

Appendix B:

Mineral Occurrences Identified By Chugach Alaska Corporation

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Reviewed and Refined by Bureau of Land Management and the U.S. Forest Service

Contents of Appendix B

Appendix B contains tables summarizing available data for 100 mineral occurrences and 5 quarry deposits of interest to the Chugach Alaska Corporation (CAC) within the Chugach Alaska Region. CAC provided a list of 100 mineral occurrences to the U.S. Bureau of Land Management in May 2020. EMPSi and BLM worked to augment and edit this list based on, among other reference materials, a 2020 mineral report produced by CAC-contractor Alaska Earth Sciences (AES) and personal communications between EMPSi analysts and CAC (Phillips 2020). The mineral occurrences are divided into three categories based on the owner of the subsurface estate and whether the subsurface underlies or is adjacent to surface interests acquired under the the Exxon Valdez Oil Spill Trustee Council's Habitat Protection Program (Program).

- **Table B-1.** Subsurface Development Categories in the Chugach Alaska Region (Table 11 in the Socioeconomic Assessment).
- **Table B-2.** Information on Mineral and Quarry Occurrences on CAC Subsurface Underlying or Adjacent to Program-Acquired Property Interests.
- **Table B-3.** Information on Mineral and Quarry Occurrences on CAC Subsurface Not Affected by the Program.
- **Table B-4.** Information on Mineral and Quarry Occurrences on Non-CAC Subsurface.

The Tables B-2 through B-4 are all similarly configured with the following columns:

Column Name	Description
Map ID #	The ID # for the occurrence as it is shown in Maps found in Appendix A
Map Region	The Map Region (Village Area: 1. Tatitlek, 2. Eyak, 3. Chenega, 4. English Bay) in which the occurrence is located. Maps are provided in Appendix A.
Mineral Occurrence	The name of the occurrence with clarifications shown in parentheses as appropriate.
Surface Owner/Manager	The owner or manager of the surface.
Subsurface Development	The Subsurface Development category will often be the surface owner, and may elaborate on impediments to subsurface access. Table 12 in the Socioeconomic Assessment discusses the access impediments.
Commodities	The top three commodities for in the occurrence as reported by CAC in CAC's list.
Location (latitude, longitude)	Latitude and longitude data out to 5 decimal places referencing the North American Datum of 1983 for the location of the occurrence as reported in the Mineral Resource Data System (MRDS) or the Alaska Resource Data File (ARDF), maintained by the US Geological Survey (USGS) or as modified in this report.
Reported Minerals	<p>Reported Minerals were compiled by the study team from a variety of sources. If estimated quantities are reported in the ARDF those values are used. If ARDF estimates are Not Available, then estimates reported in the MRDS are used. If no estimates are reported in these two online sources, then the best estimate from CAC (2008) or AES (2020a or 2020b) is used. Note that Reported Minerals equal the sum of the resources reported as inferred quantities.</p> <p>Estimates of resources in this appendix utilize the following abbreviation for units of mass (weight) with conversion factors as indicated.</p> <ul style="list-style-type: none"> • ton = 2,000 pounds • ppm = part per million • mt = metric ton: 1 mt = 2,204.6 pounds, 1 mt = 1,000 kilograms, 1 mt = 1.102 tons • g = gram: • oz = troy ounce: 1 oz = 31.1035 g, 1 oz = 1.097 standard (avoirdupois) ounces
CAC Mineral Potential	The potential for development provided by CAC of the resource as assigned by Alaska Earth Science in their report on occurrences (AES 2020). As noted in the body of the Assessment, "development potential" as AES and CAC define and apply it, does not imply that any site is a development-level deposit but that those sites designated as higher potential, have characteristics that might compel someone to continue to explore and characterize the subject sites.
USBM Mineral Potential	The potential for development designated in the USBM in Mineral Land Assessment MLA 5-84 (1984). As used by USBM in 1984,

	potential for development included the potential that a person may, based on available data, undertake further exploration and characterization. It did not consider the technical or economic feasibility of any mineral occurrence for actual mining.
Estimated Value	<p>The estimated value equals the value of occurrences where the tons and grade of contained metal were reported, relative to other identified occurrences. These relative values are speculative because they are based on inferred tonnage and grade estimates, where sampling is insufficient to confidently establish a resource. Because of the dearth of geological evidence and sampling and the lack of capital or production cost, determining whether development of this material would be economically feasible and assigning actual value is not reasonable. The estimated value was determined by calculating the value of each ton of resource reported and multiplying that value times the inferred quantity of tons reported.</p> <p><i>copper (Cu) = \$2.80 per pound</i> <i>Zinc (Zn) = \$1.25 per pound</i> <i>Silver (Ag) = \$16.20 per oz</i> <i>Gold (Au) = \$1,400 per oz.</i></p> <p>Low Value: value per ton is below the cut-off grade of regional mines</p> <p>Moderate Value: high grades per ton but low tonnage Large Value: higher grade and larger tonnage</p>
MRDS Deposit #	The MRDS Deposit ID number.
URL to more information	The URL for the occurrence that links directly to the site in ARDF or MRDS. Double clicking on the link will open your browser to the page for this deposit. The ARDF and MRDS contains a wealth of additional information regarding the history of the site and historical amounts extracted, if any.

Table B-1. Subsurface Development Categories in the Chugach Alaska Region

Property Ownership Category	Description of the Property Ownership Categories and Potential Development Requirements
1. CAC Full-fee Estate	<p>CAC identified ten mineral occurrences that fall into this category, but no active or proposed projects are found on CAC full-fee estate potentially not affected by the Program.</p> <p>Permits from the USACE and AKDNR would be required for almost any development project, no additional coordination with village corporations or state or federal agencies would be required except by agreement. However, in the 1982 CNI Agreement CAC did agree to implement its resource planning “in cooperation and consultation with the appropriate state and federal agencies that have land management and resource planning responsibilities in the Chugach Region” as well as to “give due regard and consideration to views expressed by interested groups and the public.” (Exhibit ___, ¶ 18).</p>
2. Access through Village Corporation Surface	<p>This category represents the pre-existing split-estate ownership pattern created by the ANCSA, and along with Category 8 provides the baseline for comparison to other property ownership categories involving access across adjacent lands. The CAC identified two mineral occurrences that fall into this category and no examples of development or attempted development. This category as specified is potentially not affected by the Program.</p> <p>This category involves development of the CAC occurrences on CAC full-fee estate lands that would require crossing through separate parcels of village corporation surface to access a marine terminal. Development would require coordination and negotiations with the village corporation, and potentially other entities if the village corporation has alienated interests in its surface. There does not appear to be any legal requirement that village corporations grant the CAC access through separate village corporation surface parcels, but the CAC and the applicable village corporation and any other parties could come to negotiated agreement to facilitate development.</p>
3. Access through Program-acquired surface interests within a larger parcel	<p>The CAC identified two mineral occurrences that fall into this category. There have been no examples of development or attempted development in this category. The CAC’s subsurface ownership guarantees it a right to develop subsurface resources making reasonable use of the surface, even where such use involves property interests acquired by the EVOSTC, whether that be in the form of surface, timber easement, or conservation easement.</p>

Property Ownership Category	Description of the Property Ownership Categories and Potential Development Requirements
4. Access through Forest Service Program Surface	<p>The CAC identified one mineral occurrence which was determined likely to require access through Forest Service Program Surface. There have been no examples of development or attempted development in this category.</p> <p>Development of the CAC subsurface on adjacent properties would involve negotiations and possibly permits from the Forest Service. Under Section 1323(a) of ANILCA, the Forest Service will provide access inholdings within the National Forest System, so the owner(s) may enjoy reasonable use of their property. In turn, the non-federal landowner must adhere to the rules and regulations of the National Forest System. The State also holds a Program conservation easement on these lands. There does not appear to be any legal requirement the State must grant the CAC access, but the CAC and the State (and village corporation as holder of a reversionary interests) could come to a negotiated agreement to facilitate development.</p>
5. AKDNR Program Surface	<p>The CAC identified two mineral occurrences that fall into this category. There have been no examples of development or attempted development in this category.</p>
6. Forest Service Program Surface	<p>The CAC has identified fourteen mineral occurrences that fall into this category. There has been one example of development or attempted development in this category. The Program land acquisitions expressly do not affect or limit the CAC's rights to develop its subsurface by making reasonable use of the surface. In the one example of proposed development, the CAC and the Forest Service agreed to negotiate reasonable use of the surface through a public process. They successfully agreed to a development plan and avoided litigation.</p>
7. Minerals are located on or adjacent to NPS Program Surface	<p>Access to the development will be governed by the ANILCA Section 1110(b) right of access for the NPS. Ten mineral occurrences fall into this category. If NPS-granted access is inconsistent with the terms of a Program conservation easement held by the State, CAC and the State would need to come to negotiated agreement to facilitate development.</p>
8. Village Corporation Surface	<p>This category represents the pre-existing split-estate ownership created by the ANCSA, and along with Category 2 provides the baseline for comparison to other property ownership categories. The CAC has identified sixteen occurrences that fall into this category. The CAC identified no examples of development or attempted development in this category. Analysts deem this category to be unaffected by the Program.</p> <p>Development would likely involve notification of the village corporation and potentially negotiation regarding reasonable use of the surface to access subsurface resources. It may also involve interaction with other third parties if the village corporation has alienated some or all of its interests in the surface (such as through a carbon credits program). Past disputes over subsurface development between village and regional corporations suggest that development on village corporation lands is not categorically less onerous than development on State or federal-owned surface acquired under the program. Development will almost invariably involve permitting by the USACE or AKDNR, including a public notice and comment period.</p>

Property Ownership Category	Description of the Property Ownership Categories and Potential Development Requirements
9. Village Corporation Surface / Forest Service Program Conservation Easement	<p>The CAC has identified eleven mineral occurrences that fall into this category. There have been no examples of development or attempted development in this category. Development would likely involve notification of the village corporation and potentially negotiation prior to access through the surface.</p> <p>The conservation easement does not “affect or in any way limit the rights of the owner of the subsurface in accordance with applicable law.” Analysts deem this category to be unaffected by the Program, noting that the Forest Service could have a collaborative role in ensuring compliance of conditions of the conservation easement. This category would have permitting and approval requirements similar to category 8 above.</p>
10. Village Corporation Surface / Forest Service Program Timber Easement	<p>The CAC has identified ten mineral occurrences that fall into this category. There have been no examples of development or attempted development in this category. Analysts deem this category to be unaffected by the Program although discussions with the Forest Service would likely be necessary to ensure compliance with conditions of the Timber Easement. This category would have permitting and approval requirements similar to category 8 above.</p> <p>Development would likely involve notification of the village corporation and potentially negotiation over reasonable access through the surface. The timber easement allows development of roads and infrastructure if they are not related to commercial timber harvests.</p>

Source: Property ownership categories have been developed specifically for this assessment by the analysts.

Note: For all CAC subsurface resources USACE permits will be required if navigable waters or wetlands are affected.

**Table B-2. Information on Mineral and Quarry Deposits on CAC Subsurface
Underlying or Adjacent to Program Acquired Property Interests**

Map ID #	Map Region	Mineral Occurrence	Surface Owner / Manager	Subsurface Development Category	Commodities	Location (latitude, longitude)	Reported Minerals ¹	CAC Mineral Potential	USBM Mineral Potential	Estimated Value	MRDS Deposit #	URL to more information
1.03	Tatitlek	Mcnaughton & Turner	Village Corp. surface/ Forest Service Program CE	Village Corp. surface/ Forest Service Program CE	copper	60.90789, -146.64394	Not Available	Lower	Unknown	Not Available	10282389	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10282389
1.04	Tatitlek	Mogul Group	Village Corp. surface/ Forest Service Program CE	Village Corp. surface/ Forest Service Program CE	copper, zinc	60.90269, -146.61364	ARDF reports an inferred estimate of 400 tons: Copper @ 0.25%.	Moderate	Low	Low	10112789	https://mrdata.usgs.gov/ardf/show-ardf.php?ardf_num=CV009
1.05	Tatitlek	Copper Mountain Prospect	Village Corporation	Possible access through Village Corp. surface/ Forest Service Program Conservation Easement	copper, zinc, silver	60.896469, -146.598	ARDF reports an inferred estimate of 300 tons: Copper @ 1.87%	Moderate	Low	Low	10258649	https://mrdata.usgs.gov/ardf/show-ardf.php?ardf_num=CV010
1.07	Tatitlek	Vesuvius-Wrangle	Village Corp. surface/ Forest Service Program CE	Village Corp. surface/ Forest Service Program CE	copper, zinc	60.89459, -146.57114	Not Available	Lower	Unknown	Not Available	10282517	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10282517
1.08	Tatitlek	Sunnyside	Village Corporation	Possible access through Village Corp. SURFACE/ Forest Service Program CE	copper, zinc	60.89099, -146.60144	Not Available	Moderate	Unkown	Not Available	10258567	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10258567
1.17	Tatitlek	Bligh Island	Village Corp. surface/ Forest Service Program CE	Village Corp. surface/ Forest Service Program CE	gold	60.87539, -146.74754	Not Available	Lower	Low	Not Available	10112922	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10112922

¹ Resources reported by CAC or AES have not been independently verified.

Map ID #	Map Region	Mineral Occurrence	Surface Owner / Manager	Subsurface Development Category	Commodities	Location (latitude, longitude)	Reported Minerals ¹	CAC Mineral Potential	USBM Mineral Potential	Estimated Value	MRDS Deposit #	URL to more information
1.19	Tatitlek	Steinmetz (Copper Lake)	Village Corp. surface/ Forest Service Program CE	Village Corp. surface/ Forest Service Program CE	copper, zinc, gold	60.87289, -146.56034	Not Available	Moderate	Unknown	Not Available	10258791	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10258791
1.21	Tatitlek	Reynolds-Alaska Development Co.	Village Corp. surface/ Forest Service Program CE	Village Corp. surface/ Forest Service Program CE	copper, silver, zinc	60.86848, -146.56365	ARDF reports an Inferred estimate of 3000 tons: Copper @ 4.6%, Zinc @ 0.14%, Silver @ 0.5 oz/t.	Higher	Moderate	Moderate	10093950	https://mrdata.usgs.gov/ardf/show-ardf.php?ardf_num=CV014
1.32	Tatitlek	Chisna Consolidated (Buckeye Group)	Village Corp. surface/ Forest Service Program TE	Village Corp. surface/ Forest Service Program TE	copper	60.84765, -146.53143	ARDF reports an inferred estimate of 2,400 tons: Copper @ 0.28%	Moderate	Low	Low	10000366	https://mrdata.usgs.gov/mrds/show-mrds.php?ardf_num=CV022
1.42	Tatitlek	Dickey Copper Co. (north)	Forest Service Program surface	Forest Service Program surface	copper, zinc, gold	60.76683, -146.402	Moffit and Fellows (1950) report that geophysical prospecting suggests that the mines in this area (Fidalgo-Alaska ARDF#CV028 and this deposit—Dickey Copper Co. ARDF # CV029) contain additional undiscovered mineral resources.	Higher	Moderate	Not Available	10000360	https://mrdata.usgs.gov/ardf/show-ardf.php?ardf_num=CV029
2.01	Eyak	Port Gravina Quarry	Forest Service Program surface	Forest Service Program surface	granite	60.70789, -146.13774	AES estimates 2.2 million tons in the eastern pit & 4.6 million tons in the western pit.	Higher	Unkonwn	\$237,320,000	Not Available	No MRDS Hyperlink
2.02	Eyak	Port Gravina Quarry Extension	CAC FFE	Access through Forest Service Program surface	granite	60.70000, -146.12104	Not Available	Higher	Unknown	Not Available	Not Available	No MRDS Hyperlink

2.03	Eyak	Ellis, Boone, & Ibeck 1	Forest Service Program surface	Forest Service Program surface	copper	60.68210, -146.00001	Not Available	Lower	Unknown	Not Available	10283055	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10283055
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Map ID #	Map Region	Mineral Occurrence	Surface Owner / Manager	Subsurface Development Category	Commodities	Location (latitude, longitude)	Reported Minerals ¹	CAC Mineral Potential	USBM Mineral Potential	Estimated Value	MRDS Deposit #	URL to more information
2.04	Eyak	Sheep Bay Quarry	Forest Service Program surface	Forest Service Program surface	granite	60.67603, -146.01494	Not Available	Moderate	Unknown	Not Available	Not Available	No MRDS Hyperlink
2.05	Eyak	Ellis, Boone, & Ibeck 2	Forest Service Program surface	Forest Service Program surface	copper	60.66769, -146.07031	Not Available	Lower	Unknown	Not Available	10209554	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10209554
2.11	Eyak	Rosecrans and Co.	Forest Service Program surface	Forest Service Program surface	copper	60.59900, -145.62639	Not Available	Lower	Unknown	Not Available	10112636	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10112636
2.12	Eyak	Boswell & Lowe	Forest Service Program surface	Forest Service Program surface	copper	60.59380, -145.63439	Not Available	Lower	Unknown	Not Available	10137192	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10137192
2.13	Eyak	Emerald	Forest Service Program surface	Forest Service Program surface	copper	60.57680, -145.65579	Not Available	Lower	Unknown	Not Available	10161298	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10161298
2.14	Eyak	Revenue	Forest Service Program surface	Forest Service Program surface	copper	60.57040, -145.81830	Not Available	Lower	Unknown	Not Available	10112711	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10112711
2.16	Eyak	Hawkins Island 1	Forest Service Program surface	Forest Service Program surface	copper	60.55445, -145.83099	Not Available	Lower	Low	Not Available	10160828	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10160828
2.17	Eyak	U.S. & Mtn. Group	Forest Service Program surface	Forest Service Program surface	copper	60.53460, -145.67329	Not Available	Lower	Unknown	Not Available	10185709	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10185709
2.18	Eyak	Kippin & Co.	AKDNR Program surface	AKDNR Program surface	copper	60.52789, -146.05170	Not Available	Lower	Unknown	Not Available	10258473	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10258473
3.01	Chenega	Eshamy Bay Quarry	AKDNR Program surface	AKDNR Program surface	granite	60.45370, -147.96600	Not Available	Lower	Unknown	Not Available	Not Available	No MRDS Hyperlink
3.04	Chenega	Chenega Island	Village Corp. surface/ Forest Service Program CE	Village Corp. surface/ Forest Service Program CE	manganese	60.37125, -147.99424	ARDF reports an inferred estimate of 700 tons with 17% Manganese.	Moderate	Unknown	Not Available	10185923	https://mrdata.usgs.gov/ardf/show-ardf.php?ardf_num=SR222

3.09	Chenega	Unnamed Occurrence	Village Corp. surface/ Forest Service Program CE	Village Corp. surface/ Forest Service Program CE	chromium, copper, nickel	60.34815, -148.06504	Not Available	Moderate	Unknown	Not Available	10137251	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10137251
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Map ID #	Map Region	Mineral Occurrence	Surface Owner / Manager	Subsurface Development Category	Commodities	Location (latitude, longitude)	Reported Minerals ¹	CAC Mineral Potential	USBM Mineral Potential	Estimated Value	MRDS Deposit #	URL to more information
3.13	Chenega	Unnamed Occurrence	Village Corp. surface/Forest Service Program CE	Village Corp. surface/ Forest Service Program CE	iron, manganese, copper	60.34125, -148.03443	Not Available	Lower	Low	Not Available	10136799	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10136799
3.17	Chenega	Unnamed Occurrence	Village Corp. surface /Forest Service Program CE	Village Corp. surface/ Forest Service Program CE	chromium, nickel, manganese	60.32265, -148.06583	Not Available	Lower	Low	Not Available	10282612	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10282612
3.25	Chenega	Copper Queen Prospect	Forest Service Program surface	Forest Service Program surface	copper, zinc	60.18705, -147.75032	Not Available	Moderate	Low	Not Available	10136648	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10136648
4.01	English Bay/ Port Graham	(Cataract Cove)	NPS Program surface	NPS Program surface	gold	59.72131, -149.81913	Not Available	Lower	Unknown	Not Available	10000426	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10000426
4.02	English Bay/ Port Graham	Two Arm Bay	NPS Program surface	NPS Program surface	gold	59.69950, -150.13283	Not Available	Lower	Unknown	Not Available	10161061	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10161061
4.03	English Bay/ Port Graham	Kusturin & Johanson	NPS Program surface	NPS Program surface	gold, copper	59.62640, -150.17143	Not Available	Lower	Unknown	Not Available	10112810	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10112810
4.04	English Bay/ Port Graham	Hatcher	NPS Program surface	NPS Program surface	copper, gold, lead	59.57259, -150.50583	Not Available	Moderate	Unknown	Not Available	10136970	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10136970
4.05	English Bay/ Port Graham	Morris, Sheridan, Kuppler	NPS Program surface	NPS Program surface	gold, copper	59.56949, -150.39253	Not Available	Lower	Unknown	Not Available	10308346	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10308346

Table B-3. Information on Mineral and Quarry Deposits on CAC Subsurface Not Affected by the Program

Map ID #	Map Region	Mineral Occurrence	Surface Owner / Manager	Subsurface Development Category	Commodities	Location (latitude, longitude)	Reported Minerals	CAC Mineral Potential	USBM Mineral Potential	Estimated Value	MRDS Deposit #	URL to more information
1.01	Tatitlek	Silver Lake Tributary	CAC FFE	Access through Village Corp. surface	gold	60.95429, - 146.52254	Not Available	Moderate	Moderate	Not Available	10282571	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10282571
1.02	Tatitlek	Hidden Treasure	Village Corp. surface	Village Corp. surface	copper, lead, zinc	60.90819, - 146.70585	Not Available	Lower	Unknown	Not Available	10258604	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10258604
1.09	Tatitlek	Wagner	Village Corp. surface	Village Corp. surface	copper	60.88959, - 146.64564	Not Available	Moderate	Unknown	Not Available	10161432	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10161432
1.10	Tatitlek	Fielder & Hemple (Boulder Bay)	Village Corp. surface	Village Corp. surface	copper, zinc	60.88629, - 146.62754	Not available.	Lower	Unknown	Not Available	10136812	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10136812
1.11	Tatitlek	Reynolds-Alaska	Village Corp. surface	Village Corp. surface	copper, zinc, silver	60.88246, - 146.63001	MRDS reports an inferred estimate of 600 tons: Copper @ 1.37%, Zinc @ 0.28%, Silver @ 0.214 oz/t.	Higher	Moderate	Low	10209922	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10209922
1.12	Tatitlek	Ella	Village Corp. surface	Village Corp. surface	copper	60.88399, - 146.67864	Not Available	Lower	Unknown	Not Available	10161452	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10161452
1.13	Tatitlek	Rua	Village Corp. surface	Village Corp. surface	copper, zinc	60.88379, - 146.64614	Not Available	Moderate	Low	Not Available	10185560	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10185560
2.19	Eyak	Bay View No.1	Village Corp. surface	Village Corp. surface	gold, copper, zinc	60.50489, - 145.85749	Not Available	Lower	Low	Not Available	10209630	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10209630
2.20	Eyak	Hartney Bay	Village Corp. surface	Village Corp. surface	copper	60.48399, - 145.91169	Not Available	Lower	Unknown	Not Available	10136924	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10136924
2.21	Eyak	Flynn & Co., Orca	Village Corp. surface	Village Corp. surface	copper	60.47989, - 145.89059	Not Available	Lower	Unknown	Not Available	10161420	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10161420

Map ID #	Map Region	Mineral Occurrence	Surface Owner / Manager	Subsurface Development Category	Commodities	Location (latitude, longitude)	Reported Minerals	CAC Mineral Potential	USBM Mineral Potential	Estimated Value	MRDS Deposit #	URL to more information
2.22	Eyak	Tansey 2	Village Corp. surface	Village Corp. surface	copper	60.45899, -145.94639	Not Available	Lower	Low	Not Available	10136531	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10136531
3.02	Chenega	South Arm	CAC FFE	None: CAC FFE	copper	60.37626, -147.70943	Not Available	Lower	Low	Not Available	10136746	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10136746
3.03	Chenega	Northwest Exploration Ha No. 3-14	CAC FFE	None: CAC FFE	copper	60.37316, -147.67333	Not Available	Lower	Unknown	Not Available	10112947	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10112947
3.05	Chenega	Unnamed Occurrence	CAC FFE	None: CAC FFE	copper	60.36876, -147.62313	Not Available	Lower	Low	Not Available	10112409	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10112409
3.10	Chenega	Jonesy	Forest Service Non-Program surface	Forest Service Non-Program surface	copper	60.34676, -147.74833	ARDF reports an inferred estimate of 1,300 tons: Copper @ 3.3%.	Moderate	Moderate	Moderate	10161145	https://mrdata.usgs.gov/ardf/show-ardf.php?ardf_num=SR240
3.11	Chenega	Marsha Bay 1-6	CAC FFE	None: CAC FFE	copper	60.34536, -147.67613	Not Available	Moderate	Unknown	Not Available	10209626	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10209626
3.12	Chenega	Nellie Group	CAC FFE	None: CAC FFE	copper	60.34266, -147.74003	Not Available	Lower	Low	Not Available	10234260	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10234260
3.15	Chenega	Marsha Bay	CAC FFE	None: CAC FFE	copper, zinc	60.32596, -147.68172	Not Available	Lower	Unknown	Not Available	10258621	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10258621
3.16	Chenega	Twentieth Century Knight Island	CAC FFE	None: CAC FFE	copper	60.32021, -147.74952	ARDF reports an inferred estimate of 1,300 tons: Copper @ 2.6%	Lower	Moderate	Low	10136802	https://mrdata.usgs.gov/ardf/show-ardf.php?ardf_num=SR242
3.19	Chenega	U & I	CAC FFE	None: CAC FFE	copper	60.31566, -147.72062	Not Available	Lower	Low	Not Available	10185722	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10185722
3.20	Chenega	Knight's Island Copper Company	CAC FFE	None: CAC FFE	copper, zinc	60.31065, -147.75673	AES (2020a) reports a 0.25 ton resource assuming 1% Copper	Moderate	Moderate	Low	10185921	https://mrdata.usgs.gov/ardf/show-ardf.php?ardf_num=SR243

Map ID #	Map Region	Mineral Occurrence	Surface Owner / Manager	Subsurface Development Category	Commodities	Location (latitude, longitude)	Reported Minerals	CAC Mineral Potential	USBM Mineral Potential	Estimated Value	MRDS Deposit #	URL to more information
3.21	Chenega	Copper Coin	CAC FFE	None: CAC FFE	copper	60.31039, -147.77828	ARDF reports an inferred estimate of 5,900 tons: Copper @ 2.4 %, Silver @ 0.3 oz/t, Gold @ 0.03 oz/t	Higher	Moderate	Large	10137234	https://mrdata.usgs.gov/ardf/show-ardf.php?ardf_num=SR236
3.23	Chenega	Hogan, Hample & Egan	Village Corp. surface/Forest Service Program CE	Village Corp. surface/ Forest Service Program CE	copper, silver	60.21205, -147.76782	Not Available	Lower	Moderate	Not Available	10185687	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10185687
3.24	Chenega	Wilcox	Village Corp. surface/ Forest Service Program surface	Village Corp. surface/ Forest Service Program surface	copper	60.20785, -147.76782	Not Available	Lower	Low	Not Available	10209976	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10209976
4.13	English Bay/ Port Graham	Sonny Fox	Village Corp surface	Village Corp. surface	gold	59.53949, -150.47253	No Value	Higher	Unknown	Not Available	10100939	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10100939
4.14	English Bay/ Port Graham	Johnston & Degan	Village Corp. surface	Village Corp. surface	gold, lead, silver	59.53009, -150.49253	Not Available	Moderate	Unknown	Not Available	10282843	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10282843
4.17	English Bay/ Port Graham	Lang (Frank Long)	Village Corp. surface	Village Corp. surface	copper, gold, lead	59.51942, -150.4921	Not Available	Higher	Unknown	Not Available	10093959	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10093959
4.18	English Bay/ Port Graham	Nukalaska	Village Corp. surface	Village Corp. surface	copper, gold, lead	59.50837, -150.66947	CAC (2008) indicates gold resources of 875 tons @ 2.9 oz /ton	Higher	Unknown	Large	10100936	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10100936
4.19	English Bay/ Port Graham	Tidewater	Village Corp. surface	Village Corp. surface	gold	59.50388, -150.48329	Not Available	Moderate	Unknown	Not Available	10258726	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10258726

4.21	English Bay/ Port Graham	Sather	Village Corp. surface	Village Corp. surface	copper, gold, lead	59.45948, -150.63253	Not Available	Higher	Unknown	Not Available	10000406	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10000406
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Table B-4. Information on Mineral and Quarry Occurrences on Non-CAC Subsurface

Map ID #	Map Region	Mineral Occurrence	Surface Owner / Manager	Commodities	Location (latitude, longitude)	Reported Resources *	CAC Mineral Potential	USBM Mineral Potential	Estimated Value	MRDS Deposit #	URL to more information
1.06	Tatitlek	Ellamar	Private	copper, gold, silver	60.89519, -146.70104	ARDF reports a resource of 36,000 tons: Copper @ 2%, Gold @ 0.1oz/t, Silver @ 0.5 oz/t, and another resource of 500,000 tons of ore: Copper @ 0.5%, Gold @ 0.085 oz/t, Silver @ 0.75 oz/t.	Higher	Moderate	Large	10308821	https://mrdata.usgs.gov/ardf/show-ardf.php?ardf_num=CV003
1.14	Tatitlek	Galena Bay Mining Co.	Private	copper, gold, zinc	60.88289, -146.58064	ARDF reports a resource 5,800 tons: Copper @ 7.9%, Zinc @ 1.3%, Silver @ 0.16 oz/t.	Higher	Moderate	Large	10234025	https://mrdata.usgs.gov/ardf/show-ardf.php?ardf_num=CV011
1.15	Tatitlek	ACCO	Private	copper	60.87819, -146.57564	Not Available	Lower	Unknown	Not Available	10185780	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10185780
1.16	Tatitlek	Threeman Prospect	Private	copper, zinc, silver	60.87819, -146.57474	Not Available	Lower	Low	Not Available	10185605	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10185605
1.18	Tatitlek	Tibbits	Private	copper, silver, zinc	60.87245, -146.566	ARDF reports a resource of 500 tons: Copper @ 0.72%.	Moderate	Low	Low	10136495	https://mrdata.usgs.gov/ardf/show-ardf.php?ardf_num=CV018
1.24	Tatitlek	Standard Copper	Private	copper, zinc, gold	60.86069, -146.57894	ARDF reports a resource of 4,300 tons: Copper @ 2.89%.	Higher	Low	Moderate	10282720	https://mrdata.usgs.gov/ardf/show-ardf.php?ardf_num=CV016
1.25	Tatitlek	Montezuma	Private	copper, zinc, gold	60.86069, -146.57084	ARDF reports a resource of 200 tons: Copper @ 1.67%, Silver @ 0.138 oz/t.	Moderate	Moderate	Low	10209811	https://mrdata.usgs.gov/ardf/show-ardf.php?ardf_num=Cv017
1.27	Tatitlek	Hemple Copper Co.	Private	copper, gold, silver	60.85776, -146.5419	ARDF reports a resource of 6,300 tons: Copper @ 1.3%.	Moderate	Moderate	Low	10258574	https://mrdata.usgs.gov/ardf/show-ardf.php?ardf_num=CV019
1.28	Tatitlek	Alaska Commercial Co.	Private	copper, zinc, lead	60.85459, -146.54554	ARDF reports a resource of 900 tons: Copper @ 1.12%, Zinc @0.5%, Silver@ 0.749 oz/t.	Higher	Moderate	Low	10307358	https://mrdata.usgs.gov/ardf/show-ardf.php?ardf_num=CV018
1.29	Tatitlek	Threeman (Standard Copper)	Private	copper	60.85459, -146.53954	ARDF reports a resource of 1,902,000 tons: Copper @ 1.05%.	Higher	Moderate	Low	10307359	https://mrdata.usgs.gov/ardf/show-ardf.php?ardf_num=CV020
1.31	Tatitlek	Steinmetz (Landlocked Bay)	Private	copper, gold	60.85149, -146.54034	MRDS reports a resource of 500 tons: Copper @ 2.27%.	Moderate	Moderate	Low	10233928	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10233928
1.34	Tatitlek	Hoodoo	Private	copper, zinc, gold	60.8481, -146.54847	ARDF reports a resource of 300 tons: Copper @ 1.29%, Zinc @ 0.34%, Silver @ 0.256 oz/t.	Moderate	Moderate	Low	10112635	https://mrdata.usgs.gov/ardf/show-ardf.php?ardf_num=CV021
1.35	Tatitlek	Threeman, Landlocked Bay	Private	copper	60.84399, -146.53944	ARDF reports a resource of 600 tons: Copper @ 4.7%, Zinc @ 2.6%	Moderate	Moderate	Moderate	10185501	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10185501

*Resources reported by CAC or AES have not been independently verified.

Map ID #	Map Region	Mineral Occurrence	Surface Owner / Manager	Commodities	Location (latitude, longitude)	Reported Minerals*	CAC Mineral Potential	USBM Mineral Potential	Estimated Resource Value	MRDS Deposit #	URL to more information
1.38	Tatitlek	Threeman-Billygoat	Village Corp. FFE/ Forest Service Program TE	copper, zinc, silver	60.82649, -146.51143	Not Available	Lower	Unknown	Not Available	10282823	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10282823
1.41	Tatitlek	Fidalgo-Alaska (Schlosser)	Private	copper	60.77359, -146.41953	ARDF-reports a resource of 25,625 tons: Copper @ 3%, and another resource of 224,000 tons: Copper at 3.18%	Higher	Moderate	Moderate	10307363	https://mrdata.usgs.gov/ardf/show-ardf.php?ardf_num=CV028
2.15	Eyak	Hawkins Island 2	Forest Service Non-Program surface	copper	60.56770, -145.83970	Not Available	Lower	Low	Not Available	10112968	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10112968
2.23	Eyak	Tansey 1	Forest Service Non-Program surface	copper	60.45099, -145.85919	Not Available	Lower	Unknown	Not Available	10185524	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10185524
3.06	Chenega	Pandora	Private	copper, zinc	60.35213, -147.65044	ARDF reports a resource of 85,000 tons: Copper @ 1.09%, Gold @ 0.005 oz/t and Silver @ 0.1oz/t.).	Higher	Moderate	Low	10185669	https://mrdata.usgs.gov/ardf/show-ardf.php?ardf_num=SR258
3.07	Chenega	Monarch	Forest Service Non-Program surface	copper	60.35235, -147.77753	Not Available	Moderate	Unknown	Not Available	10112838	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10112838
3.08	Chenega	Copper Bullion	Private	copper, zinc, iron	60.35096, -147.64973	ARDF reports a resource of 1,325,000 tons: Copper @ 1.25 %, Silver @0.1 oz/t, Gold @0.005 oz/t.	Higher	Low	Moderate	10282616	https://mrdata.usgs.gov/ardf/show-ardf.php?ardf_num=SR269
3.14	Chenega	Knights Island Alaska Copper Co.	Private	copper, zinc, zinc	60.32596, -147.72473	Not available	Moderate	Low	Not Available	10185650	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10185650
3.18	Chenega	Jackpot Bay	Forest Service Non-Program surface	gold, lead, silver	60.32175, -148.26504	Not Available	Lower	Unknown	Not Available	10258429	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10258429

Map ID #	Map Region	Mineral Occurrence	Surface Owner / Manager	Commodities	Location (latitude, longitude)	Reported Minerals*	CAC Mineral Potential	USBM Mineral Potential	Estimated Resource Value	MRDS Deposit #	URL to more information
3.22	Chenega	Unnamed Prospect	Forest Service Non-Program surface	copper	60.21565, -147.76312	Not Available	Lower	Low	Not Available	10258049	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10258049
3.26	Chenega	Beatson	Private	copper, silver	60.04955, -147.90111	ARDF-reports a resource of 3,000,000 tons: Copper @ 1%, Silver @ 1 oz/t, noting that grades are based on low grade resources remaining.	Higher	Moderate	Low	10233974	https://mrdata.usgs.gov/ardf/show-ardf.php?ardf_num=SR306
4.08	English Bay/ Port Graham	Nuka Bay, North Arm	NPS Non-Program surface	gold, silver	59.55979, -150.52283	Not Available	Lower	Unknown	Not Available	10233695	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10233695
4.10	English Bay/ Port Graham	Nuka Bays Mining Company (Nuka Bay Mines Co.)	NPS Non-Program surface	gold, silver	59.55338, -150.62059	Not Available	Moderate	Unknown	Not Available	10000410	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10000410
4.11	English Bay/ Port Graham	Glass & Heifner	Private	copper, gold, lead	59.55228, -150.68534	Resource from AES (2020) = 1,000 tons of gold or assuming a grade of 1 oz per ton	Higher	Unknown	Large	10233657	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10233657
4.15	English Bay/ Port Graham	Goyne (Golden Horn)	NPS	gold, lead, silver	59.51142, -150.4961	CAC (2008) indicates gold resources of 25 tons @ 4.1 oz /ton	Moderate	Unknown	Large	10113085	https://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10113085