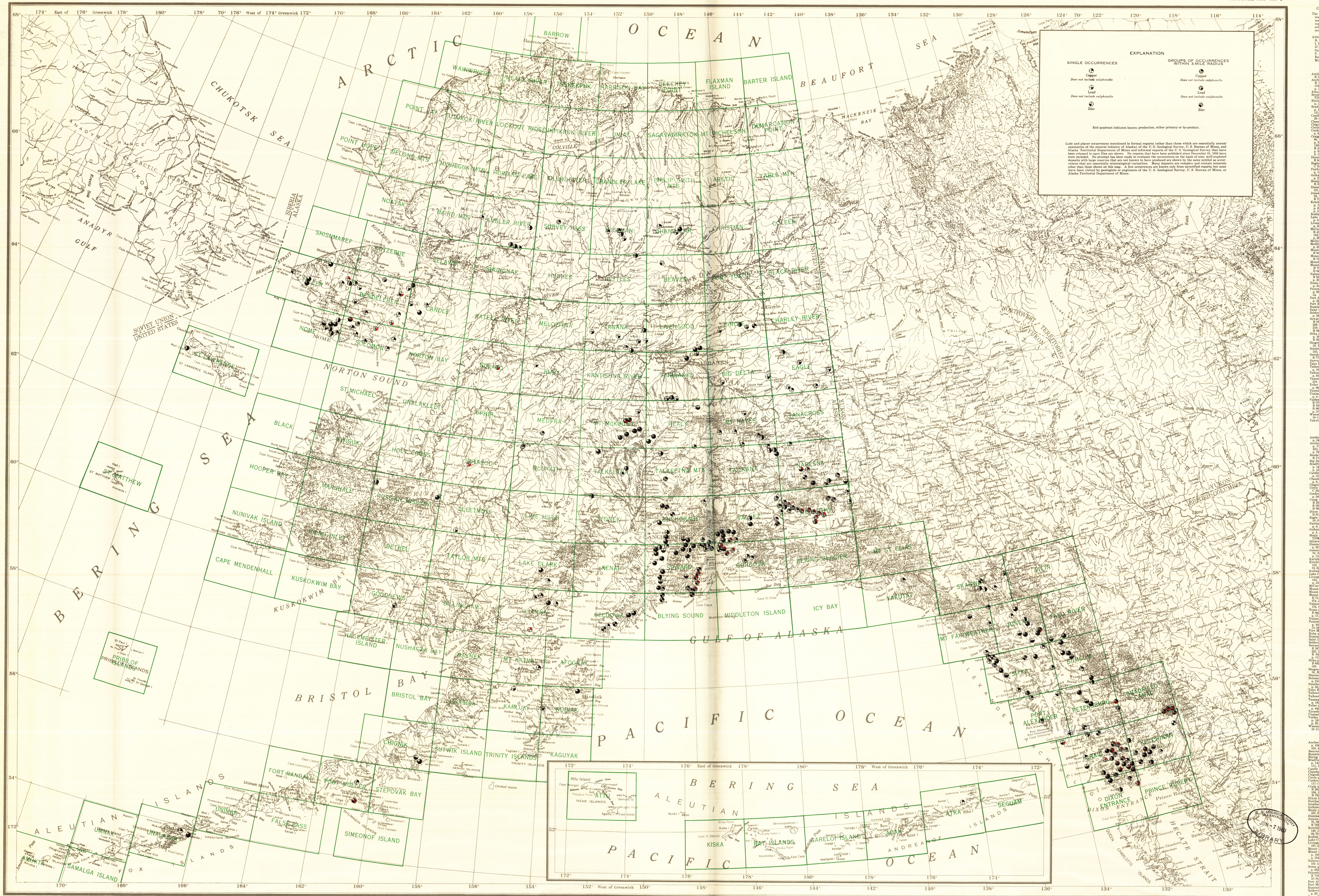

EXPLANATION

SINGLE OCCURRENCES

Copper
Does not include sulphosalts

Lead
Does not include sulphosalts

Zinc

GROUPS OF OCCURRENCES WITHIN 3-MILE RADIUS

Copper
Does not include sulphosalts

Lead
Does not include sulphosalts

Zinc

Red quadrant indicates known production, either primary or by-product.

Lode and placer occurrences mentioned in formal reports (other than those which are essentially annual summaries of the mineral industry of Alaska) of the U. S. Geological Survey, U. S. Bureau of Mines, and Alaska Territorial Department of Mines and informal reports of the U. S. Geological Survey that have been released to open files are shown. No reports that have been published since December 31, 1958 have been included. No attempt has been made to evaluate the occurrences on the basis of size; well-explored deposits with large reserves that are not known to have produced are shown by the same symbol as occurrences that are essentially mineralogical curiosities. Many deposits are complex and contain minerals other than those shown on this map. A few occurrences are known only from unverified reports, but most have been visited by geologists or engineers of the U. S. Geological Survey, U. S. Bureau of Mines, or Alaska Territorial Department of Mines.

COMMODITY-QUADRANGLE REFERENCE LIST

The following selected references give data on occurrences of copper, lead, and zinc by quadrangle. The quadrangle boundaries and names used on the map are those selected by the U. S. Geological Survey for topographic mapping in Alaska on a scale of 1:250,000. References selected are to the most complete or most recent descriptions of occurrences.

Abbreviations used: AR, U. S. Geological Survey Annual Report; B, U. S. Geological Survey Bulletin; C, U. S. Geological Survey Circular; I, U. S. Geological Survey Miscellaneous Geologic Investigations Map; IC, U. S. Bureau of Mines Information Circular; IP, U. S. Geological Survey report in press; OF, U. S. Geological Survey open-file report; P, U. S. Geological Survey Professional Paper; RI, U. S. Bureau of Mines Report of Investigations; TDM, Alaska Territorial Department of Mines Pamphlet.

COPPER

Ambler River quadrangle . . . B 536, p. 132, 147-150; B 592, p. 72; TDM 5-R, p. 23.
Anchorage quadrangle . . . B 284, p. 77; B 587, p. 190; B 592, p. 226, 228, 282; B 607, p. 68, 75, 77; B 642, p. 193; B 692, p. 146, 184, 186; B 712, p. 33; B 714, p. 202-203, 206; B 792, p. 70-71; B 849c, p. 218, 221; B 849g, p. 413, 416, 420; B 963b, p. 77, 86; B 1004, p. 76, 82.
Atka quadrangle . . . B 857d, p. 149.
Bendeleben quadrangle . . . B 345, p. 244; B 449, p. 134; TDM 5-R, p. 20.
Blying Sound quadrangle . . . B 587, p. 234-236; B 662, p. 210; I-273.
Bradfield Canal quadrangle . . . B 642, p. 97, 99; B 722, p. 140; B 773, p. 74; B 807, p. 72-75, 82-93, 95-100, 102, 104, 106-111, 120-121; B 1024f, p. 125, 129-134, 139-140.
Candle quadrangle . . . B 692, p. 392; C 250, p. 22, 29-30.
Chandalar quadrangle . . . B 532, p. 105, 114-115.
Chignik quadrangle . . . B 467, p. 129, 131.
Circle quadrangle . . . C 335, p. 5; C 348, p. 13-14.
Cordova quadrangle . . . B 443, p. 54, 63, 70; B 605, p. 93-95, 98, 103-112, 119-120; B 963b, p. 54-56, 58-62.
Craig quadrangle . . . P 1, p. 77-79, 82, 87-88, 95-96, 99-101, 103, 107; P 87, p. 57-58, 62-65, 92, 94-95, 97-98, 100-101; P 251, p. 38-40, 42; B 284, p. 48, 50; B 347, p. 104-105, 108, 119-120, 127, 130-134, 136-137, 162-163, 168-170, 174-175, 188; B 379, p. 79, 83; B 480, p. 102; B 592, p. 78; B 642, p. 81-82, 84-86, 90, 93; B 662, p. 66, 68-69, 72; B 692, p. 87-88; B 714, p. 119-125; B 783, p. 52; B 926c, p. 167-168; B 963a, p. 7-8, 10, 12-15, 17, 20; B 998c, p. 74-78; OF.
Dixon Entrance quadrangle . . . B 347, p. 181; B 592, p. 83; B 642, p. 91; B 662, p. 66-68, 71-72; B 917a, p. 21.
Eagle quadrangle . . . B 542, p. 214; B 813, p. 141; C 335, p. 7.
Fairbanks quadrangle . . . B 836, p. 340, 344; B 849b, p. 148; B 880a, p. 65; TDM 2, p. 13-14.
Gulkana quadrangle . . . B 943b, p. 41, 43-44; B 989d, p. 210-211; RI 3940, p. 4, 6-7.
Healy quadrangle . . . B 608, p. 76; B 692, p. 224; B 849e, p. 319-321, 324-328.
Iliamna quadrangle . . . B 442, p. 196; B 485, p. 120-121, 124; B 773, p. 173-174; B 862, p. 91-92.
Juneau quadrangle . . . B 284, p. 35; B 287, p. 73, 92, 101, 109, 150; B 314, p. 59; B 446, p. 47; B 502, p. 55; B 714, p. 118; B 783, p. 45-46; B 936o, p. 354-360; B 963a, p. 29-30; OF.
Ketchikan quadrangle . . . P 1, p. 57, 71-73; B 347, p. 139-140, 156-157, 178, 180, 185; B 542, p. 33; B 592, p. 88, 93; B 642, p. 82, 93-94; B 807, p. 67-71, 76-77, 112; B 998c, p. 63-66, 68-70; B 1024f, p. 136-137.
Kodiak quadrangle . . . B 880c, p. 179.
Lake Clark quadrangle . . . C 207, p. 3-4; RI 4828, p. 3-10.
Livengood quadrangle . . . B 525, p. 178, 187; B 592, p. 334.
McCarthy quadrangle . . . P 15, p. 19-20; B 345, p. 155; B 417, p. 57; B 448, p. 92-93, 97, 105-106; B 630, p. 121-125; B 662, p. 161-162; B 745, p. 87, 92, 100, 105-115, 128, 135-137; B 813, p. 54; B 947f, p. 98-109, 111, 113-115, 117-120; B 947g, p. 134-140; OF.
McGrath quadrangle . . . B 714, p. 93.
Medfra quadrangle . . . B 783, p. 129-130; B 864c, p. 231-232, 237-238, 240.
Mount Fairweather quadrangle . . . B 773, p. 95; B 783, p. 56; B 947b, p. 14.
Mount Hayes quadrangle . . . P 41, p. 111; B 662, p. 43-44; B 712, p. 20; B 714, p. 35; B 943b, p. 37; C 332, p. 1, 4-5.
Mount Katmai quadrangle . . . B 712, p. 35.
Mount McKinley quadrangle . . . B 687, p. 99; B 714, p. 85; B 792, p. 108; B 836, p. 319-324, 330; B 849d, p. 273-274, 276, 278-284; B 849f, p. 362-365, 368-369, 371-372, 376.
Nabesna quadrangle . . . P 15, p. 39-40; B 417, p. 55; B 630, p. 114, 116; B 933b, p. 169-170, 173-174, 177, 184-189, 194; B 989d, p. 205-206; C 248, p. 8; OF.
Nome quadrangle . . . B 533, p. 132, 135; B 649, p. 50; B 662, p. 439, 457; B 722, p. 182, 219, 221.
Petersburg quadrangle . . . B 347, p. 142, 183-184; B 739, p. 68-69; B 947b, p. 22, 24; B 963a, p. 37-38; B 998b, p. 21, 23, 27, 37, 43, 54.
Port Alexander quadrangle . . . AR 18, p. 62; B 936m, p. 324-330.
Port Moller quadrangle . . . B 467, p. 126, 129.
Russian Mission quadrangle . . . P 268, p. 122; B 926c, p. 199.
Saint Lawrence quadrangle . . . TDM 5-R, p. 35-36.
Seldovia quadrangle . . . B 587, p. 230-232; B 897a, p. 28-31.
Seward quadrangle . . . B 284, p. 85; B 379, p. 91-92; B 587, p. 142, 146-147, 151, 163, 172, 190, 207, 233-234; B 592, p. 219, 221, 229-234, 236; B 622, p. 138; B 642, p. 191-192; B 662, p. 185, 210-211, 213, 218; B 692, p. 144, 146; B 783, p. 21; B 849i, p. 499, 501-502, 509, 515, 520; B 947e, p. 85-92; B 963b, p. 63-66, 69-77; B 1024e, p. 113-122; I-273.
Sitka quadrangle . . . B 287, p. 150-151; B 504, p. 26; B 692, p. 122-124; B 773, p. 95, 108, 115, 122; B 926c, p. 174-176; B 929, p. 114-115, 140-141; B 947c, p. 45-59, 62-64.
Skagway quadrangle . . . B 236, p. 22; B 699, p. 15, 18; B 800, p. 323.
Solomon quadrangle . . . B 345, p. 243; B 449, p. 134-135; B 622, p. 441; B 722, p. 188, 199-200, 214-217; C 300, p. 6.
Sumdum quadrangle . . . B 314, p. 58; B 739, p. 68; B 773, p. 129-133; B 998a, p. 8-11.
Survey Pass quadrangle . . . B 815, p. 337-338.
Taku River quadrangle . . . B 773, p. 135.
Talkeetna quadrangle . . . B 692, p. 254, 261; B 792, p. 109.
Talkeetna Mountains quadrangle . . . B 692, p. 201-204; B 783, p. 93-94.
Tanana quadrangle . . . B 844d, p. 180, 182-183, 187, 210, 215-216, 232-234, 239-240.
Teller quadrangle . . . B 662, p. 440-442; B 733, p. 66, 79, 81, 109-111; C 214, p. 3; TDM 5-R, p. 22, 30.
Tyonek quadrangle . . . AR 20, p. 112.
Unalaska quadrangle . . . AR 18, p. 62, 85; RI 3967, p. 4-9.
Valdez quadrangle . . . P 15, p. 18; B 442, p. 161; B 576, p. 51-52; B 622, p. 161, 163, 166, 169, 175-177, 179, 181-182, 185-186; B 642, p. 140; B 662, p. 180; B 692, p. 171; B 745, p. 89-90, 101, 117-125; B 866, p. 29; B 880a, p. 24; B 943c, p. 53, 55-56; B 947g, p. 126-132; B 963b, p. 51-53; B 989e, p. 302.
Wiseman quadrangle . . . B 815, p. 342; C 195, p. 8, 10-11; TDM 2, p. 17.
Yakutat quadrangle . . . B 314, p. 87.

LEAD

Ambler River quadrangle . . . B 536, p. 150, 153; B 815, p. 343.
Anchorage quadrangle . . . B 592, p. 226, 228; B 607, p. 75, 77; B 642, p. 193; B 692, p. 186; B 792, p. 71; B 849c, p. 218, 221, 225; B 849g, p. 413, 416, 420; B 897a, p. 33; B 933c, p. 204-206; B 1004, p. 76.
Bendeleben quadrangle . . . B 247, p. 54; B 449, p. 131; B 712, p. 195; B 739, p. 43; TDM 5-R, p. 28, 30-31.
Big Delta quadrangle . . . C 331, p. 13; TDM 1, p. 14.
Bradfield Canal quadrangle . . . B 642, p. 97, 99; B 722, p. 140; B 773, p. 74; B 783, p. 53; B 807, p. 73-75, 81-111, 120-121; B 1024f, p. 125, 129-134, 139-140; IC 7379, p. 42.
Candle quadrangle . . . C 250, p. 29-30; TDM 5-R, p. 31.
Chandalar quadrangle . . . B 532, p. 114-115; C 195, p. 8, 11; C 348, p. 16, 18.
Chignik quadrangle . . . B 467, p. 128-129.
Circle quadrangle . . . B 824, p. 162; B 897c, p. 237; C 335, p. 5; C 348, p. 11, 13.
Cordova quadrangle . . . B 605, p. 95, 108, 112; B 963a, p. 56.
Craig quadrangle . . . P 1, p. 80, 93; P 87, p. 62, 64; B 284, p. 54; B 347, p. 130, 160, 162-164, 168, 170, 174, 176, 182, 187-188; B 592, p. 78, 92; B 642, p. 81-82; B 662, p. 69, 72; B 692, p. 88; B 783, p. 52; B 963a, p. 12-13, 20, 39; B 998c, p. 74-78; B 1058a, p. 24.
Dixon Entrance quadrangle . . . B 347, p. 181; B 662, p. 71; B 917a, p. 21.
Eagle quadrangle . . . B 897c, p. 190; C 335, p. 7, 18-19.
Fairbanks quadrangle . . . B 525, p. 197-198; B 783, p. 8; B 880a, p. 65; TDM 1, p. 12, 14; TDM 2, p. 13.
Gulkana quadrangle . . . B 989d, p. 210-211; RI 3940, p. 4, 6-7.
Healy quadrangle . . . B 849e, p. 318-319, 325-327; TDM 1, p. 11; TDM 2, p. 13.
Iditarod quadrangle . . . B 880a, p. 72.
Iliamna quadrangle . . . B 442, p. 196; B 862, p. 92-93.
Juneau quadrangle . . . B 225, p. 36; B 287, p. 55, 73, 76, 92, 101, 109, 150; B 314, p. 59; B 446, p. 47; B 502, p. 46, 55; B 714, p. 118; B 739, p. 21; B 783, p. 45, 51; OF.
Karluk quadrangle . . . B 773, p. 207.
Ketchikan quadrangle . . . P 1, p. 59; B 347, p. 146-149, 152, 178; B 592, p. 88, 90, 92; B 807, p. 67-71, 76-77; B 998c, p. 63-66, 68, 81-82; B 1024f, p. 136-137.
Kodiak quadrangle . . . B 880c, p. 175, 179.
Lake Clark quadrangle . . . C 207, p. 3-4.
Livengood quadrangle . . . B 525, p. 157-158, 160-161, 163, 178, 198, 200; B 542, p. 188; B 592, p. 348-350; B 642, p. 61; B 649, p. 35; B 662, p. 406; B 849b, p. 90, 92-93, 98, 100, 104, 118; TDM 1, p. 10.
McCarthy quadrangle . . . B 448, p. 105; B 745, p. 11.
Mount Fairweather quadrangle . . . B 963a, p. 32-34.
Mount Hayes quadrangle . . . B 926b, p. 144; B 943b, p. 37.
Mount McKinley quadrangle . . . B 687, p. 84, 86, 88, 102-103; B 714, p. 84-85; B 792, p. 108; B 836, p. 319-321, 323-330; B 849d, p. 273-274, 276-284; B 849f, p. 353-354, 361-365, 367-376; B 936n, p. 341.
Nabesna quadrangle . . . B 417, p. 59; B 933b, p. 165, 172, 174, 185-189.
Nome quadrangle . . . B 328, p. 191; B 649, p. 50; B 662, p. 432, 436, 439, 445-446; B 722, p. 219, 221, 232, 240, 246; TDM 5-R, p. 17, 27.
Nulato quadrangle . . . B 868d, p. 174-175.
Petersburg quadrangle . . . B 347, p. 142, 183-184; B 379, p. 84; B 739, p. 68-69, 73; B 998b, p. 19, 21-27, 31, 33-34, 36-40, 42-46, 51-54.
Port Moller quadrangle . . . B 467, p. 126-127.
Ruby quadrangle . . . B 783, p. 145-150.
Russian Mission quadrangle . . . B 926c, p. 199; C 328, p. 7.
Saint Lawrence quadrangle . . . TDM 5-R, p. 33.
Seldovia quadrangle . . . B 897a, p. 28-31.
Seward quadrangle . . . B 277, p. 46-47; B 443, p. 76; B 587, p. 142, 145-148, 151, 153, 157, 162-163, 171-173; B 592, p. 219, 221, 223, 229, 231-234, 236; B 622, p. 138; B 642, p. 191-192; B 662, p. 188-189; B 849i, p. 497, 499-502, 505-508, 514-515; B 963b, p. 63-65; B 1024e, p. 113-122.
Sitka quadrangle . . . AR 18, p. 80; B 287, p. 151; B 692, p. 120, 122-123; B 773, p. 122; B 929, p. 114-115, 123, 127, 132, 140.
Skagway quadrangle . . . B 236, p. 22; B 699, p. 14-15, 18; B 797, p. 37.
Sleetmute quadrangle . . . P 268, p. 121.
Solomon quadrangle . . . B 662, p. 446; B 722, p. 210-211.
Sumdum quadrangle . . . B 287, p. 44-45, 47; B 314, p. 58; B 739, p. 68; B 773, p. 127, 131-133; B 998a, p. 9.
Taku River quadrangle . . . B 379, p. 72; B 773, p. 135.
Talkeetna quadrangle . . . B 692, p. 260; B 792, p. 109.
Talkeetna Mountains quadrangle . . . B 783, p. 93-94.
Tanana quadrangle . . . B 631, p. 82-83; B 844d, p. 182-183, 185, 202, 215, 217, 233-234; C 331, p. 35.
Teller quadrangle . . . B 358, p. 26, 30, 57; B 662, p. 442; B 733, p. 60, 78-81, 86-87.
Tyonek quadrangle . . . AR 20, p. 112.
Unalaska quadrangle . . . RI 3967, p. 4-9.
Valdez quadrangle . . . B 520, p. 124-125; B 622, p. 161, 163-169, 172, 174-177, 179-182, 185-186; B 662, p. 178-180; B 866, p. 29, 33; B 880a, p. 24; B 963b, p. 53.
Wiseman quadrangle . . . B 815, p. 343; C 195, p. 8, 10-11.

ZINC

Anchorage quadrangle . . . B 592, p. 226, 228; B 692, p. 184; B 714, p. 206; B 792, p. 70-71; B 849c, p. 218, 221; B 849g, p. 413, 416, 420; B 933c, p. 204-206; B 1004, p. 76.
Beaver quadrangle . . . B 926c, p. 197.
Bendeleben quadrangle . . . B 712, p. 195.
Blying Sound quadrangle . . . B 587, p. 235; B 662, p. 210.
Bradfield Canal quadrangle . . . B 642, p. 97, 99; B 722, p. 140; B 773, p. 74; B 807, p. 73-75, 83-92, 95-100, 102, 104-105, 107-108, 111; B 1024f, p. 125, 129, 139.
Candle quadrangle . . . C 250, p. 29.
Chandalar quadrangle . . . B 532, p. 114-115.
Chignik quadrangle . . . B 467, p. 128-129.
Circle quadrangle . . . C 348, p. 13-14.
Cordova quadrangle . . . B 605, p. 95, 98, 104, 106-108, 111-112, 119; B 963b, p. 54-56, 58, 62; RI 5320, p. 19.
Craig quadrangle . . . P 87, p. 64, 101; P 251, p. 40; B 284, p. 54; B 347, p. 131, 136-137, 160, 162-164, 170, 174, 176, 182, 188, 190-191; B 592, p. 78; B 642, p. 81-82; B 662, p. 69, 72; B 692, p. 88; B 783, p. 52; B 963a, p. 12; B 998c, p. 74-78; C 248, p. 11.
Dixon Entrance quadrangle . . . B 347, p. 181.
Fairbanks quadrangle . . . B 783, p. 8.
Goodnews quadrangle . . . IP.
Gulkana quadrangle . . . B 989d, p. 210-211.
Healy quadrangle . . . B 692, p. 224; B 849e, p. 319, 321, 325-327; TDM 1, p. 11; TDM 2, p. 13.
Iliamna quadrangle . . . B 862, p. 92-93.
Juneau quadrangle . . . B 225, p. 36; B 287, p. 55, 73, 76, 92, 101, 109, 150; B 314, p. 59; B 446, p. 47; B 502, p. 55; B 739, p. 21; B 783, p. 45, 51; OF.
Ketchikan quadrangle . . . P 1, p. 72-73; B 347, p. 146-149, 152, 178; B 592, p. 88, 90; B 807, p. 67-71, 76-77; B 998c, p. 63-66, 68-70, 81-82; B 1024f, p. 137.
Kodiak quadrangle . . . B 880c, p. 179.
Lake Clark quadrangle . . . C 207, p. 3.
Livengood quadrangle . . . B 525, p. 157-158, 173, 178, 187, 200; B 849b, p. 90, 98; TDM 1, p. 10.
Mount Fairweather quadrangle . . . B 963a, p. 32-34.
Mount McKinley quadrangle . . . B 687, p. 99, 102-103; B 792, p. 108; B 836, p. 319-321, 323, 330; B 849d, p. 273-274, 276, 278-284; B 849f, p. 354, 362-365, 367-370, 372-376.
Nabesna quadrangle . . . B 417, p. 59; B 933b, p. 174, 185-186, 188-189; B 989d, p. 205-206; OF.
Nome quadrangle . . . B 662, p. 445, 447; B 722, p. 232.
Petersburg quadrangle . . . B 347, p. 142, 183-184; B 739, p. 68, 73; B 947b, p. 22, 24; B 963a, p. 37; B 998b, p. 19-27, 31, 33-34, 36-40, 42-46, 51-54; B 1058a, p. 27.
Port Alexander quadrangle . . . B 773, p. 139.
Port Moller quadrangle . . . B 467, p. 126-127.
Russian Mission quadrangle . . . C 328, p. 7.
Seldovia quadrangle . . . B 587, p. 230-232; B 897a, p. 28, 30-31.
Seward quadrangle . . . B 277, p. 46-47; B 443, p. 76; B 587, p. 142, 145-148, 151, 153, 162-163, 171-173; B 592, p. 221, 225, 229-234, 236; B 622, p. 138; B 662, p. 188-189, 210-211, 218-219; B 849i, p. 497, 499, 501-502, 508-509, 514; B 947e, p. 85-92; B 963b, p. 63-65, 69-70, 72, 74-76; B 1024e, p. 113-122.
Sitka quadrangle . . . B 287, p. 151; B 692, p. 120; B 773, p. 108, 115, 122; B 929, p. 114-115, 123, 127.
Skagway quadrangle . . . B 699, p. 15.
Solomon quadrangle . . . B 722, p. 210-211.
Sumdum quadrangle . . . B 287, p. 44-45; B 739, p. 68; B 773, p. 127, 131-133; B 998a, p. 8-11.
Taku River quadrangle . . . B 379, p. 72; B 773, p. 135.
Talkeetna quadrangle . . . B 792, p. 109.
Teller quadrangle . . . B 733, p. 60, 86, 100, 111.
Unalaska quadrangle . . . RI 3967, p. 4-9.
Valdez quadrangle . . . B 622, p. 161, 163-166, 169, 172, 174-177, 179-181, 185-186; B 866, p. 29; B 943c, p. 53, 55; B 963b, p. 51-53.

Base by U. S. Geological Survey Topographic Division, Alaska Base Map E, 1946

COPPER, LEAD, AND ZINC OCCURRENCES IN ALASKA

Compiled by
E. H. Cobb

SCALE 1:2 500 000

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