GEOLOGICAL SAMPLING AND MAGNETIC SURVEYS OF A TUNGSTEN OCCURRENCE, BONANZA CREEK AREA HODZANA HIGHLANDS, ALASKA

By Karen H. Clautice

********** Open File Report 80-83

UNITED STATE DEPARTMENT OF THE INTERIOR
James G. Watt, Secretary
BUREAU OF MINES
Robert C. Horton, Director

CONTENTS

	Page
Abstract	1
Introduction	2
Location and physiography	2
Previous work	3
Regional geology	9
Acknowledgments	10
Analytical data	10
Stream sediments	10
Soils	13
Panned concentrates	13
Rocks	20
Mineral occurrences	23
Tungsten	23
Molybdenum	29
Magnetic Surveys	31
Windy Knob	32
Strange Ridge	32
References	36
Appendix	39
Appendix A - Stream sediment analyses	39
Appendix B - Stream sediment, soil, and rock analyses	41
Appendix C - Soil sample analyses	57
Appendix D - Soil sample analyses, Windy Knob soil grid	59
Appendix E - Soil sample analyses, Strange Ridge soil grid	60

CONTENTS - Continued

	Page
Appendix F - Panned concentrate analyses	63
Appendix G - Rock sample analyses	72
Appendix H - Field descriptions of BZ rock samples	75
Appendix I - Major oxide analyses	80

ILLUSTRATIONS

	Page
1. Project location map	4
2. Bonanza Creek study area	5
3. Northwestern portion of the project area	6
4. View of Strange Ridge in the northeastern portion of the project area	7
5. Stream sediment sample location map	11
6. Tungsten concentration in stream sediments	14
7. Copper and zinc concentration in stream sediments	15
8. Soil sample location map	16
9. Windy Knob soil sample grid	in pocket
10. Strange Ridge soil sample grid	in pocket
11. Copper and tungsten concentration in soils	17
12. Lead and zinc concentration in soils	18
13. Panned concentrate sample location map	19
14. Rock sample location map	21
15. Trench sample locations	22
16. Scheelite occurrence locations	24
17. Molybdenite occurrence locations	25

ILLUSTRATIONS - Continued

Page

18. Typical outcrop of calc-silicate schist with scheelite mineralization on fracture surfaces..... 27

19. Aerial view of scheelite occurrence location on a limonite-stained spur on Strange Ridge..... 28

20. Small aplite dikes cutting through knobby weathered garnet, pyroxene, calc-silicate schist..... 30

21. Windy Knob magnetic survey..... in pocket

22. Strange Ridge magnetic survey..... in pocket

23. Magnetic profiles across a scheelite occurrence on Strange Ridge..... 34

LIST OF CAPTIONS

FIGURE 1. - Project location map.

FIGURE 2. - Bonanza Creek study area.

FIGURE 3. - Northwestern portion of the project area. (Windy Knob prospect trenches indicated.)

FIGURE 4. - View of Strange Ridge in the northeastern portion of the project area. (Approximate location of soil sample and magnetic survey grids indicated.)

FIGURE 5. - Stream sediment sample location map.

FIGURE 6. - Tungsten concentration in stream sediments.

FIGURE 7. - Copper and zinc concentration in stream sediments.

FIGURE 8. - Soil sample location map.

FIGURE 9. - Windy Knob soil sample grid.

FIGURE 10. - Strange Ridge soil sample grid.

FIGURE 11. - Copper and tungsten concentration in soils.

FIGURE 12. - Lead and zinc concentration in soils.

FIGURE 13. - Panned concentrate sample location map.

FIGURE 14. - Rock sample location map.

FIGURE 15. - Trench sample locations.

FIGURE 16. - Scheelite occurrence locations.

FIGURE 17. - Molybdenite occurrence locations.

FIGURE 18. - Typical outcrop of calc-silicate schist with scheelite mineralization on fracture surfaces. (The scheelite was located with an ultra-violet light and circled with a marking pen. Photo from NE 1/4 SE 1/4 sec 22 T. 21 N., R. 11 W.)

FIGURE 19. - Aerial view of scheelite occurrence on a limonite-stained spur on Strange Ridge. (The approximate location of magnetic survey

lines a, b, and c are indicated. The magnetic profiles are shown in figure 23.)

FIGURE 20. - Small aplite dikes cutting through knobby weathered garnet, pyroxene, calc-silicate schist. Scheelite mineralization occurs on fracture surfaces of aplite dikes, cutting the north side of this knob. (Photo from hillside in NW 1/4 NW 1/4 sec. 30, T 21 N., R. 11 W.)

FIGURE 21. - Windy Knob magnetic survey.

FIGURE 22. - Strange Ridge magnetic survey.

FIGURE 23. - Magnetic traverses across a scheelite occurrence on Strange Ridge.

GEOLOGICAL SAMPLING AND MAGNETIC SURVEYS OF A TUNGSTEN OCCURRENCE, BONANZA CREEK AREA, HODZANA HIGHLANDS, ALASKA

By Karen H. Clautice[1]

ABSTRACT

A tungsten occurrence at the margin of the Kanuti batholith in the Bonanza Creek area was investigated by the Bureau of Mines for the Bureau of Land Management as part of an inventory of mineral deposits within and bordering the trans-Alaska oil pipeline corridor. Field work was conducted over a period of six weeks during the summer of 1979.

Analyses and sample location maps were compiled from stream sediment, panned concentrate, soil, and rock samples. Analytical methods included atomic absorption, x-ray fluorescence, emission spectrography, and neutron activation.

Tungsten and molybdenum, occurring in the minerals scheelite and molybdenite, were found in trace amounts throughout the 30 sq mi project area. Highest grade tungsten mineralization (0.89% W) was found in a dark green, pyrrhotite-rich, chalcopyrite-bearing tactite adjacent to a biotite quartz monzonite contact. The tactite occurs in pods up to a maximum 10 ft in width. Scheelite was most commonly found in a relatively sulfide-free calc-silicate schist that was of lower grade than the tactite. Traces of molybdenite occur in quartz veins, pegmatite and aplite dikes. No well-developed quartz stockworks were observed.

---

[1] Geologist (now a private consultant, Fairbanks, Alaska)

Magnetic surveys show calc-silicate country rock to be more magnetically susceptible than granitic rock. One magnetic anomaly of 1700-gammas within calc-silicate schist coincided with a group of anomalous soil samples high in W, Mo, Pb, Cu, and Zn.

INTRODUCTION

This report is a compilation of data collected during a study of a tungsten occurrence in the Bonanza Creek area, Alaska. It includes the following: 1) analytical data for stream sediments, soils, panned concentrates, and rocks, including major oxide analyses of representative whole rock samples; 2) descriptions of scheelite and molybdenite mineralization located within the project area; and 3) the results of two magnetic surveys conducted in the Windy Knob and Strange Ridge areas. This information was collected as part of a study of mineral resources in the vicinity of the trans-Alaska oil pipeline corridor made by the Bureau of Mines, Alaska Field Operations Center (AFOC) for the Bureau of Land Management (BLM).

Field work was conducted over a six-week period during the summer of 1979. Access to the study area was by helicopter and all sampling was done on foot.

LOCATION AND PHYSIOGRAPHY

The Bonanza Creek study area occupies the east central portion of the Bettles C-1 Quadrangle and the west central portion of the Beaver C-6 Quadrangle. It covers approximately 30 sq mi between 149° 50' to 150° 05' west longitude and 66° 36' to 66° 38' north latitude. The Old Man airstrip along the pipeline haul road is located 20 air miles to the

southwest and the town of Bettles is approximately 50 air miles to the northwest. Fairbanks is 200 mi to the south via the haul road (figs. 1 and 2).

The area is within the Kokrines-Hodzana physiographic province (15)[2].

---

[2] Underlined numbers in parentheses refer to items in the list of references at the end of this report.

Elevations range from 2000 to 4000 ft. There is no evidence of glaciation on the rounded ridges that comprise the region. High alpine tundra consisting of ground level vegetation and frost-riven rock rubble are typical of the western portions of the area (fig. 3). In the eastern portion of the area the more deeply incised creeks are choked with tall alder, willow, and thickets of dwarf birch. Rock outcrops are more common in the east due to the steeper topography (fig. 4). The geographic place names of this area are those used by mining industry and Bureau of Mines personnel during the last several years.

PREVIOUS WORK

The Reef and Bonanza claim blocks were staked in the area for tungsten by B.P. Alaska Exploration Inc. and recorded in September, 1977 (State of Alaska Division of Geological and Geophysical Surveys Kardex numbers 39-25 and 40-9). These block locations are shown in figure 2. In 1978, it was determined that the claims were invalid because they fell within the lands withdrawn from mineral entry under the "D-2 authority", Public Land Order 5250, part of the Alaska Native Claims Settlement Act of 1971, Public Law 92-203. Since 1978, the Doyon Native Corporation

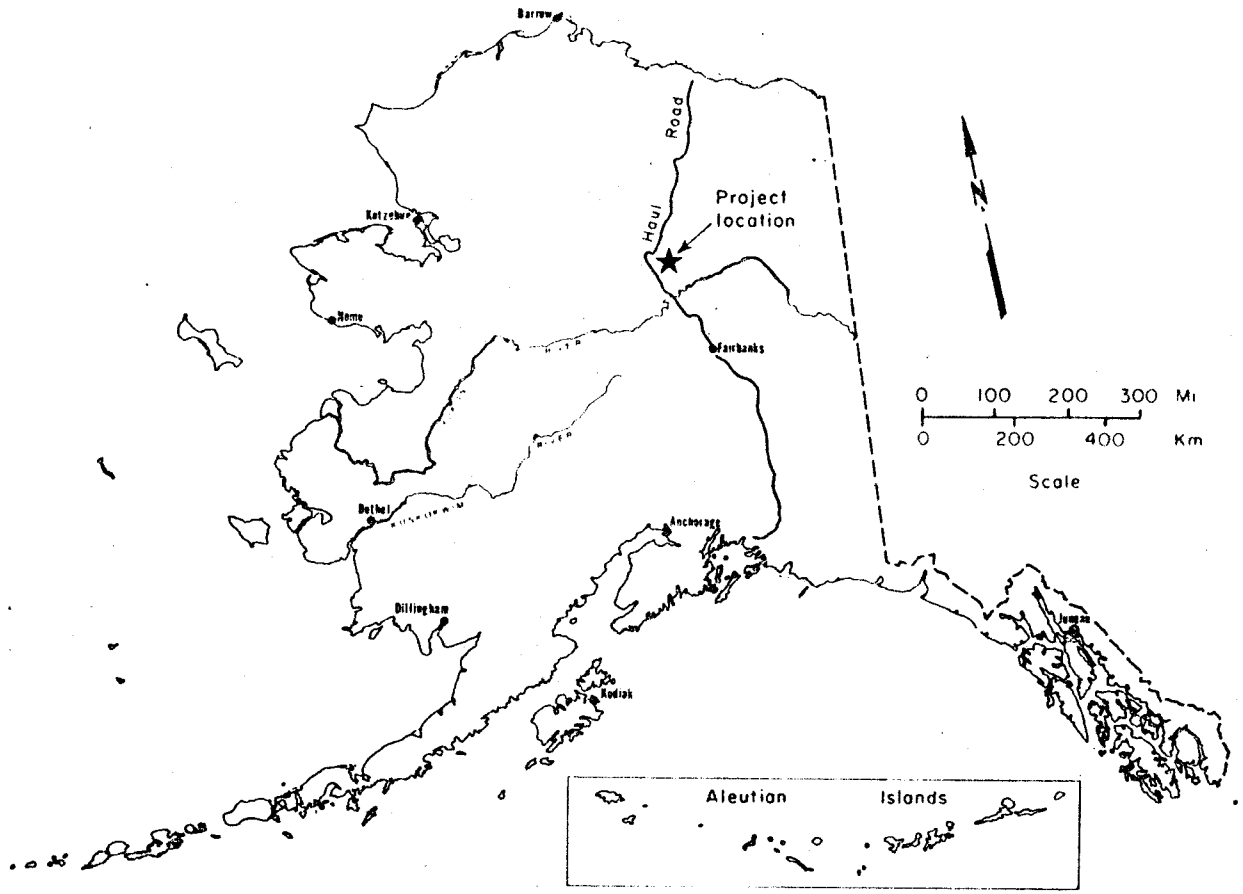
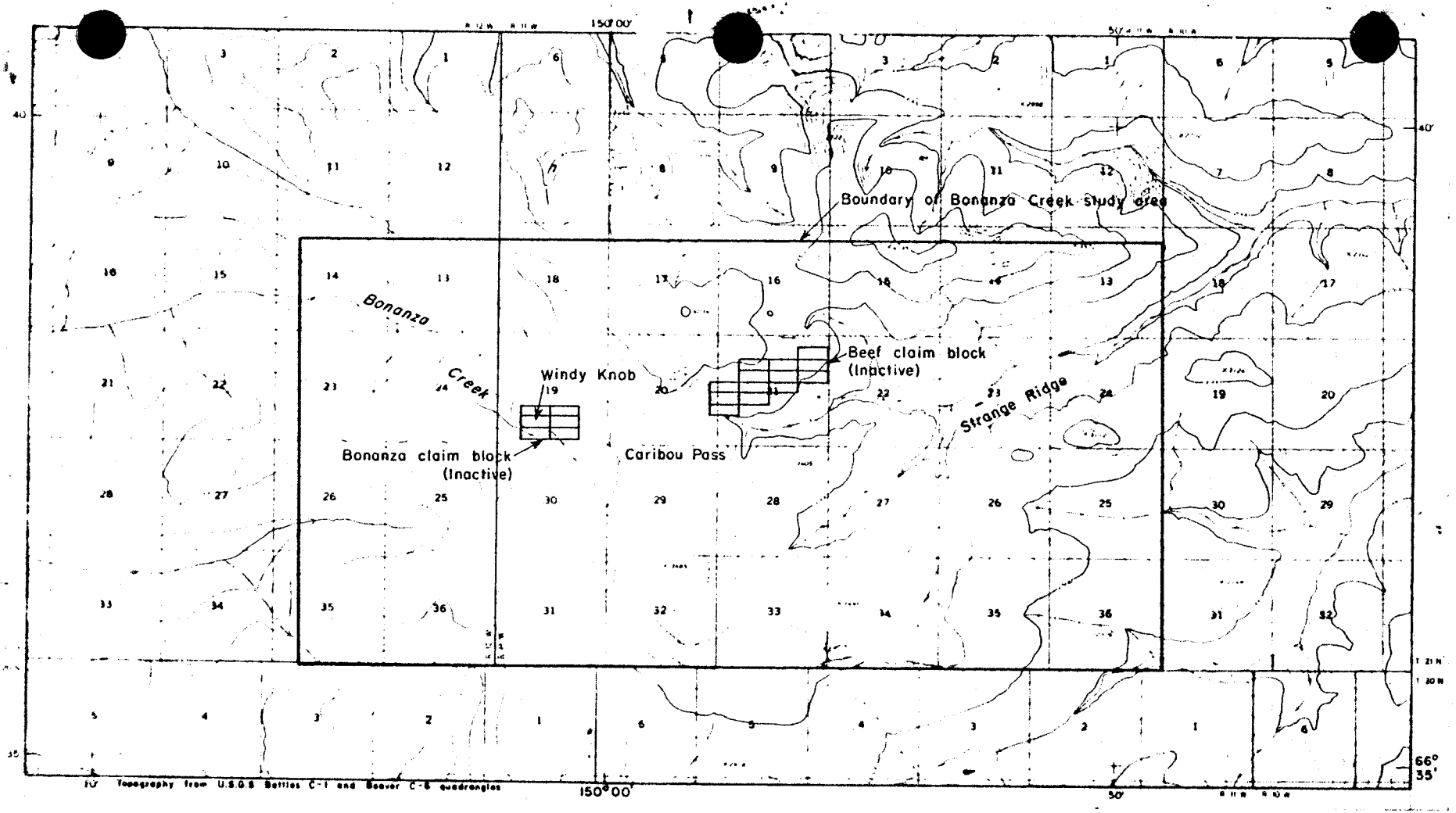
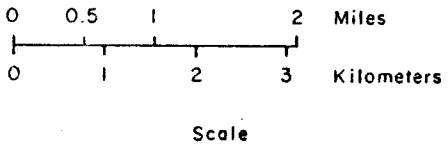


Figure 1.– Project location map





Contour interval 100 feet

Figure 2.— Bonanza Creek study area

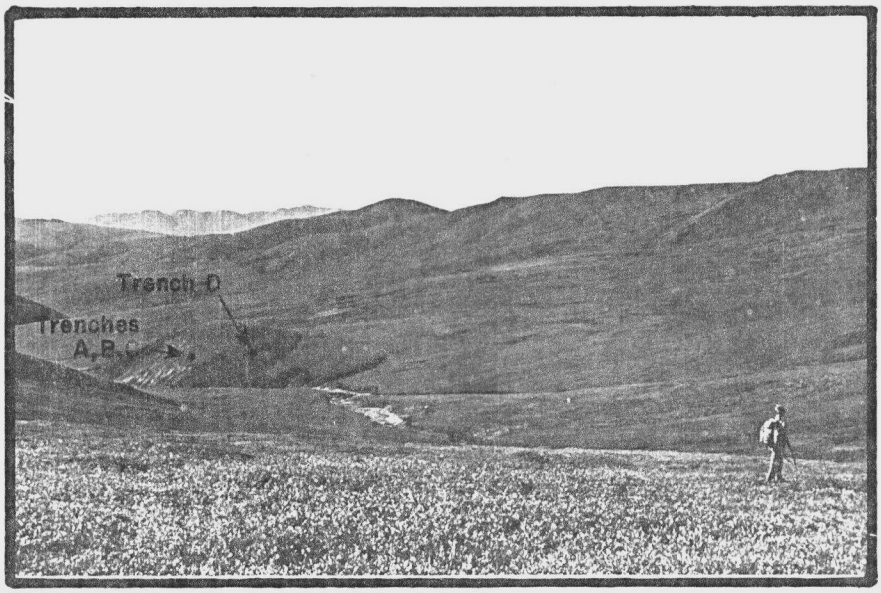


FIGURE 3. - Northwestern portion of the project area.
(Windy Knob prospect trenches indicated.)

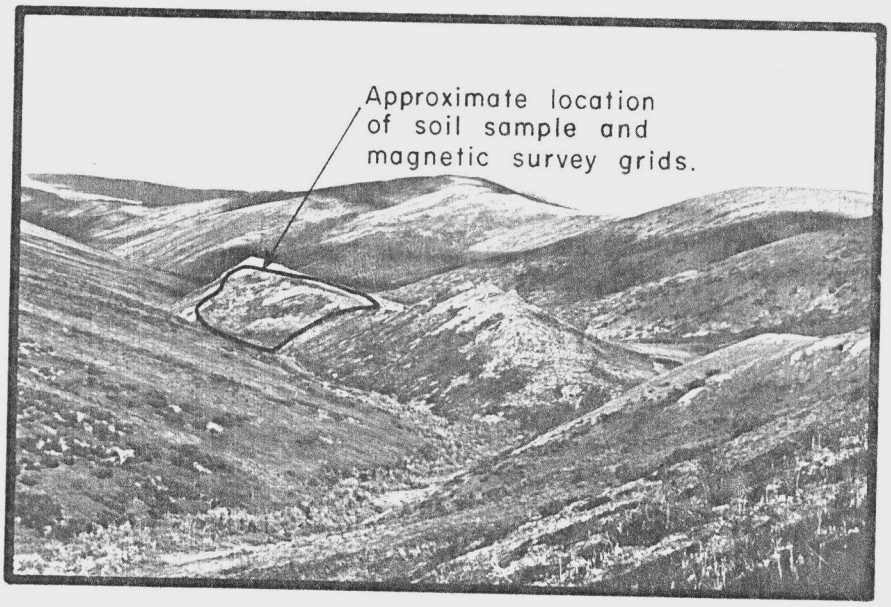


FIGURE 4. - View of Strange Ridge in the northeastern portion of the project area. (Approximate location of soil sample and magnetic survey grids indicated.)

has selected the claim blocks and adjacent land and a consortium of mining companies has explored the region for Doyon. As of May 1982, the land had not yet been conveyed to Doyon.

In February 1978, data on the area were presented in public testimony which addressed the subject of mineralization within lands proposed for withdrawal from mineral entry (6). These data briefly document a scheelite occurrence at an intrusive contact.

During the summers of 1978-79, the U.S. Bureau of Mines (USBM) made reconnaissance investigations that included the Bonanza Creek area as part of a study of the proposed Yukon Flats and Kanuti National Wildlife Refuges. This present report is a portion of the 1979 work. All stream sediment and rock samples collected by the USBM during the 1978-79 studies were analyzed for 45 elements and the results are listed in two reports prepared by the Bendix Field Engineering Corporation and the USBM for the Department of Energy as part of the National Uranium Resource Evaluation Program (1, 9). In general, the analyses show a regional trend of tungsten mineralization in the Hodzana Uplands. Analyses of samples collected during 1979 within the Bonanza Creek project area and published in the Bendix report by Averett and Barker (1) have been duplicated in this report.

Other published geologic work in the area includes reconnaissance geologic mapping at a scale of 1:250,000 by the U.S. Geological Survey of the Beaver (4) and Bettles (3) Quadrangles. Also portions of the study area are included in a report on the analyses of stream sediment samples from the Bettles quadrangle (7). These analyses by 30-element emission spectrograph show anomalous yttrium in a stream sediment collected immediately downstream from the reported tungsten occurrence.

An aeromagnetic survey of the region was published in 1973 at a scale of 1:63,360 by the U.S. Geological Survey (13-14). In 1976, the U.S. Energy Research and Development Administration conducted an aerial gamma-ray and magnetic survey which included this region (10).

REGIONAL GEOLOGY

The project area is located on the northern margin of the Kanuti batholith, one of numerous plutons of Cretaceous age or older, which intrude a sequence composed predominantly of pelitic schist with subordinate marble and phyllite of assumed Paleozoic age. Brosge (4) has described the plutons as porphyritic to granular, locally gneissic quartz monzonite and granite, with aplite and a few pegmatite dikes. A potassium-argon date from the Kanuti batholith within the project area shows an age of 90.6 ± 6 million years (5). The Hodzana pluton, approximately 30 mi north of the project area, has a potassium-argon date of 101 ± 5 million years (3) while the Sithylemenkat pluton, 50 miles to the southwest, has a potassium argon date of 106 ± 3 million years (9).

Pelitic rocks hosting the Kanuti batholith include quartz mica schist, quartzo-feldspathic schist with some quartzite, and calcareous quartz mica schist. They show a regional metamorphic grade in the greenschist facies, with thermal alteration to the hornblende hornfels facies within 2 to 3 mi of the granite contacts (4). The pelitic schists are thought to be in part equivalent to a phyllite unit which is probably Devonian in age (8).

Interbedded with the pelitic schists are gray, coarsely crystalline marbles, which are locally interbedded with orange-weathering, finely

crystalline dolomite. These marble-dolomite units vary in thickness from 50 to several hundred feet and are altered to calc-silicate hornfels near contacts with the granite (4). The maximum thickness of marble within the project area is approximately 50 ft, although the thinly interbedded pelitic schists and carbonates which are altered to calc-silicate schist are several hundred feet thick.

A gneiss and quartzite unit is also recognized in the region. It includes gneissic quartzite, quartz biotite schist, and quartz plagioclase gneiss containing biotite, garnet, and sillimanite (4).

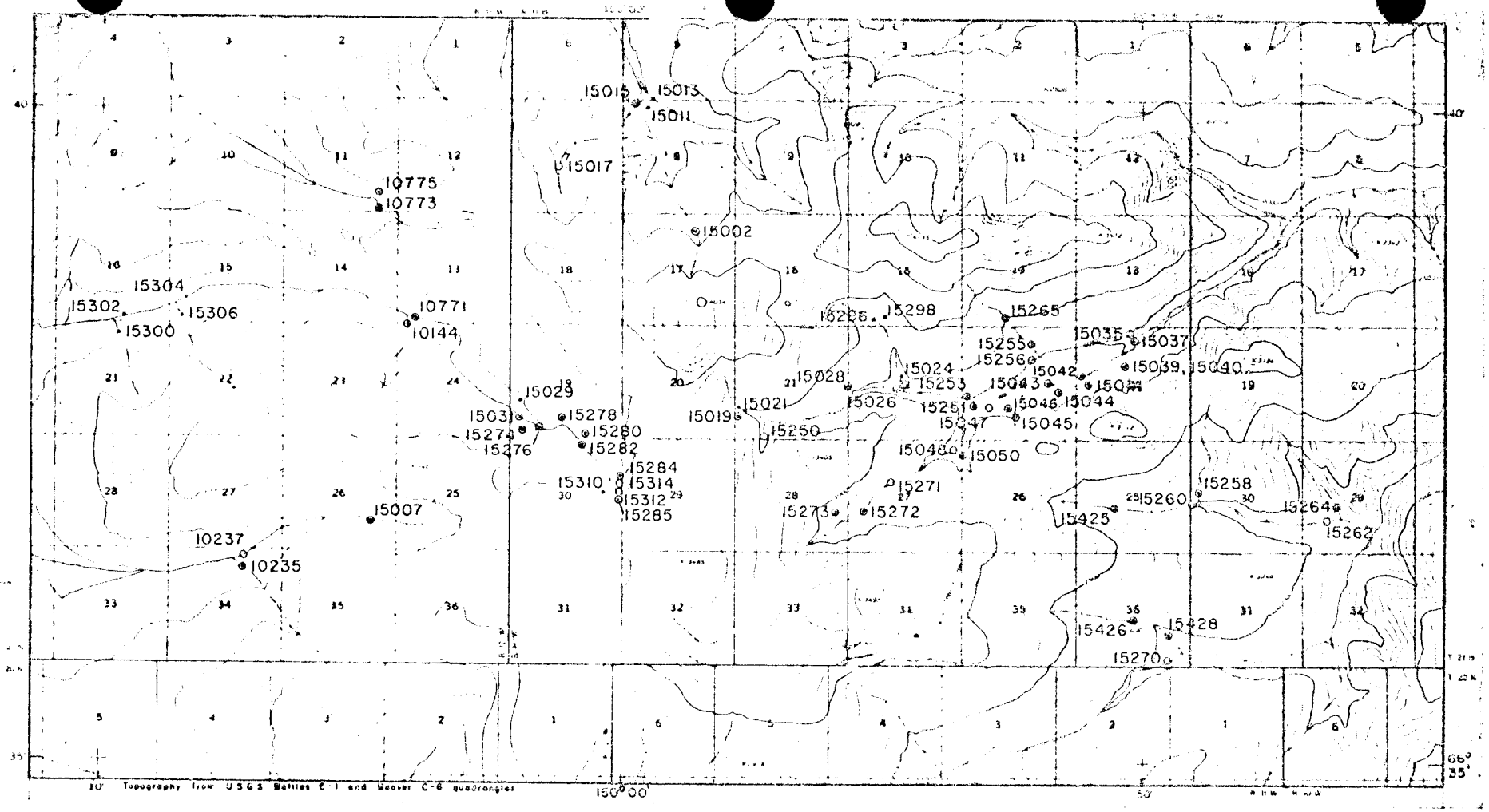
ACKNOWLEDGMENTS

Assistance in the field was provided by J. Ryer, S. Backlund, and T. Calvert of AFOC, Fairbanks. Previous investigations and sampling of the Strange Ridge area by J. Barker and G. Hall of AFOC, Fairbanks initiated this follow-up study. D. Turner of the University of Alaska generously donated his services and those of the geochronology lab in dating the Kanuti batholith. This manuscript was reviewed and edited by J. Barker, AFOC, Fairbanks and C. Samia and D. Carnes of AFOC, Juneau.

ANALYTICAL DATA

STREAM SEDIMENTS

Analyses of stream sediment samples from the project area are given in appendixes A and B and these samples are located in figure 5. Sediment was collected from active stream channels with a steel trowel. These samples were then oven-dried at 110°C (230°F), screened to -80 mesh (177 microns) and divided into two units for separate analysis



LEGEND

- • Sample location. See appendix A.
- ○ Sample location. See appendix B.
- ⊙ Sample location. See appendixes A and B
- 15031 Sample number

0 0.5 1 2 Miles

0 1 2 3 Kilometers

Scale

Contour interval 100 feet

N

Figure 5.– Stream sediment sample location map

by two different laboratories.[3] A 6-10 g split was sent to Los

---

[3] Sample preparation by: Resource Associates of Alaska, 3230 Airport Way, Fairbanks, Alaska 99701.

Alamos Scientific Laboratory[4] and the remaining 5-25 g sample was

---

[4] Los Alamos Scientific Laboratory, P.O. Box 1663, Los Alamos, New Mexico 97545.

---

sent to the USBM, Reno Research Center.[5] (See appendix A.)

---

[5] U.S. Bureau of Mines, Reno Research Center, 1605 Evans Avenue, Reno, Nevada 89520.

Copper, lead, zinc, silver, and molybdenum were analyzed by atomic absorption; uranium by x-ray fluorescence; and tungsten by colorimetric methods (appendix B). Beryllium and lithium were analyzed by emission spectrography; silver, bismuth, cadmium, copper, niobium (columbium), nickel, lead, tin, tungsten, arsenic, selenium, and zirconium by x-ray fluorescence. The elements aluminum, barium, calcium, chlorine, dysprosium, potassium, magnesium, manganese, sodium, strontium, titanium, and vanadium were analyzed using neutron activation with a short time delay before analysis. Analysis for gold, cerium, cobalt, chromium, cesium, europium, iron, hafnium, lanthanum, lutetium, rubidium, antimony, scandium, samarium, tantalum, terbium, thorium, ytterbium, and zinc used neutron activation with a long time delay before analysis.

Histograms of copper, zinc, and tungsten analyses, along with calculations of arithmetic mean and standard deviation using Reno data, are shown in figures 6 and 7.

SOILS

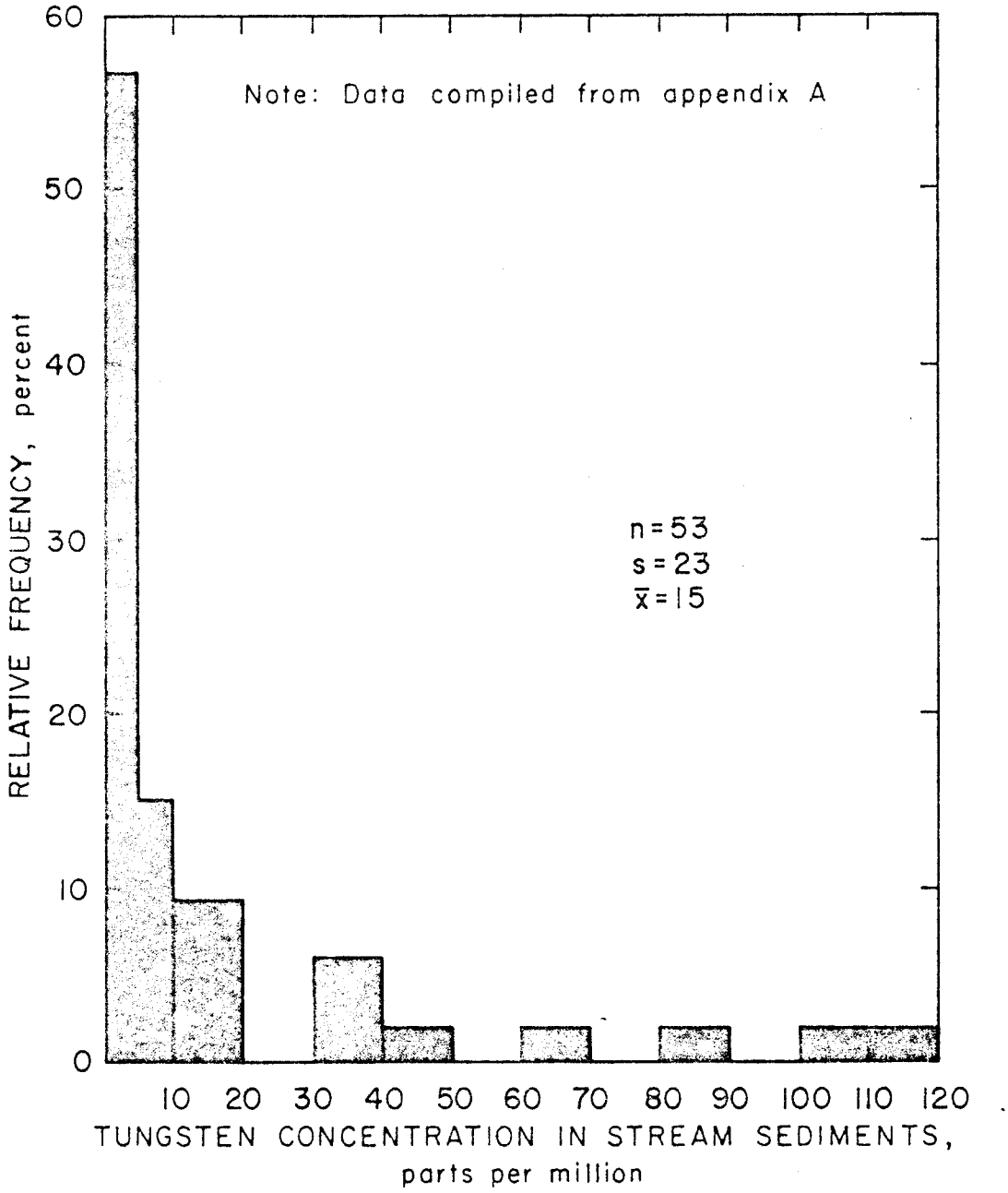
Soil samples were collected both randomly and along measured grids within the project region. Samples were collected at a 3 ft depth with a hand soil auger. Analyses of soil samples collected randomly are listed in appendixes B and C and locations are plotted on the map in figure 8. Analyses and locations of soil samples collected at measured intervals from mineralized areas of Windy Knob are found in appendixes B and D, figure 9 and of Strange Ridge in appendixes B and E, figure 10. It should be noted that the Windy Knob and Strange Ridge sampling grids were also used for the magnetic survey discussed in this report.

Soil samples were prepared and analyzed by the two labs in the same manner as described for the stream sediment samples.

Histograms of copper, tungsten, lead, and zinc analyses, along with calculations of arithmetic mean and standard deviation using the Reno data, are shown in figures 11 and 12.

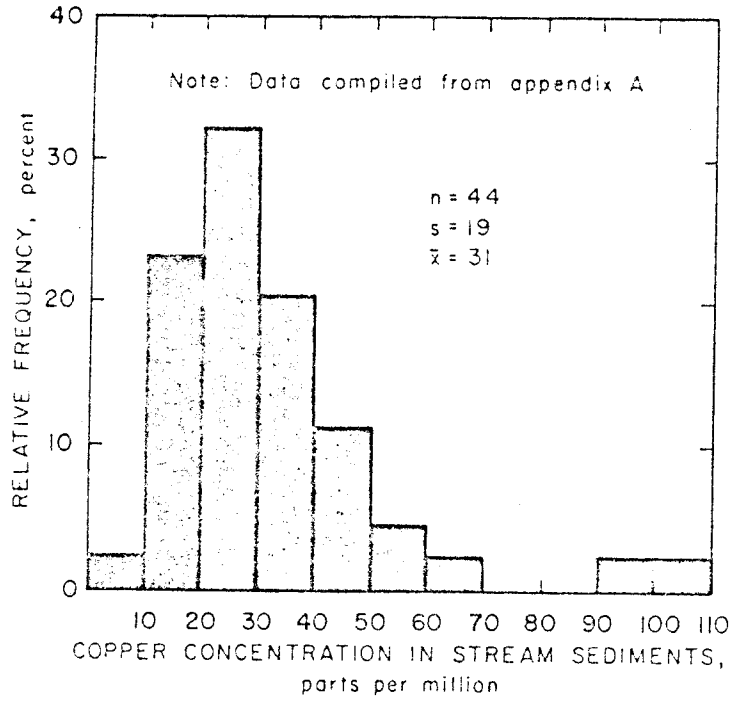
PANNED CONCENTRATES

Analyses of panned concentrate samples are listed in appendix F. Sample locations are shown on figure 13. Samples were shoveled from silty gravels taken from the center of the channel in smaller creeks and from the leading edge of gravel bars in some larger streams. A 14-in pan was heap-filled and carefully panned until about 50 to 100 g of material remained.



Note: n = number of samples
s = standard deviation
x̄ = arithmetic mean

Figure 6. — Tungsten concentration in stream sediments



Note: n = number of samples
s = standard deviation
x̄ = arithmetic mean

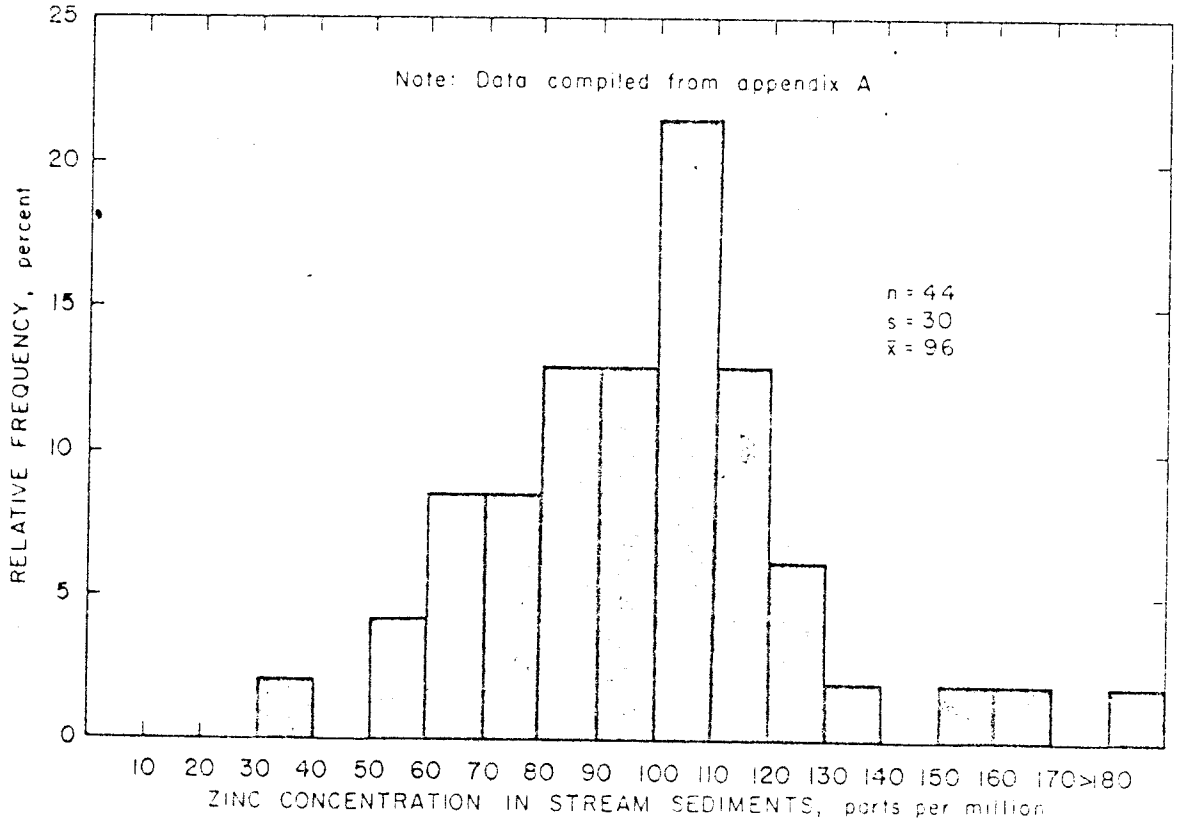
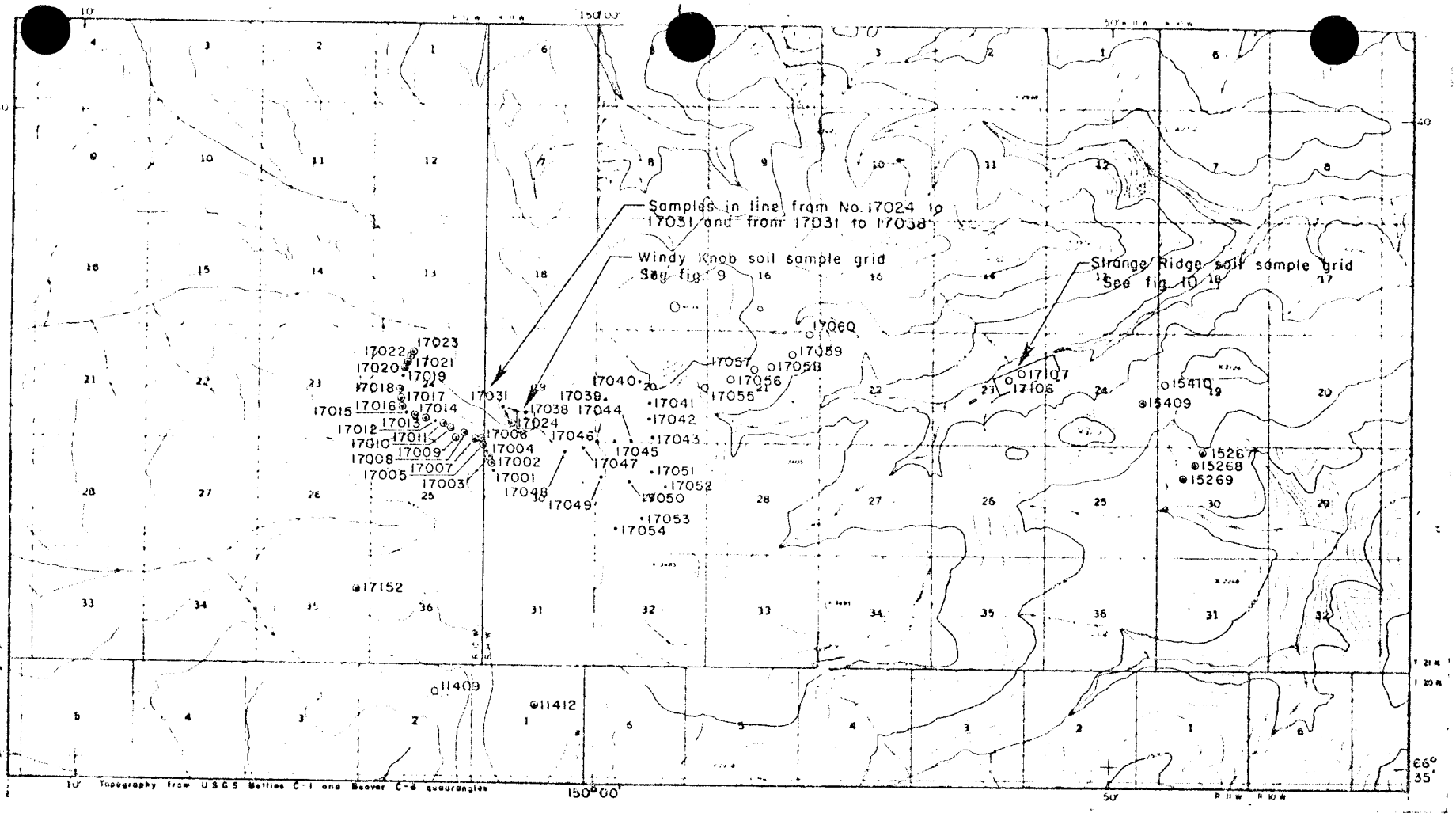


Figure 7.— Copper and zinc concentration in stream sediments



LEGEND

- • Sample location. See appendix C.
- o Sample location. See appendix B.
- ⊙ Sample location. See appendixes B and C.
- 17023 Sample number

Note: Samples 17024 — 17038 see appendix C, for samples 17024, 17025, 17027 and 17028 see also appendix B.

0 0.5 1 2 Miles

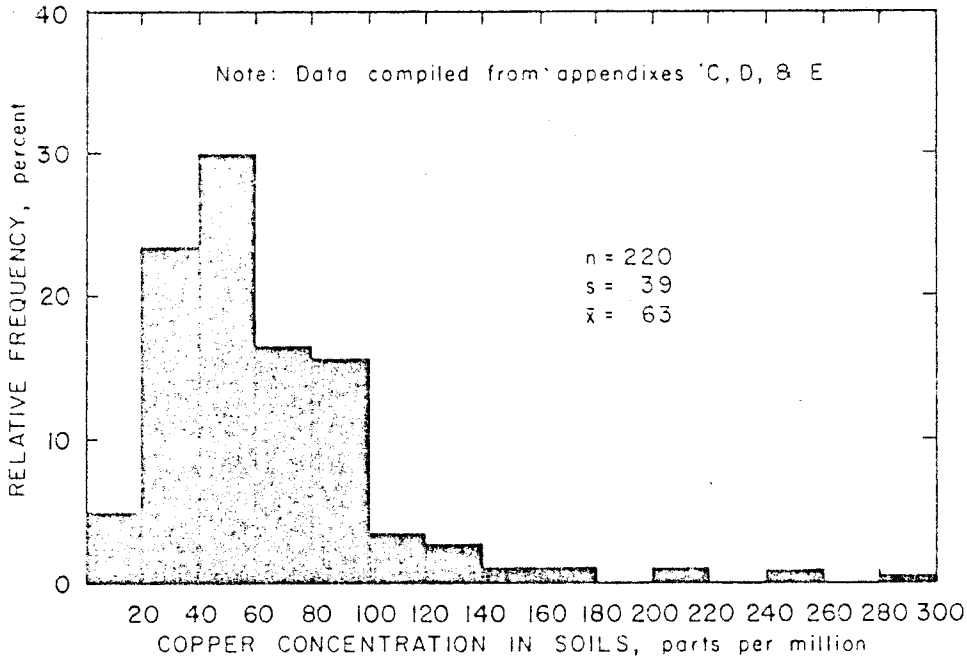
0 1 2 3 Kilometers

Scale

Contour interval 100 feet

N

Figure 8.— Soil sample location map



Note: n = number of samples
s = standard deviation
x̄ = arithmetic mean

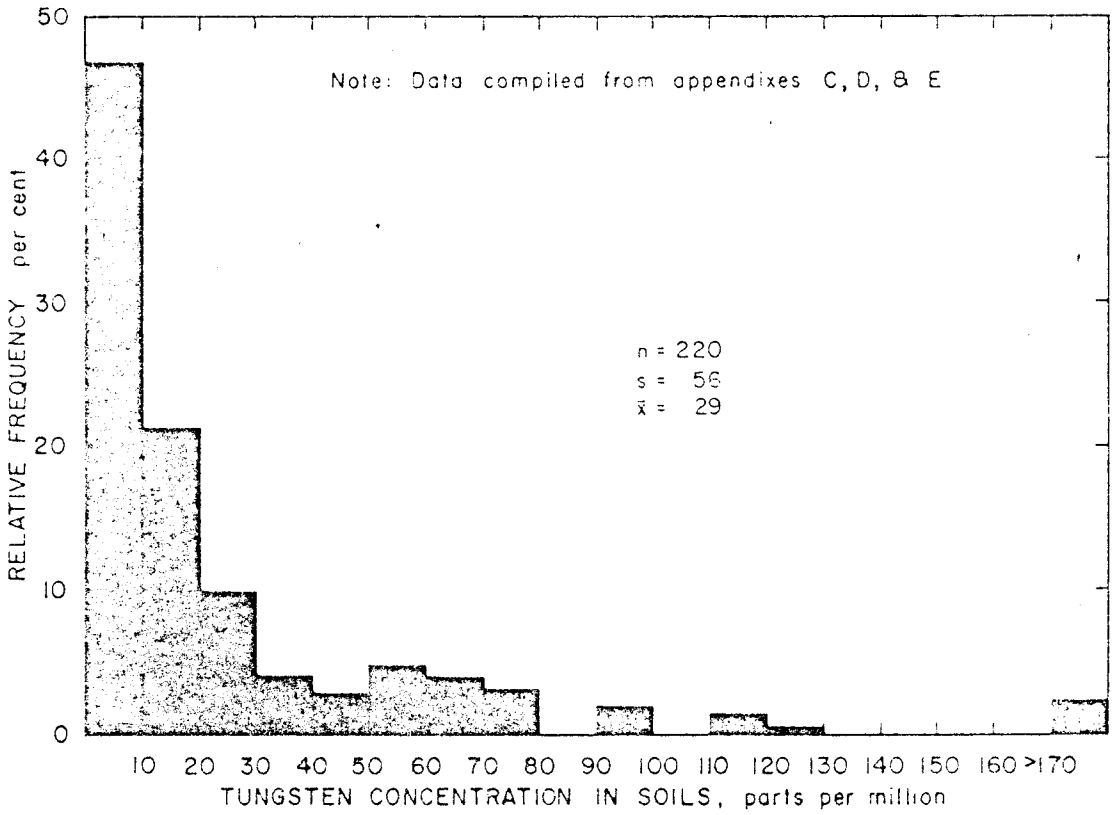
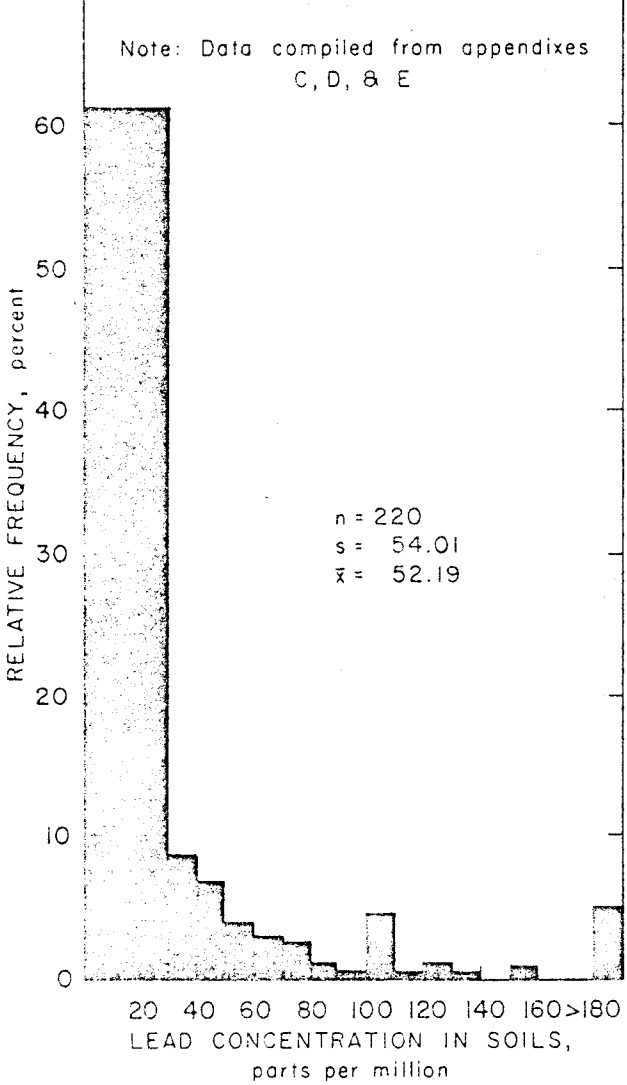


Figure 11.— Copper and tungsten concentration in soils



Note: n = number of samples
s = standard deviation
x̄ = arithmetic mean

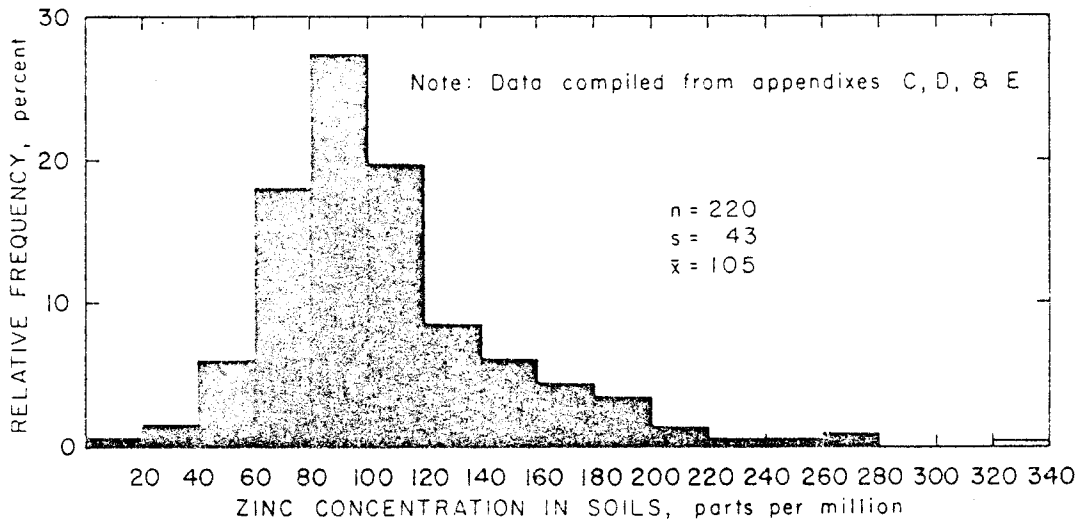
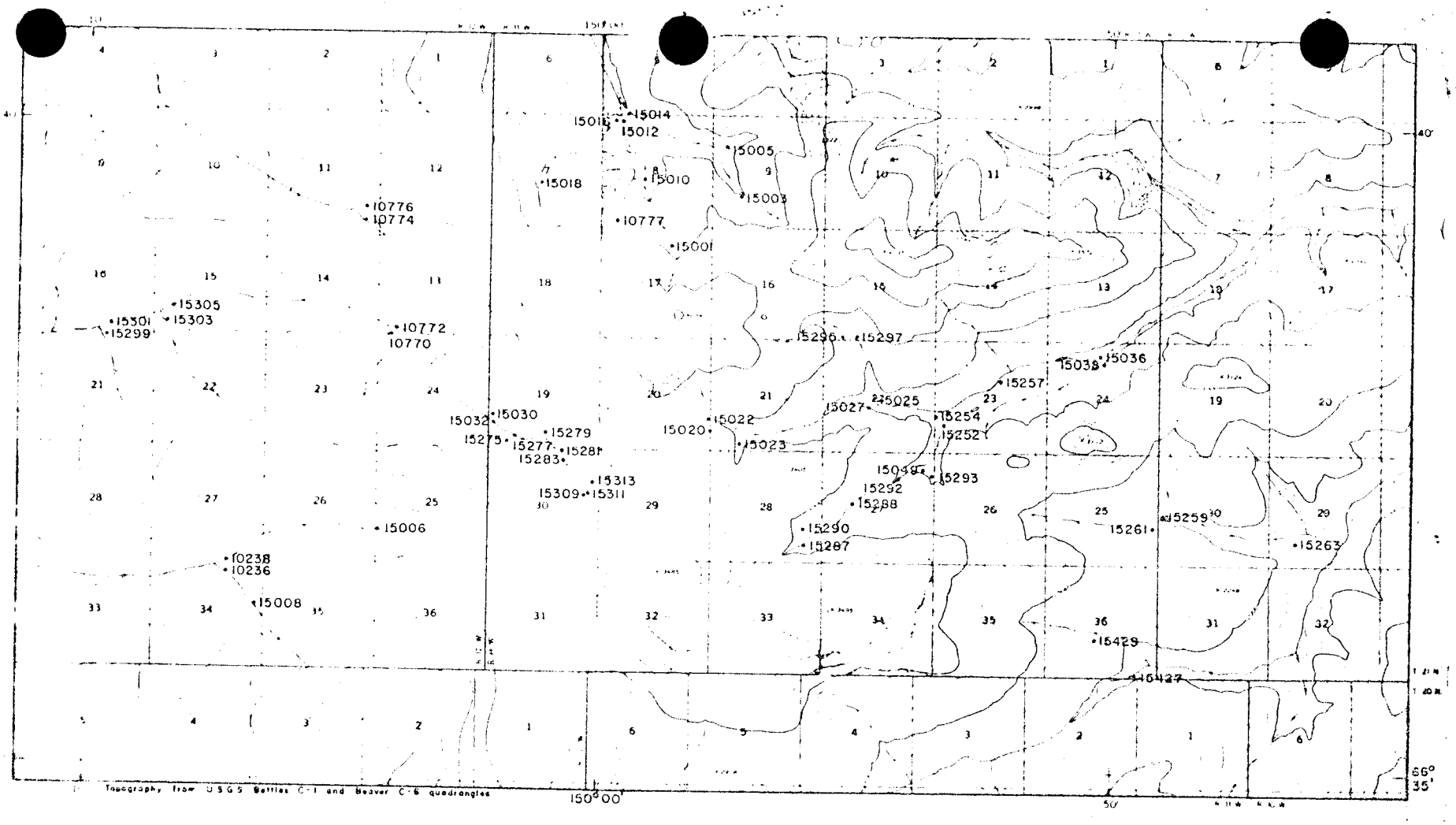


Figure 12.— Lead and zinc concentration in soils



LEGEND

• Sample location. See appendix F.

15003 Sample number

0 0.5 1 2 Miles

0 1 2 3 Kilometers

Scale

N

Contour interval 100 feet

Figure 13.– Panned concentrate sample location map

The concentrates were air-dried before further concentration in bromoform (+2.85 sp. gr.).[6] Material of specific gravity greater than

---

[6] U.S. Bureau of Mines, Alaska Field Operations Center, P.O. Box 550, Juneau, Alaska 99802.

2.85 was sized with a 14 mesh (1190 micron) screen and undersized material then magnetically separated. The less than 14 mesh non-magnetic fraction was dried, weighed and pulverized for semi-quantitative emission spectrographic analysis.[7]

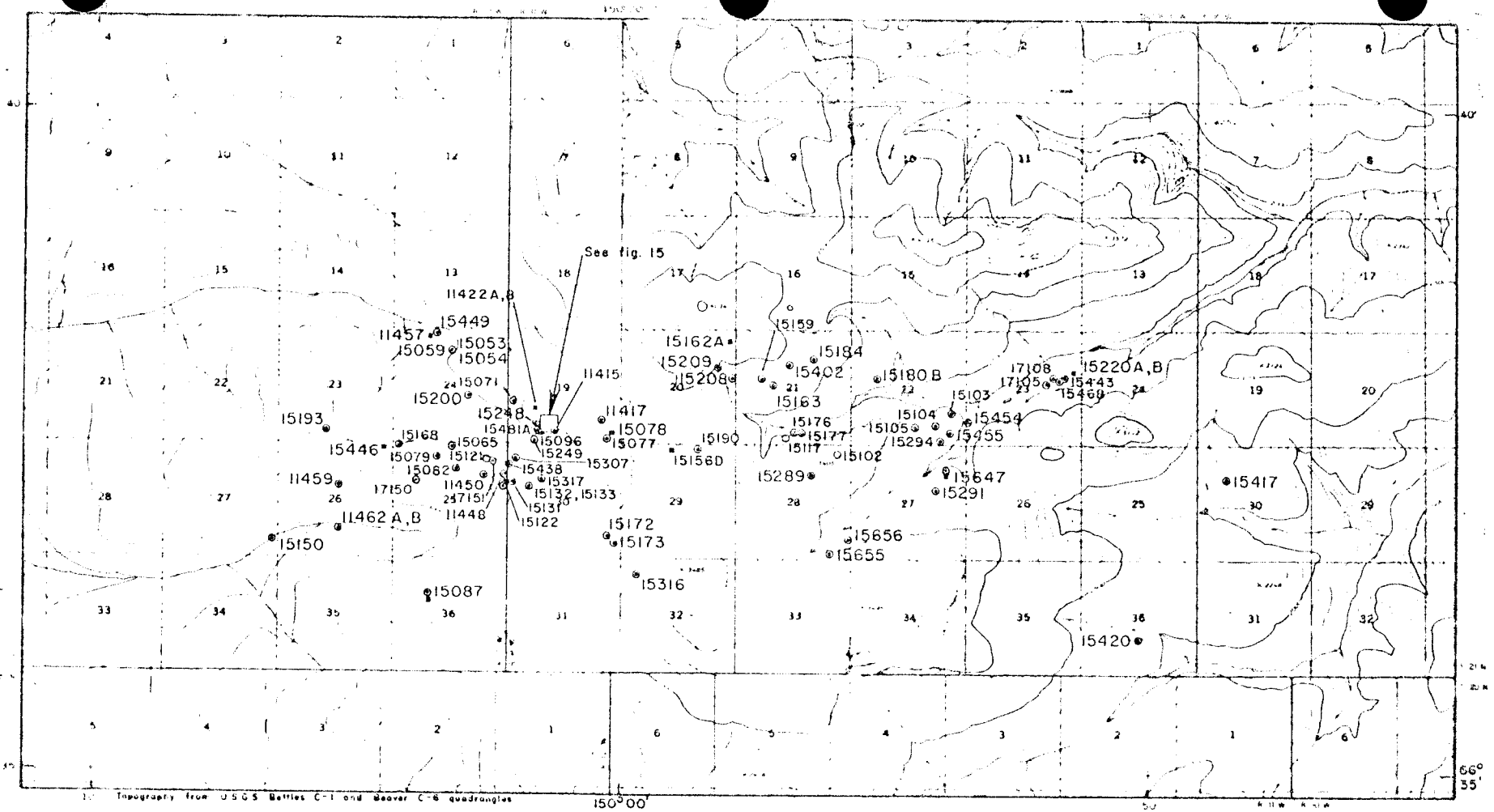
---

[7] Skyline Labs, Inc., 12090 West 50th Place, Wheat Ridge, Co. 80033.

ROCKS

Analyses of rocks from the project area are given in appendixes B and G and locations are shown in figure 14. Continuous rock chip samples, each chip being approximately 2 sq in, were collected lengthwise, along the walls of four prospect trenches lettered A through D, and these locations are shown in figure 15. Field descriptions of each rock sample and notes on type of sample collected are listed in appendix H.

Samples were crushed, split, and pulverized to approximately 100-150 mesh size (147-104 microns)[8] and analyzed by two laboratories as described for stream sediment samples.



LEGEND

- • Sample location. See appendix G.
- o Sample location. See appendix B.
- ⊙ Sample location. See appendixes B and G.
- ■ Sample location, whole rock (major oxide) analyses. See appendixes I and J.
- 15193 Sample number

Note: Field description of rock samples can be found in appendix H.

0 0.5 1 2 Miles

0 1 2 3 Kilometers

Scale

Contour interval 100 feet

N

Figure 14.—Rock sample location map

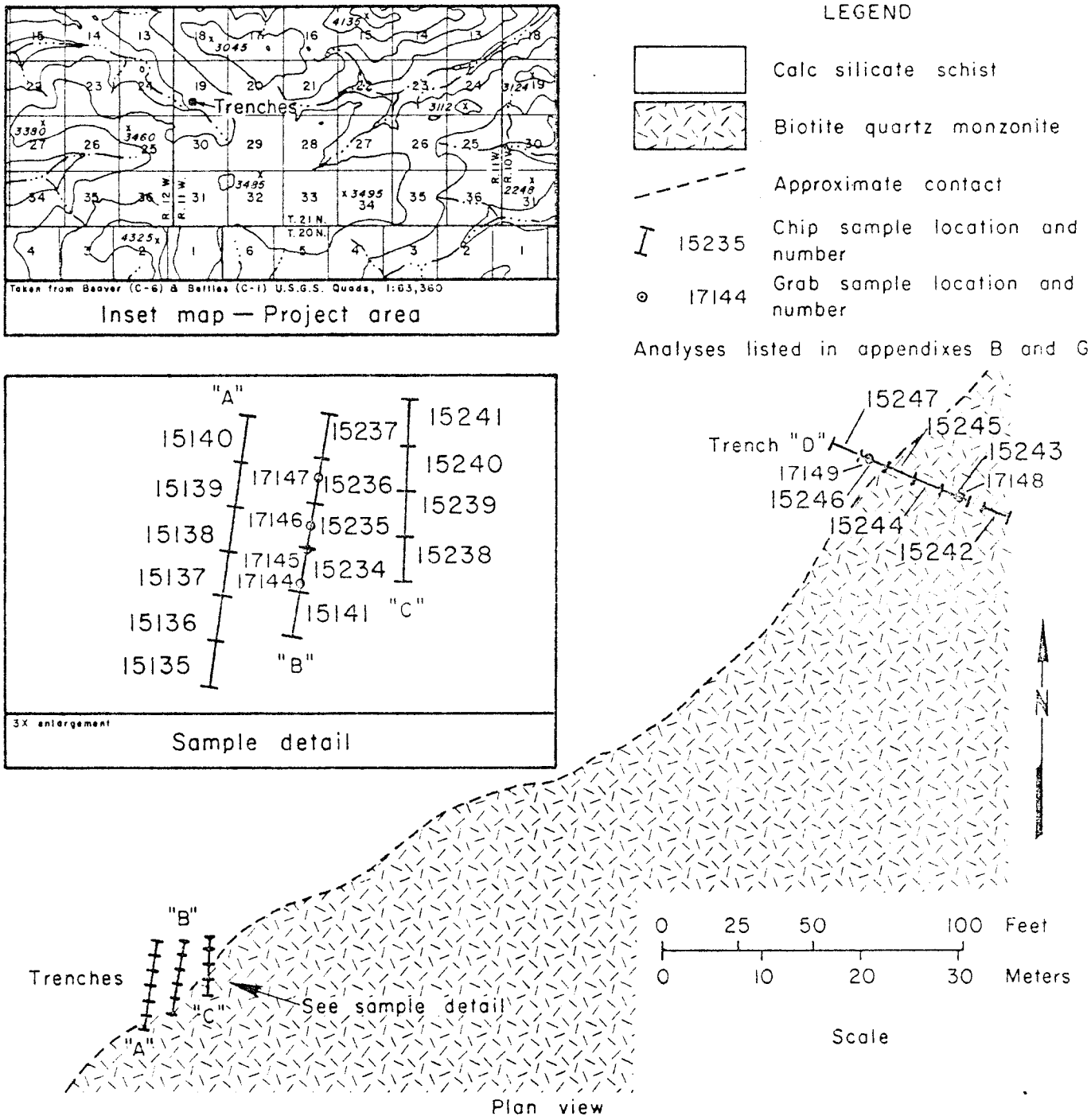


Figure 15.- Trench sample location

[8] Resource Associates of Alaska, 3230 Airport Way, Fairbanks, Alaska 99701.

Whole rock major oxide analyses were performed on 12 rock samples.[9]

[9] Technical Service Laboratories, 1301 Fewster Drive, Mississauga, Ontario, Canada L4W 1AZ.

These samples represent major lithologic types found within the project area and are plotted in figure 14. Rock type and major oxide analyses are listed in appendix I.

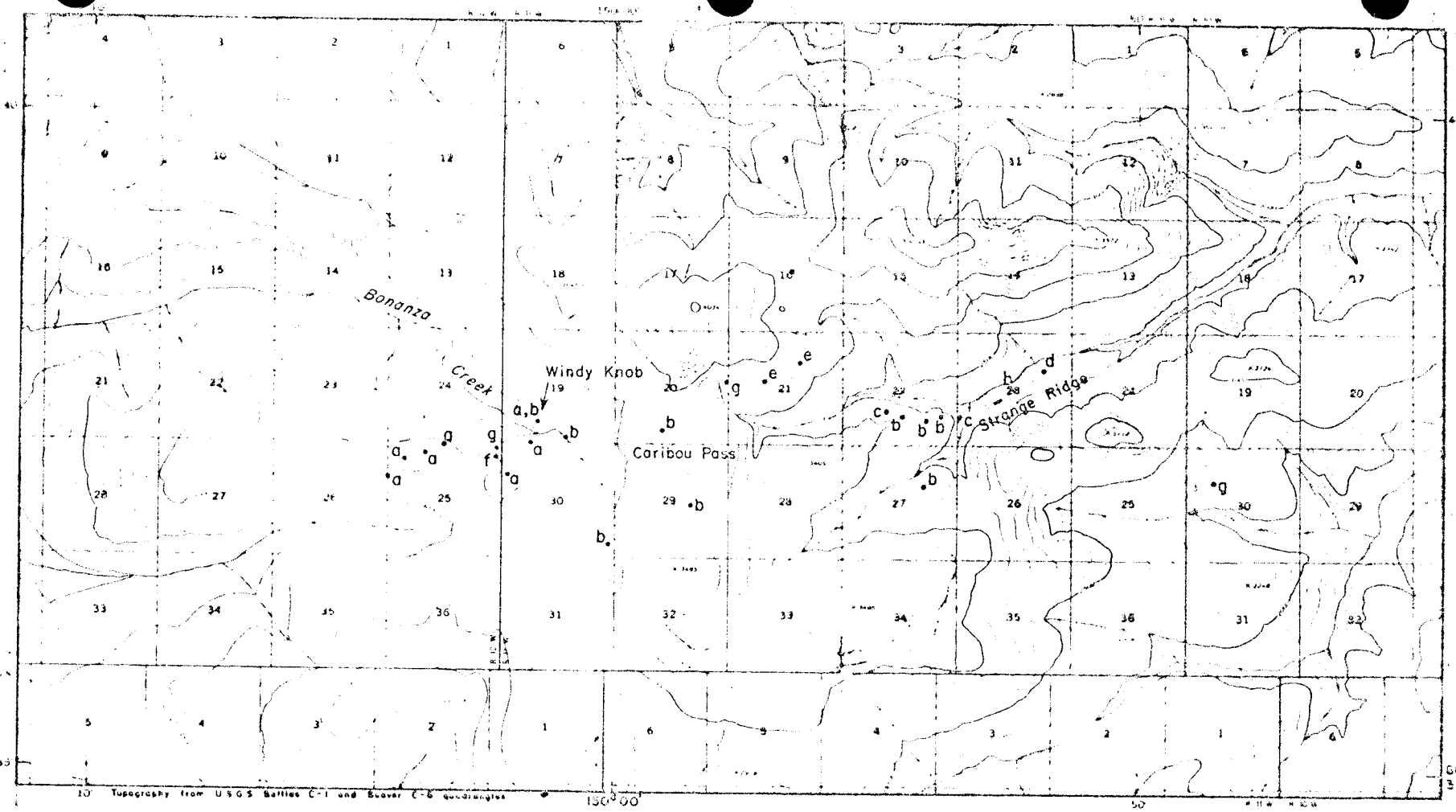
MINERAL OCCURRENCES

Numerous small showings of tungsten and molybdenum mineralization occur predominantly as scheelite and molybdenite throughout the project area. The locations of these occurrences and their host rocks are indicated in figure 16 (tungsten) and figure 17 (molybdenum).

TUNGSTEN

Scheelite ($CaWO_4$) was identified with ultraviolet (UV) light in outcrop, in float rock, and in panned concentrate samples. The panned concentrate samples, which were taken in most drainages within the project area, indicate widespread tungsten mineralization, although only a few analyses are particularly high (fig. 13, appendix F).

The major scheelite occurrences are located on and in the vicinity of Windy Knob in sec. 19, T. 21 N., R. 11 W., where four prospect trenches were dug across a granitic contact. The trenches, lettered A



LEGEND

Note: Letters denote type of scheelite occurrence:

a Within pyrrhotite rich, chalcopyrite bearing tactite.

b Within relatively sulfide free, calc-silicate schist.

c On fracture surfaces of calc-silicate rock.

d Within moderately iron-stained, calc-silicate schist.

e Within gossan.

f On fracture surfaces of aplite dikes.

g In quartz veins.

0 0.5 1 2 Miles

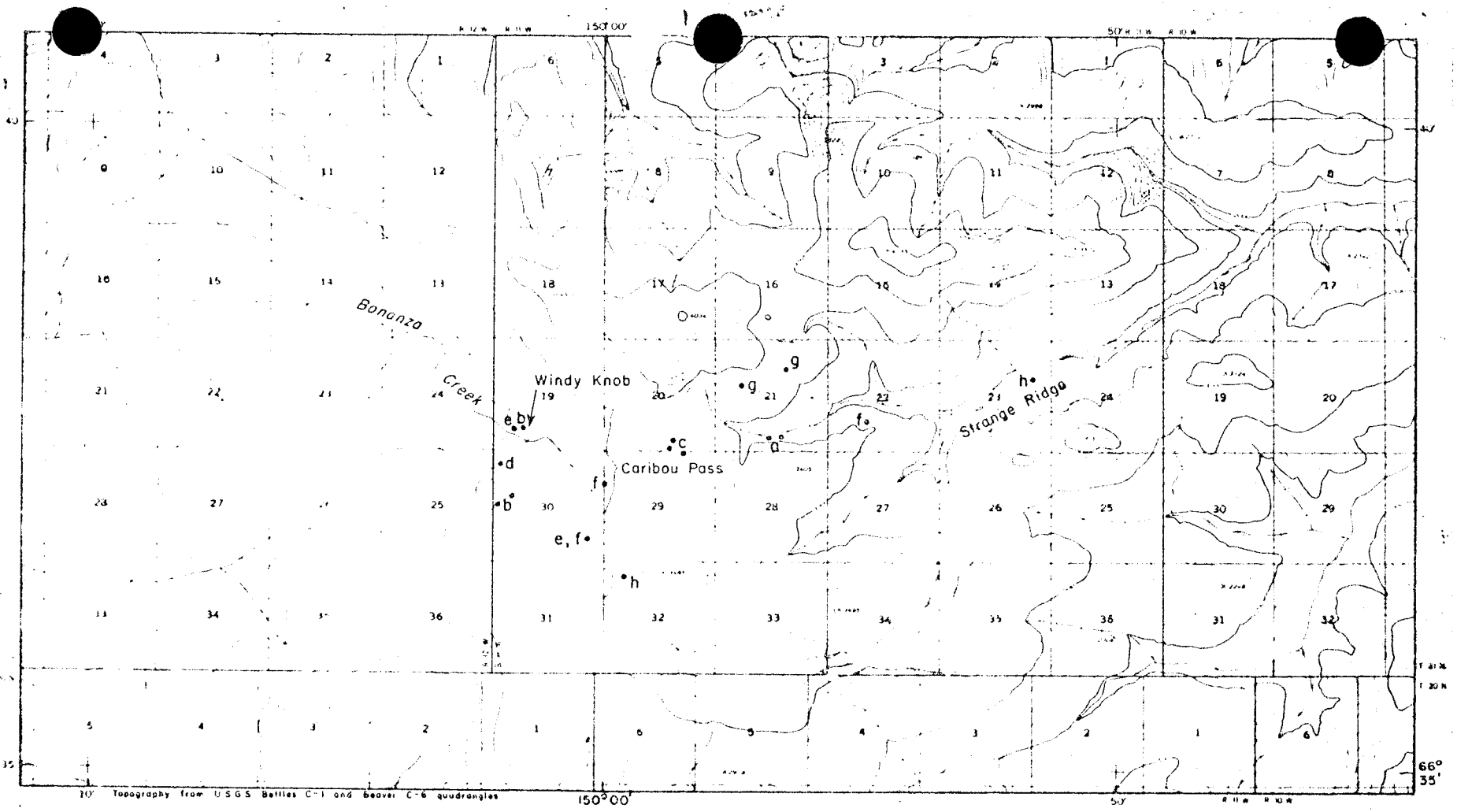
0 1 2 3 Kilometers

Scale

Contour interval 100 feet

N

Figure 16.— Scheelite occurrence locations.



LEGEND

Note: Letters denote type of molybdenite occurrence:

a Rosettes ($\frac{1}{2}$ in. dia.) and small ($\frac{1}{8}$ in.) flakes in quartz veins within quartz monzonite.

b Quartz veins ($\frac{1}{8}$ to $\frac{1}{4}$ in. wide) in biotite quartz monzonite.

c Quartz veins ($\frac{1}{8}$ to $\frac{1}{4}$ in. wide) within granitic rock in vicinity of contact with dacite porphyry dikes.

d Small ($\frac{1}{8}$ in.) flakes in aplite dikes.

e Rosettes ($\frac{1}{2}$ in. dia.) in pegmatite.

f Fine disseminations in light green calc-silicate schist.

g Small flakes and ferrimolybdite in gossan.

h Quartz veins ($\frac{1}{8}$ in.) in quartzite and calc-silicate schist.

0 0.5 1 2 Miles

0 1 2 3 Kilometers

Scale

N

Contour interval 100 feet

Figure 17 — Molybdenite occurrence locations

through D from west to east, and their relation to the granite contact are shown in figure 15. The highest tungsten value (0.61% W) within the trenches came from a 10-ft chip sample in trench D, collected from a dark green, pyrrhotite rich, chalcopyrite-bearing tactite (letter a, fig. 16) adjacent to a granitic contact (BZ15246, appendix G). The tactite appears to be poddy, and has a variable tungsten content; it has a width of 10 ft in trench D, was not observed in trench C, was less than a foot wide in trench B and approximately 5 ft wide in trench A. High tungsten values are not indicated in the tactite samples from trenches A and B. Instead a sulfide-free, garnet-pyroxene calc-silicate rock farther from the granite contact contained the highest tungsten values (up to 0.57% W, BZ17147, appendix G).

The highest tungsten and silver values (0.89% W and 300 ppm Ag) in the project area were found in a high-graded grab sample (BZ15096, appendix G) collected within a tactite zone (letter a, fig. 16) at the granitic contact exposed on the south side of the creek across from Windy Knob. The tactite in this location is also very poddy, ranging from a width of 3 ft to a width of 5 in.

Throughout the project area scheelite occurs most commonly as sparsely disseminated grains within a relatively sulfide-free garnet pyroxene skarn or calc-silicate rock (letter b, fig. 16). Fracture surfaces of these rocks often carry a small amount of scheelite also (letter c, fig. 16). Even though scheelite bearing fracture surfaces seemed slightly more siliceous than the bedrock, no well developed quartz stockworks were observed. Mineralization of this type (fig. 18) was especially noted along the ridge in sec. 22, T. 21 N., R. 11 W. On Strange Ridge similar scheelite mineralization, accompanied by a moderate amount of

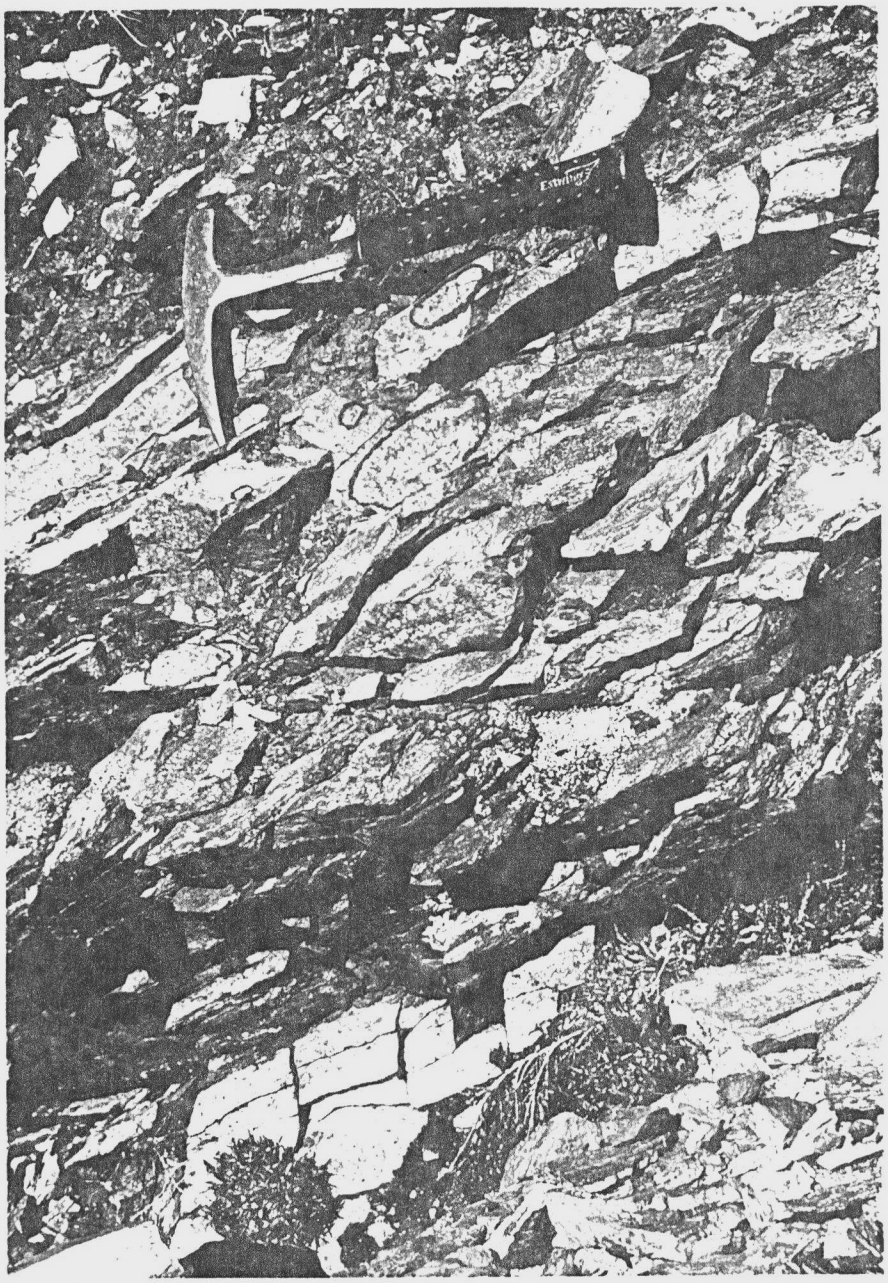


FIGURE 18. - Typical outcrop of cal-silicate schist with scheelite mineralization on frature surfaces. (The scheelite was located with an ultra-violet light and circled with a marking pen. Photo from NE 1/4 SE 1/4 sec 22 T. 21 N., R. 11 W.)

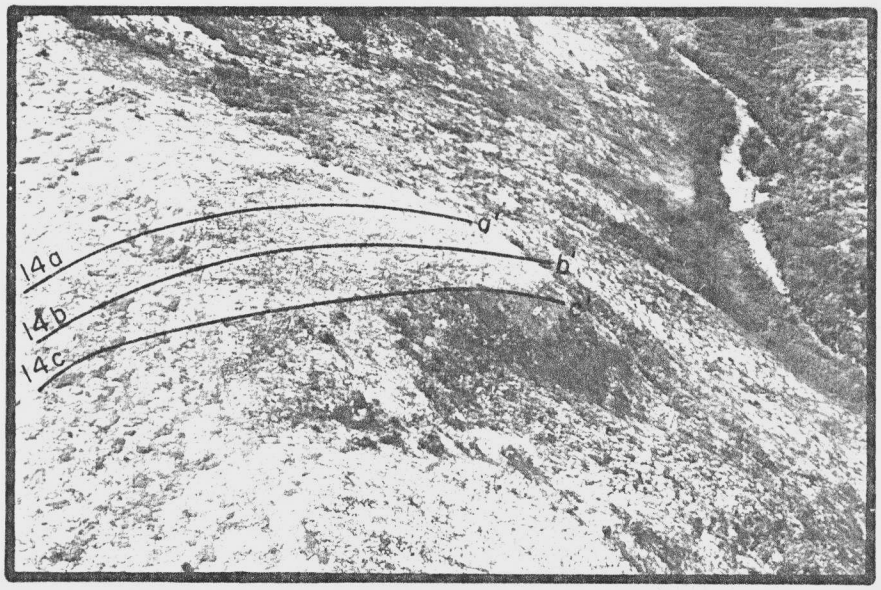


FIGURE 19. - Aerial view of scheelite occurrence on a limonite-stained spur on Strange Ridge. (The approximate location of magnetic survey lines a, b, and c are indicated. The magnetic profiles are shown in figure 23.)

limonite, was found on an iron-stained spur (fig. 19) near a small granitic stock (letter d, fig. 16).

Quartz veins associated with fracture surfaces in aplite veins and dikes on the hillside southwest of Windy Knob (letter f, fig. 16) also revealed scheelite mineralization. A photograph of aplite dikes cutting through a knobby-weathered garnet, pyroxene calc-silicate on this hillside is shown in figure 20. Flecks of scheelite were also noted occasionally in quartz veins (letter g, fig. 16).

Occasional float rock of vuggy, black to dark orange-colored gossan, containing traces of scheelite, pyrrhotite, ferrimolybdite and chalcopyrite were found on grass covered slopes in sec. 21, T. 21 N., R. 11 W., on the Beef claim block (letter e, fig. 16).

MOLYBDENUM

Traces of molybdenum were found throughout the project area as either the mineral molybdenite(MoS_2) or, to a limited extent its alteration product ferrimolybdite[$Fe_2(MoO_4)_3 \cdot 8H_2O$]. Occasional yellow fluorescent minerals suggested the presence of powellite($CaMoO_4$), but these occurrences were so limited in extent that they are not recorded in figure 17.

Most of the molybdenite occurs in quartz veins. Rosettes (up to 1/2 in diameter) and small flakes of molybdenite were noted in quartz veins within a biotite quartz monzonite on the south side of the creek in sec. 21, T. 21 N., R. 10 W. (letter a, fig. 17). A red (hematite?)-stained biotite quartz monzonite in sec. 30, T. 21 N., R. 11 W. also contained molybdenite in small (1/4 in) quartz veins (letter b, fig. 17). Molybdenite in small (1/8 - 1/4 in) quartz veins also appeared to be associ-

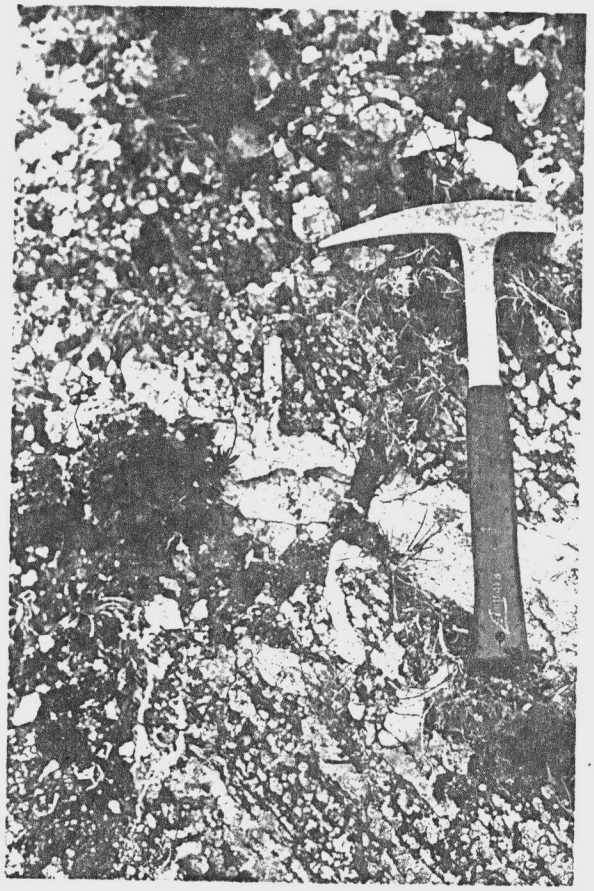


FIGURE 20. - Small aplite dikes cutting through knobby weathered garnet, pyroxene, calc-silicate schist. Scheelite mineralization occurs on fracture surfaces of aplite dikes, cutting the north side of this knob. (Photo from hillside in NW 1/4 NW 1/4 sec. 30, T 21 N., R. 11 W.)

ated with the margins of northeast trending dacite porphyry dikes which cut granitic rock in Caribou Pass in sec. 20, T. 21 N., R. 10 W. (letter c, fig. 17).

Numerous other small findings of molybdenite occurring only locally are recorded in figure 17. These findings include: 1) flakes of molybdenite in aplitic rock on the hill southwest of Windy Knob, 2) rosettes of molybdenite in a pegmatite near Windy Knob, 3) fine disseminations in a light green calc-silicate, 4) small flakes of molybdenite and ferrimolybdite in gossan from the Beef claim block, and 5) veinlets (1/8-1/4 in) in quartzite and calc-silicate (letters d-h, fig. 17).

MAGNETIC SURVEYS

Magnetic surveys were conducted to better define both the areas of pyrrhotite-scheelite mineralization and of the granitic contacts in the Windy Knob and Strange Ridge areas (figs. 21, 22, and 23). A Barringer proton magnetometer, model #122,[10] was used to survey

---

[10] Reference to specific trade names does not imply endorsement by the Bureau of Mines.

Windy Knob and the western end of Strange Ridge; a Geometrics proton magnetometer, Uni-mag model #G-836, was used along three line traverses and the eastern end of Strange Ridge. Base station readings were used for the removal of diurnal variations. Survey times and dates were compared with charts of magnetic activity recorded at the College Observatory, Fairbanks, Alaska (11-12) and only data collected during "quiet periods" are presented here.

WINDY KNOB

The contour map of Windy Knob data (fig. 21), constructed with 10-gamma contour intervals over a grid (350 ft by 400 ft) with 50 ft centers, shows magnetic response varying between 57,010- and 57,170-gammas. The calc-silicate country rock is more magnetically susceptible than the biotite quartz monzonite. The contact between these two rock types as mapped on the ground roughly follows this change in magnetic relief seen in figure 21. The mineralized tactite found at the granitic contact in the trenches, particularly in trench D with a maximum width of 10 ft, was not detected magnetically, although a smaller grid might pick up this pyrrhotite rich tactite. North-trending magnetic highs (labeled anomalies A and B, figure 21) showing 50- to 60-gammas respectively of closure are located in the north-central and southwestern portions of the map area and have an approximate depth of 30 ft ($\pm$ 15 ft) (2). Anomaly A appears to be caused by a magnetic body which splays and dips to the west and south. Anomaly B is broader in nature and appears to be caused by an eastward dipping magnetic body. The latter could be associated with the granitic contact, although additional, more closely spaced surveys are required to confirm this.

The source of the anomalies on Windy Knob is unknown. If these discontinuous magnetic anomalies are related to pyrrhotite and associated scheelite mineralization, then they reinforce field observations of the poddy scheelite occurrences in outcrops and trenches.

STRANGE RIDGE

The magnetic data from Strange Ridge will be discussed in three sections: 1) grid survey over lines 9-11 (fig. 22), 2) grid survey over

lines 15-20 (fig. 22), and 3) traverses in the vicinity of line 14 (fig. 23). These surveys were made over the same measured grids used for soil sampling (figs. 9 and 10).

Magnetic contours in the vicinity of lines 9-11 were constructed using 100-gamma contours from data collected at 50 and 100 ft stations along five 1,000 ft lines. A conspicuous 1,700-gamma high (anomaly A) is located approximately 75 ft south of the ridge crest along line 9.5. It is also detected in line 10. This anomaly was verified with repeated traverses and became more intense when readings were taken at 4 ft intervals (fig. 24). This anomaly is in the vicinity of the highest tungsten value found in a soil sample (600 ppm W, No. BZ15500, fig. 10) and coincides with a group of anomalous soil samples also high in W, Mo, Pb, Cu, and Zn (fig. 10).

Bedrock exposed along the ridge crest between lines 9 and 10, in the vicinity of the magnetic high, is an iron-stained, pyrrhotite-bearing calc-silicate schist. Foliation strikes roughly parallel to the ridge (N 50° E) and dips 26° to the north. One piece of float rock was found in this area with a cross-cutting quartz veinlet containing small (1/8 in) euhedral magnetite crystals, and a piece of float quartz contained a flake of molybdenite. Bull quartz float is common north of the ridge crest for several hundred feet down slope. West of line 9.5, bedrock is not exposed along the ridge crest until reaching a rock rubble area of dark gray phyllite with yellow (sulfurous?) weathering products in the vicinity of line 11.

The magnitude of anomaly A and the presence of magnetite in the float, suggest a magnetite concentration as the probable source of the high. No single geologic model was found to conform to a profile across the

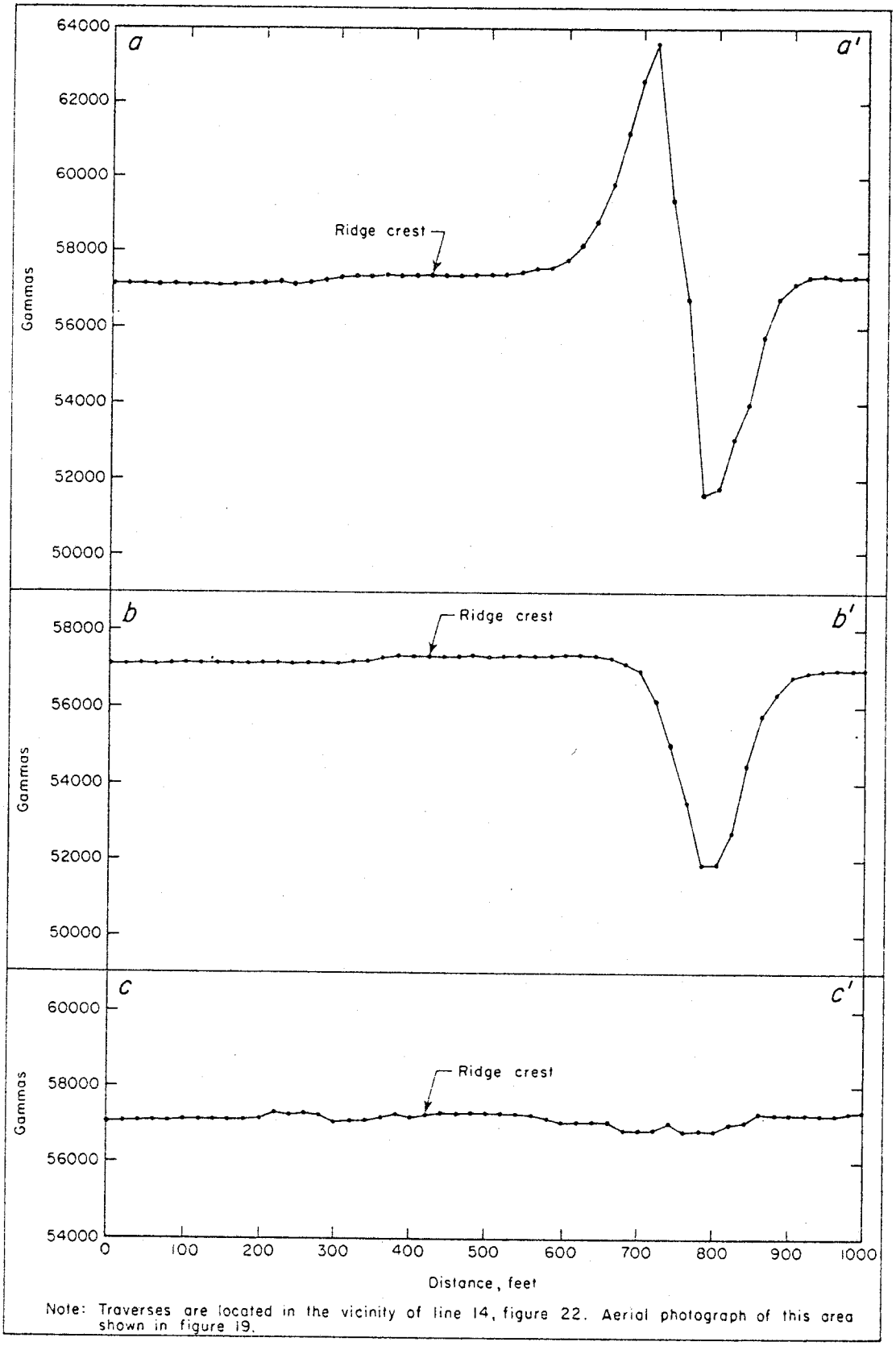


Figure 23.– Magnetic profiles across a scheelite occurrence on Strange Ridge

magnetic anomaly. This could be due to the presence of a more complicated structure such as intersecting dikes. The magnetic source has a probable depth of 25 ft (± 12 ft) and a predominantly northeastsouthwest strike that roughly parallels the ridge crest. Also noted on this grid is an open-ended magnetic high (anomaly B) of 100-gammas which extends into the creek bed to the north of the grid. Its source is unknown.

Another map section was constructed using readings from lines 15 through 20. Fifty-gamma contour intervals were used here instead of the 100-gamma contour intervals used in lines 9-11. Data were collected at 100 ft intervals over 6 lines approximately 1100 ft long spaced 200 ft apart.

Results show a magnetic high-low pair roughly following the northeast-southwest trending ridge crest. This broad, closed high of 350-gammas (anomaly C), contains a local 100-gamma closed low. The high also shows an offset to the north. A large magnetic low in the northwest corner of the grid suggests less magnetically active granitic rock at depth and this is further confirmed by a porphyritic biotite quartz monzonite outcropping in rubble along line 18. The other rock outcropping on this grid is an iron-stained, calc-silicate schist. The northerly component of the northeast-southwest high near the ridge crest along with the linear trend of the granitic outcrop suggests that the granitic rock could have been emplaced along a fault zone.

Profiles of magnetic traverses conducted in the vicinity of line 14 across an iron-stained spur of calc-silicate schist on Strange Ridge, are shown in figure 23. Here UV lamping revealed the presence of scheelite disseminated throughout the rock (rock sample Nos. BZ17105 and BZ17106, appendixes B and G). An aerial photograph of this spur, showing the approximate locations of the traverses, is found in figure 19.

These traverses were conducted along three lines 50 ft apart and 500 ft long. Data intervals were 20 ft apart. These data cannot be compared with the adjacent contour map of lines 15-20 because they were collected several weeks later at a different level of magnetic activity using a different magnetometer.

Line a shows a 1600-gamma difference between magnetic high and low; line b shows a 500-gamma negative anomaly, and c shows no magnetic activity. These data suggest a magnetic body (depth 50 ft [± 25 ft]), which dips steeply to the south on line a, away from line b.

REFERENCES

1. Averett, W. R. and J. C. Barker. Report of Analyses from Mineral Resource Investigations in Central and Eastern Alaska. Bendix Field Engineering Corp., Grand Junction, Co., and U.S. BuMines, AFOC, Fairbanks, Alaska, for the U.S. Dept. of Energy, 1981, GJBX-178(81), 148 pp.

2. Breiner, S. Applications Manual for Portable Magnetometers. Geometrics, Sunnyvale, Ca., 1973, 57 pp.

3. Brosge, W. P., and H. N. Reiser. Geologic Map and Section of the Chandalar Quadrangle, Alaska. U.S. Geol. Survey Misc. Inv. Series Map I-375, Scale 1:250,000, 1964.

4. Brosge, W. P., H. N. Reiser, and W. Yeend. Reconnaissance Geologic Map of the Beaver Quadrangle, Alaska. U.S. Geol. Survey Misc. Field Studies Maps MF-525, Scale 1:250,000, 1973.

5. Clautice, K. H. Thesis in Progress. Available upon request from K.H. Clautice, University of Alaska, Fairbanks.

6. Northwest Miners Association, Feb., 1978. Data prepared for Representative L. Meeds. Available upon request from Bureau of Mines, Fairbanks, Alaska.

7. Patton, W. W., Jr., and T. P. Miller. Analyses of Stream-Sediment Samples from Bettles and the Southern Part of Wiseman Quadrangles, Alaska. U.S. Geol. Survey OFR 73-219, Scale 1:250,000, 1 sheet, 1973, 52 pp.

8. _____. Bedrock Geologic Map of Bettles and Southern Part of Wiseman Quadrangles, Alaska. U.S. Geol. Survey Misc. Field Studies Map MF-492, Scale 1:250,000, 1973.

9. Stablein, N. K. Report on the Mineral Resource Investigations in Six Areas of Central and Northeastern Alaska. Bendix Field Engineering Corp., Grand Junction, Co., 1980, for the U.S. Dept. of Energy, GJBX-33(80), 186 pp.

10. Texas Instruments, Inc., Aerial Gamma-Ray and Magnetic Survey of the Bethel and Yukon Areas, Alaska, Final Report, 1976, for the U.S. Energy Research and Development Admin., Grand Junction, Co., GJBX-5(77). Vols. I and II (various paging).

11. Townshend, J. B., and others. Preliminary Geomagnetic Data, College Observatory, Fairbanks, Alaska, July, 1979. U.S. Geol. Survey OFR 79-300-G, 21 pp.

12. _____. Preliminary Geomagnetic Data, College Observatory, Fairbanks, Alaska, August, 1979. U.S. Geol. Survey OFR 79-300-H, 23 pp.

13. U. S. Geological Survey. Aeromagnetic Survey, Eastern Part of Bettles Quadrangle, Northeast, Alaska, Bettles A 1-4, B 1-4, C 1-3, D 1-3. U.S. Geol. Survey Open File Map 555A, Scale 1:63,360, 14 sheets, 1973.

14. U. S. Geological Survey. Aeromagnetic Survey, Western Part of Beaver Quadrangle, Northeast, Alaska, Beaver A 4-6, B 4-6, C 4-6, D 4-6. U.S. Geological Survey Open File Map 554A, Scale 1:63,360, 12 sheets, 1973.

15. Wahrhaftig, C. Physiographic Divisions of Alaska. U.S. Geol. Survey Prof. Paper 482, 1965 (1966), 52 pp.

APPENDIX A. - Stream sediment analyses (ppm) [1] [2]

Sample No.	Sec.	Twp.	Rge.	W	U	Cu	Pb	Zn	Ag	Mo
BZ15002	17	21N	11W	<5	1.7	32	36	59	<5	<30
BZ15007	26	21N	12W	8	1.7	6	<15	30	<3	<15
BZ15011	8	21N	11W	<5	2.8	32	<15	90	<3	<15
BZ15013	5	21N	11W	NA	NA	33	<15	120	<3	<15
BZ15015	8	21N	11W	<5	2.2	22	<15	85	<3	<15
BZ15019	21	21N	11W	100	5.0	52	30	80	<3	<15
BZ15021	21	21N	11W	60	3.9	NA	NA	NA	NA	NA
BZ15024	22	21N	11W	8	3.3	36	<15	85	<3	<15
BZ15026	22	21N	11W	40	6.9	91	40	160	<5	<30
BZ15028	22	21N	11W	110	4.5	100	40	210	<5	39
BZ15029	19	21N	11W	<5	2.5	36	35	95	<3	<15
BZ15031	19	21N	11W	18	6.7	27.2	<30	100	<5	<30
BZ15037	24	21N	11W	8	3.2	33	<30	110	<5	<30
BZ15039	24	21N	11W	6	1.9	29.9	48	100	<5	<30
BZ15040	24	21N	11W	<5	2.6	41	31	100	<5	<30
BZ15041	24	21N	11W	<5	2.0	39	<30	100	<5	<30
BZ15042	24	21N	11W	<5	1.8	21	<30	90	<5	<30
BZ15043	23	21N	11W	<5	1.7	23	<30	110	<5	<30
BZ15044	23	21N	11W	16	1.9	24	<30	100	<5	<30
BZ15045	23	21N	11W	<5	1.6	24	<30	110	<5	<30
BZ15046	23	21N	11W	<5	1.4	54	36	150	<5	<30
BZ15050	26	21N	11W	<5	3.3	23	<30	83	<5	<30
BZ15251	23	21N	11W	8	3.7	28.1	<30	94	<5	<30
BZ15253	23	21N	11W	6	2.8	48	<30	110	<5	<30
BZ15255	23	21N	11W	<5	2.0	29.9	<30	78	<5	<30
BZ15258	30	21N	10W	<5	2.8	12	<30	80	<5	<30
BZ15260	30	21N	10W	<5	6.7	12	<30	78	<5	<30
BZ15264	29	21N	10W	<5	1.9	31	<30	100	<5	<30
BZ15265	14	21N	11W	<5	2.6	66	61	120	<5	<30
BZ15272	27	21N	11W	<5	4.3	20	<30	70	<5	<30
BZ15273	28	21N	11W	<5	1.8	15	<15	60	<3	<15
BZ15274	19	21N	11W	12	10.0	21	31	100	<5	<30
BZ15276	19	21N	11W	10	7.6	11	<30	59	<5	<30
BZ15278	19	21N	11W	<5	2.2	39	<15	135	<3	<15
BZ15280	19	21N	11W	20	2.3	41	<15	120	<3	35

See footnotes at end of this appendix

Stream sediment analyses (ppm) - Continued

Sample No.	Sec.	Twp.	Rge.	W	U	Cu	Pb	Zn	Ag	Mo
BZ15282	30	21N	11W	6	3.3	17	<15	90	<3	<15
BZ15284	29	21N	11W	32	4.4	19	<30	110	<5	<30
BZ15285	30	21N	11W	6	3.2	19	<30	62	<5	<30
BZ15296	15	21N	11W	<5	2.4	NA	NA	NA	NA	NA
BZ15298	15	21N	11W	<5	3.3	NA	NA	NA	NA	NA
BZ15300	21	21N	12W	<5	2.2	NA	NA	NA	NA	NA
BZ15302	16	21N	12W	39	3.3	NA	NA	NA	NA	NA
BZ15304	15	21N	12W	<5	2.9	NA	NA	NA	NA	NA
BZ15306	15	21N	12W	24	2.9	NA	NA	NA	NA	NA
BZ15310	30	21N	11W	<5	3.6	NA	NA	NA	NA	NA
BZ15312	30	21N	11W	17	3.0	NA	NA	NA	NA	NA
BZ15314	29	21N	11W	36	6.7	NA	NA	NA	NA	NA
BZ15425	25	21N	11W	<5	1.8	<30	5	61	<5	<30
BZ15426	36	21N	11W	<5	2.6	16	<15	105	<3	<15
BZ15428	36	21N	11W	<5	1.0	14	<15	75	<3	<15
BZ10235	24	21N	12W	<5	12.0	40	<30	85	<5	<30
BZ10711	13	21N	12W	80	2.9	17	<30	61	<5	<30
BZ10773	11	21N	12W	<5	3.1	40	<30	100	<5	<30
BZ10775	11	21N	12W	<5	2.8	29	<30	100	<5	<30

[1] Sample locations shown in figure 5.
[2] Analyzed by U.S. Bureau of Mines, Reno Research Center, 1605 Evans Ave., Reno, Nevada 89520

NOTES. - Cu, Pb, Zn, Ag, and Mo analyzed by atomic absorption. W analyzed by colorimetry. U analyzed by fluorometry.

NA = not analyzed.

Total samples = 54

APPENDIX B. - Stream sediment, soil, and rock analyses (ppm) [1] [2] (1)

BUREAU MINES FIELD NUMBER		LASL ANALYTICAL NUMBER	URANIUM (ppm)
02- BZ 10144	S	-2-99- 0-703771-	3.37
02- BZ 10235	S	-2-99- 0-703769-	14.30
02- BZ 10237	S	-2-99- 0-703770-	5.73
02- BZ 10771	S	-2-99- 0-702227-	4.85
02- BZ 10773	S	-2-99- 0-703772-	3.64
02- BZ 10775	S	-2-99- 0-702228-	3.54
02- BZ 11409	D	-2-99- 0-702676-	3.99
02- BZ 11412	D	-2-99- 0-702227-	6.10
02- BZ 11415	R	-2-99- 0-703104-	3.57
02- BZ 11417	R	-2-99- 0-703117-	3.72
02- BZ 11448	R	-2-99- 0-703105-	5.99
02- BZ 11450	R	-2-99- 0-703115-	7.00
02- BZ 11459	R	-2-99- 0-703104-	7.95
02- BZ 11462	A-R	-2-99- 0-703102-	4.28
02- BZ 11462	B-R	-2-99- 0-703116-	2.92
02- BZ 15002	S	-2-99- 0-702230-	3.70
02- BZ 15007	S	-2-99- 0-702130-	2.52
02- BZ 15015	S	-2-99- 0-702131-	3.36
02- BZ 15017	S	-2-99- 0-703760-	7.25
02- BZ 15019	S	-2-99- 0-702123-	5.85
02- BZ 15026	S	-2-99- 0-702231-	9.02
02- BZ 15028	S	-2-99- 0-702232-	6.22
02- BZ 15031	S	-2-99- 0-702233-	6.96
02- BZ 15035	S	-2-99- 0-703761-	5.42
02- BZ 15037	S	-2-99- 0-702593-	4.17
02- BZ 15037	S	-2-99- 1-703774-	4.17
02- BZ 15039	S	-2-99- 0-702125-	3.10
02- BZ 15040	S	-2-99- 0-702234-	3.33
02- BZ 15041	S	-2-99- 0-702235-	2.09
02- BZ 15042	S	-2-99- 0-702236-	2.58
02- BZ 15043	S	-2-99- 0-702237-	2.71
02- BZ 15044	S	-2-99- 0-702238-	3.08
02- BZ 15045	S	-2-99- 0-702239-	2.17
02- BZ 15046	S	-2-99- 0-702246-	2.44
02- BZ 15047	S	-2-99- 0-703762-	2.21
02- BZ 15048	S	-2-99- 0-703763-	3.76
02- BZ 15050	S	-2-99- 0-702240-	4.76
02- BZ 15053	R	-2-99- 0-703717-	4.47
02- BZ 15054	R	-2-99- 0-703723-	2.95
02- BZ 15059	R	-2-99- 0-703727-	2.77
02- BZ 15065	R	-2-99- 0-703732-	2.91
02- BZ 15071	R	-2-99- 0-703737-	2.36
02- BZ 15077	R	-2-99- 0-703742-	1.58
02- BZ 15078	R	-2-99- 0-703747-	2.40
02- BZ 15079	R	-2-99- 0-703704-	4.09
02- BZ 15082	R	-2-99- 0-703709-	5.03
02- BZ 15087	R	-2-99- 0-703713-	2.72
02- BZ 15096	R	-2-99- 0-703134-	6.53
02- BZ 15096	R	-2-99- 1-703719-	5.18
02- BZ 15102	R	-2-99- 0-703724-	2.99
02- BZ 15103	R	-2-99- 0-703135-	2.26

See footnotes at end of this appendix

BUREAU MINES FIELD NUMBER	LASL ANALYTICAL NUMBER	AG	BI	CD	CU	MO	NI	PB	SN	W	AS	SE	ZR	MO	BE	LI
02- BZ 10144 S	-2-99- 0-703771	-5	7	-5	32	-20	47	11	-10	23	10	-5	102		2	89
02- BZ 10235 S	-2-99- 0-703769	-5	12	-5	40	-20	57	20	-10	17	11	-5	131		3	157
02- BZ 10237 S	-2-99- 0-703770															
02- BZ 10771 S	-2-99- 0-702227															
02- BZ 10773 S	-2-99- 0-703772	-5	-5	-5	35	-20	29	18	-10	-15	30	-5	160		2	50
02- BZ 10775 S	-2-99- 0-702228	-5	7	-5	33	-20	-15	15	-10	16	11	-5	193		2	42
02- BZ 11409 D	-2-99- 0-702676	-5	7	-5	15	-20	-15	17	-10	-15	10	-5	172		3	90
02- BZ 11412 D	-2-99- 0-702229	-5	8	-5	-10	-20	-15	21	-10	-15	-5	-5	222		3	70
02- BZ 11415 R	-2-99- 0-703104	7	25	-5	55	-20	39	200	-10	244	-5	-5	68		-1	-1
02- BZ 11417 R	-2-99- 0-703117	-5	-5	-5	107	-20	45	17	-10	-15	-5	-5	129		2	62
02- BZ 11448 R	-2-99- 0-703105	-5	-5	-5	678	-20	106	-5	-10	-15	10	-5	112		2	50
02- BZ 11450 R	-2-99- 0-703115	-5	-5	-5	82	-20	17	34	-10	16	-5	-5	63		2	25
02- BZ 11459 R	-2-99- 0-703106	-5	11	-5	43	-20	-15	86	-10	21	-5	-5	23		4	45
02- BZ 11462 A-R	-2-99- 0-703102	-5	-5	-5	33	-20	83	50	-10	-15	-5	-5	50		5	44
02- BZ 11462 B-R	-2-99- 0-703116	-5	-5	-5	47	-20	-15	31	14	-15	-5	-5	51		7	50
02- BZ 15002 S	-2-99- 0-702230	-5	-5	-5	46	-20	24	21	-10	-15	111	-5	170		2	57
02- BZ 15007 S	-2-99- 0-702130	-5	-5	-5	13	-20	-15	17	-10	-15	8	-5	104		2	50
02- BZ 15015 S	-2-99- 0-702131	-5	-5	-5	43	-20	41	13	-10	-15	14	-5	186		2	49
02- BZ 15017 S	-2-99- 0-703760	-5	-5	-5	76	-20	36	25	-10	-15	10	-5	148		-1	38
02- BZ 15019 S	-2-99- 0-702133															
02- BZ 15026 S	-2-99- 0-702231	-5	8	-5	96	-20	23	29	-10	46	12	-5	148		2	47
02- BZ 15028 S	-2-99- 0-702232	-5	19	-5	137	-20	27	30	-10	122	13	-5	165		2	46
02- BZ 15031 S	-2-99- 0-702233	-5	6	-5	33	-20	22	19	-10	72	6	-5	317		2	58
02- BZ 15035 S	-2-99- 0-703761															
02- BZ 15037 S	-2-99- 0-703593	-5	-5	-5	47	-20	34	15	-10	28	13	-5	191		3	53
02- BZ 15037 S	-2-99- 1-703774	-5	9	-5	55	-20	59	21	-10	45	14	-5	190		1	49
02- BZ 15039 S	-2-99- 0-702126															
02- BZ 15040 S	-2-99- 0-702234	-5	-5	-5	61	-20	36	13	-10	-15	17	-5	143		2	49
02- BZ 15041 S	-2-99- 0-702235	-5	-5	-5	56	-20	45	18	-10	-15	6	-5	134		2	44
02- BZ 15042 S	-2-99- 0-702236	-5	-5	-5	24	-20	33	-5	-10	-15	25	-5	147		2	46
02- BZ 15043 S	-2-99- 0-702237	-5	-5	-5	39	-20	33	12	-10	20	7	-5	147		-1	49
02- BZ 15044 S	-2-99- 0-702238	-5	-5	-5	39	-20	27	7	-10	29	6	-5	172		1	48
02- BZ 15045 S	-2-99- 0-702239	-5	5	-5	53	-20	37	8	-10	-15	11	-5	132		2	44
02- BZ 15046 S	-2-99- 0-702286	-5	-5	-5	37	-20	44	10	-10	-15	-5	-5	113		1	36
02- BZ 15047 S	-2-99- 0-703762	-5	6	-5	106	-20	56	22	-10	19	9	-5	67		-1	21
02- BZ 15048 S	-2-99- 0-703763															
02- BZ 15050 S	-2-99- 0-702240	-5	-5	-5	45	-20	16	5	-10	-15	10	-5	176		2	49
02- BZ 15053 R	-2-99- 0-703717	-5	5	-5	709	-20	22	30	-10	-15	-5	-5	181		1	47
02- BZ 15054 R	-2-99- 0-703723	-5	7	-5	171	-20	23	38	-10	-15	9	-5	132		1	14
02- BZ 15059 R	-2-99- 0-703727	8	16	-5	6286	-20	-15	106	-10	-15	-5	5	145		-1	44
02- BZ 15065 R	-2-99- 0-703732	-5	-5	-5	960	-20	85	-5	19	867	15	13	111		7	33
02- BZ 15071 R	-2-99- 0-703737	-5	-5	-5	49	-20	21	12	-10	-15	25	-5	126		2	22
02- BZ 15077 R	-2-99- 0-703742	-5	-5	-5	25	-20	-15	10	-10	-15	13	-5	75		2	16
02- BZ 15078 R	-2-99- 0-703747	-5	5	-5	223	-20	19	47	-10	-15	-5	-5	201		1	33
02- BZ 15079 R	-2-99- 0-703704	-5	-5	-5	895	-20	-15	-5	23	1393	51	14	75		3	12
02- BZ 15082 R	-2-99- 0-703709	-5	-5	-5	933	-20	-15	-5	19	75	17	-5	161		3	21
02- BZ 15097 R	-2-99- 0-703713	-5	-5	-5	-10	-20	-15	24	-10	-15	5	-5	129		2	74
02- BZ 15096 R	-2-99- 0-703134	204	1304	72	410	-20	45	10345	24	8126	-5	87	110		9	18
02- BZ 15098 R	-2-99- 1-703718	187	838	72	329	-20	40	6962	-10	3712	-5	73	130		8	29
02- BZ 15102 R	-2-99- 0-703724	-5	34	-5	1777	-20	81	38	-10	45	16	12	103		1	24
02- BZ 15103 R	-2-99- 0-703136	-5	20	-5	64	-20	30	16	-10	150	-5	-5	82		1	20

Stream sediment, soil, and rock analyses (ppm) - Continued

BUREAU MINES FIELD NUMBER	LASL ANALYTICAL NUMBER	AL	AU	BA	CA	CE	CL	CO	CR	CS	DY	EU	FE	HF	K	LA	LU
02- BZ 10144 S	-2-99- 0-703771	50540	-0.08	622	52300	63	-65	13.3	90	5.6	5	1.1	38080	4.2	13230	29	0.3
02- BZ 10235 S	-2-99- 0-703769	74950	-0.08	-149	14310	105	140	14.4	47	9.0	-1	1.4	38050	5.4	17060	47	0.4
02- BZ 10237 S	-2-99- 0-703770	64610	-0.08	842	41070	95	-87	15.3	85	8.0	6	1.3	41490	5.0	13340	39	0.5
02- BZ 10771 S	-2-99- 0-702227	60950	-0.06	673	42490	99	-91	12.2	67	3.8	9	1.3	36820	8.1	15030	43	0.6
02- BZ 10773 S	-2-99- 0-703772	57780	-0.08	658	4159	85	138	17.0	88	8.6	8	1.4	42540	7.6	14400	44	0.5
02- BZ 10775 S	-2-99- 0-702229	59710	-0.09	530	-566	74	115	17.9	82	8.6	8	1.0	45860	7.9	17030	32	0.7
02- BZ 11409 O	-2-99- 0-702676	95900	-0.09	1039	14960	96	-102	6.2	16	31.3	4	1.1	27740	5.8	22460	49	0.4
02- BZ 11412 O	-2-99- 0-702229	91940	-0.07	823	20730	170	-114	5.7	16	8.4	9	1.4	28390	12.0	22230	74	0.7
02- BZ 11415 R	-2-99- 0-703104	96060	-0.04	3890	-554	24	-62	-0.6	41	8.0	-1	1.4	1645	2.7	110200	13	0.1
02- BZ 11417 R	-2-99- 0-703117	82730	-0.11	1046	34480	72	-81	16.8	153	9.4	5	1.1	46860	4.2	32620	29	0.4
02- BZ 11449 R	-2-99- 0-703105	54750	-0.09	338	125000	50	-104	29.5	115	4.8	5	0.7	69970	3.2	-4185	29	0.3
02- BZ 11450 R	-2-99- 0-703115	86870	-0.04	1316	27820	18	-75	4.2	56	6.1	2	0.6	12650	2.6	89370	11	0.1
02- BZ 11459 R	-2-99- 0-703106	74400	-0.04	-109	4714	7	-100	-0.5	84	4.2	2	-0.1	5035	1.1	34480	-2	0.1
02- BZ 11462 A-R	-2-99- 0-703102	71190	-0.05	596	5643	25	-99	-0.7	85	7.6	3	0.4	3737	1.7	45420	11	0.2
02- BZ 11462 B-R	-2-99- 0-703116	71020	-0.05	863	6074	24	-95	-0.6	100	19.7	-1	0.6	5362	1.5	36390	14	0.1
02- BZ 15002 S	-2-99- 0-702230	79960	-0.10	992	4641	87	199	16.0	106	8.3	6	1.4	54470	5.8	19930	39	0.5
02- BZ 15007 S	-2-99- 0-702130	74720	-0.05	835	25870	41	-116	4.7	32	2.6	4	1.1	14740	4.7	23000	23	0.3
02- BZ 15015 S	-2-99- 0-702131	68860	-0.11	708	2998	96	-59	17.6	108	7.1	7	1.3	51230	7.5	17650	44	0.5
02- BZ 15017 S	-2-99- 0-703760	69940	-0.09	806	4175	103	121	23.7	114	8.3	8	1.7	49620	6.5	21200	46	0.5
02- BZ 15019 S	-2-99- 0-702123	58700	-0.09	1102	28860	56	-110	9.6	34	4.3	4	1.2	24240	5.9	22100	30	0.3
02- BZ 15026 S	-2-99- 0-702231	73700	-0.09	896	24300	69	-113	13.1	64	5.8	5	1.2	36200	5.6	21540	40	0.4
02- BZ 15028 S	-2-99- 0-702232	72720	-0.11	804	20660	99	-104	14.0	81	6.5	5	1.2	43140	6.2	15040	42	0.3
02- BZ 15031 S	-2-99- 0-702233	68430	-0.08	908	31350	94	124	11.4	56	4.9	7	1.3	32280	12.1	16000	41	0.6
02- BZ 15035 S	-2-99- 0-703751	69670	-0.08	732	20150	67	-92	16.3	90	7.9	8	1.2	43130	6.1	16450	34	0.5
02- BZ 15037 S	-2-99- 0-702593	63770	-0.09	708	18330	74	-85	20.0	91	11.5	6	1.1	44400	6.8	12260	32	0.4
02- BZ 15037 S	-2-99- 1-703774	61240	-0.11	626	18450	84	-86	19.2	87	12.1	5	1.3	45180	6.5	12790	31	0.4
02- BZ 15039 S	-2-99- 0-702124	67120	-0.12	588	18450	62	-103	17.0	95	20.7	6	1.2	41060	5.0	14220	29	0.4
02- BZ 15040 S	-2-99- 0-702234	67910	-0.10	794	17420	58	165	17.9	97	10.9	4	1.1	42680	4.7	12730	31	0.4
02- BZ 15041 S	-2-99- 0-702235	67940	-0.10	521	12520	60	120	17.3	80	15.1	6	1.2	42840	5.6	12640	29	0.3
02- BZ 15042 S	-2-99- 0-702236	56990	-0.11	648	12060	65	-91	21.0	81	7.5	4	1.2	65290	8.3	11100	27	0.4
02- BZ 15043 S	-2-99- 0-702237	60290	-0.11	751	10770	70	-109	30.4	76	7.3	4	1.4	47460	5.2	10210	29	0.3
02- BZ 15044 S	-2-99- 0-702238	57080	-0.09	501	14020	74	-79	16.2	86	9.8	6	1.2	44420	7.5	8490	35	0.7
02- BZ 15045 S	-2-99- 0-702239	59540	-0.08	612	14460	44	147	15.2	69	5.5	5	1.0	39170	4.0	9556	25	0.3
02- BZ 15046 S	-2-99- 0-702286	52610	-0.10	731	11540	45	182	13.1	93	6.5	3	1.1	36860	3.3	11710	17	0.3
02- BZ 15047 S	-2-99- 0-703762	39240	-0.14	-181	7064	53	369	8.3	45	-2.8	5	1.2	21210	-1.8	-3795	-7	-0.2
02- BZ 15048 S	-2-99- 0-703763	79670	-0.07	492	21550	43	-122	8.5	28	4.6	3	0.9	27420	4.8	12210	15	0.3
02- BZ 15050 S	-2-99- 0-702240	68300	-0.13	552	18500	58	-135	13.0	61	5.5	10	1.4	37300	6.5	-4830	19	0.8
02- BZ 15053 R	-2-99- 0-703717	98440	-0.11	390	58910	106	-138	15.6	235	6.1	8	1.6	38840	6.4	9976	52	0.5
02- BZ 15054 R	-2-99- 0-703723	73450	-0.12	703	63330	67	403	19.0	118	6.6	6	1.2	49540	4.3	21900	25	0.5
02- BZ 15059 R	-2-99- 0-703727	78820	-0.13	1215	26240	58	-99	13.5	170	-2.3	7	1.5	59610	4.7	25200	36	0.4
02- BZ 15065 R	-2-99- 0-703732	33050	-0.09	-212	101300	45	-112	52.5	199	5.0	4	0.7	137600	3.8	-5121	25	0.2
02- BZ 15071 R	-2-99- 0-703737	59970	0.60	339	72080	49	-99	14.5	134	6.5	5	1.0	41720	4.1	17190	22	0.3
02- BZ 15077 R	-2-99- 0-703742	37050	-0.04	-128	171000	32	-74	12.5	66	5.5	2	0.4	41830	1.8	-3149	11	0.3
02- BZ 15078 R	-2-99- 0-703747	78920	-0.13	353	57010	60	-113	23.3	55	8.8	9	1.3	48210	6.2	17770	29	0.6
02- BZ 15079 R	-2-99- 0-703704	30410	0.61	-254	124300	26	-143	27.7	77	5.6	4	0.4	123400	3.1	-6186	15	0.4
02- BZ 15082 R	-2-99- 0-703709	70240	0.61	-172	100000	84	-92	31.0	150	5.5	6	2.9	99790	4.8	-4415	43	0.5
02- BZ 15087 R	-2-99- 0-703713	74660	-0.07	1089	21110	56	-112	4.2	74	3.6	2	0.6	17610	3.7	29450	25	0.2
02- BZ 15095 R	-2-99- 0-703134	39710	-0.09	-234	90070	30	-132	17.4	143	-1.7	-2	1.0	53090	15.3	-5562	22	0.2
02- BZ 15096 R	-2-99- 1-703719	51140	-0.13	-210	79920	44	-138	17.9	169	4.6	2	0.9	54170	3.3	-5417	29	0.4
02- BZ 15102 R	-2-99- 0-703724	51470	2.20	290	90450	39	-80	93.3	114	5.3	1	0.6	101600	3.0	13750	21	0.2
02- BZ 15103 R	-2-99- 0-703135	43060	-0.06	511	216700	35	-66	11.4	80	3.3	3	0.7	27670	2.8	17020	18	0.2

BUREAU MINES FIELD NUMBER		LASL ANALYTICAL NUMBER	MG	MN	NA	RB	SB	SC	SM	SR	TA	TB	TH	TI	V	YB	ZN	UTHRT
02- BZ 10144 S	-2-99-	0-703771	21820	741	6197	82	-2	16.6	5.0	-225	-1	-1	7.4	5513	140	4.1	-37	0.455
02- BZ 10235 S	-2-99-	0-703769	7535	865	19750	109	-2	13.7	8.3	-293	-2	-1	21.8	3971	99	3.9	144	0.656
02- BZ 10237 S	-2-99-	0-703770	14400	836	11890	106	-2	16.4	8.0	-261	2	-1	12.8	4181	118	4.4	123	0.448
02- BZ 10771 S	-2-99-	0-702227	12010	892	9756	82	-2	12.4	8.7	-234	2	-1	14.9	7460	110	6.7	274	0.326
02- BZ 10773 S	-2-99-	0-703772	6883	544	4461	99	-2	13.1	7.7	-194	2	-1	9.1	8220	120	5.7	169	0.400
02- BZ 10775 S	-2-99-	0-702229	6433	638	3665	123	-2	13.5	4.8	-235	2	-1	11.4	9287	116	7.5	-105	0.311
02- BZ 11409 D	-2-99-	0-702676	6045	603	15300	106	-1	8.8	5.9	-281	-1	-1	18.6	2807	45	4.8		0.215
02- BZ 11412 D	-2-99-	0-702229	6453	769	26030	138	-2	9.5	12.8	-277	5	1	41.4	3628	41	8.0	118	0.147
02- BZ 11415 R	-2-99-	0-703104	-1225	62	9543	407	-1	1.4	0.8	1021	-1		16.8	-355	-5	-0.7		0.213
02- BZ 11417 R	-2-99-	0-703117	19320	481	7425	146	-3	19.8	4.5	-201	-1	-1	7.9	4252	176	4.7	154	0.471
02- BZ 11448 R	-2-99-	0-703105	37040	1468	5459	-40	-2	13.5	3.5	591	-1	-1	7.2	2478	114	3.5	116	0.832
02- BZ 11450 R	-2-99-	0-703115	8023	435	11050	368	-1	3.8	1.7	867	2		5.3	-611	30	1.8	55	1.472
02- BZ 11459 R	-2-99-	0-703106	-2082	60	29090	201	-1	3.0	1.7	-188	1		1.5	-585	-7	-0.7	69	5.300
02- BZ 11462 A-R	-2-99-	0-703102	-2071	109	22540	175	-1	4.1	2.8	-197	-1		8.4	-616	-8	-1.0	84	0.510
02- BZ 11462 B-R	-2-99-	0-703116	-1826	161	24080	254		1.4	2.0	-162	-1		6.3	-485	-7	-0.9	-33	0.463
02- BZ 15002 S	-2-99-	0-702230	8962	436	5359	139	-3	17.8	6.8	-202	-1	-1	13.1	6395	172	6.3	80	0.282
02- BZ 15007 S	-2-99-	0-702130	5067	429	26900	79	-1	6.3	3.8	459	-1	-1	6.6	2120	49	2.9	-49	0.382
02- BZ 15015 S	-2-99-	0-702131	8285	524	4927	97	-3	15.6	6.3	-227	-1	-1	11.2	6429	145	5.7	-78	0.300
02- BZ 15017 S	-2-99-	0-703750	8080	621	5960	137	-2	16.0	7.8	-209	-2	-1	12.8	6495	151	7.3	158	0.566
02- BZ 15019 S	-2-99-	0-702133	8770	842	15500	140	-2	8.4	5.1	-325	-1	-1	11.0	2955	73	2.5	-68	0.532
02- BZ 15026 S	-2-99-	0-702231	10970	642	12440	104	-3	11.9	7.2	-275	-1	-1	12.4	3799	105	-1.6	163	0.727
02- BZ 15028 S	-2-99-	0-702232	13530	1134	9559	128	-3	13.5	7.5	-366	-1	-1	13.6	4060	130	4.8	224	0.457
02- BZ 15031 S	-2-99-	0-702233	10120	834	15380	76	-2	12.1	9.6	-206	-1	-1	14.7	5332	100	6.4	-38	0.473
02- BZ 15035 S	-2-99-	0-703751	10910	790	10310	87	-2	16.0	6.1	-238	-1	-1	10.1	4203	132	4.7	-111	0.537
02- BZ 15037 S	-2-99-	0-702593	10680	940	7134	96	-2	19.1	5.9	-255	-1	-1	8.8	6007	141	4.8	137	0.474
02- BZ 15037 S	-2-99-	1-703774	10073	914	7006	82	-3	15.6	5.8	-315	-1	-1	8.9	6565	131	4.3	-51	0.469
02- BZ 15039 S	-2-99-	0-702136	12080	732	5535	-49	-3	15.0	5.2	-296	-2	-1	8.8	4108	138	-2.0		0.352
02- BZ 15040 S	-2-99-	0-702234	10620	716	6242	75	-3	14.3	5.1	-258	-2	-1	8.3	4731	143	-1.7	93	0.401
02- BZ 15041 S	-2-99-	0-702235	9407	607	6162	111	-3	14.9	5.2	-256	-1	1	7.3	3934	140	4.1	197	0.396
02- BZ 15042 S	-2-99-	0-702236	8597	1362	5946	-47	-3	14.1	5.6	-381	-1	-1	7.5	4250	116	-2.3	139	0.344
02- BZ 15043 S	-2-99-	0-702237	5740	1793	6292	-48	-3	13.5	4.1	-472	-2	-1	6.0	3632	118	-1.9	-60	0.452
02- BZ 15044 S	-2-99-	0-702238	10160	1454	5451	59	-2	17.4	6.4	-270	-1	-1	8.8	5947	109	5.3	135	0.330
02- BZ 15045 S	-2-99-	0-702239	10010	792	7228	-38	-2	13.8	3.7	-249	-1		6.0	3606	103	3.3	207	0.362
02- BZ 15046 S	-2-99-	0-702285	10450	478	5059	-41	-3	12.2	3.9	-224	-1	-1	6.2	4091	119	3.5	152	0.394
02- BZ 15047 S	-2-99-	0-703762	5940	267	3898	-57	-4	9.7	4.0	-296	-3	-1	5.9	2656	81	-2.6	258	0.375
02- BZ 15048 S	-2-99-	0-703763	5127	065	26240	73	-2	10.5	3.1	-308	-1	-1	7.2	2033	59	3.9	80	0.522
02- BZ 15050 S	-2-99-	0-702240	10330	1215	20710	-44	-3	20.3	5.4	-389	-1	-1	7.5	3478	95	7.2	176	0.635
02- BZ 15053 R	-2-99-	0-703717	12350	378	31320	-47	-3	18.6	8.6	-300	-2	-1	15.3	5908	163	6.0	134	0.292
02- BZ 15054 R	-2-99-	0-703723	17710	563	10540	71	0	19.5	5.8	-222	-1	-1	7.9	4400	171	3.9	-42	0.373
02- BZ 15059 R	-2-99-	0-703727	10310	335	11330	-43	-4	21.3	5.0	-220	-2	-1	10.5	4983	212	5.2	962	0.264
02- BZ 15065 R	-2-99-	0-703732	25420	2522	2873	-41	-2	13.3	4.1	-420	-1	1	3.2	3262	115	2.7	210	0.909
02- BZ 15071 R	-2-99-	0-703737	16770	786	14410	-38	8	16.4	3.9	-276	-1	-1	7.3	3325	137	3.8	-49	0.323
02- BZ 15077 R	-2-99-	0-703742	54860	1177	2670	-32	7	7.8	2.5	-232	-1		4.5	1385	67	-1.4	176	0.351
02- BZ 15078 R	-2-99-	0-703747	17530	699	17560	64	8	29.4	6.8	-238	-1	-1	8.6	8292	268	5.9	-46	0.279
02- BZ 15079 R	-2-99-	0-703704	15410	3229	2961	-38	7	9.3	2.8	-514	-1		3.8	-1196	72	4.1	270	1.076
02- BZ 15082 R	-2-99-	0-703707	15410	1945	2519	-47	4	22.3	6.9	-362	-1	-1	11.4	3700	175	4.5		0.441
02- BZ 15087 R	-2-99-	1-703713	3733	458	25210	136	-2	4.9	3.8	-257	-1	-1	13.6	2197	27	2.4	75	0.200
02- BZ 15096 R	-2-99-	0-703134	13490	2536	8773	-33	-2	11.0	2.4	-488	-1	-1	3.7	2058	122	2.9	314	1.765
02- BZ 15096 R	-2-99-	1-703718	10350	2514	13870	-40	-3	14.2	2.5	-385	-2	-1	5.0	3044	132	3.4	331	1.036
02- BZ 15102 R	-2-99-	0-703724	27410	598	8307	-46	12	8.1	2.4	475	-1		7.5	2763	109	-1.5	90	0.399
02- BZ 15103 R	-2-99-	0-703136	19130	604	2097	82	-2	9.9	2.8	711	-1		4.6	2084	79	-1.1	100	0.491

Stream sediment, soil, and rock analyses (ppm) - Continued

BUREAU MINES FIELD NUMBER	LASL ANALYTICAL NUMBER	URANIUM (ppm)
02- BZ 15104 R	-2-99- 0-703121-	4.75
02- BZ 15105 R	-2-99- 0-703122-	3.10
02- BZ 15117 R	-2-99- 0-703728-	4.82
02- BZ 15121 R	-2-99- 0-703733-	3.70
02- BZ 15122 R	-2-99- 0-703735-	6.02
02- BZ 15131 R	-2-99- 0-703123-	3.09
02- BZ 15132 R	-2-99- 0-703139-	4.13
02- BZ 15133 R	-2-99- 0-703118-	11.69
02- BZ 15135 R	-2-99- 0-703753-	4.90
02- BZ 15136 R	-2-99- 0-703752-	5.61
02- BZ 15137 R	-2-99- 0-703751-	3.49
02- BZ 15138 R	-2-99- 0-703750-	4.27
02- BZ 15139 R	-2-99- 0-703749-	3.22
02- BZ 15140 R	-2-99- 0-703759-	2.82
02- BZ 15141 R	-2-99- 0-703707-	4.31
02- BZ 15150 R	-2-99- 0-703107-	6.20
02- BZ 15159 R	-2-99- 0-703103-	2.43
02- BZ 15163 R	-2-99- 0-703114-	4.14
02- BZ 15168 R	-2-99- 0-703101-	4.01
02- BZ 15172 R	-2-99- 0-703743-	1.68
02- BZ 15173 R	-2-99- 0-703749-	4.32
02- BZ 15176 R	-2-99- 0-703705-	3.79
02- BZ 15177 R	-2-99- 0-703710-	6.40
02- BZ 15180 R-R	-2-99- 0-703714-	0.38
02- BZ 15184 R	-2-99- 0-703719-	3.24
02- BZ 15190 R	-2-99- 0-703725-	4.16
02- BZ 15193 R	-2-99- 0-703729-	4.95
02- BZ 15200 R	-2-99- 0-703735-	3.47
02- BZ 15208 R	-2-99- 0-703739-	1.19
02- BZ 15209 R	-2-99- 0-703119-	4.82
02- BZ 15234 R	-2-99- 0-703758-	3.39
02- BZ 15235 R	-2-99- 0-703757-	3.90
02- BZ 15236 R	-2-99- 0-703756-	3.02
02- BZ 15237 R	-2-99- 0-703755-	3.04
02- BZ 15238 R	-2-99- 0-703754-	3.79
02- BZ 15239 R	-2-99- 0-703731-	4.00
02- BZ 15240 R	-2-99- 0-703736-	5.30
02- BZ 15241 R	-2-99- 0-703711-	3.38
02- BZ 15242 R	-2-99- 0-703715-	3.59
02- BZ 15243 R	-2-99- 0-703720-	4.60
02- BZ 15244 R	-2-99- 0-703721-	6.54
02- BZ 15245 R	-2-99- 0-703730-	4.28
02- BZ 15246 R	-2-99- 0-703735-	4.55
02- BZ 15247 R	-2-99- 0-703740-	3.59
02- BZ 15248 R	-2-99- 0-703745-	3.47
02- BZ 15249 R	-2-99- 0-703732-	4.26
02- BZ 15250 S	-2-99- 0-702697-	6.66
02- BZ 15250 S	-2-99- 1-703775-	6.40
02- BZ 15251 S	-2-99- 0-702241-	4.90
02- BZ 15253 S	-2-99- 0-702242-	4.39
02- BZ 15255 S	-2-99- 0-702243-	3.23

BUREAU MINES FIELD NUMBER	LASL ANALYTICAL NUMBER	AG	BI	CD	CU	MO	NI	PB	SN	W	AS	SE	ZR	MO	BE	LI
02- BZ 15104 R	-2-99- 0-703121	-5	11	-5	157	-20	51	6	14	4001	-5	29	98		2	40
02- BZ 15105 R	-2-99- 0-703122	-5	-5	-5	152	-20	73	12	-10	1479	5	9	146		1	86
02- BZ 15117 R	-2-99- 0-703725	-5	9	-5	78	-20	-15	18	-10	-15	-5	-5	145		2	62
02- BZ 15121 R	-2-99- 0-703733	-5	-5	-5	33	-20	33	8	-10	-15	8	-5	161		2	74
02- BZ 15122 R	-2-99- 0-703739	-5	-5	-5	29	-20	-15	45	-10	-15	-5	-5	78		3	22
02- BZ 15131 R	-2-99- 0-703123	-5	8	-5	147	-20	51	-5	78	151	5	-5	102		26	23
02- BZ 15132 R	-2-99- 0-703139	-5	-5	-5	64	-20	53	9	16	87	-5	-5	94		2	18
02- BZ 15133 R	-2-99- 0-703118	-5	6	-5	46	-20	-15	54	-10	253	-5	-5	108		2	21
02- BZ 15135 R	-2-99- 0-703753	-5	15	13	266	-20	28	74	12	1235	6	6	103		6	32
02- BZ 15136 R	-2-99- 0-703752	-5	15	16	156	-20	53	129	13	1224	-5	-5	109		5	43
02- BZ 15137 R	-2-99- 0-703751	-5	7	-5	73	-20	54	23	-10	131	-5	-5	121		3	43
02- BZ 15138 R	-2-99- 0-703750	-5	43	33	112	-20	39	150	23	2131	-5	15	97		6	21
02- BZ 15139 R	-2-99- 0-703749	35	100	38	97	-20	47	773	30	3003	-5	11	82		6	12
02- BZ 15140 R	-2-99- 0-703757	11	38	15	59	-20	39	204	39	1017	-5	-5	88		6	16
02- BZ 15141 R	-2-99- 0-703737	-5	-5	15	66	-20	-15	44	-10	478	-5	6	104		6	33
02- BZ 15150 R	-2-99- 0-703107	-5	11	-5	59	-20	-15	108	16	90	-5	-5	31		7	50
02- BZ 15159 R	-2-99- 0-703103	-5	-5	9	107	-20	57	46	57	57	-5	-5	71		8	4
02- BZ 15163 R	-2-99- 0-703114	-5	-5	13	112	-20	27	7	130	2552	-5	14	97		5	4
02- BZ 15168 R	-2-99- 0-703101	-5	-5	-5	43	-20	-15	49	11	-15	-5	-5	69		5	40
02- BZ 15172 R	-2-99- 0-703743	-5	-5	-5	31	-20	17	22	-10	-15	9	-5	38		4	44
02- BZ 15173 R	-2-99- 0-703748	-5	-5	-5	42	-20	61	21	11	29	24	-5	90		2	18
02- BZ 15176 R	-2-99- 0-703705	-5	101	-5	222	-20	-15	130	-10	-15	-5	-5	122		2	60
02- BZ 15177 R	-2-99- 0-703710	-5	8	-5	69	-20	-15	20	-10	22	6	-5	84		2	52
02- BZ 15180 R-R	-2-99- 0-703714	69	309	41	59	-20	-15	4105	-10	-15	-5	-5	22		-1	3
02- BZ 15184 R	-2-99- 0-703713	74	854	19	6495	-20	-15	321	117	2133	-5	28	34		24	8
02- BZ 15190 R	-2-99- 0-703725	-5	8	-5	136	-20	-15	54	-10	606	68	9	96		3	47
02- BZ 15193 R	-2-99- 0-703729	-5	-5	-5	120	-20	48	20	-10	-15	-5	-5	179		2	156
02- BZ 15200 R	-2-99- 0-703734	-5	-5	-5	51	-20	-15	15	-10	-15	9	-5	76		35	26
02- BZ 15208 R	-2-99- 0-703739	8	27	-5	198	-20	-15	72	25	62	30	-5	10		-1	4
02- BZ 15209 R	-2-99- 0-703119	-5	5	-5	34	-20	-15	21	-10	39	6	-5	121		3	46
02- BZ 15234 R	-2-99- 0-703758	6	21	19	149	-20	48	175	16	736	-5	-5	111		7	39
02- BZ 15235 R	-2-99- 0-703757	-5	36	72	205	-20	33	157	16	3301	-5	15	104		5	44
02- BZ 15236 R	-2-99- 0-703756	-5	13	23	88	-20	40	104	20	803	-5	-5	133		4	36
02- BZ 15237 R	-2-99- 0-703755	-5	21	-5	43	-20	57	125	-10	40	-5	-5	119		2	34
02- BZ 15238 R	-2-99- 0-703754	-5	6	-5	73	-20	-15	30	-10	34	-5	-5	128		3	33
02- BZ 15239 R	-2-99- 0-703701	-5	18	-5	76	-20	45	42	-10	172	-5	-5	133		5	50
02- BZ 15240 R	-2-99- 0-703706	5	45	21	68	-20	39	561	11	436	-5	7	99		6	26
02- BZ 15241 R	-2-99- 0-703711	-5	-5	-5	47	-20	44	7	-10	-15	-5	-5	168		3	104
02- BZ 15242 R	-2-99- 0-703715	-5	-5	15	136	-20	-15	57	12	-15	16	-5	111		5	86
02- BZ 15243 R	-2-99- 0-703720	12	9	9	174	-20	16	83	-10	766	-5	13	131		4	70
02- BZ 15244 R	-2-99- 0-703721	-5	5	-5	50	-20	-15	51	-10	41	18	-5	104		3	44
02- BZ 15245 R	-2-99- 0-703730	-5	5	21	87	-20	31	91	-10	156	-5	-5	109		5	30
02- BZ 15246 R	-2-99- 0-703735	5	16	67	256	-20	-15	164	18	3658	63	31	104		10	34
02- BZ 15247 R	-2-99- 0-703740	-5	-5	9	49	-20	25	18	-10	22	5	-5	116		9	45
02- BZ 15248 R	-2-99- 0-703745	-5	9	-5	62	-20	44	40	-10	38	13	-5	122		2	47
02- BZ 15249 R	-2-99- 0-703732	110	554	68	170	-20	29	3748	15	3389	-5	61	126		6	47
02- BZ 15250 S	-2-99- 0-702597															
02- BZ 15250 S	-2-99- 1-703775	-5	7	-5	36	-20	-15	13	-10	35	19	-5	211		2	47
02- BZ 15251 S	-2-99- 0-702241	-5	4	-5	35	-20	-15	23	-10	-15	12	-5	103		3	68
02- BZ 15253 S	-2-99- 0-702242	-5	-5	-5	75	-20	56	8	-10	25	24	-5	156		2	49
02- BZ 15255 S	-2-99- 0-702243	-5	-5	-5	47	-20	35	24	-10	-15	8	-5	191		2	48

Stream sediment, soil, and rock analyses (ppm) - Continued

BUREAU MINES FIELD NUMBER	LABL ANALYTICAL NUMBER	AL	AU	BA	CA	CE	CL	CO	CR	CS	DY	EU	FE	HF	K	LA	LU
02- BZ 15104 R	-2-99- 0-703121	55590	-0.10	1929	111500	37	-87	20.8	123	6.1	3	1.2	49210	8.7	24010	17	0.3
02- BZ 15105 R	-2-99- 0-703122	74430	-0.09	1232	77780	54	-70	18.2	148	15.9	4	1.1	42850	4.5	43410	27	0.3
02- BZ 15117 R	-2-99- 0-703728	77150	-0.08	1336	24370	68	-120	5.9	102	8.9	3	1.2	25030	3.7	22320	36	0.2
02- BZ 15121 R	-2-99- 0-703733	79560	-0.10	1177	40780	74	-129	17.8	114	9.9	3	1.1	38650	4.1	26820	37	0.2
02- BZ 15122 R	-2-99- 0-703734	72510	-0.09	754	7503	63	-102	-1.0	308	9.6	5	0.5	6516	2.8	55000	29	0.2
02- BZ 15131 R	-2-99- 0-703123	58290	-0.06	-291	183300	14	-151	17.6	147	10.2	2	0.6	62030	3.1	-7329	8	0.2
02- BZ 15132 R	-2-99- 0-703139	45960	-0.06	393	126000	36	-100	19.9	107	3.5	-1	0.7	64590	2.4	-4118	15	0.2
02- BZ 15133 R	-2-99- 0-703118	93830	-0.06	2408	9162	69	-74	-0.8	35	6.4	6	1.0	2836	4.2	110600	35	0.3
02- BZ 15135 R	-2-99- 0-703753	49070	-0.09	-202	78400	40	-139	15.7	92	3.9	2	0.7	47840	3.3	-5167	23	0.4
02- BZ 15136 R	-2-99- 0-703752	51900	-0.09	-234	93180	44	-138	15.7	117	5.7	3	0.8	52430	3.6	9396	21	0.4
02- BZ 15137 R	-2-99- 0-703751	59610	-0.11	721	142500	42	-109	18.1	150	3.9	4	1.0	44910	2.9	13370	19	-0.1
02- BZ 15138 R	-2-99- 0-703750	41150	-0.10	-191	149300	37	-117	18.7	133	2.9	3	0.8	49050	3.3	-5011	24	0.2
02- BZ 15139 R	-2-99- 0-703749	37820	-0.09	-232	155300	35	-128	13.4	118	4.5	-2	0.5	40660	3.4	-5791	19	0.2
02- BZ 15140 R	-2-99- 0-703739	36820	-0.07	-195	149900	38	-117	12.5	120	-1.5	-1	0.6	45750	2.9	-4995	20	0.2
02- BZ 15141 R	-2-99- 0-703707	49190	-0.09	-211	163100	38	-147	15.7	128	5.2	-2	0.9	51120	2.7	-6212	21	0.2
02- BZ 15150 R	-2-99- 0-703107	70050	-0.04	-158	-1594	-3	-139	-0.5	117	12.7	2	-0.1	5520	1.7	30490	-2	0.2
02- BZ 15159 R	-2-99- 0-703103	15520	-0.06	-507	117000	59	-305	16.6	135	1.9	-3	0.4	87390	2.6	-13010	32	0.2
02- BZ 15163 R	-2-99- 0-703114	43470	-0.07	-421	159400	28	-221	12.7	125	3.9	3	0.6	70390	6.7	-10530	17	0.3
02- BZ 15168 R	-2-99- 0-703131	71740	-0.06	790	6539	40	-114	-0.7	84	11.0	3	0.7	8468	2.7	40940	20	0.2
02- BZ 15172 R	-2-99- 0-703743	92740	-0.08	3812	17440	-4	-106	-0.7	90	6.7	-1	2.2	4008	1.6	79580	-4	-0.1
02- BZ 15173 R	-2-99- 0-703749	51890	-0.09	352	142900	39	-108	15.7	143	8.9	3	0.7	44720	3.0	-4331	22	0.3
02- BZ 15176 R	-2-99- 0-703705	68900	-0.08	1059	20540	35	-115	3.4	208	5.8	-1	0.5	19280	3.3	16380	18	0.1
02- BZ 15177 R	-2-99- 0-703710	63540	-0.07	1547	13130	28	-90	2.7	132	5.1	2	0.8	13610	3.1	33060	15	0.2
02- BZ 15180 B-R	-2-99- 0-703714	1567	-0.09	-91	44120	-4	-38	2.9	269	6.0	-1	-0.2	12980	-0.9	-1952	-4	-0.1
02- BZ 15184 R	-2-99- 0-703719	22400	-0.09	-509	85320	25	-223	3.0	108	10.9	-3	1.3	94020	1.4	-11750	-3	-0.1
02- BZ 15190 R	-2-99- 0-703725	57350	0.80	919	8310	21	-94	-1.0	351	8.1	1	0.6	15550	3.4	31690	-5	-0.1
02- BZ 15193 R	-2-99- 0-703729	124400	-0.12	1347	26610	79	-70	26.0	159	12.3	7	1.2	52280	7.1	55930	40	0.4
02- BZ 15200 R	-2-99- 0-703734	71050	-0.10	1056	129100	29	639	13.7	94	8.6	2	0.7	25930	2.1	41580	16	-0.1
02- BZ 15208 R	-2-99- 0-703739	1521	-0.05	-45	-404	-3	24	3.6	201	20.0	-0	-0.1	16070	-0.5	-952	-3	-0.1
02- BZ 15209 R	-2-99- 0-703119	76500	-0.05	1045	10160	63	-106	3.1	90	4.6	3	0.5	16540	3.9	34480	31	0.2
02- BZ 15234 R	-2-99- 0-703753	62010	-0.08	483	117400	43	-111	13.8	146	5.4	3	0.8	42430	3.4	9439	22	0.2
02- BZ 15235 R	-2-99- 0-703757	54510	-0.09	409	120700	40	-95	18.0	121	4.4	2	0.8	47950	4.2	9593	18	0.3
02- BZ 15236 R	-2-99- 0-703754	65210	-0.09	535	123600	51	-99	18.2	131	6.0	4	1.0	46580	3.9	13010	25	0.4
02- BZ 15237 R	-2-99- 0-703755	62520	-0.10	-145	163600	40	-102	16.5	147	4.4	4	0.7	42580	3.2	6893	18	0.3
02- BZ 15238 R	-2-99- 0-703756	71390	-0.08	1053	38510	67	-112	6.0	83	3.3	2	0.8	24110	4.4	24200	29	0.2
02- BZ 15239 R	-2-99- 0-703701	63500	-0.11	620	122400	48	-117	17.1	187	5.5	3	0.9	46540	2.9	-5164	26	0.3
02- BZ 15240 R	-2-99- 0-703706	64380	-0.08	789	29170	52	-105	3.5	52	4.6	2	0.7	15550	4.9	34780	30	0.2
02- BZ 15241 R	-2-99- 0-703711	70320	-0.12	1030	108200	56	-117	17.6	134	6.4	6	1.0	42700	4.6	23630	30	0.4
02- BZ 15242 R	-2-99- 0-703715	77120	-0.09	597	36100	56	-115	5.1	71	14.2	4	0.8	18250	3.3	33690	24	0.2
02- BZ 15243 R	-2-99- 0-703720	67850	-0.07	1322	56850	51	-98	9.8	105	6.1	2	0.5	28820	3.3	25230	25	0.2
02- BZ 15244 R	-2-99- 0-703721	69360	-0.08	731	34010	38	-101	4.9	86	8.2	2	0.5	18600	3.1	24440	25	0.2
02- BZ 15245 R	-2-99- 0-703730	65290	-0.09	904	68650	30	-97	10.9	96	5.7	2	0.8	32020	3.1	17070	20	0.3
02- BZ 15246 R	-2-99- 0-703735	53170	-0.10	-215	94360	39	-158	13.4	122	-1.6	-2	0.6	49960	8.4	-6273	28	0.2
02- BZ 15247 R	-2-99- 0-703740	69150	-0.08	712	98990	40	-87	15.0	99	8.6	4	0.8	36560	4.0	21200	21	0.3
02- BZ 15248 R	-2-99- 0-703745	73370	-0.10	562	99560	50	-87	19.2	129	9.5	4	0.6	44750	2.5	28310	21	0.3
02- BZ 15249 R	-2-99- 0-703703	63570	0.31	602	87360	46	-105	16.7	166	8.1	-1	1.0	47010	7.5	12680	25	0.2
02- BZ 15250 S	-2-99- 0-702497	69920	-0.09	762	13130	63	-121	10.6	55	4.5	5	1.3	37900	11.0	13140	32	0.5
02- BZ 15253 S	-2-99- 1-703775	69600	-0.09	602	13310	78	-105	13.6	54	5.9	4	1.2	38040	11.1	14400	34	0.4
02- BZ 15251 S	-2-99- 0-702241	73140	-0.08	578	15990	55	-113	10.1	37	6.8	4	0.9	33600	4.5	16590	18	0.4
02- BZ 15253 S	-2-99- 0-702242	67770	-0.08	1630	27690	81	117	10.5	89	6.6	6	1.5	44480	5.5	18990	34	0.5
02- BZ 15255 S	-2-99- 0-702243	73410	-0.09	830	8054	74	204	16.0	99	7.2	6	1.4	48660	6.7	17050	32	0.4

BUREAU MINES FIELD NUMBER	LASL ANALYTICAL NUMBER	MG	MN	NA	RB	SB	SC	SM	SR	TA	TB	TH	TI	V	YB	ZN	UTHRT
02- BZ 15104 R	-2-99- 0-703121	27770	957	3350	146	-3	11.5	2.5	618	-1	-1	5.2	2901	121	-1.8	138	0.913
02- BZ 15105 R	-2-99- 0-703122	25770	636	5428	240	-2	17.8	4.7	768	-1	-1	7.6	3615	128	-1.6	-40	0.408
02- BZ 15117 R	-2-99- 0-703728	6009	589	24370	150	8	7.0	3.9	473	-1	-1	10.0	3469	44	2.2	101	0.402
02- BZ 15121 R	-2-99- 0-703733	13290	710	30550	100	6	14.1	5.8	513	-1	-1	12.9	3822	102	-1.6	106	0.287
02- BZ 15122 R	-2-99- 0-703734	-1719	169	19160	260	7	3.1	3.6	305	-1	-1	20.2	-425	-6	5.2		0.298
02- BZ 15131 R	-2-99- 0-703123	18150	3705	1704	-27	7	10.1	2.3	-536	-1		1.6	3244	148	-1.1	286	1.931
02- BZ 15132 R	-2-99- 0-703139	25880	1944	6143	-30	-2	11.4	2.6	-350	-1		4.4	2228	121	2.1	208	0.939
02- BZ 15133 R	-2-99- 0-703119	-1549	130	9870	405	-1	3.8	6.6	803	3		20.6	763	-7	5.3		0.567
02- BZ 15135 R	-2-99- 0-703753	14000	2397	16320	-34	-2	12.4	3.4	-418	-1	-1	8.7	2625	81	3.0	238	0.563
02- BZ 15136 R	-2-99- 0-703752	21830	2687	9753	-31	-2	15.3	3.2	-474	-1	-1	6.0	1926	109	3.1	349	0.935
02- BZ 15137 R	-2-99- 0-703751	26670	1593	4443	-33	-3	18.0	3.7	-331	-1	-1	5.7	3024	153	-1.9	-43	0.612
02- BZ 15138 R	-2-99- 0-703750	20710	2542	2656	-33	-3	11.8	2.6	-355	-1	-1	4.7	2153	111	2.7	300	0.909
02- BZ 15139 R	-2-99- 0-703749	16790	3058	1762	-35	-2	10.1	3.1	-489	-1		5.6	-1147	89	-1.6	510	0.573
02- BZ 15140 R	-2-99- 0-703748	16090	2704	1376	-29	-2	12.6	2.9	-414	-1	-1	5.9	-900	63	2.6	544	0.478
02- BZ 15141 R	-2-99- 0-703707	19060	2999	2221	-32	-3	12.8	3.5	-443	-1		5.9	-992	111	2.9	955	0.731
02- BZ 15150 R	-2-99- 0-703107	-2606	906	33510	273	-1	1.6	0.9	-319	-1		1.8	-960	-12	2.6	29	3.444
02- BZ 15159 R	-2-99- 0-703133	12660	7164	299	-32	-2	9.1	2.6		-1	-1	6.1	-2434	-28	3.4	553	0.398
02- BZ 15163 R	-2-99- 0-703114	13170	5878	381	-31	-2	8.9	3.8	-892	-1		4.1	3027	90	3.0	231	1.030
02- BZ 15168 R	-2-99- 0-703101	-2143	164	25210	222	-1	2.8	3.3	-187	2		10.4	-561	-9	2.7	88	0.386
02- BZ 15172 R	-2-99- 0-703743	-1777	115	18250	332	-2	7.4	-2.7	967	8		-0.8	-424	-6	-1.4	105	
02- BZ 15173 R	-2-99- 0-703748	31810	1483	9301	-32	17	13.1	2.5	-367	-1		5.3	2192	179	2.0	205	0.815
02- BZ 15176 R	-2-99- 0-703705	5565	414	23140	94	6	5.3	2.7	776	-1	-1	6.9	2480	37	-1.3	77	0.549
02- BZ 15177 R	-2-99- 0-703710	4644	366	18720	137	4	4.4	3.4	-178	-1		11.5	1579	28	2.0	-13	0.557
02- BZ 15180 0-R	-2-99- 0-703715	-869	364	64	-31	11	0.3	-0.4	-157	-1		-0.9	-358	6	-1.6	4768	
02- BZ 15184 R	-2-99- 0-703719	-4934	6065	206	-38	17	2.1	2.1		-1	-1	1.8	-2396	-24	-1.5	412	1.800
02- BZ 15190 R	-2-99- 0-703725	-1651	209	16950	136	34	3.2	1.7	-213	-1	-1	12.3	2305	22	-1.4		0.330
02- BZ 15193 R	-2-99- 0-703729	15340	454	6962	224	-3	21.0	6.3	-215	-1	-1	12.8	6785	302	2.9	75	0.387
02- BZ 15200 R	-2-99- 0-703734	14200	617	7594	183	12	7.9	1.5	492	12	-1	3.1	1494	81	-1.7	98	1.119
02- BZ 15203 R	-2-99- 0-703737	-495	89	55	-19	34	0.4	-0.3	-82	-1		-0.6	-190	11	-1.0	229	
02- BZ 15209 R	-2-99- 0-703119	4346	339	22970	193	2	5.1	3.9	419	-1		18.9	1900	30	3.4	91	0.255
02- BZ 15234 R	-2-99- 0-703754	22800	1804	9510	74	-2	15.0	3.3	527	-1	-1	6.4	3818	126	-2.1	168	0.530
02- BZ 15235 R	-2-99- 0-703757	23300	1725	5318	-35	4	13.7	3.3	-343	-1		4.8	2211	102	3.0	733	0.813
02- BZ 15236 R	-2-99- 0-703756	20480	1605	7785	88	-2	16.4	4.0	-346	-1		6.4	3158	126	3.7	222	0.472
02- BZ 15237 R	-2-99- 0-703755	28810	1315	5378	-34	-3	15.0	3.2	-298	-1	-1	6.2	3277	134	2.5	131	0.490
02- BZ 15238 R	-2-99- 0-703754	9324	809	20920	102	-2	6.1	3.2	655	-1	-1	11.5	2229	50	2.7	140	0.330
02- BZ 15239 R	-2-99- 0-703731	24420	1989	8145	77	7	14.4	4.4	-432	-1	-1	6.3	3314	118	-1.8	267	0.635
02- BZ 15240 R	-2-99- 0-703706	5155	900	20250	174	-2	5.4	3.1	499	-1		14.2	1201	43	2.4	112	0.373
02- BZ 15241 R	-2-99- 0-703711	26480	1292	10410	121	-3	19.2	5.3	705	-1	-1	7.1	3500	99	4.4	-45	0.476
02- BZ 15242 R	-2-99- 0-703715	7629	522	16110	206	28	6.3	3.1	-242	-1	-1	13.7	1829	46	-2.0	130	0.262
02- BZ 15243 R	-2-99- 0-703720	14760	698	16500	141	9	9.0	3.1	557	-1	-1	10.8	1750	67	2.5	150	0.426
02- BZ 15244 R	-2-99- 0-703721	6842	515	21070	111	54	5.5	3.3	489	-1	-1	11.0	1692	37	-1.5	65	0.595
02- BZ 15245 R	-2-99- 0-703730	15590	999	14420	101	12	9.7	2.6	505	-1	-1	7.8	2114	86	3.2	166	0.549
02- BZ 15246 R	-2-99- 0-703735	20010	2564	11540	-36	6	12.1	2.4	-447	-1		5.6	2302	104	-1.7	718	0.812
02- BZ 15247 R	-2-99- 0-703740	19130	1094	7940	145	5	13.3	2.5	-230	10		5.7	2948	106	3.2	132	0.630
02- BZ 15248 R	-2-99- 0-703745	22790	901	9260	93	-3	17.6	4.4	396	-1	-1	6.8	4167	154	-2.4	109	0.510
02- BZ 15249 R	-2-99- 0-703703	19610	1380	11580	-41	12	14.2	3.6	506	-2	-1	6.2	2947	118	4.4	517	0.607
02- BZ 15250 S	-2-99- 0-702647	6919	945	15350	101	-2	11.4	6.6	-299	-2	-1	14.5	4017	112	5.1	-94	0.459
02- BZ 15252 S	-2-99- 0-703779	4782	957	14250	-16	-2	12.2	4.7	-310	-1	-1	17.4	4384	106	3.6	-102	0.368
02- BZ 15254 S	-2-99- 0-703741	9071	991	12790	78	2	11.0	3.0	-102	-1		7.4	2172	79	3.8	183	0.445
02- BZ 15253 S	-2-99- 0-702242	17400	759	6170	97	-2	16.6	6.3	-214	-1	-1	10.1	4063	183	5.0	241	0.433
02- BZ 15255 S	-2-99- 0-702243	11760	451	7541	91	-3	18.2	6.1	-202	-1	-1	9.2	6162	167	4.5	-111	0.351

Stream sediment, soil, and rock analyses (ppm) - Continued

BUREAU HINES FIELD NUMBER	LASL ANALYTICAL NUMBER	URANIUM (ppm)
02- BZ 15256 S	-2-99- 0-703764-	7.93
02- BZ 15258 S	-2-99- 0-702244-	4.30
02- BZ 15260 S	-2-99- 0-702245-	7.57
02- BZ 15262 S	-2-99- 0-703765-	6.16
02- BZ 15264 S	-2-99- 0-702246-	3.23
02- BZ 15265 S	-2-99- 0-702247-	3.75
02- BZ 15267 D	-2-99- 0-702248-	0.40
02- BZ 15268 D	-2-99- 0-702249-	0.93
02- BZ 15269 D	-2-99- 0-702250-	2.34
02- BZ 15270 S	-2-99- 0-703766-	12.69
02- BZ 15271 S	-2-99- 0-703767-	8.64
02- BZ 15272 S	-2-99- 0-702251-	5.21
02- BZ 15273 S	-2-99- 0-702121-	2.81
02- BZ 15274 S	-2-99- 0-703769-	8.45
02- BZ 15276 S	-2-99- 0-702252-	9.79
02- BZ 15278 S	-2-99- 0-702123-	3.02
02- BZ 15280 S	-2-99- 0-702124-	4.14
02- BZ 15282 S	-2-99- 0-702127-	4.56
02- BZ 15284 S	-2-99- 0-702253-	6.71
02- BZ 15285 S	-2-99- 0-702254-	4.22
02- BZ 15289 R	-2-99- 0-703125-	7.13
02- BZ 15291 R	-2-99- 0-703135-	2.88
02- BZ 15294 R	-2-99- 0-703109-	3.34
02- BZ 15307 R	-2-99- 0-703139-	12.64
02- BZ 15316 R	-2-99- 0-703138-	4.76
02- BZ 15317 R	-2-99- 0-703139-	7.90
02- BZ 15402 R	-2-99- 0-703716-	3.23
02- BZ 15409 D	-2-99- 0-702128-	3.27
02- BZ 15410 D	-2-99- 0-702255-	3.19
02- BZ 15410 D	-2-99- 1-702057-	3.21
02- BZ 15417 R	-2-99- 0-703722-	0.23
02- BZ 15420 R	-2-99- 0-703725-	5.39
02- BZ 15425 S	-2-99- 0-702696-	2.09
02- BZ 15425 S	-2-99- 1-703773-	2.30
02- BZ 15426 S	-2-99- 0-702129-	4.79
02- BZ 15428 S	-2-99- 0-702122-	2.39
02- BZ 15438 R	-2-99- 0-703731-	2.92
02- BZ 15443 R	-2-99- 0-703736-	4.79
02- BZ 15449 A-R	-2-99- 0-703741-	0.89
02- BZ 15454 R	-2-99- 0-703744-	3.27
02- BZ 15455 R	-2-99- 0-703793-	1.43
02- BZ 15468 R	-2-99- 0-703700-	17.72
02- BZ 15491 A-R	-2-99- 0-703712-	3.23
02- BZ 15547 R	-2-99- 0-703113-	3.76
02- BZ 15655 R	-2-99- 0-703132-	1.26
02- BZ 15655 R	-2-99- 0-703131-	3.87
02- BZ 17002 D	-2-99- 0-702591-	10.26
02- BZ 17003 D	-2-99- 0-702592-	16.10
02- BZ 17005 D	-2-99- 0-702593-	5.07
02- BZ 17006 D	-2-99- 0-703594-	4.89
02- BZ 17007 D	-2-99- 0-702595-	6.36

BUREAU MINES FIELD NUMBER	LASL ANALYTICAL NUMBER	AG	BI	CD	CU	MO	NI	PB	SN	W	AS	SE	ZR	MO	BE	LI
02- BZ 15256 S	-2-99- 0-703754															
02- BZ 15258 S	-2-99- 0-702244	-5	-5	-5	23	-20	26	6	-10	-15	12	-5	151		1	66
02- BZ 15260 S	-2-99- 0-702245	-5	-5	-5	25	-20	-15	6	-10	-15	9	-5	214		-1	86
02- BZ 15262 S	-2-99- 0-703755	-5	-5	-5	26	-20	-15	9	-10	-15	9	-5	125		-1	68
02- BZ 15264 S	-2-99- 0-702246	-5	-5	-5	57	-20	29	9	-10	-15	16	-5	136		1	70
02- BZ 15265 S	-2-99- 0-702247															
02- BZ 15267 D	-2-99- 0-702248															
02- BZ 15268 D	-2-99- 0-702249															
02- BZ 15269 D	-2-99- 0-702250	-5	7	-5	31	-20	16	22	-10	67	10	-5	171		2	40
02- BZ 15270 S	-2-99- 0-703766															
02- BZ 15271 S	-2-99- 0-703767															
02- BZ 15272 S	-2-99- 0-702251	-5	-5	5	29	-20	-15	25	-10	24	5	-5	163		3	63
02- BZ 15273 S	-2-99- 0-702121															
02- BZ 15274 S	-2-99- 0-703768	-5	11	-5	37	-20	51	23	-10	45	8	-5	144		2	97
02- BZ 15276 S	-2-99- 0-702252	-5	15	-5	18	-20	-15	29	-10	58	7	-5	443		3	45
02- BZ 15278 S	-2-99- 0-702125	-5	-5	-5	57	-20	41	6	-10	-15	34	-5	142		2	41
02- BZ 15280 S	-2-99- 0-702124	-5	-5	-5	67	-20	59	13	-10	-15	44	-5	156		2	40
02- BZ 15282 S	-2-99- 0-702127	-5	6	-5	34	-20	23	10	-10	24	12	-5	160		2	64
02- BZ 15284 S	-2-99- 0-702253															
02- BZ 15285 S	-2-99- 0-702254	-5	7	-5	36	-20	46	9	-10	26	10	-5	169		3	49
02- BZ 15289 R	-2-99- 0-703135	-5	-5	-5	54	-20	-15	25	-10	-15	-5	-5	101		2	47
02- BZ 15291 R	-2-99- 0-703133	-5	5	-5	84	-20	55	17	18	-15	-5	-5	92		2	20
02- BZ 15294 R	-2-99- 0-703109	-5	13	-5	211	-20	51	5	37	84	-5	-5	48		10	5
02- BZ 15307 R	-2-99- 0-703138	-5	-5	-5	38	-20	-15	29	-10	-15	-5	-5	63		2	31
02- BZ 15316 R	-2-99- 0-703128	-5	8	-5	41	-20	70	27	39	86	-5	-5	126		3	33
02- BZ 15317 R	-2-99- 0-703129	-5	5	-5	82	-20	10	23	-10	-15	-5	-5	91		2	48
02- BZ 15402 R	-2-99- 0-703716	-5	5	-5	95	-20	20	49	-10	34	52	-5	141		2	30
02- BZ 15409 D	-2-99- 0-702128	-5	-5	-5	62	-20	42	11	-10	-15	6	-5	172		2	48
02- BZ 15410 D	-2-99- 0-702255															
02- BZ 15410 D	-2-99- 1-702557	-5	-5	-5	108	-20	81	24	-10	-15	25	-5	166		2	59
02- BZ 15417 R	-2-99- 0-703722	-5	12	-5	79	-20	-15	7	14	120	6	-5	20		-1	6
02- BZ 15420 R	-2-99- 0-703725	-5	7	-5	124	-20	193	9	-10	-15	13	-5	73		1	24
02- BZ 15425 S	-2-99- 0-702646															
02- BZ 15425 S	-2-99- 1-703773	-5	-5	-5	18	-20	-15	8	-10	16	-5	-5	136		-1	50
02- BZ 15426 S	-2-99- 0-702127	-5	-5	-5	20	-20	-15	16	-10	-15	7	-5	114		2	86
02- BZ 15428 S	-2-99- 0-702122															
02- BZ 15438 R	-2-99- 0-703731	7	6	-5	1282	-20	-15	59	-10	-15	28	-5	87		3	21
02- BZ 15443 R	-2-99- 0-703736	11	5	44	4446	-20	30	-5	20	-15	9	-5	254		2	44
02- BZ 15449 A-R	-2-99- 0-703741	97	120	36	335	-20	-15	3593	-10	294	-5	25	102		-1	55
02- BZ 15454 R	-2-99- 0-703746	-5	18	-5	13	-20	64	20	78	365	117	-5	71		29	45
02- BZ 15455 R	-2-99- 0-703703	-5	6	-5	-10	-20	-15	34	100	4161	5	38	73		1	10
02- BZ 15468 R	-2-99- 0-703709	-5	-5	-5	144	28	43	8	-10	-15	9	-5	348		3	66
02- BZ 15491 A-R	-2-99- 0-703712	-5	-5	-5	135	-20	-15	51	-10	20	21	-5	131		1	86
02- BZ 15647 R	-2-99- 0-703113	-5	5	-5	46	-20	-15	24	-10	-15	-5	-5	104		2	84
02- BZ 15655 R	-2-99- 0-703132	-5	-5	-5	25	-20	-15	-5	-10	25	-5	-5	90		1	62
02- BZ 15656 R	-2-99- 0-703131	-5	13	-5	14	-20	-15	24	-10	18	10	-5	153		3	95
02- BZ 17002 D	-2-99- 0-702591	5	17	5	113	-20	31	183	-10	51	-5	-5	123		4	57
02- BZ 17003 D	-2-99- 0-702592	-5	10	-5	76	-20	30	71	-10	19	-5	-5	119		3	41
02- BZ 17005 D	-2-99- 0-702593	-5	11	-5	62	-20	57	80	-10	34	-5	-5	156		4	83
02- BZ 17006 D	-2-99- 0-702594	-5	9	-5	79	-20	39	74	-10	134	-5	-5	170		2	87
02- BZ 17007 D	-2-99- 0-702595	-5	6	-5	58	-20	53	40	11	-15	6	-5	142		3	76

Stream sediment, soil, and rock analyses (ppm) - Continued

BUREAU MINES FIELD NUMBER	LASL ANALYTICAL NUMBER	AL	AU	BA	CA	CE	CL	CO	CR	CS	DY	EU	FE	HF	K	LA	LU
02- BZ 15256 S	-2-99- 0-703764	72050	-0.10	755	20410	38	-119	11.6	61	8.1	6	0.9	28620	3.1	13840	20	0.3
02- BZ 15258 S	-2-99- 0-702244	65480	-0.11	524	18640	56	-130	18.9	55	5.9	7	1.0	37580	5.3	10710	23	0.5
02- BZ 15260 S	-2-99- 0-702245	62240	-0.10	-187	16040	52	-130	14.4	55	4.3	7	0.9	38500	9.8	-4706	19	0.8
02- BZ 15262 S	-2-99- 0-703765	53930	-0.08	-162	16740	39	-143	14.0	52	5.6	8	1.1	34960	6.2	9107	20	0.7
02- BZ 15264 S	-2-99- 0-702246	72560	-0.09	491	25010	52	-110	16.5	69	13.4	4	1.2	43620	3.2	9861	24	0.4
02- BZ 15265 S	-2-99- 0-702247	83690	-0.10	926	9483	83	-81	25.3	123	11.8	7	1.4	54570	6.4	21010	37	0.4
02- BZ 15267 D	-2-99- 0-702248	85560	-0.09	222	30050	21	-128	18.1	-9	6.3	1	0.7	50070	2.4	-4349	9	-0.1
02- BZ 15268 D	-2-99- 0-702249	80120	-0.09	469	23730	26	-109	19.6	-9	15.0	2	0.8	48360	2.7	10880	-4	0.2
02- BZ 15269 D	-2-99- 0-702250	71260	-0.08	590	6995	54	-86	14.8	86	6.7	6	0.9	42300	7.4	11230	26	0.6
02- BZ 15270 S	-2-99- 0-703766	69880	-0.09	573	21430	136	-131	10.6	40	5.5	11	1.4	38100	18.2	16170	52	0.9
02- BZ 15271 S	-2-99- 0-703767	67640	-0.09	509	19540	76	-119	10.3	63	6.4	8	1.0	33790	12.4	13960	30	0.9
02- BZ 15272 S	-2-99- 0-702251	76460	-0.07	530	21720	55	-136	9.7	38	5.5	7	1.2	32690	9.5	14350	27	0.7
02- BZ 15273 S	-2-99- 0-702121	77730	-0.07	552	14350	36	-121	10.2	34	8.0	4	1.0	39390	6.8	11960	13	0.6
02- BZ 15274 S	-2-99- 0-703769	72770	-0.07	920	26200	73	101	13.8	43	6.6	3	1.2	32370	6.2	17690	35	0.3
02- BZ 15276 S	-2-99- 0-702252	74390	-0.08	723	24270	114	-105	7.7	33	3.7	8	1.6	24730	23.3	18590	46	0.8
02- BZ 15278 S	-2-99- 0-702123	62050	-0.09	1007	29720	61	-62	17.2	79	8.6	6	1.2	41840	5.6	16910	32	0.3
02- BZ 15280 S	-2-99- 0-702124	69750	-0.11	1029	26810	72	-80	18.6	108	8.3	6	1.3	43420	6.0	19340	30	0.3
02- BZ 15282 S	-2-99- 0-702127	68500	-0.11	811	17720	90	-105	13.5	59	4.7	5	1.2	39440	7.3	12410	35	0.5
02- BZ 15284 S	-2-99- 0-702253	66390	-0.11	806	19210	93	-120	12.8	35	5.7	4	1.3	31840	7.1	20050	38	0.3
02- BZ 15285 S	-2-99- 0-702254	67090	-0.08	604	21670	82	-89	18.2	94	4.1	6	1.5	48650	8.1	8953	40	0.6
02- BZ 15289 R	-2-99- 0-703125	74810	-0.06	975	19590	53	-122	3.3	91	4.1	3	0.8	17000	4.0	30860	26	0.3
02- BZ 15291 R	-2-99- 0-703135	60110	-0.06	-120	145500	34	-80	17.1	116	2.7	3	0.6	39890	2.3	-2814	17	0.2
02- BZ 15294 R	-2-99- 0-703109	58010	-0.07	-210	109500	57	-138	22.0	162	3.7	-2	1.4	74320	-0.8	-6064	29	0.2
02- BZ 15307 R	-2-99- 0-703138	92510	-0.06	4341	6044	17	-77	-0.7	35	4.7	3	0.8	1585	2.0	105200	12	0.2
02- BZ 15316 R	-2-99- 0-703128	45990	-0.08	-260	135900	22	-181	21.0	139	23.7	-2	0.4	58400	3.3	-7731	11	0.3
02- BZ 15317 R	-2-99- 0-703129	67540	-0.06	866	13340	39	-119	2.7	135	4.2	3	0.6	13440	2.7	30610	20	0.2
02- BZ 15402 R	-2-99- 0-703716	71500	0.43	407	72180	70	-57	16.8	131	12.8	7	1.1	45450	5.2	19230	28	0.4
02- BZ 15409 D	-2-99- 0-702128	60550	-0.11	997	17620	79	-77	20.9	108	23.2	6	1.4	51090	5.6	19530	33	0.4
02- BZ 15410 D	-2-99- 0-702255	36030	-0.10	677	13800	83	-89	31.8	99	15.5	7	1.3	58140	6.4	19700	34	0.4
02- BZ 15410 D	-2-99- 1-702457	83260	-0.12	658	14490	92	-75	29.8	101	14.3	6	1.3	57540	5.9	18140	41	0.3
02- BZ 15417 R	-2-99- 0-703722	69000	-0.11	-441	91360	-4	-199	4.9	116	2.2	-3	0.2	46150	-0.9	-10970	-4	0.5
02- BZ 15420 R	-2-99- 0-703726	66640	-0.14	-130	118600	14	220	45.3	1130	-2.4	-1	0.4	60020	2.2	-3317	-5	-0.1
02- BZ 15425 S	-2-99- 0-702586	69530	-0.07	-151	17620	34	-128	11.5	41	3.4	4	0.9	34720	5.6	8509	16	0.7
02- BZ 15425 S	-2-99- 1-703773	66990	-0.07	-154	17770	38	-143	11.2	39	2.1	8	1.0	34680	6.1	6089	15	0.6
02- BZ 15426 S	-2-99- 0-702129	72590	-0.08	719	16030	60	-126	9.6	42	7.5	5	1.2	31100	4.2	11070	26	0.5
02- BZ 15429 S	-2-99- 0-702122	77420	-0.13	-241	21000	26	-215	10.1	-13	5.3	6	0.8	35360	3.1	-6788	11	0.5
02- BZ 15430 R	-2-99- 0-703731	37530	-0.09	-169	133800	30	-115	14.1	86	11.5	4	0.5	92530	2.3	-4012	16	0.5
02- BZ 15443 R	-2-99- 0-703735	100600	-0.12	604	98640	106	-106	21.1	205	9.7	10	1.9	45160	8.1	18040	44	0.7
02- BZ 15449 A-R	-2-99- 0-703741	64140	-0.15	-106	31990	23	-67	14.0	224	6.4	5	1.3	64600	-1.4	5497	14	0.3
02- BZ 15454 R	-2-99- 0-703745	62540	0.22	-117	203100	26	461	15.9	108	6.9	2	0.5	43060	2.0	6748	16	0.2
02- BZ 15455 R	-2-99- 0-703703	67760	-0.09	-105	150200	76	-114	9.8	266	6.8	7	1.5	34390	6.3	-5331	24	0.4
02- BZ 15468 R	-2-99- 0-703709	76440	-0.10	1609	35730	141	-80	24.3	156	7.8	10	2.0	43810	12.3	32960	71	0.7
02- BZ 15481 A-R	-2-99- 0-703712	96900	-0.07	1673	2374	64	-58	10.3	46	12.2	2	0.6	21950	3.9	103400	22	0.2
02- BZ 15647 R	-2-99- 0-703113	77450	-0.07	1093	18390	61	-132	4.1	55	3.4	3	0.9	16670	3.7	27610	29	0.2
02- BZ 15655 R	-2-99- 0-703132	58400	-0.10	494	6763	22	-129	-1.0	124	-2.0	11	0.7	10410	4.1	11580	-4	1.4
02- BZ 15656 R	-2-99- 0-703131	71360	0.12	1314	13640	67	-100	2.8	85	15.1	2	0.8	17100	4.9	30730	39	-0.1
02- BZ 17002 D	-2-99- 0-702591	66410	-0.08	776	45990	73	-90	12.9	61	7.1	4	1.2	34670	3.1	15940	29	0.3
02- BZ 17003 D	-2-99- 0-702592	57240	-0.09	744	39550	67	-102	13.8	55	8.2	5	1.1	31660	4.2	13350	31	0.3
02- BZ 17005 D	-2-99- 0-702593	60430	-0.10	754	71360	60	-90	18.1	94	6.7	4	1.1	43370	5.6	11730	29	0.4
02- BZ 17006 D	-2-99- 0-702594	51290	-0.09	756	32980	70	-93	16.8	86	5.1	3	1.0	39940	4.9	10820	25	0.2
02- BZ 17007 D	-2-99- 0-702595	63980	-0.08	1053	71300	65	70	18.9	99	5.5	5	0.7	41860	4.8	18410	29	0.4

BUREAU HIRES FIELD NUMBER	LASL ANALYTICAL NUMBER	MG	MN	NA	RB	SB	SC	SM	SR	TA	TB	TH	TI	V	YB	ZN	UTHRT
02- BZ 15258 S	-2-99- 0-703764	11560	737	11170	-42	-3	12.0	3.2	-305	-2	-1	6.0	3858	145	-1.7	112	1.322
02- BZ 15259 S	-2-99- 0-702244	9102	1349	19520	-39	-3	16.4	4.7	-386	-2	1	5.0	3034	92	5.5	-128	0.060
02- BZ 15260 S	-2-99- 0-702245	6367	1599	20670	-36	-3	17.4	4.6	-385	-1	-1	6.4	3530	99	8.2	183	1.183
02- BZ 15262 S	-2-99- 0-703765	6393	151	22490	-36	-2	18.7	5.7	-329	-1	1	4.6	-755	85	6.5	152	1.339
02- BZ 15264 S	-2-99- 0-702246	12350	1189	14960	94	-1	17.1	-0.5	-284	-2	-1	6.9	3801	140	3.2	-19	0.468
02- BZ 15265 S	-2-99- 0-702247	15070	672	7462	126	-3	19.6	6.9	-220	-1	-1	12.7	5526	172	4.6	148	0.295
02- BZ 15267 D	-2-99- 0-702248	17880	1295	23970	-35	-2	15.4	1.7	-346	-1	-1	1.8	2904	112	-1.6	103	0.222
02- BZ 15268 D	-2-99- 0-702249	20920	871	19210	57	-2	14.7	2.5	-291	-1	-1	-1.1	3557	127	-1.7	-89	
02- BZ 15269 D	-2-99- 0-702250	8799	519	14840	-33	-2	18.7	4.5	-192	-1	-1	7.5	4292	128	5.2	121	0.312
02- BZ 15270 S	-2-99- 0-703766	6397	1327	22340	78	-2	14.2	12.6	-367	3	-1	39.0	4274	97	10.0	139	0.325
02- BZ 15271 S	-2-99- 0-703767	5913	1178	20930	-33	-2	16.6	6.2	-329	-1	-1	11.7	3511	86	8.8	-39	0.738
02- BZ 15272 S	-2-99- 0-702251	7417	1060	24540	81	-2	12.7	5.5	-292	-1	-1	14.1	3295	74	7.0	149	0.370
02- BZ 15273 S	-2-99- 0-702121	9845	1236	26260	61	-2	14.5	3.8	-260	-1		5.1	3136	83	5.3	106	0.551
02- BZ 15274 S	-2-99- 0-703769	3984	1194	16750	101	-2	9.8	4.5	-284	-1	-1	14.6	3521	64	3.6	-131	0.579
02- BZ 15276 S	-2-99- 0-702252	7210	571	21950	96	-2	10.1	8.6	534	3	-1	18.2	4565	69	8.0	83	0.538
02- BZ 15278 S	-2-99- 0-702125	15640	668	3560	94	-2	15.3	5.3	-205	-1	-1	9.1	5180	165	2.2	-132	0.420
02- BZ 15280 S	-2-99- 0-702124	15460	799	6745	125	5	17.4	5.5	-277	-2	-1	9.8	4569	164	3.9	-47	0.422
02- BZ 15282 S	-2-99- 0-702127	7708	872	14510	110	-3	13.3	5.4	-316	-1	-1	12.5	4907	123	3.3	-134	0.365
02- BZ 15284 S	-2-99- 0-702253	6747	1143	13560	-40	-3	9.9	6.0	-379	-2	-1	15.4	3019	75	4.2	161	0.436
02- BZ 15285 S	-2-99- 0-702254	11980	811	13860	68	-2	17.9	7.1	-215	-1	-1	10.7	6467	151	4.5	111	0.394
02- BZ 15289 R	-2-99- 0-703125	4104	425	24860	136	-2	5.2	3.5	469	-1	-1	15.0	1750	35	4.2	76	0.475
02- BZ 15291 R	-2-99- 0-703135	24520	969	7751	58	-2	14.1	2.7	-243	-1	-1	6.1	2262	102	2.1	201	0.472
02- BZ 15294 R	-2-99- 0-703139	-2805	2976	1931	-39	-2	5.4	3.7	-434	-1	1	2.9	-1250	38	1.8	214	1.152
02- BZ 15307 R	-2-99- 0-703139	-1669	65	12730	339	-1	4.5	2.8	981	4		13.3	-508	-7	2.0	76	0.950
02- BZ 15316 R	-2-99- 0-703129	25330	3573	7753	-36	-2	15.2	2.9	-543	-1		4.6	3597	95	3.5	077	1.035
02- BZ 15317 R	-2-99- 0-703129	3679	209	21390	128	-2	4.0	2.1	419	-1	-1	14.7	1827	20	-1.4	68	0.537
02- BZ 15402 R	-2-99- 0-703716	19690	731	2047	95	12	15.2	4.7	-237	-1	-1	8.6	4944	140	4.5	106	0.376
02- BZ 15409 D	-2-99- 0-702128	15580	728	8035	130	-3	20.5	5.6	-252	-2	-1	8.6	5638	182	3.6	-46	0.380
02- BZ 15410 D	-2-99- 0-702255	15590	715	7492	130	-4	19.8	6.7	-251	-1	-1	10.7	5273	163	3.7	145	0.298
02- BZ 15410 D	-2-99- 1-702957	16120	711	7349	136	-3	19.3	5.8	-260	-1	-1	10.2	5026	160	4.6	-152	0.315
02- BZ 15417 R	-2-99- 0-703722	-4444	5369	1932	-33	4	15.9	-0.5	-935	-1		-1.0	-2183	379	4.9	93	
02- BZ 15420 R	-2-99- 0-703726	64390	892	6576	-47	-4	22.5	1.5	-235	-2	-1	6.6	2898	233	-2.4	-56	0.817
02- BZ 15425 S	-2-99- 0-702696	6717	1184	20860	-29	-2	16.2	3.9	-271	-1	1	4.0	1944	75	6.3	-75	0.522
02- BZ 15423 S	-2-99- 1-703773	7901	1168	26390	-32	-2	16.0	4.2	-308	-1		4.5	2924	80	6.7	-107	0.511
02- BZ 15426 S	-2-99- 0-702129	8398	1045	24970	81	-2	14.9	5.0	-276	-1	-1	11.1	3735	79	3.8	177	0.432
02- BZ 15428 S	-2-99- 0-702122	10110	1424	33380	-49	-4	21.0	3.1	-474	-2	-1	3.7	3295	99	-2.2	89	0.646
02- BZ 15438 R	-2-99- 0-703731	38503	2084	3905	-35	23	11.2	3.1	-347	-1		2.5	1910	82	4.3	177	1.168
02- BZ 15443 R	-2-99- 0-703736	10830	669	14240	105	-3	24.3	9.1	993	-1	-1	12.0	7215	201	6.2	653	0.399
02- BZ 15449 A-R	-2-99- 0-703741	20460	247	5793	-54	-4	25.3	2.5	-202	-2	-1	2.2	6312	208	-3.0	302	0.405
02- BZ 15454 R	-2-99- 0-703746	25690	985	2913	-33	18	10.8	2.3	434	-1		3.7	2607	160	-1.5	225	0.884
02- BZ 15455 R	-2-99- 0-703793	6227	2165	1700	-30	18	9.4	6.3	-384	-1	1	3.2	-872	232	5.0	99	0.447
02- BZ 15460 R	-2-99- 0-703794	16070	762	7626	202	-3	19.2	12.2	-268	3	-1	14.1	6170	315	6.5	115	1.257
02- BZ 15481 A-R	-2-99- 0-703712	3764	367	4640	556	-2	5.2	3.2	500	-1		17.5	2697	48	2.8	47	0.185
02- BZ 15647 R	-2-99- 0-703113	4098	281	25190	119	-2	4.9	3.2	698	-1	-1	13.5	2105	33	2.1	-13	0.279
02- BZ 15655 R	-2-99- 0-703132	-2295	597	37090	-32	-3	30.2	4.3	-230	-1	1	1.2	-689	-10	11.9	-44	1.050
02- BZ 15656 R	-2-99- 0-703131	-2020	243	27130	180		3.5	3.8	-203	-1		26.6	1589	17	-0.9	96	0.145
02- BZ 17002 D	-2-99- 0-702531	15070	792	7731	118	-2	10.6	4.5	-256	-2	-1	16.0	2970	97	-1.4	176	0.641
02- BZ 17003 D	-2-99- 0-702532	12930	890	6133	-42	-2	9.7	6.4	-312	-2	-1	18.4	2928	86	3.5	210	1.045
02- BZ 17005 D	-2-99- 0-702533	29160	739	10110	94	-3	13.9	4.6	446	-1	-1	9.8	3092	130	3.5	146	0.517
02- BZ 17006 D	-2-99- 0-702534	17580	854	9330	-38	-3	12.3	4.3	-303	-2	-1	11.6	4093	107	2.4	229	0.422
02- BZ 17007 D	-2-99- 0-702535	24770	484	5982	113	-2	14.7	4.9	-204	-1	-1	11.6	3663	140	3.6	167	0.548

Stream sediment, soil, and rock analyses (ppm) - Continued

BUREAU HIBES FIELD NUMBER	LASL ANALYTICAL NUMBER	URANIUM (ppm)
02- BZ 17008 D	-2-99- 0-702596-	5.73
02- BZ 17009 D	-2-99- 0-702597-	9.31
02- BZ 17010 D	-2-99- 0-702598-	4.79
02- BZ 17011 D	-2-99- 0-702599-	11.60
02- BZ 17013 D	-2-99- 0-702600-	6.43
02- BZ 17014 D	-2-99- 0-702601-	7.34
02- BZ 17016 D	-2-99- 0-702602-	4.44
02- BZ 17017 D	-2-99- 0-702603-	3.97
02- BZ 17018 D	-2-99- 0-702604-	3.75
02- BZ 17020 D	-2-99- 0-702605-	2.76
02- BZ 17021 D	-2-99- 0-702606-	3.10
02- BZ 17022 D	-2-99- 0-702607-	3.03
02- BZ 17023 D	-2-99- 0-702608-	3.16
02- BZ 17024 D	-2-99- 0-702609-	5.38
02- BZ 17025 D	-2-99- 0-702610-	4.42
02- BZ 17027 D	-2-99- 0-702611-	5.76
02- BZ 17028 D	-2-99- 0-702612-	3.50
02- BZ 17055 D	-2-99- 0-702579-	4.37
02- BZ 17056 D	-2-99- 0-702580-	3.38
02- BZ 17057 D	-2-99- 0-702581-	3.14
02- BZ 17058 D	-2-99- 0-702582-	3.77
02- BZ 17059 D	-2-99- 0-702583-	3.05
02- BZ 17060 D	-2-99- 0-702584-	3.40
02- BZ 17105 R	-2-99- 0-703120-	2.80
02- BZ 17106 D	-2-99- 0-703141-	3.58
02- BZ 17107 D	-2-99- 0-703140-	5.45
02- BZ 17108 R	-2-99- 0-703137-	4.39
02- BZ 17109 R	-2-99- 1-703144-	4.16
02- BZ 17144 R	-2-99- 0-703133-	4.05
02- BZ 17145 R	-2-99- 0-703130-	2.60
02- BZ 17146 R	-2-99- 0-703110-	4.55
02- BZ 17147 R	-2-99- 0-703124-	5.46
02- BZ 17148 R	-2-99- 0-703109-	3.35
02- BZ 17149 R	-2-99- 0-703126-	4.23
02- BZ 17150 R	-2-99- 0-703112-	6.86
02- BZ 17151 R	-2-99- 0-703111-	12.61
02- BZ 17152 D	-2-99- 0-703127-	6.94

BUREAU MINES FIELD NUMBER	LASL ANALYTICAL NUMBER	AG	BI	CD	CU	NB	NI	PB	SN	W	AS	SE	ZR	MO	BE	LI
02- BZ 17008 D	-2-99- 0-702596	-5	9	-5	91	-20	73	26	-10	19	6	-5	111		3	48
02- BZ 17009 D	-2-99- 0-702597	-5	11	-5	90	-20	27	21	-10	-15	30	-5	142		3	119
02- BZ 17010 D	-2-99- 0-702598	-5	5	-5	50	-20	27	0	-10	-15	11	-5	169		2	33
02- BZ 17011 D	-2-99- 0-702599	-5	8	-5	101	-20	69	23	-10	17	33	-5	104		2	90
02- BZ 17013 D	-2-99- 0-702600	-5	5	-5	79	-20	50	14	-10	-15	30	-5	113		2	42
02- BZ 17014 D	-2-99- 0-702601	-5	11	-5	89	-20	384	24	-10	20	14	-5	123		3	49
02- BZ 17016 D	-2-99- 0-702602	-5	-5	-5	69	-20	125	17	-10	-15	58	-5	98		3	133
02- BZ 17017 D	-2-99- 0-702603	-5	5	-5	50	-20	506	8	-10	19	35	-5	133		2	78
02- BZ 17018 D	-2-99- 0-702604	-5	-5	-5	56	-20	396	17	-10	-15	44	-5	118		2	64
02- BZ 17020 D	-2-99- 0-702605	-5	5	-5	105	-20	250	9	-10	18	9	-5	121		1	35
02- BZ 17021 D	-2-99- 0-702606	-5	-5	-5	83	-20	356	-5	-10	-15	29	-5	134		2	38
02- BZ 17022 D	-2-99- 0-702607	-5	-5	-5	127	-20	144	8	-10	-15	16	-5	115		1	69
02- BZ 17023 D	-2-99- 0-702608	-5	-5	-5	80	-20	304	11	-10	-15	11	-5	144		-1	31
02- BZ 17024 D	-2-99- 0-702609	-5	10	-5	78	-20	95	45	-10	39	9	-5	180		2	40
02- BZ 17025 D	-2-99- 0-702610	-5	-5	-5	56	-20	60	30	-10	-15	5	-5	130		2	42
02- BZ 17027 D	-2-99- 0-702611	-5	5	-5	100	-20	76	12	-10	-15	16	-5	132		1	21
02- BZ 17028 D	-2-99- 0-702612	-5	5	-5	52	-20	50	25	-10	-15	20	-5	141		2	31
02- BZ 17055 D	-2-99- 0-702679	-5	9	-5	98	-20	31	15	-10	30	24	-5	181		2	69
02- BZ 17056 D	-2-99- 0-702680	-5	5	-5	139	-20	39	12	-10	50	21	-5	162		1	79
02- BZ 17057 D	-2-99- 1-702681	-5	87	27	394	-20	51	28	38	2950	70	9	151		8	58
02- BZ 17058 D	-2-99- 0-702682	-5	9	5	110	-20	46	30	-10	346	8	-5	247		3	61
02- BZ 17059 D	-2-99- 0-702683	-5	10	-5	91	-20	38	22	-10	147	14	-5	187		4	48
02- BZ 17060 D	-2-99- 0-702684	-5	-5	-5	68	-20	42	18	-10	-15	8	-5	219		2	63
02- BZ 17105 R	-2-99- 0-703120	-5	-5	-5	196	-20	76	10	32	90	-5	-5	119		2	19
02- BZ 17106 D	-2-99- 0-703141	7	21	5	106	-20	125	232	-10	175	-5	-5	126		2	42
02- BZ 17107 D	-2-99- 0-703140	-5	12	-5	263	-20	47	88	34	264	-5	-5	98		8	46
02- BZ 17108 R	-2-99- 0-703137	-5	14	-5	227	-20	85	51	35	424	6	-5	101		9	32
02- BZ 17144 R	-2-99- 1-703744	-5	-5	-5	111	-20	61	18	24	-15	13	-5	117		4	31
02- BZ 17145 R	-2-99- 0-703133	-5	5	14	44	-20	-15	18	-10	2814	-5	19	101		6	25
02- BZ 17146 R	-2-99- 0-703130	-5	5	24	266	-20	15	44	20	1573	-5	11	59		11	15
02- BZ 17147 R	-2-99- 0-703110	-5	-5	20	228	-20	37	97	24	1822	-5	8	143		7	43
02- BZ 17148 R	-2-99- 0-703124	-5	13	300	212	-20	27	103	16	4413	-5	26	73		4	11
02- BZ 17149 R	-2-99- 0-703108	-5	12	10	192	-20	-15	181	30	27	22	-5	108		5	95
02- BZ 17150 R	-2-99- 0-703126	-5	8	10	158	-20	51	26	17	129	11	-5	98		3	14
02- BZ 17151 R	-2-99- 0-703112	-5	8	-5	116	73	-15	23	78	-15	-5	-5	51		9	42
02- BZ 17152 D	-2-99- 0-703111	-5	7	-5	28	-20	-15	19	-10	172	-5	-5	97		2	30
	-2-99- 0-703127	-5	-5	-5	26	-20	-15	16	-10	-15	15	-5	200		2	105

Stream sediment, soil, and rock analyses (ppm) - Continued

BUREAU MINES FIELD NUMBER	LASL ANALYTICAL NUMBER	AL	AU	BA	CA	CE	CL	CO	CR	CS	DY	EU	FE	HF	K	LA	LU
02- BZ 17008 D	-2-99- 0-702596	62360	-0.10	918	63050	57	-88	14.3	93	7.3	5	1.0	38960	4.2	15180	26	0.3
02- BZ 17009 D	-2-99- 0-702597	41750	-0.10	906	44990	80	-73	17.0	64	9.0	4	1.2	38590	5.5	19060	36	0.4
02- BZ 17010 D	-2-99- 0-702598	68590	-0.09	468	11620	71	155	17.1	83	5.4	5	1.1	30880	6.2	9714	33	0.4
02- BZ 17011 D	-2-99- 0-702599	70560	-0.11	704	29990	62	193	20.6	101	12.8	5	1.1	49070	4.5	10730	42	0.3
02- BZ 17013 D	-2-99- 0-702600	69900	-0.11	655	26300	62	242	19.5	80	9.7	5	1.2	42200	4.7	9154	32	0.3
02- BZ 17014 D	-2-99- 0-702601	78820	-0.11	923	42970	75	-72	20.0	90	10.3	5	1.0	41890	4.4	18620	33	0.3
02- BZ 17016 D	-2-99- 0-702602	69953	-0.09	914	55900	69	-72	18.6	90	8.5	5	1.1	40960	4.3	15620	29	0.4
02- BZ 17017 D	-2-99- 0-702603	76060	-0.09	1077	51980	67	-71	22.5	114	12.3	5	1.1	46870	5.7	19920	29	0.4
02- BZ 17018 D	-2-99- 0-702604	69420	-0.10	949	44180	60	-80	21.4	100	13.2	5	1.1	51000	4.1	14950	27	0.4
02- BZ 17020 D	-2-99- 0-702605	68790	-0.12	595	38030	72	-79	19.2	104	7.3	6	1.3	46030	5.0	16410	28	0.4
02- BZ 17021 D	-2-99- 0-702606	73950	-0.11	611	21530	86	-73	24.4	95	8.7	5	1.2	58860	4.8	15440	33	0.4
02- BZ 17022 D	-2-99- 0-702607	82100	-0.09	773	18600	71	-53	27.8	108	9.4	5	1.4	61690	5.6	19840	32	0.4
02- BZ 17023 D	-2-99- 0-702608	79160	-0.10	632	10270	66	-80	20.1	96	8.4	6	1.1	46110	5.6	17620	27	0.3
02- BZ 17024 D	-2-99- 0-702609	62500	-0.11	789	35430	92	-88	16.1	93	9.1	5	1.2	42180	6.4	13620	35	0.4
02- BZ 17025 D	-2-99- 0-702610	63190	-0.11	817	29400	61	-90	14.5	80	10.2	4	1.1	38960	5.0	15000	30	0.3
02- BZ 17027 D	-2-99- 0-702611	49790	-0.09	551	35830	57	146	9.6	44	5.3	5	1.1	35110	3.9	9562	29	-0.1
02- BZ 17028 D	-2-99- 0-702612	62390	-0.11	750	24490	69	-103	15.1	99	8.7	5	1.1	42400	5.0	12560	32	0.3
02- BZ 17055 D	-2-99- 0-702679	71900	-0.10	677	18600	79	-94	13.0	82	5.6	6	1.2	39470	6.2	14140	31	0.4
02- BZ 17056 D	-2-99- 0-702680	70090	-0.11	788	23250	91	-80	18.6	94	7.3	5	1.3	46280	7.0	14570	34	0.5
02- BZ 17057 D	-2-99- 0-702681	37380	-0.10	-316	38070	57	-192	28.4	58	4.0	-2	1.2	103400	4.9	-8286	25	0.3
02- BZ 17058 D	-2-99- 0-702682	74070	-0.08	717	21790	77	-91	16.7	103	6.7	7	1.2	43310	8.5	15820	38	0.4
02- BZ 17059 D	-2-99- 0-702683	71240	-0.10	696	18340	77	-101	16.2	92	5.1	6	1.3	43350	6.8	17700	34	0.4
02- BZ 17060 D	-2-99- 0-702684	71450	-0.11	778	4046	87	-71	18.1	101	7.6	6	1.2	53740	7.9	19990	31	0.5
02- BZ 17105 R	-2-99- 0-703120	55980	-0.07	-173	104300	49	-115	20.9	137	4.7	-1	1.1	46670	3.2	-4315	22	0.3
02- BZ 17106 D	-2-99- 0-703141	71640	-0.11	1093	36130	58	-108	42.5	137	12.6	5	1.2	59090	4.3	14380	26	0.2
02- BZ 17107 D	-2-99- 0-703140	52790	-0.09	-167	92400	34	-99	16.1	111	8.3	3	0.7	69590	1.8	6606	18	0.2
02- BZ 17108 R	-2-99- 0-703137	61860	-0.09	-153	105500	40	-107	22.6	130	8.5	3	0.7	57580	3.0	8049	20	0.2
02- BZ 17109 R	-2-99- 1-703744	63960	-0.10	1211	86670	39	-103	16.3	229	7.7	4	0.7	50500	3.1	16350	19	0.2
02- BZ 17144 R	-2-99- 0-703133	60440	-0.05	481	24490	48	-113	2.2	93	3.2	-1	0.5	8655	8.4	22670	25	0.2
02- BZ 17145 R	-2-99- 0-703130	56210	-0.06	-271	64330	47	-174	7.7	102	-1.3	3	0.2	35410	3.9	-6531	20	0.1
02- BZ 17146 R	-2-99- 0-703110	64430	-0.08	495	114400	61	-109	18.2	148	5.8	3	1.1	48310	5.4	10070	32	0.3
02- BZ 17147 R	-2-99- 0-703124	32990	-0.07	-220	128900	19	-134	16.6	118	2.7	-1	-0.1	53980	7.8	-5594	9	0.2
02- BZ 17148 R	-2-99- 0-703109	59730	-0.06	335	19550	54	-66	4.1	44	12.6	3	0.6	16040	4.3	38510	26	0.3
02- BZ 17149 R	-2-99- 0-703126	55370	-0.08	-202	143900	32	-115	21.2	132	5.5	4	0.7	55850	3.1	-4720	18	0.3
02- BZ 17150 R	-2-99- 0-703112	134100	-0.06	-159	7852	32	-114	-0.8	99	10.6	7	0.3	10390	7.3	48390	15	0.4
02- BZ 17151 R	-2-99- 0-703111	70620	-0.05	2624	10160	66	-73	1.6	54	7.5	5	1.0	3683	4.3	104500	37	0.3
02- BZ 17152 D	-2-99- 0-703127	73190	-0.09	641	8987	72	-123	7.7	45	6.7	5	1.2	29010	7.7	15220	42	0.5

BUREAU MINES FIELD NUMBER	LASL ANALYTICAL NUMBER	MG	MN	NA	RB	SB	SC	SM	SR	TA	TB	TH	TI	V	YB	ZN	URANIUM
02- BZ 17008 D	-2-99- 0-702596	21870	565	5427	106	-3	12.9	4.9	-251	-1	1	10.0	3168	132	-1.8	149	0.573
02- BZ 17009 D	-2-99- 0-702597	24970	599	5493	108	-2	12.2	6.1	-255	-1	-1	15.7	3163	105	2.6	-83	0.593
02- BZ 17010 D	-2-99- 0-702598	10660	705	6795	-98	-3	13.7	5.0	-266	-1	-1	10.5	4711	129	4.4	-57	0.456
02- BZ 17011 D	-2-99- 0-702599	24460	489	4174	81	-3	15.8	5.2	-290	-2	-1	9.8	3478	139	-1.9	131	1.184
02- BZ 17013 D	-2-99- 0-702600	14230	469	5583	-52	-3	12.2	5.3	-261	-2	-1	8.3	2987	130	-1.0	124	0.775
02- BZ 17014 D	-2-99- 0-702601	22900	404	6237	106	-3	14.7	4.9	-229	-1	-1	10.0	3735	143	5.0	-42	0.734
02- BZ 17016 D	-2-99- 0-702602	25100	449	8059	65	-2	17.0	5.1	426	-1	-1	8.5	3914	139	4.2	-39	0.522
02- BZ 17017 D	-2-99- 0-702603	27050	397	7229	156	-2	16.4	5.3	282	-1	-1	9.5	4327	166	-1.5	-134	0.418
02- BZ 17018 D	-2-99- 0-702604	24030	565	5785	-42	4	16.6	6.2	-227	-1	-1	9.0	4168	161	3.9	81	0.417
02- BZ 17020 D	-2-99- 0-702605	22210	531	6038	112	-3	17.8	5.4	-254	-1	-1	8.5	3959	165	3.6	271	0.325
02- BZ 17021 D	-2-99- 0-702606	19630	705	6395	100	-3	21.3	5.8	-252	-1	-1	9.3	5203	173	-1.8	-40	0.342
02- BZ 17022 D	-2-99- 0-702607	21050	676	2748	122	-2	21.1	5.6	195	-1	2	10.0	5148	178	3.3	118	0.303
02- BZ 17023 D	-2-99- 0-702608	12120	490	5703	138	-3	16.6	4.8	-227	-1	-1	9.7	4495	175	4.3	101	0.326
02- BZ 17024 D	-2-99- 0-702609	15760	639	8521	-45	-3	14.5	5.3	-278	-1	-1	14.4	4043	115	4.8	-94	0.374
02- BZ 17025 D	-2-99- 0-702610	12660	616	6746	87	-3	13.5	4.9	-290	-2	-1	10.4	3445	142	2.1	211	0.425
02- BZ 17027 D	-2-99- 0-702611	6737	393	8344	-40	-2	12.1	5.0	-205	-2	-1	8.8	4360	111	-1.7	-78	0.655
02- BZ 17028 D	-2-99- 0-702612	9758	799	5516	-47	-3	13.3	5.2	-309	-2	-1	11.4	4031	128	-2.0	129	0.307
02- BZ 17055 D	-2-99- 0-702679	14050	668	7954	105	-3	14.7	6.1	-253	-2	-1	12.0	4743	130	4.7	207	0.364
02- BZ 17056 D	-2-99- 0-702680	15100	625	8723	114	-3	17.1	6.1	-253	-1	-1	11.4	5423	131	5.1	246	0.296
02- BZ 17057 D	-2-99- 0-702681	11780	4670	3737	-49	-3	13.4	4.1	-681	-2	-1	7.7	-1602	112	-2.1	1362	0.408
02- BZ 17058 D	-2-99- 0-702682	13380	1132	9417	127	-2	14.7	5.7	-262	-1	-1	12.2	4221	122	4.1	212	0.309
02- BZ 17059 D	-2-99- 0-702683	14350	747	7879	68	-3	14.0	7.3	-269	-1	-1	11.1	4635	122	4.0	257	0.275
02- BZ 17060 D	-2-99- 0-702684	7212	432	7378	110	-3	17.2	5.6	-221	-1	-1	10.4	5574	159	5.2	-45	0.327
02- BZ 17105 R	-2-99- 0-703139	22050	1955	11530	-36	-2	12.9	4.4	-313	-1	-1	5.2	3389	101	3.0	148	0.538
02- BZ 17106 D	-2-99- 0-703141	18890	1139	7574	88	-3	14.7	4.2	-310	-1	-1	7.6	3602	140	3.7	-139	0.471
02- BZ 17107 D	-2-99- 0-703140	36220	1391	6991	121	-2	13.6	3.6	-301	-1	-1	4.9	3219	232	-1.4	194	1.112
02- BZ 17108 R	-2-99- 0-703137	31490	1455	7560	116	-2	14.0	3.4	-307	-1	-1	5.5	2813	147	3.9	144	0.798
02- BZ 17109 R	-2-99- 1-703744	26740	1003	10430	99	13	14.5	3.6	782	-1	-1	5.0	2925	204	2.9	135	0.832
02- BZ 17144 R	-2-99- 0-703133	4668	582	19890	152	-1	4.2	2.8	676	-1		13.1	1162	35	2.7	154	0.309
02- BZ 17145 R	-2-99- 0-703130	12070	2678	23350	-26	-2	7.2	2.0	-543	-1		5.2	1737	90	-1.2	250	0.500
02- BZ 17146 R	-2-99- 0-703110	24333	1714	9743	80	-2	10.6	5.1	-354	-1	-1	7.7	3347	122	4.2	288	0.591
02- BZ 17147 R	-2-99- 0-703124	23800	2993	4260	-35	-2	10.2	1.6	-404	-1		2.4	1679	56	2.6	2359	2.275
02- BZ 17149 R	-2-99- 0-703108	5604	339	7404	321	-1	4.3	3.3	-151	-1		15.3	2144	51	3.6	101	0.219
02- BZ 17149 R	-2-99- 0-703126	22700	2085	7529	-33	-2	14.4	3.5	-398	-1		4.9	2230	103	-1.3	214	0.063
02- BZ 17150 R	-2-99- 0-703112	-2115	1202	15260	531	-1	3.3	6.2	-205	25	1	25.7	-836	-12	5.1	91	0.267
02- BZ 17151 R	-2-99- 0-703111	-1491	133	11510	435	-1	4.3	4.3	1036	4		19.6	-511	-7	3.1	35	0.643
02- BZ 17152 D	-2-99- 0-703127	8155	482	23220	87	-2	14.1	5.2	-284	-1	1	13.9	3825	84	4.8	-72	0.499

[1] Sample type is designated by letter suffix to field number:
S = stream sediment, located in figure 5
D = soil, located in figures 8, 9, and 10
R = rock, located in figures 14 and 15

[2] Analyzed by Los Alamos Scientific Laboratory, P.O. Box 1663, Los Alamos, New Mexico 97545

NOTE. - Be, Li analyzed by emission spectrography. Ag, Bi, Cd, Cu, Nb, Ni, Pb, Sn, W, As, Se, and Zr analyzed by x-ray fluorescence. All other elements analyzed by neutron activation.

APPENDIX C. - Soil sample analyses (ppm) [1] [2]

Sample No.	Sec.	Twp.	Rge.	W	U	Cu	Pb	Zn	Ag	Mo
BZ11412	1	20N	12W	<5	5.9	<5	<30	99	<5	<30
BZ15267	30	21N	11W	<5	0.5	16	<30	99	<5	<30
BZ15268	30	21N	11W	<5	0.8	85	<30	70	<5	<30
BZ15269	30	21N	11W	<5	1.5	16	<30	88	<5	<30
BZ15409	24	21N	11W	<5	2.0	50	<15	145	<3	<15
BZ17001	30	21N	11W	16	8.4	74	<30	120	<5	38
BZ17002	30	21N	11W	70	5.9	96	180	140	<5	<30
BZ17003	30	21N	11W	14	15.0	75	66	110	<5	<30
BZ17004	30	21N	11W	14	<0.5	51	150	100	<5	<30
BZ17005	25	21N	12W	26	3.1	45	69	120	<5	<30
BZ17006	25	21N	12W	70	3.5	59	66	6	<5	<30
BZ17007	24	21N	12W	10	4.6	48	35	95	<5	<30
BZ17008	24	21N	12W	10	3.8	68	<30	110	<5	<30
BZ17009	24	21N	12W	<5	7.8	68	<30	80	<5	<30
BZ17010	24	21N	12W	<5	3.2	43	<30	87	<5	<30
BZ17011	24	21N	12W	10	8.3	81	<30	110	<5	<30
BZ17012	24	21N	12W	<5	3.2	24.5	<30	43	<5	<30
BZ17013	24	21N	12W	<5	5.1	56	<30	80	<5	<30
BZ17014	24	21N	12W	<5	4.9	76	<30	81	<5	<30
BZ17015	24	21N	12W	<5	7.4	77	<30	88	<5	<30
BZ17016	24	21N	12W	<5	2.4	50	<30	60	<5	<30
BZ17017	24	21N	12W	<5	8.1	53	<30	83	<5	<30
BZ17018	24	21N	12W	<5	3.7	48	<30	81	<5	<30
BZ17019	24	21N	12W	<5	2.5	45	<30	75	<5	<30
BZ17020	24	21N	12W	<5	2.2	91	<30	76	<5	<30
BZ17021	24	21N	12W	<5	2.1	66	<30	84	<5	<30
BZ17022	24	21N	12W	<5	2.5	120	<30	200	<5	<30
BZ17023	24	21N	12W	<5	2.3	66	<30	75	<5	<30
BZ17024	19	21N	11W	22	4.0	57	41	100	<5	<30
BZ17025	19	21N	11W	<5	3.4	48	33	94	<5	<30
BZ17026	21	21N	11W	<5	3.8	58	<30	67	<5	<30
BZ17027	19	21N	11W	<5	4.3	79	<30	44	<5	<30
BZ17028	19	21N	11W	<5	2.5	42	<30	80	<5	<30
BZ17029	19	21N	11W	50	3.0	37	<30	110	<5	<30
BZ17030	19	21N	11W	22	2.9	33	<30	92	<5	<30

See footnotes at end of this appendix

Soil sample analyses (ppm) - Continued.

Sample No.	Sec.	Twp.	Rge.	W	U	Cu	Pb	Zn	Ag	Mo
BZ17031	19	21N	11W	<5	3.1	41	<30	59	<5	<30
BZ17032	19	21N	11W	<5	2.4	31	<30	86	<5	<30
BZ17033	19	21N	11W	<5	2.7	33	<30	91	<5	<30
BZ17034	19	21N	11W	<5	2.4	32	<30	81	<5	<30
BZ17035	19	21N	11W	<5	1.8	20.5	<30	60	<5	<30
BZ17036	19	21N	11W	<5	2.2	31	<30	52	<5	<30
BZ17037	19	21N	11W	<5	2.2	12	<30	37	<5	<30
BZ17038	19	21N	11W	24	2.1	36	<30	78	<5	<30
BZ17039	20	21N	11W	11	2.5	44	<30	160	<5	<30
BZ17040	20	21N	11W	<5	2.9	130	<30	190	<5	<30
BZ17041	20	21N	11W	<5	3.5	120	<30	84	<5	<30
BZ17042	20	21N	11W	50	3.6	83	<30	99	<5	<30
BZ17043	20	21N	11W	<5	3.6	12	<30	59	<5	<30
BZ17044	20	21N	11W	50	3.3	43	<30	84	<5	<30
BZ17045	20	21N	11W	38	2.3	51	<30	97	<5	<30
BZ17046	20	21N	11W	20	5.1	41	<30	84	<5	<30
BZ17047	30	21N	11W	16	5.0	31	<30	94	<5	<30
BZ17048	30	21N	11W	<5	23.0	55	96	81	<5	<30
BZ17049	29	21N	11W	16	5.8	22.5	<30	75	<5	<30
BZ17050	29	21N	11W	<5	4.5	47	<30	97	<5	<30
BZ17051	29	21N	11W	<5	5.1	44	<30	100	<5	<30
BZ17052	29	21N	11W	<5	3.7	120	<30	120	<5	<30
BZ17053	29	21N	11W	<5	4.8	45	<30	94	<5	<30
BZ17054	29	21N	11W	<5	3.2	41	<30	75	<5	<30
BZ17055	35	21N	12W	<5	5.0	15.6	<30	50	<5	<30

[1] Sample locations shown in figure 8.
[2] Analyzed by: U.S. Bureau of Mines, Reno Research Center, 1605 Evans Ave., Reno, Nevada 89520.

NOTES. - Cu, Pb, Zn, Ag, and Mo analyzed by atomic absorption. W analyzed by colorimetry. U analyzed by fluorometry.

NA = not analyzed

Total samples = 60

APPENDIX D. - Soil sample analyses, Windy Knob soil grid (ppm) [1] [2]

Sample No.	Sec.	Twp.	Rge.	W	U	Cu	Pb	Zn	Ag	Mo
BZ17061	19	21N	11W	30	2.4	NA	NA	NA	NA	NA
BZ17062	19	21N	11W	50	1.9	24.8	<30	120	<5	<30
BZ17063	19	21N	11W	22	3.0	61	<30	70	<5	<30
BZ17064	19	21N	11W	70	3.5	59	31	100	<5	<30
BZ17065	19	21N	11W	120	2.7	43	50	120	7	<30
BZ17066	19	21N	11W	<5	2.9	26.8	<30	130	<5	<30
BZ17067	19	21N	11W	<5	2.4	40	<30	86	<5	<30
BZ17068	19	21N	11W	<5	3.0	45	<30	110	<5	<30
BZ17069	19	21N	11W	<5	2.7	39	<30	44	<5	<30
BZ17070	19	21N	11W	30	2.9	63	100	91	<5	<30
BZ17071	19	21N	11W	60	3.7	75	77	100	<5	<30
BZ17072	19	21N	11W	<5	2.4	57	<30	130	<5	<30
BZ17073	19	21N	11W	28	2.1	38	<30	59	<5	<30
BZ17074	19	21N	11W	<5	2.2	37	35	88	<5	<30
BZ17075	19	21N	11W	<5	2.6	28.8	<30	72	<5	<30
BZ17076	19	21N	11W	<5	2.6	52	<30	100	<5	<30
BZ17077	19	21N	11W	32	3.2	61	<30	110	<5	<30
BZ17078	19	21N	11W	<5	2.3	61	<30	67	<5	<30
BZ17079	19	21N	11W	24	2.4	61	150	180	<5	<30
BZ17080	19	21N	11W	16	2.1	83	330	330	<5	<30
BZ17081	19	21N	11W	<5	2.4	28.8	47	170	<5	<30
BZ17082	19	21N	11W	15	2.6	24.8	50	110	<5	<30
BZ17083	19	21N	11W	16	2.3	41	58	130	<5	<30
BZ17084	19	21N	11W	14	2.3	33	43	140	<5	<30
BZ17085	19	21N	11W	90	2.3	38	47	140	<5	<30
BZ17086	19	21N	11W	50	1.8	69	39	93	<5	<30
BZ17087	19	21N	11W	20	2.2	81	<30	80	<5	<30
BZ17088	19	21N	11W	16	1.7	31	<30	85	<5	<30
BZ17089	19	21N	11W	<5	1.9	28.1	35	110	<5	<30
BZ17090	19	21N	11W	12	1.9	23.5	<30	88	<5	<30
BZ17091	19	21N	11W	11	1.7	37	<30	72	<5	<30
BZ17092	19	21N	11W	<5	2.1	27.5	58	77	<5	<30
BZ17093	19	21N	11W	8	2.5	44	35	88	<5	<30
BZ17094	19	21N	11W	17	2.8	21.5	<30	72	<5	<30

[1] Sample locations shown in figure 9.
[2] Analyzed by: U.S. Bureau of Mines, Reno Research Center, 1605 Evans Ave., Reno, Nevada 89520.

NOTES. - Cu, Pb, Zn, Ag, and Mo analyzed by atomic absorption. W analyzed by colorimetry. U analyzed by fluorometry.

NA = not analyzed

Total samples = 34

APPENDIX E. - Soil sample analyses, Strange Ridge soil grid (ppm) [1] [2]

Sample No.	Sec.	Twp.	Rge.	W	U	Cu	Pb	Zn	Ag	Mo
BZ15318	23	21N	11W	<5	1.9	34	<30	45	<5	<30
BZ15319	23	21N	11W	<5	2.0	37	<30	62	<5	<30
BZ15320	23	21N	11W	<5	2.1	33	<30	53	<5	<30
BZ15321	23	21N	11W	16	2.2	84	53	130	<5	<30
BZ15322	23	21N	11W	18	3.4	49	<30	68	<5	<30
BZ15323	23	21N	11W	22	3.8	65	<30	98	<5	<30
BZ15324	23	21N	11W	60	2.3	60	33	89	<5	<30
BZ15325	23	21N	11W	70	3.5	66	46	93	<5	<30
BZ15326	23	21N	11W	<5	3.9	47	<30	81	<5	<30
BZ15327	23	21N	11W	<5	3.3	36	<30	73	<5	<30
BZ15328	23	21N	11W	20	2.5	54	<30	96	<5	<30
BZ15329	23	21N	11W	<5	3.0	57	<30	92	<5	<30
BZ15330	23	21N	11W	<5	1.9	31	<30	150	<5	<30
BZ15331	23	21N	11W	<5	2.2	32	240	90	<5	<30
BZ15332	23	21N	11W	<5	1.9	29.1	<30	62	<5	<30
BZ15333	23	21N	11W	<5	3.4	41	<30	96	<5	<30
BZ15334	23	21N	11W	<5	2.3	29.1	<30	77	<5	<30
BZ15335	23	21N	11W	<5	2.4	46	<30	96	<5	<30
BZ15336	23	21N	11W	<5	2.0	39	<30	85	<5	<30
BZ15337	23	21N	11W	<5	1.9	39	<30	150	<5	<30
BZ15338	23	21N	11W	<5	1.3	38	<30	100	<5	<30
BZ15339	23	21N	11W	<5	1.3	39	<30	120	<5	<30
BZ15340	23	21N	11W	<5	1.7	47	31	150	<5	<30
BZ15341	23	21N	11W	<5	0.8	61	<30	110	<5	<30
BZ15342	23	21N	11W	<5	4.0	33	<30	11	<5	<30
BZ15343	23	21N	11W	<5	5.1	100	31	90	<5	<30
BZ15344	23	21N	11W	<5	6.2	84	<30	79	<5	<30
BZ15345	23	21N	11W	<5	3.5	100	<30	130	<5	<30
BZ15346	23	21N	11W	<5	17.0	58	<30	180	<5	<30
BZ15347	23	21N	11W	<5	3.5	150	<30	70	<5	<30
BZ15348	23	21N	11W	30	4.9	95	42	140	<5	<30
BZ15349	23	21N	11W	60	11.0	160	230	270	<5	<30
BZ15350	23	21N	11W	28	12.0	240	100	85	<5	<30
BZ15351	23	21N	11W	22	8.4	210	130	100	<5	<30
BZ15352	23	21N	11W	28	2.5	160	83	100	<5	<30
BZ15353	23	21N	11W	12	2.7	49	<30	85	<5	<30
BZ15354	23	21N	11W	6	2.6	63	<30	100	<5	<30
BZ15355	23	21N	11W	10	2.8	85	<30	170	<5	<30
BZ15356	23	21N	11W	6	2.3	55	68	140	<5	<30
BZ15357	23	21N	11W	<5	4.0	66	79	110	<5	<30

See footnotes at end of this appendix

Soil sample analyses, Strange Ridge soil grid (ppm) - Continued

Sample No.	Sec.	Tep.	Rge.	W	U	Cu	Pb	Zn	Ag	Mo
BZ15358	23	21N	11W	14	3.0	53	<30	120	<5	<30
BZ15359	23	21N	11W	<5	1.9	86	<30	110	<5	<30
BZ15360	23	21N	11W	12	13.0	93	46	180	<5	66
BZ15361	23	21N	11W	40	3.4	97	120	250	<5	<30
BZ15362	23	21N	11W	24	5.5	96	210	100	5	61
BZ15363	23	21N	11W	60	5.3	200	280	260	8	100
BZ15364	23	21N	11W	110	4.6	130	310	180	7	<30
BZ15365	23	21N	11W	50	2.7	46	<30	67	<5	<30
BZ15366	23	21N	11W	40	1.9	59	<30	100	<5	<30
BZ15367	23	21N	11W	<5	0.64	41	<30	26	<5	<30
BZ15368	23	21N	11W	60	1.5	58	<30	82	<5	<30
BZ15369	23	21N	11W	40	1.7	52	31	100	<5	<30
BZ15370	23	21N	11W	<5	1.8	63	31	140	<5	<30
BZ15371	23	21N	11W	<5	1.4	73	<30	71	<5	<30
BZ15372	23	21N	11W	<5	1.3	77	<30	110	5	<30
BZ15373	23	21N	11W	16	1.2	91	31	120	<5	<30
BZ15374	23	21N	11W	16	1.4	78	<30	78	<5	<30
BZ15375	23	21N	11W	<5	1.2	86	<30	110	<5	<30
BZ15376	23	21N	11W	<5	1.3	79	<30	110	<5	<30
BZ15377	23	21N	11W	<5	1.5	53	<30	150	<5	<30
BZ15378	23	21N	11W	28	1.2	57	<30	100	<5	<30
BZ15379	23	21N	11W	12	1.6	100	<30	220	<5	<30
BZ15380	23	21N	11W	110	1.2	75	<30	150	<5	<30
BZ15381	23	21N	11W	12	1.3	60	<30	110	<5	<30
BZ15382	23	21N	11W	16	1.1	91	<30	130	<5	<30
BZ15383	23	21N	11W	110	1.5	61	<30	77	<5	<30
BZ15384	23	21N	11W	<5	1.2	52	<30	100	<5	<30
BZ15385	23	21N	11W	16	0.73	92	260	100	<5	<30
BZ15386	23	21N	11W	50	1.1	61	100	100	<5	<30
BZ15387	23	21N	11W	36	1.0	76	120	110	<5	<30
BZ15388	23	21N	11W	<5	1.3	53	<30	58	<5	<30
BZ15389	23	21N	11W	10	1.4	76	57	200	<5	<30
BZ15390	23	21N	11W	40	4.1	40	<30	75	<5	<30
BZ15391	23	21N	11W	<5	0.76	81	<30	61	<5	<30
BZ15392	23	21N	11W	20	2.0	86	47	140	<5	<30
BZ15393	23	21N	11W	24	2.1	65	63	110	<5	<30
BZ15394	23	21N	11W	90	2.1	100	210	160	<5	<30
BZ15395	23	21N	11W	20	1.5	74	<30	110	<5	<30
BZ15396	23	21N	11W	20	2.0	81	<30	95	<5	<30
BZ15397	23	21N	11W	<5	2.3	40	<30	100	<5	<30
BZ15398	23	21N	11W	10	1.4	49	<30	140	<5	<30
BZ15399	23	21N	11W	38	1.1	45	31	87	<5	<30
BZ15483	23	21N	11W	12	1.5	54	<30	78	<5	<30
BZ15484	23	21N	11W	10	3.0	49	57	64	<5	<30
BZ15485	23	21N	11W	<5	2.0	31	<30	120	<5	<30

Soil sample analyses, Strange Ridge soil grid (ppm) - Continued

Sample No.	Sec.	Twp.	Rge.	W	U	Cu	Pb	Zn	Ag	Mo
BZ15486	23	21N	11W	<5	<0.5	33	<30	21	<5	<30
BZ15487	23	21N	11W	60	2.5	83	35	160	<5	<30
BZ15488	23	21N	11W	20	2.4	61	<30	71	<5	<30
BZ15489	23	21N	11W	13	2.6	98	<30	130	<5	<30
BZ15490	23	21N	11W	200	2.1	76	32	180	<5	<30
BZ15491	23	21N	11W	12	1.6	46	64	88	<5	<30
BZ15492	23	21N	11W	40	2.4	85	100	160	<5	<30
BZ15493	23	21N	11W	19	2.0	99	73	140	<5	<30
BZ15494	23	21N	11W	60	1.7	100	81	110	<5	<30
BZ15495	23	21N	11W	16	1.5	84	73	96	<5	<30
BZ15496	23	21N	11W	<5	2.8	54	32	110	<5	<30
BZ15497	23	21N	11W	<5	2.9	67	56	130	<5	<30
BZ15498	23	21N	11W	<5	2.1	57	73	96	<5	<30
BZ15499	23	21N	11W	16	2.8	54	40	90	<5	<30
BZ15500	23	21N	11W	600	3.2	280	64	98	27.9	<30
BZ17106	23	21N	11W	70	2.5	86	110	100	<5	<30
BZ17127	23	21N	11W	180	4.3	250	73	160	<5	<30
BZ17128	23	21N	11W	12	2.3	100	100	110	<5	<30
BZ17129	23	21N	11W	60	3.0	130	200	160	<5	<30
BZ17130	23	21N	11W	30	4.6	87	100	180	<5	31
BZ17131	23	21N	11W	200	3.0	33	32	92	<5	<30
BZ17132	23	21N	11W	200	2.5	30	<30	69	<5	<30
BZ17133	23	21N	11W	<5	3.1	81	40	130	<5	<30
BZ17134	23	21N	11W	28	2.9	92	40	110	<5	56
BZ17135	23	21N	11W	17	3.2	100	100	130	<5	100
BZ17136	23	21N	11W	70	4.2	83	100	190	<5	<30
BZ17137	23	21N	11W	50	3.4	34	40	77	<5	<30
BZ17138	23	21N	11W	<5	1.6	58	100	52	<5	<30
BZ17139	23	21N	11W	90	3.2	93	200	160	<5	360
BZ17140	23	21N	11W	16	2.6	99	100	110	<5	43
BZ17141	23	21N	11W	32	2.9	91	100	120	<5	51
BZ17142	23	21N	11W	12	2.6	140	300	170	<5	190
BZ17143	23	21N	11W	50	4.1	40	48	84	<5	<30
BZ17144	23	21N	11W	<5	1.4	88	48	96	<5	<30
BZ17145	23	21N	11W	90	2.6	110	56	150	<5	<30

[1] Sample locations shown in figure 10.
[2] Analyzed by U.S. Bureau of Mines, Reno Research Center, 1605 Evans Ave., Reno, Nevada 89520.

NOTES. - Cu, Pb, Zn, Ag, and Mo analyzed by atomic absorption. W analyzed by colorimetry. U analyzed by fluorometry.

Total samples = 120

APPENDIX F. - Panned concentrate analyses
(ppm except where indicated %) [1 2]

ELEMENT	BZ10236	BZ10238	BZ10770	BZ10772	BZ10774	BZ10776
Fe	10.00%	10.00%	7.00%	7.00%	10.00%	20.00%
Ca	10.00%	20.00%	20.00%	15.00%	0.10%	0.10%
Mg	2.00%	7.00%	7.00%	3.00%	0.50%	0.50%
Ag	50	<1	<1	<1	<1	<1
AS	<500	<500	<500	<500	<500	<500
B	150	200	300	150	500	1000
BA	100	300	200	100	500	200
Be	<2	<2	<2	2	<2	<2
Bi	<10	<10	<10	<10	<10	<10
Cd	<50	<50	<50	<50	<50	<50
Co	30	30	30	30	20	10
Cr	100	500	200	500	200	150
Cu	100	30	30	100	150	150
Ga	20	20	20	30	30	20
Ge	<20	<20	<20	<20	<20	<20
La	300	50	20	200	20	20
Mn	5000	3000	2000	3000	2000	3000
Mo	2	<2	<2	2	2	<2
Nb	30	20	<20	30	20	20
Ni	20	50	30	50	50	30
Pb	50	100	<10	<10	10	20
Sb	<100	<100	<100	<100	<100	<100
Sc	50	50	30	30	10	20
Sn	10	<10	<10	10	<10	<10
Sr	<100	150	100	<100	100	200
Ti	>10000	10000	10000	>10000	>10000	>10000
U	200	150	200	100	100	70
W	100	<50	<50	200	<50	<50
Y	300	200	50	200	300	1000
Zn	<200	<200	300	500	<200	<200
Zr	200	100	200	500	300	500

See footnotes at end of this appendix

Panned concentrate analyses (ppm except where indicated %) - Continued

ELEMENT	BZ10777	BZ15001	BZ15003	BZ15005	BZ15006	BZ15008
Fe	20.00%	15.00%	7.00%	10.00%	7.00%	20.00%
Ca	0.05%	0.10%	0.10%	0.20%	20.00%	15.00%
Mg	1.00%	0.50%	2.00%	1.50%	1.50%	2.00%
Ag	<1	<1	<1	<1	<1	<1
As	<500	<500	<500	<500	<500	<500
B	200	500	200	300	50	100
Ba	200	100	300	700	300	100
Be	10	10	5	<2	<2	<2
Bi	<10	<10	<10	<10	<10	<10
Cd	<50	<50	<50	<50	<50	<50
Co	70	70	50	30	10	50
Cr	500	500	700	200	100	150
Cu	50	30	50	150	30	70
Ga	70	70	100	50	20	15
Ge	<20	<20	<20	<20	<20	<20
La	200	100	100	50	300	500
Mn	2000	3000	2000	1500	5000	5000
Mo	<2	<2	2	<2	2	<2
Nb	<20	20	20	20	50	20
Ni	70	50	70	50	30	30
Pb	<10	<10	150	30	20	<10
Sb	<100	<100	<100	<100	<100	<100
Sc	20	10	10	20	30	50
Sn	<10	<10	<10	<10	100	10
Sr	<100	<100	<100	100	200	100
Ti	10000	10000	10000	10000	>10000	>10000
U	200	300	150	100	100	200
W	<50	<50	<50	<50	<50	<50
Y	200	50	50	200	1000	200
Zn	3000	2000	1000	<200	<200	<200
Zr	500	500	200	300	300	50

Panned concentrate analyses (ppm except where indicated %) - Continued

ELEMENT	BZ15010	BZ15012	BZ15014	BZ15016	BZ15018	BZ15020
Fe	20.00%	20.00%	15.00%	20.00%	20.00%	7.00%
Ca	0.05%	0.05%	0.10%	0.50%	0.50%	20.00%
Mg	0.70%	0.70%	0.70%	2.00%	1.50%	3.00%
Ag	<1	<1	<1	<1	<1	<1
As	<500	<500	<500	<500	<500	<500
B	200	300	200	500	500	20
Ba	300	300	300	500	700	100
Be	10	10	10	5	5	<2
Bi	<10	<10	<10	<10	<10	<10
Cd	<50	<50	<50	<50	<50	<50
Co	70	70	70	50	70	20
Cr	500	500	300	200	200	500
Cu	50	50	50	150	150	150
Ga	50	50	50	50	50	20
Ge	<20	<20	<20	<20	<20	20
La	50	50	50	50	200	100
Mn	2000	2000	2000	2000	2000	3000
Mo	2	2	2	2	2	500
Nb	<20	<20	<20	20	20	100
Ni	70	50	70	70	100	100
Pb	<10	<10	100	10	20	100
Sb	<100	<100	<100	<100	<100	<100
Sc	10	10	10	10	20	50
Sn	<10	<10	<10	<10	<10	50
Sr	<100	<100	<100	100	<100	<100
Ti	10000	10000	10000	>10000	>10000	>10000
U	200	200	200	100	150	300
W	<50	<50	<50	<50	<50	>10000
Y	30	30	30	300	300	100
Zn	2000	3000	2000	2000	2000	<200
Zr	200	200	200	300	500	1000

Panned concentrate analyses (ppm except where indicated %) - Continued

ELEMENT	BZ15022	BZ15023	BZ15025	BZ15027	BZ15030	BZ15032
Fe	15.00%	7.00%	15.00%	7.00%	7.00%	15.00%
Ca	20.00%	15.00%	0.70%	20.00%	0.50%	20.00%
Mg	3.00%	3.00%	0.50%	3.00%	2.00%	2.00%
Ag	<1	<1	<1	<1	<1	<1
As	<500	<500	<500	<500	<500	<500
B	100	50	200	30	150	150
Ba	100	300	300	200	200	100
Be	3	<2	<2	<2	10	<2
Bi	70	10	<10	100	<10	<10
Cd	<50	<50	<50	<50	<50	<50
Co	50	30	100	30	50	30
Cr	150	300	500	200	700	200
Cu	100	200	70	150	30	30
Ga	30	20	50	20	50	30
Ge	<20	<20	<20	<20	<20	<20
La	20	200	20	200	20	100
Mn	3000	3000	3000	2000	2000	3000
Mo	50	150	2	50	<2	20
Nb	<20	100	<20	50	20	30
Ni	30	70	100	50	50	30
Pb	20	50	10	50	<10	10
Sb	<100	<100	<100	<100	<100	<100
Sc	10	50	<10	20	<10	20
Sn	10	30	<10	20	<10	10
Sr	100	<100	<100	100	<100	200
Ti	10000	>10000	10000	10000	5000	>10000
U	150	200	300	200	200	200
W	100	100	<50	5000	<50	150
Y	50	500	30	100	30	500
Zn	1000	<200	2000	200	2000	700
Zr	100	700	300	500	300	200

Panned concentrate analyses (ppm except where indicated %) - Continued

ELEMENT	BZ15036	BZ15038	BZ15049	BZ15252	BZ15254	BZ15257
Fe	10.00%	20.00%	10.00%	7.00%	10.00%	15.00%
Ca	10.00%	10.00%	15.00%	20.00%	0.70%	10.00%
Mg	3.00%	1.50%	2.00%	5.00%	0.50%	1.00%
Ag	<1	<1	<1	<1	<1	<1
As	<500	<500	<500	<500	<500	<500
B	100	500	200	100	200	<300
Ba	200	300	50	200	300	300
Be	2	7	20	2	7	7
Bi	<10	<10	<10	<10	<10	<10
Cd	<50	<50	<50	<50	<50	<50
Co	70	50	50	50	50	70
Cr	700	200	150	200	300	300
Cu	50	100	100	70	50	150
Ga	30	10	10	15	50	30
Ge	<20	<20	<20	<20	<20	<20
La	100	50	100	50	20	20
Mn	5000	7000	10000	7000	2000	3000
Mo	10	2	2	2	2	2
Nb	30	20	<20	20	20	<20
Ni	100	50	70	100	50	70
Pb	10	50	<10	10	20	20
Sb	<100	<100	<100	<100	<100	<100
Sc	50	30	100	70	<10	10
Sn	<10	10	10	10	<10	<10
Sr	<100	<100	200	100	<100	<100
Ti	>10000	5000	10000	10000	7000	10000
U	200	150	150	200	200	200
W	5000	100	100	100	150	100
Y	200	100	500	300	100	100
Zn	1000	<200	<200	<200	1000	1000
Zr	700	50	700	1000	200	200

Panned concentrate analyses (ppm except where indicated %) - Continued

ELEMENT	BZ15259	BZ15261	BZ15263	BZ15275	BZ15277	BZ15279
Fe	10.00%	20.00%	20.00%	5.00%	7.00%	7.00%
Ca	10.00%	10.00%	10.00%	20.00%	15.00%	20.00%
Mg	5.00%	1.50%	1.50%	5.00%	2.00%	3.00%
Ag	<1	<1	<7	<1	<1	<1
As	<500	<500	<500	<500	<500	<500
B	500	500	500	10	100	150
Ba	200	50	50	200	100	300
Be	<2	<2	<2	2	2	5
Bi	<10	<10	<10	<10	<10	<10
Cd	<50	<50	<50	<50	<50	<50
Co	70	30	30	30	30	50
Cr	300	200	100	300	300	500
Cu	70	50	50	50	70	100
Ga	20	<10	<10	10	20	30
Ge	<20	<20	<20	<20	<20	<20
La	<20	20	20	300	200	20
Mn	7000	>10000	>10000	3000	3000	2000
Mo	2	2	5	50	5	15
Nb	20	<20	<20	100	100	20
Ni	50	100	70	100	70	70
Pb	10	10	10	10	10	15
Sb	<100	<100	<100	<100	<100	<100
Sc	70	100	150	50	50	20
Sn	<10	<10	<10	10	10	<10
Sr	100	200	200	100	<100	100
Ti	10000	>10000	>10000	10000	>10000	5000
U	200	200	100	100	200	200
W	<50	<50	50	10000	500	50
Y	150	500	700	200	500	50
Zn	<200	<200	<200	<200	500	1000
Zr	300	1000	1500	1500	700	150

Panned concentrate analyses (ppm except where indicated %) - Continued

ELEMENT	BZ15281	BZ15283	BZ15287	BZ15288	BZ15290	BZ15292
Fe	7.00%	15.00%	20.00%	15.00%	15.00%	15.00%
Ca	2.00%	20.00%	15.00%	15.00%	15.00%	15.00%
Mg	3.00%	1.50%	2.00%	2.00%	1.00%	2.00%
Ag	<1	<1	<1	<1	<1	<1
As	<500	<500	<500	<500	<500	<500
B	50	100	100	200	200	200
Ba	100	20	50	50	50	50
Be	3	<2	<2	<2	<2	<2
Bi	<10	<10	30	<10	30	<10
Cd	<50	<50	<50	<50	<50	<50
Co	50	50	50	20	30	30
Cr	500	200	200	150	200	200
Cu	50	70	70	70	100	70
Ga	30	10	<10	10	10	15
Ge	<20	<20	<20	<20	<20	<20
La	20	200	200	200	300	100
Mn	2000	5000	>10000	>10000	7000	>10000
Mo	2	2	2	<2	<2	<2
Nb	20	20	20	30	30	20
Ni	50	50	150	150	150	100
Pb	10	<10	<10	15	30	20
Sb	<100	<100	<100	<100	<100	<100
Sc	20	50	100	100	100	100
Sn	<10	10	<10	10	50	10
Sr	<100	<100	200	200	200	200
Ti	5000	>10000	>10000	>10000	>10000	>10000
U	200	200	200	200	100	100
W	150	1000	50	100	500	500
Y	30	200	500	500	1000	500
Zn	500	<200	<200	<200	<200	<200
Zr	150	300	1500	1500	1000	1000

Panned concentrate analyses (ppm except where indicated %) - Continued

ELEMENT	BZ15293	BZ15295	BZ15297	BZ15299	BZ15301	BZ15303
Fe	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%
Ca	10.00%	0.50%	0.50%	0.70%	15.00%	1.00%
Mg	1.50%	0.70%	0.70%	1.00%	2.00%	1.00%
Ag	<1	<1	<1	<1	<1	<1
As	<500	<500	<500	<500	<500	<500
B	200	200	200	200	200	500
Ba	100	300	300	70	100	200
Be	<2	5	5	7	7	7
Bi	<10	<10	<10	<10	<10	<10
Cd	<50	<50	<50	<50	<50	<50
Co	30	50	50	50	50	50
Cr	150	500	300	300	300	500
Cu	20	50	50	50	50	50
Ga	15	30	50	50	20	30
Ge	<20	<20	<20	<20	<20	<20
La	20	100	20	20	100	100
Mn	>10000	2000	3000	3000	2000	3000
Mo	2	<2	2	<2	<2	<2
Nb	20	20	<20	<20	20	20
Ni	70	50	50	30	50	50
Pb	<10	20	20	<10	<10	<10
Sb	<100	<100	<100	<100	<100	<100
Sc	100	<10	<10	10	20	20
Sn	<10	<10	<10	<10	<10	<10
Sr	200	100	<100	<100	<100	<100
Ti	>10000	10000	10000	>10000	>10000	>10000
U	200	200	200	200	200	200
W	100	<50	<50	<50	100	<50
V	500	100	100	50	200	300
Zn	<200	3000	1000	2000	700	2000
Zr	1500	200	200	200	300	300

Panned concentrate analyses (ppm except where indicated %) - Continued

ELEMENT	BZ15305	BZ15309	BZ15311	BZ15313	BZ15427	BZ15429
Fe	10.00%	15.00%	10.00%	7.00%	10.00%	10.00%
Ca	20.00%	10.00%	15.00%	20.00%	15.00%	15.00%
Mg	5.00%	5.00%	5.00%	3.00%	5.00%	5.00%
Ag	<1	<1	<1	<1	<1	<1
As	<500	<500	<500	<500	700	<500
B	200	300	300	30	150	500
Ba	150	10	10	15	150	200
Be	3	<2	<2	<2	<2	<2
Bi	<10	<10	<10	<10	<10	<10
Cd	<50	<50	<50	<50	<50	<50
Co	50	70	50	10	30	70
Cr	300	200	150	100	700	100
Cu	50	50	30	50	50	100
Ga	20	10	10	20	15	10
Ge	<20	<20	<20	20	<20	<20
La	50	<20	<20	150	500	20
Mn	2000	7000	5000	5000	10000	10000
Mo	<2	2	<2	50	<2	15
Nb	20	<20	20	50	70	50
Ni	70	50	70	30	30	20
Pb	<10	<10	<10	10	30	<10
Sb	<100	<100	<100	<100	<100	<100
Sc	30	50	30	20	100	100
Sn	<10	<10	10	70	30	<10
Sr	100	<100	<100	<100	200	<100
Ti	>10000	>10000	>10000	>10000	>10000	>10000
U	200	150	200	200	150	300
W	50	<50	100	2000	<50	200
Y	100	200	100	300	700	200
Zn	500	<200	<200	<200	<200	200
Zr	500	200	200	300	1000	100

1 Sample locations shown in figure 13.
2 Emission spectrographic analysis by: Skyline Labs, Inc., 12090 West 50th Place, Wheat Ridge, Co. 80033.

NOTE. - Total samples = 54

APPENDIX G. - Rock sample analyses (ppm) [1 2]

Sample No.	Sec.	Twp.	Rge.	W	U	Cu	Pb	Zn	Ag	Mo
BZ11415	19	21N	11W	360	2.9	49	140	88	<5	<30
BZ11417	19	21N	11W	<5	2.8	91	<30	120	<5	<30
BZ11448	25	21N	12W	10	4.9	580	<30	45	<5	<30
BZ11450	25	21N	12W	6	5.2	59	<30	20	<5	<30
BZ11459	26	21N	12W	10	4.1	40	52	24	<5	<30
BZ11462A	26	21N	12W	<5	3.4	19	<30	17	<5	<30
BZ11462B	26	21N	12W	8	1.7	38	<30	31	<5	<30
BZ15053	24	21N	12W	<5	2.9	710	<30	31	<5	<30
BZ15054	24	21N	12W	<5	2.4	170	<30	27	<5	<30
BZ15059	24	21N	12W	<5	2.0	6750	77	1040	6	<30
BZ15065	25	21N	12W	1100	2.5	870	<25	42	<4.2	<25
BZ15071	19	21N	12W	<5	2.0	40	<30	27	<5	<30
BZ15077	19	21N	11W	7	1.4	15	41	66	<5	<30
BZ15078	19	21N	11W	<5	1.7	180	<30	60	<5	<30
BZ15079	25	21N	12W	1900	3.2	890	<30	27	<5	<30
BZ15082	25	21N	12W	50	3.6	940	<30	18	<5	<30
BZ15087	36	21N	12W	<5	1.9	10	<30	49	<5	<30
BZ15095	19	21N	11W	8900	5.1	340	10800	220	300	<30
BZ15103	22	21N	11W	240	2.3	58	44	20	<5	<30
BZ15104	22	21N	11W	4900	4.1	130	<30	45	<5	<30
BZ15105	22	21N	11W	2600	3.3	130	<30	54	<5	<30
BZ15122	30	21N	11W	<5	4.3	23.9	<30	21	<5	<30
BZ15131	30	21N	11W	280	3.0	100	<30	18	<5	<30
BZ15132	30	21N	11W	60	5.1	72	<30	10	<5	<30
BZ15133	30	21N	11W	360	8.8	49	<30	21	<5	87
BZ15135	19	21N	11W	700	3.7	200	<30	100	<5	270
BZ15136	19	21N	11W	500	4.8	110	52	110	<5	<30
BZ15137	19	21N	11W	100	2.7	55	<30	58	<5	<30
BZ15138	19	21N	11W	900	3.3	100	100	170	<5	<30
BZ15139	19	21N	11W	3700	2.4	42	780	390	31	<30
BZ15140	19	21N	11W	900	2.3	34	150	270	5	<30
BZ15141	19	21N	11W	400	5.7	65	<30	100	<5	<30
BZ15150	27	21N	12W	100	5.5	92	72	18	<5	<30
BZ15159	21	21N	11W	60	3.1	88	<30	220	<5	3400
BZ15163	21	21N	11W	3100	4.7	89	<30	130	<5	240
BZ15168	24	21N	12W	<5	1.9	27.5	<30	34	5	<30
BZ15172	30	21N	11W	<5	1.5	<5	<30	21	<5	69
BZ15173	30	21N	11W	20	3.8	20.3	<30	33	<5	42
BZ15175	21	21N	11W	8	3.3	230	110	61	<5	2010
BZ15177	21	21N	11W	20	6.8	69	<30	36	<5	3200

See footnotes at end of this appendix

Rock sample analyses (ppm) - Continued

Sample No.	Sec.	Twp.	Rge.	W	U	Cu	Pb	Zn	Ag	Mo
BZ15180B	22	21N	11W	24	0.63	35	4190	5200	67	100
BZ15184	21	21N	11W	2400	2.9	6500	260	430	67	<30
BZ15190	29	21N	11W	380	3.3	130	<30	41	<5	1010
BZ15193	23	21N	12W	<5	3.1	63	<30	100	<5	<30
BZ15200	24	21N	12W	<5	3.3	48	<30	22	<5	46
BZ15208	20	21N	11W	50	1.2	210	<30	210	6	<30
BZ15209	20	21N	11W	<5	3.4	27	<30	31	<5	<30
BZ15234	19	21N	11W	300	2.9	110	150	140	<5	<30
BZ15235	19	21N	11W	4000	3.2	150	110	650	<5	<30
BZ15236	19	21N	11W	500	2.4	65	40	190	<5	<30
BZ15237	19	21N	11W	28	2.7	27.4	120	46	<5	<30
BZ15238	19	21N	11W	16	2.9	55	<30	75	<5	160
BZ15239	19	21N	11W	110	3.6	64	<30	90	<5	<30
BZ15240	19	21N	11W	300	3.6	54	690	820	<5	<30
BZ15241	19	21N	11W	<5	2.5	38	<30	64	<5	<30
BZ15242	19	21N	11W	32	3.4	130	<30	100	<5	<30
BZ15243	19	21N	11W	600	3.7	150	<30	79	9	<30
BZ15244	19	21N	11W	23	6.3	42	<30	72	<5	<30
BZ15245	19	21N	11W	220	3.7	76	64	170	<5	<30
BZ15246	19	21N	11W	6100	4.1	230	180	550	5	<30
BZ15247	19	21N	11W	33	3.7	42	<30	63	<5	<30
BZ15248	19	21N	11W	18	3.1	50	<30	66	<5	<30
BZ15249	19	21N	11W	4400	3.7	150	4130	460	110	<30
BZ15289	28	21N	11W	<5	5.5	46	<30	31	<5	<30
BZ15291	27	21N	11W	6	1.0	69	<30	39	<5	<30
BZ15294	22	21N	11W	36	2.6	170	<30	7	<5	<30
BZ15307	30	21N	11W	<5	9.8	37	<30	<5	<5	340
BZ15316	29	21N	11W	100	2.3	30	<30	93	<5	<30
BZ15317	30	21N	11W	<5	7.1	84	<30	15	<5	3200
BZ15402	21	21N	11W	18	2.7	86	<30	57	<5	<30
BZ15417	30	21N	10W	100	<0.50	73	<30	39	<5	<30
BZ15420	36	21N	11W	<5	3.9	110	56	15	<5	<30
BZ15438	30	21N	11W	<5	2.4	1140	40	35	<5	<30
BZ15443	23	21N	11W	23	2.9	4500	56	640	11.5	<30
BZ15449	24	21N	12W	360	<0.50	230	3800	420	120	<30
BZ15454	24	21N	12W	340	2.2	6	32	44	<5	<30
BZ15455	24	21N	12W	5400	0.82	12	98	48	<5	<30
BZ15468	23	21N	12W	<5	13.0	150	<30	54	<5	<30
BZ15481A	19	21N	11W	16	2.5	130	40	33	<5	<30
BZ15647	27	21N	11W	<5	3.2	38	<30	25	<5	35

Rock sample analyses (ppm) - Continued

Sample No.	Sec.	Twp.	Rge.	W	U	Cu	Pb	Zn	Ag	Mo
BZ15655	28	21N	11W	<5	<0.50	12	<30	25	<5	<30
BZ15656	28	21N	11W	<5	2.0	12	<30	41	<5	<30
BZ17105	23	21N	11W	36	2.0	180	<30	<5	<5	<30
BZ17108	23	21N	11W	20	3.5	99	32	46	<5	<30
BZ17144	19	21N	11W	3400	3.8	54	<30	62	<5	<30
BZ17145	19	21N	11W	110	2.3	240	<30	170	<5	<30
BZ17146	19	21N	11W	2500	3.2	170	78	150	<5	<30
BZ17147	19	21N	11W	5700	2.7	140	100	1930	<5	<30
BZ17148	19	21N	11W	32	2.6	210	170	92	<5	<30
BZ17149	19	21N	11W	20	2.1	100	30	62	<5	<30
BZ17150	19	21N	11W	<5	3.5	180	<30	<5	<5	<30
BZ17151	19	21N	11W	120	9.1	50	<30	<5	<5	<30

[1] Sample locations shown in figures 14 and 15.
[2] Analyzed by U.S. Bureau of Mines, Reno Research Center, 1605 Evans Ave., Reno, Nevada 89520.

NOTE. - Total samples = 92

APPENDIX H. - Field descriptions of BZ rock samples [1] [2]

BZ11415	- Alaskite, sericitized, disseminated fine pyrite cubes.
BZ11417	- Quartz biotite schist, pyrrhotite bearing.
BZ11448	- Dark gray-green calc-silicate, trace pyrrhotite and chalcopyrite. High-graded.
BZ11450	- Alaskite dike, trace powellite and scheelite. High-graded.
BZ11459	- Pegmatite dike.
BZ11462A	- Granitic gneiss.
BZ11462B	- Granitic gneiss with pegmatite veins.
BZ15053	- Chalcopyrite and pyrrhotite bearing actinolite quartz schist. High-graded.
BZ15054	- Pyrrhotite bearing calc-silicate schist.
BZ15059	- Strongly iron stained calc-silicate, chalcopyrite on fractures. High-graded.
BZ15065	- Dark gray-green calc-silicate, traces of pyrrhotite and chalcopyrite, iron stained. High-graded.
BZ15071	- Vuggy, pyrrhotite bearing calc-silicate.
BZ15077	- Light green calc-silicate rock.
BZ15078	- Pyrrhotite bearing gray-green calc-silicate.
BZ15079	- Dark green tactite, scheelite, pyrrhotite, chalcopyrite bearing. High-graded.
BZ15082	- Dark green tactite, trace pyrrhotite, and chalcopyrite. High-graded.
BZ15087	- Aplite dike, trace molybdenite. High-graded.
BZ15096	- Dark green tactite, pyrrhotite, chalcopyrite bearing from poddy 5in - 6 ft wide contact zone. High-graded.
BZ15102	- Iron stained tactite. High-graded.
BZ15103	- Marble.
BZ15104	- Scheelite bearing calc-silicate. High-graded.
BZ15105	- Scheelite bearing calc-silicate. High-graded.
BZ15117	- Quartz-molybdenite vein. High-graded.
BZ15121	- Dark gray porphyry.
BZ15122	- Aplite dike.
BZ15131	- Scheelite, molybdenite bearing calc-silicate. High-graded.
BZ15132	- Scheelite bearing calc-silicate. High-graded.
BZ15133	- Scheelite, molybdenite bearing aplite dike. High-graded.
BZ15135	- Trench A, 1 Chip samples collected from four trenches
BZ15136	- Trench A, 2 lettered A - D from west to east. Trenches
BZ15137	- Trench A, 3 cross tactite/ calc-silicate zone at granite
BZ15138	- Trench A, 4 contact. Sample location in figure 15.
BZ15139	- Trench A, 5
BZ15140	- Trench A, 6
BZ15141	- Trench B, 1
BZ15150	- Pegmatite dike.
BZ15159	- Molybdenite bearing, limonite stained, calc-silicate. High-graded.
BZ15163	- Iron stained, scheelite bearing calc-silicate. High-graded.

See footnotes at end of this appendix

Field descriptions of BZ rock samples - Continued

BZ15168	- Biotite muscovite granite.
BZ15172	- Molybdenite bearing pegmatite. High-graded.
BZ15173	- Scheelite, molybdenite bearing calc-silicate. High-graded.
BZ15176	- Granitic rock with quartz, molybdenite veins. High-graded.
sZ15177	- Granitic rock with quartz, molybdenite veins. High-graded.
BZ15180B	- Two in. quartz vein cutting gray-green, hornblende, biotite, quartz porphyry. High-graded.
BZ15184	- Gossan with trace pyrrhotite and chalcoprite. High-graded.
BZ15190	- Granitic rock with quartz molybdenite veins. High-graded.
BZ15193	- Pyrrhotite bearing quartz biotite schist.
BZ15200	- Light green calc-silicate schist.
BZ15208	- Gray-green, hornblende, biotite, quartz porphyry with powellite, scheelite bearing quartz veinlets. High-graded.
BZ15209	- Gray-green hornblende biotite quartz porphyry.
BZ15234	- Trench B, 2 Chip samples collected from four trenches
BZ15235	- Trench B, 3 lettered A - D from west to east. Trenches
BZ15236	- Trench B, 4 cross tactite/calc-silicate zone at granite
BZ15237	- Trench B, 5 contact. Sample location in figure 15.
BZ15238	- Trench C, 1
BZ15239	- Trench C, 2
BZ15240	- Trench C, 3
BZ15241	- Trench C, 4
BZ15242	- Trench D, 0
BZ15243	- Trench D, 1
BZ15244	- Trench D, 2
BZ15245	- Trench D, 3
BZ15246	- Trench D, 4
BZ15247	- Trench D, 5
BZ15248	- Five foot chip sample in calc-silicate at granite contact.
BZ15249	- Five foot chip sample in calc-silicate at granite contact.
BZ15289	- Granitic rock.
BZ15291	- Scheelite bearing calc-silicate. High-graded.
BZ15294	- Pyrrhotite bearing calc-silicate. High-graded.
BZ15307	- Molybdenite bearing aplite dike. High-graded.
BZ15316	- Molybdenite bearing calc-silicate. High-graded.
BZ15317	- Pyrite, pyrrhotite, chalcopyrite(?) bearing granitic rock with molybdenite, quartz veinlets. High-graded.
BZ15402	- Pyrrhotite, chalcopyrite bearing dark green calc-silicate.
BZ15417	- Chloritically altered granitic gneiss.
BZ15420	- Calc-silicate.
BZ15438	- Pyrrhotite, chalcopyrite bearing calc-silicate. High-graded.
BZ15443	- Pyrrhotite bearing calc-silicate schist. High-graded.
BZ15449	- Two in. quartz vein cutting pyrite bearing actinolite schist. High-graded.
BZ15454	- Scheelite, powellite bearing calc-silicate. High-graded.
BZ15455	- Scheelite, powellite bearing calc-silicate. High-graded.
BZ15468	- Chalcopyrite(?), pyrrhotite bearing quartz biotite schist. High-graded.
BZ15481A	- Granitic rock with clay alteration cut by alaskite vein.
BZ15647	- Quartz porphyry.

Field descriptions of BZ rock samples - Continued

BZ15168	- Biotite muscovite granite.
BZ15172	- Molybdenite bearing pegmatite. High-graded.
BZ15173	- Scheelite, molybdenite bearing calc-silicate. High-graded.
BZ15176	- Granitic rock with quartz, molybdenite veins. High-graded.
BZ15177	- Granitic rock with quartz, molybdenite veins. High-graded.
BZ15180B	- Two inch quartz vein cutting gray-green, hornblende, biotite, quartz porphyry. High-graded.
BZ15184	- Gossan with trace pyrrhotite and chalcoprite. High-graded.
BZ15190	- Granitic rock with quartz molybdenite veins. High-graded.
BZ15193	- Pyrrhotite bearing quartz biotite schist.
BZ15200	- Light green calc-silicate schist.
BZ15208	- Gray-green, hornblende, biotite, quartz porphyry with powellite, scheelite bearing quartz veinlets. High-graded.
BZ15209	- Gray-green hornblende biotite quartz porphyry.
BZ15234	- Trench B, 2 Chip samples collected from four trenches
BZ15235	- Trench B, 3 lettered A - D from west to east. Trenches
BZ15236	- Trench B, 4 cross tactite/calc-silicate zone at granite
BZ15237	- Trench B, 5 contact. Sample location in figure 15.
BZ15238	- Trench C, 1
BZ15239	- Trench C, 2
BZ15240	- Trench C, 3
BZ15241	- Trench C, 4
BZ15242	- Trench D, 0
BZ15243	- Trench D, 1
BZ15244	- Trench D, 2
BZ15245	- Trench D, 3
BZ15246	- Trench D, 4
BZ15247	- Trench D, 5
BZ15248	- Five foot chip sample in calc-silicate at granite contact.
BZ15249	- Five foot chip sample in calc-silicate at granite contact.
BZ15289	- Granitic rock.
BZ15291	- Scheelite bearing calc-silicate. High-graded.
BZ15294	- Pyrrhotite bearing calc-silicate. High-graded.
BZ15307	- Molybdenite bearing aplite dike. High-graded.
BZ15316	- Molybdenite bearing calc-silicate. High-graded.
BZ15317	- Pyrite, pyrrhotite, chalcopyrite(?) bearing granitic rock with molybdenite, quartz veinlets. High-graded.
BZ15402	- Pyrrhotite, chalcopyrite bearing dark green calc-silicate.
BZ15417	- Chloritically altered granitic gneiss.
BZ15420	- Calc-silicate.
BZ15438	- Pyrrhotite, chalcopyrite bearing calc-silicate. High-graded.
BZ15443	- Pyrrhotite bearing calc-silicate schist. High-graded.
BZ15449	- Two inch quartz vein cutting pyrite bearing actinolite schist. High-graded.
BZ15454	- Scheelite, powellite bearing calc-silicate. High-graded.
BZ15455	- Scheelite, powellite bearing calc-silicate. High-graded.
BZ15468	- Chalcopyrite(?), pyrrhotite bearing quartz biotite schist. High-graded.
BZ15481A	- Granitic rock with clay alteration cut by alaskite vein.
BZ15647	- Quartz porphyry.

Field descriptions of BZ rock samples - Continued

BZ15168	- Biotite muscovite granite.
BZ15172	- Molybdenite bearing pegmatite. High-graded.
BZ15173	- Scheelite, molybdenite bearing calc-silicate. High-graded.
BZ15176	- Granitic rock with quartz, molybdenite veins. High-graded.
BZ15177	- Granitic rock with quartz, molybdenite veins. High-graded.
BZ151808	- Two in. quartz vein cutting gray-green, hornblende, biotite, quartz porphyry. High-graded.
BZ15184	- Gossan with trace pyrrhotite and chalcoprite. High-graded.
BZ15190	- Granitic rock with quartz molybdenite veins. High-graded.
BZ15193	- Pyrrhotite bearing quartz biotite schist.
BZ15200	- Light green calc-silicate schist.
BZ15208	- Gray-green, hornblende, biotite, quartz porphyry with powellite, scheelite bearing quartz veinlets. High-graded.
BZ15209	- Gray-green hornblende biotite quartz porphyry.
BZ15234	- Trench B, 2 Chip samples collected from four trenches
BZ15235	- Trench B, 3 lettered A - D from west to east. Trenches
BZ15236	- Trench B, 4 cross tactite/calc-silicate zone at granite
BZ15237	- Trench B, 5 contact. Sample location in figure 15.
BZ15238	- Trench C, 1
BZ15239	- Trench C, 2
BZ15240	- Trench C, 3
BZ15241	- Trench C, 4
BZ15242	- Trench D, 0
BZ15243	- Trench D, 1
BZ15244	- Trench D, 2
BZ15245	- Trench D, 3
BZ15246	- Trench D, 4
BZ15247	- Trench D, 5
BZ15248	- Five ft chip sample in calc-silicate at granite contact.
BZ15249	- Five ft chip sample in calc-silicate at granite contact.
BZ15289	- Granitic rock.
BZ15291	- Scheelite bearing calc-silicate. High-graded.
BZ15294	- Pyrrhotite bearing calc-silicate. High-graded.
BZ15307	- Molybdenite bearing aplite dike. High-graded.
BZ15316	- Molybdenite bearing calc-silicate. High-graded.
BZ15317	- Pyrite, pyrrhotite, chalcopyrite(?) bearing granitic rock with molybdenite, quartz veinlets. High-graded.
BZ15402	- Pyrrhotite, chalcopyrite bearing dark green calc-silicate.
BZ15417	- Chloritically altered granitic gneiss.
BZ15420	- Calc-silicate.
BZ15438	- Pyrrhotite, chalcopyrite bearing calc-silicate. High-graded.
BZ15443	- Pyrrhotite bearing calc-silicate schist. High-graded.
BZ15449	- Two in. quartz vein cutting pyrite bearing actinolite schist. High-graded.
BZ15454	- Scheelite, powellite bearing calc-silicate. High-graded.
BZ15455	- Scheelite, powellite bearing calc-silicate. High-graded.
BZ15468	- Chalcopyrite(?), pyrrhotite bearing quartz biotite schist. High-graded.
BZ154814	- Granitic rock with clay alteration cut by alaskite vein.
BZ15647	- Quartz porphyry.

Field descriptions of BZ rock samples - Continued

BZ15655	- Garnet bearing muscovite, biotite granite.
BZ15656	- Biotite quartz monzonite.
BZ17105	- Scheelite pyrrhotite bearing calc-silicate. High-graded.
BZ17108	- Pyrrhotite bearing calc-silicate. High-graded.
BZ17144	- Trench B, sample taken 7 ft from south end. Tactite.
BZ17145	- Trench B, sample taken 10 ft from south end. Pyroxene calc-silicate.
BZ17146	- Trench B, sample taken 11-15 ft from south end. Garnet-pyroxene calc-silicate.
BZ17147	- Trench B, sample taken 15-20 ft from south end. Endoskarn and garnet-pyroxene calc-silicate.
BZ17148	- Trench D, sample taken 0-3 ft from south end. Biotite quartz monzonite.
BZ17149	- Trench D, sample taken 32 ft from south end. Tactite.
BZ17150	- Muscovite bearing pegmatite.
BZ17151	- Aplite dike, scheelite on fractures. High-graded.

[1] Analyses of these rock samples are found in appendixes B and/or G.
[2] All samples are grab samples unless indicated chip sample.

APPENDIX I. - Major oxide analyses [1] [2] (wt %) and rock type

Major oxide analyses

Sample no.	SiO_2	Al_2O_3	Fe_2O_3	FeO	CaO	MgO	Na_2O	K_2O	TiO_2	MnO	P_2O_5	BaO	LOI[3]	Total
11422A	78.74	06.13	4.02	1.20	04.49	2.40	0.45	00.85	0.35	0.04	0.03	0.04	1.31	98.84
11422B	48.87	11.64	5.56	3.36	25.54	4.24	0.70	0.89	0.54	0.09	0.07	0.04	1.17	99.36
11457	49.09	17.09	9.86	6.24	12.83	5.43	1.86	0.21	1.15	0.16	0.18	0.00	0.84	98.50
15078	56.05	14.96	6.82	2.28	7.86	3.23	2.54	2.13	1.64	0.08	0.27	0.01	2.90	98.48
15087	69.98	14.92	2.79	1.32	2.89	0.58	3.64	3.68	0.39	0.06	0.09	0.13	0.46	99.60
15122	62.96	17.32	0.45	0.36	1.19	0.29	1.99	12.99	0.09	0.02	0.08	0.48	1.35	99.21
15156D	70.63	14.33	1.79	0.96	2.35	0.75	3.55	3.72	0.28	0.04	0.07	0.16	0.64	98.31
15162A	66.96	15.78	3.65	2.04	3.89	1.28	3.45	1.95	0.46	0.05	0.12	0.11	0.76	98.47
15220A	59.60	16.57	6.96	4.32	5.11	2.79	1.49	2.86	0.84	0.11	0.19	0.08	1.43	98.03
15220B	50.50	10.87	4.97	3.12	17.98	7.85	1.32	2.92	0.56	0.09	0.11	0.13	2.21	99.50
15446	73.58	13.64	1.28	0.72	0.89	0.25	3.99	4.63	0.11	0.03	0.07	0.02	0.55	99.04
15647	68.33	14.13	2.39	1.08	2.71	0.91	3.55	3.63	0.35	0.04	0.09	0.11	1.68	97.91

Rock type

11422A - pyroxene calc-silicate schist
11422B - garnet, pyroxene calc-silicate schist
11457 - feldspar, quartz, actinolite schist
15078 - pyroxene calc-silicate schist
15087 - medium-grained, biotite quartz monzonite
15122 - medium-grained, quartz, K-feldspar dike
15156D - dacite porphyry dike
15162A - dark gray, clay altered, plagioclase porphyry dike
15220A - feldspar, biotite, quartz schist
15220B - garnet, pyroxene calc-silicate schist
15446 - medium-grained, garnet bearing, muscovite, biotite granite
15647 - dacite porphyry dike

[1] Sample locations shown in figure 14
[2] Analyzed by Technical Service Laboratories, 1301 Fewster Dr., Mississauga, Ontario, Canada L4W 1AZ
[3] Loss on ignition