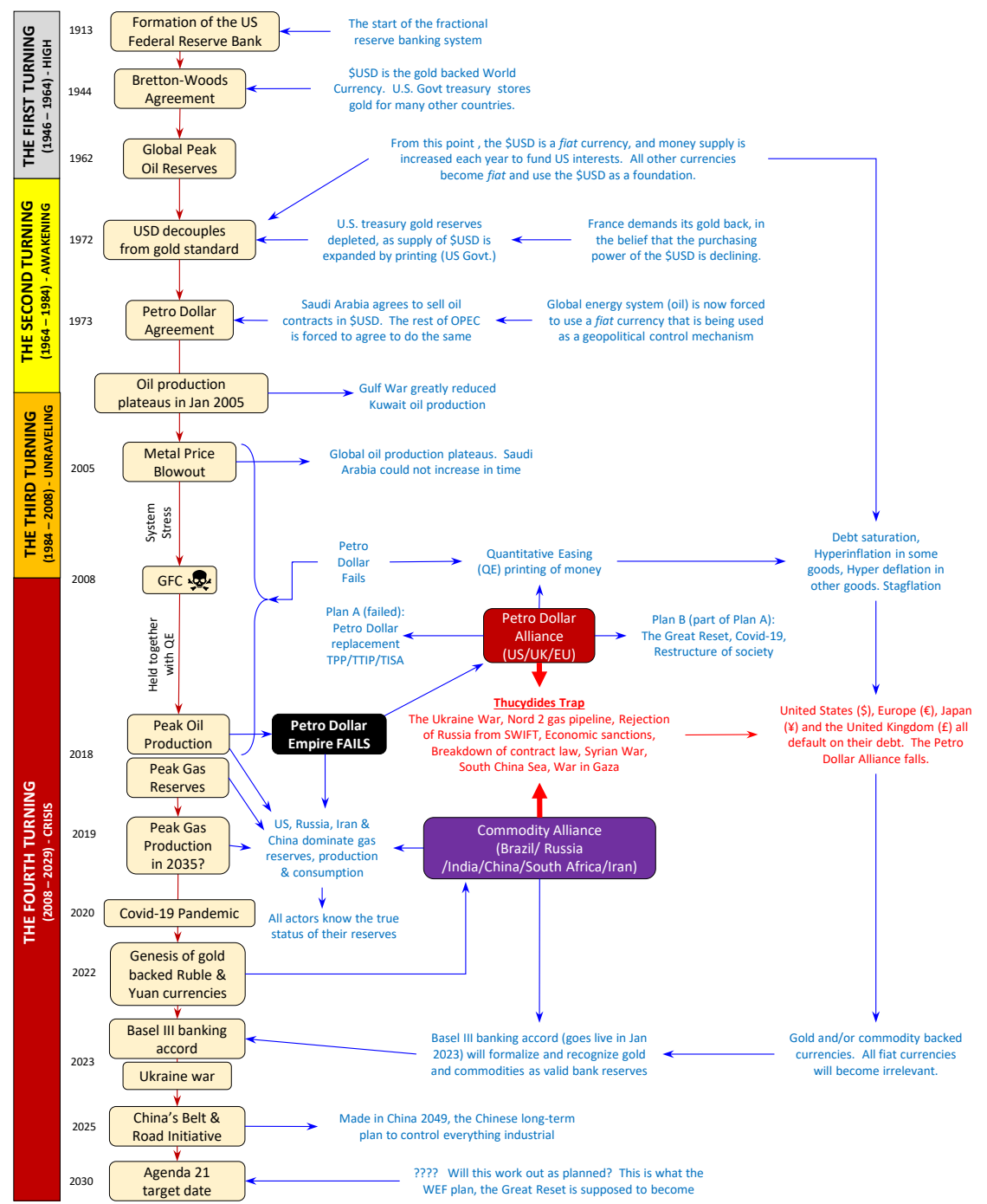
Sensitivity analysis: The economic effects of this kind of supply shock would be dire.

The world would experience severe energy shortages and disruption to daily lives within a year of investment ceasing.

Given price responses to past oil supply shocks, the permanent loss of 15% of oil supply per year could raise oil prices by more than 400%. By comparison, prices rose 200% during the oil price shocks of the 1970s.

Within 10 years, unemployment rates would likely reach 30%. That's higher than during the Great Depression of the 1930s.





Empire cycles, global currencies & monkey business

