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Mineral Investigations in the Aniak Mining District, Southwestern Alaska, 2004 Field Season

Robert M. Ellefson, John E. Hoppe, Joseph M. Kurtak, and Mark P. Meyer



Alaska



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Authors

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Cover Photographs

Front: BLM Geologist Rob Ellefson examines quartz veins near the 47 Creek Prospect. (Photo by John Hoppe). Back: (Top, Left to right) Volunteer geologist Jay Kalbas examines Kuskokwim Group shale exposed in the placer cut at Ruby Gulch, Rob Ellefson samples outcrop at the Fortyseven Creek prospect trenches, and Icley Lyman holds a 9.3-ounce nugget from the Lyman family's Ruby Gulch placer mine. Photos are by Rob Ellefson, John Hoppe, and Joe Kurtak, respectively. (Bottom, Left to Right) STEP Student Ryan Underwood stands in front of the DeCourcy Mountain mercury retort and Joe Kurtak examines outcrop at the reclaimed Red Devil Mine. Photos by Joe Kurtak and Ryan Underwood

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ABBREVIATIONS USED IN THIS REPORT

@	at
%	percent
cm	centimeter
cu m	cubic meter
cy	cubic yard
ft	foot
g	gram
in	inch
lb	pound
kg	kilogram
km	kilometer
m	meter
mi	mile
mm	millimeter
oz	troy ounce
lcy	loose cubic yard
ppb	parts per billion
ppm	parts per million
sq ft	square foot
sq m	square meter

MINERAL INVESTIGATIONS IN THE ANIAK MINING DISTRICT, SOUTHWESTERN ALASKA, 2004 FIELD SEASON

ABSTRACT

The Aniak Mining District study focuses on the evaluation of mineral resources in a large, approximately 27 million-acre (11 million hectares) area of southwestern Alaska, expanded to include parts of the adjacent Anvik, Iditarod, Innoko, Marshall, and McGrath Mining Districts. Fieldwork for the district evaluation will be completed in three years and followed by the publication of a comprehensive, district-wide report in year four. The second season of the three-year field investigation was completed in 2004 by the Bureau of Land Management (BLM), Alaska State Office, Solid Minerals Branch.

The 2004 field investigation examined properties in the central one-third of the district, which includes the gold occurrences at Donlin Creek and Flat, in addition to placer and lode prospects in the Napaimiut, Taylor Mountains, Fortyseven Creek, and George River areas. The historic DeCourcy Mountain and Red Devil area mercury deposits, as well as placer gold occurrences along the Oskawalik River, were investigated. A 64-sample soil survey grid completed in the Eagle Creek area followed-up reconnaissance data provided by Calista Corporation. In all, 86 mineral occurrences were evaluated and 290 samples collected during the 2004 Aniak Mining District mineral investigation.

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The authors also wish to thank Marge Mellick, who was our hostess at Mellick's Lodge, the base for our main summer operations. Jamin Klopman of the Taylor Mountain Mine not only provided us with generous hospitality upon our surprise visit, but also with detailed history of the area and keen geological insights. John Miscovich, unofficial Mayor of Flat, provided a tour of the Otter Creek area and related much of the area's rich mining history. Carolyn and Spencer Lyman took time from a busy mining season to show us their Ruby Gulch placer operation. James Fueg of Placer Dome U.S., Inc. provided us an excellent tour of the Donlin Creek Project. Special thanks from the authors also go out to Mike Wilson and Gerald Snoozy of the BLM Anchorage Field Office for their tenacious efforts to provide air support for our project.

INTRODUCTION

In 2004, the BLM-Alaska, Division of Energy and Solid Minerals, Solid Minerals Branch completed the second year in a four-year mineral resource assessment of the Aniak Mining District. Mineral assessment objectives are to identify the nature, extent, and development potential of mineral resources; perform mining feasibility studies through hypothetical mine models based on potentially economic mineral deposits in the district; and fund geophysical investigations of areas having the potential to contain concealed mineral deposits. BLM fieldwork includes locating, sampling, mapping geology and mine workings, and evaluating historic mines, prospects, and mineral occurrences. The BLM also investigates, in more detail, newly discovered prospects and deposits. The Aniak Mining District study is part of the Alaska Minerals program, which conducts mineral assessments on public lands as authorized under Section 1010 of the Alaska National Interest Lands Conservation Act.

The Aniak Mining District project area contains over 400 mineral deposits and prospects, including those located in the historic mining areas of Iditarod-Flat, Nyac, Crooked Creek-Donlin Creek, Candle Creek, Ganes Creek, Nixon Fork, Illinois Creek, and Red Devil. Historically, placer gold has been the main commodity sought in the district, with reported production as early as the late 1800's. Platinum and mercury placers, as well as gold and mercury lodes with byproduct silver and antimony, have also been mined. Other commodities prospected for in the region include barite, copper, lead, molybdenum, tin, tungsten, uranium, and zinc.¹

The BLM began the multi-year mineral resource assessment of the Aniak Mining District in 2003 by examining the northeastern part of the district.² BLM geologists located, mapped, and/or sampled 100 documented sites in the northeastern part of the study area, collecting and analyzing 351 rock, pan concentrate, stream sediment, soil, and placer samples. Sites investigated in 2003 included, Fourth of July Creek, Ganes Creek, Moore Creek, and Nixon Fork.

This report presents analytical results for samples collected during the 2004 field season and provides a brief description of findings for selected mineral sites. A final report detailing the results of BLM's Aniak Mining District mineral assessment, including property summaries and all analytical data, will be published in 2006. An economic analysis report and an industrial minerals report will also be published in 2006.

¹ Cobb, E.H., 1973, Placer deposits of Alaska: U.S. Geological Survey Bulletin 1374, p.41-43, 51-53.

² Meyer, M.P., Kurtak, J.M., Hoppe, J.E., and Wandke, J.J., 2003, Mineral Investigations in the Aniak Mining District, Southwestern Alaska, 2003 Field Season: US Bureau of Land Management Open-File Report 94, 42 pp., 2 figures, plate.

2004 FIELD SEASON REVIEW

The 2004 summer field season began in the second week of June with team members mobilizing to Mellick's Lodge on the Kuskokwim River near Sleetmute. While based at Mellick's, the mineral assessment team completed a 35-day evaluation of sites in the Kuskokwim Mountains (Plate 1). Work focused on property examinations and sample collection in the central portion of the district, specifically the Iditarod and Sleetmute quadrangles. The majority of those sites evaluated during 2004 were visited during this time, including: the Flat-area prospects such as Chicken Mountain, the Golden Horn Mine, and Happy Creek; the Ruby Gulch placer mine and the ongoing Donlin Creek lode gold project at Donlin Creek; the Red Devil-area mercury occurrences; and other scattered sites from Hill Top No. 1 in the north, to Girl Creek in the south. A 64-sample soil grid was completed in the Eagle Creek area near Crooked Creek, in follow-up of reconnaissance data provided by Calista Corporation.

2004 was a record-setting year for Alaska. In addition to a banner year for mosquitoes (according to locals) in the Kuskokwim region, Interior Alaska fires set a new record for acres burned. Final statistics for the 2004 fire season, the worst in Alaska's modern history, include 655 fires responsible for over 6,000,000 million acres (2,400,000 hectares) burned. The fires impacted the Aniak mineral assessment program through reduced visibility and eventually, on July 6th, by a re-assignment of the project helicopter to assist with fire-suppression activities near Fairbanks.

After a short hiatus, mineral assessment activities resumed in the first part of August. A two-person crew was mobilized to Fortyseven Creek by fixed-wing aircraft, and spent two days examining placer and lode occurrences in the Fortyseven Creek area. Following a short flight to the Taylor Mountain airstrip, the Taylor Creek and Taylor Mountain West placer gold occurrences were examined. A total of three days were spent in the Taylor Mountains area. USGS geologists who were sampling and mapping in the area provided short helicopter moves for Aniak study crew members during this time. This support enabled sampling in outlying areas such as Kiknik and Whitewater Creeks prior to the completion of the Aniak Mining District 2004 field season.

Pre-field season literature searches identified over 140 mineral sites/occurrences in the 2004 study area. However, due to abbreviated helicopter support that effectively reduced the intended seven-week field season to five weeks, approximately 30 sites located in the eastern portion of the planned 2004 study area were not visited. This eastern portion consists of sites in the Lime Hills, Lake Clark, and Taylor Mountains quadrangles, areas now included in the planned 2005 study area. During the 2004 Aniak Mining District investigation, a total of 86 mineral occurrences were located and evaluated, with 290 samples collected. Numerous sites with elevated metal values or other noteworthy results were documented; the following provides a brief description of significant findings for selected mineral sites:

Ahgaluk: A 2-pan concentrate sample (13609, map no. 165), collected from an east-northeast flowing stream on the border between sections 23 and 14, contained 0.132

ppm gold, 143.5 ppm arsenic, and 2.58 ppm antimony. Two very fine-grained gold particles were also recovered in the sample. Stream float consisted of 60% sandy shale with rare quartz veinlets and 40% (very) fine-grained felsic intrusive with minor quartz-feldspar phenocrysts. The site is located on State lands.

Barometer Mine: A grab sample (13478, map no. 150) of surface float, or possibly dump material, was collected at the Barometer Mine's collapsed portal. The sample, consisting of a single, thin <1 in (2.5 cm) quartz-stibnite-cinnabar veinlet cutting brecciated and hornfelsed Kuskokwim Group shale, contained 0.933 ppm gold, 3.19 ppm silver, 8.08% antimony, and 3,030 ppm mercury. The site is located on Calista Corporation lands.

Chicken Mountain: Placer workings and trenching near the head of Flat Creek (Idaho Bench) on the north side of Chicken Mountain expose deeply-weathered quartz monzonite of the Chicken Mountain Stock. The monzonite is cut by limonite-stained, widely-spaced stockwork quartz veinlets and silicified shear zones. A select sample (13507, map no. 10) of a 2 in (5.3 cm) wide quartz veinlet contained 30.6 ppm gold, 77.9 ppm silver, 5320 ppm arsenic, and 432 ppm antimony. A spaced-chip sample (13509, map no. 13509) across a 9.8 ft (3 m) wide limonitic silicified shear zone, contained 13.4 ppm gold, 1,405 ppm arsenic, and 78 ppm antimony. Pans of limonite-stained, grus-like monzonite from the same site contained visible gold, and a pan concentrate (13508, map no. 10) contained 51.4 ppm gold. The site is located on Doyon Ltd. lands.

On the south side of Chicken Mountain, near the headwaters of Chicken Creek, trenching in saprolitic monzonite and syenite has exposed stockwork quartz veinlets up to 0.5 inch (1.0 cm) wide. The veinlets exhibit potassie alteration halos and contain disseminated arsenopyrite. A select sample (13368, map no. 13) of syenite trench float contained 2.4 ppm gold and 1.09% arsenic. Veinlet concentration in the trenches averaged about 1 every 10 ft (3.0 m). A 2-pan concentrate of monzonite grus, exposed in a placer cut at the head of Chicken Creek (13370, map no. 14) contained 50.2 ppm gold. The site is located on active Federal mining claims.

DeCourcy Mountain: A grab sample (13540, map no. 112) from an ore stockpile, 2.0 mi (3.2 km) south of the summit of DeCourcy Mountain, contained 0.194 ppm gold and 1.04% antimony. A continuous chip sample (13541, map no. 113) across a 0.5 ft (0.15 m) wide zone of cinnabar-bearing quartz veinlets, contained 0.244 ppm gold and 107 ppm antimony. The chip sample was collected in a trench 1.6 mi (2.6 km) south of the summit of DeCourcy Mountain. The site is located on Calista Corporation lands.

Eightmile Creek: Pans from stream gravel on Eightmile Creek, 1.9 mi (3.1 km) upstream from the Kuskokwim River, contained trace visible gold. A 4-pan concentrate (13548, map no. 144) collected at the same site, contained 0.315 ppm gold, 45.2 ppm arsenic, 10.65 ppm antimony, and 2.05 ppm mercury. Stream float contained minor amounts of rhyodacite porphyry and felsite (?). There are no bedrock exposures near

the sample site. No signs of placer mining or sampling were observed in the drainage. The site is located on Calista Corporation lands.

Georgetown Prospect: Quartz-stibnite-cinnabar veins up to 8 in (20.3 cm) thick are exposed in Hill 1273 area trenches. Veining generally consists of quartz-healed Kuskokwim Group shale and graywacke breccias, with minor drusy quartz and open space. Two select samples (13480-81, map no. 130) collected from the trenches contained up to 28.2 ppm gold, 116 ppm silver, 27.4 ppm arsenic, 44.2 ppm mercury, and 1.04% antimony. Quartz vein material comprised approximately 1% of talus in a 60 ft (19.5 m) wide, at least 600 ft (185 m) long zone, which trends east-west across main trenched area. A caved adit appears to have tested the zone from the north, although no quartz vein material was found in dump material near the collapsed portal. Thin felsic dike rocks up to 2 inches thick were observed in trenches and surface float. The Georgetown Prospect is located on lands selected by Calista Corporation.

A select sample (13008) of vein quartz float and wallrock was collected near the trenches during a reconnaissance of the Aniak Mining District in 2001. The sample contained 2.2 ppm gold, 22.4 ppm silver, 18 ppm arsenic, 8.15% antimony, 11,478 ppm tin, and 267 ppm tellurium. The quartz vein float is associated with a 10-ft wide (3-m) wide quartz vein zone traced for 500 feet (152 m) from the caved adit to the northeast.

Girl Creek: A 2-pan concentrate sample (13397, map no. 175) was collected from Girl Creek, a western tributary of the Holukuk River. Stream float was exclusively Kuskokwim Group siltstone and sandstone. The sample contained one very fine gold grain, with analysis results of 0.923 ppm gold and, 147.5 ppm arsenic. The site is located on State lands.

Golden Horn Mine: Samples were collected at the Golden Horn Mine site, 2.5 mi (4.0 km) east of Flat. A select sample (13504, map no. 8) of arsenopyrite-bearing, quartz-carbonate vein material on the Golden Horn shaft dump contained 151 ppm gold, 395 ppm silver, 5.04% arsenic, 1,235 ppm antimony, 40 ppm tungsten, and 19.2 ppm mercury. A select sample (13502, map no. 8) of narrow quartz veins in a nearby trench contained 3.81 ppm gold and 4,100 ppm arsenic. A select sample (13505, map no. 8) of vein quartz float in a trench located 0.2 mi (0.32 km) southwest of the shaft contained 3.45 ppm gold, 47.8 ppm silver, and 19.7% antimony. The Golden Horn is located on active Federal mining claims.

Happy Creek: Eluvial placer gold was found near the upper limit of old placer workings in a broad sloping area at the headwaters of Happy Creek, on the west side of Chicken Mountain. A placer sample (13382, map no. 11) collected from fractured monzonite bedrock contained 0.056 oz/cy (2.28 g/cu m) or 0.0004 oz (0.012 g) of gold/bedrock foot. The gold was mostly nuggety with rare dendritic pieces. Cinnabar and scheelite were observed in the resulting concentrate. Overburden at the head of the placer cut averaged about 6 ft (1.8 m) thick and contained boulders up to 3 ft (0.9 m) in diameter. There is potential for more eluvial placer resources upslope from the mined

area, but getting water to the site for processing may be difficult. Nearby lode gold occurrences have been trenched and drilled. The site is located on Doyon Ltd. lands

Kiknik Creek: A stream sediment sample (13424, map no. 191) collected from Kiknik Creek, west of the Taylor Mountains, contained 0.192 ppm gold. A pan concentrate sample (13423, map no. 191) was collected from gravel at the same site, yielding 28 very fine gold grains and an assay result of 5.55 ppm gold. Stream float consists of Kuskokwim Group shale and mudstone with up to 25% felsic intrusive fragments. The site is located on State lands.

Munther Creek: Munther Creek is a 3.5 mi (5.6 km) long western tributary to the East Fork of the George River. Pan concentrate and stream sediment samples were collected from sandy fluvial material about 1 mi (1.7 km) upstream from the George River. A 1-pan concentrate (13520, map no. 34) contained 1.13 ppm gold and 10.6 ppm arsenic. At the sample point, the stream channel is deeply incised and meandering. The area is mostly tundra covered with no bedrock exposed in the vicinity of the sample site. No indications of placer mining or sampling were observed in the drainage. Munther Creek is located on State-selected lands.

Red Devil Mine: Mineralized stream and surface float samples (13473, 13551; map no. 151) were collected at the former Red Devil Mine site. These select samples of high grade mineralization at the site contained greater than 10% mercury, and up to 22.3% antimony and 0.354 ppm gold. The mine site has been the focus of ongoing BLM-managed mine reclamation activities which began in 1989. The following link presents a summary of Red Devil Mine reclamation activities:
<http://www.ak.blm.gov/ado/redevl-c.html>. The site is located on Calista Corporation lands.

Ruby Gulch placer: Continued placer gold development in the Donlin Creek area has focused on processing material near the mouth of Ruby Gulch. In 2004, the mining of a 150,000 sq ft (14,000 sq m) cut was completed and initial development of an additional 100,000 sq ft (9,200 sq m) cut was begun. A 0.1 cy (0.76 cu m) placer sample (13535, map no. 47) was collected adjacent to the developing cut. The sample consisted of 1 ft (0.03 m) of fractured bedrock and 0.5 ft (15 cm) of overlying bench gravel, yielding 0.039 oz/cy (0.0007 oz/bedrock ft) gold. Gold particles varied from rounded to dendritic up to 0.28 in (7 mm) in size. The sample contained minor cinnabar and trace scheelite. Overburden is up to 10 ft (3 m) thick. The site is currently under lease from Calista Corporation to a private individual.

Ruby Gulch lode: Gold-bearing quartz-carbonate veins and altered dikes cutting Kuskokwim Group siltstone and graywacke were mapped in the recently completed Ruby Gulch placer cut. A northeast-striking dike zone, exposed in the placer cut for a distance of 190 ft (57.9 m), is offset by a series of east-west and north-south trending faults. The 10-ft wide (3.0 m) dike zone includes individual clay-sericite-fuchsite altered dikes up to 3 ft (0.9 m) wide which contain very fine needle-like grains of arsenopyrite (?) and trace pyrite. A grab sample (13526, map no. 47) of in-place dike

material contained 0.595 ppm gold and 7,990 ppm arsenic. The dikes likely represent a mafic phase described in the main Donlin Creek lode gold project resource area located 1.9 mi (3.1 km) to the east. Quartz-carbonate veins up 4 in (10 cm) thick occur locally along the southeast margin of the dike zone. A select sample (13525, map no. 47) of a 2-in wide (5.1 cm) vein contained 44.8 ppm gold, 1.37% arsenic, 1,925 ppm antimony, and 5.44 ppm mercury.

Sheet-like sets of quartz veinlets were mapped by Aniak assessment team in zones outboard of the mapped altered dikes. The zones contain up to 1 veinlet per foot across widths of 10 ft (3 m), and strike for up to 100 ft (30.5 m) at an average N50°E.

Individual veinlets typically 1 in (2.5 cm) thick contained up to 5% finely disseminated arsenopyrite and pyrite concentrated mainly along veinlet margins. Samples (13527-28, continuous chip; 13530, spaced chip; 13539, select; all map no. 47) collected from four separate quartz veinlet zones averaged 21.07 ppm gold, 9,917.5 ppm arsenic, and 26.28 ppm mercury. One sample contained up to 32.5 ppm gold (13527, map no. 47).

The Ruby Gulch lode area is covered by an exploration lease granted to the Donlin Creek lode gold project by subsurface-estate owner Calista Corporation. Pre-development economic feasibility studies are currently underway for the Donlin Creek lode gold project as a whole.

Taylor Mountain West Placer: A 2-pan concentrate sample (13606, map no. 189) collected from the active Taylor Mountain West Placer operation contained 40 to 60 very fine to fine colors, equivalent to 0.17 oz/cy (6.92 g/cu m). The majority of gold occurs as very angular to dendritic grains, with few rounded particles, suggesting a nearby source. The sample contained a moderate amount of black sands, with abundant wolframite and only minor magnetite and scheelite. Quartz grains recovered exhibited black, needle-like tourmaline intergrowths. The sample was collected from basal pay gravels, just above bedrock exposure of gray Kuskokwim Group siltstone. Analysis of the concentrate after removal of visible gold yielded 305 ppm gold, 60.1 ppm silver, 267 ppm mercury, 820 ppm tungsten, and 2,350 ppm tin. The Taylor Mountain West Placer is covered by active State mining claims.

Whitewater Creek: Two samples were collected from Whitewater Creek, a low-gradient tributary of Kiknik Creek that drains the west side of the Taylor Mountains. A stream sediment sample (13426, map no. 190) contained 1,395 ppm gold and a two-pan concentrate sample (13425, map no. 190) resulted in 2.25 ppm gold. Six very fine colors observed in the pan concentrate were accompanied by pink garnets and very few heavy mineral grains. Stream float in the drainage consists of Kuskokwim Group graywacke and shale, with up to 25% felsic intrusive fragments. The site is located on State lands.

SAMPLING AND ANALYTICAL PROCEDURES

SAMPLING METHODS

Samples of geologic materials - soil, sediment, and rock - were collected using a variety of methods during field investigations. A description of sampling methods utilized for the 2004 field season is presented below.

Rock samples are of seven types: (1) **grab** - samples consist of small rocks or rock fragments collected more or less at random from surface float, an outcrop, or mine dump; (2) **select** – rock fragments taken from the most-mineralized portion of a mineralized zone in order to estimate the highest grade potential; (3) **random chip** – rock chips taken randomly across an exposure; (4) **representative chip** – samples consist of rock fragments chipped at random across any exposure; (5) **spaced chip** - samples of rock chips collected at a specified interval across an exposure and reported with a corresponding distance and chip frequency measurement; (6) **continuous chip** - samples consist of small rock fragments chipped in a continuous line across an exposure and were usually reported with a corresponding distance measurement; and (7) **chip channel** – a channel sample, typically 4 in (10 cm) wide by 2 in (5 cm) deep across a specified distance, was chiseled from an exposure in order to better volumetrically represent sampled material, when possible.

Stream sediment, soil, and pan concentrate samples were collected in a reconnaissance mode to detect geochemical values, specifically metals, which indicate the presence of mineralized rock in an area. Additionally, pan concentrate samples were applied as a placer deposit evaluation tool when other sample methods are impractical. **Stream sediment** samples consist of clay- to sand-sized particles collected from an active streambed. The coarse fraction was removed using a 10 mesh (2.0 mm) sieve and for each sample approximately 1 lb (0.5 kg) of fine material was collected. **Pan concentrate** samples represent the dense, heavy minerals contained in a stream's sediment load. Often these samples are collected at locations where heavy minerals might accumulate, such as where stream gradient changes from steep to moderate, the downstream side of boulders, or on bedrock. A 14 in (35 cm) gold pan heaped with stream sediment (gravel and fines) was panned down to approximately 0.75 oz (21 g) of concentrate. Often, two or more pan concentrate samples were combined and submitted as a single, 0.75 oz (21 g) sample. A visual description of sample mineralogy was noted in the field, and the sample was stored in a sealed plastic bag prior to laboratory submittal.

Soil samples were collected with a stainless steel hand auger or shovel. Approximately 0.5 lb (220 g) sample was collected from as deep as possible, typically 18 to 24 in below the surface, before hitting the permafrost (frozen) soil. Samples were collected from below the organic layer in the 'C' soil horizon, the subsoil closest to bedrock that often contains rock fragments. C horizon material is the standard sample material in

soils subject to permafrost. Samples were stored in paper geochemical sample bags and allowed to dry before shipment to the analytical laboratory. Sample tools were cleaned between sample sites.

Placer samples were collected using a portable 10 by 48 in (20 by 120 cm) sluice box. Samples typically consist of 0.1 cy (0.08 cu m) of bank material run through the sluice box and panned down to produce approximately 2.5 oz (71 g) of concentrate. The samples were taken back to the geology laboratory at BLM's Campbell Tract Facility where they were processed. Lab-processing includes washing, air drying, weighing of the entire sample, removal of magnetic component (i.e. tramp iron and magnetite), and the segregation and weighing of all visible gold. The remaining concentrate was examined using a binocular microscope, scintillometer, and ultraviolet light to determine sample mineralogy. A split of the sample, or entire sample if less than about 1.75 oz (50 g), was typically submitted and analyzed with the same analytical methods used for pan concentrate samples.

Sluice concentrate samples were collected from placer mine wash plants to identify accessory minerals such as gold, cinnabar, arsenopyrite, cassiterite, and scheelite. These consisted of 1 to 4 lbs (0.5 to 1.8 kg) of black sands and other heavy minerals remaining after miners had removed the majority of the placer gold. The amount of gravel washed to produce the sluice concentrate was typically unknown. Samples were taken back to the geology laboratory at BLM's Campbell Tract Facility and processed in much the same way as placer samples. Coarse, metal contaminants such as lead battery fragments and shot are removed with a sieve. The samples were washed, air dried, the magnetic component was removed, sample weight was then recorded, and finally, visible gold was segregated and weighed. The remaining concentrate was examined using a binocular microscope, scintillometer, and ultraviolet light to determine sample mineralogy. A split of the sample, or entire sample if less than about 4 oz (125 g), was typically submitted and analyzed with the same analytical methods used for pan concentrate samples. One sluice concentrate sample (13532) was additionally sieved into seven grain size fractions to determine gold particle size distribution.

ANALYTICAL METHODS

This study, as with most BLM mining district studies, assesses metallic and non-metallic mineral occurrences. To analyze for elements of economic interest to our study, all geochemical samples were submitted to ALS Chemex Labs³ of Vancouver, BC, Canada, via their Fairbanks, Alaska sample preparation facility. Samples were analyzed for a comprehensive analytical package in anticipation of a variety of assessment goals and requirements. Typical analysis for rocks and sediments was a 1.1 oz (31 g) gold-platinum-palladium fire assay, followed by a 50 element aqua-regia digestion, and a combination of induced coupled plasma-mass spectroscopy (ICP-MS) and ultra trace induced coupled plasma-atomic emission spectroscopy (ICP-AES)

³ Selection of ALS Chemex Labs does not signify any specific BLM endorsement.

analysis. These analyses were followed by pressed pellet X-ray fluorescence spectroscopy (XRF) analysis for barite, tin, and tungsten. Samples with assay results exceeding element-specific detection limits for the standard analysis were reanalyzed by a variety of element-specific procedures.

More detailed information about specific geochemical analyses and analytical techniques can be found at the ALS Chemex Labs website: <http://www.alschemex.com>

Sample Preparation

At ALS Chemex Labs sample preparation facility in Fairbanks, Alaska, soil and stream sediment samples were kiln dried, dry sieved to less than 180 microns and split down to an 8.8 oz (273 g) sample. Rock samples were crushed so more than 70 percent of the material passed through a screen with 0.08 in (2 mm) openings, then split down to an 8.8 oz (250 g) sample that was pulverized in a ring crusher until 85 percent passed through a 75-micron screen. Pan concentrate, placer, and sluice concentrate samples were dried and pulverized without screening, then split down to meet the volume specification, according to specific testing needs.

DETECTION LIMITS BY ANALYTICAL TECHNIQUE

FIRE ASSAY METHODS

For gold, palladium, and platinum analysis, all soil and sediment samples were fire assayed with an ICP-MS finish (ALS Chemex Labs method code: PGM-MS23) and all rock samples were subjected to an ICP-AES finish (ALS Chemex Labs method code: PGM-ICP23). Suspected high-grade samples were noted on the sample submittal form and analyzed using the same ICP-MS or ICP-AES methods, but with instruments calibrated to higher detection limits (ALS Chemex Labs method code: PGM-MS27 and PGM-ICP27). Samples with gold and silver assay results that exceed their respective ICP analysis detection limits were, at the discretion of the lab, reanalyzed by fire assay with either a gravimetric finish (ALS Chemex Labs method code: Ag-GRA21 and Au-GRA21), or by atomic absorption spectroscopy (ALS Chemex Labs method code: Ag-AA46 and Au-AA25).

Element	Method code	Range (ppm)	Sample type
Ag	Ag-GRA21 ore grade	5 - 3,500	Rock
Ag	Ag-AA46 ore grade	1 - 1,500	Rock
Au	Au-CON01	0.07-900,000	Sediment
Au	Au-AA25 ore grade	0.01 - 100	Rock, Sediment
Au	Au-GRA21 ore grade	0.05 - 1,000	Rock, Sediment
Au	PGM-ICP23	0.001-10	Rock
Au	PGM-ICP27 ore grade	0.03 - 100	Rock
Au	PGM-MS23	0.001 - 1	Sediment, Soil
Pd	PGM-ICP23	0.001 - 10	Rock
Pd	PGM-ICP27 ore grade	0.03 - 100	Rock
Pd	PGM-MS23	0.001 - 1	Sediment, Soil
Pt	PGM-ICP23	0.005 - 10	Rock
Pt	PGM-ICP27 ore grade	0.03 - 100	Rock
Pt	PGM-MS23	0.0005 - 1	Sediment, Soil

INDUCTIVE COUPLED ARGON PLASMA (ICP) SPECTROSCOPY

After fire assay, a split of the sample pulp was partially dissolved in aqua-regia. The resulting solution was analyzed using a combination of ICP-MS and ICP-AES (ALS Chemex Labs method code: ME-MS41).

Element	Limits (ppm)	Element	Limits (ppm)	Element	Limits (ppm)
Ag	0.01 - 100	Hg	0.01 - 10,000	Sb*	0.05 - 10,000
Al*	0.01% - 15%	In*	0.005 - 500	Sc*	0.1 - 10,000
As	0.1 - 10,000	K*	0.01% - 10%	Se	0.2 - 1,000
B*	10 - 10,000	La*	0.2 - 10,000	Sr*	0.2 - 10,000
Be*	0.05 - 100	Li*	0.1 - 500	Ta*	0.01 - 500
Bi	0.01 - 10,000	Mg*	0.01% - 15%	Te*	0.01 - 500
Ca*	0.01% - 15%	Mn	5 - 10,000	Th*	0.2 - 500
Cd	0.01 - 500	Mo	0.05 - 10,000	Ti*	0.01% - 10%
Ce*	0.02 - 500	Na*	0.01% - 10%	Tl*	0.02 - 10,000
Co	0.1 - 10,000	Nb*	0.05 - 500	U	0.05 - 10,000
Cr*	1 - 10,000	Ni	0.2 - 10,000	V	1 - 10,000
Cs*	0.05 - 500	P	10 - 10,000	Y*	0.05 - 500
Cu	0.2 - 10,000	Pb	0.2 - 10,000	Zn	2 - 10,000
Fe	0.01% - 15%	Rb*	0.1 - 500	Zr*	0.5 - 500
Ga*	0.05 - 10,000	Re*	0.001 - 50		
Ge*	0.05 - 500	S*	0.01% - 10%		

* Digestion was incomplete for most sample matrices.

ATOMIC ABSORPTION SPECTROSCOPY (AAS)

AAS analysis is an analytical technique where elements, dissolved in solution and excited by intense heat, are detected by the amount and selectivity of light absorbed from a constant beam shining through the hot vapor. AAS was used for samples when non-precious metals of economic interest exceeded the ICP analysis detection limits. Elements of interest were antimony, arsenic, cadmium, copper, lead, mercury (cold vapor atomic absorption), nickel, and zinc.

Element	Method code	Detection limits
As	As-AA46	0.01 ppm - 30%
Cd	Cd-AA46	1 ppm - 10%
Cu	Cu-AA46	100 ppm - 30%
Hg	Hg-CV42	0.1 ppm - 10%
Pb	Pb-AA46	100 ppm - 30%
Sb	Sb-AA46	0.01 ppm - 20%
Zn	Zn-AA46	100 ppm - 30%

X-RAY FLUORESCENCE SPECTROSCOPY (XRF)

Because barium, tin, and tungsten are resistant to the aqua-regia used in the ICP process, all samples, except pan concentrate and placer samples, were analyzed by XRF for those elements (ALS Chemex Labs method code: ME-XRF05).

Element	Detection limits
Ba	10 ppm - 10,000 ppm
Sn	4 ppm - 10,000 ppm
W	10 ppm - 10,000 ppm

RESULTS OF PLACER AND SLUICE CONCENTRATE PROCESSING, ANIAK MINING DISTRICT STUDY, 2004 FIELD SEASON

Table 1 presents the results of placer and sluice concentrate sample processing at the BLM Campbell Tract Facility geology laboratory. Samples were first sieved, dried, and any extraneous material (e.g. tramp iron, steel/lead shot was removed). After weighing the clean, dry sample, magnetic sand, such as ilmenite and magnetite, were removed and examined. Finally, coarse gold was removed, described, weighed, and an accurate count of the number and sizes of gold recovered particles was recorded. Remaining sample material was then examined with a microscope, and conspicuous metals and minerals were noted by percentage. Samples were also tested with a shortwave ultraviolet lamp to identify any scheelite, zircon, or other fluorescent minerals and then tested for radioactivity with a scintillometer. When sufficient sample volume existed, a split of the sample was sent in for chemical analysis and the remainder of the sample was archived. If sample volume was insufficient for splitting, the entire sample volume was submitted to the lab for analysis. The results of the geochemical analysis are presented in Table 2.

The “Au weight (g)” column presents the weight, in grams, of gold after the separation from each placer concentrate. As much gold as possible was removed from the samples using tweezers. Any gold that was too fine to be removed manually was included in the analytical results from the geochemical analysis of material sent to the commercial laboratory. No attempt was made to determine the gold fineness values from the samples collected. Map numbers correspond to the numbered locations on Plate 1.

Table 1. Results of placer and sluice concentrate sample processing, Aniak Mining District Study, 2004 field season.

Map no.	Sample no.	Sample type	Location	Volume (cy)	Au weight (g)	Oz/cy	\$/cy @ \$400/oz
8	13501	Sluice	Golden Horn	NA	NR	NA	NA
9	13456	Sluice	Fullerton Sluice – Flat Creek	NA	3.90	NA	NA
11	13382	Placer	Happy Creek	0.10	0.1742	0.056	22.40
47	13531	Sluice	Ruby Gulch Regular Concentrate	NA	NR	NA	NA
47	13532	Sluice	Ruby Gulch Super Concentrate	NA	0.6332	NA	NA
47	13535	Placer	Snow Gulch (Ruby Gulch Cut)	0.10	0.1223	0.039	15.73
189	13637	Sluice	Taylor Mtn West Placer Regular Concentrate	NA	NA	NA	NA
189	13644	Sluice	Taylor Mtn West Placer Black Sand Concentrate	NA	NA	NA	NA

NA - Not Applicable; NR - No Recoverable Gold

ANALYTICAL RESULTS FOR SAMPLES, ANIAK MINING DISTRICT STUDY, 2004 FIELD SEASON

Analytical and sample data collected during the 2004 Aniak Mining District Study are presented in Table 2. In addition to the analytical results, the following information is listed in the table: map number, sample number, location name, sample type, sample method, sample site, quadrangle, township/range/section, latitude, and longitude. Results are listed by map number as shown on Plate 1.

DATA TABLE ABBREVIATIONS

Sample type:

R	rock	S	sediment
SL	soil		

Sampling method:

C	continuous chip	RC	random chip
CC	continuous channel	S	select
G	grab	SC	spaced chip
PC	pan concentrate	SS	stream sediment
PL	placer	Slu	sluice concentrate

Sample site:

DC	drill cuttings	OC	outcrop
FL	float	RC	rubblecrop
MD	mine dump	TP	trench, pit, or cut
MT	mine tailings	UG	underground workings

OTHER INFORMATION

Quadrangle:

Represents the 1:63,360 scale U.S. Geological Survey topographic map.

Latitude and Longitude:

Collected and reported in NAD 83.

Map Numbers:

Map numbers correspond to the numbered locations shown on Plate 1.

NA

Value not determined or not applicable

Township/Range/Section:

All northern townships are within the Seward Meridian.
All southern townships are within the Kateel River Meridian.

2003 Resubmittal:

Ten samples, numbers 13628 through 13636, were splits collected from sample pulps previously analyzed for the 2003 Aniak Mining District Study. The samples represent blind replicates reanalyzed in 2004 by a separate analytical lab for project quality assurance and quality control purposes. Results are provided here for informational purposes only. A discussion of project-wide quality assurance and quality control data will be presented with the final Aniak Mining District report, due in 2006.

Sample 13453 (map no. 3):

Sample 13453 (map no. 3) was collected from the Iditarod Mine, near the historic town of Iditarod. The sample consisted of coal-bearing lithologies examined in the coal mine's production pit. No analysis was performed and the sample does not appear with Table 2, Analytical Results for Samples. Additional data will be presented with a property summary to be included in the final Aniak Mining District report, due in 2006.

Table 2. Analytical results for samples, Aniak Mining District Study, 2004 field season

Map no.	Sample no.	Location name	Type	Method	Site	Quadrangle	Township/Range/Section	Ag ppm	Al %	As ppm	Au ppm	B ppm	Ba ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm
1	13451	Hill Top No. 1	R	S	RC	Iditarod C3	T29N R44W Sec 11	0.36	0.47	5	<0.001	<10	90	270	0.45	0.04	14.7	0.1
2	13465	Camelback Mountain	R	S	RC	Iditarod C3	T28N R44W Sec 1	0.69	2.98	11.1	0.016	<10	90	500	0.49	0.04	1.45	0.73
4	13401	Golden Ground Shaft	R	S	MD	Iditarod B4	T28N R47W Sec 25	1750	0.32	4640	5.04	<10	80	150	0.25	12.85	0.11	389
4	13402	Golden Ground Adit	R	S	MT	Iditarod B4	T28N R47W Sec 36	20.5	2.11	3370	1.14	<10	330	470	0.61	2.33	1.3	3.9
5	13452	Malamute Gulch	R	G	MD	Iditarod B4	T27N R47W Sec 1	1.5	2.08	785	2.66	10	400	1500	1.98	0.12	0.8	0.51
6	13511	Minnie Gulch	R	S	TP	Iditarod B4	T27N R47W Sec 11	0.44	0.74	375	1.09	<10	80	980	0.48	0.46	0.19	0.23
7	13506	Glen Gulch	R	S	TP	Iditarod B4	T27N R47W Sec 11	3.02	0.25	5220	3.09	10	80	1240	0.63	0.08	0.18	0.57
8	13501	Golden Horn Mine	S	Slu		Iditarod B4	T27N R47W Sec 12	41.3	0.48	21.80%	158.5	<10	60	530	<0.05	6.76	0.21	0.71
8	13502	Golden Horn Mine	R	S	OC	Iditarod B4	T27N R47W Sec 12	6.58	0.41	4100	3.81	<10	460	1280	0.93	3.08	0.38	0.58
8	13503	Golden Horn Mine	R	C	OC	Iditarod B4	T27N R47W Sec 12	0.54	1.84	936	0.206	<10	170	1770	2.04	0.08	0.44	0.54
8	13504	Golden Horn Mine	R	S	MD	Iditarod B4	T22N R50W Sec 1	395	0.25	5.04%	151	<10	70	1000	0.37	23.4	0.38	16.85
8	13505	Golden Horn Mine	R	S	TP	Iditarod B4	T27N R47W Sec 11	47.8	0.19	3.3	3.45	10	30	320	0.83	0.09	0.25	1.05
8	13645	Golden Horn Mine	S	Slu		Iditarod A4	T22N R50W Sec 1	4.84	0.07	>30%	9.69	<10	10	180	0.05	15.05	0.01	0.21
9	13456	Flat Creek - Fullerton	S	Slu		Iditarod B5	T27N R47W Sec 16	368	0.88	29	--	<10	120	700	0.42	1.1	0.67	0.47
10	13507	Chicken Mountain	R	S	OC	Iditarod B4	T27N R47W Sec 34	77.9	0.77	5320	30.6	<10	70	460	2.83	49.9	0.31	3.7
10	13508	Idaho Bench	S	PC		Iditarod B4	T27N R47W Sec 34	0.62	1.27	155	51.4	10	100	980	0.89	0.23	0.57	0.49
10	13509	Idaho Bench	R	S	TP	Iditarod B4	T27N R47W Sec 34	1.34	1.28	1405	13.35	10	130	380	2.35	0.59	0.33	3.02
11	13382	Happy Creek	S	PL		Iditarod B4	T27N R47W Sec 33	4.52	1.16	105	81.7	<10	120	1890	0.56	0.34	0.34	0.1
11	13510	Happy Creek	S	PC		Iditarod B4	T27N R47W Sec 33	2.98	1.35	79.4	81.4	<10	160	1820	0.74	2	0.38	0.29
12	13454	Happy Creek	S	PC		Iditarod B5	T27N R47W Sec 33	4.38	0.79	38.6	28.5	10	100	1270	0.72	0.19	0.82	0.12
12	13455	Happy Creek	S	PC		Iditarod B5	T27N R47W Sec 33	0.14	1.16	41.3	13	<10	150	1340	1.08	0.09	0.99	0.13
13	13368	Chicken Mountain	R	S	TP	Iditarod B4	T27N R47W Sec 34	0.37	0.26	1.09%	2.4	<10	200	2130	0.52	0.5	0.18	0.21
14	13369	Chicken Mountain	R	S	OC	Iditarod B4	T27N R47W Sec 34	0.15	1.04	110	0.068	<10	60	2110	0.59	0.26	0.04	0.13
14	13370	Upper Chicken Creek	S	PC		Iditarod B4	T27N R47W Sec 34	0.27	0.88	65.1	50.2	<10	70	1960	0.5	0.24	0.13	0.11
15	13381	Chicken Creek Dome	R	S	OC	Iditarod B4	T26N R47W Sec 3	0.35	0.7	346	0.116	<10	90	2030	0.59	0.3	0.23	0.37
16	13383	Upper Prince Creek	S	PC		Iditarod B4	T26N R47W Sec 12	0.1	1.38	8.6	12.6	<10	140	1250	0.78	0.14	0.27	0.23
17	13403	Swinging Dome - NE	R	G	RC	Iditarod B5	T26N R48W Sec 18	3.27	0.36	22.8	0.012	<10	60	680	0.12	0.17	0.01	0.71
18	13565	Yushur Prospect	R	S	OC	Iditarod A5	T25N R49W Sec 32	0.4	0.5	1365	<0.001	10	180	640	0.19	0.11	5.82	0.43
19	13457	Eldo - North	R	S	RC	Iditarod B4	T25N R47W Sec 11	0.59	0.36	12.7	0.015	<10	60	560	0.35	0.05	0.07	0.15
20	13515	Widg	R	G	RC	Iditarod B4	T25N R46W Sec 2	0.08	0.5	18.4	0.009	10	130	2090	0.42	0.26	0.01	0.2
21	13516	MOSE 101-106	R	G	FL	Iditarod B4	T26N R45W Sec 30	0.07	0.33	19.9	0.006	20	60	580	0.32	0.32	0.01	0.03
22	13517	MOSE 101-106	R	G	RC	Iditarod B4	T26N R45W Sec 21	0.03	3.01	1.9	0.001	10	570	1970	1.02	0.01	1.51	0.31
23	13464	Barn	R	S	RC	Iditarod B3	T26N R44W Sec 24	0.06	0.43	3.8	<0.001	<10	20	200	1	0.47	0.03	0.04
24	13513	Bismark Creek	R	S	RC	Iditarod B3	T27N R42W Sec 15	12.2	1.68	44.7	0.013	130	50	970	0.43	1.52	0.26	3.59
25	13512	Bismark Creek	R	S	RC	Iditarod B3	T27N R42W Sec 15	0.74	2.7	23.6	0.051	<10	60	720	1.18	0.14	0.11	0.4

Table 2. Analytical results for samples, Aniak Mining District Study, 2004 field season

Map no.	Sample no.	Location name	Type	Method	Site	Quadrangle	Township/Range/Section	Ag ppm	Al %	As ppm	Au ppm	B ppm	Ba ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm
26	13518	Bismark Creek	R	S	FL	Iditarod B3	T27N R42W Sec 15	10.5	0.83	505	0.009	<10	60	1190	0.71	12.1	0.02	7.05
27	13405	Bismark Creek	R	G	RC	Iditarod B3	T27N R42W Sec 14	10.1	0.18	280	0.007	20	140	390	0.49	7.31	0.01	5.79
27	13406	Bismark Creek	R	S	FL	Iditarod B3	T27N R42W Sec 14	1	2.73	19.4	0.007	10	110	1580	0.96	1.1	0.61	0.12
28	13458	Granite-Willow	S	PC		Iditarod B2	T26N R42W Sec 12	0.11	1.44	48.7	0.658	<10	250	1300	0.42	0.23	0.31	0.1
28	13459	Granite-Willow	S	PC		Iditarod B2	T26N R42W Sec 12	0.12	1.4	29.9	0.297	<10	230	1320	0.51	0.2	0.28	0.19
28	13460	Wyrick Lode	R	S	RC	Iditarod B2	T26N R42W Sec 12	5.3	0.12	16.2	2.79	<10	20	590	0.06	0.2	<0.01	0.15
29	13384	Granite Pup	R	S	TP	Iditarod B2	T26N R41W Sec 7	0.08	2.68	12	0.026	<10	210	410	0.93	0.09	11.05	0.11
30	13386	Granite Pup	R	RC	TP	Iditarod B2	T26N R41W Sec 7	0.05	0.87	12.2	0.007	<10	80	1230	0.7	0.24	0.35	0.05
30	13387	Granite Pup	R	S	TP	Iditarod B2	T26N R41W Sec 7	0.32	2.85	271	0.136	<10	80	150	0.67	0.55	3.78	0.08
31	13385	Granite Pup	R	S	TP	Iditarod B2	T26N R41W Sec 7	0.65	0.44	297	0.052	10	60	1350	0.5	0.54	0.18	0.28
31	13514	Granite Pup	R	S	TP	Iditarod B2	T26N R41W Sec 8	4.07	0.28	518	7.68	10	60	670	0.21	42.1	0.01	0.2
32	13521	Granite Mountains	S	PC		Iditarod B2	T26N R40W Sec 28	0.1	1.96	31.1	0.072	40	90	1320	0.73	2.17	0.33	0.24
32	13522	Granite Mountains	R	G	FL	Iditarod B2	T26N R40W Sec 28	0.21	2.73	19.2	0.007	10	120	1490	0.42	0.39	1	0.18
33	13407	Granite Mountains	S	PC		Iditarod B2	T26N R40W Sec 33	0.15	1.06	15.2	0.065	10	80	1780	0.61	0.58	0.11	0.34
34	13519	Munther Creek	S	SS		Iditarod B2	T26N R41W Sec 29	0.2	1.72	9.6	0.004	<10	200	930	0.34	0.16	0.26	0.18
34	13520	Munther Creek	S	PC		Iditarod B2	T26N R41W Sec 29	0.08	1.66	10.6	1.13	<10	200	900	0.48	0.06	0.34	0.13
35	13523	Ada	R	S	FL	Iditarod A3	T25N R43W Sec 23	0.25	0.47	29.9	0.022	<10	80	700	0.3	0.27	0.01	0.07
35	13524	Ada	R	S	FL	Iditarod A3	T25N R43W Sec 23	0.12	0.37	26.9	0.011	<10	100	650	0.24	0.15	0.02	0.07
36	13591	Julian Creek Mine	R	S	MD	Iditarod A3	T24N R44W Sec 4	0.25	0.64	57.2	0.003	10	140	830	0.79	0.48	0.14	0.16
36	13592	Julian Creek Mine	S	PC		Iditarod A3	T24N R44W Sec 4	0.16	1.75	20.3	0.206	10	280	1600	0.62	0.27	0.74	0.23
37	13601	Julian Creek Mine	R	S	MT	Iditarod A3	T25N R44W Sec 35	0.77	0.38	118.5	0.008	10	40	840	0.59	0.05	0.58	0.06
38	13461	Juli/Jul	R			Iditarod A3	T25N R44W Sec 27	0.17	1.45	10.1	0.016	10	170	1020	0.3	0.14	3.42	0.18
39	13463	Juli/Jul	R	G	RC	Iditarod A3	T25N R44W Sec 27	0.07	0.4	31.8	0.002	<10	40	560	0.68	0.67	0.07	0.04
40	13462	Juli/Jul	R	S	RC	Iditarod A3	T25N R44W Sec 27	0.37	0.42	52	0.005	<10	100	820	0.83	0.82	0.17	0.19
41	13409	Eldorado Creek	R	G	FL	Iditarod A4	T24N R47W Sec 7	0.09	0.56	9.9	<0.001	<10	50	1250	0.25	0.05	0.01	0.09
42	13482	Eldorado Creek	R	G	RC	Iditarod A4	T24N R47W Sec 8	0.62	0.55	2.2	0.037	<10	50	1740	0.32	0.1	<0.01	0.03
42	13483	Eldorado Creek	SL			Iditarod A4	T24N R47W Sec 8	0.09	2.75	9.8	0.004	<10	80	880	0.48	0.42	0.08	0.11
43	13555	Eldorado Creek	R	G	RC	Iditarod A4	T24N R47W Sec 17	0.07	0.83	4.1	0.002	<10	70	2280	0.52	0.05	0.02	0.02
44	13466	Donlin Project - Dome Area	R	S	TP	Iditarod A5	T23N R48W Sec 19	0.62	0.48	266	0.156	<10	130	410	0.2	7.5	0.02	0.03
44	13552	Donlin Project - Dome Area	R	S	RC	Iditarod A5	T23N R48W Sec 19	1.15	3.1	212	0.119	<10	360	500	0.96	2.15	0.64	0.16
44	13553	Donlin Project - Dome Area	R			Iditarod A5	T23N R48W Sec 19	0.69	0.61	220	0.326	10	40	250	0.57	13.55	0.05	0.01
45	13533	Donlin Creek - Ruby Gulch	R	C	OC	Iditarod A5	T23N R49W Sec 23	0.1	0.19	57.4	0.81	<10	80	750	0.36	0.11	3.37	0.1
45	13534	Donlin Creek - Ruby Gulch	R	S	FL	Iditarod A5	T23N R49W Sec 23	0.12	0.38	25.7	0.034	10	80	530	0.18	0.34	0.02	0.05
46	13472	Dickite	R	S	RC	Iditarod A5	T23N R49W Sec 21	0.09	0.66	45.9	0.006	<10	100	790	0.49	0.04	2.11	0.13
47	13525	Donlin Creek - Ruby Gulch	R	C	OC	Iditarod A5	T23N R49W Sec 23	1.38	0.15	1.37%	44.8	<10	30	320	0.18	0.1	3.18	0.09

Table 2. Analytical results for samples, Aniak Mining District Study, 2004 field season

Map no.	Sample no.	Location name	Type	Method	Site	Quadrangle	Township/Range/Section	Ag ppm	Al %	As ppm	Au ppm	B ppm	Ba ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm
47	13526	Donlin Creek - Ruby Gulch	R	C	OC	Iditarod A5	T23N R49W Sec 23	0.1	0.46	7990	0.595	10	40	680	0.5	0.06	4.54	0.2
47	13527	Donlin Creek - Ruby Gulch	R	C	OC	Iditarod A5	T23N R49W Sec 23	0.85	0.16	9770	32.5	<10	40	380	0.14	0.03	6.31	0.07
47	13528	Donlin Creek - Ruby Gulch	R	S	OC	Iditarod A5	T23N R49W Sec 23	0.3	0.25	8400	9.27	10	60	420	0.3	0.06	10.15	0.11
47	13529	Donlin Creek - Ruby Gulch	R	RC	OC	Iditarod A5	T23N R49W Sec 23	0.09	0.72	112.5	0.068	10	100	510	0.77	0.04	3.02	0.54
47	13530	Donlin Creek - Ruby Gulch	R	S	OC	Iditarod A5	T23N R49W Sec 23	0.72	0.24	1.08%	14.1	10	80	550	0.27	0.02	9.89	0.13
47	13531	Donlin Creek - Ruby Gulch	S	Slu		Iditarod A5	T23N R49W Sec 23	0.19	0.58	841	0.478	<10	160	890	0.47	0.19	0.8	0.21
47	13532	Donlin Creek - Ruby Gulch	S	Slu		Iditarod A5	T23N R49W Sec 23	240	0.17	4980	>10	<10	60	70	0.71	3.71	0.33	0.02
47	13535	Donlin Creek - Ruby Gulch	S	PL		Iditarod A5	T23N R49W Sec 23	0.15	0.91	53.5	24.3	<10	90	630	0.38	0.16	0.21	0.14
47	13539	Donlin Creek - Ruby Gulch	R	S	TP	Iditarod A5	T23N R49W Sec 23	1.35	0.14	1.07%	28.4	<10	50	360	0.22	0.08	12.8	0.15
47	13638	Donlin Creek - Ruby Gulch	S	Slu		Iditarod A5	T23N R49W Sec 23	152	0.33	6290	--	<10	10	370	<0.05	17.15	0.56	0.02
47	13639	Donlin Creek - Ruby Gulch	S	Slu		Iditarod A5	T23N R49W Sec 23	37.8	0.61	2950	346	<10	40	970	0.59	0.53	0.9	0.25
47	13640	Donlin Creek - Ruby Gulch	S	Slu		Iditarod A5	T23N R49W Sec 23	143	0.79	2610	--	<10	50	990	0.74	0.54	1	0.24
47	13641	Donlin Creek - Ruby Gulch	S	Slu		Iditarod A5	T23N R49W Sec 23	18.35	0.54	1400	273	<10	150	960	0.43	0.88	0.71	0.21
47	13642	Donlin Creek - Ruby Gulch	S	Slu		Iditarod A5	T23N R49W Sec 23	39.3	0.78	2140	169.5	<10	40	1270	0.45	0.98	0.54	0.25
47	13643	Donlin Creek - Ruby Gulch	S	Slu		Iditarod A5	T23N R49W Sec 23	3.09	0.53	1.33%	87.4	<10	10	3060	0.31	2.27	0.55	0.56
48	13467	Donlin Project - Snow Area	R	S	TP	Iditarod A5	T23N R49W Sec 25	0.34	0.35	138	0.019	10	110	770	0.15	0.98	0.01	0.06
48	13554	Donlin Project - Snow Area	R	S	RC	Iditarod A5	T23N R49W Sec 25	0.27	0.43	692	0.073	10	120	330	0.36	0.7	0.01	0.58
49	13469	Donlin Project - Queen Area	R	S	RC	Iditarod A5	T23N R49W Sec 26	0.81	0.4	1030	0.25	<10	60	380	0.31	0.06	0.01	0.15
50	13468	Donlin Project - Queen Area	R	S	RC	Iditarod A5	T23N R49W Sec 25	0.33	0.31	1985	0.008	10	120	560	0.33	0.2	0.05	0.14
51	13470	Donlin Project	R	S	OC	Iditarod A5	T23N R49W Sec 35	0.35	0.35	1995	1.45	10	50	220	0.42	0.02	0.03	0.06
51	13471	Donlin Project	R	S	RC	Iditarod A5	T23N R49W Sec 35	0.17	0.31	2370	0.008	10	50	710	0.4	0.03	0.1	0.23
52	13479	Donlin Project	R	S	TP	Iditarod A5	T23N R49W Sec 35	0.38	0.31	2440	0.806	10	70	540	0.37	0.05	0.05	0.16
53	13719	Eagle Creek	SL			Iditarod A5	T22N R50W Sec 1	0.49	1.06	3.9	0.028	<10	200	950	0.12	0.15	0.19	0.17
54	13718	Eagle Creek	SL			Iditarod A5	T22N R50W Sec 1	1.22	1.92	8.6	0.006	<10	280	1190	0.39	0.22	0.18	0.25
55	13717	Eagle Creek	SL			Iditarod A5	T22N R50W Sec 1	0.28	1.64	8.9	0.003	<10	170	1040	0.42	0.19	0.1	0.21
56	13716	Eagle Creek	SL			Iditarod A5	T22N R50W Sec 1	0.7	2	7.9	0.003	<10	90	890	0.34	0.21	0.04	0.11
57	13715	Eagle Creek	SL			Iditarod A5	T22N R50W Sec 1	0.25	1.74	10.7	0.003	<10	150	990	0.54	0.19	0.07	0.14
58	13575	Eagle Creek	R	S	FL	Iditarod A5	T22N R50W Sec 1	0.1	0.39	17.9	0.008	<10	210	840	0.37	0.1	0.03	0.19
58	13709	Eagle Creek	SL			Iditarod A5	T22N R50W Sec 1	0.14	1.58	9.7	0.006	<10	110	950	0.29	0.18	0.05	0.09
59	13710	Eagle Creek	SL			Iditarod A5	T22N R50W Sec 1	0.08	2.74	18.2	0.002	<10	80	790	0.39	0.28	0.05	0.13
60	13711	Eagle Creek	SL			Iditarod A5	T22N R50W Sec 1	0.37	0.92	6.4	0.002	<10	50	940	0.11	0.15	0.02	0.05
61	13576	Eagle Creek	R	G	FL	Iditarod A5	T22N R50W Sec 1	0.07	0.26	68.3	0.006	<10	320	1670	0.12	0.06	0.01	0.05
61	13712	Eagle Creek	SL			Iditarod A5	T22N R50W Sec 1	0.02	1.28	8	<0.001	<10	40	850	0.27	0.09	0.03	0.08
62	13713	Eagle Creek	SL			Iditarod A5	T22N R50W Sec 1	0.18	1.99	9.9	0.002	<10	120	980	0.38	0.18	0.07	0.12
63	13714	Eagle Creek	SL			Iditarod A5	T22N R50W Sec 1	0.24	2	7.8	0.002	<10	120	960	0.54	0.19	0.07	0.12

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Map no.	Sample no.	Location name	Type	Method	Site	Quadrangle	Township/Range/Section	Ag ppm	Al %	As ppm	Au ppm	B ppm	Ba ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm
64	13708	Eagle Creek	SL		Iditarod A5	T22N R50W Sec 1	0.14	1.28	5.7	0.002	<10	60	700	0.26	0.1	0.05	0.11	
65	13743	Eagle Creek	SL		Iditarod A5	T22N R50W Sec 1	0.29	2.36	11	0.003	<10	120	970	0.56	0.22	0.11	0.3	
66	13742	Eagle Creek	SL		Iditarod A5	T22N R50W Sec 1	0.25	2	9.3	0.004	<10	100	910	0.54	0.19	0.06	0.2	
67	13741	Eagle Creek	SL		Iditarod A5	T22N R50W Sec 1	0.19	2.13	11.8	0.003	<10	120	950	0.54	0.22	0.07	0.21	
68	13740	Eagle Creek	SL		Iditarod A5	T22N R50W Sec 1	0.23	1.58	9.3	0.002	<10	90	790	0.43	0.16	0.06	0.11	
69	13739	Eagle Creek	SL		Iditarod A5	T22N R50W Sec 1	0.32	1.85	10.4	0.008	<10	100	910	0.48	0.18	0.07	0.18	
70	13738	Eagle Creek	SL		Iditarod A5	T22N R50W Sec 1	0.15	1.94	12.7	0.004	<10	160	1040	0.59	0.2	0.09	0.31	
71	13707	Eagle Creek	SL		Iditarod A5	T22N R50W Sec 1	0.47	1.58	9	0.003	<10	70	840	0.3	0.19	0.05	0.09	
71	13732	Eagle Creek	SL		Iditarod A5	T22N R50W Sec 1	0.33	1.44	7.4	0.003	<10	60	830	0.2	0.18	0.04	0.07	
72	13733	Eagle Creek	SL		Iditarod A5	T22N R50W Sec 1	0.21	1.28	9.2	0.003	<10	60	880	0.24	0.17	0.05	0.1	
72	13734	Eagle Creek	SL		Iditarod A5	T22N R50W Sec 1	0.12	1.8	5.8	0.002	<10	90	830	0.42	0.14	0.07	0.1	
73	13744	Eagle Creek	SL		Iditarod A5	T22N R50W Sec 1	0.54	2.56	7.8	0.003	<10	130	950	0.59	0.24	0.08	0.16	
74	13735	Eagle Creek	SL		Iditarod A5	T22N R50W Sec 1	0.09	2.54	13.5	0.003	<10	100	780	0.37	0.23	0.06	0.16	
75	13736	Eagle Creek	SL		Iditarod A5	T22N R50W Sec 1	0.05	1.06	1.8	0.005	<10	30	790	0.18	0.05	0.04	0.03	
75	13737	Eagle Creek	SL		Iditarod A5	T22N R50W Sec 1	0.37	2.06	7.7	0.002	<10	110	870	0.42	0.18	0.08	0.13	
76	13753	Eagle Creek	R	S	FL	Iditarod A5	T22N R50W Sec 1	0.03	0.37	7.6	0.002	<10	340	2000	0.21	0.04	0.01	0.1
77	13706	Eagle Creek	SL		Iditarod A5	T22N R50W Sec 1	0.11	1.67	12.2	0.003	<10	130	1030	0.63	0.22	0.08	0.27	
78	13751	Eagle Creek	SL		Iditarod A5	T22N R50W Sec 1	0.29	2.18	7.9	0.003	<10	300	1190	0.59	0.2	0.24	0.19	
79	13725	Eagle Creek	SL		Iditarod A5	T22N R50W Sec 1	0.19	1.81	6.1	0.003	<10	160	940	0.32	0.19	0.13	0.14	
80	13724	Eagle Creek	SL		Iditarod A5	T22N R50W Sec 1	0.37	1.94	6	0.003	<10	170	990	0.32	0.22	0.14	0.14	
81	13723	Eagle Creek	SL		Iditarod A5	T22N R50W Sec 1	0.31	2.06	8	0.002	<10	180	1040	0.38	0.23	0.11	0.19	
82	13722	Eagle Creek	SL		Iditarod A5	T22N R50W Sec 1	0.22	2.04	9	0.003	<10	190	1070	0.54	0.24	0.12	0.28	
83	13721	Eagle Creek	SL		Iditarod A5	T22N R50W Sec 1	0.16	1.92	11.6	0.002	<10	150	1000	0.59	0.21	0.12	0.23	
84	13720	Eagle Creek	SL		Iditarod A5	T22N R50W Sec 1	0.27	2.05	9.8	0.003	<10	160	980	0.52	0.21	0.11	0.24	
85	13705	Eagle Creek	SL		Iditarod A5	T22N R50W Sec 1	0.27	1.77	6.8	0.003	<10	130	920	0.34	0.19	0.09	0.14	
86	13749	Eagle Creek	SL		Iditarod A5	T22N R50W Sec 1	0.27	1.5	7	0.002	<10	130	960	0.33	0.16	0.07	0.14	
86	13750	Eagle Creek	SL		Iditarod A5	T22N R50W Sec 1	0.24	1.42	7.1	0.003	<10	130	930	0.33	0.15	0.07	0.16	
87	13748	Eagle Creek	SL		Iditarod A5	T22N R50W Sec 1	0.2	1.74	8.9	0.003	<10	110	910	0.29	0.18	0.07	0.12	
88	13747	Eagle Creek	SL		Iditarod A5	T22N R50W Sec 1	0.03	3.57	12.8	0.001	<10	160	840	0.77	0.18	0.1	0.29	
89	13746	Eagle Creek	SL		Iditarod A5	T22N R50W Sec 1	0.03	2.05	7.1	0.001	<10	80	810	0.39	0.12	0.06	0.13	
90	13745	Eagle Creek	SL		Iditarod A5	T22N R50W Sec 1	0.3	1.95	12	0.005	<10	180	1030	0.44	0.17	0.15	0.2	
91	13704	Eagle Creek	SL		Iditarod A5	T22N R50W Sec 1	0.26	2.09	7.4	0.004	<10	180	1010	0.37	0.2	0.12	0.16	
92	13765	Eagle Creek	SL		Iditarod A5	T22N R 50W Sec 12	0.57	2.15	11.5	0.003	<10	400	1310	0.6	0.22	0.47	0.18	
92	13766	Eagle Creek	SL		Iditarod A5	T22N R50W Sec 12	0.32	1.88	7.6	0.003	<10	300	1180	0.5	0.18	0.37	0.14	
93	13767	Eagle Creek	SL		Iditarod A5	T22N R50W Sec 12	0.32	2.02	9.1	0.004	<10	340	1200	0.51	0.18	0.42	0.14	

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Map no.	Sample no.	Location name	Type	Method	Site	Quadrangle	Township/Range/Section	Ag ppm	Al %	As ppm	Au ppm	B ppm	Ba ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm
94	13768	Eagle Creek	SL			Iditarod A5	T22N R50W Sec 12	0.72	2.72	9.9	0.005	<10	550	1360	0.76	0.21	0.64	0.17
95	13769	Eagle Creek	SL			Iditarod A5	T22N R50W Sec 12	0.27	1.98	8.3	0.005	<10	320	1030	0.5	0.16	0.56	0.22
96	13703	Eagle Creek	SL			Iditarod A5	T22N R50W Sec 12	0.35	2.15	8	0.009	<10	450	1240	0.57	0.18	0.53	0.24
97	13770	Eagle Creek	SL			Iditarod A5	T22N R50W Sec 1	0.26	1.86	7.6	0.004	<10	130	1000	0.38	0.19	0.08	0.16
98	13771	Eagle Creek	SL			Iditarod A5	T22N R50W Sec 1	0.29	1.48	8.1	0.004	<10	220	1230	0.41	0.23	0.1	0.19
99	13772	Eagle Creek	R	G	FL	Iditarod A5	T22N R50W Sec 1	0.04	0.3	32.8	0.003	<10	100	690	0.16	0.05	0.01	0.07
100	13702	Eagle Creek	SL			Iditarod A5	T22N R50W Sec 12	0.28	0.98	17	0.016	<10	100	940	0.24	0.14	0.11	0.15
101	13763	Eagle Creek	SL			Iditarod A5	T22N R50W Sec 12	0.74	2.26	8.2	0.003	<10	520	1430	0.7	0.25	0.26	0.35
101	13764	Eagle Creek	SL			Iditarod A5	T22N R50W Sec 12	0.77	2.29	7.9	0.004	<10	560	1450	0.7	0.27	0.27	0.35
102	13762	Eagle Creek	SL			Iditarod A5	T22N R50W Sec 12	0.38	2.45	6.9	0.003	<10	160	910	0.47	0.23	0.16	0.16
103	13761	Eagle Creek	SL			Iditarod A5	T22N R50W Sec 12	0.23	1.9	6.7	0.002	<10	220	980	0.44	0.18	0.34	0.15
104	13760	Eagle Creek	SL			Iditarod A5	T22N R50W Sec 12	0.16	1.89	8.6	0.002	<10	170	840	0.38	0.18	0.09	0.09
105	13759	Eagle Creek	SL			Iditarod A5	T22N R50W Sec 12	0.22	1.66	10	0.003	<10	130	960	0.31	0.2	0.07	0.15
106	13701	Eagle Creek	SL			Iditarod A5	T22N R50W Sec 12	0.02	0.22	1.5	0.001	<10	20	910	<0.05	0.12	0.02	0.02
107	13754	Eagle Creek	SL			Iditarod A5	T22N R50W Sec 12	0.14	3.2	15.6	0.002	<10	80	760	0.53	0.24	0.08	0.17
108	13755	Eagle Creek	SL			Iditarod A5	T22N R50W Sec 12	0.08	2.09	2.5	0.002	<10	40	800	0.31	0.06	0.07	0.04
109	13756	Eagle Creek	SL			Iditarod A5	T22N R50W Sec 12	0.18	1.53	15.6	0.003	<10	80	990	0.31	0.19	0.05	0.09
110	13757	Eagle Creek	SL			Iditarod A5	T22N R50W Sec 12	0.22	1.62	11	0.003	<10	140	1050	0.44	0.19	0.08	0.18
111	13758	Eagle Creek	SL			Iditarod A5	T22N R50W Sec 12	0.16	1.24	7.7	0.004	<10	80	1110	0.49	0.2	0.05	0.17
112	13540	DeCourcy Mountain Mine	R	G	MD	Iditarod A5	T23N R50W Sec 28	1.22	0.3	76.6	0.194	<10	60	350	<0.05	0.2	0.13	<0.01
113	13541	DeCourcy Mountain Mine	R	C	TP	Iditarod A5	T23N R50W Sec 21	0.62	0.24	1010	0.244	<10	100	390	0.28	0.18	0.06	0.2
114	13394	Return Creek	S	PC		Iditarod A5	T23N R50W Sec 32	0.12	1.42	19.4	0.005	10	340	1170	0.69	0.13	0.36	0.25
115	13393	Return Creek Lode	R	RC	FL	Iditarod A6	T 23N R51W Sec 30	0.08	1.02	11.6	0.004	<10	170	700	0.74	0.09	6.29	0.16
116	13388	Mosquito Mountain	R	S	FL	Iditarod A6	T23N R51W Sec 13	1.13	2.2	13.8	0.036	10	100	440	0.54	0.38	4.01	0.09
116	13550	Mosquito Mountain	R	S	RC	Iditarod A6	T23N R51W Sec 13	0.36	0.24	685	0.023	<10	90	640	0.26	0.17	0.02	0.36
117	13563	Mosquito Mountain	R	S	FL	Iditarod A6	T23N R52W Sec 18	0.06	2.43	7.8	0.009	<10	300	1280	0.92	0.1	0.43	0.12
118	13549	American Creek	S	PC		Iditarod A6	T23N R51W Sec 35	0.04	0.52	7.9	0.002	<10	140	680	0.25	0.04	0.1	0.05
119	13410	Little Creek	S	PC		Iditarod A6	T22N R51W Sec 6	0.05	1.24	10.6	0.892	<10	160	950	0.42	0.05	0.36	0.11
119	13411	Little Creek	S	PC		Iditarod A6	T22N R51W Sec 6	0.07	1.3	14.3	0.881	<10	180	960	0.51	0.06	0.35	0.13
119	13556	Little Creek	S	PC		Iditarod A6	T22N R51W Sec 6	0.04	0.98	7.7	--	<10	120	--	0.38	0.04	0.3	0.11
120	13567	Rhyolite Prospect	R	G	TP	Sleetmute D7	T21N R50W Sec 3	0.12	0.56	82.2	0.001	10	40	150	0.96	0.07	0.02	0.42
121	13566	Rhyolite Prospect	R	S	OC	Sleetmute D7	T21N R50W Sec 2	0.67	1.09	176	0.016	<10	180	1100	0.79	0.07	0.32	0.17
122	13585	Horn Mountains	S	PC		Sleetmute C7	T19N R52W Sec 20	0.04	1.66	23.8	<0.001	<10	60	1250	0.71	0.18	0.4	0.13
123	13752	Horn Mountains	S	PC		Sleetmute C7	T 19N R52W Sec 20	0.03	1.36	17	<0.001	<10	50	1270	0.53	0.22	0.34	0.11
124	13590	Central Creek	S	PC		Sleetmute D6	T21N R47W Sec 32	0.05	0.84	22.7	0.021	<10	300	1050	0.52	0.08	0.28	0.35

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125	13498	Egnaty Creek	SL		Sleetmute D5	T21N R47W Sec 34	0.18	0.94	10.2	0.007	<10	200	1070	0.44	0.17	0.34	0.29	
125	13499	Egnaty Creek	S	SS	Sleetmute D5	T21N R47W Sec 34	0.07	0.78	12	0.028	<10	190	940	0.41	0.11	0.57	0.27	
126	13497	Egnaty Creek	SL		Sleetmute D5	T21N R47W Sec 34	0.05	1.86	8	0.005	<10	120	870	0.35	0.14	0.2	0.09	
127	13495	Egnaty Creek	SL		Sleetmute D5	T21N R47W Sec 35	0.07	2.04	11.9	0.005	<10	170	950	0.51	0.2	0.11	0.2	
127	13496	Egnaty Creek	SL		Sleetmute D5	T21N R47W Sec 35	0.08	1.78	8.1	0.003	<10	150	960	0.44	0.16	0.16	0.13	
128	13494	Egnaty Creek	SL		Sleetmute D5	T21N R47W Sec 35	0.06	1.17	12.5	0.004	<10	120	910	0.48	0.25	0.03	0.11	
129	13536	Kuskokwim Point Bar	S	PC	Sleetmute D5	T23N R49W Sec 19	0.06	1.08	9.9	0.528	<10	230	1240	0.61	0.09	0.63	0.26	
130	13480	Georgetown Prospect	R	S	RC	Sleetmute D5	T22N R46W Sec 33	32.9	0.23	27.4	0.72	10	160	370	0.21	0.28	0.02	0.55
130	13481	Georgetown Prospect	R	S	TP	Sleetmute D5	T22N R46W Sec 33	116	0.08	20	28.2	<10	180	390	0.08	0.27	0.02	1.48
131	13557	California Creek	SL		Sleetmute D5	T21N R46W Sec 11	0.23	0.67	17.8	0.003	<10	230	1340	0.6	0.24	0.12	0.17	
132	13558	California Creek	SL		Sleetmute D5	T21N R46W Sec 13	0.53	1.74	10.2	0.005	10	460	1330	0.63	0.15	1.76	0.17	
133	13559	California Creek	R	G	RC	Sleetmute D5	T21N R46W Sec 13	0.07	2.34	8.7	0.003	<10	300	750	0.43	0.07	1.54	0.14
133	13560	California Creek	S	PC	Sleetmute D5	T21N R46W Sec 13	0.08	1.5	16.6	0.002	<10	270	1110	0.5	0.14	0.47	0.21	
134	13561	California Creek	SL		Sleetmute D5	T21N R46W Sec 13	0.03	1.82	6.7	0.002	<10	190	990	0.48	0.13	0.15	0.14	
134	13562	California Creek	R	S	RC	Sleetmute D5	T21N R46W Sec 13	0.1	0.4	3.7	<0.001	10	70	1400	0.33	0.39	0.02	0.06
135	13573	California Creek	SL		Sleetmute D5	T21N R46W Sec 13	0.09	2.61	13.3	0.003	<10	160	910	0.77	0.18	0.12	0.16	
136	13448	California Creek	S	PC	Sleetmute D5	T21N R45W Sec 19	0.07	1.7	26.7	0.098	<10	140	630	0.5	0.08	0.43	0.13	
136	13574	California Creek	R	G	RC	Sleetmute D5	T21N R45W Sec 19	0.03	0.6	1	<0.001	<10	100	2170	0.38	0.02	0.04	0.03
137	13447	California Creek	SL		Sleetmute D5	T21N R45W Sec 30	0.04	2.12	12.8	0.005	<10	80	910	0.29	0.29	0.05	0.08	
138	13500	Oskawalik River	R	G	RC	Sleetmute D5	T21N R45W Sec 16	0.11	1.62	1.5	0.001	10	320	1470	0.94	0.22	5.69	0.28
139	13441	Oskawalik River	R	G	FL	Sleetmute D5	T21N R45W Sec 16	0.02	3.17	3.4	<0.001	<10	100	740	0.31	0.01	1.6	0.14
139	13442	Oskawalik River	R	G	RC	Sleetmute D5	T21N R45W Sec 16	0.05	0.47	49.2	0.004	10	120	2490	0.27	0.3	0.02	0.02
140	13443	Oskawalik River	R	G	RC	Sleetmute D5	T21N R45W Sec 15	0.16	2.46	6.9	0.004	<10	230	1170	1.24	0.03	3.29	0.3
141	13444	Oskawalik River	R	G	RC	Sleetmute D5	T21N R45W Sec 16	0.05	4.82	2.6	0.01	<10	80	300	0.73	0.2	3.85	0.15
142	13446	Oskawalik River	R	G	RC	Sleetmute D4	T21N R45W Sec 22	0.05	2.32	2.8	0.002	<10	140	530	0.36	0.07	1.02	0.11
143	13445	Oskawalik River	R	G	RC	Sleetmute D4	T21N R45W Sec 27	0.08	0.6	7.9	<0.001	10	40	300	0.43	0.36	0.02	0.02
144	13548	Eightmile Creek	S	PC	Sleetmute D5	T20N R45W Sec 26	0.16	1.7	45.2	0.315	<10	190	940	0.74	0.15	0.32	0.31	
145	13538	Fuller and Willis	R	S	OC	Sleetmute D4	T20N R45W Sec 24	0.48	0.35	172	0.004	<10	180	1360	<0.05	0.5	0.01	0.05
146	13450	Ammiline	SL		Sleetmute D4	T20N R45W Sec 25	0.15	1.7	16.4	0.006	<10	150	950	0.33	0.18	0.12	0.15	
147	13449	Ammiline	SL		Sleetmute D4	T20N R45W Sec 25	0.1	1.8	10.8	0.003	<10	110	880	0.41	0.14	0.18	0.21	
148	13537	Alice and Bessie; Parks	R	S	FL	Sleetmute D4	T20N R44W Sec 25	0.47	0.39	265	0.017	10	260	1520	0.66	0.33	2.11	0.32
149	13476	BHP Red Devil Soil Grid	SL		Sleetmute D4	T19N R45W Sec 1	0.15	1.88	7	0.002	<10	70	850	0.31	0.15	0.08	0.08	
149	13477	BHP Red Devil Soil Grid	SL		Sleetmute D4	T19N R45W Sec 1	0.1	1.34	17.9	0.004	<10	100	980	0.46	0.19	0.06	0.19	
150	13478	Barometer	R	G	MD	Sleetmute D4	T19N R45W Sec 6	3.19	0.26	36	0.933	10	40	350	0.79	0.29	0.02	0.63
151	13473	Red Devil Mine	R	G	RC	Sleetmute D4	T19N R44W Sec 6	0.34	0.28	5000	0.235	10	50	490	0.43	0.15	0.14	0.19

Table 2. Analytical results for samples, Aniak Mining District Study, 2004 field season

Map no.	Sample no.	Location name	Type	Method	Site	Quadrangle	Township/Range/Section	Ag ppm	Al %	As ppm	Au ppm	B ppm	Ba ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm
151	13551	Red Devil Mine	R			Sleetmute D4	T19N R44W Sec 6	0.51	0.11	59.9	0.354	<10	20	340	0.16	0.03	0.01	0.21
152	13408	Fairview	R	S	TP	Sleetmute D4	T19N R45W Sec 1	0.55	0.32	1435	<0.001	10	190	540	0.49	0.21	0.01	<0.01
152	13474	Fairview	R	G	TP	Sleetmute D4	T19N R45W Sec 1	0.03	0.49	213	0.009	10	20	210	0.31	0.7	0.03	0.01
152	13475	Fairview	R	S	TP	Sleetmute D4	T19N R45W Sec 1	0.05	0.46	407	0.003	10	60	390	0.46	0.02	0.01	0.01
153	13493	Fuller Creek	S	SS		Sleetmute D4	T 19N R 45W Sec 10	0.06	1.53	8.6	0.002	<10	240	890	0.42	0.11	0.29	0.13
153	13564	Fuller Creek	S	PC		Sleetmute D4	T19N R45W Sec 10	0.1	1.38	12.4	0.002	<10	230	1220	0.54	0.13	0.22	0.21
154	13546	Oskawalik River	S	PC		Sleetmute C5	T18N R47W Sec 30	0.13	1.57	16.1	0.092	<10	380	1090	0.64	0.16	0.35	0.4
155	13581	Red Mountain	R	G	RC	Sleetmute C4	T17N R44W Sec 9	0.55	0.96	248	0.004	<10	160	1050	1.47	3.8	0.03	0.46
155	13582	Red Mountain	R	S	RC	Sleetmute C4	T17N R44W Sec 9	0.71	1.32	539	0.079	<10	220	1300	1.19	6.23	0.01	0.34
155	13583	Red Mountain	R	S	RC	Sleetmute C4	T17N R44W Sec 9	2.07	0.09	113.5	0.018	70	30	150	0.1	4.39	0.01	0.28
155	13584	Red Mountain	R	S	RC	Sleetmute C4	T17N R44W Sec 9	11.3	0.12	1280	0.098	100	40	120	0.12	55.9	0.01	0.65
155	13586	Red Mountain	R	G	FL	Sleetmute C4	T17N R44W Sec 9	1.43	0.09	84.1	0.021	130	10	40	0.14	1.61	0.06	0.07
156	13543	Oskawalik River	R	G	OC	Sleetmute C5	T17N R47W Sec 20	0.05	4.48	9.8	0.006	<10	190	540	0.74	0.01	5.42	0.07
157	13544	Oskawalik River	S	PC		Sleetmute C5	T17N R47W Sec 30	0.04	1.14	27	0.004	<10	90	710	0.5	0.08	0.36	0.09
157	13545	Oskawalik River	R	S	FL	Sleetmute C5	T17N R47W Sec 30	0.06	2.36	17.8	0.006	<10	160	1120	0.75	0.13	1.45	0.2
158	13547	Henderson Mountain	R	S	RC	Sleetmute C5	T17N R47W Sec 24	0.04	1.76	9.3	0.003	<10	190	910	0.58	0.03	0.92	0.05
159	13487	Oskawalik River	S	PC		Sleetmute C6	T17N R48W Sec 33	0.07	2.25	26	1.875	<10	270	850	0.82	0.22	0.43	0.21
159	13488	Oskawalik River	S	SS		Sleetmute C6	T17N R48W Sec 33	0.06	1.97	18	0.034	<10	140	790	0.64	0.19	0.4	0.12
160	13486	Oskawalik River	R	G	RC	Sleetmute C6	T17N R48W Sec 28	0.11	0.44	8.4	0.004	10	50	610	0.41	0.33	0.01	0.02
161	13489	Oskawalik River	S	PC		Sleetmute C6	T17N R48W Sec 31	0.05	2.33	28.4	0.006	<10	150	980	0.84	0.16	0.35	0.16
161	13490	Oskawalik River	S	SS		Sleetmute C6	T17N R48W Sec 31	0.05	1.72	13	0.004	<10	140	810	0.47	0.11	0.33	0.1
162	13485	Oskawalik River	R			Sleetmute C6	T17N R48W Sec 30	0.08	1.88	113	0.005	<10	50	420	0.31	0.14	0.05	0.02
163	13484	Oskawalik River	R	RC	RC	Sleetmute C6	T17N R48W Sec 30	2.34	0.44	70.3	0.052	10	90	780	0.23	0.13	<0.01	0.03
164	13612	Ahgaluk	R	S	RC	Sleetmute C6	T17N R49W Sec 23	0.05	1.88	15.4	0.003	<10	70	470	0.3	0.06	0.16	0.18
165	13609	Ahgaluk	S	PC		Sleetmute C6	T17N R49W Sec 14	0.1	2.32	143.5	0.132	<10	150	1390	1.16	0.23	0.33	0.47
166	13608	Ahgaluk	S	SS		Sleetmute C6	T17N R49W Sec 23	0.2	1.9	67.7	<0.001	<10	150	860	0.55	0.2	0.69	0.33
166	13615	Ahgaluk	S	PC		Sleetmute C6	T17N R49W Sec 23	0.06	2.44	110	0.001	<10	140	960	0.72	0.14	0.28	0.23
167	13613	Ahgaluk	S	PC		Sleetmute C6	T17N R49W Sec 23	0.06	2.14	89.6	0.002	<10	140	990	0.88	0.22	0.25	0.25
167	13614	Ahgaluk	S	PC		Sleetmute C6	T17N R49W Sec 23	0.1	2.87	107.5	0.022	<10	150	1120	0.73	0.16	0.32	0.32
168	13491	Oskawalik River	S	PC		Sleetmute C7	T16N R50W Sec 5	0.06	1.38	35.5	0.005	<10	210	760	1.21	0.13	0.52	0.29
168	13492	Oskawalik River	S	SS		Sleetmute C7	T16N R50W Sec 5	0.05	1.16	17	<0.001	<10	180	760	0.61	0.12	0.33	0.14
169	13731	Gold Run	S	PC		Sleetmute B7	T 15N R50W Sec 5	0.11	2.85	69.9	0.003	<10	110	840	1.09	4.58	0.35	0.27
170	13578	Gold Run	SL			Sleetmute B7	T15N R50W Sec 5	0.08	2.83	12	0.002	<10	110	770	0.64	0.21	0.15	0.13
170	13579	Gold Run	SL			Sleetmute B7	T15N R50W Sec 5	0.05	2.61	8.2	0.001	<10	100	800	0.6	0.16	0.17	0.09
170	13580	Gold Run	SL			Sleetmute B7	T15N R50W Sec 5	0.04	2.25	5.4	0.001	<10	70	740	0.45	0.15	0.13	0.08

Table 2. Analytical results for samples, Aniak Mining District Study, 2004 field season

Map no.	Sample no.	Location name	Type	Method	Site	Quadrangle	Township/Range/Section	Ag ppm	Al %	As ppm	Au ppm	B ppm	Ba ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm
170	13589	Gold Run	SL		Sleetmute B7	T15N R50W Sec 5	0.19	1.67	4.3	<0.001	<10	70	770	0.35	0.22	0.16	0.09	
171	13726	Gold Run	SL		Sleetmute B7	T15N R50W Sec 5	0.05	3.05	13.4	0.002	20	120	760	0.92	0.25	0.17	0.1	
171	13727	Gold Run	SL		Sleetmute B7	T15N R50W Sec 5	0.08	2.83	11.1	0.002	<10	120	780	0.66	0.22	0.16	0.08	
171	13728	Gold Run	SL		Sleetmute B7	T 15N R50W Sec 5	0.09	1.44	3.5	<0.001	<10	50	690	0.26	0.1	0.07	0.06	
171	13729	Gold Run	SL		Sleetmute B7	T 15N R50W Sec 5	0.04	2.64	11	0.001	<10	120	810	0.53	0.24	0.16	0.1	
171	13730	Gold Run	SL		Sleetmute B7	T 15N R50W Sec 5	0.05	2.04	11.9	0.001	<10	110	800	0.43	0.29	0.09	0.1	
172	13570	Mountain Top	R	G	RC	Sleetmute B6	T15N R48W Sec 18	0.57	0.76	17.9	0.006	10	190	560	0.14	0.23	0.03	0.9
172	13571	Mountain Top	R	G	RC	Sleetmute B6	T15N R48W Sec 18	0.36	0.38	17.7	0.004	<10	180	410	0.34	0.12	0.04	2.06
173	13568	Mountain Top	R	S	MD	Sleetmute B6	T15N R48W Sec 18	0.41	0.58	14.4	0.019	10	40	230	<0.05	0.27	1.14	0.19
173	13569	Mountain Top	R	S	RC	Sleetmute B6	T15N R48W Sec 18	0.09	0.4	16.5	0.005	<10	100	310	0.12	0.08	1.02	0.07
173	13572	Mountain Top	R	S	MD	Sleetmute B6	T15N R48W Sec 18	0.46	0.54	38.2	0.009	40	210	1340	<0.05	0.17	0.03	0.31
174	13399	HVG 1-117	S	PC		Sleetmute B7	T14N R50W Sec 16	0.07	2.52	47.3	0.029	10	170	810	0.79	0.33	0.38	0.21
174	13400	HVG 1-117	S	SS		Sleetmute B7	T14N R50W Sec 16	0.09	1.4	27.8	0.002	10	90	580	0.59	0.16	0.42	0.21
175	13395	Girl Creek	R	S	OC	Sleetmute A7	T13N R51W Sec 17	0.26	3.5	21.3	0.007	<10	70	630	0.52	0.27	0.63	0.26
175	13396	Girl Creek	R			Sleetmute A7	T 13N R51W Sec 17	0.37	3.32	17.6	0.005	<10	90	730	0.55	0.31	0.79	0.23
175	13397	Girl Creek	S	PC		Sleetmute A7	T13N R51W Sec 17	0.14	2.88	147.5	0.923	<10	90	710	0.72	1.19	0.39	0.29
175	13398	Girl Creek	S	PC		Sleetmute A7	T13N R51W Sec 17	0.05	3.09	34.1	0.095	10	80	610	0.81	0.17	0.46	0.12
175	13577	Girl Creek	R	S	FL	Sleetmute A7	T13N R51W Sec 17	0.37	4.98	16.3	0.008	<10	60	510	0.75	0.4	1.66	0.73
176	13604	Fortyseven Creek	R	RC	OC	Sleetmute A6	T11N R50W Sec 5	7.4	0.22	1.36%	2.75	10	60	500	0.52	20.4	0.14	0.76
176	13605	Fortyseven Creek	R	S	OC	Sleetmute A6	T11N R50W Sec 5	24.5	0.19	1.44%	0.505	10	60	420	0.5	40.9	0.12	0.92
177	13419	Fortyseven Creek	R	S	TP	Sleetmute A6	T11N R50W Sec 17	5.63	0.09	5480	0.292	10	20	180	0.41	6.65	0.01	0.22
177	13420	Fortyseven Creek	R	C	TP	Sleetmute A6	T11N R50W Sec 8	3.23	0.2	2.17%	2.68	<10	80	190	0.23	155.5	0.03	0.26
177	13421	Fortyseven Creek	R	S	RC	Sleetmute A6	T11N R50W Sec 5	7.06	0.17	6140	0.462	10	60	620	0.43	3.24	0.03	1.29
178	13416	Fortyseven Creek	R	S	TP	Sleetmute A6	T11N R50W Sec 17	0.44	0.01	29.3	0.005	<10	<10	20	0.06	7.2	0.01	0.01
178	13417	Fortyseven Creek	R	S	TP	Sleetmute A6	T11N R50W Sec 17	10.15	0.07	6340	0.172	10	10	70	0.28	18.85	0.01	0.42
178	13418	Fortyseven Creek	R	S	TP	Sleetmute A6	T11N R50W Sec 17	103	0.01	1905	1.8	<10	<10	10	0.05	86.2	0.01	4.82
179	13603	Fortyseven Creek	R	S	FL	Sleetmute A6		0.06	0.59	12.4	<0.001	<10	50	190	0.23	0.07	0.07	0.12
180	13602	Fortyseven Creek	R	S	FL	Sleetmute A6	T11N R50W Sec 15	0.05	1.21	22.9	0.003	<10	60	390	0.25	0.09	0.12	0.04
181	13414	Fortyseven Creek Placer	S	PC		Sleetmute A6	T11N R50W Sec 16	0.1	1.92	153.5	0.049	<10	160	1300	0.67	0.56	0.2	0.16
182	13412	Fortyseven Creek Placer	S	PC		Sleetmute A6	T11N R50W Sec 16	0.28	1.96	253	3.3	<10	200	1280	0.71	0.67	0.26	0.23
182	13413	Fortyseven Creek Placer	R	S	FL	Sleetmute A6	T11N R50W Sec 16	0.34	0.22	15.6	<0.001	20	<10	140	0.27	2.53	0.16	0.03
183	13415	Fortyseven Creek Placer	S	PC		Sleetmute A6	T11N R50W Sec 16	0.08	1.82	196.5	3.14	<10	140	1330	0.66	0.49	0.22	0.2
184	13427	Stevens Creek	R	S	FL	TaylorMtn D4	T 10N R46W Sec 24	0.05	0.1	14.4	0.001	<10	<10	80	0.21	0.14	0.02	0.01
184	13610	Stevens Creek	R	S	FL	TaylorMtn D4	T10N R46W Sec 24	0.1	0.23	27.8	0.001	<10	<10	40	0.63	0.5	0.05	0.02
184	13611	Stevens Creek	R	S	RC	TaylorMtn D4	T 10N R46W Sec 24	0.09	0.02	170.5	0.006	<10	10	30	0.26	0.61	<0.01	0.01

Table 2. Analytical results for samples, Aniak Mining District Study, 2004 field season

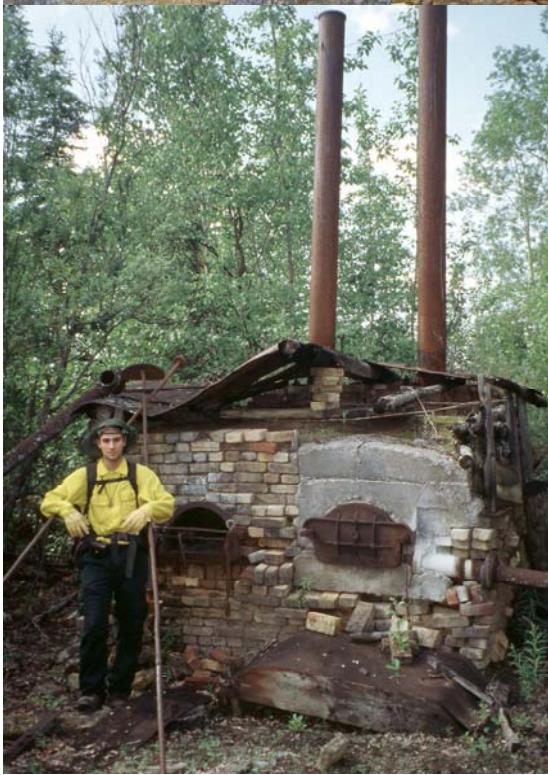
Map no.	Sample no.	Location name	Type	Method	Site	Quadrangle	Township/Range/Section	Ag ppm	Al %	As ppm	Au ppm	B ppm	Ba ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm
185	13607	Whitewater Tourmaline	R	RC	RC	TaylorMtn D4	T 10N R46W Sec 28	0.62	0.3	100.5	0.031	10	20	240	0.4	0.96	0.01	0.01
186	13422	Whitewater Tourmaline	R	S	FL	TaylorMtn D4	T 10N R46W Sec 28	3.22	0.07	313	0.042	70	<10	40	0.93	0.68	<0.01	0.04
187	13616	Taylor Creek Mine	S	PC		TaylorMtn D4	T 9N R46W Sec 13	0.25	1.74	49.8	7.66	<10	410	1400	0.79	0.28	0.26	0.22
187	13617	Taylor Creek Mine	S	PC		TaylorMtn D4	T9N R46W Sec 13	0.24	2.03	36	15.2	<10	150	1090	0.85	0.21	0.2	0.23
188	13618	Millie Creek Mine	S	PC		TaylorMtn D4	T 9N R46W Sec 14	2.14	1.69	7	20.5	10	170	770	0.64	0.09	0.13	0.07
189	13606	Taylor Mountain West	S	PC		TaylorMtn D4	T9N R46W Sec 16	60.1	2.08	73.5	305	<10	320	920	0.87	0.34	0.2	0.34
189	13637	Taylor Mountain West	S	Slu		TaylorMtn D4	T9N R46W Sec 16	556	0.85	18.5	--	<10	140	540	0.31	285	0.12	0.33
189	13644	Taylor Mountain West	S	Slu		TaylorMtn D4	T9N R46W Sec 16	>1500	0.17	15.2	--	<10	90	90	0.06	414	0.04	0.21
190	13425	Whitewater Creek	S	PC		TaylorMtn D5	T 9N R46W Sec 7	0.04	1.61	19.6	2.25	<10	120	870	0.54	0.19	0.19	0.12
190	13426	Whitewater Creek	S	PC		TaylorMtn D5	T 9N R 46W Sec 7	0.03	1.35	15.3	1.395	<10	150	1090	0.65	0.09	0.18	0.18
191	13423	Kiknik Creek	S	PC		TaylorMtn D5	T 9N R 47W Sec 23	0.07	0.93	12.8	5.55	<10	180	810	0.51	0.06	0.16	0.12
191	13424	Kiknik Creek	S	PC		TaylorMtn D5	T 9N R47W Sec 23	0.05	2.19	34.7	0.192	<10	140	1190	0.65	0.21	0.22	0.22
193	13404	Moore Creek	S	PL		Iditarod C3	T29N R42W Sec 21	0.18	2.13	67.9	0.639	<10	920	1710	1.22	0.26	0.19	1.7
194	13773	Murray Creek	R	G	RC	Sleetmute C7	T17N R52W Sec 18	0.09	1.41	22.4	0.001	<10	160	520	0.69	0.05	0.81	0.51
NA	13627	2004 quality control sample	S	Split	Pulp			9.65	0.02	34.9	398	<10	30	20	<0.05	2.93	9.31	0.09
NA	13628	2004 quality control sample	S	Split	Pulp			1.2	0.45	208	0.742	10	20	330	0.97	0.06	7.43	0.1
NA	13629	2004 quality control sample	S	Split	Pulp			185	0.12	1210	0.12	130	20	40	0.29	520	0.03	19.3
NA	13630	2004 quality control sample	S	Split	Pulp			81.3	0.53	378	0.026	70	90	280	0.21	33.6	0.08	15.25
NA	13631	2004 quality control sample	S	Split	Pulp			4.07	0.61	>10000	0.708	<10	10	100	0.21	3.64	0.46	5.15
NA	13632	2004 quality control sample	S	Split	Pulp			1.32	0.73	7	0.062	<10	30	30	0.15	0.46	>15	0.45
NA	13633	2004 quality control sample	S	Split	Pulp			1.84	1.64	2.5	0.188	<10	10	10	<0.05	0.73	0.45	0.23
NA	13634	2004 quality control sample	S	Split	Pulp			96.4	1.79	1855	0.01	<10	10	230	0.33	4.67	0.13	54.2
NA	13635	2004 quality control sample	S	Split	Pulp			67.1	0.9	7.8	0.132	<10	10	220	0.45	129	0.58	>500
NA	13636	2004 quality control sample	S	Split	Pulp			73.2	0.4	3.6	0.457	<10	<10	40	0.17	280	1.18	>500

Table 2. Analytical results for samples, Aniak Mining District Study, 2004 field season

Map no.	Sample no.	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Fe %	Ga ppm	Ge ppm	Hf ppm	Hg ppm	In ppm	K %	La ppm	Li ppm	Mg %	Mn ppm	Mo ppm	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm
185	13607	43	0.7	148	1.47	107.5	1.42	1.04	0.08	0.02	0.19	0.024	0.18	22.6	2.7	0.01	25	0.82	<0.01	0.32	4.4	330	62.2
186	13422	107	2	147	0.16	106.5	3.62	1.94	0.2	0.22	0.16	0.013	0.01	51.2	0.5	0.01	33	2.15	<0.01	3.15	10.4	550	2.2
187	13616	16.2	20.7	66	1.25	59.4	5	3.99	0.09	0.12	9.15	0.034	0.17	7.3	42.6	0.64	2280	2.56	0.02	<0.05	70.6	950	15
187	13617	21.2	20.4	59	1.68	52.7	5.19	4.48	0.09	0.1	10.8	0.035	0.2	10.6	44.7	0.82	1270	1.32	0.02	0.15	74.8	980	12.3
188	13618	18.5	9.8	61	1.42	26	2.22	3.77	0.05	0.07	4.22	0.018	0.3	9.4	34.3	0.5	181	0.6	0.03	0.21	42	490	5.8
189	13606	32.9	23.3	88	1.44	62.1	4.64	4.98	0.09	0.13	267	0.081	0.4	15.3	41.2	0.51	1660	1.56	0.03	0.44	59.8	750	15.7
189	13637	173	14.6	56	0.34	36.7	6.34	5.22	0.37	0.23	37.7	0.762	0.1	89.3	27.5	0.29	5130	2.42	0.01	5.74	37	470	8.9
189	13644	382	6.8	37	<0.05	11.8	12.4	4.21	0.4	0.19	171	4.02	0.03	187	2.1	0.16	>10000	1.77	0.01	0.7	18.2	120	6.5
190	13425	31	12	74	2.21	26.4	3.01	3.69	0.08	0.05	0.07	0.019	0.21	15.8	32.8	0.64	389	2.45	0.02	0.34	40	710	5.8
190	13426	10	15.8	31	0.61	29.5	4.74	3.65	0.1	0.05	0.17	0.032	0.08	3.4	28.4	0.45	1035	1.14	0.01	0.15	61.3	1220	7.8
191	13423	8.69	9.4	41	0.51	20.7	3.53	2.26	0.05	0.04	0.88	0.02	0.1	3.7	17.4	0.28	583	0.95	0.02	0.2	37.8	890	6.3
191	13424	34.5	18.3	54	3.34	29.3	3.77	5.91	0.13	0.05	0.16	0.026	0.22	16.5	42.7	0.83	896	0.86	0.01	1.1	56.6	820	8.6
193	13404	20.1	31	84	1.68	105	6.81	5.34	0.14	0.07	2.66	0.044	0.12	6.3	22.8	0.67	4250	6.23	<0.01	0.12	95.3	1360	29.7
194	13773	15.05	37.1	278	0.46	37.3	5.58	5.25	0.22	0.06	1.3	0.048	0.05	6.8	18.8	0.94	1080	1.5	0.02	0.05	129.5	630	10.3
NA	13627	98.25	10.7	2	<0.05	3.4	0.47	1.09	0.48	0.41	0.44	<0.005	<0.01	27.7	0.4	<0.01	611	0.07	<0.01	<0.05	6.5	<10	59.9
NA	13628	27.4	5.4	46	2.81	10.4	5.26	1.66	0.08	0.04	5.51	0.018	0.08	15.9	23.5	0.26	1200	12.95	<0.01	0.05	11	430	13.9
NA	13629	7.98	0.7	89	0.17	65.4	3.06	0.59	0.28	0.05	3.13	31.8	0.01	3	0.6	0.02	106	8.74	<0.01	0.08	4.4	710	1275
NA	13630	28	2	152	2.24	50.1	1.99	2.76	0.16	0.12	1.95	11.1	0.2	12.2	17	0.33	125	3.68	0.01	0.89	12.8	610	354
NA	13631	15.15	3.6	107	1.78	47.6	3.35	2.19	0.1	0.04	169.5	0.096	0.1	7.7	8.5	0.33	534	20.2	<0.01	<0.05	7.8	190	301
NA	13632	6.36	44.5	18	0.24	3560	1.79	1.55	0.12	0.29	0.31	0.019	0.05	2.7	3.5	0.27	96	0.78	<0.01	0.63	3260	270	11.8
NA	13633	4.01	81.1	1040	0.4	3290	3.57	3.84	0.2	0.07	0.28	0.025	0.02	1.7	5.2	3.61	133	0.45	<0.01	0.09	4660	170	5.1
NA	13634	19.7	18.8	46	0.64	670	>15	7.23	0.7	0.03	0.14	2.38	0.1	9.5	32.4	1.64	645	2.13	<0.01	0.1	16.4	390	5.52%
NA	13635	4.21	52	21	0.77	9320	>15	3.43	0.42	0.17	0.1	0.762	0.06	1.8	7.7	0.33	308	10.1	0.04	0.84	58.9	320	352
NA	13636	4.31	70.8	18	0.05	584	5.22	1.4	0.32	0.14	0.49	2.12	0.01	1.7	1.4	0.17	1330	1.18	<0.01	0.59	19.3	350	5930

Table 2. Analytical results for samples, Aniak Mining District Study, 2004 field season

Map no.	Sample no.	Pd ppm	Pt ppm	Rb ppm	Re ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm
185	13607	0.002	<0.005	15.3	<0.001	<0.01	42	0.4	3.3	0.4	<5	7	<0.01	0.01	7.1	0.005	0.06	2.96	1	10	3.21	2	<0.5
186	13422	<0.001	<0.005	0.6	<0.001	0.01	73	0.4	3.3	0.5	15	1.8	0.12	0.02	31.9	0.022	<0.02	15.3	4	80	6.64	7	5.7
187	13616	0.002	<0.005	9.7	<0.001	0.03	4.51	6.1	0.9	0.8	19	23.9	<0.01	0.08	3.3	0.008	0.08	0.65	48	20	11.05	147	4.9
187	13617	0.001	<0.005	14.3	<0.001	<0.01	2.52	5.2	1.4	1.9	34	17	<0.01	0.12	3.8	0.031	0.11	0.84	58	30	9.27	144	5.4
188	13618	0.001	<0.005	16.4	<0.001	0.01	1.64	4	0.3	0.8	<5	11.8	<0.01	0.02	2.6	0.022	0.1	0.6	41	20	6.07	91	3.8
189	13606	0.004	<0.005	18.7	0.004	0.03	5.13	6.6	1.1	74.1	2350	15.8	<0.01	0.06	4.6	0.029	0.23	1.3	67	820	12.15	121	6.8
189	13637	--	--	5.9	0.002	<0.01	3.31	24.3	2	2.6	1400	7.9	0.17	1.09	23.2	0.118	0.13	6.03	87	15.70%	19.8	158	5
189	13644	--	--	0.4	0.002	0.01	0.99	97.6	1.2	11.8	2230	2.4	0.06	1.37	39.1	0.016	0.07	19.5	31	36%	50.5	135	2.1
190	13425	0.002	<0.005	14.6	<0.001	<0.01	2.83	3.4	0.5	0.5	<5	12.8	<0.01	0.04	3.2	0.033	0.09	0.8	46	60	7.34	88	2.5
190	13426	<0.001	<0.005	7.5	0.001	<0.01	0.72	4.5	1	0.3	<5	15.8	<0.01	0.06	2.1	0.006	0.07	0.59	47	<10	7.32	141	2.3
191	13423	0.002	<0.005	7	<0.001	0.01	0.61	2.9	0.6	0.3	<5	14.5	<0.01	0.03	1.5	0.008	0.05	0.46	34	30	6.49	89	2.1
191	13424	0.004	<0.005	21.3	0.001	<0.01	3.06	4.6	0.9	0.8	<5	19.8	<0.01	0.06	3.4	0.057	0.2	0.81	67	<10	7.8	120	2.2
193	13404	0.002	<0.005	10.2	<0.001	<0.01	2.67	8.8	1.3	0.5	<5	19.8	<0.01	0.08	3.3	0.013	0.28	1.23	71	60	13.2	145	3.2
194	13773	0.001	<0.005	2.7	<0.001	0.01	1.89	18.8	0.7	0.2	<5	36	0.01	0.07	0.8	<0.005	<0.02	0.3	98	10	12.35	77	1.3
NA	13627	<0.001	<0.005	<0.1	0.002	0.51	6.87	0.2	4.7	<0.2	59	4080	0.03	0.06	1.3	<0.005	0.05	5.95	<1	>10000	127.5	6	<0.5
NA	13628	<0.001	<0.005	7.3	0.001	0.06	539	3.6	0.4	0.3	<5	27.8	<0.01	0.01	4	<0.005	0.38	15.8	53	120	11.8	18	0.7
NA	13629	0.001	<0.005	0.5	<0.001	0.04	824	0.7	55.2	82.2	1625	13.2	<0.01	50.7	3.4	<0.005	0.13	0.84	5	40	3.71	283	2.2
NA	13630	0.001	<0.005	14.1	0.001	0.02	297	3	21.4	34.9	312	9.8	<0.01	5.43	6	0.055	0.22	0.91	44	60	6.39	223	3.6
NA	13631	<0.001	<0.005	6.9	0.006	2	206	1.1	9.6	0.6	<5	10.8	<0.01	0.39	1.5	<0.005	0.09	0.41	20	30	4.71	434	0.8
NA	13632	0.589	0.432	3.9	0.008	0.8	0.7	1.7	4.4	0.3	<5	599	0.01	0.78	1.6	0.056	0.02	0.85	11	80	4.08	36	10.2
NA	13633	0.904	0.903	1.2	0.015	0.87	0.38	3.8	6.6	0.3	<5	5.4	<0.01	1.35	0.4	0.069	0.03	0.28	53	10	2.11	35	1.8
NA	13634	0.001	<0.005	6.4	<0.001	2.26	63.8	2.2	171	1.2	14	11.7	<0.01	4.44	4.8	<0.005	0.15	0.85	31	<10	8.43	7880	<0.5
NA	13635	<0.001	<0.005	6.1	0.022	>10	1.78	1.1	88.9	2.6	14	67.2	<0.01	2.97	1.1	0.048	0.13	2.31	49	<10	4.36	5.67%	4.6
NA	13636	0.001	<0.005	0.4	<0.001	5.9	2.07	2	44.7	1.2	10	36.6	<0.01	5.79	0.7	0.082	0.11	0.22	14	<10	2.83	7.46%	2.6



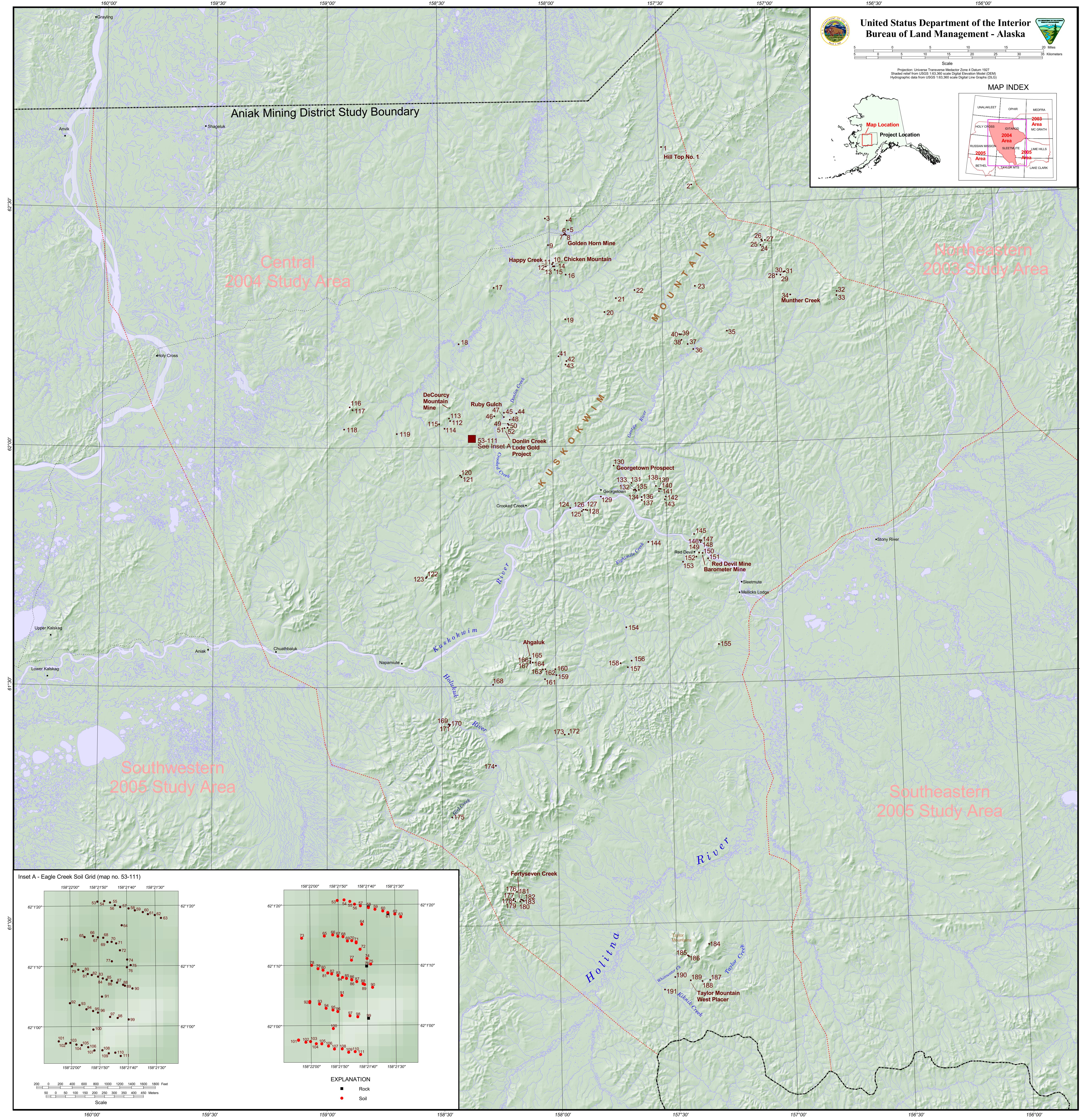


PLATE 1. Sample location map of the central part, Aniak Mining District study area, Alaska.