

History of the Valley Creek Mine, Custer County, Idaho

Victoria E. Mitchell

Staff Report 97-20
April 1997

Idaho Geological Survey
Morrill Hall, Third Floor
University of Idaho
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CONTENTS

Introductory Note	iv
Valley Creek Mine	1
References	11

ILLUSTRATIONS

Figure 1. Location of the Valley Creek Mine, Custer County, Idaho (U.S. Forest Service Sawtooth National Forest map, scale ½ inch = 1 mile). . .	2
Figure 2. Topographic map of the Valley Creek Mine and vicinity (U.S. Geological Survey Elk Meadow 7.5-minute topographic map).	3
Figure 3. Geologic map of Valley Creek Mine and vicinity (Fisher and others, 1983).	4
Figure 4. Map of the Valley Creek Mine, showing claims and workings (Figure 82 from Van Noy and others, 1986).	7
Figure 5. View of an adit with a locked wooden door at Valley Creek Mine, 1994 (Idaho Geological Survey photograph by Falma J. Moye).	9
Figure 6. Open adits and piles of equipment at the Valley Creek Mine, 1994 (Idaho Geological Survey photograph by Falma J. Moye).	10

TABLES

Table 1. Companies operating at the Valley Creek Mine.	5
Table 2. Data for samples shown in Figure 4 (page 369 from Van Noy and others, 1986).	8

INTRODUCTORY NOTE

This report was prepared under a cooperative agreement with the U.S. Forest Service, Region IV, as part of a project to identify and describe inactive and abandoned mines in the state of Idaho. Work on this project included preparing detailed histories of mines in Region IV that had significant recorded production. The information in this report is from a number of published and unpublished sources in the Idaho Geological Survey's mineral property files. Where not otherwise noted, most of the mine production data is drawn from the U.S. Geological Survey's (USGS) annual volumes on *Mineral Resources of the United States* (1882-1923) and the equivalent volumes produced by the U.S. Bureau of Mines (USBM) (*Mineral Resources of the United States*, 1924-1931, and *Minerals Yearbook*, 1932 to present). Information on underground workings and mine equipment is generally from the annual reports of the Idaho Inspector of Mines (IMIR) published from 1899 to 1979. After 1974, the Mine Inspector's office was known as the Mine Safety Bureau, a section of the Idaho Department of Labor and Industrial Services. Detailed accounts of mine operations are, for the most part, drawn from the annual reports prepared by the companies for the State Inspector of Mines; these reports were required by law and the information contained in them formed the basis of the Mine Inspector's annual reports. Reports of recent developments are taken from the Idaho Geological Survey's (IGS) annual reports on the developments in mining and minerals in Idaho (from 1984 to present) or from similar reports produced by the Survey's predecessor, the Idaho Bureau of Mines and Geology (IBMG) from 1975 to 1984. Other published sources are referenced in the text. A complete bibliography is included at the end of the report. Where direct quotations are taken from source materials, the original spelling and grammar are preserved even in cases where they do not conform to currently accepted usage.

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The Valley Creek Mine is located on Valley Creek, a tributary of the Salmon River, and is about 13 miles northwest of Stanley (Figure 1). The main workings are at an elevation of about 7,000 feet (Figure 2). Van Noy and others (1986) state that it is the most important mine in the Valley Creek district, an arbitrary subdivision of the Stanley mining district.

The mine is a gold-silver deposit in highly altered biotite granodiorite of the Idaho batholith (Figure 3; Fisher and others, 1983). The mine is in nearly vertical shear zones within a northeast-trending fracture system related to the trans-Challis fault system (Kiilsgaard and Bennett, 1985; Kiilsgaard and others, 1986). The fracture zone trends N. 70°-85° E., and the veins are believed to be genetically related to the swarm of northeast-trending Tertiary latite dikes that cuts through the mine (Van Noy and others, 1986). The mineralized zone is about 2,000 feet long.

According to Umpleby and Livingston (1920), the mine was located "about twenty-five years ago," presumably around 1895. It was worked for gold and silver between 1902 and 1909. In 1903, a 20-stamp mill and cyanide tanks were installed on the property. The mine was purchased by D.P. Carpenter, of Pittsburgh, Pennsylvania, in 1906. Carpenter apparently operated the mine under the name Fort Pitt Mining and Milling Company. (Table 1 shows the companies operating at the mine.)

In 1907, Fort Pitt operated the stamp mill for twenty days and produced gold

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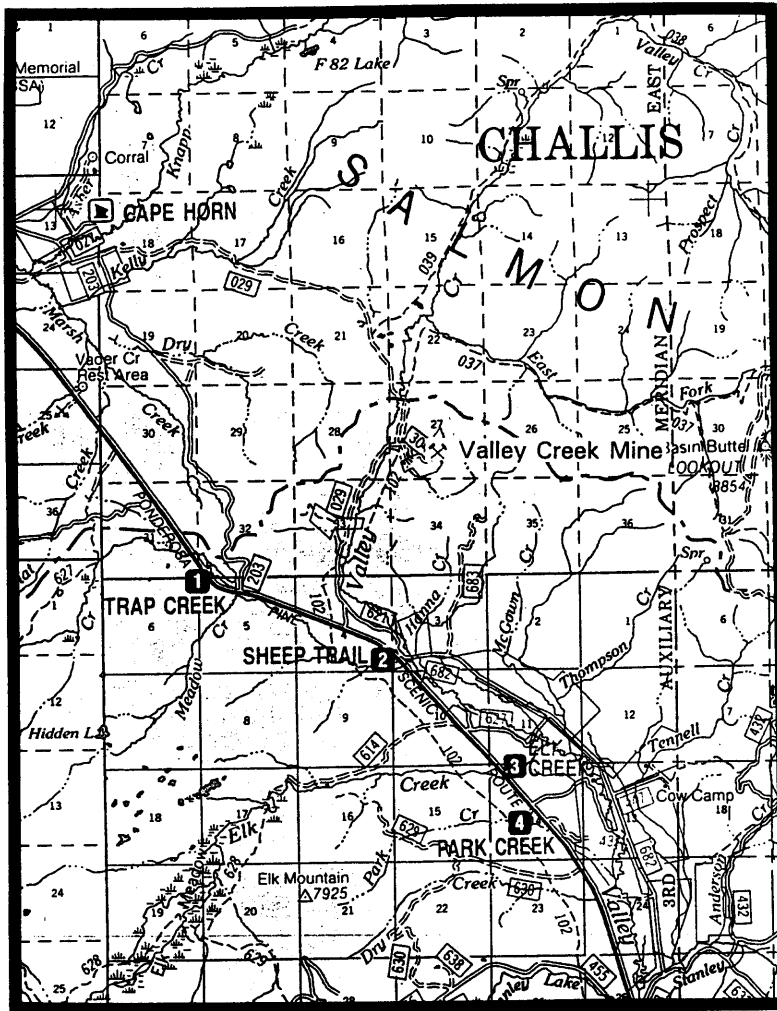


Figure 1. Location of the Valley Creek Mine, Custer County, Idaho (U.S. Forest Service Sawtooth National Forest map, scale 1/2 inch = 1 mile).

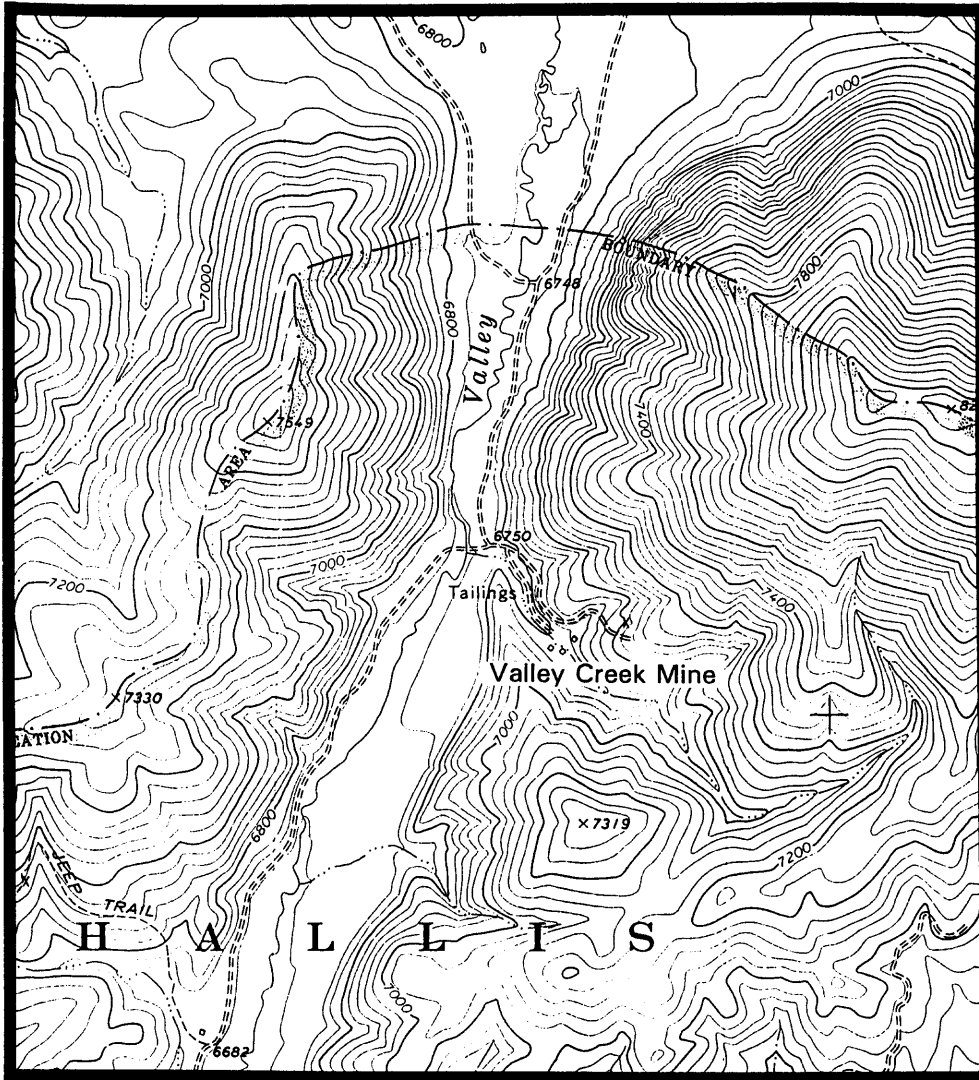


Figure 2. Topographic map of the Valley Creek Mine and vicinity (U.S. Geological Survey Elk Meadow 7.5-minute topographic map).

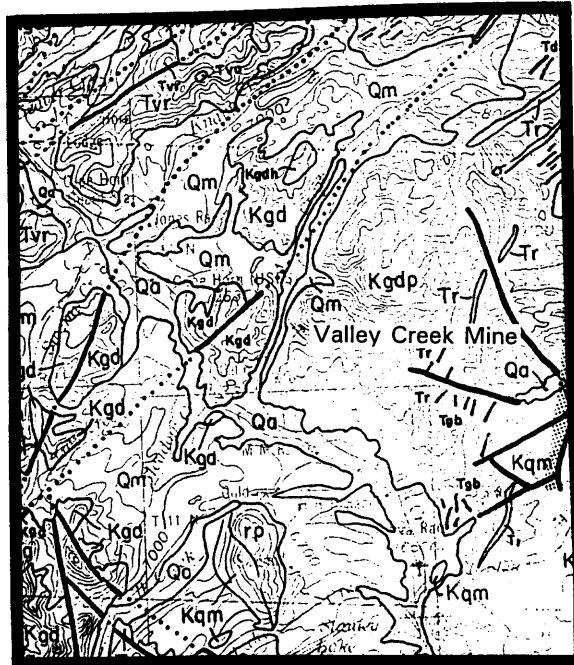


Figure 3. Geologic map of Valley Creek Mine and vicinity. Kgd, Kgdh = biotite granodiorite of the Cretaceous Idaho batholith; Kqm = quartz monzonite; rp = roof pendants; Tg, Tir = Eocene intrusive rocks; Tr, Tgb, Td = Eocene dike rocks; Tvr = rhyolite of the Eocene Challis Volcanics; Qm = glacial deposits; Qa = alluvium. Heavy lines are faults (Fisher and others, 1983).

Table 1. Companies operating at the Valley Creek Mine.

Company Name	Officer	Date Incorporated	Charter Forfeited	Year(s) at Mine
Fort Pitt Mining and Milling Co.	1	1	1	1906-1909
Stanley Mines Corp.	R. N. Phillips, President	April 8, 1915	1924	1915-1924
Western Gold Exploration Co.	Paul B. Cannon, President	July 13, 1939	Nov. 30, 1943	1940-1943
Golden Maple Mining and Leaching Co.	1	1	1	1984- ²
U. S. Antimony Corp. ³	John C. Lawrence, President	1	1	1986- ⁴

¹Information not available in IGS's files.

²Owner of record for the last date that information is available in IGS's files (1988).

³Joint venture partner; responsible for mining and milling ore.

⁴Involved with the mine on the last date for which information is available in IGS's files (1988).

bullion. The mine was idle in 1908. During the latter half of 1909, the mine produced bullion which was about half gold and half silver. The ore was somewhat refractory. Carpenter's company became insolvent in the fall of 1909 (Umpleby and Livingston, 1920), and the mine closed.

Up to that point, about \$20,000 worth of ore had been extracted. Some of the ore ran as high as \$5.50 per ton in gold (about 0.27 ounce per ton, at a gold price of \$20.67 per ounce) and 1½ ounces per ton of silver. Umpleby and Livingston (1920) estimated that the mine had 200,000 to 300,000 tons of reserves which would run \$3.50 per ton.

The exact extent of the mine workings is not known. A 1902 claim map (Mineral Survey No. 1764) showed about 2,000 feet of workings (Van Noy and others, 1986). The mine had about 3,000 feet of tunnels when Umpleby visited it in 1913 (Umpleby and Livingston, 1920).

Western Gold Exploration Co. reopened the mine in 1940. The company installed an entire plant during the year, including a used Little Tugger Hoist and a model P30 Gardner-Denver compressor. Total development was placed at 94 feet of vertical or inclined raises and 2,540 feet of tunnels, crosscuts, and drifts. The mine had seven tunnels, one shaft, one raise, three crosscuts, and one drift. The lengths of the tunnels were: No. 1, 1,000 feet; No. 2, 300 feet; No. 3, 325 feet; No. 4, 50 feet;

No. 5, 435 feet; No. 6, 20 feet; and No. 7, 10 feet. The shaft was 30 feet deep. Development work for 1940 included driving 150 feet of tunnels and sinking 30 feet, probably on the shaft. The company employed two men, and various lessees also worked the property.

During 1941, the company did 765 feet of development work, including 60 feet of sinking, 105 feet of crosscutting, 100 feet of drifting, and 500 feet of tunnel work. A ball mill was purchased during the year, but was not set up. The company noted that additional equipment was required for it to be operational.

The mine operated for a few months in 1942. About 2,000 tons of gold ore was concentrated, and nearly all of this was treated with cyanide. Copper and lead were recovered, as well as gold and silver. The mine was shut down by the government under War Production Board Order L-208, which closed "nonessential" mines for the duration of World War II. The mine was examined by the USBM in 1971 or 1972 as part of the Sawtooth National Recreation Area study (Figure 4 and Table 2; Van Noy and others, 1986).

Golden Maple Mining and Leaching Co. acquired the mine in the mid-1980s and planned a modest cyanide heap-leach operation. In October 1984, the company submitted a revised mine plan to the U.S. Forest Service. The proposed open-pit was on patented ground, but the company intended to use federal land for the processing plant and leach pads. Golden Maple received preliminary approval from the Forest Service in 1985. The plan included 2 years of open-pit mining and 3 years of underground mining. The company expected to process 10,000 tons of ore per year.

The company mined ore in 1986, but abandoned its plans for a heap-leach operation. Instead, the ore was hauled to U.S. Antimony Corporation's (USAC) 200 ton-per-day custom mill at Preacher's Cove on the Yankee Fork of the Salmon River, 35 miles away. In October, Golden Maple and USAC entered into a 5-year joint venture. Under the agreement, USAC would do all the mining and milling at the Valley Creek mine for 70 percent of the net profits. Through October, USAC milled 2,367 tons of Valley Creek ore and, under the contract, was supposed to mill 8,500 more. Ore grades ranged from 0.12 to 0.21 ounce of gold per ton. Plans called for USAC to open the No. 2 tunnel, which was 75 feet below the open pit that was being mined.

Work continued at the mine during 1987. At mid-year, two new veins were found that averaged 0.25 ounce of gold per ton. USAC also processed Valley Creek ore in 1988. The mine was visited by an IGS field crew in the summer of 1994 as part of a program to evaluate inactive and abandoned mines on U.S. Forest Service land. (Figures 5 and 6 show the property at that time.)

Recorded production for the Valley Creek mine from 1904 to 1942 was 5,463 tons of ore. This ore yielded 1,648 ounces of gold, 33,908 ounces of silver, 1,818 pounds of copper, and 71,000 pounds of lead. Information on more recent production is not available.

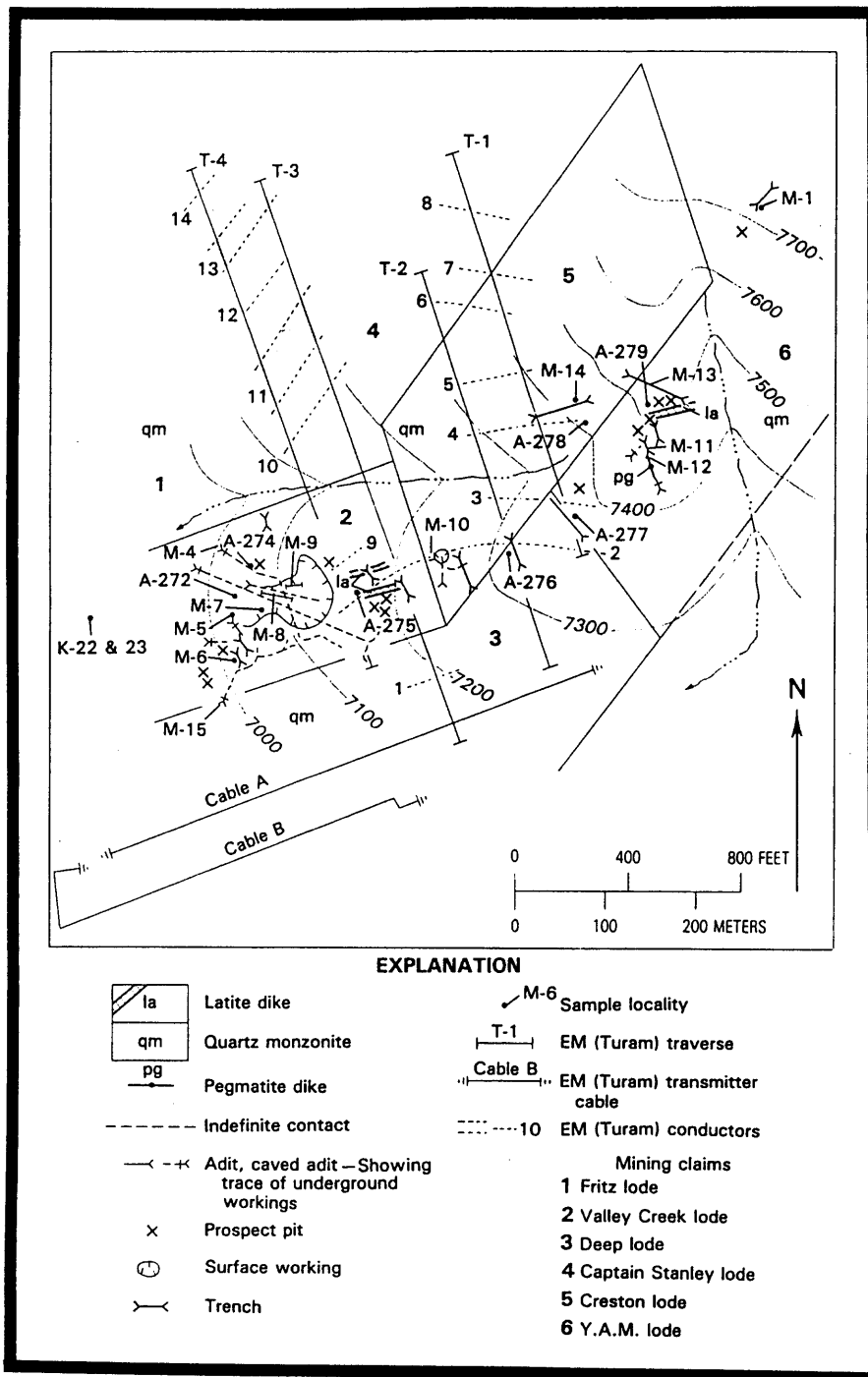


Figure 4. Map of the Valley Creek Mine, showing claims and workings. The sample data (see Table 2) and the electromagnetic (EM) survey were part of the Sawtooth National Recreation Area study (Figure 82 from Van Noy and others, 1986).

Table 2. Data for samples shown in Figure 4 (page 369 from Van Noy and others, 1986).

[Sample Nos. M-1 through M-15, U.S. Bureau of Mines. Sample Nos. A272-A279 and K22, K23, U.S. Geological Survey. Tr, trace; N, not detected; leaders (-), not analyzed; 1 ft=0.3048 m; 1 oz/ton=34.285 g/t. For U.S. Geological Survey samples: all analyses in ppm. Determinations by atomic absorption except mercury (instrumental vapor detector), arsenic (color spot-Gutzeit), and antimony (colorimetric); L, detected but in amounts too small to measure; G, greater than value given]

Sample				Gold	Silver	Lead	Copper
No.	Type	Length (ft)	Description	(oz/ton)	(oz/ton)	(percent)	(percent)
M-1	Select	(¹)	Altered quartz monzonite (dump).	N	0.1	--	--
M-4	--do--		-----do-----	0.30	2.9	2.23	--
M-5	--do--		Altered quartz monzonite and quartz (stockpile).	N	.3	--	--
M-6	--do--		Iron-oxide-stained quartz (stockpile).	.66	.5	--	--
M-7	--do--		Altered quartz monzonite and quartz (stockpile).	.14	.7	--	0.10
M-8	Random chip.	115.0	Altered quartz monzonite and quartz.	.33	1.2	1.30	--
M-9	Chip--	50.0	-----do-----	Tr	.1	.48	--
M-10	Select-		Altered quartz monzonite and quartz (dump).	.14	.9	3.45	.11
M-11	Chip--	1.0	Altered quartz monzonite and quartz.	.35	3.2	2.90	--
M-12	--do--	2.5	Pegmatite dike-----	N	N	.01	--
M-13	--do--	1.6	Iron-oxide-stained quartz monzonite and quartz.	.36	7.3	6.00	--
M-14	Select-		-----do-----	N	.1	.22	--
M-15	--do--		Iron-stained quartz monzonite (dump).	.25	6.1	1.45	--

Sample No.	Type and description	Au	Ag	Pb	Cu	Zn	Sb	As	Hg
A272	Grab, mineralized rock.	80	650	15,000	450	15	60	10,000	0.8
A273	Grab, wall rock	.15	2.0	7,500	45	5.0	5.0	2,000	.16
A274	-----do-----	N	.5	70	L	90	2.0	10	.10
A275	Grab, float and outcrop.	70	110	100,000	1,000	130	80	50,000	2.0
A276	Grab, iron-oxide-stained vein quartz with pyrite.	60	400	55,000	1,200	55	90	30,000	.5
A277	Grab, wall rock	L	3.0	1,100	500	6,000	2.0	40	.16
A278	Grab, outcrop and mineralized float.	45	260	18,000	450	1,000	30	10,000	3.0
A279	Grab, float near vein.	55	130	13,000	75	700	100	12,000	2.0
K22	Grab, ore fragments from pile at old stamp mill.	1.4	8.0	9,800	50	10	5.0	10,000	.26
K23	Grab, ore fragments from beneath stamps, at old mill.	38	200	4,000	1,700	150	150	10,000G	.05

¹Blank, not measured.



Figure 5. View of an adit with a locked wooden door at Valley Creek Mine, 1994 (Idaho Geological Survey photograph by Falma J. Moye).



Figure 6. Open adits and piles of equipment at the Valley Creek Mine, 1994. The tanks were part of the cyanide mill that operated on the property before World War II (Idaho Geological Survey photograph by Falma J. Moye).

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