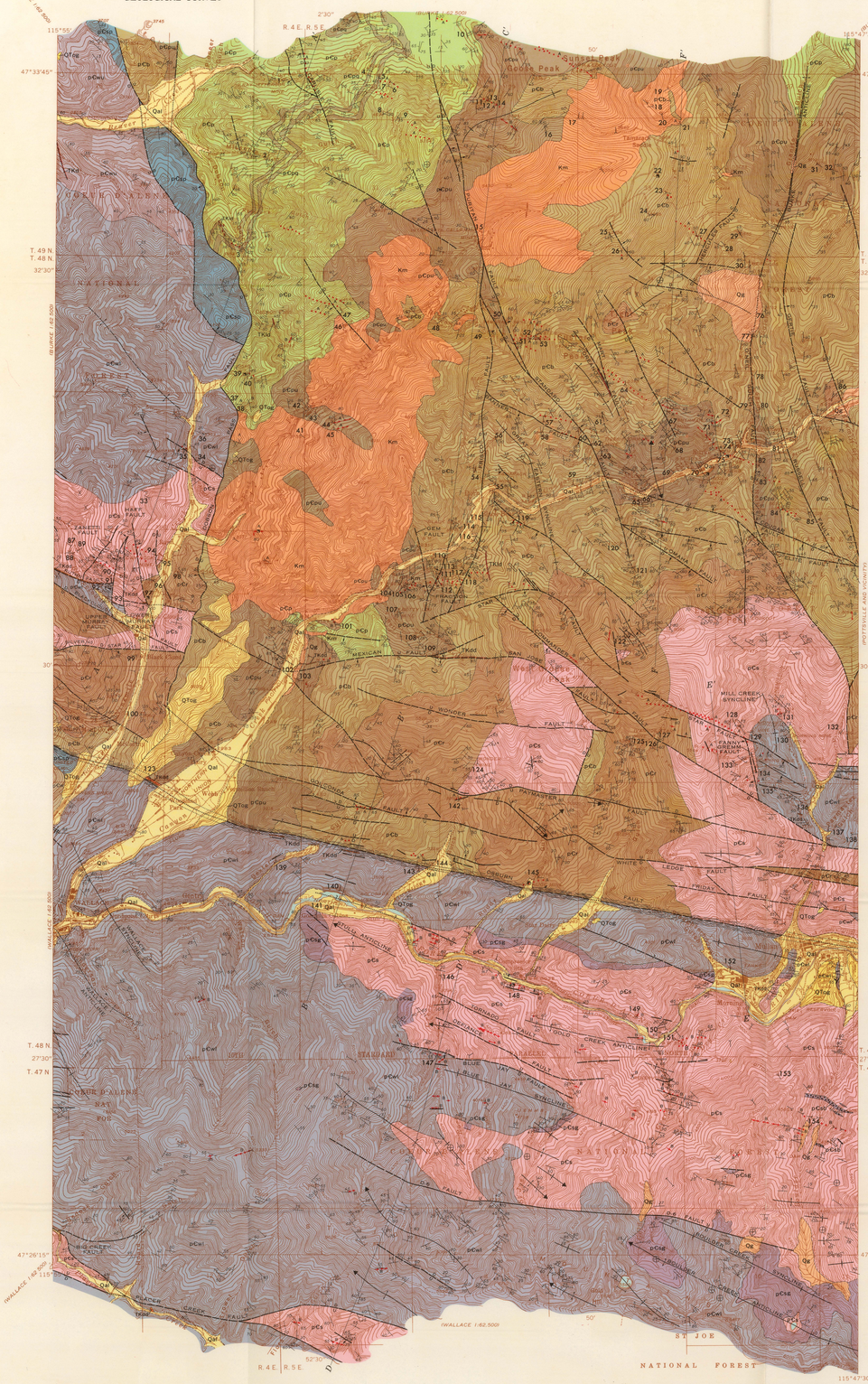
PLEASE REPLACE IN POCKET
IN BACK OF BOUND VOLUME

PROFESSIONAL PAPER 478
PLATE 4

U. S. GEOLOGICAL SURVEY
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UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



EXPLANATION

Alluvial deposits
Qal

Glacial and glaciofluvial deposits
Qg

Channel and terrace gravels
Older than alluvial deposits
QTog

Lamprophyre dikes
Solid where exposed; dashed where approximately located.
TKds

Other dikes
Solid where exposed; dashed where approximately located. Includes diabase, diorite, and monzonite
TKdd

Diabase and diorite dikes
Solid where exposed; dashed where approximately located

Monzonite and associated rocks
Range from syenite to diorite
Km

Striped Peak Formation
Interbedded quartzite and argillite with some arenaceous dolomitic beds; usually thin bedded. Colors range from purplish gray and very pale pink to gray and green. Mud cracks and ripple marks common
pCsp

Wallace Formation
Argillite and quartzite, dolomitic or calcareous in varying degree and impure dolomite
pCwu, *upper part of the Wallace Formation. Predominantly thinly laminated medium- to dark-gray argillite; some interbedded light-gray quartzite and arenaceous dolomite; carbonate-bearing throughout.*
pCwl, *lower part of the Wallace Formation. Light-gray dolomitic and calcareous quartzite interbedded with medium- to dark-gray argillite. Some impure dolomite beds near top. Mud cracks are characteristic. Ripple marks, small scale crossbedding, and molar-tooth and ovoid structures in some layers*
pCw, pCwu, pCwl

St. Regis Formation
Thick-bedded impure to pure quartzite at base, grades upward to interbedded and interlaminated impure quartzite and argillite that comprises bulk of formation. Characteristically thin bedded and many layers laminated. Predominantly purplish red and pale red of grayish cast; argillite is darker. Some carbonate-bearing beds, mostly in upper part. Ripple marks, mud cracks, and mud-chips breccia in some layers
pCsg, *uppermost part of formation; thinly laminated light greenish-gray argillite in part with a porcellaneous appearance; mapped separately where possible*
pCsb, *local lenses of breccia*
pCsg, pCs, pCsb

Revett Quartzite
Thick-bedded vitreous nearly white quartzite containing interbedded impure and nearly pure quartzite in upper and lower parts, and a few widely spaced argillite partings. Crossbedded and laminated in part
pCr

Burke Formation
Light- to greenish-gray fine-grained impure quartzite with lesser amounts of nearly white to light-gray nearly pure to pure quartzite. Contains a few layers of pale-red quartzite. Beds predominantly 2 to 8 in. thick. Ripple marks and pseudoconglomerate are common
pCb

Prichard Formation
Thin- to thick-bedded medium- to dark-gray quartzose argillite and argillite banded and laminated in part; pyrite abundant and concentrated in irregular grains and crystals aligned parallel to bedding. Weathers rusty red. Graded bedding is common. Ripple marks locally abundant
pCpu, *upper part of the Prichard Formation; light-gray to nearly white pure to impure quartzite interbedded with laminated argillite. Quartzite beds 2 to 18 in. thick. Ripple marks, mud cracks, and graded bedding are common*
pCpq, *nearly white to light-gray impure to pure quartzite. Individual quartzitic zones may be as much as 50 ft thick, and are discontinuous or lenslike; mapped separately where exposures permitted*
pCpu, pCp, pCpq

Contact
Dashed where approximately located; short dashed where indefinite, gradational, or obscure

Fault
Showing dip. Dashed where approximately located; dotted where concealed. U, upthrown side; D, downthrown side

Vertical fault approximately located

Doubtful or probable fault
Dotted where concealed

Fault projected from underground workings

Fault zone
Includes one or more planes of major movement and much crushed and highly foliated rock. Dashed where approximately located; dotted where concealed

Anticline
Showing crestline of fold and direction of plunge of axis. Dashed where approximately located

Syncline
Showing troughline of fold and direction of plunge of axis. Dashed where approximately located

Strike and dip of beds

Strike and dip of overturned beds

Strike of vertical beds

Horizontal beds

Strike and dip of cleavage

Strike of vertical cleavage

Veins at the surface
Showing dip. Solid where exposed; broken where approximately located.
A, *veins known to contain base metals*
B, *veins not known to contain base metals.*

Veins projected from underground workings
Showing dip. Shown as if veins were continuous to surface, though not necessarily known to crop out
A, *veins known to contain base metals*
B, *veins not known to contain base metals*

Underground veins, shown on mine map and sections
Showing dip. Dashed where approximately located

Prospect pit or obscure working

Portal of adit

Adit, caved at portal

Shaft

Caved shaft

Underground workings
Showing altitude, in feet, of portal or level

LIST OF MINES AND PROSPECTS IDENTIFIED ON MAP BY NUMBER

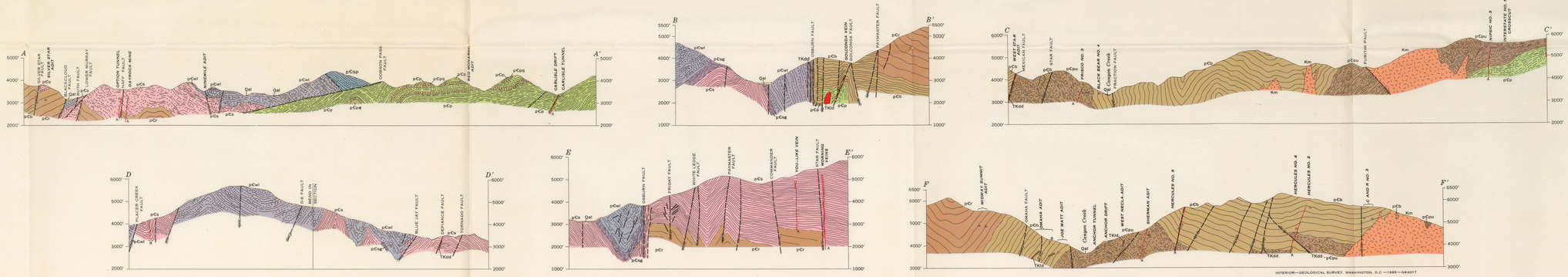
1 Carlisle
2 Red Monarch
3 Blue Sky
4 Amazon No. 3
5 Amazon No. 2
6 Amazon No. 1
7 Blue Grouse
8 Callahan No. 2
9 Callahan No. 3
10 Parrot
11 Nipsic No. 4
12 Nipsic No. 3
13 Nipsic No. 2
14 Nipsic No. 1
15 Interstate No. 4
16 Little Sunset
17 Sunset Tunnel
18 St. James No. 2
19 Sunrise
20 C & R No. 3
21 C & R No. 2
22 Guelph shaft
23 Ambergris
24 Hercules No. 2
25 Laclede No. 3
26 Laclede No. 2
27 Hercules No. 1
28 Hercules No. 2
29 Honolulu
30 Hercules No. 3
31 Washington Mining Co. No. 2
32 Washington Mining Co. No. 1
33 Galena No. 2
34 Nine Mile Mining Co. No. 1
35 Nine Mile Mining Co. No. 2
36 Mayflower No. 3
37 Mayflower No. 2
38 Mayflower No. 1
39 Treasure Vault shaft
40 Treasure Vault adit
41 Alameda
42 American
43 Success No. 3
44 Success No. 2
45 Success No. 1
46 Rex No. 2
47 Rex No. 1
48 Tamarack 400 level
49 Tamarack No. 5
50 Tamarack No. 4
51 Tamarack No. 3
52 Tamarack No. 2
53 Tamarack No. 1
54 Moonlight
55 Tamarack No. 7 (1200)
56 Headlight
57 Standard-Mammoth No. 1
58 Standard-Mammoth No. 2
59 Campbell adit (Standard-Mammoth)
60 Standard-Mammoth No. 3
61 Oreano adit (Sherman 1000)
62 Standard-Mammoth No. 4
63 Standard-Mammoth No. 5
64 Sherman 1500 level
65 Omaha
66 Joe Matt
67 Sherman 600 level
68 West Hecla
69 Anchor
70 Hecla Shaft
71 Hummingbird No. 4
72 Wide West
73 Hercules No. 5
74 Hidden Treasure adit
75 Tiger-Poorman shaft
76 Ajax No. 2
77 Hercules No. 4
78 Trade Dollar
79 Stanley
80 Benton
81 Gertie
82 Marsh No. 2
83 Marsh No. 1
84 East Hecla
85 Russel
86 Ajax No. 3
87 Duluth
88 Ruth
89 Monarch
90 McDonald
91 Blackcloud No. 3
92 Marshal No. 1
93 California No. 4
94 Dayrock (main adit)
95 Dayrock 100 level
96 Option
97 Thomas Consolidated shaft
98 Panhandle
99 Silver Star
100 Northside
101 West Bell
102 Verda May
103 Formosa
104 Gem No. 3
105 Gem No. 2
106 Gem No. 1
107 Betty Lou
108 West Star
109 West Star No. 2 west
110 Frisco No. 3
111 Frisco No. 2
112 Frisco No. 1
113 Black Bear No. 4
114 Silver Moon
115 Flynn
116 Black Bear Fraction
117 Black Bear No. 3
118 Black Bear No. 2
119 Great Eastern
120 Duluth
121 Midway Summit
122 Cunningham
123 Sisters
124 Wonder
125 Star 1200 level
126 We Like
127 Grouse
128 Morning No. 3
129 Morning No. 4
130 Morning No. 5
131 North Franklin
132 Wall Street
133 You-like
134 Fanny Gremm
135 Sunshine Premier
136 Independence
137 American Commander No. 3
138 American Commander No. 2
139 Granada
140 Golconda
141 Western Silver Lead
142 Square Deal
143 Mayflower
144 United Lead Zinc
145 Alice
146 Rock Creek
147 Blue Jay
148 Gem State shaft
149 Butcher
150 Mullan Metals
151 Moe
152 Morning No. 6
153 New York
154 Banner

INDEX SHOWING SOURCES OF GEOLOGIC INFORMATION

ABG, A. B. Griggs
HCR, H. C. Rainey
REW, R. E. Wallace

Unedited, advance base maps by U.S. Geological Survey, 1939. Subject to correction

SCALE 1:24 000
1 0 1 MILE
1 .5 0 1 KILOMETER
CONTOUR INTERVAL 25 FEET
DATUM IS MEAN SEA LEVEL



GEOLOGIC MAP, SECTIONS, AND GEOLOGY OF SELECTED UNDERGROUND WORKINGS OF MULLAN AREA, SHOSHONE COUNTY, IDAHO

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D.C.—1965—G64017