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*Tools found to cut a world  
trade bogey down to size.*

## ESTIMATING THE SOVIET GOLD POSITION

Paul R. Storm

The cloak of secrecy that covers so many Soviet activities is drawn especially tight about statistics on the production and consumption of nonferrous metals and minerals in the USSR. The State Secrets decree of 9 June 1947, as amended in April 1956 and again in 1959, makes it a criminal offense to divulge absolute figures on productive capacity, production plans, and plan fulfillment for nonferrous, precious, and rare metals. Apparently the decree is strictly enforced, for since World War II there has been no known instance of publication of the proscribed data.

If the Soviets forbid the release of information on the production of metals like copper, lead, zinc, and aluminum, it is not surprising that gold production and the size of the Soviet gold reserves should be treated with the utmost secrecy, and these secrets in fact appear to be kept even from many high-ranking officials of the Soviet government. Absolute production figures have not been released since 1927, and gold reserve figures have never been published. In the face of this almost total blackout of official data, anything better than a guess at the size of the Soviet holdings was long considered impossible.

A meaningful assessment of the USSR's financial position, however, requires that a reasonably accurate value be placed on its reserves of gold. The Western estimates which have traditionally ranged from US\$6 billion to \$12 billion—in a self-confirming circle that does little to inspire confidence in their validity—were not good enough. Better estimates had to be made on the basis of a reasoned examination of all information available to the intelligence community.

### *First Questionable Construction*

The approach that seemed to offer the best chance of success was to begin with fairly reliable estimates that have been made of the Czarist gold reserves as of the end of 1920 and

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then compute the changes by addition and withdrawal over the following 40 years. An obvious weakness of this methodology is that the results depend upon the accuracy of the 120 component estimates of annual production, consumption, and sales, plus those of other, irregular acquisitions and dispositions. But although the number of errors small and large would undoubtedly be great, it appeared reasonable to expect that those on the high side might roughly compensate for those on the low.

A preliminary survey of available information revealed that satisfactory estimates could be made of gold collections from the population and acquisitions from foreign sources—notably the Spanish gold transferred by the Loyalist government to the USSR "for safekeeping" during the civil war and that of the Baltic and East European countries which came under Soviet control when these became Soviet Republics and Satellites. Information on Soviet sales of gold outside the Bloc was also quite good for all but a few years of the 1920-1961 period. Consumption, almost negligible during the early years, was easily estimated for the period since 1950. Gold production was left as the major stumbling block.

The USSR had published figures on production through 1927 and there was enough additional information to carry the estimates through 1933, but after that the ground was not so firm. Soviet announcements of quarterly and annual percentage increases for the years 1934-1939 had been reported and analyzed, however, by the American Legation at Riga, Latvia. These reports were studied, and with some modifications the estimates were tentatively accepted.

For the period 1940 through 1961 there was almost a complete blank of information, and for a time the problem of estimating annual production in these years seemed insurmountable. But after a number of false starts and some wheel-spinning, data was obtained from a sensitive source that eventually led to the development of an accurate series of production figures for most of the 1940-61 period. With this major obstacle out of the way and various minor problems

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cleared up, a tentative estimate of reserves as of the end of 1961 could be reached.

Only it seemed this estimate could hardly be right. It was far lower than any made in the past, almost unbelievably low even to those who had never taken the \$6-12 billion guesses of Western financial circles seriously—under US\$2.5 billion. Moreover, the reconstruction showed Soviet gold sales in recent years to be considerably larger than current production, requiring the USSR to have been drawing heavily on reserves to finance its annual trade deficits, and such improvidence seemed incredible if the reserves were really so low.

A reexamination of the whole construction was thus called for. Now a shortage of several billion dollars in the reserves figure would have to derive from systematic error in a large number of component estimates over a considerable time; no single estimate or small group could possibly account for such a deficiency. Only estimates of production met this criterion. For a number of reasons that cannot be recounted here, the accuracy of production estimates for the period after 1940 was established within too narrow limits to leave room for any but a small discrepancy, so attention was concentrated on those of the prewar years 1934-1940. Although a close examination of the Riga analysis covering these years showed it to be closely reasoned and the estimates apparently accurate, there were several questions that had not been adequately explored when its figures were tentatively accepted for this study.

The first unresolved incongruity lay in announcements made at the time by the Chief of the Main Administration of the Gold Industry, one Serebrovskiy. Serebrovskiy had declared that gold production increased from about 2.7 million ounces in 1933—a figure also mentioned by Stalin in an interview with a Western journalist—to 10-12 million ounces in 1936 and 14 million ounces in 1937. These latter figures were approximately twice the Riga estimates for those years, and the difference cumulated over 5 or 6 years would yield an increase in reserves of about US\$1 billion. Serebrovskiy's claims had been disregarded on the assumption that he was either indulging in propaganda for Western ears or exaggerating for his own ends, as Soviet managers have been known to do; but now it seemed possible that they were true.

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### *The Dal'stroy Problem*

The possible vindication of the Serebovskiy figures would lie in the production of "Dal'stroy," the only gold-producing organization not under the Main Administration of the Gold Industry (Glavzoloto). Dal'stroy, the Construction Trust of the Far North, was organized by the NKVD to make use of the horde of largely political prisoners in the middle thirties for forced labor on the mineral resources of northeastern Siberia. Reports leaking out of Russia told of a vast gold-bearing region along the Kolyma river that was rich beyond the wildest imagination. Prisoners who managed to survive the rigors of the northern winters and the tender mercies of the NKVD told of the death of millions of their fellows in the frantic production of fantastic quantities of gold for the Kremlin's vaults in Moscow.

For all their fiction-like quality, some of these reports sounded credible. One popularized tale of Dal'stroy was a distillation by a Polish army officer of the testimony of over 60 prisoners, including their estimates as to the size of the labor force and the quantity of gold recovered per man. This estimate put Dal'stroy's output at almost 13 million ounces in the year of highest production. Another account, written by a former prisoner assigned to a Dal'stroy factory which made boxes for shipping the gold, used the quantities of boxes produced to calculate that more than 6 million ounces of gold was shipped in the peak year. Other eye-witness accounts of a similar nature gave estimates of the same order. These stories had been discounted for a number of reasons, but now the suspicion arose that they might be somewhere near the truth. Although production in Dal'stroy could hardly have matched the exaggerated guesses of 10-20 million ounces annually, it might have reached the more conservative reports' 5-6 million ounces. If so, the Riga estimates obviously were low.

Doubts about the Riga reports were increased by the fact that, in spite of the sensational aspects of the Dal'stroy operation and the certainty that it was producing gold, they made no mention of it. Even more significant, Riga's breakdown of production by producing area left no room for Dal'stroy, as though the analysts were not aware of the opera-

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tion or else deliberately ignored it. Most of the data used for the Riga estimates were those published by Glavzoloto, and it could be argued plausibly that Glavzoloto's production figures would not include Dal'stroy production because Dal'stroy was not under its administration. If this was the case, Dal'stroy's production was not represented in the Riga estimates, and if Dal'stroy's production had been very large, as large say as that of Glavzoloto, the total annual gold production in the USSR would have been on the order of the 10-12 million ounces that Serebrovskiy claimed.

These considerations launched a search for some way to establish the magnitude of Dal'stroy's output in the 1930's and, concurrently, for any proof as to whether the Riga estimates were really estimates of total Soviet production including that of Dal'stroy or estimates of Glavzoloto's production only.

#### *Resolution*

It was known that Dal'stroy's output in the 1950's, prior to its dismemberment in 1957, had been approximately 1.25 million ounces annually. Finding some link between this level and the magnitude of its output in the 1930's was therefore a possible approach to the determination of the latter. An intensive search was begun for a Soviet statement comparing Dal'stroy production in the two periods. Such a comparison, it was felt, might have been made quite innocently; there would be no reason to suspect in the USSR what a revelation it would be.

The search succeeded in uncovering two partial links. The first was a statement that in 1958 the Western Directorate of the former Dal'stroy, now of Magadan Oblast, produced "not less" than it had produced in any of the previous 30 years of its existence. The Western Directorate's 1958 production was on the order of 385,000 ounces, roughly one-third of total output in the former Dal'stroy region in that year. Now if the Western Directorate, in accordance with this statement, produced not more than about 385,000 ounces annually in the 1930's, a total Dal'stroy production in the 1930's on the order of 5-6 million ounces annually would require production in each of the four other gold-producing directorates in

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Dal'stroy to have been very much greater than that in the Western Directorate, averaging more than 1 million ounces each. While not impossible, this asymmetry seemed highly improbable. Every scrap of evidence available suggested that all five had occupied positions of almost equal importance in the Dal'stroy structure prior to 1952. If, on the other hand, production in the other four directorates in the 1930's had averaged about the same as that in the Western, total production in Dal'stroy in the peak prewar year could not have been more than 2 million ounces.

The second link between the thirties and fifties was found in the gross industrial index of Magadan Oblast, where three-quarters of the Dal'stroy gold was mined in the postwar period. This index showed that the Oblast's industrial production in 1950 was slightly greater than in 1940 in spite of the fact that the output of large-scale industry had remained at the same level and the output of a number of industries, including timber and brick, had declined by 1950. It is unlikely that the 1950 gross industrial index could have shown an increase over 1940 if the output of gold in Magadan had fallen significantly over the decade, particularly when that of other fairly important industries had declined. Production of gold constituted much too large a share of Magadan's total industrial output not to affect it.

It therefore seemed unlikely that Dal'stroy's production in the 1930's could have been 5-6 million ounces annually. The foregoing evidence, felt to be considerably stronger than the hearsay of prisoners who had at best a very limited view of the operation, indicated that Dal'stroy's major extraction areas, including the famous Kolyma, produced from 1.5 to 2 million ounces in the prewar year of highest output. At \$35 an ounce Dal'stroy's contribution to Soviet reserves over the crucial 6-year period in the 1930's was thus more nearly on the order of US\$300 million than a billion.

Although this conclusion leaves Serebrovskiy's claims unexplained, it reinforces the earlier supposition that they had some other motivation than diligence in honest reporting. In retrospect, Serebrovskiy's behavior opens his reliability to serious question. On 1 May 1935 he declared that the USSR would achieve first place in world gold output in 1940. Six

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months later, 11 November, he said that first place could be reached in 1937. Then just 17 days later, on 28 November, he claimed that it would be reached in 1936, the coming year. Thus in less than seven months he moved attainment of the goal of 10-12 million ounces annually ahead four years. Either a bonanza of incredible magnitude had been discovered or he was a thoroughly misled or frightened man. That it was the latter may be indicated by events a little more than a year thereafter, when Serebrovskiy, along with many other senior officials of Glavzoloto, was removed from office and never heard of again. Soviet statements at the time supplemented the usual accusations of anti-state activities against these officials with specific charges of exaggeration, mentioning in particular the practice of counting gold believed to be present in mined but unsmelted ore.

Although Dal'stroy's peak production now appeared to have been no more than 1.5 to 2 million ounces a year, the question whether this output was included in the Riga total of 5 to 6 million ounces for the peak prewar years was still of some importance. Against the negative evidence in Riga's failure to mention Dal'stroy and listing an "all other" category in the distribution of production not large enough to include Dal'stroy output, it was discovered that this distributive breakdown was "forced," that is total production was estimated independently of any area figures and then distributed, sometimes quite arbitrarily, among the various sectors. The size of the "all other" category was therefore not a valid test of whether Dal'stroy's output had been included. Moreover, if the Soviet announcements of annual percentage increases on which Riga based its estimates referred, as must be supposed, to total production, Dal'stroy's output would have been included in the Riga estimates whether or not Riga was aware of it.

There is also positive evidence that Riga's estimates included Dal'stroy production. An American engineer, Arthur Littlepage, who had been Deputy Chief Engineer in Charge of Production in Glavzoloto through mid-1936, returned then to the United States and collaborated with a professional writer in preparing an account of his years in the USSR. Not long after the book was published he died, but his collaborator was

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interviewed in the hope that Littlepage might have left notes with him or at very least told him something about levels of production. He was unable to provide any additional information; he said that Littlepage had purposely avoided publishing production figures out of concern for the safety of his Russian colleagues, many of whom had already been arrested or were under suspicion in the purge of the gold industry that began just after he came back. This fear of hurting his colleagues would have been misplaced if his published statements regarding production would have confirmed theirs, but if his testimony would have contradicted the high production claims of Serebrovskiy, his concern is understandable.

Littlepage did leave one concrete piece of evidence on production levels. A memorandum of conversation describing his debriefing by members of the Federal Reserve Board records his saying that he had seen the final official plan figures for gold production in 1936, that production did not reach 6 million ounces in that year, and that he did not believe it could have expanded very much in the following years, partly on account of the purges. Moreover, Littlepage at this debriefing was shown an article in an American mining journal which estimated the production of gold in the USSR and broke it down into Glavzoloto and Dal'stroy output. Its figures were in line with the conclusions we have reached above about the magnitude of Dal'stroy's production and with Riga's estimates of total production. Littlepage read the article and declared that it was essentially correct.

A monograph published in 1958 by a Soviet authority on gold production, furthermore, used the same index on which the estimates in the journal article were based to show the increase in the USSR's gold production in the 1930's. This citation of the index in 1958 is probably another confirmation of the article's estimates of production and, indirectly, of the Riga estimates: it is highly unlikely that an authority writing almost 30 years later would use an index that reflected only one-half of Soviet output.

*Conclusions*

With the acceptance of the validity of the Riga estimates of production in the 1930's, the last serious question regarding the estimate of reserves was removed. Incredible or not, the

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analysis indicated that Soviet 1961 gold holdings were short of US\$2.5 billion, nothing like the \$6-12 billion estimate still held by Western financial experts.

The experience gained in reaching this assessment does not point to the development of any standard technique or methodology. The important thing seemed to be a thorough exploitation of all sources and pursuit of every however unpromising lead. Though only about five percent of the leads proved fruitful, those that paid off did so handsomely. Sources ran the gamut from the observations of a Yakut panning for gold in one of several thousand streams in Siberia to reports from the highest levels in Moscow.

One lesson learned in the research was the unreliability of low-level eye-witness reports. Only a small percentage of those bearing on this problem were accurate, and there was no way, except in retrospect, of distinguishing these from the many inaccurate ones. Published Soviet data, too, proved at times inaccurate and conflicting, although there was no indication that figures put out by Soviet statistical offices were intended to mislead.

Statements by government officials, however, were another matter. As we have said, Soviet officials have in no known instance revealed publicly the true order of magnitude of either gold production or reserves. On the contrary: from the days of Serebrovskiy to the Khrushchev visit here in 1959, when members of his entourage declared that Soviet gold reserves amounted to US\$8 billion and were being increased by \$650 million annually, the consistent goal of official utterances has been to create the image of wealth.

Yet in the realm of deeds Soviet behavior has been much more appropriate to a nation with limited and dwindling gold reserves. The USSR has frequently foregone attractive trade offers when its efforts to obtain long-term credits failed, has lost desired deals by insisting on barter arrangements, and has been searching among its products for additional foreign exchange earners. And finally, during certain negotiations on an international gold reserve to which each nation should contribute ten percent of national reserves, Soviet representatives offered, not the \$1 billion appropriate to these public claims, but \$250 million, around ten percent of our foregoing estimate of their reserves.