CALIFORNIA AND NEVADA

INTRODUCTION

The map showing mineral exploration potential is an overlay of the Death Valley sheet (1958 edition) of the Geologic Map of California, scale 1:250,000, which is published by the California Division of Mines and Geology, 1416 Ninth St., Sacramento, Calif. 95814. Part of Nye County, Nev., is included: a geologic map of southern Nye County at the same scale is published in Bulletin 77 by Nevada Bureau of Mines and Geology, Reno,

The purpose of this map is to indicate localities where future exploration will probably be conducted, and the degree of probability. The map does not indicate mineral resources potential as such (see map explanation). Accordingly, the map may aid in land-use planning, to a lesser extent in mineral prospecting, and possibly as a first step in resource assessment.

The basis for assigning degrees of exploration potential (area class) is the density of known mineral occurrences shown on the map and the historical record of mining activity shown in the accompanying table. The areas are outlined by boundaries at or near the contacts between favorable and less favorable host rock. For most commodities recent alluvium and lava are unfavorable; areas so covered determine most boundary lines, which are traced directly from the geologic map.

The numbering system for area classes is adapted from a similar system used in Canada and described by McCartney, W. D., Fyles, J. T., and Matheson, A. H., 1974, Mineral capability maps for land-use planning in British Columbia: Western Miner, v. 47, no. 7, p. 9-16.

EXPLANATION

AREA CLASS

(Size in millions of dollars: A, >\$1,000; B, \$1-\$1,000; C, <\$1)

The exploration potential of an area (area class) is judged by the size, type, and number of known deposits. The extent of each area is determined by extrapolating into localities of equivalent host rock without regard for accessibility or present restrictions on land use. The area class of each outlined area is likely to remain fairly stable for several years or decades; it could be raised by new discoveries, but it is unlikely to be lowered since it is based on known deposits and on production records for more than 100 years. Because exploration potential is not necessarily proportional to future discovery ratios, it is only a rough guide to production potential.

- 1 Producing area; continuing exploration
- 1A Large deposits known or probable
 1B Medium deposits known or probable
- 1C Small deposits known or probable
- 2 Known deposits inactive or depleted; intermittent exploration l
- 2A Large deposits known or possible 2B - Medium deposits known or possible 2C - Small deposits known or possible
- 3 Favorable geologic setting; mineral potential indicated; exploration probable²
- 4 Favorable geologic setting; little or no indication of mineralization; exploration possible³
- 5 Unfavorable geologic setting; exploration unlikely 4
- D Covered area; bedrock of varied mineral potential; intermittent prospecting; exploration possible⁵
- (2C) Parentheses; denotes area class of bedrock underneath Quaternary

MINES AND PROSPECTS

(To nearest section within a township)

Excludes small deposits of leasable minerals (fuels, salines, phosphates) and geothermal resources. Lands of known value and of prospective value for these resources are classified by the Conservation Division, U.S. Geological Survey and are shown on separate overlays prepared by Conservation Division. Locatable minerals are included on the map and in the accompanying table.

- Production. Numbered deposits have significant production, reserves, or potential; see table
- O No known production. Numbered deposits have significant potential; see table
- △ Commodity unspecified; see table

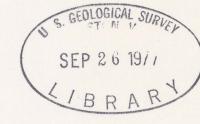
¹No known reserves of ore at current prices. Reserves of lower grade are known and (or) undiscovered ore bodies near depleted deposits are suspected. Periodic re-examination; exploration during times of high prices.

²Favorable host rock, undeveloped prospects, and (or) untested geophysical-geochemical anomalies indicate a mineral potential of unknown magnitude. Exploration probable during times of high prices.

 $^3\mathrm{Exploration}$ depends upon indications, if any, that may or may not be detected by use of new prospecting concepts, methods, or tools.

⁴The only localities in class 5 are those that have been unsuccessfully explored for commodities in current demand. Since all rock types of all ages are host to valuable mineral deposits somewhere on earth, and since exploration is rarely so exhaustive that all possibilities are eliminated, class 5 localities are rare or absent.

⁵As most of the metalliferous ores were deposited before the valleys were formed, it is possible that the parts of the bedrock formations beneath Quaternary valley fill and volcanic rock contain about the same proportion of ore deposits as the parts exposed in the mountain ranges. Prospecting in areas of relatively thin cover is feasible by geophysical, geochemical, and remote-sensing techniques.



Interior--Geological Survey, Reston, Va.--1977
For sale by Branch of Distribution, U.S. Geological Survey
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California (Death Valley quad). Minerals. 1: 250,000.

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MAP SHOWING MINERAL EXPLORATION POTENTIAL IN THE DEATH VALLEY QUADRANGLE, CALIFORNIA AND NEVADA

Compiled by

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