



STATE OF OREGON

INTEROFFICE MEMO

TO: FILE DATE: April 24, 1990
(last update)

FROM: FRANK R. HLADKY

SUBJECT: GOLD KING (SMITH) MINE, ILLINOIS RIVER DISTRICT, JOSEPHINE COUNTY

Introduction

Office visit by Jim Olson of April 24, 1990.

Location

NW1/4 NE1/4 section 36, T. 38 S., R. 9 W., NW 1/4 Cave Junction quad.

Current Status

Now owned and operated by Jim Olson, P. O. Box 95, Selma, OR 97538.

History

Detailed accounts of the early history and discovery are found in the Grants Pass mine files. Gold King was found in 1901. Original accounts indicate a rich gold quartz lode vein with turn-of-the-century values of \$100,000.

Regional Geology**Local Geology**

See GMS-38.

Ore Bodies

Mr. Olson abandoned placering due to poor recoveries. He noted a high native mercury content in placer gravels during his initial testing which quickly amalgamated the fine gold in clays and produced favorable test results. His production techniques were unsuccessful, however, and he was unable to develop sufficient recovery of the fine gold. Mr. Olson attributed the presence of mercury to a natural occurrence, however, the Gold King was the site of considerable mining activity at the turn of the century suggesting the possibility that the mercury is a contaminant of 90 years ago, perhaps having migrated to its present position.

Gold is hosted in serpentinite (altered) which has a northeasterly strike along Josephine Creek. Grades range

from about 0.03-0.05 opt according to Mr. Olson. He noted difficulties with adding water to the serpentinite ore which buffers ore to a constant pH of 5 (need 10 for cyanidization). [The addition of water to serpentine produces brucite and other hydrated minerals (OH^-), perhaps causing the dissociation of water with a resultant release of hydrogen free radicals (H^+).]

Reserves

Equipment

Plan

References

Grants Pass mine files (Gold King, Illinois River Dist.)

GMS-38.