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Lander County General
Item 40



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(0080 0023)

**Geochemical Signatures Over
Several Nevada Precious Metal Deposits
Concealed by Alluvium or Barren Rock**

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EXTENDED ABSTRACT:

ORIGIN OF GOLD BELTS IN
NORTH-CENTRAL NEVADA

by

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INTRODUCTION

There are three major zones within which occur the largest gold deposits of north-central Nevada. These include the Carlin, Battle Mountain and Getchell gold belts (Figure 1). The Carlin and Battle Mountain belts originally were defined by Roberts (1960) who related them to the alignment of tectonic windows developed in the Roberts Mountains allochthon (RMA) (Roberts, 1960). Roberts' 1960 paper, "Alignment of mining districts in north-central Nevada" provided the foundation for initial as well as more recent exploration for gold deposits along these belts. Roberts (1964, 1966) recognized that the Carlin and Battle Mountain belts were zones of uplift and proposed that the northwesterly trending belts may be related to "third order structures of Precambrian age". He indicated that more detailed work was needed to evaluate the origin of these belts.

The northwesterly trending gold belts cut across the northeasterly trending Precambrian continental margin trends (Madrid, 1987). Mapping of older map-scale and outcrop-scale structures in the Roberts Mountains allochthon and the late Paleozoic and Early Mesozoic Golconda allochthon demonstrates that their structural fabrics parallel the northeast trending Precambrian continental margin (e.g., Roberts, 1964; Wrucke, and Theodore, 1970; Theodore, and Blake, 1975; Evans and Theodore, 1978; Madrid, 1987). These older fabrics are cut by younger northwesterly structural fabrics. The northwest alignment of windows in the Roberts Mountains allochthon is structurally controlled and these structures cut across the older more northeasterly fabrics of the Precambrian continental margin.

The purpose of this paper is to discuss the origin of the gold belts in north-central Nevada. We present information on the structural analysis of north-central Nevada, the gold deposits found within the structural domains defined by these studies, the relationships of gold deposits to gold-bearing structures within individual gold belts, and the genetic relations of the

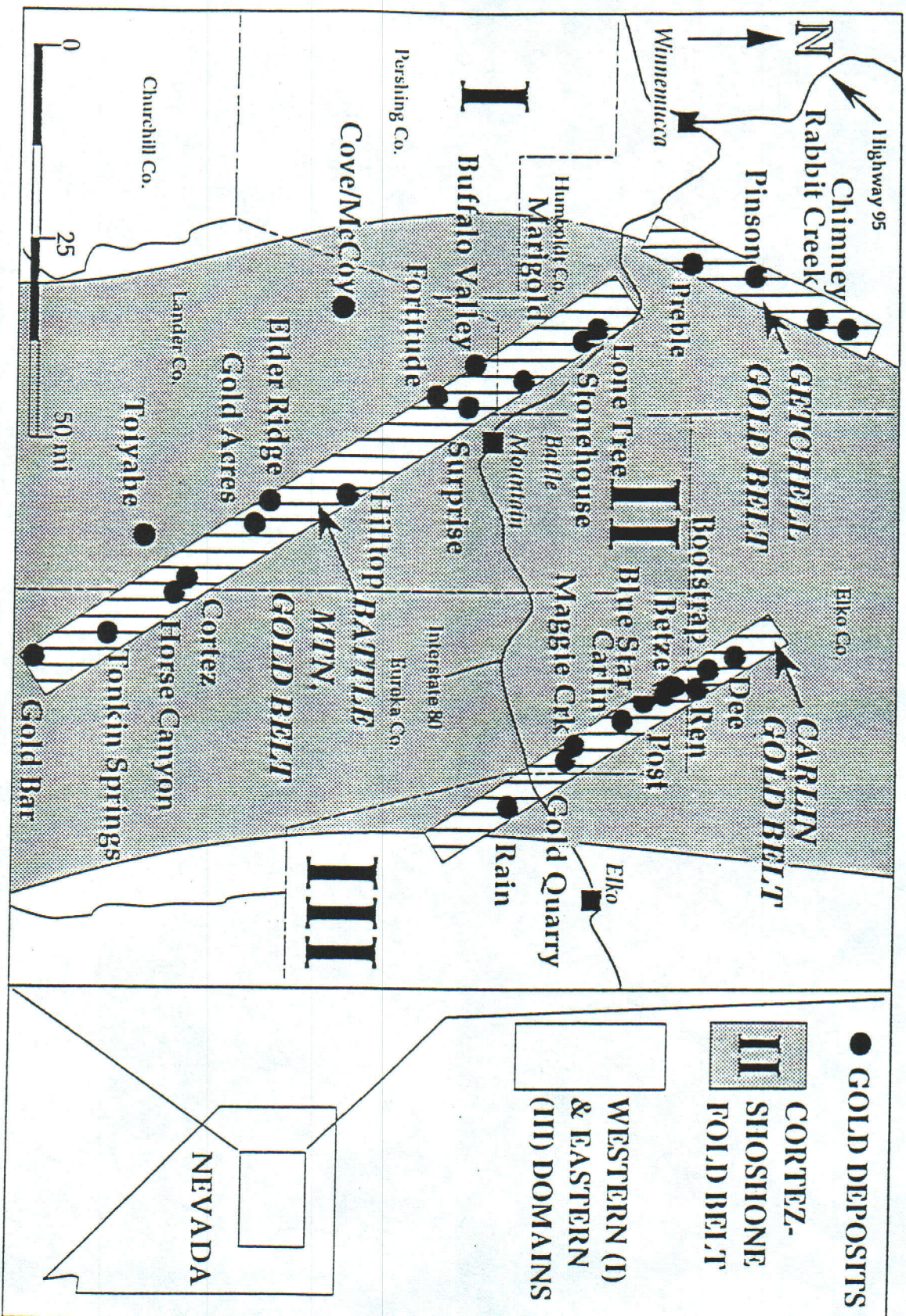


Figure 2: Structural domains and gold belts of north-central Nevada. From: west to east they are: the Western Structural Domain (I), the Cortez-Shoshone Fold Belt (II), and the Eastern Structural Domain (III)