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FOLIO OF CHANDALAR QUADRANGLE, ALASKA

MISCELLANEOUS FIELD STUDIES
MAP MF-878-B

JOHN H. DEYOUNG, JR. - MINERAL RESOURCES MAP
SHEET 2 OF 2

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Table 1.--*Mineral deposits and occurrences of the Chandalar quadrangle*

Map No.	Name(s)[1]	Location	Resource(s)[2]	Type of deposit	Development category[3]	Brief description	References[4]
1	(Anderson Creek)	T. 33 N., R. 5 W.	Cu	Vein	O	Malachite and chalcopyrite in quartz veins.	J.R. Graham (oral commun., 1977)
2	Arstine	T. 33 N., R. 5 W.	Au, As	Vein?	P/A	Block of six lode claims staked in 1975.	ADGGS[5]
3	(Bettles River) also (Garnet Creek)	T. 32 N., R. 8 W.	Au	Placer	M	Drift mining on tributaries of Bettles River produced 5 g of gold per meter[3] of bedrock in 1936-37. Mining reported as late as 1940. Placer claims relocated in 1976.	Reed (1938, p. 41-44); ADGGS
4	Bibban	T. 35 N., R. 5 W.	Cu	Vein	P/A	Malachite and chalcopyrite in quartz veins. Claims staked in 1972 and 1976.	ADGGS; J.R. Graham (oral commun., 1977)
5	(Big Creek) also (St. Mary's Creek) (Gulch)	T. 31 N., R. 3 W.	Au, Ag, (Mn)	Placer	M/A	Gold discovered in 1906. Production from Big Creek has been estimated as high as 440,000 g of which one-third was after 1950. Gold, pyrite, hematite, ilmenite, monazite, scheelite, rutile, arsenopyrite, chlorite, galena, and ilmenite are found in concentrates. Most grain size of gold is 1 mm with nuggets 2-3 mm.	Maddren (1913, p. 112-116); Mertie (1923, p. 260-261); Chipp (1970, p. 5, 17, 19); Brosgé and Reiser (1972, p. 3)
6	(Big Jim Creek, trib. Dietrich River)	T. 35 N., R. 11 W.	Cu, Pb	Coating	O	Galena and copper sulfides and(or) malachite-azurite stains on Upper Devonian phyllite.	Brosgé and Reiser (1964)
7	(Big Jim Creek, trib. Twin Lakes)	T. 31 N., R. 7 W.	Au, (Cu)	Placer	M	Small-scale placer mining for gold; some native copper nuggets found.	Reed (1938, p. 49)
8	(Big Joe Creek)	T. 31 N., R. 3 W.	Au	Vein	O	Gold in quartz vein in quartz-mica schist.	Brosgé and Reiser (1972, p. 3)
9	(Big Squaw Creek) also (Squaw Creek)	T. 32 N., R. 3 W.	Au, Ag, (Mn, PM)	Placer	M	Preglacial and postglacial placers contain gold, pyrite, arsenopyrite, stibnite, monazite, ilmenite, scheelite, galena, molybdenite, and zircon. Reports of mining as late as 1929, but no production data available.	Mertie (1923, p. 259-260); Cobb (1973, p. 113-114)
10	Bob	T. 35 N., R. 5 W.	Pb, Zn, Ag	Contact metamorphic	P/A	Galena and sphalerite with silver in skarn associated with limestone. Claims staked in 1972 and 1976.	ADGGS; J.R. Graham, (oral commun., 1977)
11	(Bore Gulch) (Creek) also (Boer Gulch)	T. 31 N., R. 9 W.	Au?	Placer	P	Prospect shafts failed to find any pyritic gold discovery in 1963.	Maddren (1913, p. 107-108); Reed, (1938, p. 32)
12	(Boulder Creek)	T. 28 N., R. 10 W.	Au	Placer	P/A	Claims staked in 1969 and prospected as recently as 1975.	ADGGS
13	(Butte Creek) also (Shawsnuck Creek)	T. 31 N., R. 8 W.	Au	Placer	P	Prospects found in 1937.	Reed (1938, p. 40-41)
14	(California Creek) also (Jim Gulch) (Creek) (Pup), (Wakeup Creek)	T. 31 N., R. 9 W.	Au	Placer	M	From discovery in 1901 through 1909, about 4,500 g of gold were produced from 5.5-m shafts and stream gravels. Gravel containing rough but fine gold of 33-38 g per meter[3] of bedrock reported in 1938. Higher channel had 5 g of gold per meter[3] of bedrock.	Maddren (1913, p. 107-108); Reed, (1938, p. 32)
15	Chandalar Copper	T. 35 N., R. 7 W.	Cu, Au, Ag	?	P/A	Eight lode claims staked in 1968 with reported prospecting as recently as 1973.	ADGGS
16	(Chandalar River, North Fork)	T. 35 N., R. 5 W.	Au, Ag, (Pb)	Vein	O	Vein sample assayed 5 ppm silver and 14 ppm gold. Galena in limestone contains 360 ppm silver and 8.5 ppm gold.	Schrader (1900, p. 485); Brosgé and Reiser (1972, p. 20)
17	Cindy-Pilgrim-Mike-Vicki	T. 34 N., Rs. 6, 7 W.	Cu?	Contact metamorphic	P/A	Four blocks of 1972 claims located near small amounts of copper mineralization associated with tactite occurrences.	ADGGS; Marsh and Wiltse (1978); J.R. Graham (oral commun., 1977)
18	(Crab Creek)	T. 31 N., R. 9 W.	Au	Placer	P/A	Three pieces of gold found during extensive prospecting on Crab Creek before 1938. Claims staked since 1969 on Last Chance Creek and Holy Moses Creek.	Reed (1938, p. 40); ADGGS
19	(Denny's Gulch)	T. 30 N., R. 7 W.	Au	Placer	M	Recent placer mining reported in 1964.	Brosgé and Reiser (1964)
20	(Dictator Creek)	T. 29 N., R. 3 W.	Au	Placer	M	Gold mining reported in 1928 and 1933 somewhere along creek. Two claims staked in 1976 near location shown.	Smith (1930, p. 34); Smith (1934, p. 41); ADGGS
21	(Eighteenie Creek)	T. 32 N., R. 8 W.	Au, Hg	Placer	P	Reports of mining prior to 1938 and of occurrence of placer gold and cinnabar.	Maddren (1913, p. 105); Reed (1938, p. 44); Joesting (1943, p. 18)
22	(Emory Creek)	T. 32 N., R. 9 W.	Au	Placer	M	Production of 15,000 g of gold from 1900-1909.	Maddren (1913, p. 69)
23	Enevelue	T. 32 N., R. 3 W.	Au, (Sb, Cu, Pb, Ag, Zn)	Vein	P	Adit driven 50 m prior to 1913. Tree gold (surface outcrop assayed 328 ppm) with minor galena and scorodite.	Maddren (1913, p. 113-115); Chipp (1970, p. 20)
24	Evelyn Lee	T. 33 N., R. 8 W.	Cu, Ag, (Mo)	Contact metamorphic	P/A	Chalcopyrite, bornite, and pyrite in contact skarns developed in marble close to or in contact with a hornblende granodiorite porphyry. Mineralization in isolated tactite zone about 200 m long by about 10 m wide. Grades of tactite samples as high as 10 percent copper. Have estimated potential about 1 million metric tons of 5 percent copper. Claims staked in 1969 and 1970.	Marsh and Wiltse (1978); ADGGS; R.C. Babcock, Jr. (written commun., 1977)
25	Gayle	T. 35 N., R. 5 W.	Cu, Pb, Ag, Zn	Contact metamorphic	P/A	Copper sulfide minerals and(or) malachite-azurite stains near top of the Skajit Limestone of Silurian and Devonian age. Sphalerite and galena with silver occur in small veinlets and stockworks in altered limestone and marble at Gayle prospect. Claims staked in three blocks in 1972 and 1973.	Brosgé and Reiser (1964); Marsh and Wiltse (1978); ADGGS; J.R. Graham (oral commun., 1977)
26	(Geroe Creek) also MAS claims	T. 33 N., Rs. 5, 6 W.	Mo, Cu	Porphyry molybdenum and copper	P/A	Disseminated molybdenite associated with Geroe Creek pluton. Associated copper sulfide minerals. Claims staked in 1975 and 1976.	ADGGS; J.R. Graham (oral commun., 1977)
27	Ginger	T. 33 N., R. 8 W.	Cu	Contact metamorphic	P/A	Copper sulfide minerals and(or) malachite-azurite stains in thrust fault-bounded block of Silurian and Devonian Skajit Limestone. Isolated tactite outcrops contain less than 0.2 percent copper. Claims staked in 1969 to 1971.	Brosgé and Reiser (1964); ADGGS; R.C. Babcock, Jr. (written commun., 1977)
28	(Gold Creek)	T. 31 N., R. 10 W.	Au	Placer	M/A	Gold discovered in 1900 with sporadic mining through 1974. Production of gold from 1900 through 1909 was about 348,000 g. Angular fragments of stibnite with quartz stringers have been found in stream gravels.	Schrader (1904, p. 102, 105); Maddren (1913, p. 69); Reed (1938, p. 23-26); Cobb (1973, p. 159)
29	(Granite Creek)	T. 25 N., R. 11 W.	Au	Placer	P/A	Five claims staked in 1967; auction dredge work in 1969.	ADGGS
30	(Gus Creek)	T. 32 N., R. 8 W.	Au?	Placer	P	Prospects said to have been found.	Reed (1938, p. 46)
31	(Horse Creek)	T. 30 N., R. 6 W.	Cu	Coating	O	Copper sulfides and(or) malachite-azurite stains in quartz-mica schist.	Brosgé and Reiser, (1964)
32	(Howard Creek)	T. 30 N., R. 11 W.	Cu, Pb, Ni	Contact metamorphic	O	Cherry-size pods of quartz and pyrrhotite with traces of galena and chalcopyrite in chloritic schists. Pyrite veinlets along fractures contain traces of copper.	Brosgé and Reiser (1964); Mulligan (1974, p. 6)
33	Hurricane-Diane-Luna	T. 34 N., R. 7 W.	Cu	Contact metamorphic	P/A	Small amounts of copper mineralization confined entirely to tactite occurrences. Claims staked in the vicinity from 1967 through 1973.	Marsh and Wiltse (1978); ADGGS; R.C. Babcock, Jr. (written commun., 1977)
34	Jim-Montana	T. 35 N., R. 6 W.	Cu, Zn, (Pb)	Contact metamorphic	P/A	Chalcopyrite, sphalerite, and minor galena and malachite stain in skarn. Claims staked in 1972 and 1975.	ADGGS; J.R. Graham (oral commun., 1977)
35	(Kalahbuk Creek)	T. 33 N., R. 10 W.	Au	Placer	P/A	Claims staked in 1976 at convergence of Kalahbuk Creek and Hammond River.	ADGGS
36	Kelty	T. 32 N., R. 3 W.	Au, (Sb, Cu, Pb, Ag, Zn)	Vein	O	Steeply dipping (65° SE) auriferous quartz veins in schistose rocks.	Maddren (1913, p. 113-115)
37	(King Creek)	T. 30 N., R. 8 W.	Au	Placer	P	A shaft, 22 m deep, found a "small" prospect.	Reed (1938, p. 41)
38	(Lake Creek)	T. 31 N., R. 9 W.	Au	Placer	M	Gold discovered in 1915 and mined until recently (1964 report) from present stream channel and old buried channel.	Reed (1938, p. 38-40); Brosgé and Reiser (1964)
39	(Limestone Creek)	T. 32 N., R. 8 W.	Pd, Ag, Ni	?	O	Palladium, silver, and nickel identified from X-ray analysis of material in limestone above the thrust fault overlying quartz-mica schist.	Brosgé and Reiser (1964)
40	(Linda Creek)	T. 31 N., R. 10 W.	Au	Placer	M/A	Gold production of less than 31,000 g from 1901 through 1909. Workings were in a small consequent stream that encountered old lower channel of Gold Creek. Recent sporadic production.	Maddren (1913, p. 69, 102-104); Reed (1938, p. 26-27); Cobb (1973, p. 159-160); Mulligan (1974, p. 5)
41	(Little Gold Creek)	T. 31 N., R. 9 W.	Au	Placer	P	Prospects found in 23-m shaft to bedrock.	Reed (1938, p. 27-28)
42	Little Squaw	T. 32 N., R. 3 W.	Au, (Sb, Cu, Pb, Ag, Zn)	Vein	M	Development work from 1910 to 1933 included about 100 m of underground workings on auriferous quartz veins in schist. Arsenopyrite lenses common. Only 38 to 62 g/t (grams per metric ton) of gold were recovered on small stamp mill brought in 1910. Proven ore estimated at 1800 metric tons averaging 69 g/t gold in 1939. Recent trenching.	Maddren (1913, p. 113-115); Mertie (1925, p. 281-282); Chipp (1970, p. 5, 20)
43	(Little Squaw Creek)	T. 32 N., R. 3 W.	Au, (Mn)	Placer	M	Gold mining and prospecting from about 1905 to 1964. Concentrates from preglacial and postglacial of placer deposits. Concentrates contain gold, pyrite, hematite, arsenopyrite, scheelite, galena, and monazite. Production unknown but significant.	Mertie (1925, p. 254-259); Nelson and others (1954, p. 16, 18); Cobb (1973, p. 113-114)
44	(Magnet Creek)	T. 31 N., R. 10 W.	Au	Placer	M	Creek and bench gravels have been worked along length of about 170 m.	Reed (1938, p. 28); Mulligan (1974, p. 6)
45	(Marion Creek)	T. 29 N., R. 11 W.	Au	Placer	P	Gold found in surface gravels and at bottom of 9-m shaft. About 1,500 g of gold produced from 1901-1909.	Maddren (1913, p. 69, 90); Reed, (1938, p. 90)
46	(Matthews River)	T. 33 N., R. 9 W.	Cu, Pb, Zn, Au, (Ag)	Vein and coating	O	Sulfide mineralization in quartz veins in greenstone and greenschist. Iron stained quartz float. Vein assayed 3.4 ppm gold and trace of silver.	Brosgé and Reiser (1964); Mulligan (1974, p. 5)
47	Mikado-also Carter, Crystal, Eclipse, Englemann Exploration, Golden Sunset, Golden Eagle, Idaho-Alaska Corp., Little Mikado, Over-look, Tonopah	T. 31 N., R. 3 W.	Au, (Sb, Cu, Pb, Ag, Zn)	Vein	M/A	Steeply dipping (80° N.) auriferous quartz veins as much as 2 m thick exposed for over 900 m in schist. Highly faulted, gouged quartz vein structure with minor sulfides and visible gold. Assays of ore shoots range from 68 to 750 ppm gold. First underground workings in 1909 to 1913 included a 60-m shaft and a 140-m crosscut. Over 200 m of workings were added in 1959 to 1960 when the mine was reopened. About 260 m of drifting and crosscutting were done with Office of Minerals Exploration assistance in 1962 and 1963. Estimated reserves in 1968 were 11,000 metric tons of ore averaging 75 g/t (grams per metric ton) gold. Active exploration and small production through present (1976).	Maddren (1913, p. 112-113); Berg and Cobb (1967, p. 206); Chipp (1970, p. 5, 19-21); Brosgé and Reiser, (1972, p. 3, 14-16)
48	Nowgli	T. 35 N., R. 6 W.	Cu, Zn, Ag, (Pb)	Contact meta-morphic	P/A	Chalcopyrite, sphalerite, and minor galena and tennantite in skarn. Claims staked in 1975 and 1976.	ADGGS; J.R. Graham (oral commun., 1977)
49	(Nulu Creek)	T. 32 N., R. 8 W.	Au, Ag	Placer	M	Gold production of about 1,500 g from 1900-1909 with small native silver nuggets and native copper nuggets up to 3.2 kg. Shafts from 23 to 24 m deep sunk in 1937.	Maddren (1913, p. 69, 104-105); Reed (1938, p. 45); Cobb (1973, p. 160)
50	(Myrtle Creek)	T. 28 N., R. 11 W.	Au	Placer	M/A	One of the biggest gold producers in the Koyukuk district with recorded production of 274,000 g from 1900 through 1909 from stream gravels and bench gravels. Deeper gravels mined by hydraulicking and mechanized equipment through 1966?s. Nugget weighing 715 g found in 1940.	Maddren (1913, p. 69, 86-89); Reed (1938, p. 93-100); Smith (1942, p. 47); Cobb (1973, p. 160); Mulligan (1974, p. 6)
51	(Neck Creek)	T. 31 N., R. 11 W.	Au	Placer	P	Good prospects reported in early days (c. 1910).	Reed (1938, p. 58)
52	(North Fork East Fork Chandalar River)	T. 33 N., R. 3 E.	Cu, Zn	Strata-bound?	P/A	Block of 118 lode claims staked in 1976, 93 in Chandalar quadrangle and 25 in Christian quadrangle to the east.	ADGGS
53	(Nugget Creek)	T. 31 N., R. 10 W.	Au	Placer	P	Fair prospects with very little mining.	Reed (1938, p. 30); Mulligan (1974, p. 6)
54	(Nutirwik Creek)	T. 36 N., R. 9 W.	Au	Placer	P/A	Claims staked in 1976.	ADGGS
55	(Phoebe Creek)	T. 32 N., R. 7 W.	Au	Placer	P	Creek flows through schist terrane. Prospects reported but no mining.	Maddren (1913, p. 105); Reed (1938, p. 47-48)
56	(Quartz Creek)	T. 35 N., R. 7 W.	Cu	Vein and coating	O	Small quartz vein cutting chlorite schist contains goethite, malachite, and trace of zinc. Malachite in brecciated zone; possible chalcopyrite in float.	Brosgé and Reiser (1964); Mulligan (1974, p. 5)
57	(Rainbow Gulch) (Creek)	T. 31 N., R. 11 W.	Au	Placer	P	Some gold prospects, but little mining.	Reed (1938, p. 30); Mulligan (1974, p. 6)
58	Riche Camp also (Reds Lake)	T. 35 N., R. 5 W.	?	Placer	P/A	Four placer claims staked in 1973.	ADGGS
59	(Robert Creek) (Sheep Creek)	T. 33 N., R. 7 W.	Au	Placer	P	Gold found in lower parts of tributaries where they have cut through limestone into underlying schist. No record of mining.	Maddren, (1913, p. 105)
60	(Sawlog Creek)	T. 30 N., R. 7 W.	Au	Placer	M/A	Recent placer mining reported in 1964.	Brosgé and Reiser (1964)
61	Shangrala	T. 31 N., R. 5 W.	?	Placer	P/A	Two placer claims staked in 1974 and 1975.	ADGGS
62	(Sheep Creek (Gulch), trib. Koyukuk River, Middle Fork)	T. 31 N., R. 10 W.	Au	Placer	M	Coarse gravel on schist bedrock mined sporadically from early 1900's through 1950's or 60's. Production from 1900 through 1909 was 3,000 g. Grouped mined yielded 65 g of gold per meter[3] of bedrock in 1908 and 10 g of gold per meter[3] of bedrock in 1935-36.	Maddren (1913, p. 69, 99); Reed (1938, p. 28-29)
63	(Sivash Creek)	T. 27 N., R. 8 W.	Cu	Coating	O	Copper sulfides and(or) malachite-azurite stains in cherty part of volcanic rock.	Brosgé and Reiser (1964)
64	(Slate Cr<sup>ek)	T. 28 N., R. 11 W.	Au	Placer	M/A	This gravels on mica schist bedrock. Mining reported sporadically from 1899 through present (1974). Production from 1900 through 1909 was 4,500 g.	Schrader (1900, p. 483-485); Maddren (1913, p. 69, 86-88); Mulligan (1974, p. 6)
65	(Snowden Creek)	T. 34 N., R. 10 W.	Cu, gypsum	Vein	O	Graphite, pyrite, and chalcopyrite in vein quartz float near contact of Devonian limestone and gypsum. Gypsum-calcite zone, 0.15 m thick, contains chalcopyrite and pyrite.	Brosgé and Reiser (1964); Mulligan (1974, p. 5)
66	(Spruce Creek)	T. 32 N., R. 8 W.	Au	Placer	P	Good prospects reported found in early 1900's, but two shafts about 23 m deep were not successful producers.	Reed (1938, p. 46)
67	(Squirrel Creek)	T. 31 N., Rs. 3, 4 W.	Au	Vein?	P/A	Thirty-four lode claims staked in 1973.	ADGGS
68	Star and Summit	T. 31 N., R. 3 W.	Au, Ag, (Sb, Cu, Pb, Zn)	Vein	M	Quartz veins at Summit mine assayed at 90 ppm gold in 1913. Workings included 16-m shaft and 22-m drift on vein about 0.5 m wide. Grab samples assayed 0.3-6.4 ppm gold in 1970 with abundant arsenopyrite and scorodite. Some underground work in late 1950's. Nearby Star prospect has 1.8-m-wide quartz vein assayed at 11 ppm gold and with visible arsenopyrite and scorodite.	Maddren (1913, p. 113-115); Chipp (1970, p. 20); Brosgé and Reiser (1972, p. 15)
69	Steph	T. 35 N., R. 6 W.	Cu, Ag	Vein	P/A	Malachite, azurite, and tennantite in quartz vein. Claims staked in 1973.	ADGGS; J.R. Graham (oral commun., 1977)
70	(Tobin Creek)	T. 31 N., R. 3 W.	Au, (Mn)	Placer	M/A	No data available on gold production that has taken place from early prospecting in 1930 to reported activity in 1969. Concentrates include monazite, hematite, scheelite, gold, pyrite, magnetite, rutile, and galena.	Smith (1933, p. 40); White (1952, p. 111); Chipp (1970, p. 5, 17); Cobb (1973, p. 113)
71	(Trembley Creek)	T. 36 N., R. 10 W.	Au	Placer	P	Two placer claims staked in 1963; no reported activity since.	ADGGS
72	Venus-Victor-Eva	Tps. 32, 33 N., R. 8 W.	Cu, (Mo)	Porphyry copper	P/A	Disseminated chalcopyrite mineralization in granodiorite porphyry that intrudes schistose and schist. Copper grades of 0.1 percent to 0.3 percent over widths up to 30 m in mineralized porphyry outcrops. Intrusion contains estimated 2 to 3 percent pyrite. Boracite and chalcopyrite exposed along cliffs of Mathews River. Claims staked during 1967 and 1970.	Marsh and Wiltse (1978); Babcock, Jr. (written commun., 1977)
73	(West Fork)	T. 27 N., R. 5 W.	Cu	Volcanogenic	O	Copper minerals in volcanic rocks.	Brosgé and Reiser (1964)
74	(Willow Creek)	T. 33 N., R. 6 W.	Au?, (Zn)	Placer	P	Reports of prospects for placer gold in early days (c. 1910). Zinc determined by X-ray analysis along contact of albite-chlorite-mica schist with calcareous schist and marble.	Reed (1938, p. 47); Brosgé and Reiser (1964)
75		T. 28 N., R. 10 W.	Cu	Coating	O	Copper sulfide minerals and(or) malachite-azurite stains in small outlier of pyritic volcanic rocks in graywacke.	Brosgé and Reiser (1964)
76		T. 32 N., R. 11 W.	Cu	Coating	O	Copper sulfide minerals and(or) malachite-azurite stains in Upper Devonian siltstone and grit.	Brosgé and Reiser (1964)
77		T. 35 N., R. 6 W.	Cu	Coating	O	Copper sulfide minerals and(or) malachite-azurite stains near contact between Silurian and Devonian Skajit limestone and black slate, phyllite, and siltstone unit of Devonian age.	Brosgé and Reiser (1964)
78		T. 36 N., R. 5 W.	Cu	Coating	O	Copper sulfide minerals and(or) malachite-azurite stains in Devonian limestone, siltstone unit overlying the Silurian and Devonian Skajit Limestone.	Brosgé and Reiser (1964)
79		T. 27 N., R. 10 W.	Cu, Ni	Coating	O	Copper sulfide minerals and(or) malachite-azurite stains at contact between volcanic rocks and underlying phyllite and slate unit. Nickel identified by X-ray analysis.	Brosgé and Reiser (1964)
80		T. 30 N., R. 3 E.	Au, Ag	Vein	O	High concentration of gold and silver in thin stringers of quartz veln from east-trending quartz vein system north of Tanzik Mountain.	Brosgé and Reiser (1972, p. 20)
81		T. 30 N., R. 4 W.	Au	Vein	O	Gold in quartz vein in quartz-mica schist.	Brosgé and Reiser (1964)
82		T. 34 N., R. 9 W.	Cu?	?	P/A	Claims staked in 1967.	ADGGS
83		T. 33 N., R. 9 W.	Cu?	?	P/A	Claims staked in 1967.	ADGGS
84		T. 35 N., R. 4 W.	Pb, Ag	?	P/A	Claims staked in 1972 in area of galena-bearing veinlets and stockworks.	ADGGS; Marsh and Wiltse (1978)
85		T. 36 N., Rs. 4, 5 W.	Cu	Vein	O	Malachite, pyrite, and pyrrhotite disseminated in small veinlets in limestone at three localities.	J.R. Graham, (oral commun., 1977)
86		T. 33 N., R. 5 W.	Zn	?	O	Sphalerite in boxwork of veinlts found in float.	J.R. Graham, (oral commun., 1977)

[1]Proper names of deposits or names of claims are given where available, but where unnamed deposits are near a named geographic feature, the name of that feature is given in parenthesis.

[2]In addition to standard chemical symbols, the following symbols are used: Mz=monazite; PM=fissionable materials (other than monazite). Parentheses indicate minor constituents or potential byproducts.

[3]Symbols used:
- O - Occurrence, no known exploration or development work
- P - Prospect
  - A - Active prospect, reported exploration or development work since 1967
- M - Mine
  - A - Active mine, reported production since 1967

[4]Most of the references cited here have been compiled in Cobb (1976). An earlier map (Cobb, 1972) provided locations of some of the metallic mineral occurrences. Information has also been gathered during the course of recent investigations by USGS and industry geologists.

[5]ADGGS - On file at the Alaska Department of Natural Resources, Division of Geological and Geophysical Surveys, Fairbanks. The claim locations are plotted in U.S. Bureau of Mines (1973), updated annually. Information available as of May, 1977 is incorporated in this report.

Table 2.--*Material sites along the trans-Alaska oil pipeline in the Chandalar quadrangle*

[Information in this table was supplied in March 1977 by Al Ahson, Alaska Pipeline Office, U.S. Department of the Interior, Anchorage, Alaska]

Map[1] No.	Location	Type of deposit	Type of material	Production[2]
101-2	T. 31 N. R. 9 W.	Alluvial	Interlayered silty sand and gravel	135,403
102-1	T. 31 N. R. 10 W.	High alluvial or glaciofluvial terrace	Silty fine to coarse gravel	400,182
102-2	T. 32 N. R. 10 W.	Alluvial terrace	Interlayered silty sand and gravel	153,489
103-0	T. 32 N. R. 10 W.	Inactive gravel bar	Sandy medium to coarse gravel	283,439
103-1	T. 32 N. R. 10 W.	Alluvial terraces and gravel bars	Sandy fine to coarse gravel intermingled with cobbles	215,190
103-2	T. 32 N. R. 10 W.	Alluvial fan	Clean fine to medium gravel with inter-bedded sand	59,152
104-1	T. 33 N. R. 10 W.	Alluvial outwash	Stream-rounded coarse gravel and cobbles	276,121
104-2	T. 33 N. R. 10 W.	Gravel bars and terraces	Sandy fine to coarse gravel with some silt	216,173
104-3	T. 33 N. R. 10 W.	Terraces and gravel bars	Sandy fine to coarse gravel with some cobbles	250,248
104-4	T. 33 N. R. 10 W.	Active gravel bar	Sandy fine to coarse gravel	52,276
105-1	T. 34 N. R. 10 W.	Alluvial fan	Silty sand and gravel	293,929
105-2	T. 34 N. R. 10 W.	Alluvial fan and terrace	Silty sand and gravel	205,887
105-3	T. 34 N. R. 10 W.	Alluvial fan	Perennially frozen, silty, sandy fine gravel	66,168
106-1	T. 35 N. R. 10 W.	Alluvial fan	Fine to coarse gravel with interbedded sand	223,477
106-1.1	T. 35 N. R. 10 W.	Limestone	Class IV riprap	150,375
106-2	T. 35 N. R. 10 W.	River terrace	Sandy medium gravel	530,932
107-1	T. 35 N. R. 10 W.	Alluvial fan	Silty fine to coarse gravel	122,089
107-2	T. 36 N. R. 10 W.	Active alluvium	Sandy fine to coarse gravel	234,062
107-2.1	T. 36 N. R. 10 W.	Rock ridge	Perennially frozen, silty, residual gravel over slate bedrock	89,506
107-3	T. 36 N. R. 10 W.	Alluvial fan	Sandy gravel	11,124
108-9	T. 36 N. R. 10 W.	Active flood plain	Silty fine to coarse gravel	59,068
108-1	T. 37 N. R. 10 W.	Old alluvial terrace	Silty sand and gravel	56,868

[1]These numbers correspond to those used to identify material sites (MS) by the Alaska Pipeline Office; for example, map number 101-1 is MS 101-1.

[2]Production figures have been converted to cubic meters from data in cubic yards supplied by the Alaska Pipeline Office.

Table 3.--*Deposit type and criteria for selection of favorable mineral resource areas*

Favorable areas	Type(s) of deposit(s) possible and criteria used to define areas[1]
Cm_1(F)	Contact metamorphic copper deposits and(or) porphyry copper deposits
	a. Known skarn or contact metamorphic deposits and prospects (10, 17, 24, 25, 27, 33, 34, and 48)[2].
	b. Favorable rock crops out (Silurian and Devonian Skajit Limestone and calcareous schist and marble with granodiorite porphyry intrusion).
	c. High copper values in stream-sediment samples.
	d. High lead and zinc values in stream-sediment samples from northeastern part.
	e. Sulfides observed in field; more copper sulfides in southwestern part and more lead and zinc sulfides in northeastern part. Secondary copper carbonates observed.
	f. Skarn mineralization (wollastonite, diopside, garnet, and epidote) observed in field.
	g. Southwest extension from Venus claims (72) indicated by favorable rock type.
	h. Buried hornfels margin covered by limestone to southwest indicated by aeromagnetics.
Mvr_1	Massive sulfide base-metal deposits associated with volcanic rocks
	a. Favorable rock type crops out (basalt and andesite flows).
	b. High barium, copper, antimony, and zinc values in stream-sediment samples.
	c. Known occurrences of copper minerals in outlying volcanic rocks (75 and 79).
Mvr_2	Massive sulfide base-metal deposits associated with volcanic rocks
	a. Known occurrences of copper minerals (63 and 73).
	b. Favorable rock type crops out (basalt and andesite flows).
P_1	Porphyry copper deposits
	a. Known deposit (72).
	b. Favorable rock type crops out (granodiorite porphyry).
	c. High copper values in stream-sediment samples.
	d. Abundant sulfides observed in field.
	e. Associated contact metamorphic deposits nearby (24).
P_2(Cm)	Porphyry molybdenum and copper deposits and(or) contact metamorphic copper deposits
	a. Known deposit (26).
	b. Favorable rock type crops out (granite--Geroe Creek pluton).
	c. High molybdenum values in stream-sediment samples, especially in western part.
	d. High copper values in stream-sediment samples, especially in central part.
	e. High molybdenum values in rock samples from altered zone near headwaters of Geroe Creek (up to 700 ppm).
	f. Sulfides observed in field.
	g. Thrust faulting may offset or conceal deposits.
	h. High levels of tellurium and low levels of gold present in rock.
	i. Contact metamorphic mineralization possible along eastern and western edges.
	j. Circular structural feature interpreted from Landsat imagery.
Pl_1	Placer gold deposits
	a. Known deposits along Big Creek (5), Little Squaw Creek (43), Big Squaw Creek (9), Tobin Creek (70), and Dictator Creek (20).
	b. Creeks drain areas of vein-type gold deposits.

Table 3.--*Deposit type and criteria for selection of favorable mineral resource areas*--Continued

Favorable areas	Type(s) of deposit(s) possible and criteria used to define areas[1]
Pl_2	Placer gold deposits
	a. Known deposits along the Middle Fork of the Koyukuk River and its tributaries (28, 40, 41, 44, 51, 53, 57, and 62).
	b. Favorable structural features for vein-type gold deposits interpreted to southeast from Landsat imagery.
Pl_3	Placer gold deposits
	a. Known deposits near Big Lake (11, 13, 14, 18, and 38).
Pl_4	Placer gold deposits
	a. Known deposits along Myrtle Creek (50), Slate Creek (64), and Boulder Creek (12).
Re_1	Rare-earth deposits
	a. High yttrium, lanthanum, barium, and vanadium values in stream-sediment samples.
	b. Geochemical anomalies from heavy-mineral concentrate samples.
	c. Late-stage differentiation of Cretaceous granitic rocks may be source of rare-earth minerals.
	d. Pegmatite observed in small inlier of schist.
Re_2	Rare-earth deposits
	a. High yttrium, lanthanum, and niobium values in stream-sediment samples; also boron values in northern area.
	b. High yttrium, lanthanum, niobium, vanadium, and tin values in heavy-mineral concentrate samples.
	c. Zoned pluton with magnetic border may be interpreted from aeromagnetics in southernmost area.
	d. Pegmatitic rubble observed in porphyritic granite.
St_1	Stratabound base-metal deposits (Kupferschiefer or volcanogenic type)
	a. Favorable rock crops out (black shale and phyllite).
	b. High barium, zinc, vanadium, molybdenum, lanthanum, silver, copper, lead, nickel, and antimony values from stream-sediment samples.
	c. Northeast and southwest extension indicated by continuity of favorable rock types in Philip Smith Mountains quadrangle and Wiseman quadrangle, respectively.
	d. Possibility for base-metal deposits associated with submarine volcanic rocks.
St_2	Stratabound base-metal deposits (volcanogenic type)
	a. Favorable rock crops out (interlayered black shale and limestone with Devonian(?) volcanic rocks).
	b. High copper values and some zinc, nickel, and chromium values in stream-sediment samples.
St_3(F)	Stratabound copper-lead-zinc deposits and(or) porphyry-type base-metal deposits
	a. Known prospect (52).
	b. Favorable rock types crop out (Silurian and Devonian limestone and Devonian shale).
	c. High zinc, molybdenum, boron, and antimony values and some copper values in stream-sediment samples from drainage basin of North Fork East Fork Chandalar River.
	d. Deep pluton may be indicated at east edge of Chandalar quadrangle by aeromagnetics.
	e. Sulfides observed in field.
	f. Possible relation to Devonian volcanic rocks.

Table 3.--*Deposit type and criteria for selection of favorable mineral resource areas*--Continued

Favorable areas	Type(s) of deposit(s) possible and criteria used to define areas[1]
V_1	Vein gold deposits
	a. Known deposits and occurrences (1, 2, 8, 23, 36, 42, 47, 67, 68, and 81).
	b. Favorable rock type crops out (quartz-mica schist).
	c. Favorable geologic structures (high-angle faults, shear zones, and strong joint patterns).
	d. High barium, arsenic, antimony, gold, lead, and zinc values in stream-sediment samples.
	e. Placer gold deposits in streams draining area (see Pl_1).
	f. Visible gold in some quartz veins with arsenopyrite, pyrite, sphalerite, and traces of stibnite, galena, chalcopyrite, and siderite.
	g. Concentric circular and arcuate structural features interpreted from Landsat imagery.
V_2	Vein deposits of base and precious metals
	a. Favorable rock crops out (quartz-mica schist as in area V_1).
	b. High copper, molybdenum, lanthanum, yttrium, titanium, boron, iron, cobalt(?), and lead values in stream-sediment samples.
V_3	Vein copper deposits
	a. Quartz veins observed in field along Trail Creek.
	b. Isolated or local high copper values in stream-sediment samples.
V_4	Vein molybdenum deposits
	a. Quartz veins observed in field along Trail Creek.
	b. Isolated or local high molybdenum values in stream-sediment samples.
V_5	Vein deposits of base and precious metals
	a. Favorable rock type crops out (quartz-mica schist).
	b. Scattered high molybdenum, copper, lead, and zinc values in stream-sediment samples.
	c. Secondary copper minerals observed in field (31).
	d. Placer gold deposits in area (19, 60).
	e. A few high nickel, niobium, antimony, boron, and tin values in stream-sediment samples.
V_6	Vein gold depos