UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

Gold analytical results and gold signatures from the Anchorage, Charley River, Healy, Iditarod, Juneau, Mt. Hayes, Mt. McKinley, Ophir, Ruby, and Talkeetna quadrangles, Alaska

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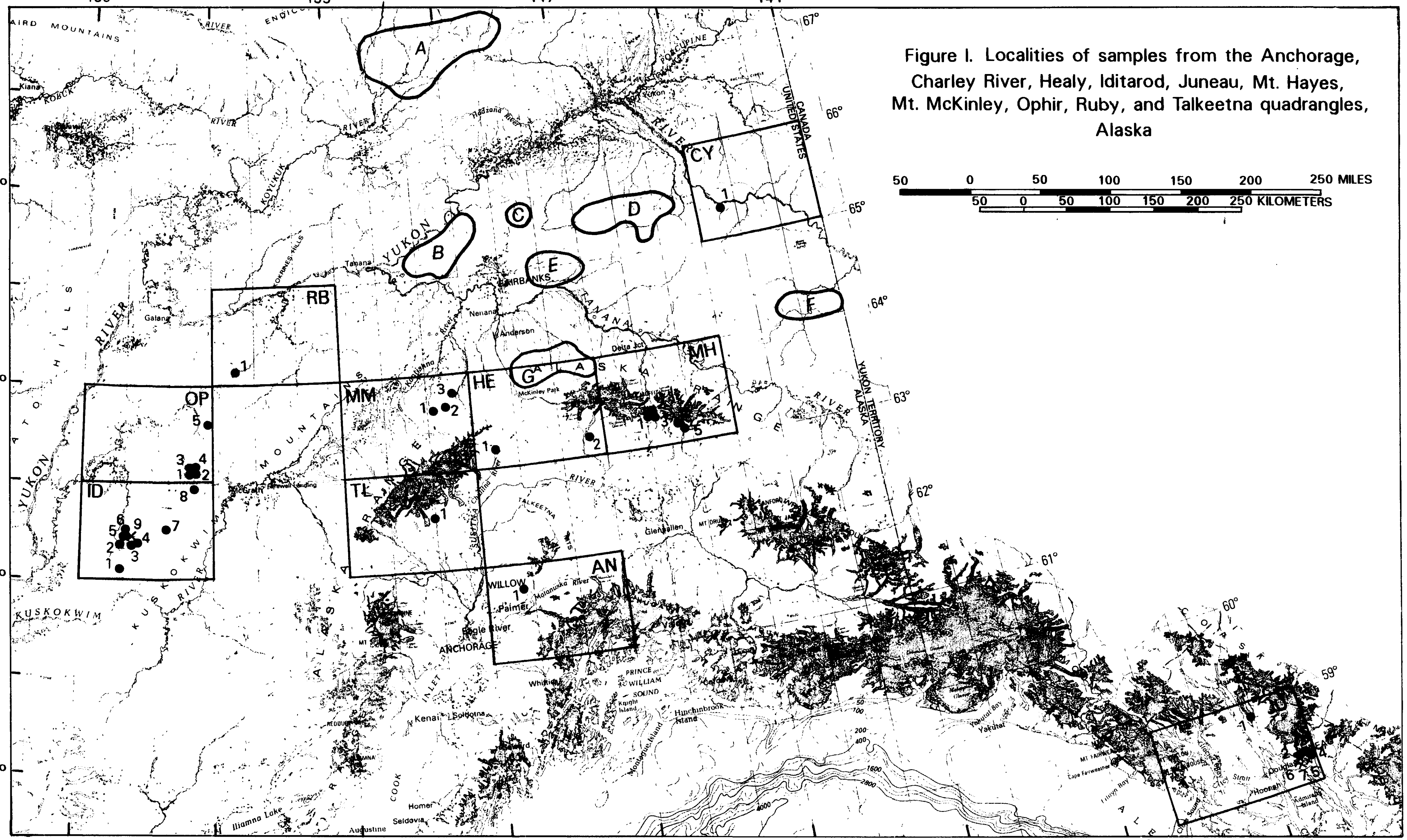


Figure I. Localities of samples from the Anchorage, Charley River, Healy, Iditarod, Juneau, Mt. Hayes, Mt. McKinley, Ophir, Ruby, and Talkeetna quadrangles, Alaska

INTRODUCTION

Geochemical studies of Alaskan gold deposits were begun in 1984 as a joint study by the U.S. Geological Survey and the State of Alaska Division of Geological and Geophysical Surveys. The objectives of the study are (1) to characterize the deposits, (2) to determine relationships of gold in placer deposits to possible lode sources, (3) to identify possible sources of gold in placer deposits, (4) to study processes of placer formation, (5) to contribute to existing knowledge of the principles of prospecting for placer deposits, and (6) to determine if minerals associated with placer deposits might suggest economic deposits of other metals. The purpose of this report is to release both the analytical data and gold signatures for placer and lode gold samples collected from placer and lode gold deposits from Anchorage, Charley River, Healy, Iditarod, Juneau, Mt. Hayes, Mt. McKinley, Ophir, Ruby, and Talkeetna quadrangles, in Alaska. Gold signatures comprise the alloy proportions and ratios of gold, silver, and copper, and the content of trace elements (Antweiler and Campbell, 1976).

SAMPLING AND ANALYTICAL PROCEDURE

Placer and lode gold samples were obtained from active claims in the Anchorage, Charley River, Healy, Iditarod, Juneau, Mt. Hayes, Mt. McKinley, Opher, Ruby, and Talkeetna quadrangles, Alaska. For some localities, miners provided us with sufficient amounts of sample for analysis whereas for other localities the samples were collected by the USGS. To determine whether differences in composition could be correlated with physical attributes, some samples were sorted based on physical appearances. Some were sieved into two or more size ranges; others were separated by color; and some were separated on the basis of other physical characteristics, e.g., rounded, angular, blocky, delicate, etc. Descriptive information, when available, is included in table 1. If no descriptive information is provided, the samples were generally small, and no sorting of individual grains was attempted prior to analysis.

A total of 182 emission spectrographic analyses using a technique described by Mosier (1975) were made on samples from 35 mines and prospects. These are the numbered sites on the sample locality map (fig. 1) and correspond to the locality index (table 1). The elements analyzed and their lower limits of determination are listed on table 2. Spectrographic results were obtained by visual comparison of spectra derived from the sample against spectra obtained from standards made from pure oxides, graphite, and 99.999 percent pure metallic gold. Pure Al_2O_3 was added to the standards and samples as a co-distillation agent. Standard concentrations are geometrically spaced over any given order of magnitude of concentration as follows: 100, 50, 20, 10, and so forth. Samples whose concentrations are estimated to fall between those values are assigned values of 70, 30, 15, and so forth. Standard concentrations are based on a 5-mg gold sample weight. Because of the particulate nature of native gold, it often was impossible to weigh exact 5-mg portions for analysis, and in many instances there was less than 5-mg of gold available for analysis. Therefore, the reported concentration values (table 2) are corrected to reflect a 5-mg sample weight by the following formula:

EXPLANATION

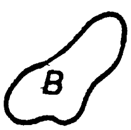
1° x 3° quadrangle covered in this report showing quadrangle code, placer and lode locality

Quadrangle code	Mining district 1° x 3° quadrangle	No. of localities	No of analysis
AN	Anchorage	1	15
CY	Charley River	1	3
HE	Healy	2	3
ID	Iditarod	9	74
JU	Juneau	7	24
MH	Mt. Hayes	5	12
MM	Mt. McKinely	3	16
OP	Ophir	5	25
RB	Ruby	1	5
TL	Talkeetna	1	5
		35	182

.1--Locality where placer gold/platinum sample collected
x3--Locality where lode gold sample collected

Locality Index

Quadrangle Code	Locality	Quadrangle Code	Locality
AN..............	1. Willow Creek	MH...........	1. Broxson Gulch
CY..............	1. Coal Creek		2. North Fork Rainy Creek
HE..............	1. Bryn Mawr Creek		3. Rainy Creek
	2. Valdez Creek		4. Tertiary Gravel, above Miller Gulch
ID..............	1. Snow Gulch		5. Quartz-Slate Creek area
	2. Happy Creek	MM...........	1. Glacier Creek at 22 Gulch
	3. Idaho Mine		2. Yellow Pup Creek
	4. Prince Creek		3. Stampede Creek
	5. Black Creek	OP...........	1. Ophir Creek
	6. Otter Creek		2. Spruce Creek, I
	7. Granite Creek		3. Spruce Creek, II
	8. Ganeo Creek		4. Anvil Creek
	9. Golden Horn Mine		5. Colorado Creek
JU..............	1. Johnson Creek	RB...........	1. Solomon Creek
	2. Gold Creek, I	TL...........	1. Nugget Creek, Morgans upper bench
	3. Gold Creek, II		
	4. Gold Creek, III		
	5. A-J Glory Hole		
	6. Treadwell Glory Hole		
	7. Treadwell Mill		



Mining district where analytical results, geochemical signatures, mineralogical data, and sample locality maps of the lode gold, placer gold, placer platinum, placer silver, and heavy-mineral concentrates are identified by U.S. Geological Survey Open-File Reports.

	Open-File Report number	Mining district	No of localities	No of samples analysed
A....	86-345	Koyukuk-Chandalar	52	481
B....	88-443	Manley, Tofty, Eureka, Rampart	45	405
C....	87-330	Tolovana	6	59
	88-578	Tolovana	22	253
D....	88-676	Circle	51	476
E....	89-490	Fairbanks	54	333
F....	89-451	Fortymile	31	250
G....	89-461	Bonnifield	27	197
			288	2,454

$$\text{reported concentration value} = \text{determined value} \times \frac{5\ \text{mg}}{\text{sample weight in mg}} .$$

As a result, some values reported in table 3 are smaller than the normal lower limit of determination (table 2) if the sample weight was >5 mg.

The trace-element content of natural gold varies greatly from grain to grain as well as from deposit to deposit and this creates a problem in determining the precision and accuracy of the analysis. Studies using artificial standards show that the precision of the analytical method exceeds by at least a factor of ten the natural variance of trace elements in native gold (Mosier, 1975). Accuracy is much more difficult to detemine than precision because the analytical recovery of targe elements varies with sample matrices. Standards prepared with known amounts of copper and silver show the method to be accurate within a factor of two for determination of those elements (Mosier, 1975) over concentration ranges relative to this study.

RELIABILITY OF GOLD ANALYSES

Differences in the composition of native gold from different geological settings can be readily distinguished using the analytical procedures if enough analyses are made to ascertain the magnitude of natural variations in gold samples from a given geological setting (Mosier, 1975). In this study, five or more spectrographic analyses of sample from a single sample site were required to obtain a reliable signature. However, in the context of many other analyses from this district, a single analysis is still of value.

The composition of native gold varies considerably (for example, see Gay, 1963; Jones and Fleischer, 1969). Variations in composition are present even from point to point within the same grain (Desborough, 1970). Native gold in oxidized zones and in associated placers generally contains lesser amounts of silver and other elements compared with the native gold in the corresponding primary deposits; within some deposits, single particles of native gold are relatively homogeneous, but in other deposits single particles of native gold are heterogeneous (Boyle, 1979). Even when single gold grains are known to be heterogeneous, gold compositional data are useful in characterizing conditions of ore deposition and are often distinctive for mines, districts, or regions. Moreover, they are useful in determining the relationships of gold in placer deposits to possible lode sources, and in meeting the other objectives stated in the introductory section of this report.

The natural variability of composition for Ag and Cu in gold from a single locality was determined by repeatedly analyzing portions of individual nuggets (Mosier, 1975; Antweiler and Campbell, 1987). The silver content of portions of one such nugget ranged from 4.7 to 8.1 percent in four analyses with a mean silver content of 5.7 percent and the copper content of this nugget ranged from .048 to .08 percent with a mean copper content of .062 percent. Replicate analyses of portions of another nugget from the same locality showed silver content ranging from 18.9 to 19.8 percent, a mean silver content of 19.3 percent and copper content ranging from .038 to .055 percent, a mean of .047 percent. These results indicate considerable natural variability. Another nugget from the same locality was washed with hydrofluoric acid to remove surface coatings, then heated to 1300°C for 30 minutes to homogenize silver and copper content. Replicate analyses of ten 5-mg portions of that nugget showed excellent precision: 10 percent silver and 0.05 percent copper. Without acid washing and heat treating, analyses of ten 5-mg portions of a similar untreated nugget showed ranges in silver content from 1.5 to 15 percent and copper content ranges from .015 to .05 percent (Mosier, 1975). The concentration of other elements in nuggets from the locality ranged somewhat more widely than copper and silver, even after the homogenization treatment. Significantly, however, the mean values for most elements, including copper and silver from 10 analyses of the natural sample, were almost the same as the mean values for those elements on the homogenized sample, except for elements removed by the acid and heat treatment.

One test for reliability of the method is comparison of fineness on samples from localities where large lots of gold have been analyzed for the U.S. Mint or banks or by commercial refiners. Compilations of Alaska gold fineness data have been made by Smith (1941), Metz and Hawkens (1981), and in unpublished data on file in the Fairbanks office of the First National Bank. These compilations show excellent agreement for some areas with each other and poor agreement in other areas. The U.S. Geological Survey data, although acquired by analyses of relatively small number of samples appear to be as accurate as the data from those sources and are, therefore, reliable to the extent permitted by natural variation of gold composition.

DESCRIPTION OF DATA TABLES

The analytical results for lode and placer gold (table 3) are given in weight percent and are presented by site numbers and gold type which are keyed to table 1. The USGS-assigned sample number is given under "Sample." When sufficient gold was available from a particular site, multiple analyses were made and the results are listed. For this study, fineness is defined as:

$$\text{fineness} = \frac{\text{Au wt\%}}{\text{Au wt\%} + \text{Ag wt\%}} \times 1{,}000.$$

The gold value was determined by difference, that is:

$$\text{Au\%} = 100-(\text{Ag\%} + \text{X\%}),$$

where X% is the sum of elements other than gold and silver. If an element was not detected at the lower limit of detection, "--" was entered. The actual weight in milligrams of the gold sample analyzed is given under "smpl. wt." The values under r = Au/Ag, Au/Cu, Ag/Cu, and r/Cu are alloy ratios that are part of the gold signature (Antweiler and Campbell, 1976). Because the corrected values shown in table 3 are computer-generated data, these results often carry more digits than are significant. The analysts did not determine these values to the accuracy suggested by the extra numbers.

OTHER PUBLICATIONS

Other U.S. Geological Survey publications showing principally analytical results, geochemical signatures, mineralogical data, and sample locality maps of placer/lode gold and heavy-mineral concentrates from other gold mining districts in Alaska are:

1. Mosier, E.L., and Lewis, J.S., 1986, Analytical results, geochemical signatures, and sample locality map of lode gold, placer gold, and heavy-mineral concentrates from the Koyukuk-Chandalar mining district, Alaska: U.S. Geological Survey Open-File Report 86-345, 172 p., 1 pl.
2. Cathrall, J.B., Antweiler, J.C., and Mosier, E.L., 1987, Occurrence of platinum in gold samples from the Tolovana and Rampart mining districts, Livengood quadrangle, Alaska: U.S. Geological Survey Open-File Report 87-330, 12 pages, 1 pl.
3. McDanal, S.K., Cathrall, J.B., Mosier, E.L., Antweiler, J.C., and Tripp, R.B., 1988, Analytical results, geochemical signatures, mineralogical data, and sample locality map of placer gold and heavy-mineral concentrates from the Manley Hot Springs, Tofty, Eureka, and Rampart mining districts, Tanana and Livengood quadrangles, Alaska: U.S. Geological Survey Open-File Report 88-443, 54 p.
4. Cathrall, J.B., McDanal, S.K., VanTrump, G., Mosier, E.L., and Tripp, R.B., 1988, Analytical results, geochemical signatures, mineralogical data, and sample locality map of lode gold, placer gold, and heavy-mineral concentrates from the Tolovana mining district, Livengood quadrangle, Alaska: U.S. Geological Survey Open-File Report 88-578, 32 p.
5. Cathrall, J.B., Tripp, R.B., McDanal, S.K., Mosier, E.L., and VanTrump, G., 1988, Analytical results, geochemical signatures, mineralogical data, and sample locality map of placer gold and heavy-mineral concentrates from the Circle mining district, Circle quadrangle, Alaska: U.S. Geological Survey Open-File Report 88-676, 48 p., 1 pl.
6. Mosier, E.L., Cathrall, J.B., Antweiler, J.C., and Tripp, R.B., 1989, Geochemistry of placer gold, Koyukuk-Chandalar mining district, Alaska: Journal of Geochemical Exploration, v. 31, p. 97-115.
7. Cathrall, J.B., Albanese, M., VanTrump, G., Mosier, E.L., and Lueck, L., 1989, Geochemical signatures, analytical results, mineralogical data, and sample locality map of placer and lode gold, and heavy-mineral concentrates from the Fortymile mining district, Eagle quadrangle, Alaska: U.S. Geological Survey Open-File Report 89-451, 32 p.
8. Cathrall, J.B., Antweiler, J.C., VanTrump, G., and Mosier, E.L., 1989, Gold, platinum, and silver analytical results and gold signature from the Bonnifield mining district, Fairbanks and Healy quadrangle, Alaska: U.S. Geological Survey Open-File Report 89-461, 23 p.
9. Cathrall, J.B., Antweiler, J.C., VanTrump, G., and Mosier, E.L., 1989, Gold analytical results and gold signatures from the Fairbanks mining district, Fairbanks and Livengood quadrangles, Alaska: U.S. Geological Survey Open-File Report 89-490, 32 p.

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Antweiler, J.C., and Campbell, W.L., 1987, Implications of the Compositions of lode and placer gold, in Theodore, T.G., Blair, W.N., and Nash, J.T., Geology and Gold Mineralization of the Gold Basin-Lost Basin Mining Districts, Mohave County, Arizona: U.S. Geological Survey Professional Paper 1361, p. 100-109.

Boyle, R.W., 1979, The geology of gold and its deposits: Geological Survey of Canada Bulletin 280, 584 p.

Desborough, G.A., 1970, Silver depletion indicated by microanalyses of gold from placer occurrences, Western United States: Economic Geology, v. 65, no. 3, p. 304-311.

Gay, N.C., 1963, A review of geochemical characteristics of gold in ore deposits: University of Witwatersrand, Economical Geological Research Unit Information Circular 12, 70 p.

Jones, R.S., and Fleischer, Michael, 1969, Gold in minerals and the composition of native gold: U.S. Geological Survey Circular 612, 17 p.

Metz, Paul A., and Hawkins, D.B., 1981, A summary of gold fineness values for Alaska Placer deposits: School of Mineral Industry, University of Alaska, Fairbanks, Alaska 99701, MIRL Report 45.

Mosier, E.L., 1975, Use of emission spectroscopy for the semiquantitative analysis of trace elements and silver in native gold, in Ward, F.N., ed., New and refined methods of trace analysis useful in geochemical exploration: U.S. Geological Survey Bulletin 1408, p. 97-105.

Smith, P.S., 1941, Fineness of gold from Alaska placers: U.S. Geological Survey Bulletin 910-C, p. 147-272.

TABLE 1.--Index for quadrangle, site, type of sample, locality name, and sample description for lode gold and placer gold from the Anchorage, Charley River, Healy, Iditarod, Juneau, Mt. Hayes, Mt. McKinley, Ophir, Ruby, and Talkeetna quadrangles, Alaska

Quadrangle name	Site type	Locality name	Sample description
Anchorage			
	1.01	Willow Creek	Unsorted gold.
	1.02	--Do--------	Delicate podiform white tipped grains of gold.
	1.03	--Do--------	Plus 20-mesh gold; delicate intricate grains.
	1.04	--Do--------	Minus 60-, plus 100-mesh gold.
	1.05	--Do--------	Minus 100-mesh gold.
Charley River			
	1.01	Coal Creek	Unsorted gold.
Healy			
	1.01	Bryn Mawr Creek	Unsorted gold.
	2.01	Valdez Creek	Unsorted gold.
Iditarod			
	1.01	Snow Gulch	Minus 20-, plus 60-mesh gold.
	1.02	--Do------	Minus 60-, plus 100-mesh gold.
	1.03	--Do------	Minus 100-mesh gold.
	1.04	--Do------	Minus 20-, plus 60-mesh gold; very thin flat flakes.
	1.05	--Do------	Minus 20-, plus 60-mesh gold; nuggety blocky grains.
	2.01	Happy Creek	Plus 20-mesh gold.
	2.02	--Do-------	Minus 20-, plus 60-mesh gold.
	2.03	--Do-------	Crystalline aggregate gold.
	2.04	--Do-------	Crystalline grains.
	3.01	Idaho Mine	Plus 20-mesh gold; angular, shiny.
	3.02	--Do------	Minus 20-, plus 60-mesh gold.
	4.01	Prince Creek	Plus 20-mesh gold; flat thin flakes.
	4.02	--Do--------	Minus 20-, plus 60-mesh gold.
	4.03	--Do--------	Plus 20-mesh gold; gray stains, tiny accretions of gold on surface.
	4.04	--Do--------	Minus 20-, plus 60-mesh gold; white to silver amalgam?
	4.05	--Do--------	Minus 20-, plus 60-mesh gold; copper colored grains.
	5.01	Black Creek	Unsorted gold.
	6.01	Otter Creek	Flat grains of gold.
	6.02	--Do-------	Minus 20-mesh gold.
	7.01	Granite Creek	Plus 20-mesh gold.
	7.02	--Do---------	Minus 20-, plus 60-mesh gold.
	7.03	--Do---------	Blocky, somewhat crystalline gold.
	7.04	--Do---------	Flattened wires of gold.
	8.01	Ganes Creek	Whitish gold; amalgam?
	9.01	Golden Horn Lode stockpile	Minus 20-, plus 60-mesh gold.
	9.02	--Do------------	Minus 60-, plus 100-mesh gold.
	9.03	--Do------------	Minus 100-, plus 160-mesh gold.
	9.04	--Do------------	Minus 160-mesh gold.

TABLE 1.--continued.

Quadrangle name	Site type	Locality name	Sample description
Juneau			
	1.01	Johnson Creek	Unsorted gold.
	2.01	Gold Creek, I	Unsorted gold.
	3.01	Gold Creek, II, right fork	Unsorted gold.
	4.01	Gold Creek, III	Unsorted gold.
	5.01	A-J Glory Hole	Minus 35-, plus 100-mesh gold.
	5.02	--Do----------	Plus 35-mesh gold.
	5.03	--Do----------	Unsorted gold.
	6.01	Treadwell Glory Hole	Unsorted gold.
	7.01	Treadwell Mill	Unsorted gold.
Mt. Hayes			
	1.01	Broxson Gulch	Unsorted gold.
	2.01	North Fork Rainy Creek	Unsorted gold.
	3.01	Rainy Creek	Plus 35-mesh gold; nuggets.
	3.02	--Do-------	Flat grains of gold.
	3.03	--Do-------	Grains of platinum.
	4.01	Tertiary gravel, above Miller Gulch	Unsorted gold.
	5.01	Quartz-slate Creek area	Unsorted gold.
Mt. McKinley			
	1.01	Glacier Creek at 22 Gulch, at cabin	Plus 35-mesh gold; dirty gold.
	1.02	--Do----------	Unsorted gold.
	1.03	--Do----------	Unsorted gold; somewhat dirty.
	1.04	--Do----------	Plus 35-mesh gold.
	2.01	Yellow Pup Creek	Gold crystals.
	3.01	Stampede Creek, below Stampede Mine	Unsorted gold.
Ophir			
	1.01	Ophir Creek	Minus 20-mesh gold.
	1.02	--Do-------	Plus 20-mesh gold.
	1.03	--Do-------	Minus 100-mesh gold.
	2.01	Spruce Creek, I	Unsorted gold.
	3.01	Spruce Creek, II	Unsorted gold.
	4.01	Anvil Creek	Unsorted gold.
	5.01	Colorado Creek	Unsorted gold.
Ruby			
	1.01	Solomon Creek	Unsorted gold.
Talkeetna			
	1.01	Nugget Creek, Morgans upper bench cut	Flattened grains of gold.

TABLE 2.--Lower limits of determination for the spectrographic analyses of gold based on a 5-mg sample

Elements	Lower determination limit
	Percent
Silver (Ag)	0.001
Copper (Cu)	.0005
Zinc (Zn)	.005
Gallium (Ga)	.0002
Lead (Pb)	.0002
Arsenic (As)	.005
Antimony (Sb)	.002
Cadmium (Cd)	.0002
Bismuth (Bi)	.0002
Indium (In)	.0005
Mercury (Hg)	.002
Tellurium (Te)	.005
Nickel (Ni)	.0005
Cobalt (Co)	.0005
Tin (Sn)	.0005
Molybdenum (Mo)	.0005
Germanium (Ge)	.0005
Platinum (Pt)	.001
Palladium (Pd)	.0002
Barium (Ba)	.0005
Strontium (Sr)	.01
Zirconium (Zr)	.0005
Vanadium (V)	.001
Chromium (Cr)	.001
Yttrium (Y)	.0005
Lanthanum (La)	.002
Scandium (Sc)	.0005
Niobium (Nb)	.001
Boron (B)	.0005
Tantalum (Ta)	.005
Beryllium (Be)	.0001
Tungsten (W)	.005
Manganese (Mn)	.0001
Iron (Fe)	.001
Magnesium (Mg)	.0005
Calcium (Ca)	.001
Titanium (Ti)	.001
Silicon (Si)	.0002

TABLE 3.--Analytical results for lode gold, placer gold, and gold signatures from the Anchorage, Charley River, Healy, Iditarod, Juneau, Mt. Hayes, Mt. McKinley, Ophir, Ruby, and Talkeetna quadrangles, Alaska

[Fine = fineness, where fineness = $\frac{Au\%}{Au\% + Ag\%}$ x 1,000; X = sum of elements other than gold and silver; Au% = 100% - (Ag% + x%): smpl. wt = sample weight in milligrams; all element and X values are given in percent; Ga, Ge, In, Sc, and Ta analyzed, but not detected; -- = not detected; analyst: E.L. Mosier. See table 1 for locality name and sample description which corresponds with site locality and analysis. N, not detected; <, detected but below the limit of determination shown; >, determined to be greater than the value shown.]

Sample	LATITUDE	LONGTUDE	SITE	AU %	FINE	AG %	SUM X %	CU %	ZN %	PB %	AS %	SB %	CD %	MO %	BI %
							Anchorage Quadrangle								
3236A	61 45 33	149 26 38	1.01	87.9	893	10.5	1.5857	.0211	--	.0105	.0053	.0021	--	--	.0032
3236B	61 45 33	149 26 38	1.01	88.1	898	10.0	1.8897	.0300	--	.0500	.0100	.0018	--	--	.0050
3236C	61 45 33	149 26 38	1.01	83.1	847	15.0	1.9242	.0150	--	.0200	.0070	.0018	--	--	.0005
3236VA	61 45 33	149 26 38	1.02	87.5	896	10.2	2.2842	.0510	--	.0714	.0204	--	--	--	.0153
3236VB	61 45 33	149 26 38	1.02	82.9	844	15.3	1.8398	.0204	--	.0204	.0102	--	--	--	.0015
3236VC	61 45 33	149 26 38	1.02	83.0	853	14.3	2.7235	.0067	--	.0190	.0048	.0019	--	--	.0002
3236XA	61 45 33	149 26 38	1.03	82.7	838	16.0	1.3361	.0074	--	.1064	.0106	.0021	--	--	.0007
3236XB	61 45 33	149 26 38	1.03	80.3	827	16.8	2.8745	.0168	--	.0840	.0084	--	--	--	.0126
3236XC	61 45 33	149 26 38	1.03	84.2	856	14.2	1.6330	.0094	--	.0283	.0066	.0047	--	--	.0014
3236RA	61 45 33	149 26 38	1.04	88.1	891	10.8	1.1534	.0538	--	.0323	.0043	--	--	--	.0011
3236RB	61 45 33	149 26 38	1.04	84.9	861	13.8	1.3312	.0459	--	.0459	.0092	--	--	--	.0064
3236RC	61 45 33	149 26 38	1.04	89.2	902	9.7	1.1238	.0485	--	.0971	.0039	--	--	--	.0049
3236SA	61 45 33	149 26 38	1.05	90.4	929	6.9	2.7745	.0490	--	.1961	--	--	--	--	.0069
3236SB	61 45 33	149 26 38	1.05	89.2	915	8.3	2.4592	.0500	--	.0333	--	--	--	--	.0025
3236SC	61 45 33	149 26 38	1.05	86.1	896	10.0	3.8632	.2143	--	1.0000	--	--	--	--	.0143
							Charley River Quadrangle								
YD5680A	65 16 46	143 13 24	1.01	83.8	848	15.0	1.1998	.0200	--	.0003	--	.0100	--	--	--
YD5680B	65 16 46	143 13 24	1.01	90.5	910	9.0	.5171	.0270	--	.0090	--	.0090	--	--	.0009
YD5680C	65 16 46	143 13 24	1.01	86.5	869	13.0	.5407	.0380	.0130	.0250	--	.0025	--	--	.0004
							Healey Quadrange								
3184A	63 13 25	149 38 1	1.01	76.5	831	16.0	5.5474	.0532	--	.2128	1.0638	.0532	--	--	1.0638
3184B	63 13 25	149 38 1	1.01	72.9	840	13.9	13.1826	.0972	--	1.3889	2.7778	.0972	--	--	.0139
YD5980A	63 10 41	147 27 13	2.01	91.2	923	7.6	1.1646	.0220	--	.0005	--	--	--	--	--
							Iditarod Quadrangle								
3305XA	62 4 36	158 11 45	1.01	91.2	928	7.1	1.7016	.0203	--	.0152	.0051	.0030	--	--	.0020
3305XB	62 4 36	158 11 45	1.01	91.0	931	6.8	2.2353	.0145	--	.0194	.0039	.0019	--	--	.0005
3305XC	62 4 36	158 11 45	1.01	87.2	892	10.5	2.2473	.0211	--	.0211	.0105	.0211	--	--	.0021
3305YA	62 4 36	158 11 45	1.02	87.9	903	9.5	2.6473	.0285	--	.0285	.0095	.0142	--	--	.0028
3305YB	62 4 36	158 11 45	1.02	85.3	885	11.1	3.5853	.0556	--	.0333	.0222	.0111	--	--	.0022
3305Z	62 4 36	158 11 45	1.03	83.6	879	11.5	4.9454	.0172	--	.0172	--	--	--	--	--
3305K	62 4 36	158 11 45	1.04	88.5	904	9.4	2.0781	.0219	--	.0938	.0156	.0062	--	--	.0016
3305LA	62 4 36	158 11 45	1.05	88.7	904	9.4	1.8855	.0066	--	.0188	.0047	.0019	--	--	.0002
3305LB	62 4 36	158 11 45	1.05	83.7	856	14.1	2.2353	.0066	--	.0014	.0038	--	--	--	.0005
3305LC	62 4 36	158 11 45	1.05	88.9	904	9.4	1.6480	.0094	--	.0094	--	.0019	--	--	.0003
3306XA	62 22 52	158 1 33	2.01	89.5	905	9.4	1.1119	.0471	--	.0094	--	.0188	--	--	.0002
3306XB	62 22 52	158 1 33	2.01	87.9	886	11.3	.7796	.0340	--	.0340	--	.0057	--	--	.0079
3306XC	62 22 52	158 1 33	2.01	90.6	911	8.8	.5424	.1767	--	.0004	--	.0883	.0004	--	.0004
3306YA	62 22 52	158 1 33	2.02	84.6	849	15.0	.3552	.0300	--	.0200	--	.0200	--	--	.0030
3306YB	62 22 52	158 1 33	2.02	92.8	932	6.8	.3487	.0487	--	.0010	--	.0017	--	--	.0003
3306YC	62 22 52	158 1 33	2.02	89.5	905	9.4	1.0815	.0660	--	.0283	--	.0283	.0002	--	.0943
3306KA	62 22 52	158 1 33	2.03	82.4	881	11.1	6.5583	.0333	--	.0017	--	.0019	--	--	.0011
3306KB	62 22 52	158 1 33	2.03	84.1	894	10.0	5.9068	.0200	--	.0020	.0050	.0018	--	--	.0010
3306LA	62 22 52	158 1 33	2.04	90.4	909	9.1	.5426	.0634	--	.0018	--	.0045	--	--	.0014
3306LB	62 22 52	158 1 33	2.04	91.2	915	8.4	.3776	.0602	--	.0036	--	.0036	--	--	.0002

Alaska Gold Data--Continued

Sample	SITE	TE %	W %	NI %	CO %	SN %	PT %	PD %	BA %	SP %	ZR %	V %	CR %	Y %	LA %	NB %
						Anchorage Quadrangle--Continued										
3236A	1.01	--	--	--	--	--	--	--	.0004	--	--	--	--	--	--	--
3236B	1.01	--	--	.0030	--	--	--	--	.0030	--	--	--	--	--	--	--
3236C	1.01	--	--	.0005	--	--	--	--	.0004	--	--	--	--	--	--	--
3236VA	1.02	--	--	--	--	--	--	--	.0020	--	--	--	--	--	--	--
3236VB	1.02	--	--	.0031	--	--	--	--	.0020	--	--	--	--	--	--	--
3236VC	1.02	--	--	--	--	--	--	--	.0005	--	--	--	--	--	--	--
3236XA	1.03	--	--	--	--	--	--	--	.0007	--	--	--	--	--	--	--
3236XB	1.03	--	--	.0017	--	--	--	--	.0042	--	--	--	.0008	--	--	--
3236XC	1.03	--	--	.0014	--	--	--	--	.0005	--	--	--	--	--	--	--
3236RA	1.04	--	--	--	--	--	--	--	.0008	--	--	--	--	--	--	--
3236RB	1.04	--	--	.0009	--	--	--	--	.0009	--	--	--	--	--	--	--
3236RC	1.04	--	--	.0010	--	--	--	--	.0010	--	--	--	--	--	--	--
3236SA	1.05	--	--	.0010	--	--	--	--	.1961	--	.0490	.0015	--	.0005	--	--
3236SB	1.05	--	--	.0017	--	--	--	--	.0333	--	.0167	.0025	.0025	--	--	--
3236SC	1.05	--	--	.0014	--	--	--	--	.0007	--	.1000	.0029	--	.0010	--	--
						Charley River Quadrangle--Continued										
YD5680A	1.01	--	--	.0020	--	--	--	--	.0015	--	--	--	--	--	--	--
YD5680B	1.01	--	--	.0009	--	--	--	--	.0009	--	.0009	--	--	--	--	--
YD5680C	1.01	--	--	--	--	--	--	--	.0004	--	--	--	--	--	--	--
						Healey Quadrange--Continued										
3184A	1.01	.0532	--	.0160	.0106	.0005	--	--	.0532	--	.0532	.0032	--	.0011	--	--
3184B	1.01	--	--	.0972	.0694	.2778	--	--	.2083	--	.0972	.0139	.0694	.0021	.0278	--
YD5980A	2.01	--	--	--	--	--	--	.0033	.0016	--	--	--	--	--	--	--
						Iditarod Quadrangle--Continued										
3305XA	1.01	--	--	.0010	--	.0015	--	--	.0020	--	--	.0009	--	--	--	--
3305XB	1.01	--	--	.0005	--	.0291	--	--	.0015	--	--	.0008	--	--	--	--
3305XC	1.01	--	--	.0007	--	.0211	--	--	.0032	--	--	.0009	--	--	--	--
3305YA	1.02	--	--	.0019	--	.1423	--	--	.0095	--	--	.0008	--	--	--	--
3305YB	1.02	--	--	.0033	--	.0333	--	--	.0111	--	.0006	.0009	--	--	--	--
3305Z	1.03	--	--	.0115	--	.0172	--	--	.0575	--	--	--	--	--	--	--
3305K	1.04	--	.0125	--	--	.0094	--	--	.0031	--	--	--	--	--	--	--
3305LA	1.05	--	--	.0014	--	.0009	--	--	.0028	--	--	--	--	--	--	--
3305LB	1.05	--	--	.0019	--	--	--	--	.0009	--	--	--	--	--	--	--
3305LC	1.05	--	--	.0014	--	.0007	--	--	.0014	--	--	--	--	--	--	--
3306XA	2.01	--	--	.0009	--	.0047	--	--	--	--	--	--	--	--	--	--
3306XB	2.01	--	--	.0011	--	.0034	--	--	.0006	--	--	--	--	--	--	--
3306XC	2.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3306YA	2.02	--	--	.0010	--	--	--	--	.0004	--	--	--	--	--	--	--
3306YB	2.02	--	--	.0005	--	--	--	--	--	--	--	--	--	--	--	--
3306YC	2.02	--	--	.0028	--	--	--	--	.0007	--	--	--	--	--	--	--
3306KA	2.03	--	--	.0022	--	--	--	--	.0017	--	--	--	.0009	--	--	--
3306KB	2.03	--	--	.0050	.0007	--	--	--	.0015	--	--	--	.0009	--	--	--
3306LA	2.04	--	--	--	--	.0009	--	--	.0005	--	--	--	--	--	--	--
3306LB	2.04	--	--	--	--	.0006	--	--	--	--	--	--	--	--	--	--

Sample	SITE	B %	BE %	HG %	MN %	FE %	MG %	CA %	TI %	SI %	SMPL WT	R=AU/AG	AU/CU	AG/CU	R/CU
						Anchorage Quadrangle--Continued									
3236A	1.01	--	--	1.0526	.0021	.1579	.0105	.0032	.0011	.3158	4.75	8.3	4,175	500	397
3236B	1.01	.0004	--	1.0000	.0500	.2000	.0300	.0050	.0015	.5000	5.00	8.8	2,937	333	294
3236C	1.01	--	--	.7000	.0050	.1500	.0200	.0020	.0020	1.0000	5.00	5.5	5,538	1,000	369
3236VA	1.02	--	--	.5102	.0510	.5102	.0204	.0102	.0015	1.0204	4.90	8.6	1,715	200	168
3236VB	1.02	--	--	.7143	.0102	.5102	.0306	.0051	.0015	.5102	4.90	5.4	4,060	750	265
3236VC	1.02	--	--	1.9048	.0019	.0952	.0143	.0048	.0029	.6667	5.25	5.8	12,449	2,143	871
3236XA	1.03	--	--	.3191	.0021	.1064	.0319	.0021	.0016	.7447	4.70	5.2	11,106	2,143	696
3236XB	1.03	.0006	--	.4202	.0042	.5882	.0420	.0084	.0017	1.6807	5.95	4.8	4,779	1,000	284
3236XC	1.03	--	--	.4717	.0019	.1415	.0189	.0019	.0014	.9434	5.30	6.0	8,927	1,500	631
3236RA	1.04	--	--	.5376	.0032	.1613	.0215	.0075	.0075	.3226	4.65	8.2	1,639	200	152
3236RB	1.04	--	--	.6422	.0917	.1835	.0183	.0064	.0046	.2752	5.45	6.2	1,851	300	135
3236RC	1.04	--	--	.4854	.0194	.1456	.0146	.0097	.0015	.2913	5.15	9.2	1,837	200	189
3236SA	1.05	--	--	.9804	.0196	.6863	.0196	.0294	.0490	.4902	5.10	13.2	1,843	140	269
3236SB	1.05	--	--	.5000	.0167	.8333	.0333	.0500	.0500	.8333	3.00	10.7	1,784	167	214
3236SC	1.05	--	--	.7143	.0143	1.0000	.0429	.0143	.0286	.7143	3.50	8.6	402	47	40
						Charley River Quadrangle--Continued									
YD5680A	1.01	.0010	--	.1500	.0030	.5000	.0100	--	.0020	.5000	5.00	5.6	4,190	750	279
YD5680B	1.01	--	--	.0450	.0018	.2700	.0027	--	.0090	.1400	5.50	10.1	3,351	333	372
YD5680C	1.01	--	--	.1300	.0013	.1900	.0038	--	.0063	.1300	4.00	6.7	2,275	342	175
						Healey Quadrangle--Continued									
3184A	1.01	--	--	.2128	.0053	2.1277	.0160	.0106	.0053	.5319	4.70	4.9	1,476	300	92
3184B	1.01	--	--	.1389	.0278	6.9444	.0417	.0278	.0694	.6944	3.60	5.3	750	143	54
YD5980A	2.01	--	--	.7600	.0022	.1600	.0220	--	.0330	.1600	4.60	12.0	4,147	345	546
						Iditarod Quadrangle--Continued									
3305XA	1.01	--	--	1.0163	.0020	.3049	.0152	.0020	.0051	.3049	4.92	12.8	4,486	350	631
3305XB	1.01	.0005	--	1.4535	.0019	.1938	.0097	.0048	.0145	.4845	5.16	13.4	6,260	467	923
3305XC	1.01	.0004	--	1.0526	.0032	.3158	.0158	.0053	.0158	.7368	4.75	8.3	4,143	500	394
3305YA	1.02	.0004	--	.9488	.0047	.4744	.0190	.0066	.0066	.9488	5.27	9.3	3,087	333	325
3305YB	1.02	.0004	--	1.6667	.0222	.5556	.0222	.0167	.0167	1.1111	4.50	7.7	1,535	200	138
3305Z	1.03	--	.0029	.8621	.0115	.8621	.1149	.0862	.0115	2.8736	.87	7.3	4,847	667	422
3305K	1.04	--	--	.9375	.0047	.3125	.0219	.0094	.0031	.6250	1.60	9.4	4,048	429	432
3305LA	1.05	--	--	1.4124	.0007	.1412	.0047	.0019	.0047	.2825	5.31	9.4	13,457	1,429	1,429
3305LB	1.05	.0004	--	1.8797	.0019	.1880	.0066	.0019	.0009	.1410	5.32	5.9	12,717	2,143	902
3305LC	1.05	.0004	--	.9434	.0014	.1887	.0066	.0019	.0094	.4717	5.30	9.4	9,425	1,000	999
3306XA	2.01	.0004	--	.9416	.0002	.0659	.0019	.0009	.0009	.0188	5.31	9.5	1,900	200	202
3306XB	2.01	.0005	--	.3401	.0002	.2268	.0079	.0023	.0017	.1134	4.41	7.8	2,584	333	228
3306XC	2.01	--	--	.1325	.0004	.0883	.0088	.0018	--	.0442	5.66	10.3	513	50	58
3306YA	2.02	--	--	.1000	.0003	.1000	.0070	.0020	.0015	.0700	5.00	5.6	2,821	500	188
3306YB	2.02	--	--	.1949	.0002	.0487	.0019	.0019	--	.0487	5.13	13.6	1,905	140	279
3306YC	2.02	--	--	.4717	.0005	.0943	.0094	.0019	--	.2830	5.30	9.5	1,355	143	144
3306KA	2.03	--	--	5.5432	.0022	.3326	.0554	.0166	.0111	.5543	4.51	7.4	2,476	333	223
3306KB	2.03	--	--	5.0000	.0020	.3000	.0500	.0100	.0070	.5000	5.00	8.4	4,205	500	420
3306LA	2.04	--	--	.1812	.0009	.0906	.0136	.0027	--	.1812	5.52	10.0	1,426	143	157
3306LP	2.04	--	--	.1807	.0008	.0843	.0036	.0012	.0024	.0361	4.15	10.8	1,514	140	179

Iditarod Quadrangle--Continued

Sample	LATITUDE	LONGTUDE	SITE	AU %	FINE	AG %	SUM X %	CU %	ZN %	PB %	AS %	SB %	CD %	MO %	BI %
3306LC	62 22 52	158 1 33	2.04	90.3	906	9.3	.4299	.0466	--	.0014	--	.0019	--	--	.0002
3309XA	62 23 30	157 59 4	3.01	89.5	900	9.9	.5528	.0425	--	.0425	.0071	.0028	--	--	.0142
3309XB	62 23 30	157 59 4	3.01	90.5	909	9.1	.3773	.0455	--	.0018	.0091	--	--	--	.0003
3309XC	62 23 30	157 59 4	3.01	90.2	912	8.7	1.0340	.0436	--	.1309	.0035	.0015	--	--	.4363
3309YA	62 23 30	157 59 4	3.02	90.0	903	9.7	.3521	.0967	--	.0068	--	.0677	--	--	.0010
3309YB	62 23 30	157 59 4	3.02	92.6	930	7.0	.4461	.2000	--	.0200	--	.0018	--	--	.0150
3309YC	62 23 30	157 59 4	3.02	84.6	860	13.8	1.5523	.0138	--	.0046	.0064	.0016	--	--	.0018
3308XA	62 21 30	157 54 44	4.01	89.8	901	9.8	.3471	.0295	--	.0689	--	.0020	--	--	.0098
3308XB	62 21 30	157 54 44	4.01	91.6	924	7.5	.8577	.0054	--	.0022	--	.0032	--	--	.0054
3308XC	62 21 30	157 54 44	4.01	89.9	904	9.6	.5062	.0672	--	.0014	--	.0192	--	--	.0005
3308YA	62 21 30	157 54 44	4.02	87.7	894	10.4	1.9690	.0104	--	.0073	--	--	--	--	.0031
3308YB	62 21 30	157 54 44	4.02	85.3	862	13.6	1.0758	.0182	--	.0182	--	.0182	--	--	.0018
3308YC	62 21 30	157 54 44	4.02	92.6	932	6.7	.6212	.0192	--	.0010	--	.0019	--	--	--
3308K	62 21 30	157 54 44	4.03	88.6	899	10.0	1.4085	.0200	--	.0015	--	.0050	--	--	--
3308LA	62 21 30	157 54 44	4.04	83.3	888	10.5	6.1566	.0527	--	.0105	--	.0032	--	--	.0074
3308LB	62 21 30	157 54 44	4.04	76.8	808	18.3	4.9461	.0064	--	.0046	--	.0091	--	--	.0046
3308LC	62 21 30	157 54 44	4.04	78.8	835	15.6	5.5358	.0521	--	.0156	--	.0073	--	--	.0521
3308M	62 21 30	157 54 44	4.05	87.0	895	10.2	2.7612	.0102	--	.0051	--	--	--	--	.1020
3307A	62 26 39	157 56 9	5.01	92.2	926	7.4	.3821	.0318	--	.0005	--	--	--	--	.0002
3307B	62 26 39	157 56 9	5.01	90.2	905	9.5	.3225	.0473	--	.0047	--	.0047	--	--	.0066
3307C	62 26 39	157 56 9	5.01	79.5	806	19.1	1.3943	.0064	--	.0009	--	.0022	--	--	--
3307D	62 26 39	157 56 9	5.01	88.1	890	10.9	1.0347	.0234	--	.0016	--	--	--	--	.0005
3302XA	62 27 4	157 56 27	6.01	88.7	889	11.1	.1422	.0333	--	--	--	.0111	--	--	--
3302XB	62 27 4	157 56 27	6.01	88.5	886	11.3	.1910	.0567	--	--	--	.0113	--	--	--
3302XC	62 27 4	157 56 27	6.01	88.9	891	10.9	.2136	.0326	--	--	--	.0076	--	--	--
3302YA	62 27 4	157 56 27	6.02	84.6	861	13.7	1.6684	.0068	--	.0007	--	--	--	--	--
3302YB	62 27 4	157 56 27	6.02	84.6	854	14.5	.8305	.0104	--	.0145	--	--	--	--	--
3302YC	62 27 4	157 56 27	6.02	84.2	852	14.7	1.1163	.0073	--	.0022	--	--	--	--	.0004
3303XA	62 21 3	157 1 25	7.01	88.9	894	10.5	.5567	.0527	--	.0002	--	.0316	--	--	.0105
3303XB	62 21 3	157 1 25	7.01	91.9	929	7.0	1.1030	.0030	--	.0005	--	--	--	--	--
3303XC	62 21 3	157 1 25	7.01	87.4	889	10.9	1.7193	.0054	--	.0008	--	--	--	--	--
3303YA	62 21 3	157 1 25	7.02	89.0	909	8.9	2.1243	.0178	--	.0004	--	.0018	--	--	--
3303YB	62 21 3	157 1 25	7.02	90.1	906	9.3	.5953	.0279	--	.0047	.0047	.0019	--	--	.0005
3303YC	62 21 3	157 1 25	7.02	89.5	905	9.3	1.1533	.0187	--	.0009	--	.0140	--	--	.0065
3303KA	62 21 3	157 1 25	7.03	94.1	950	5.0	.8732	.0020	--	.0020	--	.0070	--	--	.0002
3303KB	62 21 3	157 1 25	7.03	89.2	915	8.3	2.5539	.0059	--	.0024	--	--	--	--	--
3303KC	62 21 3	157 1 25	7.03	93.9	947	5.2	.8737	.0031	--	.0021	--	--	--	--	.0105
3303LA	62 21 3	157 1 25	7.04	89.0	905	9.4	1.5761	.0188	--	.0009	--	--	--	--	--
3303LB	62 21 3	157 1 25	7.04	89.4	904	9.5	1.0656	.0142	--	.0007	--	.0190	--	--	.0002
3303LC	62 21 3	157 1 25	7.04	91.8	928	7.1	1.0961	.0203	--	.0005	--	.0030	--	--	--
3081A	62 57 14	156 31 57	8.01	82.0	876	11.6	6.3501	.0065	--	.1394	--	.0028	--	--	.0007
3081B	62 57 14	156 31 57	8.01	78.1	834	15.6	6.2899	.0104	--	.0311	--	--	--	--	.0010
3081C	62 57 14	156 31 57	8.01	83.3	885	10.8	5.8950	.0066	--	.0283	--	.0019	--	--	.0002
3081D	62 57 14	156 31 57	8.01	80.2	856	13.5	6.3416	.0050	--	.0700	--	.0018	--	--	.0005
3081E	62 57 14	156 31 57	8.01	82.2	879	11.3	6.5348	.0051	--	.0717	--	.0018	--	--	.0205
3304XA	62 26 49	157 55 13	9.01	77.4	815	17.5	5.0890	.0175	--	1.1682	.5841	.0117	--	.0006	.0175
3304XB	62 26 49	157 55 13	9.01	76.6	804	18.6	4.8164	.0186	--	.6203	.8685	.0087	--	.0006	.0186
3304XC	62 26 49	157 55 13	9.01	80.5	837	15.7	3.7891	.0105	--	.7338	.5241	.1048	--	.0003	.0105
3304YA	62 26 49	157 55 13	9.02	86.9	897	10.0	3.1499	.0100	--	.7000	.5000	.0150	--	--	.0150
3304YB	62 26 49	157 55 13	9.02	81.3	844	15.0	3.6735	.0150	--	.7000	.5000	.0300	--	--	.0150

Sample	SITE	TE %	W %	NI %	CO %	SN %	PT %	PD %	BA %	SR %	ZR %	V %	CR %	Y %	LA %	NP %
Iditarod Quadrangle--Continued																
3306LC	2.04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3309XA	3.01	--	--	.0014	--	--	--	--	--	--	--	--	--	--	--	--
3309XB	3.01	--	--	.0045	.0014	--	--	--	.0005	--	--	--	--	--	--	--
3309XC	3.01	.0436	--	--	--	--	--	--	--	--	--	.0013	.0009	--	--	--
3309YA	3.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3309YB	3.02	.0100	--	.0010	--	--	--	--	--	--	--	--	--	--	--	--
3309YC	3.02	--	--	.0046	--	--	--	--	--	--	--	--	--	--	--	--
3308XA	4.01	--	--	--	--	--	--	--	.0005	--	--	--	--	--	--	--
3308XB	4.01	--	--	.0022	--	--	--	--	.0011	--	--	--	--	--	--	--
3308XC	4.01	--	--	.0005	--	--	--	--	.0007	--	--	--	--	--	--	--
3308YA	4.02	--	--	.0052	--	--	--	--	.0031	--	--	--	.0021	--	--	--
3308YB	4.02	--	--	.0018	--	--	--	--	.0018	--	--	--	.0008	--	--	--
3308YC	4.02	--	--	--	--	--	--	--	.0005	--	--	--	--	--	--	--
3308K	4.03	--	--	.0010	--	--	--	--	.0150	--	--	--	--	--	--	--
3308LA	4.04	--	--	.0074	.0021	--	--	--	.0016	--	--	--	--	--	--	--
3308LB	4.04	--	--	--	--	--	--	--	.0009	--	--	--	--	--	--	--
3308LC	4.04	--	--	--	--	--	--	--	.0007	--	--	--	--	--	--	--
3308M	4.05	--	--	.0051	--	--	--	--	.0051	--	--	--	.0010	--	--	--
3307A	5.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3307B	5.01	--	--	--	--	--	--	--	.0004	--	--	--	--	--	--	--
3307C	5.01	--	--	.0019	--	--	--	--	.0026	--	--	--	.0013	--	--	--
3307D	5.01	--	--	.0023	--	--	--	--	.0008	--	--	--	.0013	--	--	--
3302XA	6.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3302XB	6.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3302XC	6.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3302YA	6.02	--	--	--	--	--	--	--	.0010	--	--	--	--	--	--	--
3302YB	6.02	--	--	--	--	--	--	--	--	--	.0015	--	--	--	--	--
3302YC	6.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3303XA	7.01	--	--	--	--	--	--	--	.0005	--	--	--	--	--	--	--
3303XB	7.01	--	--	--	--	--	--	--	.0005	--	--	--	--	--	--	--
3303XC	7.01	--	--	--	--	--	--	--	.0004	--	--	--	--	--	--	--
3303YA	7.02	--	--	.0009	--	--	--	--	.0013	--	--	--	--	--	--	--
3303YB	7.02	--	--	.0007	--	--	--	--	.0005	--	--	--	--	--	--	--
3303YC	7.02	--	--	.0009	--	--	--	--	.0014	--	--	--	--	--	--	--
3303KA	7.03	--	--	.0015	--	--	--	--	.0020	--	--	--	--	--	--	--
3303KB	7.03	--	--	.0012	--	--	--	--	.0008	--	--	--	--	--	--	--
3303KC	7.03	--	--	.0021	--	--	--	--	.0021	--	--	--	--	--	--	--
3303LA	7.04	--	--	.0005	--	--	--	--	.0007	--	.0007	--	--	--	--	--
3303LB	7.04	--	--	--	--	--	--	--	.0004	--	.0009	--	--	--	--	--
3303LC	7.04	--	--	.0005	--	--	--	--	.0004	--	--	--	--	--	--	--
3081A	8.01	--	--	.0009	--	.0019	--	--	.0019	--	--	--	--	--	--	--
3081B	8.01	--	--	.0005	--	.0021	--	--	.0010	--	--	--	--	--	--	--
3081C	8.01	--	--	--	--	.0009	--	--	.0005	--	--	--	--	--	--	--
3081D	8.01	--	--	--	--	.0050	--	--	.0010	--	--	--	--	--	--	--
3081E	8.01	--	--	--	--	.0015	--	--	.0007	--	--	--	--	--	--	--
3304XA	9.01	--	--	.0058	--	--	--	--	.0234	--	--	.0035	.0023	.0008	--	--
3304XB	9.01	--	--	.0087	--	--	--	--	.0372	--	--	.0062	.0025	.0006	--	--
3304XC	9.01	--	--	.0031	--	--	--	--	.0052	--	--	.0031	.0016	.0005	--	--
3304YA	9.02	--	--	.0020	--	--	--	--	.0100	--	--	.0010	.0009	--	--	--
3304YB	9.02	--	--	.0050	--	--	--	--	.0050	--	--	.0020	.0015	--	--	--

Sample	SITE	F %	PE %	HG %	MN %	FE %	MG %	CA %	TI %	SI %	SMPL WT	R=AU/AG	AU/CU	AG/CU	R/CU
						Iditarod Quadrangle--Continued									
3306LC	2.04	--	--	.2793	.0009	.0466	.0047	.0019	--	.0466	5.37	9.7	1,939	200	208
3309XA	3.01	--	--	.1416	.0004	.2125	.0142	.0014	.0014	.0708	3.53	9.0	2,107	233	213
3309XB	3.01	--	--	.0909	.0006	.0636	.0455	.0182	.0045	.0909	5.50	10.0	1,992	200	219
3309XC	3.01	--	--	.0873	.0006	.1745	.0175	.0009	.0044	.0873	5.73	10.3	2,068	200	237
3309YA	3.02	--	--	.1451	.0001	.0193	.0048	.0010	--	.0097	5.17	9.3	930	100	96
3309YB	3.02	--	--	.0700	.0003	.0700	.0070	.0010	--	.0500	5.00	13.2	463	35	66
3309YC	3.02	--	--	1.3812	.0005	.0645	.0064	.0009	.0014	.0645	5.43	6.1	6,128	1,000	444
3308XA	4.01	--	--	.1476	.0001	.0148	.0030	.0020	--	.0689	5.08	9.1	3,042	333	309
3308XB	4.01	--	--	.5376	.0008	.0538	.0161	.0075	.0075	.2151	4.65	12.2	17,040	1,400	2,264
3308XC	4.01	--	--	.1919	.0003	.0192	.0096	.0019	.0019	.1919	5.21	9.4	1,338	143	139
3308YA	4.02	.0004	--	.7261	.0007	.1037	.0156	.0021	.0519	1.0373	4.82	8.5	8,450	1,000	815
3308YB	4.02	--	--	.4545	.0014	.2727	.0091	.0018	.0027	.2727	5.50	6.3	4,691	750	344
3308YC	4.02	--	--	.4808	.0005	.0067	.0096	.0048	--	.0962	5.20	13.8	4,818	350	716
3308K	4.03	--	--	1.0000	.0010	.1500	.0100	.0020	.0030	.2000	5.00	8.9	4,430	500	443
3308LA	4.04	--	--	5.2743	.0032	.2110	.2110	.0527	.0032	.3165	4.74	7.9	1,579	200	150
3308LB	4.04	--	--	4.5704	.0009	.1371	.0274	.0018	--	.1828	5.47	4.2	11,996	2,857	656
3308LC	4.04	--	--	5.2083	.0007	.0729	.0208	.0010	--	.1042	4.80	5.0	1,514	300	97
3308M	4.05	--	--	1.0204	.0102	.5102	.0510	.0102	.0102	1.0204	4.90	8.5	8,529	1,000	836
3307A	5.01	--	--	.3178	--	.0074	.0011	.0021	--	.0212	4.72	12.4	2,901	233	391
3307B	5.01	--	--	.1894	.0001	.0189	.0019	.0009	--	.0473	5.28	9.5	1,905	200	201
3307C	5.01	--	--	.6378	.0002	.0638	.0255	.0013	.0128	.6378	3.92	4.2	12,461	3,000	651
3307D	5.01	--	--	.7788	.0002	.0467	.0047	.0031	.0156	.1558	3.21	8.1	3,769	467	346
3302XA	6.01	--	--	.0778	--	.0056	.0022	.0011	--	.0111	4.50	8.0	2,662	333	240
3302XB	6.01	--	--	.0794	--	.0057	.0017	.0011	.0011	.0340	4.41	7.8	1,561	200	138
3302XC	6.01	--	--	.1087	--	.0054	.0022	.0016	.0011	.0543	4.60	8.2	2,727	333	251
3302YA	6.02	--	--	1.3699	.0003	.0685	.0068	.0021	.0068	.2055	3.65	6.2	12,356	2,000	902
3302YB	6.02	--	--	.6224	.0002	.0622	.0062	.0031	.0062	.1037	2.41	5.8	8,160	1,400	562
3302YC	6.02	--	--	1.0264	--	.0293	.0044	.0022	--	.0440	3.41	5.7	11,488	2,000	783
3303XA	7.01	--	--	.3165	.0005	.0316	.0032	.0016	.0021	.1055	4.74	8.4	1,685	200	160
3303XB	7.01	--	--	1.0040	.0001	.0201	.0020	.0015	.0010	.0703	4.98	13.1	30,500	2,333	4,340
3303XC	7.01	--	--	1.6304	.0002	.0217	.0033	.0016	.0011	.0543	4.60	8.0	16,084	2,000	1,480
3303YA	7.02	--	--	1.7825	.0009	.1337	.0045	.0013	.0009	.1783	5.61	10.0	4,991	500	560
3303YB	7.02	--	--	.4655	.0003	.0186	.0028	.0014	.0008	.0652	5.37	9.7	3,225	333	346
3303YC	7.02	--	--	.9346	.0007	.0280	.0047	.0019	.0008	.1402	5.35	9.6	4,788	500	512
3303KA	7.03	--	--	.5000	.0005	.0500	.0050	.0020	.0010	.3000	5.00	18.8	47,063	2,500	9,413
3303KB	7.03	--	--	2.3585	.0006	.0590	.0035	.0018	.0024	.1179	4.24	10.8	15,127	1,400	1,833
3303KC	7.03	--	--	.5241	.0005	.1048	.0073	.0021	.0052	.2096	4.77	17.9	29,856	1,667	5,696
3303LA	7.04	--	--	1.4071	.0002	.0469	.0028	.0019	.0019	.0938	5.33	9.5	4,746	500	506
3303LB	7.04	--	--	.9488	.0003	.0285	.0019	.0019	.0014	.0474	5.27	9.4	6,285	667	662
3303LC	7.04	--	--	1.0163	.0002	.0203	.0020	.0020	--	.0305	4.92	12.9	4,516	350	635
3081A	8.01	--	--	5.5762	.0009	.1394	.0093	.0028	.0028	.4647	5.38	7.1	12,610	1,786	1,085
3081B	8.01	--	--	5.1867	.0021	.5187	.0104	.0052	.0021	.5187	4.82	5.0	7,534	1,500	484
3081C	8.01	--	--	5.6604	.0005	.0472	.0047	.0014	.0009	.1415	5.30	7.7	12,607	1,643	1,162
3081D	8.01	--	--	6.0000	.0003	.0500	.0050	.0020	.0010	.2000	5.00	5.9	16,032	2,700	1,188
3081E	8.01	--	--	6.1475	.0005	.0717	.0051	.0020	.0015	.2049	4.88	7.3	16,044	2,200	1,424
3304XA	9.01	--	--	.5841	.0234	1.7523	.0175	.0584	--	.8178	4.28	4.4	4,416	1,000	252
3304XB	9.01	--	--	.6203	.0248	1.8610	.0248	.0620	.0124	.6203	4.03	4.1	4,115	1,000	221
3304XC	9.01	--	--	1.0482	.0210	1.0482	.0314	.0314	.0016	.2096	4.77	5.1	7,679	1,500	488
3304YA	9.02	--	--	1.0000	.0150	.5000	.0300	.0500	.0010	.3000	5.00	8.7	8,685	1,000	869
3304YB	9.02	--	--	1.0000	.0300	1.0000	.0200	.0500	--	.3000	5.00	5.4	5,422	1,000	361

Alaska Gold Data--Continued

Sample	LATITUDE	LONGTUDE	SITE	AU %	FINE	AG %	SUM X %	CU %	ZN %	PB %	AS %	SB %	CD %	MO %	BI %
Iditarod Quadrangle--Continued															
3304YC	62 26 49	157 55 13	9.02	81.4	844	15.0	3.5580	.0150	--	.5000	.7000	.0300	--	--	.0150
3304ZA	62 26 49	157 55 13	9.03	86.8	899	9.8	3.3857	.0147	--	.4892	.4892	.0196	--	--	.0098
3304ZP	62 26 49	157 55 13	9.03	79.6	834	15.9	4.5603	.0159	--	.7937	.7937	.0238	--	--	.0159
3304K	62 26 49	157 55 13	9.04	64.1	806	15.4	20.5142	.1538	--	1.1538	3.8462	--	--	--	.0115
Juneau Quadrangle															
3049A	58 49 44	135 1 54	1.01	74.6	805	18.1	7.3189	.0098	--	.0984	--	.0098	--	--	--
3040A	58 18 52	134 22 15	2.01	80.0	834	15.9	4.0772	.0245	--	.0086	--	.0368	--	--	--
3040B	58 18 52	134 22 15	2.01	76.7	827	16.0	7.2475	.0185	--	.0062	--	.0246	--	--	--
3040C	58 18 52	134 22 15	2.01	73.8	789	19.8	6.4168	.0082	--	.0082	--	.0412	--	--	--
3042A	58 18 52	134 22 15	2.01	76.4	778	21.8	1.7886	.0140	--	.0140	--	.0211	--	--	--
3042B	58 18 52	134 22 15	2.01	69.7	709	28.6	1.7362	.0106	--	.0106	--	.1059	--	--	--
3042C	58 18 52	134 22 15	2.01	69.6	710	28.4	2.0255	.0072	--	.0072	--	.0207	--	--	--
3041A	58 18 56	134 22 12	3.01	82.1	837	16.0	1.8761	.0102	--	.0029	--	.0146	--	--	--
3043A	58 18 55	134 21 51	4.01	69.9	709	26.7	1.4123	.0082	--	.0115	--	.0328	--	--	--
3043B	58 18 55	134 21 51	4.01	71.6	727	26.9	1.4541	.0080	--	.0115	--	.0573	--	--	--
3043C	58 18 55	134 21 51	4.01	75.3	762	23.5	1.2440	.0084	.0120	.0181	--	.0361	--	--	--
3093MA	58 18 27	134 20 42	5.01	87.5	900	9.7	2.7949	.1456	.1456	1.9417	.0485	.0291	.0146	--	.0002
3093MB	58 18 27	134 20 42	5.01	92.7	933	6.6	.7346	.1887	.0189	.1887	--	.0943	.0047	--	.0002
3093MC	58 18 27	134 20 42	5.01	87.1	901	9.5	3.3485	.0667	1.4286	1.4286	--	.0476	.0190	--	.0005
3093XA	58 18 27	134 20 42	5.02	79.3	910	7.9	12.7974	.0787	11.2360	.0225	--	.0225	.0787	--	.0002
3093XB	58 18 27	134 20 42	5.02	84.8	850	15.0	.1704	.0500	--	.0200	--	.0700	--	--	.0002
3093XC	58 18 27	134 20 42	5.02	94.1	954	4.5	1.3782	.1364	--	.1818	--	.0091	.0005	--	.0005
3050A	58 18 27	134 20 42	5.03	81.6	828	16.9	1.4382	.0260	.2604	.6510	--	.0130	.0130	--	--
3050B	58 18 27	134 20 42	5.03	81.7	821	17.8	.4833	.0237	.0083	.0592	--	.0237	.0002	--	--
3050C	58 18 27	134 20 42	5.03	89.2	897	10.3	.4894	.0309	.1029	.0514	--	.0031	.0051	--	--
3046A	58 16 4	134 22 54	6.01	86.7	881	11.7	1.5812	.0455	--	.0649	--	--	--	--	--
3047A	58 15 54	134 22 3	7.01	75.8	784	20.8	3.4158	.0167	--	.1667	--	.0167	--	--	--
3047B	58 15 54	134 22 3	7.01	84.6	857	14.1	1.2562	.0481	--	.1122	--	.0048	--	--	.0032
3047C	58 15 54	134 22 3	7.01	83.1	865	13.0	3.9630	.0432	--	.9259	--	.0123	--	--	.0031
Mount Hays															
YD6779A	63 19 22	146 5 55	1.01	89.0	904	9.4	1.6313	.2800	--	.0014	.0094	--	--	--	.0001
YD6279A	63 17 14	145 53 5	2.01	82.3	829	17.0	.6579	.0830	--	.0017	--	--	--	--	--
3096A	63 16 45	145 49 57	3.01	89.7	909	8.9	1.4210	.0893	--	.0063	--	.0268	--	--	.0013
3096B	63 16 45	145 49 57	3.01	88.2	890	10.9	.9033	.1087	--	.0109	--	.0054	--	--	.0005
3096C	63 16 45	145 49 57	3.01	84.1	849	15.0	.9112	.0500	--	.0050	--	--	--	--	.0005
3096SA	63 16 45	145 49 57	3.02	92.8	933	6.7	.5269	.0476	--	.0143	.0048	.0286	--	--	.0019
3096SB	63 16 45	145 49 57	3.02	89.1	899	10.0	.8723	.0700	--	.0010	--	.0100	--	--	.0003
3096SC	63 16 45	145 49 57	3.02	83.1	839	16.0	.9514	.0319	--	.0021	--	.0053	--	--	.0003
3096P	63 16 45	145 49 57	3.03	--	--	--	99.9000	.5263	--	--	--	--	--	--	--
YD4379A	63 10 41	144 48 32	4.01	86.1	910	8.5	5.4272	.2400	--	.0006	--	--	--	--	--

Alaska Gold Data--Continued

Sample	SITE	TE %	W %	NI %	CO %	SN %	PT %	PD %	BA %	SR %	ZR %	V %	CR %	Y %	LA %	NB %
Iditarod Quadrangle--Continued																
3304YC	9.02	--	--	.0050	--	--	--	--	.0050	--	--	.0020	.0010	--	--	--
3304ZA	9.03	--	.0196	.0049	--	--	--	--	.0049	--	--	.0029	.0015	.0007	--	--
3304ZP	9.03	--	.0111	.0032	--	--	--	--	.0024	--	--	.0024	.0016	--	--	--
3304K	9.04	--	.3846	.0769	--	.2308	--	--	.0385	--	.1154	.0077	.0154	.0038	--	.0065
Juneau Quadrangle--Continued																
3049A	1.01	--	--	--	--	--	--	--	--	--	.0197	.0039	--	.0020	.0098	--
3040A	2.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3040P	2.01	--	--	--	--	--	--	--	.0012	--	--	--	--	--	--	--
3040C	2.01	--	--	--	--	--	--	--	--	--	--	--	--	.0019	.0137	--
3042A	2.01	--	--	--	--	--	--	--	.0007	--	--	--	--	--	--	--
3042B	2.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3042C	2.01	--	--	--	--	--	--	--	.0007	--	--	--	--	--	--	--
3041A	3.01	--	--	--	--	--	--	--	--	--	--	--	--	.0007	--	--
3043A	4.01	--	--	--	--	--	--	--	.0016	--	--	--	--	--	--	--
3043P	4.01	--	--	--	--	--	--	--	.0023	--	.0080	--	--	--	--	--
3043C	4.01	--	--	--	--	--	--	--	.0018	--	.0012	--	--	--	--	--
3093MA	5.01	--	--	.0005	--	--	--	--	--	--	--	--	--	--	--	--
3093MP	5.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3093MC	5.01	--	--	.0019	--	--	--	--	.0004	--	--	--	--	--	--	--
3093XA	5.02	--	--	--	.0034	--	--	--	--	--	--	--	--	--	--	--
3093XB	5.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3093XC	5.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3050A	5.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3050B	5.03	--	--	--	--	--	--	.0024	--	--	--	--	--	--	--	--
3050C	5.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3046A	6.01	--	--	--	--	--	--	--	--	--	.0195	--	--	--	--	--
3047A	7.01	--	--	--	--	.0033	--	--	--	--	--	--	--	--	--	--
3047B	7.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3047C	7.01	--	--	--	--	--	--	--	--	--	.0309	--	--	--	--	--
Mount Hays--Continued																
YD6779A	1.01	--	--	.0019	.0019	--	--	--	.0009	--	--	--	.0005	--	--	--
YD6279A	2.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3096A	3.01	--	--	.0089	--	--	--	--	.0009	--	--	--	--	--	--	--
3096B	3.01	--	--	.0022	--	--	--	--	.0005	--	--	--	--	--	--	--
3096C	3.01	--	--	.0050	--	--	--	--	.0007	--	--	--	--	--	--	--
3096SA	3.02	--	--	.0019	--	--	--	--	.0007	--	--	--	.0048	--	--	--
3096SB	3.02	--	--	.0015	--	--	--	--	.0005	--	--	--	--	--	--	--
3096SC	3.02	--	--	.0016	--	--	--	--	.0005	--	--	--	--	--	--	--
3096P	3.03	--	--	.1053	.0105	--	62.4	26.3158	--	--	.0016	--	.0011	--	--	--
YD4379A	4.01	--	--	.0018	--	--	--	--	.0024	--	.0012	.0120	.0024	--	--	--

Alaska Gold Data--Continued

Sample	SITE	B %	BE %	HG %	MN %	FE %	MG %	CA %	TI %	SI %	SMPL WT	R=AU/AG	AU/CU	AG/CU	R/CU
Iditarod Quadrangle--Continued															
3304YC	9.02	--	--	1.0000	.0200	1.0000	.0150	.0500	--	.2000	5.00	5.4	5,429	1,000	362
3304ZA	9.03	--	--	.9785	.0147	.9785	.0147	.1468	--	.1957	5.11	8.9	5,916	667	605
3304ZB	9.03	--	--	.7937	.0238	1.5873	.0159	.1587	--	.3175	3.15	5.0	5,013	1,000	316
3304K	9.04	.0077	--	.5385	.0769	5.3846	1.1538	1.5385	.3846	5.3846	.65	4.2	417	100	27
Juneau Quadrangle--Continued															
3049A	1.01	--	--	.2953	.0984	5.9055	.0394	.1378	.2953	.3937	2.54	4.1	7,576	1,840	418
3040A	2.01	--	--	3.6765	.0012	.1838	.0123	.0086	.0025	.1225	4.08	5.0	3,264	650	205
3040B	2.01	--	--	6.1576	.0025	.3695	.0246	.0185	.0086	.6158	4.06	4.8	4,154	867	259
3040C	2.01	--	--	5.4945	.0055	.4121	.0137	.0055	.1374	.2747	1.82	3.7	8,955	2,400	453
3042A	2.01	--	--	1.4045	.0014	.0983	.0140	.0098	--	.2107	3.56	3.5	5,443	1,550	250
3042B	2.01	--	--	1.0593	.0021	.3178	.0106	.0042	.0032	.2119	2.36	2.4	6,576	2,700	230
3042C	2.01	--	--	1.5496	.0052	.1033	.0103	.0103	.0010	.3099	4.84	2.4	9,620	3,929	339
3041A	3.01	--	--	1.4577	.0015	.2187	.0146	.0073	.0022	.1458	3.43	5.1	8,045	1,571	502
3043A	4.01	--	--	.1639	.0033	.8197	.0246	.0164	.0025	.3279	3.05	2.4	8,528	3,500	297
3043B	4.01	--	--	.5734	.0023	.3440	.0803	.0172	.0057	.3440	4.36	2.7	8,919	3,357	331
3043C	4.01	--	--	.2410	.0036	.6024	.0241	.0361	.0181	.2410	4.15	3.2	8,924	2,786	380
3093MA	5.01	--	--	.0097	.0010	.2913	.0019	.0194	--	.1456	5.15	9.0	601	67	62
3093MB	5.01	--	--	.0189	.0009	.0283	.0014	.0009	--	.1887	5.30	14.0	491	35	74
3093MC	5.01	--	--	.0143	.0010	.1905	.0019	.0048	--	.1429	5.25	9.1	1,307	143	137
3093XA	5.02	--	--	.0022	.0022	.7865	.0011	.0017	--	.5618	4.45	10.1	1,009	100	128
3093XB	5.02	--	--	.0200	.0007	.0050	.0005	.0020	--	.0020	5.00	5.7	1,697	300	113
3093XC	5.02	--	--	.0136	.0136	.0636	.0045	.9091	--	.0455	5.50	20.7	690	33	152
3050A	5.03	--	--	.0065	.0007	.2604	.0065	.0039	.0013	.1953	3.84	4.8	3,135	650	185
3050B	5.03	--	--	.0178	.0008	.2370	.0237	.0024	.0012	.0829	4.22	4.6	3,450	750	194
3050C	5.03	--	--	.0103	.0007	.1029	.0206	.0072	--	.1543	4.86	8.7	2,891	333	281
3046A	6.01	--	--	.3247	.0097	.6494	.0130	.0649	.0649	.3247	.77	7.4	1,908	257	163
3047A	7.01	--	--	2.5000	.0025	.5000	.0083	.0833	.0017	.1167	3.00	3.6	4,545	1,250	218
3047B	7.01	--	--	.4808	.0016	.4808	.0080	.0032	.0014	.1122	3.12	6.0	1,761	293	125
3047C	7.01	--	--	.6173	.0093	1.8519	.0123	.0123	.0123	.4321	.81	6.4	1,923	300	148
Mount Hays--Continued															
YD6779A	1.01	.0014	--	.6600	.0028	.1400	.0140	--	.0470	.4700	5.30	9.5	318	34	34
YD6279A	2.01	--	--	.0420	.0017	.2500	.0170	--	.0125	.2500	.60	4.8	992	205	58
3096A	3.01	--	--	.4464	.0045	.2679	.0893	.0268	.0063	.4464	5.60	10.0	1,004	100	112
3096B	3.01	--	--	.1087	.0033	.0761	.0217	.0163	.0054	.5435	4.60	8.1	812	100	75
3096C	3.01	--	--	.0700	.0030	.2000	.0500	.0200	.0070	.5000	5.00	5.6	1,682	300	112
3096SA	3.02	--	--	.1429	.0019	.0476	.0190	.0190	.0014	.1905	5.25	13.9	1,949	140	292
3096SB	3.02	--	--	.5000	.0020	.0500	.0200	.0150	.0020	.2000	5.00	8.9	1,273	143	127
3096SC	3.02	--	--	.5319	.0021	.1064	.0319	.0213	.0032	.2128	4.70	5.2	2,604	500	163
3096P	3.03	--	--	.0526	.0016	10.5263	.0053	--	--	.0211	4.75	--	--	--	--
YD4379A	4.01	.0018	--	.8500	.0180	1.8000	.0360	--	.0610	2.4000	4.10	10.1	359	35	42

Alaska Gold Data--Continued

Sample	LATITUDE	LONGTUDE	SITE	AU %	FINE	AG %	SUM X %	CU %	ZN %	PB %	AS %	SB %	CD %	MO %	BI %
Mount Hays--Continued															
YD4379B	63 10 41	144 48 32	4.01	89.1	934	6.3	4.5587	.3800	--	.0009	--	--	--	--	--
YD2979A	63 9 6	144 45 9	5.01	80.5	937	5.4	14.0983	12.5000	.0180	.0054	--	--	--	--	--
Mount McKinley															
3062A	63 34 32	150 53 5	1.01	49.1	517	45.8	5.1106	.0068	--	.0292	.0068	.0195	--	--	.0019
3062B	63 34 32	150 53 5	1.01	30.1	306	68.3	1.6204	.0020	--	.5020	.0502	.1004	--	--	.0050
3062DA	63 34 32	150 53 5	1.02	66.8	688	30.3	2.8433	.0112	.0225	.1124	.0079	.0169	--	--	.0022
3062DB	63 34 32	150 53 5	1.02	61.2	643	34.0	4.8466	.0042	.0042	.0424	.0127	.0127	--	--	.0059
3063A	63 34 32	150 53 5	1.03	62.9	636	36.0	1.1037	.0030	--	.0300	.0070	.0200	--	--	.0003
3063B	63 34 32	150 53 5	1.03	55.7	573	41.5	2.7482	.0049	--	.0692	.0148	.0494	--	--	.0007
3063C	63 34 32	150 53 5	1.03	73.1	737	26.0	.9082	.0051	--	.0204	.0204	.0153	--	--	--
3063D	63 34 32	150 53 5	1.03	57.6	580	41.7	.6213	.0050	--	.0149	.0050	.0298	--	--	--
3063XA	63 34 32	150 53 5	1.04	68.9	693	30.5	.5425	.0049	--	.0098	.0049	.0148	--	--	.0002
3063XB	63 34 32	150 53 5	1.04	68.5	708	28.3	3.2150	.0049	--	.0195	.0068	.0195	--	--	--
3064A	63 33 50	150 49 56	2.01	50.2	504	49.3	.5218	.0017	--	.0002	.0573	.0080	--	--	--
3064B	63 33 50	150 49 56	2.01	61.0	612	38.7	.2398	.0017	--	.0004	.0168	.0084	--	--	--
3064C	63 33 50	150 49 56	2.01	52.8	534	46.0	1.2321	.0023	--	.0002	.0046	.0080	--	--	--
3064D	63 33 50	150 49 56	2.01	57.1	578	41.8	1.1533	.0021	--	.0002	.1566	.0104	--	--	--
3064E	63 33 50	150 49 56	2.01	56.4	569	42.7	.8165	.0016	--	.0005	.0107	.0075	--	--	--
3327	63 44 31	150 22 23	3.01	59.8	603	39.4	.8800	.0039	--	.0059	.0197	.1969	--	--	--
Ophir Quadrangle															
3082A	63 5 4	156 34 42	1.01	82.6	834	16.5	.9362	.0206	--	.0206	--	--	--	--	--
3082B	63 5 4	156 34 42	1.01	86.8	875	12.4	.8598	.0190	--	.0190	--	.0048	--	--	--
3082C	63 5 4	156 34 42	1.01	83.8	842	15.8	.3813	.0148	--	.0099	--	--	--	--	--
3082D	63 5 4	156 34 42	1.01	89.1	901	9.8	1.0730	.0311	--	.0207	--	--	--	--	--
3082XA	63 5 4	156 34 42	1.02	87.8	882	11.7	.4423	.0080	--	.0023	--	--	--	--	--
3082XB	63 5 4	156 34 42	1.02	90.6	912	8.8	.6292	.0418	--	.0025	--	--	--	--	--
3082XC	63 5 4	156 34 42	1.02	84.2	845	15.4	.4068	.0136	--	.0045	.0453	--	--	--	--
3082XD	63 5 4	156 34 42	1.02	92.2	925	7.4	.4143	.0216	--	.0054	--	--	--	--	--
3082IE	63 5 4	156 34 42	1.03	87.3	906	9.1	3.6548	.0195	--	.9766	--	.0029	--	--	.0029
3082IF	63 5 4	156 34 42	1.03	86.0	896	10.0	4.0182	.0200	--	1.0000	--	.0030	--	--	.0007
YD6780A	63 7 7	156 29 11	2.01	92.2	929	7.0	.8302	.0200	--	.0007	--	--	--	--	--
YD6780B	63 7 7	156 29 11	2.01	90.7	928	7.0	2.2758	.0200	--	.0005	--	--	--	--	--
YD6780C	63 7 7	156 29 11	2.01	91.9	929	7.0	1.0547	.0200	.0050	.0005	.0100	--	--	--	--
YD6780D	63 7 7	156 29 11	2.01	89.2	899	10.0	.8365	.0070	.0050	.0100	--	--	--	--	--
YD6880A	63 7 24	156 28 54	3.01	78.9	798	20.0	1.0520	.0050	.0200	.0050	.0070	--	--	--	--
YD6880B	63 7 24	156 28 54	3.01	89.1	899	10.0	.9031	.0200	.0150	.0005	--	--	--	--	--
YD6880C	63 7 24	156 28 54	3.01	88.8	899	10.0	1.1566	.0200	.0150	.0005	--	--	--	--	--
YD6880D	63 7 24	156 28 54	3.01	89.4	899	10.0	.5960	.0150	.0100	.0030	.0020	--	--	--	--
YD6980A	63 7 48	156 30 1	4.01	86.3	869	13.0	.7036	.0130	--	.0038	--	.0013	--	--	--
YD6980B	63 7 48	156 30 1	4.01	89.4	899	10.0	.5658	.0100	--	.0015	--	.0015	--	--	--

Alaska Gold Data--Continued

Sample	SITF	TE %	W %	NI %	CO %	SN %	PT %	PD %	BA %	SR %	ZR %	V %	CR %	Y %	LA %	NB %
							Mount Hays--Continued									
YD4379B	4.01	--	--	.0013	--	--	--	--	.0025	--	.0250	.0090	.0019	--	--	--
YD2979A	5.01	--	--	--	--	--	--	--	.0054	--	--	--	--	--	--	--
							Mount McKinley--Continued									
3062A	1.01	--	--	.0015	.0010	--	--	--	.0015	--	--	--	--	.0005	--	--
3062B	1.01	--	--	.0007	.0005	.0050	--	--	.0007	--	--	--	--	--	--	--
3062DA	1.02	--	--	.0225	.0056	.0006	--	--	.0112	--	--	--	--	--	--	--
3062DB	1.02	--	--	.0042	.0042	.0059	--	--	.0017	--	.0004	--	--	.0006	.0017	--
3063A	1.03	--	--	.0007	.0007	.0020	--	--	--	--	--	--	--	--	--	--
3063B	1.03	--	--	--	--	.0049	--	--	--	--	--	--	--	.0005	--	--
3063C	1.03	--	--	--	--	.0010	--	--	--	--	--	--	--	--	--	--
3063D	1.03	--	--	--	--	.0020	--	--	--	--	--	--	--	--	--	--
3063XA	1.04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3063XB	1.04	--	--	--	--	.0007	--	--	.0005	--	--	--	--	--	--	--
3064A	2.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3064B	2.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3064C	2.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3064D	2.01	--	--	--	.0010	--	--	--	--	--	--	--	--	--	--	--
3064E	2.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3327	3.01	--	--	--	--	--	--	--	--	--	--	--	--	.0020	.0394	--
							Ophir Quadrangle--Continued									
3082A	1.01	--	--	--	--	--	--	--	.0015	--	--	--	--	--	--	--
3082B	1.01	--	.0190	--	--	--	--	--	.0014	--	--	--	--	--	--	--
3082C	1.01	--	--	--	--	--	--	--	.0005	--	--	--	--	--	--	--
3082D	1.01	--	--	--	--	--	--	--	.0021	--	--	--	--	--	--	--
3082XA	1.02	--	--	--	--	--	--	--	.0006	--	--	--	--	--	--	--
3082XB	1.02	--	--	--	--	--	--	--	.0008	--	--	--	--	--	--	--
3082XC	1.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3082XD	1.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3082IE	1.03	--	--	.0005	--	--	--	--	1.9531	--	--	--	--	--	--	--
3082IF	1.03	--	--	.0005	--	--	--	--	2.0000	--	--	--	--	--	--	--
YD6780A	2.01	--	--	--	--	--	--	--	.0010	--	--	--	.0010	--	--	--
YD6780B	2.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
YD6780C	2.01	--	--	.0015	--	--	--	--	.0010	--	--	--	.0010	--	--	--
YD6780D	2.01	--	--	.0010	--	--	--	--	.0010	--	--	--	.0010	--	--	--
YD6880A	3.01	--	--	.0030	--	--	--	--	.0010	--	--	--	.0010	--	--	--
YD6880B	3.01	--	--	.0020	--	--	--	--	.0050	--	--	--	.0010	--	--	--
YD6880C	3.01	--	--	.0020	--	--	--	--	.0050	--	--	--	.0010	--	--	--
YD6880D	3.01	--	--	.0020	--	--	--	--	.0010	--	--	--	--	--	--	--
YD6980A	4.01	--	--	--	--	--	--	--	.0063	--	--	--	--	--	--	--
YD6980B	4.01	--	--	--	--	--	--	--	.0010	--	--	--	--	--	--	--

Alaska Gold Data--Continued

Sample	SITE	B %	BE %	HG %	MN %	FE %	MG %	CA %	TI %	SI %	SMPL WT	R=AU/AG	AU/CU	AG/CU	R/CU
Mount Hays--Continued															
YD4379B	4.01	.0019	--	1.3000	.0062	1.9000	.0250	--	.0250	.8800	4.00	14.1	235	17	37
YD2979A	5.01	.0035	--	.3600	.0090	.5400	.0900	--	.0270	.5400	2.80	14.9	6	--	1
Mount McKinley--Continued															
3062A	1.01	--	--	.0975	.0292	2.9240	.0195	.0195	.0029	1.9493	5.13	1.1	7,194	6,714	157
3062B	1.01	--	--	.1004	.0301	.5020	.0100	.0100	--	.3012	4.98	.4	14,993	34,000	220
3062DA	1.02	--	--	.7865	.5618	.5618	.0787	.0787	.0011	.5618	4.45	2.2	5,947	2,700	196
3062DB	1.02	--	.0001	1.6978	.0424	2.5467	.0127	.0170	.0042	.4244	5.89	1.8	14,418	8,000	425
3063A	1.03	--	--	.3000	.0200	.5000	.0070	.0100	.0030	.2000	5.00	1.7	20,965	12,000	582
3063B	1.03	--	--	1.9763	.0069	.2964	.0099	.0148	.0030	.2964	5.06	1.3	11,284	8,400	272
3063C	1.03	--	--	.2041	.0071	.3061	.0102	.0102	.0020	.3061	4.90	2.8	14,322	5,100	550
3063D	1.03	--	--	.1491	.0030	.1988	.0070	.0070	.0010	.1988	5.03	1.4	11,595	8,400	278
3063XA	1.04	--	--	.0984	.0020	.1969	.0069	.0049	.0020	.1969	5.08	2.3	14,010	6,200	459
3063XB	1.04	.0004	--	1.9493	.0049	.4873	.0195	.0146	.0049	.6823	5.13	2.4	14,060	5,800	497
3064A	2.01	--	--	.0229	.0006	.0803	.0023	.0034	.0010	.3440	4.36	1.0	29,163	28,667	591
3064B	2.01	--	--	.0168	.0001	.0253	.0013	.0006	--	.1684	5.94	1.6	36,258	23,000	936
3064C	2.01	.0011	--	.0172	.0008	.0230	.0115	.0057	.0080	1.1494	4.35	1.1	22,964	20,000	499
3064D	2.01	.0010	--	.0209	.0007	.2088	.0104	.0073	.0031	.7307	4.79	1.4	27,348	20,000	655
3064E	2.01	--	--	.0214	.0002	.0214	.0021	.0032	--	.7479	4.68	1.3	35,224	26,667	824
3327	3.01	--	--	.0984	.0030	.2953	.0098	.0030	.0020	.1969	2.54	1.5	15,177	10,000	386
Ophir Quadrangle--Continued															
3082A	1.01	--	--	.1029	.0005	.0514	.0103	.0051	.0031	.7202	4.86	5.0	4,014	800	244
3082B	1.01	--	--	.0951	.0002	.0285	.0067	.4753	.0008	.1901	5.26	7.0	4,565	650	369
3082C	1.01	--	--	.0986	.0003	.0493	.0069	.0030	.0008	.1972	5.07	5.3	5,668	1,067	359
3082D	1.01	.0010	--	.1553	.0016	.1035	.0207	.0072	.0052	.7246	4.83	9.1	2,869	317	292
3082XA	1.02	--	--	.1708	.0003	.0228	.0057	.0017	.0023	.2278	4.39	7.5	11,016	1,471	939
3082XB	1.02	--	--	.1254	.0004	.0251	.0084	.0025	.0042	.4181	5.98	10.3	2,167	210	247
3082XC	1.02	--	--	.0906	.0001	.0634	.0027	.0009	.0045	.1812	5.52	5.5	6,197	1,133	402
3082XD	1.02	--	--	.1078	.0005	.0539	.0054	.0022	.0022	.2155	4.64	12.4	4,276	345	575
3082IE	1.03	--	--	.1465	.0010	.2930	.0098	.0488	.0049	.1953	5.12	9.6	4,468	465	492
3082IF	1.03	--	--	.1500	.0010	.5000	.0100	.0300	.0030	.3000	5.00	8.6	4,299	500	430
YD6780A	2.01	--	--	.2000	.0005	.1000	.0050	--	.0020	.5000	5.00	13.2	4,608	350	658
YD6780B	2.01	--	--	.2000	.0003	.1500	1.7000	--	.0050	.2000	5.00	13.0	4,536	350	648
YD6780C	2.01	--	--	.2000	.0007	.5000	.0050	--	.0100	.3000	5.00	13.1	4,597	350	657
YD6780D	2.01	--	--	.1500	.0015	.5000	.0050	--	.0050	.1500	5.00	8.9	12,738	1,429	1,274
YD6880A	3.01	--	--	.3000	.0020	.5000	.0050	--	.0030	.2000	5.00	3.9	15,790	4,000	789
YD6880B	3.01	.0010	.0001	.2000	.0020	.5000	.0050	--	.0015	.1500	5.00	8.9	4,455	500	445
YD6880C	3.01	.0010	.0001	.2000	.0020	.7000	.0050	--	.0050	.2000	5.00	8.9	4,442	500	444
YD6880D	3.01	--	--	.1500	.0010	.2000	.0050	--	.0070	.2000	5.00	8.9	5,960	667	596
YD6980A	4.01	.0013	--	.1900	.0006	.0880	.0130	--	.0063	.3800	4.00	6.6	6,638	1,000	511
YD6980B	4.01	--	--	.1600	.0005	.0730	.0052	--	.0031	.3100	4.80	8.9	8,943	1,000	894

Alaska Gold Data--Continued

Sample	LATITUDE	LONGTUDE	SITE	AU %	FINE	AG %	SUM X %	CU %	ZN %	PB %	AS %	SB %	CD %	MO %	BI %
							Ophir Quadrangle--Continued								
YD6980C	63 7 48	156 30 1	4.01	91.2	918	8.1	.6684	.0080	--	.0008	--	--	--	--	--
YD6980D	63 7 48	156 30 1	4.01	92.4	930	7.0	.5510	.0300	--	.0005	--	.0070	--	--	--
YD7680A	63 33 7	156 0 19	5.01	81.1	844	15.0	3.9485	.0070	--	.2000	.0500	.0100	--	--	.0050
YD7680B	63 33 7	156 0 19	5.01	85.6	886	11.0	3.4124	.0150	--	.0003	--	--	--	--	.0030
YD7680C	63 33 7	156 0 19	5.01	83.3	839	16.0	.6531	.0500	--	.0083	--	.1200	--	--	--
							Ruby Quadrangle								
3080A	64 4 39	155 37 41	1.01	75.6	767	23.0	1.4117	.0153	--	.0005	--	--	--	--	--
3080B	64 4 39	155 37 41	1.01	70.2	711	28.5	1.2236	.0098	--	.0492	--	--	--	--	.0020
3080C	64 4 39	155 37 41	1.01	77.5	783	21.5	1.0600	.0102	--	.0007	--	--	--	--	--
3080D	64 4 39	155 37 41	1.01	81.5	818	18.1	.3303	.0143	--	.0002	--	--	--	--	--
3080E	64 4 39	155 37 41	1.01	75.9	765	23.3	.7789	.0101	--	.0005	--	--	--	--	--
							Talkeetna Quadrangle								
3066A	62 32 29	150 56 52	1.01	78.0	787	21.2	.7898	.0101	--	.0050	.0050	--	--	--	.0005
3066B	62 32 29	150 56 52	1.01	74.4	748	25.1	.4345	.0019	--	.0093	.0186	.0047	--	--	.0047
3066C	62 32 29	150 56 52	1.01	87.4	883	11.6	1.0434	.0430	--	.0009	--	--	--	--	--
3066D	62 32 29	150 56 52	1.01	83.5	840	15.9	.6271	.0280	--	.0007	--	.0019	--	--	--
3066E	62 32 29	150 56 52	1.01	82.5	827	17.3	.2060	.0102	--	.0007	--	.0020	--	--	--

Alaska Gold Data--Continued

Sample	SITE	TE %	W %	NI %	CO %	SN %	PT %	PD %	BA %	SR %	ZR %	V %	CR %	Y %	LA %	NB %
Ophir Quadrangle--Continued																
YD6980C	4.01	--	--	--	--	--	--	--	.0012	--	--	--	--	--	--	--
YD6980D	4.01	--	--	--	--	--	--	--	.0010	--	--	--	--	--	--	--
YD7680A	5.01	--	--	.0020	--	--	--	--	.0300	.015	.0010	--	.0010	--	.0050	--
YD7680B	5.01	--	--	--	--	--	--	--	.0015	--	--	--	--	--	--	--
YD7680C	5.01	--	--	--	--	--	--	--	.0016	--	--	--	--	--	--	--
Ruby Quadrangle--Continued																
3080A	1.01	--	--	--	--	--	--	--	.0015	--	--	--	--	--	--	--
3080B	1.01	--	--	.0015	--	--	--	--	.0020	--	--	--	--	--	--	--
3080C	1.01	--	--	.0015	--	--	--	--	.0020	--	--	--	--	--	--	--
3080D	1.01	--	--	.0007	.0005	--	--	.0007	--	--	--	--	--	--	--	--
3080E	1.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Talkeetna Quadrangle--Continued																
3066A	1.01	--	--	--	--	--	--	--	.0010	--	--	--	--	--	--	--
3066B	1.01	--	--	--	--	--	--	--	.0005	--	--	--	--	--	--	--
3066C	1.01	--	--	--	--	--	--	--	.0013	--	.0004	--	--	--	--	--
3066D	1.01	--	--	--	--	--	--	--	.0019	--	--	--	--	--	--	--
3066E	1.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Alaska Gold Data--Continued

Sample	SITE	B %	BE %	HG %	MN %	FE %	MG %	CA %	TI %	SI %	SMPL WT	R=AU/AG	AU/CU	AG/CU	R/CU
						Ophir Quadrangle--Continued									
YD6980C	4.01	--	--	.1700	.0006	.1200	.0058	--	.0120	.3500	4.30	11.3	11,404	1,013	1,408
YD6980D	4.01	--	--	.1500	.0005	.0500	.0070	--	.0050	.3000	5.00	13.2	3,082	233	440
YD7680A	5.01	.0010	--	3.0000	.0015	.1000	.0100	--	.0100	.5000	5.00	5.4	11,579	2,143	772
YD7680B	5.01	--	--	3.0000	.0011	.0760	.0110	--	.0045	.3000	3.30	7.8	5,706	733	519
YD7680C	5.01	--	--	.1700	.0016	.1200	.0083	--	.0033	.1700	3.00	5.2	1,667	320	104
						Ruby Quadrangle--Continued									
3080A	1.01	--	--	.1531	.0005	.2041	.0102	.0031	.0031	1.0204	4.90	3.3	4,941	1,500	215
3080B	1.01	--	--	.1476	.0007	.2953	.0069	.0098	.0098	.6890	5.08	2.5	7,136	2,900	250
3080C	1.01	--	--	.1022	.0005	.2045	.0072	.0051	.0102	.7157	4.89	3.6	7,576	2,100	353
3080D	1.01	--	--	.0668	.0001	.0477	.0048	.0019	.0019	.1908	5.24	4.5	5,697	1,267	314
3080E	1.01	--	--	.2024	.0001	.0506	.0051	.0020	.0020	.5061	4.94	3.3	7,503	2,300	322
						Talkeetna Quadrangle--Continued									
3066A	1.01	--	--	.0504	.0010	.2016	.0050	.0030	.0030	.5040	4.96	3.7	7,742	2,100	366
3066B	1.01	--	--	.0186	.0002	.1862	.0028	.0009	--	.1862	5.37	3.0	39,967	13,500	1,590
3066C	1.01	--	--	.0430	.0004	.0859	.0043	.0009	.0043	.8591	5.82	7.5	2,034	270	175
3066D	1.01	--	--	.0467	.0003	.0654	.0093	.0009	.0047	.4673	5.35	5.3	2,978	567	187
3066E	1.01	--	--	.0508	--	.0305	.0020	.0010	.0071	.1016	4.92	4.8	8,120	1,700	470