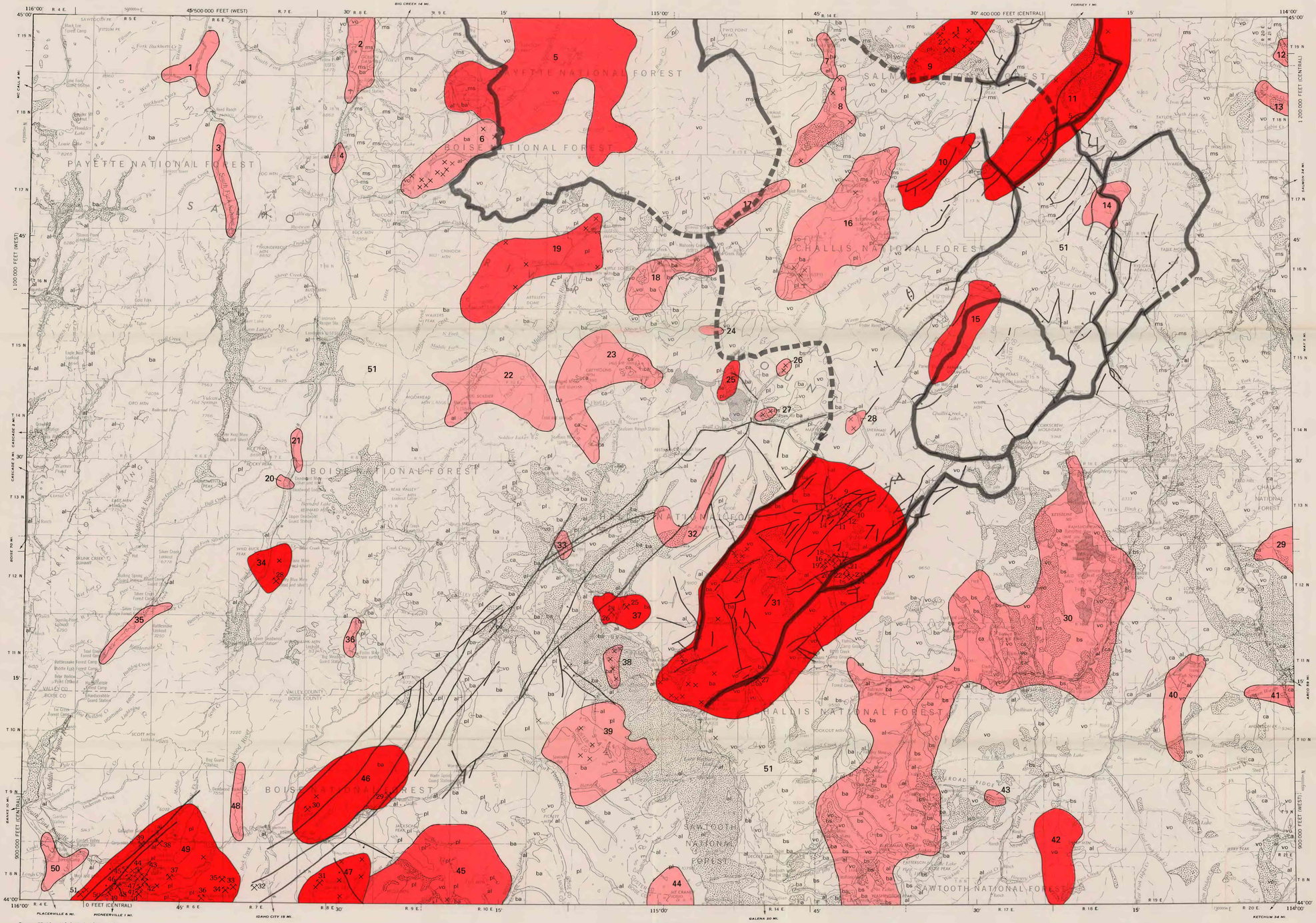


Base modified from U.S. Geological Survey, 1957
Limited revision 1983
100,000-foot grids based on Idaho coordinate system, central and west zones

SCALE 1:250 000

5 0 5 10 15 20 25 MILES

5 0 5 10 15 20 25 KILOMETERS

NATIONAL GEODETIC VERTICAL DATUM OF 1929

1995 MAGNETIC DECLINATION VARIES FOR THIS SHEET FROM 16°30' EASTERLY FOR THE CENTER OF THE WEST EDGE TO 16°00' FOR THE CENTER OF THE EAST EDGE. MEAN ANNUAL CHANGE IS 5' WESTERLY

EXPLANATION OF RESOURCE POTENTIAL

Area having resource potential for precious-metal vein deposits—See table 13 for scoring of recognition criteria

- 9 — **High potential**—Areas 9–11, 31, 34, 37, 46–47, 49
- 5 — **Moderate potential**—Areas 5, 15, 19, 25, 42, 45
- 1 — **Low potential**—Areas 1–4, 6–8, 12–14, 16–18, 20–24, 26–30, 32, 33, 35, 36, 38–41, 43, 44, 48, 50
- 51 — **Area having no resource potential for precious-metal veins**—Area 51

5 — **Mine or prospect that produced more than 100 oz gold or 1,000 oz silver**—See list below

× — **Mine or prospect having minor production**

NAMES OF MINES AND PROSPECTS

1 Yellowjacket
2 Byran
3 Silver Moon (Liberty)
4 Tin Cup
5 Rabbit Foot
6 Singheiser
7 Snowdrift
8 McFadden
9 Estes Mountain
10 Yankee Fork
11 Arcade
12 Why Not
13 Montana Group
14 Jordan
15 Charles Dickens
16 Morrison
17 Letha
18 Juliette
19 Passover
20 Fairplay
21 General Custer
22 Lucky Boy
23 Badger Group
24 Peak
25 Valley Creek
26 Buckskin
27 Gold Chance
28 Mary Blue & Union
29 Idaho-Birthday
30 Specimen
31 Banner
32 San Cristobal
33 Golden Cycle
34 Golden Chariot
35 Sloper (Jessie)
36 Mammoth
37 Black Jack
38 Gold Belt
39 K C Group
40 Comeback
41 Smuggler
42 Enterprise
43 Mohawk
44 Coon Dog
45 Silver Gem
46 Golden Age
47 Independence
48 Mountain Queen
49 J & S
50 Missouri
51 Grand View

Arcade (11)
Badger Group (23)
Banner (31)
Black Jack (37)
Byran (2)
Buckskin (26)
Charles Dickens (15)
Comeback (40)
Coon Dog (44)
Enterprise (42)
Estes Mountain (9)
Fairplay (20)
General Custer (21)
Gold Belt (38)
Gold Chance (27)
Golden Age (46)
Golden Chariot (34)
Golden Cycle (33)
Grand View (51)
Idaho-Birthday (29)
Independence (47)
J & S (49)
Jordan (14)
Juliette (18)
K C Group (39)
Letha (17)
Lucky Boy (22)
Mammoth (36)
Mary Blue & Union (28)
Missouri (50)
Mohawk (43)
Montana Group (13)
Morrison (16)
Mountain Queen (48)
McFadden (8)
Passover (19)
Peak (24)
Rabbit Foot (5)
San Cristobal (32)
Silver Gem (45)
Silver Moon (Liberty) (3)
Singheiser (6)
Sloper (Jessie) (35)
Smuggler (41)
Snowdrift (7)
Specimen (30)
Tin Cup (4)
Valley Creek (25)
Why Not (12)
Yankee Fork (10)
Yellowjacket (1)

LIST OF GEOLOGIC TERRANES

- al — **Alluvial terrane**
- pl — **Eocene Plutonic terrane**
- vo — **Challis volcanic terrane**
- ba — **Idaho batholith terrane**
- bs — **Black shale terrane**
- ca — **Carbonate terrane**
- ms — **Proterozoic terrane**

Trans-Challis fault system terrane

Regions of overlap between carbonate terrane and black shale terrane

Mostly rock glaciers; alluvial fans; landslide debris; talus; and terminal, end, and lateral moraines. Also includes Miocene volcanic and sedimentary rocks and noncarbonate roof pendants in the Idaho batholith of undivided (Paleozoic? or Proterozoic?) age

Terrane boundary

Boundaries of calderas and other volcano-tectonic structures—Dashed where approximately located

DEFINITIONS OF RESOURCE POTENTIAL

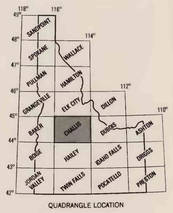
High mineral resource potential exists in areas where geologic, geochemical, and geophysical characteristics favorable for resource accumulation are known to be present, or where enough of these characteristics are present to give strong support to genetic models favorable for resource accumulation and where evidence shows that mineral concentration—mineralization in the broad sense—has taken place (Taylor and Steven, 1983, p. 1269).

Moderate mineral resource potential exists in areas where geologic, geochemical, and geophysical characteristics favorable for resource accumulation are known or can reasonably be inferred to be present but where evidence for mineralization is less clear or has not yet been found (Taylor and Steven, 1983, p. 1269).

Low mineral resource potential exists in areas where geologic, geochemical, and geophysical characteristics are unfavorable, where evidence indicates that mineral concentrations are unlikely, or where requirements for genetic models cannot be supported (Taylor and Steven, 1983, p. 1269).

Unknown mineral resource potential exists where the level of knowledge, at an appropriate scale, is so inadequate that to classify potential as high, moderate, or low would be misleading (Taylor and Steven, 1983, p. 1269).

In some instances an assignment of no **mineral resource potential** for a particular ore deposit type or types has been given to specific areas within the Challis quadrangle. In these cases the occurrence of the particular ore deposit type is dependent on the presence of a specific lithology. Known absence of the required rock type precludes the occurrence of the ore deposit.



RESOURCE POTENTIAL FOR PRECIOUS–METAL VEIN DEPOSITS IN THE CHALLIS 1°× 2° QUADRANGLE, IDAHO

By
Frederick S. Fisher and Kathleen M. Johnson

1995