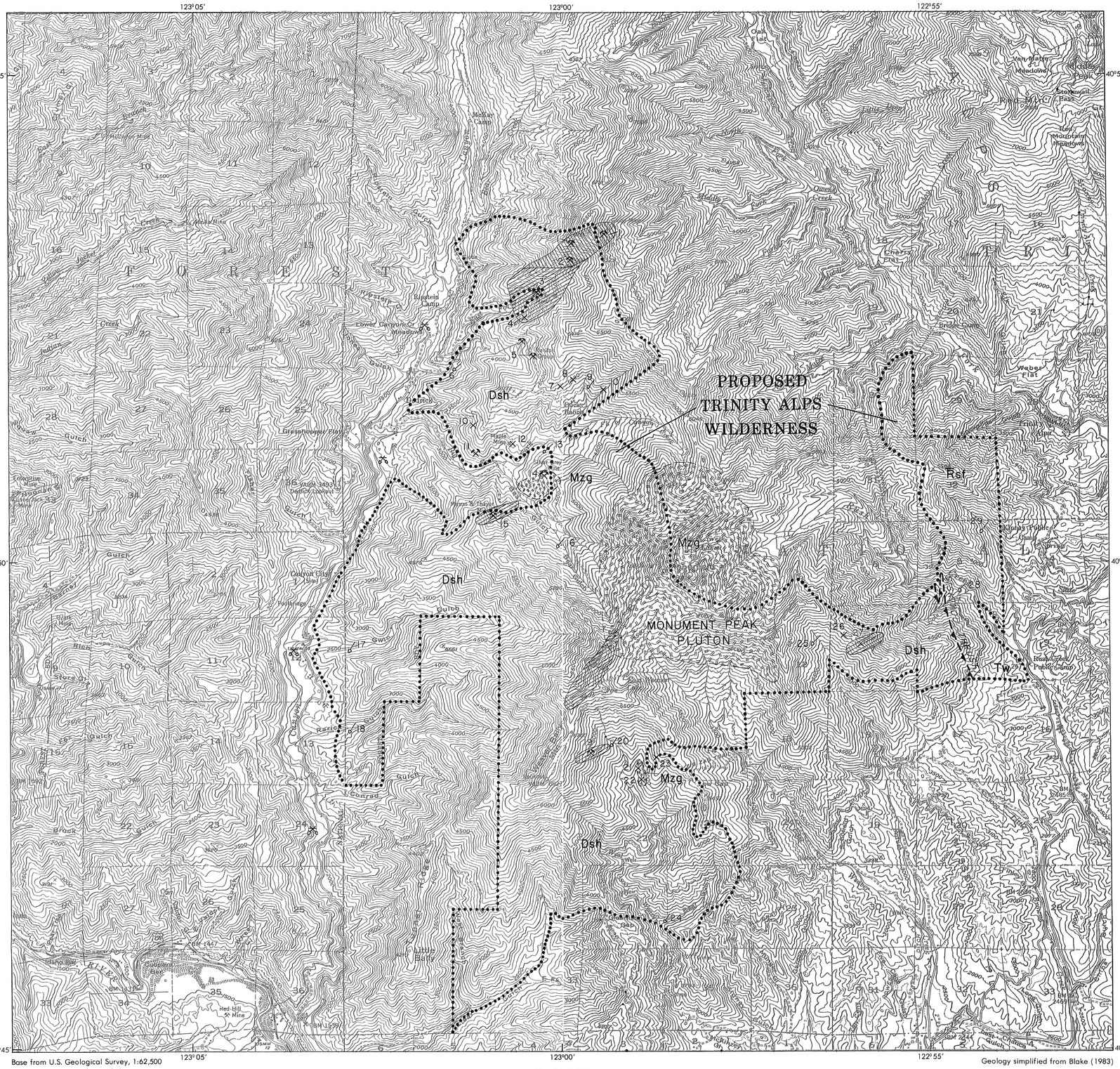
DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

MISCELLANEOUS FIELD STUDIES
MAP MF-1657-A



MINERAL RESOURCE POTENTIAL MAP OF THE WEAVER BALLY ROADLESS AREA, TRINITY COUNTY, CALIFORNIA

By

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EXPLANATION

AREA OF HIGH MINERAL RESOURCE POTENTIAL FOR GOLD WITH BY-PRODUCT SILVER--Based on assays of material from mines and prospects

AREA OF LOW TO MODERATE RESOURCE POTENTIAL FOR GOLD WITH BY-PRODUCT SILVER--Based on assays of material from mines and prospects and geochemical anomalies in rock and stream-sediment samples

PROPERTY WITH RESOURCE OR POTENTIAL--Number refers to table 1 of accompanying pamphlet and list of mines and prospects below

- Mine--Recorded production
- Prospect
- Hydraulic placer mine--Abandoned
- Placer prospect

LIST OF MINES AND PROSPECTS

1. Globe mine
2. Bailey mine
3. Chloride mine
4. Poor-No-More prospect
5. Ralston mine
6. Little East Fork placer
7. Bucks Ranch prospect
8. Fox prospect
9. Yellow Pine placer
10. Middle Maple prospect
11. Maple mine
12. Upper Maple prospect
13. Big East Fork placer
14. Silver Grey mine
15. Mason-Thayer mine
16. Bear Gulch placer
17. Gwin Gulch placer
18. Barick Gulch placer
19. Meckel-Fields mine
20. Hay Press placer
21. Eagle Beaver prospect
22. Bally Quartz prospect
23. Lucky Hi prospect
24. Hard Times placer
25. Bud and Ems placer
26. Heffinger-Fox prospect
27. Arbuckle prospect
28. Bogus Puma placer
29. Joy Star placer

CORRELATION OF MAP UNITS

Tw	Oligocene(?)	TERTIARY
Mzg		MESOZOIC
Rsf	TRIASSIC AND (OR) OLDER	MESOZOIC AND (OR) OLDER
Dsh	DEVONIAN	PALEOZOIC

DESCRIPTION OF MAP UNITS

Tw WEAVERVILLE FORMATION (OLIGOCENE?)--Fine-grained sandstone, shale, and conglomerate

Mzg GRANODIORITE (MESOZOIC)--Equigranular hornblende-biotite granodiorite

Rsf STUART FORK FORMATION (TRIASSIC AND (OR) OLDER)--Fine-grained metatuff and phyllite

Dsh SALMON HORNBLENDE SCHIST (DEVONIAN)--Fine- to coarse-grained hornblende schist and metagabbro

APPROXIMATE CONTACT

APPROXIMATE THRUST FAULT--Sawteeth on upper plate

BOUNDARY OF ROADLESS AREA

STUDIES RELATED TO WILDERNESS

The Wilderness Act (Public Law 88-577, September 3, 1964) and related acts require the U.S. Geological Survey and the U.S. Bureau of Mines to survey certain areas on Federal lands to determine their mineral resource potential. Results must be made available to the public and be submitted to the President and the Congress. This report presents the results of a mineral resource potential survey of the Weaver Bally Roadless Area (05-804) in the Shasta-Trinity National Forest, Trinity County, California. The Weaver Bally Roadless Area was classified as a further planning area during the Second Roadless Area Review and Evaluation (RARE II) by the U.S. Forest Service, January 1979.

SUMMARY

The Weaver Bally Roadless Area is mainly underlain by the Salmon Hornblende Schist which is host for most of the gold-bearing quartz lodes in the area. A granodiorite stock intrudes the schist near Monument Peak; this pluton and several smaller, but similar, intrusive bodies are the hosts for the other gold-bearing quartz lodes.

Gold and by-product silver have been identified in quartz lodes at the Globe mine where approximately 33,000 tons of indicated marginal reserves (2,000 tons in the roadless area and 31,000 tons in the adjacent proposed Trinity Alps Wilderness) contain 0.45 oz gold per ton and probably 0.1 oz silver per ton, based on assays by the Globe Consolidated Mining Company in 1916. There is an additional 150,000 tons of inferred marginal reserves (35,000 tons in the roadless area and 115,000 tons in the adjacent proposed wilderness) at the Globe mine averaging 0.38 oz gold per ton and probably 0.1 oz silver per ton. There is a high resource potential for gold in this area. The resource potential for gold in this area is high.

Sample assay results and estimated small tonnages of gold-bearing quartz indicate a moderate resource potential for gold at the Chloride, Mason-Thayer (adjacent to the study area), and Meckel-Fields mines. Assay results indicate a low resource potential for gold at the Poor-No-More and Arbuckle prospects.

Geochemical sampling and geologic mapping have identified a northeast-trending area containing anomalous gold values on Weaver Bally Mountain. Based on the geologic setting and anomalous geochemical samples, a low to moderate resource potential is inferred for the Weaver Bally Mountain area.

There are no indications of geothermal, hydrocarbon, or nuclear energy resources.

INTRODUCTION

The Weaver Bally Roadless Area, contiguous with the south boundary of the proposed Trinity Alps Wilderness includes 12,600 acres of the Shasta-Trinity National Forest and 1,600 acres of private land. The roadless area is on the southeast flank of the Salmon-Trinity Alps (part of the Klamath Mountains) in Trinity County, about 4 mi northeast of Weaverville, Calif. Access is by California Highway 299; the area is approximately 110 mi from Eureka and 55 mi from Redding.

GEOLOGY AND GEOCHEMISTRY

Geologic mapping and geochemical sampling indicate that the Salmon Hornblende Schist (Davis and others, 1965) is host for most of the gold-bearing quartz lodes in the Weaver Bally Roadless Area. The hornblende schist is intruded by granodiorite stocks of probable Jurassic age near Monument Peak, and many unmapped small dikes and sills of dacite porphyry and alaskite along Weaver Bally Mountain may be offshoots of the larger pluton at Monument Peak.

Gold and silver are concentrated in ore shoots within quartz veins that cut the hornblende schist. The shoots can be distinguished in some places by granular quartz and manganese stains, and, less reliably, by sulfide minerals and limonite stains. In other places they can only be distinguished by sample assays. Mining has primarily consisted of selective stoping of the shoots.

During an earlier mineral resource assessment of the northern part of the area (Hotz and others, 1972), numerous rock and stream-sediment samples were collected and analyzed. Additional samples were collected and analyzed during the present study and all of these data are contained in the geologic and geochemical report (Blake, 1983).

Geochemical anomalies, chiefly gold, are associated with the altered dikes along Weaver Bally Mountain and in the adjacent Monument Peak pluton. Some rock samples contain as much as 2.77 oz gold per ton. No anomalous values of gold, silver, or other metals were found in the stream sediments.

Prospect sites were examined, sampled, and mapped where warranted (Peters, 1983). Chip samples were taken from mineralized structures and grab samples were taken from dumps where entry to excavations was impossible. Gold was found in trace amounts in concentrates from most of the placer deposits (table 1 of the accompanying pamphlet).

MINING DISTRICTS AND MINERALIZATION

Trinity County records were used to identify claims within, or adjacent to, the Weaver Bally Roadless Area. About 200 claims appear to have been placer operations along Canyon Creek, west of the roadless area; about 150 lode claims and 50 placer claims have been located in the study area. Many of the properties were relocated several times.

In 1982, 55 lode claims and 17 placer claims were held in the roadless area, with five patented claims at the Globe mine. Seven lode properties and about ten placer claims were being explored in the study area in 1982. Placer operations in the study area are limited to seasonal, one- or two-man suction-dredging operations in creek beds. Stream gradients are steep, and there are no substantial gravel bars in the study area.

ASSESSMENT OF MINERAL RESOURCE POTENTIAL

Gold with by-product silver is the only identified mineral resource within the Weaver Bally Roadless Area. The only area with a high resource potential is the Globe mine, which has an estimated 33,000 tons of indicated marginal reserves averaging 0.45 oz gold per ton (2,000 tons in the roadless area and 31,000 tons in the adjacent proposed Trinity Alps Wilderness). Based on a ratio derived from total past production from the Globe Consolidated group (113,970 oz of gold and 26,650 oz of silver), the by-product silver content should average 0.1 oz per ton. Additional inferred marginal reserves at the Globe mine are estimated to total 150,000 tons averaging 0.38 oz gold per ton and probably 0.1 oz silver per ton (35,000 tons in the roadless area and 115,000 tons in the proposed wilderness).

Several other small deposits of gold-bearing quartz have been identified by this study. A moderate resource potential for gold was indicated at the Chloride, Mason-Thayer, and Meckel-Fields mines. A low resource potential for gold is indicated at the Poor-No-More and Arbuckle prospects. The geochemical anomaly associated with small altered dikes along Weaver Bally Mountain indicates a low to moderate resource potential for gold there. Abundant milky quartz in alluvium and a fairly extensive cover of surficial deposits and vegetation suggest that additional quartz lodes occur. A minor percentage of these undiscovered lodes can be expected to have low resource potential for gold in those areas underlain by the Salmon Hornblende Schist.

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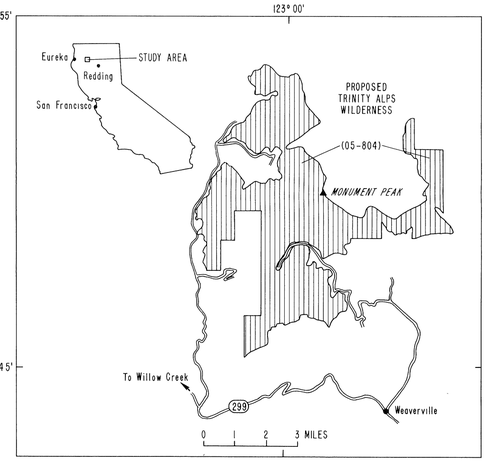

INDEX MAP SHOWING LOCATION OF THE WEAVER BALLY (05-804) ROADLESS AREA (LINED), NORTHERN CALIFORNIA

Explanatory pamphlet accompanies map

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