



GEOCHEMISTRY AND MINERAL RESOURCES

Table 1.—Exploration

| Number | Name | Minerals | Deposit type | Geology | Probable age of mineralization | Subsequent exploration | Evaluation | References |
|--------|---------------|------------------------------------------------------------------------------------|--------------|-----------------------------------------------------------------------------|--------------------------------|------------------------|--------------------------|--------------|
| 1. | Cape Rukhik | Pyrite, chalcopyrite | Porphyry | Mafic to mafic andesitic rocks intruded by quartz diorite and andesite | 30-35 my. | None | Small tonnage, low grade | (This sheet) |
| 2. | Breaded Creek | Quartz, pyrite, galena, sphalerite, pyrite, chalcocite, pyrite, chalcopyrite | Vein | Strata of mafic and andesitic rocks intruded by quartz diorite and andesite | 1-2 my. | See drill holes | Small tonnage, low grade | (This sheet) |
| 3. | Sea Creek | Pyrite, chalcopyrite, sphalerite, galena, pyrite, chalcocite, pyrite, chalcopyrite | Porphyry | Mafic to mafic and andesitic rocks intruded by quartz diorite and andesite | 3-4 my. | See drill holes | Small tonnage, low grade | (This sheet) |
| 4. | Wash | Pyrite, chalcopyrite | Vein | Mafic to mafic and andesitic rocks intruded by quartz diorite and andesite | Tertiary | None | Small tonnage, low grade | (This sheet) |
| 5. | Sutwik Island | Pyrite, chalcopyrite | Vein | Mafic to mafic and andesitic rocks intruded by quartz diorite and andesite | 1-2 my. | None | Small tonnage, low grade | (This sheet) |
| 6. | Sutwik Island | Pyrite, chalcopyrite | Vein | Mafic to mafic and andesitic rocks intruded by quartz diorite and andesite | 1-2 my. | None | Small tonnage, low grade | (This sheet) |
| 7. | Sea Creek | Quartz, galena, sphalerite, pyrite, chalcopyrite | Vein | Mafic to mafic and andesitic rocks intruded by quartz diorite and andesite | 1-2 my. | None | Small tonnage, low grade | (This sheet) |
| 8. | Washed Creek | Pyrite, chalcopyrite, sphalerite, galena, pyrite, chalcocite, pyrite, chalcopyrite | Porphyry | Mafic to mafic and andesitic rocks intruded by quartz diorite and andesite | 3-4 my. | None | Small tonnage, low grade | (This sheet) |
| 9. | Washed Creek | Pyrite, chalcopyrite, sphalerite, galena, pyrite, chalcocite, pyrite, chalcopyrite | Porphyry | Mafic to mafic and andesitic rocks intruded by quartz diorite and andesite | 3-4 my. | None | Small tonnage, low grade | (This sheet) |
| 10. | Horse Bay | Quartz, galena, sphalerite, pyrite, chalcopyrite | Vein | Mafic to mafic and andesitic rocks intruded by quartz diorite and andesite | Less than 3 my. | None | Small tonnage, low grade | (This sheet) |
| 11. | Horse Bay | Quartz, galena, sphalerite, pyrite, chalcopyrite | Vein | Mafic to mafic and andesitic rocks intruded by quartz diorite and andesite | Less than 3 my. | None | Small tonnage, low grade | (This sheet) |

Table 2.—Mineral prospects and occurrences

| Number | Name | Minerals | Deposit type | Geology | Probable age of mineralization | Subsequent exploration | Evaluation | References |
|--------|---------------|------------------------------------------------------------------------------------|--------------|-----------------------------------------------------------------------------|--------------------------------|------------------------|--------------------------|--------------|
| 1. | Cape Rukhik | Pyrite, chalcopyrite | Porphyry | Mafic to mafic and andesitic rocks intruded by quartz diorite and andesite | 30-35 my. | None | Small tonnage, low grade | (This sheet) |
| 2. | Breaded Creek | Quartz, pyrite, galena, sphalerite, pyrite, chalcocite, pyrite, chalcopyrite | Vein | Strata of mafic and andesitic rocks intruded by quartz diorite and andesite | 1-2 my. | See drill holes | Small tonnage, low grade | (This sheet) |
| 3. | Sea Creek | Pyrite, chalcopyrite, sphalerite, galena, pyrite, chalcocite, pyrite, chalcopyrite | Porphyry | Mafic to mafic and andesitic rocks intruded by quartz diorite and andesite | 3-4 my. | See drill holes | Small tonnage, low grade | (This sheet) |
| 4. | Wash | Pyrite, chalcopyrite | Vein | Mafic to mafic and andesitic rocks intruded by quartz diorite and andesite | Tertiary | None | Small tonnage, low grade | (This sheet) |
| 5. | Sutwik Island | Pyrite, chalcopyrite | Vein | Mafic to mafic and andesitic rocks intruded by quartz diorite and andesite | 1-2 my. | None | Small tonnage, low grade | (This sheet) |
| 6. | Sutwik Island | Pyrite, chalcopyrite | Vein | Mafic to mafic and andesitic rocks intruded by quartz diorite and andesite | 1-2 my. | None | Small tonnage, low grade | (This sheet) |
| 7. | Sea Creek | Quartz, galena, sphalerite, pyrite, chalcopyrite | Vein | Mafic to mafic and andesitic rocks intruded by quartz diorite and andesite | 1-2 my. | None | Small tonnage, low grade | (This sheet) |
| 8. | Washed Creek | Pyrite, chalcopyrite, sphalerite, galena, pyrite, chalcocite, pyrite, chalcopyrite | Porphyry | Mafic to mafic and andesitic rocks intruded by quartz diorite and andesite | 3-4 my. | None | Small tonnage, low grade | (This sheet) |
| 9. | Washed Creek | Pyrite, chalcopyrite, sphalerite, galena, pyrite, chalcocite, pyrite, chalcopyrite | Porphyry | Mafic to mafic and andesitic rocks intruded by quartz diorite and andesite | 3-4 my. | None | Small tonnage, low grade | (This sheet) |
| 10. | Horse Bay | Quartz, galena, sphalerite, pyrite, chalcopyrite | Vein | Mafic to mafic and andesitic rocks intruded by quartz diorite and andesite | Less than 3 my. | None | Small tonnage, low grade | (This sheet) |
| 11. | Horse Bay | Quartz, galena, sphalerite, pyrite, chalcopyrite | Vein | Mafic to mafic and andesitic rocks intruded by quartz diorite and andesite | Less than 3 my. | None | Small tonnage, low grade | (This sheet) |

Table 3.—Mineral resource areas

| Area | Geology | Criteria | Uncovered deposits | Estimated number of deposits | Estimated tonnage | Estimated grade | Estimated value |
|------|-------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|---------------------------|------------------------------|-------------------|-----------------|-----------------|
| A | Sedimentary rocks of Permian-Tertiary age and Tertiary volcanic rocks intruded by mafic and andesitic rocks | Uncovered color anomalies produced by weathering of disseminated sulfide minerals | Pyrophy copper-molybdenum | 27 | 3 | 2 | \$0.30 |
| B | Mafic to mafic and andesitic rocks intruded by quartz diorite and andesite | Copper mineral in veins (1) and (2) and copper and other metals in mafic and andesitic rocks | Pyrophy copper-molybdenum | 23 | 2 | 1 | \$0.30 |
| C | Area trends east-west across sedimentary and volcanic rocks | Copper mineral in veins (1) and (2) and copper and other metals in mafic and andesitic rocks | Pyrophy copper-molybdenum | 33 | 3 | 2 | \$0.30 |
| D | Mafic to mafic and andesitic rocks intruded by quartz diorite and andesite | Copper mineral in veins (1) and (2) and copper and other metals in mafic and andesitic rocks | Pyrophy copper-molybdenum | 23 | 2 | 1 | \$0.30 |
| E | Mafic to mafic and andesitic rocks intruded by quartz diorite and andesite | Copper mineral in veins (1) and (2) and copper and other metals in mafic and andesitic rocks | Pyrophy copper-molybdenum | 23 | 2 | 1 | \$0.30 |
| F | Mafic to mafic and andesitic rocks intruded by quartz diorite and andesite | Copper mineral in veins (1) and (2) and copper and other metals in mafic and andesitic rocks | Pyrophy copper-molybdenum | 23 | 2 | 1 | \$0.30 |
| G | Mafic to mafic and andesitic rocks intruded by quartz diorite and andesite | Copper mineral in veins (1) and (2) and copper and other metals in mafic and andesitic rocks | Pyrophy copper-molybdenum | 23 | 2 | 1 | \$0.30 |

Table 4.—Probability of Discovery, Tolerance, and Near-Field Formation

| Area | Probability of Discovery | Tolerance | Near-Field Formation |
|------|--------------------------|-----------|----------------------|
| A | 0.50 | 2.28 | 1.06 |
| B | 0.50 | 2.28 | 1.06 |
| C | 0.50 | 2.28 | 1.06 |
| D | 0.50 | 2.28 | 1.06 |
| E | 0.50 | 2.28 | 1.06 |
| F | 0.50 | 2.28 | 1.06 |
| G | 0.50 | 2.28 | 1.06 |

Table 5.—Estimated grade and tonnage of deposits

| Area | Estimated grade | Estimated tonnage |
|------|-----------------|-------------------|
| A | 0.50 | 2.28 |
| B | 0.50 | 2.28 |
| C | 0.50 | 2.28 |
| D | 0.50 | 2.28 |
| E | 0.50 | 2.28 |
| F | 0.50 | 2.28 |
| G | 0.50 | 2.28 |

Table 6.—Estimated grade and tonnage of deposits

| Area | Estimated grade | Estimated tonnage |
|------|-----------------|-------------------|
| A | 0.50 | 2.28 |
| B | 0.50 | 2.28 |
| C | 0.50 | 2.28 |
| D | 0.50 | 2.28 |
| E | 0.50 | 2.28 |
| F | 0.50 | 2.28 |
| G | 0.50 | 2.28 |

Table 7.—Estimated grade and tonnage of deposits

| Area | Estimated grade | Estimated tonnage |
|------|-----------------|-------------------|
| A | 0.50 | 2.28 |
| B | 0.50 | 2.28 |
| C | 0.50 | 2.28 |
| D | 0.50 | 2.28 |
| E | 0.50 | 2.28 |
| F | 0.50 | 2.28 |
| G | 0.50 | 2.28 |

Table 8.—Estimated grade and tonnage of deposits

| Area | Estimated grade | Estimated tonnage |
|------|-----------------|-------------------|
| A | 0.50 | 2.28 |
| B | 0.50 | 2.28 |
| C | 0.50 | 2.28 |
| D | 0.50 | 2.28 |
| E | 0.50 | 2.28 |
| F | 0.50 | 2.28 |
| G | 0.50 | 2.28 |

Table 9.—Estimated grade and tonnage of deposits

| Area | Estimated grade | Estimated tonnage |
|------|-----------------|-------------------|
| A | 0.50 | 2.28 |
| B | 0.50 | 2.28 |
| C | 0.50 | 2.28 |
| D | 0.50 | 2.28 |
| E | 0.50 | 2.28 |
| F | 0.50 | 2.28 |
| G | 0.50 | 2.28 |

MINERAL RESOURCE MAPS OF THE CHIGNIK AND SUTWIK ISLAND QUADRANGLES, ALASKA

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