

FDR, the New Deal, and the Great Nineteen Thirties Gold Rush

By
Mark Aldrich

“The time to mine gold is in hard times.”
—John W. Finch, dean of the Idaho School of Mines, 1932

“The current price of \$35 per ounce has established a
new horizon for the [gold] industry in California.”
—*Engineering and Mining Journal*, November 1934

Even before they had a football team named after them, the '49ers had become part of American myth and folklore. But how many people have ever heard of the '34ers? There was a gold rush in the United States in 1934; it began in a small way in 1930, exploded in 1933-34, and lasted until the advent of World War II. During those years more gold came out of American mines than had been dug in the earlier, more famous rush.

Most mineral booms, whether they involve gold, oil, copper or anything else, have been supply-induced. That is, they resulted from discoveries of rich deposits. The gold rush of 1934 was different, for it was made in Washington, D.C. It resulted from changes in public policy, and in fact was inadvertent, being an unintended consequence of New Deal gold policies pursued for other ends.

While much has been written about these New Deal policies, that writing mostly focuses on the motives behind them and their monetary and macroeconomic consequences. This paper mines a different vein; it digs into the consequences of the new gold policies for western mining in the years immediately before World War II. The first section explains the changes made during the New Deal and briefly places them in historical and economic context. The second section details the character of the era's mining boom and links it to the policy changes. The third sec-

tion treats gold purchases as a type of New Deal jobs-and-income program and compares their effects with similar New Deal activities, demonstrating that the gold purchases were a significant source of income and employment for gold mining states. The last section briefly explains the end of the boom.¹

Gold Mining Meets the New Deal

By 1933, except for the period from 1862 to 1879, the United States had been on a gold standard since 1834. For practical purposes what that meant was that the dollar was defined in terms of gold—about .048 ounces to the dollar or \$20.67 per ounce. The gold standard meant that the U.S. Treasury agreed to buy or sell gold for dollars, paper or otherwise, at that price, making \$20.67 per ounce the market supply-demand price of gold as well. Thus it was profitable to mine all gold that cost less than \$20.67 per ounce to produce.

Of course, for the Treasury to sell gold it had to own some, and so if the demand for gold were greater than the mines could supply, the treasury might run out. In such a case, the country would no longer be on a gold standard and the price of gold in dollars would rise. Such an event might occur if there were large-scale speculation that the Treasury would raise the price of gold, in which case such expectations might become self-fulfilling.²

Given the fixed price of gold, four influences determine the amount of mining done: new, low-cost discoveries that should increase supply; depletion, that should reduce it; improvements in mining technology that should increase output; and decreases or increases in the prices of other goods, relative to the value of gold, that increase or decrease profit and thereby should influence the production incentive.

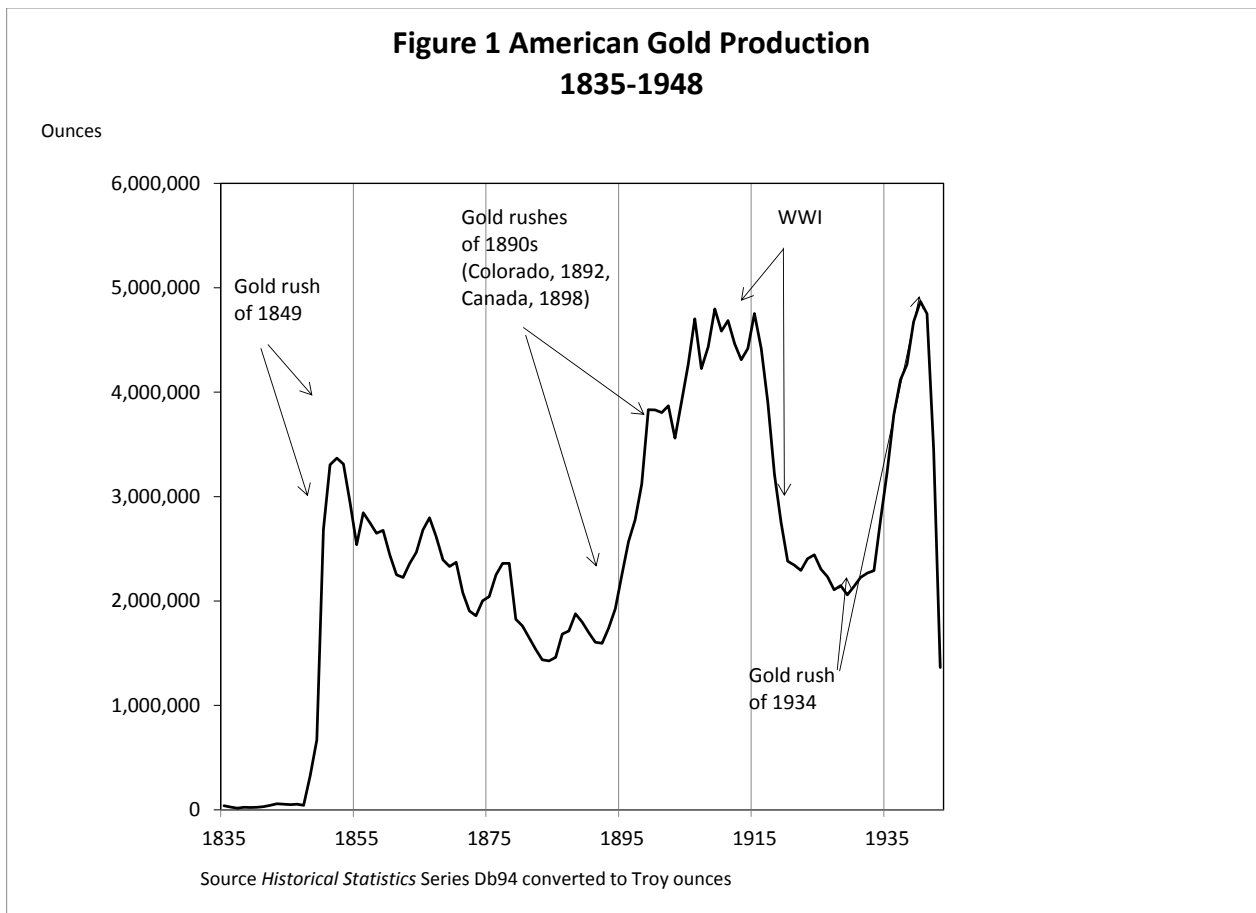
This last point requires a bit of explanation. A general rise in wages and prices will increase the costs of gold mining, and with gold selling at a fixed price of \$20.67 per ounce, marginal dig-

gings will become uneconomic. A parallel argument suggests that deflation is good for the gold industry (see below). Figure 1 charts U.S. gold production from 1845 to 1945 and the influences of the booms can be seen clearly. The decades of the 1870s and 1880s probably reflect depletion, while the impact of the World War I inflation is also clear. The collapse after 1942 was due to the almost complete shutdown of gold mining for war purposes.

The United States was one of many countries that defined its currencies in terms of gold in the 1920s and early 1930s. Of greatest importance was Great Britain, which defined the pound to be equal to .235 ounces of gold. As a result, there was an official dollar-pound exchange rate which, until 1931, was that £1 equaled \$4.86.

When the world entered depression in 1930, speculators began to attack the British pound—trading pounds for gold and causing essentially a run against the Bank of England. In danger of running out of gold, Britain went off the gold standard in September 1931; that is, it would no longer trade gold for pounds at the old rate. The gold price of pounds promptly rose, the pound depreciating in terms of gold and therefore in terms of the dollar. Thirteen other countries followed Britain that year, thus precipitating a rise in gold prices, measured in a number of currencies, and accordingly, the beginnings of an international gold rush.³

In simplified terms, this was the backdrop when Franklin Roosevelt took office in March 1933: About a quarter of the labor force was then out of work; prices had declined about 25 percent; industrial production had plunged 50 percent since 1929; and with the collapse of wheat and other major agricultural prices farmers were in open revolt. Students of New Deal gold policy have concluded that FDR knew little about monetary matters and came into office with no fixed ideas about gold. And to the extent that his advisors—the “brain trust”—thought about gold, they held largely conventional ideas, believing



that existing policies should be continued. In fact, those policies quickly would be scrapped.⁴

On 19 April 1933, the United States went off the gold standard, with the Treasury no longer willing to sell gold at \$20.67 an ounce. The probable cause was a run on the dollar similar to the run on the pound described above, and, with the dollar deregulated, market forces promptly drove gold prices on world markets to about twenty-eight dollars per ounce by July and thirty-one dollars by September. Alas, the administration also temporarily banned gold exports, preventing miners from taking advantage of the world price. After complaints from gold miners, the ban was lifted in September and the administration employed the Reconstruction Finance Corporation (RFC) to purchase gold in the open market at successively higher prices.

The maverick most responsible for this policy

shift was George F. Warren, an agricultural economist at Cornell University and personal friend of Roosevelt. Warren had a professional interest in farm prices, which had been collapsing. He had done statistical work that showed a positive correlation between gold prices and wheat prices, although he eschewed any theoretical explanation that might account for such a finding.

With the farm belt in open revolt, the likelihood is that Warren and FDR each hoped that raising the price of gold would also raise the price of wheat and other crops as well. By December 1933 the RFC had driven up gold to thirty-four dollars an ounce, and by 1 February 1934 the price was thirty-five dollars per ounce, where it would remain until 1971. Thus the nominal price of gold rose about 70 percent in ten months in 1933 and 1934. This was enough to start a gold rush.⁵

Figure 2. Gold Prices, Official and Adjusted for Inflation and Deflation, 1925-1950



Gold Mining Takes Off

In 1929, on the eve of the Great Depression, American gold mining had been declining for over a decade. At a little more than two million ounces, production that year was lower than in any year since 1920. Even these figures understate the decline, for the share of “byproduct” gold recovered from mining copper and other base metals had been steadily rising, from about 36 percent of the total in 1920 to 48 percent in 1929. All of this was about to change, however, as deflation slowly breathed new life into old mines. “The time to mine gold is in hard times,” John W. Finch, dean of Idaho’s School of Mines, noted in 1932. Between 1929 and 1930, gold production rose about 3.8 percent. But as mining of other metals collapsed, byproduct gold fell with them. Colorado’s commissioner of mines commented that “only the mines where gold values predomi-

nated were able to operate at a profit.” As a result, production from gold mines (placer and lode) increased by about 15 percent from 1929 to 1930. The *Los Angeles Times* felt the new breeze: “Quest for Gold Reviving,” the paper reported in September 1930, attributing the upswing to lower prices for materials and better mining methods.⁶

Predictably, as the Depression deepened and more countries raised gold prices, mining everywhere picked up even more. In 1931, newspapers reported old mines re-opening all over the world and a boom in gold stocks on the New York and London markets. By the end of 1932, gold production from all American mines, including those where it was a byproduct, had increased 13 percent over 1929, while that from gold mines had risen 46 percent. *Nation’s Business* remarked in 1932 that “gold mining is one of the most prosperous industries of the day,” and went on to explain that “gold mining always increases in hard

times.” These events were but a tune up, however, for developments during the New Deal.⁷

After the United States raised gold prices 70 percent by early 1934, the boom really took off. Moreover, as Figure 2 depicts, because of deflation, the rise in the price of gold adjusted for changes in purchasing power was more like 116 percent between 1929 and 1934. In response (Figure 1), gold production in the Continental United States rose 112 percent between 1933 and 1940, a larger increase than in any previous period of similar length. Accordingly, the number of active gold mines increased from fewer than 3,300 in 1929 to over 12,000 in 1935.⁸

Contemporaries were unanimous that the driving force behind the boom was the rise in the price of gold. “There was a quickening of the industry . . . from September through December [1933] which has continued and will be reflected in an increase in 1934,” the U.S. Bureau of Mines noted. Idaho’s mine inspector surveyed the events of 1933 and found that the “outstanding feature . . . was the change from the general feeling of hopelessness to one of optimism,” which he attributed to “the increase in the price of gold from \$20.67 to \$35 [that] placed Idaho’s future gold mining on an entirely new basis.” An editor of the *Engineering and Mining Journal* visited Colorado’s Cripple Creek District in January 1934 and remarked—apparently with some surprise—on the “the absence of gloom,” which he attributed to “the enhanced price for gold and silver [that] had brought new hope and inspiration.” The *Los Angeles Times* summarized events in October 1934: “Gold Mining Revival Brought about by High Metal Prices.”⁹

But if high metal prices underlay the boom, breathless newspaper articles lent an air of euphoria to the atmosphere that also helped to propel events. The *Los Angeles Times* published “New Strike in Little Elephant Mine Held Rich,” “Gold Dome Mine Held Rich,” and similar stories. In January 1934, the paper announced that “A New Era of Gold Mining” had arrived. Not

to be outdone, in September 1934 the *New York Times* reported that “Gold Fever Grows in Colorado Area,” and noted that the gradual increase in the gold price had generated hopes that it might rise to forty dollars per ounce or more. “Cripple Creek District Rides High as Crest of Boom Routs Depression,” reported California’s *San Bernardino Sun*, claiming that “the old ghost towns of Cripple Creek and Victor have been reborn.”¹⁰

A symptom of this euphoria—typical of most resource booms and financial bubbles—is that it arrived with a generous dollop of fraud, as both news stories and records of the U.S. Securities and Exchange Commission attest. In 1933 some California gold buyers were using false weights and the following year the *Los Angeles Times* reported that one E. C. Metz was convicted of selling shares in a salted placer mining company. There was the La Luz Mining Corporation, incorporated in Arizona in 1933 with offices in Canada and a mine in Mexico. The company “geologist”—who was innocent of training in that or any other science—used a “vibrator” to detect gold, which, he claimed, averaged thirty dollars to the ton of ore. More common, if less imaginative, was a report of the Big Wedge Gold Mining Company that simply inflated the gold content found by its mineralogist. The Gilpin Eureka Consolidated Mines, a Missouri corporation with a Colorado mine, inflated the gold content of its ores simply by taking the unweighted average of one very small but high-gold-content sample with two much larger and much less rich samples. The company also claimed that one of its managers had experience as an engineer for the Austrian government; this was true, but his experience was in driving a locomotive.¹¹

If the price increase encouraged a certain amount of fraud and froth, it also stimulated the search for new gold, and there were, indeed, a few important finds. The Golden Queen Mine near Mojave, California, made its discoverer, George Holmes, a multimillionaire, for example. But such strikes were rare; the vast increase in gold

production and the number of mines largely resulted from reopening old mines and reworking previously known and sometimes previously worked deposits.¹²

As is well known, resource availability is as much a reflection of economics and technology as it is of geological conditions, and the mining boom of the 1930s reflected this truism. The rise in gold prices and improvements in technology again made profitable mines and mining that would have been uneconomical at previous prices and with older technology. It even became economic to rework old tailings banks. Byproduct gold must also have experienced some stimulus from the rise in gold prices. In copper mining, revenue from gold equaled about 3 percent of producers' revenues from copper in the 1920s but with the fall of copper prices and the rise of gold, byproduct gold revenues amounted to 13 percent of the revenues from copper in 1934. As noted above, Colorado's commissioner of mines claimed that for some byproduct mines, gold represented the margin of profit.¹³

Reports of federal and state mining bureaus, along with those from the mining press, document that the expansion mostly reflected reworking rather than new finds. Remarking on the revival of California gold dredging in 1934, the *Engineering and Mining Journal* observed: "Areas formerly marginal are now of great importance and other areas not even considered as marginal . . . are now being examined." The U.S. Bureau of Mines noted that in Alaska, because of the rise in the price of gold, "certain lower grade areas . . . have become available." From Arizona, new gold production came in part from "the Vulture [Mine's] tailing dump." In Montana the increase in the price of gold "resulted in the operation of . . . many low-grade gold mines and old tailings dumps." The Bureau noted that "in California, the large increase in the price of gold . . . will notably extend the areas that may be mined profitably." In South Dakota the price rise during 1933 resulted in the opening of two mines closed since 1923,

while the further price increase in 1934 brought back to life one that had been dead for thirty-five years. In 1934 Idaho's mine inspector reported efforts to revive the moribund Idaho Copper Company, since "on account of the very appreciable gold content of these ores, operation of this property is feasible . . . in spite of the low price of copper." Also describing conditions in Idaho, the U.S. Bureau of Mines observed that the price increase of gold "transformed much vein material too low in grade to be considered ore heretofore into payable reserves."¹⁴

Thus, the gold rush of 1934 was largely a reworking of old properties in response to higher prices and so, in most cases, ore concentrations declined. But the ability to rework such thin gruel at a profit reflected not only higher prices, but also improved technology and infrastructure—which paid off more handsomely, of course, with gold selling at higher prices. R. S. McClellan, manager of Idaho's Golden Chariot Mine, understood the interaction of price and technology: "If it seems likely that modern ore-finding, mining and metallurgical methods and \$35 gold can again put the property on a profitable basis someone can usually be found to back the venture." The improvements included, besides those that McClellan stressed, better infrastructure and transportation as well. Heavier trucks, along with New Deal road-building programs, reduced costs and improved year-round accessibility, especially in the rugged mountainous regions of Idaho. In winter, air transport to distant mines could fly in key parts and fly out bullion.¹⁵

New Technologies Employed

Some of the most important improvements involved ore processing rather than mining. Traditionally gold ore had initially been processed via crushing in stamp mills. Vanners (shaker/conveyors) might employ gravity and water to concentrate the ore further and, depending upon the ore's chemistry, mercury could be used to draw



TRAVELING UNDER DIFFICULTIES



THE MODERN WAY TO TRAVEL

Air travel helped Idaho gold mines operate year round. (Idaho Inspector of Mines, Thirty-Fifth Annual Report, 1933.)

off the gold. Again, depending upon chemistry, some companies employed cyanide for further purification. While these processes remained widely used, mines began to replace stamping mills with more efficient ball mills and to employ flotation as well. The Bureau of Mines concluded that “the outstanding technical development in the gold mining industry of California in 1933 was the continued trend toward the adoption of flotation” methods.¹⁶

Flotation was a physical and chemical process that immersed finely ground ore in water with some form of reagent added. Agitating the mix so that it formed bubbles resulted in the gold clinging to the froth, which could then be separated from the mix. Flotation might be used instead of, or in combination with, other methods, and might result in much-increased rates of gold recovery. By the 1920s, flotation was widely employed in mining such base metals as copper but, probably because there was little investment in gold during that decade, it had not been used much in gold mining. While no overall figures exist, mining literature suggests the widespread construction of flotation plants during the 1930s.¹⁷

No dramatic changes in underground lode mine technology occurred during the boom. Some mines had begun to use scrapers in the 1920s and the investments of the 1930s saw a more widespread application of such mechanical haulage methods. For example, the Idaho-Maryland Mining Company bought mine-car loaders in 1932 and nearly doubled its productivity in loading. When St Joseph Lead opened an old Idaho gold mine it simply brought in electric locomotives from other workings. Summarizing mechanization of lode gold mining in 1939, the U.S. Census of 1940 reported “a marked increase in the proportion of mobile equipment.”¹⁸

Placer mining especially boomed during these years. Its share of gold production rose from less than 20 percent in 1929 to about 31 percent in 1940. By the 1930s, placer mining involved several separate methods: elevator-bucket dredging; use of draglines and power shovels; hydraulic mining; and drift (underground) mining. These were what might be called industrial mining, but there was also much small-scale placer mining by individuals employing hand methods. About half of all placer gold came from California, and

Table 1 California Placer Mining by Type of Operation 1935 and 1940

	Mines	Material (Thousands of Cu. Yards)	Gold (Oz.)	\$/yd
Mechanical Bucket Dredging 1935	20	75,014	236,404	0.11
1940	32	132,461	414,966	0.11
Draglines 1935	24	3,906	22,191	0.199
1940	198	42,747	205,181	0.168
Hydraulic 1935	93	3,013	13,623	0.142
1940	92	2,401	12,059	0.176
Hand Methods 1935	1,132	2,896	44,147	0.534
1940	278	1,710	38,526	0.788
All Placer 1935	1,487	86,442	345,526	0.14
1940	836	185,425	704,952	0.133
Source: US Bureau of Mines, <i>Minerals Yearbook</i>				

Table 1 indicates the importance of each of these methods in that state.

As can be seen, bucket dredging dominated. The technology had existed since 1898 and by the 1930s the main improvements were bigger and more powerful equipment that used 18-cubic-foot buckets that could work to 150 feet below the water surface. Where electricity was unavailable, the substitution of diesel for gasoline engines reduced the cost of power. The dredges themselves were often constructed of sectionalized hulls for ease of transport. Output of the largest dredges was four million cubic yards per year, and they were profitable when gravel yielded eleven cents (.003 ounces) of gold to the yard. Such mining

provides a good example of the interaction of technology and market price. These low yields required dredges to process immense amounts of gravel to turn a profit; yet if gold had remained at \$20.67 per ounce such work would have yielded only 6.5 cents per yard—probably not enough to profit.¹⁹

Mining with draglines and power shovels that might feed a dry-land or floating washing plant was also an older technology into which the Depression and higher gold prices breathed new life, when construction contractors began to look for ways to employ their equipment. Such methods could work much smaller bodies of water than dredges required and, indeed, could operate in



Gold dredge on the Trinity River in California, 1938. (UC Davis Library Digital Collections, <https://digital.ucdavis.edu/record/collection/eastman/P-1/P-1751>.)

dry gravel pits. As can be seen, their use grew explosively during the 1930s.²⁰

Despite high hopes on the part of the mining industry, hydraulic mining never recovered its former importance in the 1930s. A U.S. Bureau of Mines report for 1932 concluded that few of the mines it surveyed were profitable and hydraulic mining accounted for only 1.7 percent of the 705 million ounces of gold issuing from California placers in 1940. Nor did drift mining of placer deposits account for much gold.

Small-scale placer mining, by contrast, accounted for about 5.5 percent of California's placer gold in 1940, making it more important than hydraulic and drift mining combined. Moreover, of all the various methods for winning gold, none captured the public imagination more than small-scale placer mining—as literally thousands of newspaper articles attested. Indeed, small-scale placer mining became so popular that at least seven cities and state universities began to offer courses in it. Placer mining seemed romantic, for it reminded Americans of the hard work and grit that was part of their collective memory. Like 1930s movies, stories of prospectors provided a kind of escape at a time of mass unemployment. Perhaps what worked in the old days would work again. In 1936, *Nation's Business* extolled the success of one such miner, contrasting his efforts with those who had simply given up and gone on the dole.²¹

Gold Mining as a New Deal Works Project

The New Deal included an alphabet soup of federal programs that intervened in the economy to create jobs, build public works, and influence

resource prices. Although historians have not seen it that way, gold buying was one such program: it propped up the price of gold and supported private economic activity both directly and indirectly. In those states that mined gold, it was an important but largely overlooked program. Table 2 compares per capita gold purchases by state from 1933 through 1939 for those western states that mined gold with similar data for important New Deal Programs. As can be seen, gold purchases were typically as significant a source of spending in these states as the individual New Deal programs.²²

Gold purchases should also be seen as a jobs program. U.S. Census data reveal the number of persons engaged in lode and large-scale placer mining for 1939 but miss the many small-scale, self-employed placer miners who swarmed the hills after 1930. The only available detailed study of the men (and the very few women) who un-



Day's pay. The miner thought that the gold in the pan was worth about \$2.80. (WPA, National Research Project, Report E-14, 1940.)

Table 2: Per-Capita Spending, Selected New Deal Programs and Gold Purchases, 1933-1939						
States	RFC	FERA	CWA	WPA	CCC	Gold
Arizona	\$27	\$40	\$11	\$58	\$101	\$139
California	102	28	7	60	20	43
Colorado	21	39	7	73	41	78
Idaho	29	36	12	51	127	47
Montana	26	47	12	88	51	74
Nevada	94	61	14	66	213	623
New Mexico	23	47	6	64	101	19
Oregon	25	22	7	60	20	14
South Dakota	21	63	10	66	33	192
Utah	39	40	9	58	70	98
Washington	34	24	9	64	36	5
Wyoming	25	46	11	49	108	2
Source: Leonard Arrington, "The New Deal in the West, A Preliminary Statistical Inquiry" (<i>Pacific Historical Quarterly</i> 38 (Aug 1969): 311-6), and author's calculations.						

dertook small-scale placer mining during these years comes from the Works Progress Administration, National Research Project. The NRP study focused on the years 1935 through 1937; accordingly, it tells us little about either earlier or later years. Based on gold sales to the U.S. Mint, about twenty-eight thousand small-scale miners were at work in 1935, 70 percent of them in California. The average earning of those California miners for that year was fifty-three dollars; including miners operating in other states raises the average to seventy-two dollars. In contrast, wages for unskilled labor on WPA work projects that year ranged from forty to fifty-five dollars per month.²³

These were only the miners who found gold, however; based on its own surveys the National Research Project's researchers estimated that in 1935 and earlier only about a fifth of miners found any gold at all. Thus, probably at least one hundred thousand miners were at work in 1935. Even more had been earlier; the researchers esti-

mated that as many as two hundred thousand men had been panning for gold in 1932 and 1933. The total might have equaled 10 percent of California's population of adult males, the NRP's writers opined. By 1937, however, most of the casual miners had left—returning to private industry or to work on WPA projects—so perhaps four out of five found gold.²⁴

Again, a comparison with the federal relief program is instructive. Table 3 contains U.S. Census data on gold mining employment by state (adjusted to 1935 levels of output) along with the number of successful small-scale placer miners (those who found any gold) by state. Comparison with the data on relief work in 1935 indicates that the gold program constituted an important form of employment.²⁵

Yet, as the NRP's study emphasized, work in small-scale placer mining was nearly always episodic. Thus, while California miners earned an average of fifty-three dollars for all of 1935, they only worked an average of forty days to do so,

Table 3: Gold Mining Employment as a Percent of Employment on Public Works, by State, 1935

State	Gold Placer	Gold Census	Census Adj.	Pub. Wks. Emp.	Gold Pct. of P. W.
Arizona	1,184	1,550	1,070	7,553	29.8
California	19,463	9,182	6,336	28,924	89.2
Colorado	1,047	3,370	2,325	9,659	34.9
Idaho	1,314	850	587	9,053	21
Montana	711	1,998	1,379	9,334	22.4
Nevada	130	1,944	1,341	7,583	19.4
N.M.& Wyoming	271	295	204	12,956	3.7
Oregon	2,229	741	511	8,492	32.3
South Dakota	214	2,458	1,696	6,313	30.3
Utah	41	455	314	6,101	5.8
Washington	250	302	208	18,299	2.5
Source: See text					

which is to say they earned a bit less than forty dollars a month—a figure comparable to the WPA’s monthly wages. The NRP’s researchers divided miners into categories. Those it termed “casual” worked a month or less at the job. These included the unemployed and drifters, the great majority of whom found little gold and left quickly. “Intermittent” miners, who worked from one to six months a year, might be seasonal farm workers or townspeople who mined on weekends. Finally, fewer than 4 percent of the men were classed as a “full timer,” a miner who worked six months or more, and these included a “large proportion of pensioners, elderly men, cripples and others who would be sub-marginal in industry.”

Each of these groups was in turn heterogeneous, with a few who, because of luck or skill earned good wages. Here too, technology sometimes increased productivity. The more successful miners used shakers, long toms and other equipment usually driven by gasoline-powered hit and miss engines or sometimes a washing machine motor or Ford Model T. But probably most did not. Median weekly incomes were, accordingly,

far below group averages.²⁶

Broadly speaking, the picture that emerges is of a few full-time miners, who had failed at much else, along with a much larger group of working-class men (and a few women) who had been cast off by the Depression and lured by newspaper stories and high gold prices. For some, mining was an income supplement and a small number did well. But most did not. “The anticipation [of a possible large find] is a real satisfaction,” an NRP writer noted. Small-scale placer mining by those otherwise under- or unemployed in the 1930s thus resembles the purchase of a lottery ticket by a poor household today. Many continued to mine in hopes of finding a winning ticket. New Deal gold purchases thus funded a large-scale employment program; but for many, the payoff came mostly in hope.²⁷

Expansion and Collapse

Gold output continued to expand sharply throughout the late 1930s. In part this reflected the revival of byproduct production as copper

mining especially came out of its depression doldrums, but the expansion also resulted from the growth of using new methods. In California, while dredging output continued to expand rapidly, the relatively new use of draglines simply exploded, rising from three such operations in 1933 to 142 in 1939. Accordingly, gold production per annum from draglines rose from 75 ounces to 173,000 over the same period! Nor had the impact of gold's price rise been entirely spent, for the purchasing power of an ounce of gold remained higher in 1939 than it had been in 1937.²⁸

By 1940, however, the boom that had begun a decade earlier was running out of steam, and by 1941, it was over. In the former year, gold production rose about 5 percent over the 1939 total—the increase had been 10 percent the year before. Much of the gain, moreover, was from byproduct gold. In California the increase was only 1 percent and output from underground mines declined. While production rose in Idaho and Montana, it declined in Arizona and South Dakota. In 1941, U.S. gold production declined and in its report on California, the U.S. Bureau of Mines explained the forces at work: “higher wages, migration of miners to war industries, rising prices of supplies . . . and difficulties in obtaining them, increased taxes and fixed prices for gold.”²⁹

Fittingly enough, however, for a boom that had been largely propelled by government policy, what finally rang down the curtain on the thirties rush was a government mandate. A headline from the *Los Angeles Times* in October 1942 told the story: “Gold Mining to Be Halted.” The War Production Board, the paper informed readers, “decided to order all gold mining halted in the United States...for more vital war production.”

After the war, continuing inflation further reduced mining's incentives. In 1948, with production controls gone, gold output was again back to 1929 levels. The great 1930s gold rush really was over.³⁰

Meanings of the 1930s Gold Rush

For political and economic historians, the gold rush of the 1930s has been overshadowed by the more exciting changes in agricultural policy, social programs, welfare, and macro-economics, but mining historians should not ignore it. The rush during those years was one of the great gold booms of all time and it differed from previous booms because it was not resource driven. Instead, while it was ignited by the Great Depression, the real boom was policy driven. In a delicious example of the inadvertent consequences of government policies, raising the price of gold was intended to help wheat farmers; it did and showered collateral benefits upon the mining West as well. While 1930s gold purchases largely have been studied for their monetary consequences, they also need to be understood as an inadvertent New Deal income and jobs program that provided important benefits for western mining states.

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Notes:

1. Of course, while the gold rush resulted primarily from New Deal policies, these policies in turn were in part a reflection of international financial and political events.
2. A good, reasonably simple explanation of the workings of the gold standard is offered by Michael Bordo, "Gold Standard," at: www.econlib.org/library/Enc/GoldStandard.html
3. The best introduction to the financial collapse of the 1930s is from an economic history text, such as: Gary Walton and Hugh Rockoff, *History of the American Economy* (Mason, OH: Cengage, 2018). The secondary literature is vast. For two good examples see: Peter Temin and Barry Wigmore, "The End of One Big Deflation," *Explorations in Economic History* 27, no. 4 (Oct. 1990): 483-502; Christina Romer, "The Nation in Depression," *Journal of Economic Perspectives* 7, no. 2 (Spr. 1993): 19-39.
4. The decline in prices is measured by the change in the GDP deflator—a broad measure of the prices of all goods and services produced domestically in a year. Along with the Index of Industrial Production it is available in: U.S. Bureau of the Census, *Historical Statistics of the United States* (Wash., D.C.: USGPO), Series Ca13 and Cb31. Sebastian Edwards, "Gold, the Brains Trust, and Roosevelt," *History of Political Economy* 49, no. 1 (Jan. 2017): 1-30.
5. Barrie Wigmore, "Was the Bank Holiday of 1933 Caused by a Run on the Dollar?" *Journal of Economic History* 47, no. 3 (Sep. 1987): 739-55. For the ban on gold exports and miners' complaints see: "Gold Embargo Modified to Allow Sale Abroad," *Los Angeles Times*, 30 Aug. 1933. On the Roosevelt administration's decision to change the price of gold see: Elmus Wicker, "Roosevelt's 1933 Monetary Experiment," *Journal of American History* 57, no. 4 (Mar. 1971): 864-79; and Scott Sumner, "Roosevelt, Warren, and the Gold-Buying Program of 1933," in: Alexander Field, et al. (eds.), *Research in Economic History*, v. 20 (New York: Elsevier, 2001), 135-72.
6. Gold production information is from: United States Bureau of Mines [USBM], *Mineral Resources of the United States and Minerals Yearbook*, for various years. Finch is quoted in: Walter Bradley, "An Echo of the Days of '49," *Engineering and Mining Journal* 135, no. 11 (Nov. 1934): 494-6. Colorado Bureau of Mines, *Annual Report for the Year 1932* (Boulder, 1933), 10. Duane Smith provides a good discussion of Colorado mining during these years in *The Trail of Gold and Silver: Mining in Colorado, 1859-2009* (Boulder: University Press of Colorado, 2009), Ch. 10. For a detailed look at how the Depression and New Deal gold policies affected the mining districts around Grass Valley, California, see: Gage McKinney, *The 1930s: No Depression Here* (Grass Valley, CA: Comstock Bonanza Press, 2009). "Quest for Gold Reviving," *Los Angeles Times*, 22 Sep. 1930.
7. For examples see the following: "Markets in London, Paris and Berlin," *New York Times*, 5 Feb. 1931, which reported that South African gold shares were "again in the limelight." "Gold Mining Revival," *Los Angeles Times*, 3 Aug. 1931. "Gold Mining Booms Despite Depression," *New York Times*, 18 Oct. 1931. "How Gold Acts in Depression," *Nation's Business* 20, no. 8 (Aug. 1932): 42-3, 50.
8. The number of mines is derived from USBM, *Mineral Resources of the United States and Minerals Yearbook*, various years. The Bureau acknowledged that the figures failed to include a significant number of small placer operations.
9. "There was a quickening" is from: USBM, *Minerals Yearbook 1934* (Wash., D.C.: USGPO, 1934), 36. Idaho Inspector of Mines, *Thirty-Fifth Annual Report of the Mining Industry of Idaho for the Year 1933* (N. p., 1933?), 18. John Hurlt, "Colorado Camps Active," *Engineering and Mining Journal* 135 (Feb. 1934): 74-5. "Gold Mining Revival Brought About by High Metal Prices," *Los Angeles Times*, 17 Oct. 1933.
10. "New Strike in Little Elephant Mine Held Rich," *Los Angeles Times*, 4 Sep. 1933; "Gold Dome Mine Held Rich," *Los Angeles Times*, 20 Mar. 1933; "A New Era of Gold Mining," *Los Angeles Times*, 2 Jan. 1934; "Gold Fever Grows in Colorado Area," *New York Times*, 23 Sep. 1934; "Cripple Creek District Rides High as Crest of Boom Routs Depression," *San Bernardino [CA] Sun*, 19 Nov. 1934.
11. "Miners Warned of Gold Fraud," *Los Angeles Times*, 2 Oct. 1933; Metz is from: "Mine Promoter Found Guilty of Mail Fraud," *Los Angeles Times*, 15 Sep. 1934. The other frauds, and many more shut down by the SEC, are from its *Decisions*, v. 1, July 2 1934-December 31, 1936 (Wash., D.C.: USGPO, 1938). Thanks to Dan Plazak for informing me about this source; on mining fraud generally see his *A Hole in the Ground with a Liar at the Top* (Salt Lake City: University of Utah Press, 2006).
12. For the Golden Queen see: "Mine Option Exercised," *Los Angeles Times*, 11 Jan. 1935. The mine is still in operation.
13. Byproduct gold revenues derived from: USBM, *Minerals Yearbook 1936* (Wash., D.C.: USGPO, 1936).
14. "Areas formerly" is from: C. M. Romanowitz and George J. Young, "Gold Dredging Receives New Impetus," *Engineering and Mining Journal* 135, no. 11 (Nov. 1934): 486-90; "certain lower grades" is from: USBM, *Minerals Yearbook 1934*, 40, which is also the source of the quote on the Vulture Mine; "In California" is on p. 152 of the same volume; Montana is from *Minerals Yearbook 1934*, 146; South Dakota

- is from *Minerals Yearbook 1935* (Wash., D.C.: USGPO, 1935), 38; Idaho Inspector of Mines, *Thirty-Sixth Annual Report of the Mining Industry of Idaho for the Year 1934* (N. p., 1935?), 35; USBM, *Minerals Yearbook 1935*, 150.
15. R. S. McClellan, "Rejuvenating the Golden Chariot Property in Idaho," *Mining and Metallurgy* 15, no. 324 (Nov. 1934): 443-4. On the importance of air transport and road building for Idaho's gold industry see: Philip Shennon, "Gold Mines of Central Idaho," in: Idaho Inspector of Mines, *Thirty-Eighth Annual Report of the Mining Industry of Idaho for the Year 1936* (N. p., 1937?), 15-18. See too: S. H. Lorain, "Gold Mining and Milling in Idaho County, Idaho," USBM, *Information Circular 7039* (Wash., D.C.: USGPO, 1938).
 16. USBM, *Minerals Yearbook 1935*, 154.
 17. My understanding of flotation is based on: Antoine M. Gaudin, *Flotation* (New York: McGraw Hill, 1932). See also: Charles Jackson and John Knaebel, "Gold Mining and Milling in the United States and Canada," USBM, *Bulletin 363* (Wash., D.C.: USGPO, 1932), part 3; and E. S. Leaver and J. A. Wolf, "Flotation of Gold: Effect of Sodium Sulphide," USBM, *Report of Investigation 3275* (Wash., D.C.: USGPO, 1935). That its use was becoming widespread is derived from: J. B. Huttel, "From the Siskiyou to the South... the Visitor to California's Gold mines Finds Conservative, Substantial Activity," *Engineering and Mining Journal* 135, no. 11 (Nov. 1934): 506-10. Excellent modern assessments are: Dawn Bunyak, "To Float or Sink: A Brief History of Flotation Milling," *Mining History Journal* 7 (2000): 35-44; and A. J. Lynch, et al., "History of Flotation Technology," in: Maurice Fuerstenau, et al. (eds.), *Froth Flotation: A Century of Innovation* (Littleton, CO: Society for Mining, Metallurgy and Exploration, 2007), 65-94.
 18. Use of scrapers is from: Charles Barneveld, *Mechanical Underground Loading in Metal Mines* (Rolla: University of Missouri School of Mines and Metallurgy, 1924), 347-54. D. Gardner, "Mining Methods and Costs at the Mine of the St Joseph Lead Co., Atlanta, Idaho," USBM, *Information Circular 6823* (Wash., D.C.: USGPO, 1935). The Idaho-Maryland mine is from: McHenry Mosier and J. H. Steinmesch, "Mechanical Shovel in Underground Metal Mines," USBM, *Bulletin 423* (Wash., D.C.: USGPO, 1940), 64-5. Sixteenth Census of the United States: 1940, *Mineral Industries 1939, vol. I, General Summary and Industry Statistics* (Wash., D.C.: USGPO, 1944), 344.
 19. The ore content of gravel is from: USBM, *Minerals Yearbook 1938* (Wash., D.C.: USGPO, 1938). Good descriptions of California operations are in: C. M. Romanowitz and George J. Young, "\$35 Gold Stimulates the Dredge Designer's Ingenuity," *Engineering and Mining Journal* 135, no. 8 (Aug. 1934): 338-41; and Romanowitz and Young, "Gold Dredging Receives New Impetus." John Huttel, "Arroyo Seco's New Dredge," *Engineering and Mining Journal* 136, no. 10 (Oct. 1935): 494-6. Sectionalized hulls are from: C. M. Romanowitz and George J. Young, "Small Placers to Benefit from Dredge Improvement," *Engineering and Mining Journal* 135, no. 6 (June 1934): 248-9. For excellent descriptions of the evolution of bucket dredging equipment see: Clark Spence, *The Conrey Placer Mining Company: A Pioneer Gold Dredging Company in Montana 1897-1922* (Helena: Montana Historical Society, 1989); and Clark Spence, *A History of Gold Dredging in Idaho* (Boulder: University Press of Colorado, 2016).
 20. For good discussions of this technology see: D. Gardner and C. H. Johnson, "Placer Mining in the Western United States, Part III," USBM, *Information Circular 6788* (Wash., D.C.: USGPO, 1936); and D. Gardner and Paul Allsman, "Power Shovel and Dragline Placer Mining," USBM, *Information Circular 7013* (Wash., D.C.: USGPO, 1938). See also: John Huttel, "Gold Placer Mining Revived at Lincoln," *Engineering and Mining Journal* 136, no. 9 (Sep. 1935): 440-3.
 21. For evidence of the high hopes see: James Stewart, "Hydraulic Mining Again Interesting to Capital," *Engineering and Mining Journal* 135, no. 11 (Nov. 1934): 491-3; and Leroy Palmer, "Hydraulic Mining Looks Up in California," *Engineering and Mining Journal* 138, no. 10 (Oct. 1937): 29-33+. E. D. Gardner and C.H. Johnson, "Placer Mining in the Western United States Part II," USBM, *Information Circular 6787* (Wash., D.C.: USGPO, 1934). For mining courses see: Charles Miller, *The Automobile Gold Rushes and Depression Era Mining* (Moscow: University of Idaho Press, 1998), who also stresses frontier optimism. Ross Hemming, "I Almost Went on Relief," *Nation's Business* 24, no. 10 (Oct. 1936): 36, 38, 122, 125.
 22. For contemporary accounts see: William O. Vandenburg and Alfred M. Smith, "Placer Mining in Nevada," *University of Nevada Bulletin* 26, no. 8 (Reno, 1932); and William O. Vandenburg, "Placer Mining in Nevada," *University of Nevada Bulletin* 30, no. 4 (Reno, 1936). Bradley, "Echo of the Days of '49," 494-6.
 23. Good descriptions of these small-scale placer miners are contained in: Miller, *Automobile Gold Rushes*. See also: McKinney, *No Depression Here*, Chs. 18-19; and Donna Turnipseed, "Skim Digging for Dignity: A Look at Placer Mining in Idaho County During the Great Depression," *Idaho Yesterdays* 42, no. 1 (Spr. 1998): 18-24. Robinson Newcomb, et al., "Employment and Income from Gold Placering by Hand Methods, 1935-1937," Works Progress Administration, National Research Project, *Project Report E-14* (Philadelphia: WPA, 1940), Table B-1 (hereafter: NRP Report).

24. That the total number of placer miners might have equaled 10 percent of California's population is from *NRP Report*, 139.
25. The Census data are from *Mineral Industries, 1939*, Gold, Table 4. I adjusted them to 1935 levels by multiplying them by .69—the ratio of gold production in 1935 to that of 1939. Employment in small-scale placering is from *NRP Report*, Table B-1. WPA employment information is from: WPA, Division of Research, Statistics and Records, *Report on the Works Program, March 16, 1936* (Wash., D.C.: USGPO, 1936), Table 1. I averaged the employment data reported for 28 September and 26 October.
26. *NRP Report*, Chs. 3-4 (quote on 37).
27. *NRP Report*, 22.
28. Dragline numbers and production are from the chapters on California gold production in: USBM, *Minerals Yearbook 1938* and *Minerals Yearbook 1940* (Wash., D.C.: USGPO, 1941).
29. USBM, *Minerals Yearbook 1941*, (Wash., D.C., USGPO, 1943), 221.
30. "Gold Mining to be Halted," *Los Angeles Times*, 7 Oct. 1942.