

**EXPLANATION**

60 MINES AND PROSPECTS - Numbered deposits have significant production, reserves, or potential; see table  
 - - Placer gold deposit  
 + - Placer gold and platinum deposit

**DESCRIPTION OF MAP UNITS**

QTV  
 VOLCANIC ROCKS OF THE HIGH CASCADE RANGE (QUATERNARY AND TERTIARY)  
 Tv  
 VOLCANIC ROCKS OF THE WESTERN CASCADE RANGE (TERTIARY)  
 Ts  
 MARINE AND NON-MARINE SEDIMENTARY ROCKS (TERTIARY)  
 Klg  
 GRANITIC ROCKS (CRETACEOUS AND JURASSIC)  
 Kis  
 SEDIMENTARY ROCKS (CRETACEOUS AND JURASSIC)  
 Jv  
 VOLCANIC ROCKS (JURASSIC)  
 Jo  
 OPHIOLITE (MIOCENE)  
 Mpv  
 VOLCANIC ROCKS (TERTIARY AND PALEOZOIC)  
 Mpm  
 METAMORPHIC ROCKS (MESOZOIC AND PALEOZOIC)  
 CONTACT  
 FAULT

**INTRODUCTION**

This map is compiled on a generalized geologic map of the Medford 1° by 2° quadrangle (Smith and others, 1982). It shows reported occurrences of placer deposits that have been explored or mined. Production of major deposits, if known, and byproduct commodities, if any, are listed in the accompanying table. Total production of gold and silver from the Medford quadrangle cannot be determined accurately because there are no records of some early production. Estimates indicate that the total through 1965 exceeds 1,133,000 oz gold and 278,000 oz silver. More than 75 percent of the gold was produced from placer deposits (Brooks and Ramp, 1969, p. 139).

**PLACER GOLD**

Gold-bearing gravel deposits are of three different ages, Tertiary, Pleistocene, and Holocene. Tertiary gravels at Gold Basin are about 100 ft thick and 3,000 ft higher than the Gatto river. They are unrelated to present drainage. The cemented gravel yielded 0.005 to 0.007 oz/yd<sup>3</sup>, more or less evenly distributed. Very little was mined.

Pleistocene gravels 15 to 225 ft thick at the Old Channel placer mine (no. 20) are terrace deposits about 600 ft higher than the Rogue River. The mine was reported to be one of the largest hydraulic mines in the United States (Brooks and Ramp, 1968, p. 168). It yielded gold having a fineness greater than 900.

Holocene gravels occupy somewhat lower terraces, high and low benches, and bars along present streams. Most of the placer gold produced in the quadrangle came from Holocene deposits, and virtually all streams have been mined. Gold content of stream gravels ranged from about 0.001 to 0.1 oz/yd<sup>3</sup> and fineness averaged about 840. Small quantities of placer gold are recovered almost continuously from present streams by prospectors.

Most of the larger deposits suitable for dredging are worked out, or nearly so. Millions of cubic yards of gravel remain in deposits that were worked by hydraulic methods (see table).

**PLATINUM-GROUP METALS**

Small production of platinum was a byproduct of placer gold from streams that drain areas of ophiolitic rocks. The ratio of platinum to gold in placers near Haldie ranged from 1:50 to 1:100. The platinum is alloyed with other metals of the group; near Kerby the alloy contained 32 percent iridium, 30 percent ruthenium, 25 percent osmium, 13 percent rhenium, and little or no rhodium or palladium. The chance of finding workable lode deposits is very poor (Ramp and Brooks, 1969, p. 170).

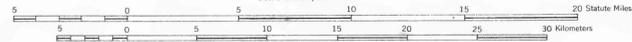
**SAND AND GRAVEL**

The locations of all gravel pits are not reported, but as most placer gold is in gravel, this map of placer deposits and the drainage pattern indicates many sand and gravel deposits. Quaternary stream and terrace gravels are of good quality but only those within a 20-mile hauling radius are currently economic. Floodplain gravels are abundant but some are closed to exploitation by urban encroachment. Tertiary gravels are of poor quality for construction uses (Schlicker, 1969, p. 233-237).

**REFERENCES**

Brooks, H. C., and Ramp, Len, 1968, Gold and silver in Oregon: Oregon Department of Geology and Mineral Industries Bulletin 61, 338 p.  
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 Ramp, Len, and Brooks, H. C., 1969, Platinum group metals, in Mineral and water resources of Oregon: Oregon Department of Geology and Mineral Industries Bulletin 64, p. 167-171.  
 Schlicker, H. G., 1969, Sand and gravel, in Mineral and water resources of Oregon: Oregon Department of Geology and Mineral Industries Bulletin 64, p. 233-237.  
 Smith, J. G., Page, N. J., Johnson, M. C., Waring, B. C., and Gray, Floyd, 1982, Preliminary geologic map of the Medford 1° by 2° quadrangle, Oregon and California: U. S. Geological Survey Open-File Report 82-955, scale 1:250,000.

Base from U.S. Geological Survey, 1955



NATIONAL GEODETIC VERTICAL DATUM OF 1929  
 CONTOUR INTERVAL 200 FEET  
 WITH SUPPLEMENTARY CONTOURS AT 100 FOOT INTERVALS  
 TRANSVERSE MERCATOR PROJECTION

Deposits For Placer Gold And Platinum

MINERAL DEPOSITS AND PROBABILITY OF EXPLORATION, MEDFORD 1° BY 2° QUADRANGLE, OREGON AND CALIFORNIA

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