UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

# Geochemical Results for Samples of Ore and Altered Hostrocks, Blackbird Mining District, Lemhi County, Idaho

By

Nash, J. Thomas,* Briggs, Paul,*

Bartel, Ardith J.,* and Brandt, Elaine L.*

Open-File Report 88-661



*U.S. Geological Survey, Box 25046, MS 973, Federal Center, Denver, CO 80225

CONTENTS



ILLUSTRATIONS



TABLES

# INTRODUCTION

The Blackbird mining district contains the largest marginal reserves of cobalt in the United States. Historically, these reserves have been explored and mined with Government subsidies during times of war, and could be brought back into production in future times of strategic need or if mineral economics change. Geologic and geochemical studies in the Blackbird area by the U.S. Geological Survey are designed to contribute to the understanding of the geologic setting and conditions of formation of the cobalt deposits for more effective exploration and resource assessment.

The Blackbird mining district is located in the Salmon River Mountains of Lemhi County, Idaho, about 35 km west of Salmon (fig. 1). The area is characterized by steep-walled canyons and heavy conifer forest. The very small amount of outcrop in the area hampers geologic study. Most exposures are soil or rock glaciers that do not permit reliable mapping or sampling.

The Blackbird area was first prospected for gold in 1893, and cobalt was discovered in 1901. There was little demand for cobalt until World War I; from 1917 to 1920 deposits recognized earlier were mined for about 9 tonnes of cobalt (Vhay, 1948). A deposit at the south end of what would become the Blackbird mine complex was mined for Cu-Ag-Au from 1938 to 1940; Co in that ore drew a penalty. Military needs for cobalt during World War II justified the participation of the U.S. Geological Survey and U.S. Bureau of Mines with the Calera Mining Co. in an extensive exploration program that outlined several new cobalt deposits (Vhay, 1948). An underground mine complex was developed and a mill was erected nearby to make cobalt and copper concentrates. Production from the Blackbird mine, chiefly from 1951 to 1959, was about 6,350 tonnes Co from ores that averaged about 0.6 percent Co and 1.5 percent Cu. Operations ceased in 1960 with the loss of a government contract for cobalt, decreased copper prices, and competition from foreign cobalt suppliers.

From 1978 to 1982 Noranda Exploration Inc. reevaluated the district for additional reserves to support a new mine-mill complex. Many Co-Cu prospects were known in the mine area from the 1950's, including some with favorable drill intercepts. The size of the prospects had been underestimated because of incorrect geologic interpretations that ore was emplaced in post-metamorphic shear zones. Noranda geologists recognized that the ores are stratabound in character and are associated with mafic volcaniclastic strata (Hughes, 1983; Hahn and Hughes, 1984). The Noranda exploration program defined 5.0 million tonnes mining reserves and 7.3 million tonnes indicated reserves, and located many new prospective lodes (Nash and Hahn, 1986). The exploration program was effective, but economic conditions in the 1980's have prevented mine development.

This report presents analytical results for 372 samples mostly from drill core and collected by Nash in a program designed to describe the geochemical character of several types of ores and alteration in the Blackbird area. These studies build upon the geologic studies made by Noranda Exploration and amplify some of their rock descriptions. These analytical results have been cited in recent publications (Nash and Hahn, 1986; Nash and Hahn, 1987; Nash and others, 1987). An additional 40 samples were collected from outcrops near the mine to investigate the composition of mafic rocks outside the deposits and to determine the composition of specific rock layers rich in chloritoid or garnet.

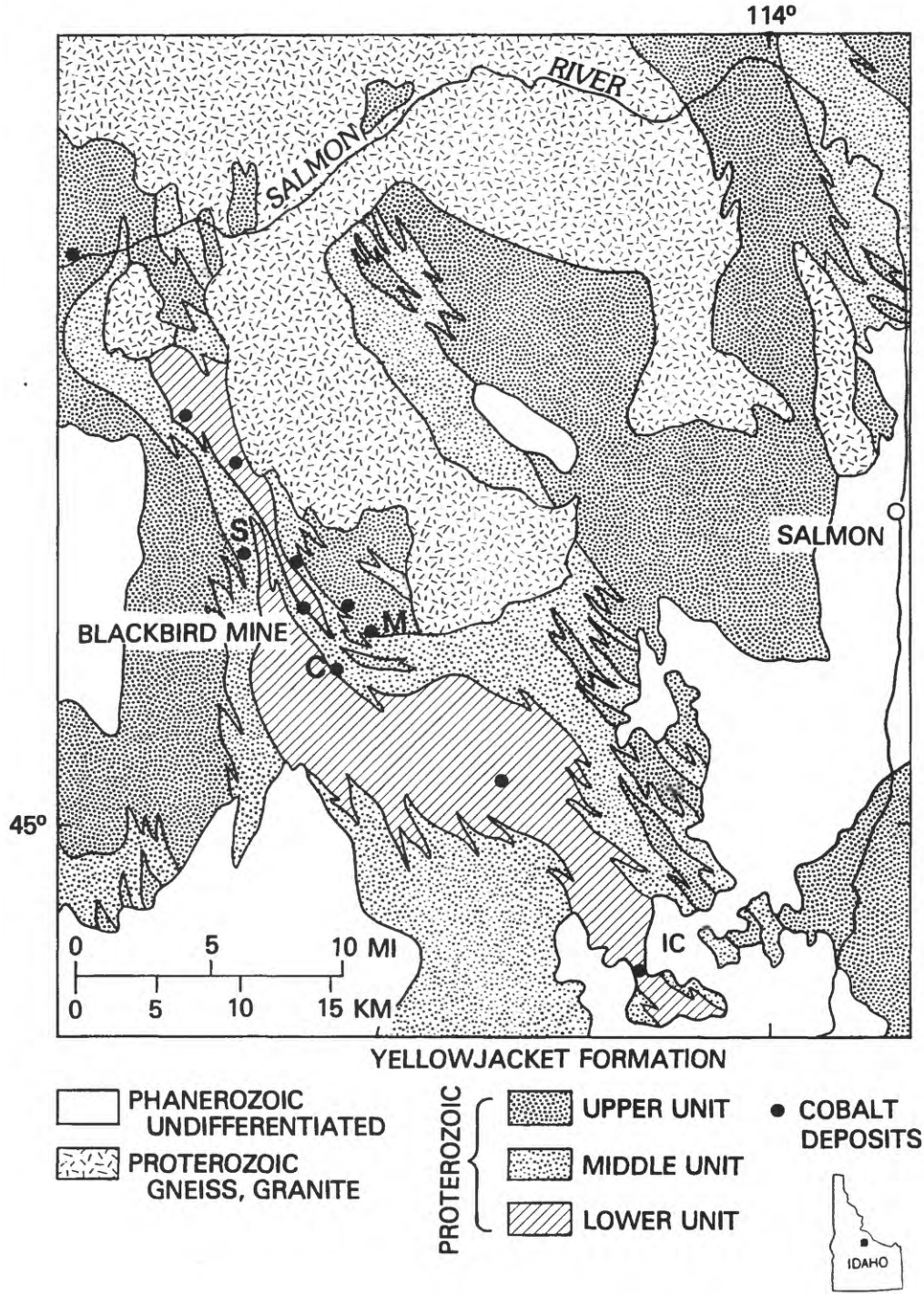


Figure 1. Location and generalized geology of the Idaho Cobalt Belt, Lemhi County, Idaho. Cobalt deposits sampled in this study: C, Conicu; IC, Iron Creek; M, Merle; S, Sunshine

## GEOLOGIC SETTING

Cobalt-copper deposits of the Blackbird district occur in clastic rocks of the Middle Proterozoic Yellowjacket Formation that probably formed in a rift basin. The deposits are stratabound within distinctive fine-grained clastic and volcaniclastic rocks that comprise only a small part of the Yellowjacket Formation (Hughes, 1983; Nash and Hahn, 1986). The area underwent several periods of metamorphism and deformation in the Precambrian, and rocks of the region were thrust eastward during Paleozoic and Cretaceous orogenies, then cut by Cenozoic normal faults. Regional greenschist metamorphism occurred prior to contact metamorphism associated with 1,370 Ma granitic plutons (Evans and Zartman, 1981).

The Yellowjacket Formation in east-central Idaho is the oldest sedimentary unit in a Proterozoic section that is at least 15,000 m thick. Regionally, and in the mine area, three lithostratigraphic units can be distinguished (Hughes, 1983; Connor and others, 1985) (fig. 1). The lower unit, more than 3,000 m thick, is predominantly grey-green argillite and siltite with lesser amounts of fine-grained quartzite and impure carbonate. Sedimentary features suggest deposition in a deep marine basin by turbidity currents as basin-plain and distal turbidite deposits. The upper part of the lower unit contains some coarser clastic rocks (fine-grained quartzite). No Co-Cu deposits of the Blackbird type occur in the lower unit.

The middle unit, about 1,200 m thick, is the host for the largest Co-Cu deposits of the Idaho Cobalt Belt (Hughes, 1983; fig. 1). The middle or B unit of Hughes (1983) is a complex of coarsening upward cycles of argillite, siltite, and fine-grained quartzite, and contains distinctive interbeds of biotite-rich rock. Zircon from mafic beds in the middle unit yielded apparent U-Pb ages of about 1,670-1,700 Ma (Hahn and Hughes, 1984); these ages should be considered maximum ages because of possible inherited radiogenic lead (K.V. Evans, written commun., 1986). Sedimentary structures are abundant in this unit and include graded beds, silt-sand couplets, flute casts, load structures, slumped beds, and sand dikelets. These clastics were probably deposited in a submarine fan complex.

Layered biotite-rich rocks are common in the middle unit (fig. 2). Individual mafic beds are 1 to 20 cm thick and tend to occur in packages about 2 to 10 m thick comprised of mafic volcaniclastic strata and interbedded siltite and quartzite. Details of continuity on strike are not well known because of poor outcrop, but most mafic packages can be correlated between drillholes 100 m apart. Multiple packages of mafic rocks, which we term a "sequence," are 10 to 200 m thick and are useful for district-scale mapping (fig. 2). Mafic beds tend to be massive or faintly laminated and generally are not foliated. Depending upon metamorphic grade they are comprised chiefly of biotite or biotite-garnet +/- chloritoid. Beds up to 10 cm thick of granular quartz or fine tourmaline are associated with the mafic rocks; the lack of clastic textures in thin sections indicate these are chemical sediments (exhalite). Biotite-rich argillites resemble mafic rocks but have finer, "shreddy" metamorphic biotite, more clastic quartz grains and layers, and graded bedding.

The upper unit of the Yellowjacket in the mine area is more than 1,000 m thick and is mostly quartzite with thick beds having planar laminations. Interbeds of fine clastic rocks are rare and there are very few mafic beds. Cross-beds and ripples are the most common sedimentary structures. Sedimentation probably was in a mid-fan or shallow marine shelf, although some hummocky beds probably reflect shallow-water wave action. No subaerial or intertidal environments are recognized in the mine area.

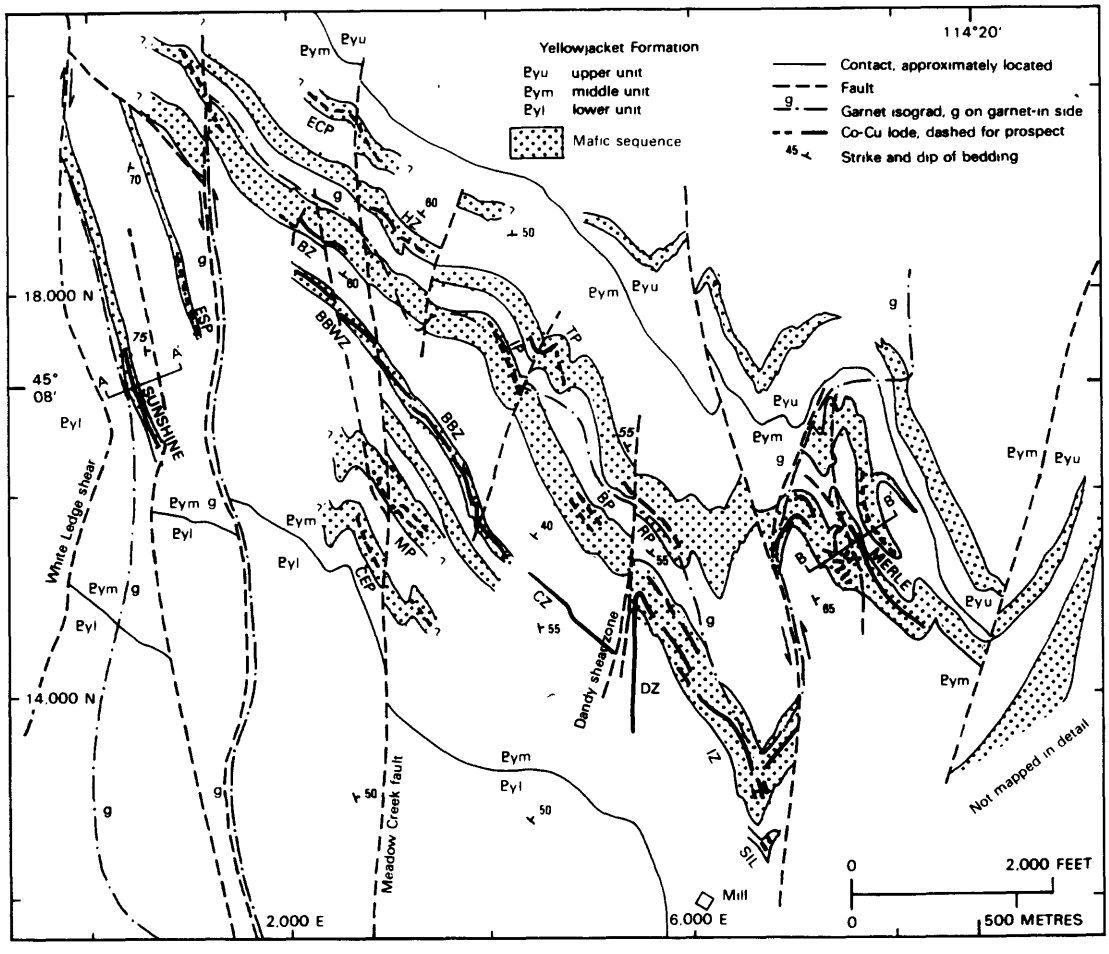


Figure 2. Generalized geology of the Blackbird mine area showing the location of Co-Cu deposits and prospects (generalized from unpublished mapping by Noranda Exploration, Inc., 1982). The Blackbird underground mine developed ore from a series of deposits spanning about 2.3 km from the Idaho Zone to the Blacktail zone. Abbreviations: BZ, Blacktail zone; BBZ, Brown Bear zone; BBWZ, Brown Bear west zone; BP, Buckeye prospect; CZ, Chicago zone; CP, Chelan prospect; CEP, Catherine-Ella prospect; DZ, Dandy zone; ECP, East Chelan prospect; ESP, East Sunshine prospect; HZ, Horseshoe zone; IZ, Idaho zone; IP, Iowa prospect; MP, Mushroom prospect; RP, Ridgetop prospect; SIL, South Idaho lode; TP, Toronto prospect

Metamorphosed mafic dikes and sills of several types intrude the Yellowjacket Formation. Although these rocks rarely crop out, they are common in float and in drillcore and mine workings where they are seen to be 1 to 30 m thick. Most dikes are dark green to black with faintly porphyritic texture. Metamorphic minerals are biotite, zoisite, plagioclase, siderite, and minor quartz. Other dikes are grey with equal amounts of metamorphic plagioclase and mafic silicate minerals. A few diatremes, intersected in drillholes, contain fragments of ultramafic rocks, gabbro, and carbonate rock composed of coarse-grained calcite; the carbonate fragments may represent carbonatite because no clean limestone is known in the basement. Mafic volcaniclastic rocks of the middle unit are most abundant in areas having mafic dikes and are chemically similar to the mafic dikes, as described in a later section; the mafic intrusions are believed to have vented into the Yellowjacket basin.

Proterozoic granitic rocks intrude the Yellowjacket about 3 km north and east of the Blackbird mine (fig. 1). The granitic rocks generally have large K-feldspar phenocrysts and some have gneissic fabric. Samples from various phases of the large body yield discordant Rb/Sr ages of about 1,500 Ma (Armstrong, 1975) and zircons yield a more reliable U-Th-Pb age of 1,370 Ma (Evans and Zartman, 1981). Metamorphic grade increases toward the intrusive body, reaching a maximum grade of hornblende-cordierite-sillimanite in the contact zone.

Tertiary volcanic rocks of the Challis volcanic field cap some ridges about 5 km from the mine. Tertiary mafic and felsic dikes fill some fault zones and intrude the Yellowjacket in the mine.

The dominant structural features of the area are north to northwest-striking faults and shear zones. One of the largest of these, the White Ledge, appears to have substantial strike-slip movement and marks the western limit of mafic strata in the mine area (fig. 2). The garnet isograd is influenced by some of the north-trending faults, indicating post-metamorphic vertical displacement. Parts of some deposits, such as the Chicago and Brown Bear zones (fig. 2), are in sheared rocks; this association led early workers (e.g. Vhay, 1948) to conclude that the ores formed as shear-zone replacements. However, new mine mapping and drillcore logging reveal that ore layers continue on strike into unfoliated rocks. Local occurrences of ore minerals, chiefly chalcopyrite, in shear foliation, hinges of small folds, or in bull quartz veins are now interpreted to reflect metamorphic remobilization. Folds of many types and scales are present. Folds are most evident near the Merle and Idaho zones (fig. 2); beds are locally overturned in the Idaho zone. Some tight folds are near north-trending shears and seem to be produced by drag. Other folds are associated with areas of soft-sediment deformation and are interpreted to be slump folds.

Three types of Co-Cu deposits are recognized in the Idaho Cobalt Belt (fig. 1). (1) The most important deposits are those of Blackbird mine type that are rich in Co, Cu, and As. These consist of approximately equal amounts of cobalt and copper minerals, generally cobaltite (CoAsS) and chalcopyrite, with variable gold and pyrite content. The deposits have tabular form and are closely associated with mafic sequences. These deposits and prospects are shown on figure 2. Most of the results reported here are for samples from these deposits. (2) Cobaltiferous-pyrite deposits, with variable chalcopyrite content, occur at Iron Creek about 28 km southeast of the Blackbird mine (fig. 1). These deposits contain abundant very fine to coarse-grained pyrite. Bedded magnetite occurs below the Co-pyrite zones. Results are reported for 41 samples from the Iron Creek deposits. (3) Cobaltite-bearing,

tourmaline-cemented breccias are common in the lower unit of the Yellowjacket Formation for many kilometers south and east of the Blackbird mine. Only a few contain more than 0.1 percent Co. Results for a limited suite of samples from one deposit, the Conicu, are reported here

A unifying feature in more than a dozen Co-Cu deposits in the Blackbird mine area is the intimate association with mafic sequences (fig. 2). Some of the sequences contain several Co-Cu lodes along strike, and some contain as many as eight stacked lodes, each in a mafic package (Nash and Hahn, 1986). The mafic sequences are time-stratigraphic markers, and the Co-Cu deposits along strike in a mafic sequence are probably time equivalents. Many of the samples selected for analysis (table 2) are these mafic rocks because of their economic importance and also their geochemical rarity.

## SAMPLING STRATEGY

All samples analyzed in this study are from drill holes because no mine workings were accessible. Oxidized and weathered materials were avoided in an effort to minimize the effects of surficial processes. The deposits studied have tabular geometry with ore in "layers" that are conformable with bedding of the enclosing sedimentary rocks (Nash and Hahn, 1986). An example of an ore layer is shown in figure 3. A goal of the study is to describe the geochemical and mineral zonation (if present) above, below, and within ore layers. To that end, one or two samples were typically taken in ore, and one or two samples from the hangingwall and footwall zones of each drill hole. Assays provided by Noranda Exploration Inc. were one guide to ore, as was the mineralogy of ores and alteration. Experience by Noranda and by Nash showed that the abundance of ore and alteration minerals decreases abruptly at the margins of the ore "layers" which are much darker in color than enclosing strata due to abundant biotite. Hangingwall and footwall core samples generally were taken from an interval of about 12 to 48 inches from the darker ore layer, as well as from another location several feet away from the ore layer. Most samples are a composite one-quarter portion of drill core 12 to 24 inches long if sufficient material was available. In many ore intercepts there was very little core remaining, and for these locations a split was taken of the core that had been crushed for assay. A slice was retained for petrographic study of most samples. A total of 332 samples was collected in this manner.

The Sunshine and Merle deposits were examined in most detail because they are most representative of the most significant Co-Cu ores of the district (Nash and Hahn, 1986). The Sunshine deposit is more than 1,800 feet long; the south end is cut off by a fault and the north end is open down plunge. Twenty-two drill holes that intersected the Sunshine deposit were sampled; most of the holes were drilled as "fans" to provide more than one ore intercept (fig. 3), thus our samples describe possible variation across the ore layer as well as along its strike. A total of 129 samples from the Sunshine deposit were collected. The Merle deposit contains multiple ore layers (fig. 4; Nash and Hahn, 1986) up to 13.4 feet thick and at least 1,600 feet long. Most of the sampling was directed at the Merle "B" layer, the largest of eight. Nash collected 144 samples from 17 of the 23 Noranda drill holes that intersected mineralization in the Merle deposit. Four samples from the Horseshoe prospect are described in table 2; these samples should be similar to those from the Sunshine deposit except that metamorphic grade is lower. Four samples from the South Idaho deposit (table 2) are geologically similar to samples from the Merle deposit.

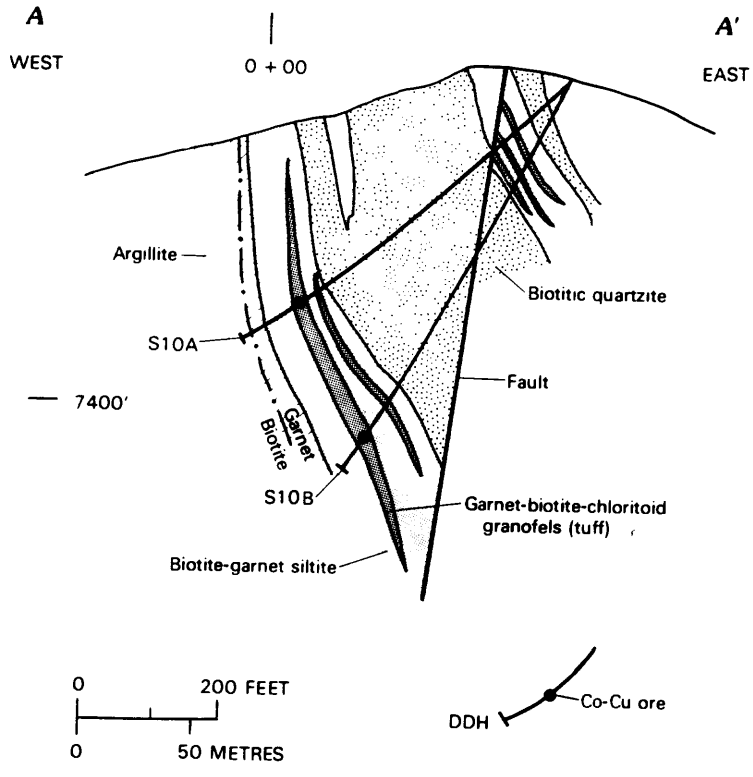


Figure 3. Geologic cross section of the Sunshine deposit. Samples were typically taken above, below, and in the ore layer. Samples from adjacent drill holes in the "fan" array (holes 10A and 10B in this section) provide information on lateral changes in composition

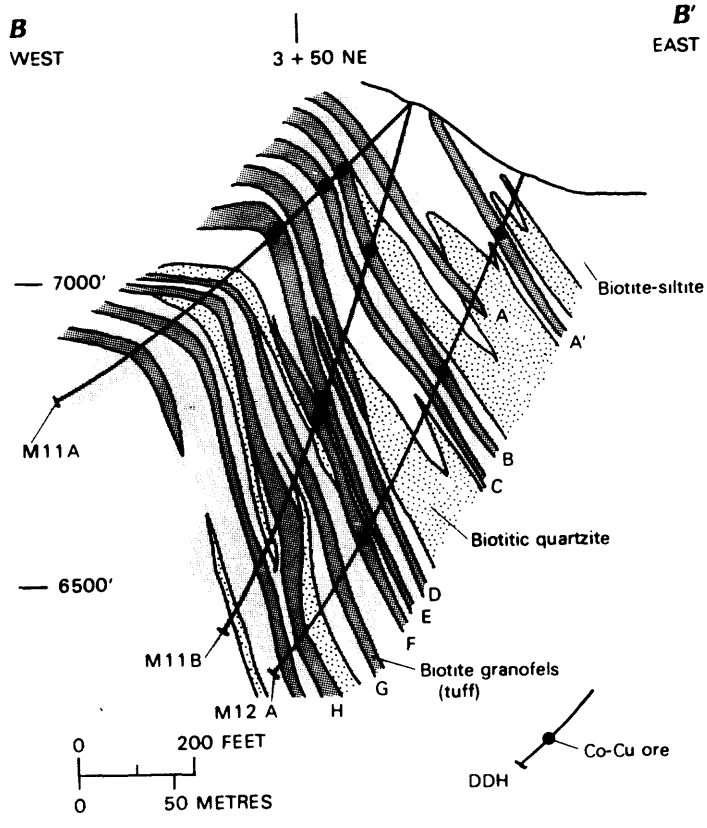


Figure 4. Geologic cross section of the Merle deposit showing multiple ore layers. The "B" layer was sampled most extensively in this study.

Ten samples (coded C in table 2) from the Conicu deposit (Nash and Hahn, 1986) are characterized by abundant flooding by fine-grained tourmaline. Two samples contain fragments of carbonate and ultramafic rocks, possibly emplaced by an explosive eruption. Also, 41 samples (coded IC in table 2) were collected from the No-Name deposit at Iron Creek where cobalt occurs as cobaltiferous pyrite. Outcrop samples (prefix NIC, table 2) were collected near the Blacktail open pit and on Sunshine ridge to investigate bulk chemical differences that produce layers rich in chloritoid or garnet. Also, outcrop samples were collected near the Tinker's pride prospect, 6 km north of the mine, to investigate the character of mafic biotite-rich rocks that are well exposed.

## METHODS FOR GEOCHEMICAL ANALYSIS

Rock samples were analyzed by chemists of the U.S. Geological Survey using standard methods described below. For more information consult the references cited.

**Sample preparation:** All samples were crushed in a steel jaw crusher and pulverized in a grinder with ceramic plates to a minus 100 mesh (0.15 mm) grain size for analysis.

**X-Ray fluorescence (XRF):** A split of the sample weighing 0.8 g is fused with 8.0 g lithium tetraborate, and the glass disk obtained is analyzed for major elements by wavelength dispersive X-Ray spectrometry (Taggart and others, 1988). The XRF method can not distinguish between ferric and ferrous iron; results for total iron are reported as ferric iron ("$FeTO_3$" in table 2). Limits of detection are shown in table 1. J.E. Taggart and A.J. Bartel, analysts.

Two unusual aspects of these samples posed problems for the XRF method. First, samples containing more than about 28 percent iron (as $Fe_2O_3$) cause the detector measuring iron in the spectrometer to experience "dead time", caused when so many characteristic X-Rays enter the detector that it fails to record all events (counts). Also, samples containing more than about 0.2 percent As could not be analyzed because the As would damage the platinum crucible during ignition and fusion. Samples with high Fe or As concentration have no values (--) reported in table 2. Some samples with high concentrations of Cu or Ni were problems if those elements caused the fused glass disk to stick to the platinum crucible, making it difficult or impossible to obtain a good disk for analysis.

**Induction Coupled Plasma Atomic Emission Spectroscopy (ICP):** A split of the sample weighing about 0.2 g is digested with mixed acids (HF, $HCl$-$HNO_3$, $HClO_4$) to dryness, then redissolved in $HCl$-$HNO_3$, then analyzed by inductively coupled plasma atomic emission spectroscopy with lutetium as an internal standard (Lichte and others, 1988). The lower limits of detection are shown in table 1. A few refractory minerals are not dissolved by this acid attack. For the analysis of B in tourmaline and Zr in zircon, the sample is sintered with $Na_2O_2$ prior to ICP analysis. Paul Briggs analyst.

The wide dynamic range of the ICP-AES method permitted successful analysis of both the ore and barren wall rock samples in this study. The normal method of total sample dissolution in mixed acids seems to work well for most elements, but problems are suspected for some elements like Sn and Nb that reside in refractory oxide minerals. B and Zr in tourmaline and zircon were effectively dissolved after sintering in $Na_2O_2$. High concentrations of Fe, Co, and Cu in many of these ore samples probably caused spectral interference with the

**Special Element Analysis:** Six additional elements are analyzed using methods described by Jackson and others (1988). L.L. Jackson and E.E. Engleman, and D.B. Hatfield, and E. Brandt, analysts.

**Fe as FeO:** Sample (0.5 g.) is decomposed with HF and $H_2SO_4$ in a platinum crucible and the digestate is immersed in a solution of boric, sulfuric, and phosphoric acids. Fe(II) is determined by potentiometric titration with potassium dichromate.

Sulfide minerals are known to complicate analyses by this technique and cause results to be incorrectly high or low. If the sulfide mineral dissolves, then the S reacts in titration to produce high results for FeO; if the sulfide does not dissolve, any iron in the sulfide is not detected in the titration. There possibly are large errors in the FeO results for samples with high sulfide concentrations.

**$H_2O$:** Sample (1.0 g) is heated at $110^o$ for 1 hour, and H2O- is determined by weight loss. H2O+ determined on 0.05 g. sample heated with lead oxide and lead chromate with evolved water analyzed by coulometric Karl Fischer titration.

**C total:** Sample (0.75 g) is combusted in an oxygen atmosphere; total C is determined as $CO_2$ by infrared absorption spectrometry.

**S total:** Sample (0.25 g) mixed with vanadium pentoxide and combusted at $1370^o$ C in oxygenated atmosphere; total S determined at $SO_2$ by infrared absorption spectroscopy.

**Au:** Sample (10 g) is digested with HBr-$Br_2$ and the Au is extracted with methyl-isobutyl ketone (Hubbert and Chao, 1985). After washing the organic phase with 0.1M HBr to remove iron, Au is determined by flame atomic absorption spectroscopy.

**Se:** Sample (0.3 g) is digested with $K_2S_2O_8$, HF, $HNO_3$, and $HCLO_4$ plus a second treatment by $HNO_3$ and $HCLO_4$ plus $H_2SO_4$. Solution is mixed with sodium borohydride and resultant metal hydride is carried in an argon stream into a heated quartz glass tube and determined by atomic absorption spectroscopy (Wilson and others, 1988).

The high As concentrations in many of these samples interfere with the determination of the much lower concentrations of Se by competing for hydride. Some Se results may be substantially lower than the amount present; where problems were recognized during analysis no results (--) are reported in table 2.

## RESULTS

Analytical results for 372 samples are in table 2. A statistical summary of the ranges in element concentrations in analyzed samples of ore and enclosing wall rocks is in table 3. Arithmetic mean values reported in table 3 are approximate and do not include qualified results (less than or greater than values) that would influence the mean.

**Table 1. Lower Limits of Determination in Geochemical Analyses**

Major elements[1] in weight percent

| | | | |
|---|---|---|---|
| $SiO_2$ | 0.05 | $TiO_2$ | 0.02 |
| $Al_2O_3$ | 0.10 | $P_2O_5$ | 0.05 |
| $FeTO_3$[2] | 0.04 | MnO | 0.02 |
| FeO | 0.01 | H2O+ | 0.01 |
| MgO | 0.10 | H2O- | 0.01 |
| CaO | 0.05 | $CO_2$ | 0.01 |
| $Na_2O$ | 0.15 | S tot | 0.01 |
| $K_2O$ | 0.02 | | |
| Al (S)[1] | 0.05 | Na (S) | 0.005 |
| Fe (S) | 0.05 | K (S) | 0.05 |
| Mg (S) | 0.005 | Ti (S) | 0.005 |
| Ca (S) | 0.05 | P (S) | 0.005 |

Minor Elements in parts per million

| | | | |
|---|---|---|---|
| Ag | 2 | Mn | 4 |
| As | 10 | Mo | 2 |
| Au | 0.05 | Nb | 4 |
| B | 20 | | |
| Ba | 1 | Nd | 4 |
| Be | 1 | Ni | 2 |
| Bi | 10 | Pb | 4 |
| Cd | 2 | Sc | 2 |
| Ce | 4 | Se | 0.01 |
| Co | 1 | Sn | 10 |
| Cr | 1 | Sr | 2 |
| Cu | 1 | Ta | 40 |
| Eu | 2 | Th | 4 |
| Ga | 4 | U | 100 |
| | | V | 2 |
| Ho | 4 | Y | 2 |
| La | 2 | Yb | 1 |
| Li | 2 | Zn | 2 |
| | | Zr | 8 |

---

[1]Major elements reported as oxides (e.g., $SiO_2$) determined by X-Ray fluorescence; those with "(S)", determined by induction coupled plasma atomic emission spectrometry.

[2]$FeTO_3$ is total iron reported as $Fe_2O_3$.

## Explanation of Table 2

The number of figures reported in table 2, such as for

Ca %-s and K %-s, are not necessarily significant but are a result of the computer listing format.

Abbreviations used in table 2:

| | |
|---|---|
| --- | No data or not determined. |
| < | Less than value shown. |
| > | Greater than value shown. |
| S | as in Ag PPM-S, determined by ICP-AES |
| N, L | for Au only: N, not detected; L, detected but below the limit of determination (0.05 ppm). |

$FeTO_3$, total iron reported as ferric iron ($Fe_2O_3$)

Explanation of sample numbers: the number is derived from the diamond drill hole coding. The first letter or two stand for the deposit: C, Conicu; HO, Horseshoe; IC, Iron Creek (No-name prospect); M, Merle; S, Sunshine; SI, South Idaho; NIC, surface samples. The next digits are the number of the drill hole as designated by Noranda Exploration. The final digits are the depth in the drill hole in feet.

Explanation of geologic and engineering coding (last eight columns in table 2):
Feet north: coordinate in an informal local grid system, in feet. Should be used in a relative sense for samples from the same deposit.

Feet east: coordinate in an informal local grid system, in feet. Should be used in a relative sense for samples from the same deposit.

Elev Ft: sample elevation, above sea level, in feet.

Rel Ft: location of the sample relative to ore. The ore zone is 0 feet, footwall samples are negative numbers, and hangingwall samples are positive numbers measured perpendicular to the ore (not along the drill hole).

Lithol: lithology of sample: all samples contain biotite, and most samples from Sunshine deposit contain garnet. Codes-- 10, argillite; 20, siltite; 30, fine quartzite; 40, biotite-rich mafic rock, conformable with enclosing sedimentary layers (probably a sedimentary volcaniclastic rock); 50, very rich in mafic components (>80 percent mafic volcaniclastic); 60, 70, 80, not used; 90, mafic dike. Second digit describes major mineralogy: 0, biotite; 1, garnet; 2, tourmaline; 3, hydrothermal quartz.

Fabric: fabric and structure of sample: first digit: 1 (tens), thinly laminated; 2, medium to thickly laminated bedding; 3, massive or not obviously laminated (describes both originally nonbedded fabric, such as in a dike, or a sediment that has lost its bedding); second digit: 1, contains notable primary sedimentary structures; 2, contains epigenetic disruption structures; 3, contains fractures and veinlets; 4, contains disruption structures and veinlets.

Oretyp: Type of ore: 10, cobaltite dominant; 20, chalcopyrite dominant; 30, cobaltite plus chalcopyrite; 40, pyrite only; 50, other varieties of ore; 60, barren or very low grade hangingwall; 70 barren or very low grade footwall; 80, barren, other location not obviously spatially related to ore; modifier: 1, contains magnetite; 2, contains more than 5 percent pyrite; 3, contains magnetite and pyrite.

Lode: Name of deposit: 1, Iron Creek (No-name deposit); 2, Conicu; 3, Sunshine; 4, Merle layer A; 5, Merle layer B; 6, Merle layers C to H.

**NOTE:** Five elements were determined by ICP-AES but not reported in table 2 because no samples contained detectable amounts. All determinations of Au by ICP were < 8ppm; all determination of Cd were < 2 ppm; all determinations of Sn were < 20 ppm; all determinations of Ta were < 40 ppm; and all determinations of U were < 100 ppm. Ho was determined by ICP-AES and not reported in table 2 because the majority of determinations were < 4 ppm; 21 samples contained 4 to 11 ppm Ho, one had 22 ppm and one had 31 ppm. Tungsten can be determined by ICP-AES but was not included in this analytical package, thus we have no data to report.

## REFERENCES CITED


Armstrong, R.L., 1975, Precambrian (1,500 m.y. old) rocks of central Idaho--the Salmon River Arch and its role in Cordilleran sedimentation and tectonics: American Journal of Sciences, v. 275-A, p. 437-467.

Connor, J.J., Evans, K.V., and Johnson, S.Y., 1985, Stratigraphy of the Yellowjacket Formation (Middle Proterozoic), Eastern Salmon River Mountains, Idaho: Geological Society of America, Abstracts with Programs, v. 17, no. 4, p. 213.

Evans, K.V., and Zartman, R.E., 1981, U-Th-Pb geochronology of Proterozoic granitic intrusions in the Salmon area, east central Idaho: Geological Society of America, Abstracts with Programs, v. 13, p. 195.

Hahn, G.A., and Hughes, G.J., Jr., 1984, Sedimentation, tectonism, and associated magmatism of the Yellowjacket Formation in the Idaho Cobalt Belt, Lemhi County, Idaho, in Hobbs, S.W., ed., The Belt, Abstracts with Summaries, Belt Symposium II, 1983: Montana Bureau of Mines and Geology, Special Publication 90, p. 65-67.

Hubbert, A.E., and Chao, T.T., 1985, Determination of gold, indium, tellurium, and thallium in the same sample digestion of geological materials by atomic absorption spectroscopy and two-step solvent extraction: Talanta, v. 32, p. 568-570.

Hughes, G.J., Jr., 1983, Basinal setting of the Idaho Cobalt Belt, Blackbird mining district, Lemhi County, Idaho, in The Genesis of Rocky Mountain Ore Deposits--Changes with time and tectonics: Denver Region Exploration Geologists Society, p. 21-27.

Jackson, L.L., Brown, F.W., and Neil, S.T., 1988, Major and minor elements requiring individual determinations, classical whole rock analysis and rapid rock analysis, in, Baedecker, ed., Methods for geochemical analysis: U.S. Geological Survey Bulletin 1770, p. G1-G23.

Lichte, F.E., Golightly, D.W., and Lamothe, P.J., 1987, Inductively coupled plasma-atomic emission spectrometry, in Baedecker, P.A., ed., Methods for Geochemical Analysis: U.S. Geological Survey Bulletin 1770, p. B1-B10.

Nash, J.T., and Hahn, G.A., 1986, Volcanogenic Character of Sediment-hosted Co-Cu Deposits in the Blackbird Mining District, Lemhi County--an Interim Report: U.S. Geological Survey Open-File Report 86-430, 29 p.

Nash, J.T., and Hahn, G.A., 1987, New Geochemical Guides to Au-rich Lodes in the Blackbird Mining District, Lemhi County, Idaho, in USGS Research on Mineral Resources--1987, J.S. Sachs ed: U.S. Geological Survey Circular 995, p. 51-52.

Nash, J.T., Hahn, G.A., and Saunders, J.A., 1987, The occurrence of gold in siliceous Co-Cu exhalite deposits of the Blackbird Mining District, Lemhi County, Idaho: U.S. Geological Survey Open-File Report 87-410, 14p.

Taggart, J.E.,Jr., Lindsay, J.R., Scott, B.A., Vivit, D.V., Bartel, A.J., and Stewart, K.C., 1988, Analysis of geological materials by wave-length dispersive X-Ray fluorescence spectroscopy, in Baedecker, ed., Methods for Geochemical Analysis: U.S. Geological Survey Bulletin 1770, p. E1-E19.

Wilson, S.A., Kane, J.S., Crock, J.G., and Hatfield, D.B., 1988, Chemical methods of separation for optical emission, atomic absorption, and colorimetry, in Baedecker, ed., Methods for Geochemical Analysis: U.S. Geological Survey Bulletin 1770, p. D1-D14.

Vhay, J.S., 1948, Cobalt-copper deposits in the Blackbird district, Lemhi County, Idaho: U.S. Geological Survey Strategic Minerals Investigations Preliminary Report 3-219, 26 p.

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho

[N, not detected; <, detected but below the limit of determination shown; >, determined to be greater than the value shown.]

| Sample | SiO2 % | Al2O3 % | FeTO3 % | FeO % | MgO % | CaO % | Na2O % | K2O % | TiO2 % | P2O5 % |
|---|---|---|---|---|---|---|---|---|---|---|
| C2A-0298 | 68.7 | 13.50 | 6.79 | 5.28 | 1.22 | .17 | 2.30 | 4.42 | .55 | .11 |
| C2A-0310 | 65.8 | 14.90 | 8.16 | -- | 1.49 | .15 | 1.53 | 5.18 | .58 | .13 |
| C2A-0320 | 61.4 | 16.40 | 10.20 | -- | 1.71 | .15 | 1.25 | 5.85 | .65 | .12 |
| C2A-0341 | 67.0 | 14.70 | 8.61 | 6.29 | .98 | .07 | .49 | 5.13 | .53 | .07 |
| C2A-0362 | 63.3 | 15.70 | 10.10 | -- | 1.72 | .09 | .61 | 5.45 | .48 | .08 |
| C3B-0289 | 62.3 | 15.20 | 10.40 | -- | 1.37 | .14 | 1.92 | 5.49 | .73 | .12 |
| C3B-0300 | 69.4 | 13.40 | 6.73 | -- | 1.23 | .23 | .28 | 5.13 | .45 | .08 |
| C3B-0410 | 37.8 | 7.01 | 8.57 | -- | 28.80 | 3.84 | .16 | .56 | .98 | .27 |
| C5A-0047 | 60.7 | 15.50 | 11.70 | 9.21 | 1.49 | .16 | 2.12 | 5.44 | .62 | .11 |
| C5A-0283 | 42.2 | 15.30 | 13.70 | 11.60 | 4.09 | 5.43 | 3.79 | 2.83 | 2.57 | 1.13 |
| HO2A-610 | 62.2 | 9.69 | 19.10 | -- | 1.48 | .09 | .18 | 4.45 | .36 | .08 |
| HO2A-615 | 63.7 | 10.40 | 18.10 | 14.60 | 1.47 | .09 | <.15 | 4.76 | .37 | .06 |
| HO3A-383 | -- | -- | -- | 24.50 | -- | -- | -- | -- | -- | -- |
| HO3A-413 | 54.6 | 14.10 | 22.80 | 18.80 | 2.08 | .35 | <.15 | 4.39 | .60 | .08 |
| IC10-440 | 55.6 | 16.00 | 14.00 | 7.74 | 2.57 | .09 | .46 | 5.52 | .63 | .08 |
| IC10-806 | 65.1 | 12.20 | 16.40 | 7.09 | 1.63 | .09 | .26 | 4.91 | .30 | .10 |
| IC10-807 | 65.1 | 9.02 | 16.40 | 7.09 | 1.62 | .09 | <.15 | 3.91 | .24 | .07 |
| IC10-809 | -- | -- | -- | 19.10 | -- | -- | -- | -- | -- | -- |
| IC10-819 | -- | -- | -- | 12.10 | -- | -- | -- | -- | -- | -- |
| IC10-824 | 54.0 | 8.23 | 26.10 | 9.18 | 1.75 | .14 | .25 | 3.50 | .29 | .08 |
| IC10-829 | 71.2 | 10.20 | 9.62 | 6.26 | 1.70 | .20 | 2.21 | 2.75 | .30 | .10 |
| IC12-265 | 64.3 | 10.90 | 12.40 | -- | 1.76 | .17 | <.15 | 4.32 | .33 | .10 |
| IC12-280 | 62.8 | 10.40 | 14.00 | 5.93 | 1.81 | .16 | .19 | 4.32 | .39 | .10 |
| IC12-295 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| IC12-325 | 59.3 | 14.30 | 13.00 | -- | 2.70 | .22 | <.15 | 5.66 | .61 | .12 |
| IC12-328 | 64.4 | 14.60 | 9.43 | 6.14 | 2.17 | .20 | .60 | 5.41 | .57 | .16 |
| IC12-488 | 60.9 | 9.45 | 16.40 | -- | 1.44 | .38 | 1.51 | 2.02 | .17 | .22 |
| IC16-236 | 56.9 | 14.30 | 13.20 | 8.20 | 2.77 | 1.44 | 2.14 | 3.81 | 1.17 | .45 |
| IC16-244 | 53.3 | 13.40 | 17.20 | 7.52 | 2.51 | .16 | .45 | 4.86 | .47 | .11 |
| IC16-271 | 66.5 | 11.60 | 10.80 | 5.83 | 2.02 | .09 | .21 | 4.56 | .35 | .08 |
| IC16-281 | 61.7 | 9.43 | 15.10 | 5.98 | 1.71 | .05 | .19 | 3.46 | .33 | .06 |
| IC16-285 | 55.6 | 9.41 | 18.90 | 5.73 | 1.74 | .04 | .16 | 2.96 | .26 | .10 |
| IC16-305 | 49.6 | 17.00 | 16.70 | 9.16 | 2.96 | .15 | 1.18 | 4.86 | .57 | .15 |
| IC16-306 | -- | -- | -- | 7.82 | -- | -- | -- | -- | -- | -- |
| IC16-311 | 68.0 | 9.55 | 12.30 | 6.80 | 2.08 | .13 | .76 | 2.03 | .34 | .09 |
| IC16-336 | 64.8 | 11.70 | 12.40 | -- | 2.10 | .17 | 1.26 | 2.96 | .45 | .09 |
| IC16-351 | 57.8 | 9.68 | 20.70 | -- | 2.81 | .19 | <.15 | 2.08 | .33 | .09 |
| IC16-542 | 59.4 | 10.50 | 18.30 | -- | 2.14 | .16 | .32 | 3.83 | .37 | .08 |
| IC18-700 | 66.3 | 13.20 | 10.30 | 7.82 | 2.58 | .12 | 1.96 | 1.76 | .45 | .10 |
| IC18-762 | 63.1 | 12.50 | 10.70 | 6.29 | 2.21 | .93 | 2.09 | 2.93 | .89 | .38 |
| IC18-767 | 59.5 | 13.70 | 15.20 | 6.30 | 2.29 | 1.14 | 1.80 | 3.92 | 1.06 | .41 |
| IC18-768 | 59.5 | 13.70 | 12.10 | -- | 2.29 | 1.14 | 1.80 | 3.41 | 1.06 | .41 |
| IC18-770 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| IC18-781 | 60.3 | 13.80 | 13.40 | -- | 2.84 | .29 | 1.08 | 3.08 | .60 | .11 |
| IC18-854 | 61.6 | 17.40 | 7.98 | 4.36 | 1.67 | .14 | 1.30 | 5.86 | .66 | .10 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | MnO % | LOI 900C | Total C% | Total S% | Al %-s | Ca %-s | Fe %-s | K %-s | Mg %-s |
|---|---|---|---|---|---|---|---|---|---|
| C2A-0298 | <.02 | 1.60 | <.01 | <.01 | 6.9 | .140 | 4.7 | 3.60 | .67 |
| C2A-0310 | <.02 | 1.55 | .02 | <.01 | 7.7 | .130 | 5.7 | 3.30 | .86 |
| C2A-0320 | <.02 | 1.75 | .17 | <.01 | 8.6 | .130 | 7.2 | 4.40 | .99 |
| C2A-0341 | <.02 | 1.66 | <.01 | <.01 | 7.6 | .070 | 6.0 | 4.10 | .53 |
| C2A-0362 | <.02 | 1.67 | <.01 | <.01 | 7.9 | .080 | 7.0 | 4.20 | .97 |
| C3B-0289 | <.02 | 1.60 | .48 | <.01 | 8.1 | .130 | 7.3 | 3.60 | .79 |
| C3B-0300 | <.02 | 1.26 | <.01 | <.01 | 6.1 | .170 | 4.3 | 3.70 | .50 |
| C3B-0410 | .21 | 10.60 | .79 | <.01 | 4.2 | 2.900 | 6.1 | .53 | 13.00 |
| C5A-0047 | <.02 | 1.26 | .11 | <.01 | 8.2 | .140 | 8.3 | 4.00 | .84 |
| C5A-0283 | .44 | 7.30 | 1.84 | .04 | 8.5 | 4.000 | 9.7 | 2.50 | 2.50 |
| HO2A-610 | .05 | 1.45 | .50 | 15.50 | 4.8 | .070 | 13.0 | 2.80 | .87 |
| HO2A-615 | .03 | .84 | <.01 | .06 | 5.7 | .060 | 12.0 | 3.80 | .86 |
| HO3A-383 | -- | -- | <.01 | <.01 | 9.7 | .140 | 20.0 | 7.80 | 2.90 |
| HO3A-413 | .11 | .97 | .03 | <.01 | 7.5 | .240 | 15.0 | 3.60 | 1.20 |
| IC10-440 | .06 | 4.06 | <.01 | 2.66 | 8.8 | .090 | 10.0 | 4.50 | 1.50 |
| IC10-806 | .04 | 3.30 | .01 | 2.50 | 6.6 | .090 | 12.0 | 4.00 | .97 |
| IC10-807 | .04 | 3.14 | .01 | 2.42 | 4.7 | .070 | 12.0 | 2.90 | .95 |
| IC10-809 | -- | -- | .01 | 7.82 | 1.2 | .020 | 56.0 | .60 | .17 |
| IC10-819 | -- | -- | <.01 | 4.12 | 3.4 | .070 | 28.0 | 2.00 | .63 |
| IC10-824 | .05 | 5.18 | <.01 | 6.19 | 4.4 | .100 | 19.0 | 2.60 | 1.00 |
| IC10-829 | .04 | 1.40 | <.01 | .93 | 5.5 | .170 | 6.9 | 2.30 | 1.00 |
| IC12-265 | .04 | 4.02 | <.01 | 3.46 | 5.4 | .110 | 8.4 | 2.70 | 1.00 |
| IC12-280 | .05 | 4.69 | .02 | 4.46 | 5.4 | .120 | 9.7 | 3.20 | 1.00 |
| IC12-295 | -- | -- | <.01 | 19.30 | 4.1 | .110 | 23.0 | 2.20 | 1.10 |
| IC12-325 | .08 | 2.62 | <.01 | .77 | 7.2 | .140 | 9.0 | 3.50 | 1.60 |
| IC12-328 | .06 | 2.16 | <.01 | .38 | 7.8 | .170 | 6.7 | 4.30 | 1.30 |
| IC12-488 | .04 | 6.87 | <.01 | 7.91 | 5.1 | .260 | 12.0 | 1.40 | .89 |
| IC16-236 | .14 | 3.27 | .17 | 1.31 | 7.4 | 1.000 | 9.1 | 3.00 | 1.60 |
| IC16-244 | .07 | 5.99 | <.01 | 6.11 | 7.9 | .150 | 13.0 | 4.30 | 1.60 |
| IC16-271 | .06 | 3.04 | <.01 | 1.65 | 6.0 | .070 | 7.4 | 3.40 | 1.20 |
| IC16-281 | .05 | 5.98 | <.01 | 6.05 | 5.2 | .030 | 11.0 | 2.70 | 1.00 |
| IC16-285 | .05 | 8.14 | <.01 | 9.83 | 5.3 | .050 | 14.0 | 2.50 | 1.10 |
| IC16-305 | .07 | 5.15 | <.01 | 3.83 | 9.8 | .140 | 13.0 | 4.20 | 1.80 |
| IC16-306 | -- | -- | .03 | 5.13 | 8.5 | .130 | 13.0 | 3.60 | 1.60 |
| IC16-311 | .07 | 3.64 | .05 | 2.24 | 5.0 | .090 | 8.5 | 1.50 | 1.20 |
| IC16-336 | .08 | 3.32 | .07 | 1.22 | 5.9 | .110 | 8.6 | 1.90 | 1.20 |
| IC16-351 | .13 | 6.43 | .20 | 4.16 | 4.7 | .110 | 14.0 | 1.30 | 1.60 |
| IC16-542 | .11 | 3.99 | .23 | 2.17 | 5.3 | .100 | 13.0 | 2.60 | 1.20 |
| IC18-700 | .05 | 2.61 | <.01 | .15 | 7.1 | .110 | 7.3 | 1.50 | 1.50 |
| IC18-762 | .07 | 3.06 | .15 | 1.88 | 6.8 | .720 | 7.6 | 2.50 | 1.30 |
| IC18-767 | .08 | 6.11 | .20 | 4.95 | 7.3 | .770 | 11.0 | 3.20 | 1.30 |
| IC18-768 | .08 | 3.84 | .20 | 2.04 | 6.9 | .770 | 8.1 | 2.30 | 1.30 |
| IC18-770 | -- | -- | .17 | 24.00 | 3.7 | .090 | 24.0 | 1.40 | .64 |
| IC18-781 | .09 | 3.55 | .03 | .87 | 7.0 | .190 | 9.3 | 2.20 | 1.70 |
| IC18-854 | .03 | 2.76 | <.01 | .74 | 9.2 | .130 | 5.6 | 4.70 | .96 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | MnO % | LOI 900C | Total C% | Total S% | Al %-s | Ca %-s | Fe %-s | K %-s | Mg %-s |
|---|---|---|---|---|---|---|---|---|---|
| C2A-0298 | <.02 | 1.60 | <.01 | <.01 | 6.9 | .140 | 4.7 | 3.60 | .67 |
| C2A-0310 | <.02 | 1.55 | .02 | <.01 | 7.7 | .130 | 5.7 | 3.30 | .86 |
| C2A-0320 | <.02 | 1.75 | .17 | <.01 | 8.6 | .130 | 7.2 | 4.40 | .99 |
| C2A-0341 | <.02 | 1.66 | <.01 | <.01 | 7.6 | .070 | 6.0 | 4.10 | .53 |
| C2A-0362 | <.02 | 1.67 | <.01 | <.01 | 7.9 | .080 | 7.0 | 4.20 | .97 |
| C3B-0289 | <.02 | 1.60 | .48 | <.01 | 8.1 | .130 | 7.3 | 3.60 | .79 |
| C3B-0300 | <.02 | 1.26 | <.01 | <.01 | 6.1 | .170 | 4.3 | 3.70 | .50 |
| C3B-0410 | .21 | 10.60 | .79 | <.01 | 4.2 | 2.900 | 6.1 | .53 | 13.00 |
| C5A-0047 | <.02 | 1.26 | .11 | <.01 | 8.2 | .140 | 8.3 | 4.00 | .84 |
| C5A-0283 | .44 | 7.30 | 1.84 | .04 | 8.5 | 4.000 | 9.7 | 2.50 | 2.50 |
| HO2A-610 | .05 | 1.45 | .50 | 15.50 | 4.8 | .070 | 13.0 | 2.80 | .87 |
| HO2A-615 | .03 | .84 | <.01 | .06 | 5.7 | .060 | 12.0 | 3.80 | .86 |
| HO3A-383 | -- | -- | <.01 | <.01 | 9.7 | .140 | 20.0 | 7.80 | 2.90 |
| HO3A-413 | .11 | .97 | .03 | <.01 | 7.5 | .240 | 15.0 | 3.60 | 1.20 |
| IC10-440 | .06 | 4.06 | <.01 | 2.66 | 8.8 | .090 | 10.0 | 4.50 | 1.50 |
| IC10-806 | .04 | 3.30 | .01 | 2.50 | 6.6 | .090 | 12.0 | 4.00 | .97 |
| IC10-807 | .04 | 3.14 | .01 | 2.42 | 4.7 | .070 | 12.0 | 2.90 | .95 |
| IC10-809 | -- | -- | .01 | 7.82 | 1.2 | .020 | 56.0 | .60 | .17 |
| IC10-819 | -- | -- | <.01 | 4.12 | 3.4 | .070 | 28.0 | 2.00 | .63 |
| IC10-824 | .05 | 5.18 | <.01 | 6.19 | 4.4 | .100 | 19.0 | 2.60 | 1.00 |
| IC10-829 | .04 | 1.40 | <.01 | .93 | 5.5 | .170 | 6.9 | 2.30 | 1.00 |
| IC12-265 | .04 | 4.02 | <.01 | 3.46 | 5.4 | .110 | 8.4 | 2.70 | 1.00 |
| IC12-280 | .05 | 4.69 | .02 | 4.46 | 5.4 | .120 | 9.7 | 3.20 | 1.00 |
| IC12-295 | -- | -- | <.01 | 19.30 | 4.1 | .110 | 23.0 | 2.20 | 1.10 |
| IC12-325 | .08 | 2.62 | <.01 | .77 | 7.2 | .140 | 9.0 | 3.50 | 1.60 |
| IC12-328 | .06 | 2.16 | <.01 | .38 | 7.8 | .170 | 6.7 | 4.30 | 1.30 |
| IC12-488 | .04 | 6.87 | <.01 | 7.91 | 5.1 | .260 | 12.0 | 1.40 | .89 |
| IC16-236 | .14 | 3.27 | .17 | 1.31 | 7.4 | 1.000 | 9.1 | 3.00 | 1.60 |
| IC16-244 | .07 | 5.99 | <.01 | 6.11 | 7.9 | .150 | 13.0 | 4.30 | 1.60 |
| IC16-271 | .06 | 3.04 | <.01 | 1.65 | 6.0 | .070 | 7.4 | 3.40 | 1.20 |
| IC16-281 | .05 | 5.98 | <.01 | 6.05 | 5.2 | .030 | 11.0 | 2.70 | 1.00 |
| IC16-285 | .05 | 8.14 | <.01 | 9.83 | 5.3 | .050 | 14.0 | 2.50 | 1.10 |
| IC16-305 | .07 | 5.15 | <.01 | 3.83 | 9.8 | .140 | 13.0 | 4.20 | 1.80 |
| IC16-306 | -- | -- | .03 | 5.13 | 8.5 | .130 | 13.0 | 3.60 | 1.60 |
| IC16-311 | .07 | 3.64 | .05 | 2.24 | 5.0 | .090 | 8.5 | 1.50 | 1.20 |
| IC16-336 | .08 | 3.32 | .07 | 1.22 | 5.9 | .110 | 8.6 | 1.90 | 1.20 |
| IC16-351 | .13 | 6.43 | .20 | 4.16 | 4.7 | .110 | 14.0 | 1.30 | 1.60 |
| IC16-542 | .11 | 3.99 | .23 | 2.17 | 5.3 | .100 | 13.0 | 2.60 | 1.20 |
| IC18-700 | .05 | 2.61 | <.01 | .15 | 7.1 | .110 | 7.3 | 1.50 | 1.50 |
| IC18-762 | .07 | 3.06 | .15 | 1.88 | 6.8 | .720 | 7.6 | 2.50 | 1.30 |
| IC18-767 | .08 | 6.11 | .20 | 4.95 | 7.3 | .770 | 11.0 | 3.20 | 1.30 |
| IC18-768 | .08 | 3.84 | .20 | 2.04 | 6.9 | .770 | 8.1 | 2.30 | 1.30 |
| IC18-770 | -- | -- | .17 | 24.00 | 3.7 | .090 | 24.0 | 1.40 | .64 |
| IC18-781 | .09 | 3.55 | .03 | .87 | 7.0 | .190 | 9.3 | 2.20 | 1.70 |
| IC18-854 | .03 | 2.76 | <.01 | .74 | 9.2 | .130 | 5.6 | 4.70 | .96 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | Na %-s | P %-s | Ti %-s | Ag ppm-s | As ppm-s | Au ppm | B ppm-s | Ba ppm-s | Be ppm-s | Bi ppm-s |
|---|---|---|---|---|---|---|---|---|---|---|
| C2A-0298 | 1.700 | .040 | .32 | <2 | 200 | N | 190 | 710 | 1 | <10 |
| C2A-0310 | 1.100 | .050 | .34 | <2 | 20 | N | 60 | 770 | 2 | <10 |
| C2A-0320 | .930 | .050 | .39 | <2 | <10 | N | 60 | 840 | 2 | <10 |
| C2A-0341 | .310 | .020 | .31 | <2 | 150 | N | 390 | 780 | 1 | <10 |
| C2A-0362 | .400 | .030 | .28 | <2 | 40 | N | 870 | 690 | 2 | <10 |
| C3B-0289 | 1.500 | .050 | .42 | <2 | 20 | N | 40 | 830 | 2 | <10 |
| C3B-0300 | .090 | .020 | .24 | <2 | 30 | N | 1,910 | 770 | 1 | <10 |
| C3B-0410 | .030 | .120 | .62 | <2 | 20 | N | 20 | 97 | <1 | <10 |
| C5A-0047 | 1.700 | .050 | .38 | <2 | 50 | N | 60 | 840 | 1 | <10 |
| C5A-0283 | 3.200 | .520 | 1.50 | <2 | 10 | N | 20 | 690 | 2 | <10 |
| HO2A-610 | .050 | .020 | .22 | <2 | 5,400 | .200 | <20 | 330 | <1 | 20 |
| HO2A-615 | .060 | .030 | .23 | <2 | 330 | N | 20 | 390 | <1 | <10 |
| HO3A-383 | .080 | .070 | .64 | <2 | 140 | N | 710 | 740 | 2 | 10 |
| HO3A-413 | .060 | .030 | .37 | <2 | 20 | N | 50 | 390 | 1 | <10 |
| IC10-440 | .300 | .030 | .39 | <2 | 190 | N | 70 | 170 | 1 | <10 |
| IC10-806 | .170 | .040 | .19 | <2 | 190 | N | 30 | 360 | 2 | <10 |
| IC10-807 | .040 | .030 | .15 | <2 | 190 | N | 30 | 360 | 1 | <10 |
| IC10-809 | .020 | <.005 | .02 | <2 | 420 | .050 | 60 | 190 | 1 | 120 |
| IC10-819 | .130 | .020 | .12 | <2 | 200 | N | 40 | 250 | 1 | 20 |
| IC10-824 | .120 | .030 | .18 | <2 | 300 | <.050 | 60 | 190 | 1 | 20 |
| IC10-829 | 1.800 | .040 | .19 | <2 | 30 | N | 40 | 390 | <1 | <10 |
| IC12-265 | .070 | .030 | .20 | 2 | 170 | N | 20 | 23 | <1 | 10 |
| IC12-280 | .070 | .040 | .22 | <2 | 200 | N | 30 | 210 | <1 | <10 |
| IC12-295 | .040 | .040 | .26 | 3 | 1,200 | N | <20 | 37 | <1 | 70 |
| IC12-325 | .070 | .040 | .37 | <2 | 10 | N | 50 | 80 | <1 | <10 |
| IC12-328 | .370 | .060 | .34 | <2 | <10 | N | 50 | 530 | <1 | <10 |
| IC12-488 | 1.200 | .090 | .12 | <2 | 530 | N | <20 | 13 | <1 | 30 |
| IC16-236 | 1.500 | .200 | .67 | <2 | 50 | N | 40 | 650 | 1 | <10 |
| IC16-244 | .300 | .050 | .31 | <2 | 330 | N | 40 | 910 | <1 | <10 |
| IC16-271 | .100 | .030 | .21 | <2 | 90 | N | 40 | 360 | <1 | <10 |
| IC16-281 | .060 | .020 | .20 | <2 | 390 | <.050 | 40 | 210 | <1 | <10 |
| IC16-285 | .070 | .040 | .17 | 3 | 560 | .150 | 40 | 380 | <1 | <10 |
| IC16-305 | .950 | .070 | .37 | <2 | 280 | N | 120 | 630 | 1 | <10 |
| IC16-306 | .970 | .060 | .32 | <2 | 370 | N | 120 | 330 | <1 | 20 |
| IC16-311 | .530 | .040 | .20 | <2 | 120 | N | 110 | 380 | <1 | 10 |
| IC16-336 | .970 | .030 | .28 | <2 | 60 | N | 50 | 71 | <1 | <10 |
| IC16-351 | .050 | .030 | .19 | <2 | 240 | N | 30 | 20 | <1 | 20 |
| IC16-542 | .240 | .030 | .23 | <2 | 140 | N | 50 | 30 | <1 | 10 |
| IC18-700 | 1.500 | .040 | .27 | <2 | <10 | N | 40 | 260 | 1 | <10 |
| IC18-762 | 1.700 | .170 | .55 | <2 | 90 | N | 30 | 100 | 1 | <10 |
| IC18-767 | 1.400 | .150 | .62 | <2 | 370 | N | 70 | 310 | 1 | 20 |
| IC18-768 | 1.400 | .150 | .62 | <2 | 120 | N | 40 | 38 | 1 | 10 |
| IC18-770 | .220 | .030 | .18 | 5 | 1,700 | <.050 | 30 | 10 | <1 | 110 |
| IC18-781 | .850 | .040 | .37 | <2 | <10 | N | 50 | 190 | <1 | <10 |
| IC18-854 | .970 | .040 | .39 | <2 | 30 | N | 50 | 190 | 1 | <10 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | Ce ppm-s | Co ppm-s | Cr ppm-s | Cu ppm-s | Eu ppm-s | Ga ppm-s | La ppm-s | Li ppm-s | Mn ppm-s | Mo ppm-s |
|---|---|---|---|---|---|---|---|---|---|---|
| C2A-0298 | 47 | 190 | 56 | 21 | <2 | 20 | 22 | 25 | 120 | <2 |
| C2A-0310 | 35 | 27 | 50 | 3 | <2 | 21 | 16 | 30 | 140 | <2 |
| C2A-0320 | 8 | 20 | 59 | 1 | <2 | 28 | 4 | 34 | 220 | <2 |
| C2A-0341 | 51 | 110 | 48 | 3 | <2 | 24 | 22 | 26 | 210 | <2 |
| C2A-0362 | 38 | 51 | 39 | <1 | <2 | 27 | 16 | 37 | 150 | 15 |
| C3B-0289 | 51 | 63 | 49 | 3 | <2 | 24 | 23 | 33 | 120 | <2 |
| C3B-0300 | 1,300 | 43 | 38 | 10 | 12 | 20 | 570 | 21 | 120 | <2 |
| C3B-0410 | 36 | 110 | 1,400 | 3 | <2 | 11 | 17 | 6 | 1,600 | <2 |
| C5A-0047 | 61 | 85 | 50 | 10 | <2 | 28 | 27 | 31 | 230 | <2 |
| C5A-0283 | 140 | 72 | 16 | 68 | 4 | 22 | 68 | 32 | 3,200 | 2 |
| HO2A-610 | 37 | 4,700 | 33 | 1,800 | <2 | 46 | 18 | 47 | 390 | <2 |
| HO2A-615 | 79 | 430 | 29 | 540 | <2 | 44 | 39 | 53 | 340 | <2 |
| HO3A-383 | 49 | 210 | 79 | 22 | <2 | 54 | 25 | 99 | 270 | <2 |
| HO3A-413 | 130 | 73 | 44 | 170 | 4 | 62 | 66 | 50 | 890 | <2 |
| IC10-440 | 130 | 1,200 | 74 | 140 | <2 | 38 | 56 | 30 | 530 | 24 |
| IC10-806 | 41 | 1,200 | 120 | 47 | <2 | 27 | 18 | 20 | 370 | 21 |
| IC10-807 | 27 | 1,200 | 120 | 47 | <2 | 22 | 15 | 17 | 370 | 17 |
| IC10-809 | <4 | 3,300 | 100 | 11 | <2 | 18 | 2 | 5 | 230 | <2 |
| IC10-819 | 75 | 1,800 | 97 | 6 | <2 | 18 | 39 | 13 | 250 | 11 |
| IC10-824 | 79 | 2,700 | 100 | 35 | <2 | 20 | 39 | 15 | 420 | 22 |
| IC10-829 | 120 | 460 | 37 | 12 | <2 | 18 | 57 | 15 | 390 | 3 |
| IC12-265 | 180 | 1,500 | 37 | 6,200 | 3 | 25 | 91 | 20 | 390 | 3 |
| IC12-280 | 170 | 2,100 | 140 | 4,900 | 3 | 25 | 84 | 19 | 450 | 7 |
| IC12-295 | 110 | 10,000 | 48 | 5,100 | 2 | 18 | 53 | 17 | 530 | 6 |
| IC12-325 | 250 | 540 | 74 | 320 | 4 | 41 | 130 | 30 | 690 | <2 |
| IC12-328 | 230 | 250 | 57 | 110 | 3 | 39 | 110 | 28 | 520 | 2 |
| IC12-488 | 63 | 3,900 | 21 | 21 | <2 | 16 | 31 | 12 | 400 | <2 |
| IC16-236 | 160 | 760 | 69 | 410 | 3 | 29 | 85 | 24 | 1,100 | 14 |
| IC16-244 | 150 | 3,600 | 55 | 3,000 | <2 | 34 | 60 | 33 | 600 | <2 |
| IC16-271 | 200 | 1,000 | 120 | 980 | 2 | 25 | 96 | 27 | 500 | 5 |
| IC16-281 | 77 | 3,300 | 150 | 6,800 | <2 | 22 | 35 | 21 | 440 | 4 |
| IC16-285 | 150 | 4,800 | 33 | 10,000 | <2 | 23 | 63 | 21 | 450 | 3 |
| IC16-305 | 460 | 2,100 | 69 | 2,600 | 5 | 37 | 190 | 33 | 650 | 22 |
| IC16-306 | 240 | 2,600 | 140 | 1,800 | 3 | 33 | 110 | 26 | 560 | 15 |
| IC16-311 | 170 | 1,200 | 130 | 980 | 2 | 22 | 87 | 14 | 560 | 4 |
| IC16-336 | 110 | 770 | 57 | 350 | <2 | 27 | 58 | 18 | 680 | 6 |
| IC16-351 | 80 | 2,200 | 36 | 1,400 | <2 | 24 | 42 | 16 | 960 | 8 |
| IC16-542 | 58 | 1,000 | 42 | 11 | <2 | 29 | 29 | 18 | 860 | 12 |
| IC18-700 | 37 | 70 | 40 | 1,100 | <2 | 26 | 17 | 15 | 450 | <2 |
| IC18-762 | 66 | 760 | 27 | 410 | <2 | 22 | 31 | 18 | 610 | 6 |
| IC18-767 | 88 | 2,500 | 120 | 2,100 | <2 | 33 | 46 | 22 | 640 | 11 |
| IC18-768 | 88 | 900 | 37 | 370 | <2 | 24 | 46 | 19 | 640 | 9 |
| IC18-770 | 34 | 9,800 | 25 | 7,300 | <2 | 18 | 17 | 11 | 490 | 12 |
| IC18-781 | 190 | 400 | 72 | 410 | 2 | 38 | 100 | 19 | 710 | <2 |
| IC18-854 | 140 | 340 | 70 | 21 | <2 | 36 | 64 | 24 | 280 | <2 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | Nb ppm-s | Nd ppm-s | Ni ppm-s | Pb ppm-s | Sc ppm-s | Se ppm | Sr ppm-s | Th ppm-s | V ppm-s | Y ppm-s |
|---|---|---|---|---|---|---|---|---|---|---|
| C2A-0298 | 10 | 18 | 17 | <4 | 10 | <.10 | 66 | 14 | 50 | 11 |
| C2A-0310 | 10 | 18 | 17 | <4 | 13 | <.10 | 45 | 9 | 50 | 11 |
| C2A-0320 | 12 | 7 | 18 | <4 | 14 | <.10 | 39 | 13 | 59 | 6 |
| C2A-0341 | 12 | 19 | 15 | <4 | 10 | .10 | 19 | 16 | 47 | 6 |
| C2A-0362 | 13 | 18 | 13 | <4 | 10 | <.10 | 23 | 22 | 40 | 8 |
| C3B-0289 | 7 | 20 | 18 | 4 | 13 | <.10 | 48 | 13 | 70 | 9 |
| C3B-0300 | 9 | 470 | 12 | 5 | 12 | <.10 | 21 | 18 | 42 | 100 |
| C3B-0410 | 43 | 16 | 1,700 | 6 | 23 | .10 | 130 | 5 | 120 | 8 |
| C5A-0047 | 11 | 26 | 19 | <4 | 12 | <.10 | 62 | 14 | 60 | 11 |
| C5A-0283 | 60 | 62 | 19 | 6 | 13 | .30 | 390 | 5 | 130 | 28 |
| HO2A-610 | -- | 16 | 26 | <4 | 6 | <5.00 | 5 | 11 | 34 | 27 |
| HO2A-615 | -- | 36 | 6 | 5 | 6 | .50 | 8 | 10 | 37 | 17 |
| HO3A-383 | -- | 25 | 24 | <4 | 14 | <.50 | 12 | 18 | 79 | 9 |
| HO3A-413 | -- | 61 | 5 | <4 | 11 | <.50 | 12 | 24 | 53 | 88 |
| IC10-440 | 14 | 56 | 31 | 14 | 16 | 8.80 | 21 | 17 | 62 | 12 |
| IC10-806 | 8 | 18 | 33 | 8 | 9 | 5.30 | 18 | 12 | 34 | 22 |
| IC10-807 | 6 | 11 | 33 | 8 | 7 | 2.80 | 9 | 9 | 33 | 8 |
| IC10-809 | <4 | <4 | 94 | 48 | 6 | 43.00 | 5 | 9 | 47 | <2 |
| IC10-819 | 5 | 35 | 51 | 13 | 6 | 19.00 | 12 | 9 | 28 | 8 |
| IC10-824 | 8 | 40 | 51 | 16 | 6 | 17.00 | 16 | 8 | 40 | 9 |
| IC10-829 | 6 | 53 | 22 | 8 | 6 | 3.30 | 69 | 9 | 23 | 12 |
| IC12-265 | -- | 81 | 38 | 10 | 6 | 19.00 | 18 | 9 | 21 | 15 |
| IC12-280 | 6 | 78 | 40 | 11 | 6 | 19.00 | 20 | 7 | 21 | 10 |
| IC12-295 | -- | 56 | 110 | 110 | 5 | 70.00 | 14 | 12 | 24 | 6 |
| IC12-325 | -- | 120 | 44 | 8 | 12 | 9.30 | 19 | 14 | 55 | 20 |
| IC12-328 | 11 | 92 | 28 | 5 | 13 | 1.20 | 28 | 15 | 60 | 17 |
| IC12-488 | -- | 29 | 25 | 40 | 4 | 24.00 | 31 | 8 | 18 | 12 |
| IC16-236 | 29 | 73 | 41 | 28 | 9 | 4.60 | 190 | 12 | 46 | 27 |
| IC16-244 | 12 | 60 | 75 | 37 | 9 | 21.00 | 31 | 13 | 37 | 24 |
| IC16-271 | 7 | 94 | 34 | 11 | 8 | 7.20 | 17 | 8 | 27 | 16 |
| IC16-281 | 8 | 41 | 63 | 5 | 6 | 27.00 | 12 | 7 | 21 | 10 |
| IC16-285 | 9 | 68 | 93 | 22 | 6 | 41.00 | 15 | 12 | 21 | 15 |
| IC16-305 | 13 | 190 | 64 | 14 | 13 | 15.00 | 44 | 14 | 60 | 25 |
| IC16-306 | 12 | 120 | 87 | 15 | 11 | 26.00 | 38 | 12 | 51 | 15 |
| IC16-311 | 6 | 82 | 38 | 16 | 6 | 9.80 | 24 | 8 | 33 | 8 |
| IC16-336 | -- | 51 | 34 | 5 | 9 | 9.90 | 35 | 12 | 43 | 11 |
| IC16-351 | -- | 38 | 44 | 16 | 6 | 17.00 | 15 | 8 | 47 | 14 |
| IC16-542 | -- | 28 | 37 | 10 | 7 | 15.00 | 16 | 8 | 47 | 13 |
| IC18-700 | 9 | 15 | 28 | 6 | 10 | 1.20 | 30 | 12 | 42 | 11 |
| IC18-762 | 25 | 31 | 23 | 7 | 7 | 8.10 | 73 | 10 | 35 | 11 |
| IC18-767 | 10 | 44 | 49 | 11 | 8 | 18.00 | 76 | 14 | 41 | 12 |
| IC18-768 | -- | 44 | 28 | 8 | 7 | 14.00 | 76 | 11 | 41 | 12 |
| IC18-770 | -- | 16 | 290 | 91 | 3 | 87.00 | 15 | 9 | 18 | 4 |
| IC18-781 | -- | 85 | 54 | <4 | 12 | 7.70 | 32 | 12 | 63 | 14 |
| IC18-954 | 15 | 51 | 7 | 6 | 18 | 1.60 | 43 | 15 | 74 | 12 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | Yb ppm-s | Zn ppm-s | Zr ppm-s | Ft north | Ft east | Elev ft | Rel ft | Lithol | Fabric | Oretyp | Lode |
|---|---|---|---|---|---|---|---|---|---|---|---|
| C2A-0298 | 2 | 15 | 345 | -- | -- | -- | -- | 30 | 20 | 10 | 2 |
| C2A-0310 | 2 | 18 | 223 | -- | -- | -- | -- | 32 | 23 | 80 | 2 |
| C2A-0320 | 2 | 23 | 184 | -- | -- | -- | -- | 32 | 23 | 80 | 2 |
| C2A-0341 | 1 | 13 | 327 | -- | -- | -- | -- | 30 | 20 | 10 | 2 |
| C2A-0362 | 2 | 19 | 370 | -- | -- | -- | -- | 32 | 23 | 80 | 2 |
| C3B-0289 | 2 | 23 | 253 | -- | -- | -- | -- | 30 | 20 | 80 | 2 |
| C3B-0300 | 4 | 8 | 197 | -- | -- | -- | -- | 33 | 23 | 80 | 2 |
| C3B-0410 | <1 | 55 | 110 | -- | -- | -- | -- | 33 | 23 | 10 | 2 |
| C5A-0047 | 2 | 19 | 249 | -- | -- | -- | -- | 30 | 20 | 80 | 2 |
| C5A-0283 | 2 | 30 | 247 | -- | -- | -- | -- | 90 | 30 | 80 | 2 |
| HO2A-610 | 4 | 34 | 216 | 500 | 50 | 7,200 | 0 | 50 | 20 | 30 | 7 |
| HO2A-615 | 2 | 33 | 188 | 500 | 50 | 7,200 | 0 | 30 | 10 | 70 | 9 |
| HO3A-383 | 1 | 74 | 380 | 500 | 50 | 7,400 | 0 | 50 | 20 | 80 | 9 |
| HO3A-413 | 9 | 34 | 319 | 500 | 50 | 7,400 | 0 | 50 | 20 | 80 | 9 |
| IC10-440 | 2 | 51 | 243 | 6,248 | 4,270 | 6,088 | 0 | 20 | 10 | 22 | 1 |
| IC10-806 | 3 | 34 | 138 | 6,079 | 4,270 | 5,762 | 0 | 20 | 10 | 22 | 1 |
| IC10-807 | 2 | 33 | 126 | 6,079 | 4,270 | 5,762 | 0 | 20 | 10 | 22 | 1 |
| IC10-809 | <1 | 17 | 21 | 6,078 | 4,270 | 5,761 | 0 | 20 | 32 | 43 | 1 |
| IC10-819 | <1 | 27 | 147 | 6,073 | 4,270 | 5,751 | 0 | 20 | 32 | 43 | 1 |
| IC10-824 | 1 | 32 | 145 | 6,071 | 4,270 | 5,746 | 0 | 20 | 32 | 43 | 1 |
| IC10-829 | 1 | 26 | 116 | 6,069 | 4,270 | 5,741 | -5 | 20 | 10 | 73 | 1 |
| IC12-265 | 2 | 63 | 171 | 6,215 | 4,760 | 6,510 | 20 | 30 | 21 | 40 | 1 |
| IC12-280 | 1 | 80 | 168 | 6,212 | 4,760 | 6,495 | 5 | 20 | 32 | 40 | 1 |
| IC12-295 | 1 | 60 | 173 | 6,210 | 4,760 | 6,481 | 0 | 20 | 22 | 40 | 1 |
| IC12-325 | 3 | 51 | 210 | 6,205 | 4,760 | 6,452 | -5 | 20 | 10 | 40 | 1 |
| IC12-328 | 2 | 37 | 209 | 6,204 | 4,760 | 6,449 | -7 | 20 | 10 | 72 | 1 |
| IC12-488 | 2 | 31 | 99 | 6,177 | 4,760 | 6,292 | 0 | 20 | 11 | 40 | 1 |
| IC16-236 | 3 | 120 | 277 | 5,993 | 5,080 | 6,552 | 2 | 20 | 10 | 60 | 1 |
| IC16-244 | 3 | 76 | 184 | 5,990 | 5,080 | 6,546 | -2 | 20 | 10 | 40 | 1 |
| IC16-271 | 2 | 54 | 175 | 5,980 | 5,080 | 6,521 | -5 | 20 | 11 | 60 | 1 |
| IC16-281 | 1 | 67 | 159 | 5,976 | 5,080 | 6,512 | 0 | 20 | 11 | 40 | 1 |
| IC16-285 | 2 | 66 | 136 | 5,975 | 5,080 | 6,508 | 10 | 20 | 32 | 22 | 1 |
| IC16-305 | 3 | 91 | 209 | 5,967 | 5,080 | 6,489 | 0 | 20 | 13 | 22 | 1 |
| IC16-306 | 2 | 81 | 196 | 5,976 | 5,080 | 6,488 | 0 | 20 | 32 | 40 | 1 |
| IC16-311 | <1 | 140 | 150 | 5,965 | 5,080 | 6,483 | 0 | 20 | 32 | 40 | 1 |
| IC16-336 | 1 | 49 | 201 | 5,956 | 5,080 | 6,461 | -10 | 20 | 11 | 40 | 1 |
| IC16-351 | 2 | 68 | 110 | 5,950 | 5,080 | 6,447 | -20 | 30 | 10 | 40 | 1 |
| IC16-542 | 2 | 34 | 170 | 5,879 | 5,080 | 6,271 | -99 | 20 | 11 | 44 | 1 |
| IC18-700 | 2 | 55 | 203 | 6,525 | 3,750 | 6,181 | 55 | 20 | 10 | 20 | 1 |
| IC18-762 | 1 | 51 | 253 | 6,485 | 3,750 | 6,125 | 5 | 20 | 23 | 62 | 1 |
| IC18-767 | 2 | 57 | 272 | 6,478 | 3,750 | 6,118 | 0 | 30 | 10 | 40 | 1 |
| IC18-768 | 1 | 57 | 245 | 6,477 | 3,750 | 6,117 | 0 | 30 | 10 | 40 | 1 |
| IC18-770 | <1 | 52 | 145 | 6,476 | 3,750 | 6,115 | 0 | 80 | 10 | 40 | 1 |
| IC18-781 | 2 | 58 | 215 | 6,474 | 3,750 | 6,109 | -5 | 30 | 11 | 40 | 1 |
| IC18-854 | 2 | 30 | 231 | 6,429 | 3,750 | 6,046 | 0 | 20 | 10 | 60 | 1 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | SiO2 % | Al2O3 % | FeTO3 % | FeO % | MgO % | CaO % | Na2O % | K2O % | TiO2 % | P2O5 % |
|---|---|---|---|---|---|---|---|---|---|---|
| IC181064 | 65.0 | 12.30 | 11.20 | 4.65 | 1.39 | .20 | .96 | 4.39 | .47 | .08 |
| IC181068 | 71.9 | 10.60 | 8.52 | 4.04 | 1.26 | .14 | .49 | 3.96 | .38 | .08 |
| IC181074 | 66.6 | 12.50 | 10.10 | 4.86 | 1.43 | .19 | 1.01 | 4.30 | .46 | .09 |
| IC181079 | 59.3 | 13.10 | 14.80 | -- | 2.15 | .21 | .93 | 4.47 | .50 | .10 |
| IC181080 | 69.0 | 13.00 | 8.93 | 4.02 | 1.33 | .22 | .98 | 4.58 | .46 | .10 |
| IC181081 | 68.5 | 13.00 | 8.59 | -- | 1.31 | .22 | .98 | 4.58 | .46 | .09 |
| IC3-064 | 65.7 | 13.50 | 9.16 | 4.79 | 2.21 | .10 | .56 | 3.42 | .50 | .12 |
| IC3-083 | 60.4 | 12.30 | 12.70 | 6.70 | 2.36 | .04 | .63 | 3.76 | .53 | .08 |
| IC3-102 | 57.2 | 15.30 | 13.90 | 10.10 | 3.11 | .12 | .34 | 4.82 | .56 | .11 |
| IC3-072 | 64.5 | 7.80 | 14.90 | 3.94 | 1.78 | .10 | .35 | 1.04 | .30 | .09 |
| M10A-190 | 47.3 | 19.20 | 16.90 | 13.60 | 2.55 | .47 | 1.88 | 7.30 | 1.36 | .34 |
| M10A-197 | 58.9 | 10.90 | 16.70 | 13.20 | 3.27 | .23 | .52 | 4.89 | .94 | .18 |
| M10A-210 | 71.6 | 6.96 | 13.20 | -- | 1.39 | .14 | <.15 | 3.54 | .23 | .16 |
| M10A-214 | 68.4 | 11.30 | 11.10 | 8.76 | 1.24 | .09 | .44 | 5.13 | .40 | .07 |
| M10A-258 | 52.8 | 15.30 | 18.70 | 14.20 | 1.80 | .25 | <.15 | 6.77 | .90 | .21 |
| M10A-303 | 52.4 | 13.50 | 21.20 | 16.10 | 1.97 | .27 | <.15 | 6.43 | .78 | .22 |
| M10A-348 | 53.3 | 11.70 | 22.50 | 18.10 | 3.06 | .07 | <.15 | 6.06 | .47 | .06 |
| M10A-360 | 64.4 | 12.40 | 12.80 | 9.72 | 1.45 | .04 | <.15 | 5.23 | .41 | .07 |
| M10B-326 | 67.9 | 12.30 | 8.90 | 7.08 | .98 | .06 | 1.69 | 5.91 | .37 | <.05 |
| M10B-332 | 59.5 | 14.50 | 14.00 | 10.30 | 1.42 | .08 | 1.76 | 5.79 | .42 | .06 |
| M10B-333 | -- | -- | -- | 9.17 | -- | -- | -- | -- | -- | -- |
| M10B-337 | 63.0 | 8.45 | 17.20 | 11.20 | 1.60 | .20 | <.15 | 4.01 | .27 | .18 |
| M10B-339 | 65.1 | 8.71 | 14.70 | 12.10 | 2.49 | .19 | .33 | 4.48 | .71 | .14 |
| M10B-498 | 68.5 | 11.60 | 10.60 | 8.01 | 1.26 | .07 | .15 | 4.72 | .44 | .06 |
| M10B-499 | 67.4 | 10.60 | 11.80 | 8.65 | 1.47 | .07 | <.15 | 4.47 | .40 | .08 |
| M10B-505 | 67.3 | 10.70 | 13.10 | 10.20 | 1.60 | .05 | .26 | 4.65 | .38 | .06 |
| M11A-138 | 63.8 | 10.60 | 16.10 | 12.20 | 1.87 | .12 | <.15 | 4.86 | .28 | .11 |
| M11A-147 | 78.7 | 6.86 | 8.40 | 6.18 | .97 | <.02 | .17 | 2.92 | .17 | <.05 |
| M11A-153 | 66.3 | 6.55 | 13.20 | -- | 2.98 | .24 | <.15 | 3.34 | .65 | .21 |
| M11A-159 | 66.1 | 11.80 | 12.70 | 9.85 | 1.64 | .09 | .46 | 4.82 | .42 | .07 |
| M11A-160 | 70.1 | 9.79 | 11.20 | 8.41 | 1.28 | .09 | <.15 | 4.22 | .36 | .08 |
| M11A-233 | 62.5 | 16.60 | 10.10 | 7.68 | 1.14 | .12 | .91 | 5.83 | .64 | .09 |
| M11A-234 | 62.1 | 17.30 | 9.79 | 7.45 | 1.10 | .17 | 1.15 | 5.88 | .61 | .13 |
| M11A-248 | 62.6 | 13.50 | 12.50 | 10.10 | 2.47 | .24 | <.15 | 5.81 | .83 | .18 |
| M11A-258 | 33.4 | 19.20 | 22.50 | 18.40 | 12.10 | .06 | <.15 | 7.00 | .93 | .11 |
| M11A-304 | 68.5 | 10.50 | 12.30 | 10.20 | 1.64 | .07 | .16 | 4.44 | .37 | .07 |
| M11A-309 | 62.9 | 11.30 | 16.00 | 11.10 | 1.75 | .05 | <.15 | 4.40 | .32 | .06 |
| M11B-222 | 75.4 | 10.20 | 5.76 | 4.48 | .77 | .05 | .51 | 5.69 | .31 | <.05 |
| M11B-246 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| M11B-249 | 52.7 | 13.40 | 21.80 | 17.50 | 2.81 | .19 | <.15 | 6.43 | .59 | .14 |
| M11B-264 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| M11B-268 | 38.7 | 10.60 | 27.90 | 23.40 | 6.16 | .71 | <.15 | 5.70 | 1.81 | .45 |
| M11B-497 | 54.2 | 15.20 | 17.80 | 14.40 | 2.14 | .35 | .18 | 7.29 | .96 | .27 |
| M11B-520 | 46.5 | 12.90 | 27.50 | 21.90 | 3.17 | .29 | <.15 | 6.83 | .73 | .23 |
| M11B-687 | -- | -- | -- | 23.80 | -- | -- | -- | -- | -- | -- |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | MnO % | LOI 900C | Total C% | Total S% | Al %-s | Ca %-s | Fe %-s | K %-s | Mg %-s |
|---|---|---|---|---|---|---|---|---|---|
| IC181064 | .04 | 3.41 | <.01 | 2.59 | 6.3 | .150 | 7.7 | 3.30 | .81 |
| IC181068 | .03 | 2.07 | <.01 | 1.32 | 5.7 | .130 | 6.0 | 3.20 | .73 |
| IC181074 | .04 | 2.64 | <.01 | 1.40 | 6.4 | .140 | 7.0 | 3.30 | .82 |
| IC181079 | .07 | 3.68 | <.01 | 2.69 | 6.5 | .140 | 10.0 | 3.00 | 1.20 |
| IC181080 | .04 | 2.76 | <.01 | 1.74 | 7.2 | .140 | 7.1 | 4.00 | .84 |
| IC181081 | .04 | 2.32 | <.01 | .96 | 6.5 | .140 | 5.8 | 3.00 | .74 |
| IC3-064 | <.02 | 3.36 | <.01 | .93 | 7.0 | .090 | 6.3 | 2.80 | 1.30 |
| IC3-083 | .05 | 4.84 | <.01 | 3.36 | 6.6 | .040 | 9.0 | 3.10 | 1.40 |
| IC3-102 | .09 | 3.11 | <.01 | .47 | 7.5 | .100 | 8.9 | 3.50 | 1.70 |
| IC3-072 | <.02 | 6.78 | .02 | 5.64 | 4.2 | .090 | 11.0 | .77 | 1.10 |
| M10A-190 | <.02 | 1.49 | <.01 | .04 | 10.0 | .320 | 11.0 | 6.40 | 1.40 |
| M10A-197 | .07 | 2.79 | .42 | .32 | 5.9 | .170 | 12.0 | 4.00 | 1.90 |
| M10A-210 | <.02 | .85 | .04 | .63 | 3.5 | .100 | 9.3 | 2.10 | .81 |
| M10A-214 | <.02 | 1.05 | <.01 | .09 | 6.1 | .070 | 7.9 | 4.10 | .74 |
| M10A-258 | <.02 | 2.08 | .10 | .65 | 8.2 | .190 | 13.0 | 5.50 | 1.10 |
| M10A-303 | .02 | 1.79 | <.01 | .95 | 7.2 | .200 | 15.0 | 5.10 | 1.20 |
| M10A-348 | .05 | 1.34 | .08 | .64 | 6.4 | .050 | 16.0 | 5.00 | 1.80 |
| M10A-360 | <.02 | 1.53 | .02 | .14 | 6.6 | .040 | 9.0 | 4.20 | .85 |
| M10B-326 | <.02 | 1.14 | .07 | .01 | 6.5 | .040 | 6.3 | 4.70 | .58 |
| M10B-332 | <.02 | 1.86 | .10 | .09 | 7.5 | .060 | 9.7 | 4.70 | .79 |
| M10B-333 | -- | -- | .32 | 23.40 | 2.6 | .170 | 31.0 | 1.60 | .64 |
| M10B-337 | <.02 | 3.07 | .19 | 2.06 | 4.3 | .150 | 12.0 | 3.00 | .90 |
| M10B-339 | .08 | 2.66 | .63 | .17 | 4.7 | .150 | 10.0 | 3.60 | 1.50 |
| M10B-498 | <.02 | 1.86 | .38 | .03 | 6.3 | .060 | 7.6 | 3.80 | .78 |
| M10B-499 | .03 | 2.05 | .50 | .32 | 5.4 | .060 | 8.1 | 3.40 | .83 |
| M10B-505 | <.02 | 1.55 | .18 | <.01 | 5.5 | .040 | 9.1 | 3.60 | .93 |
| M11A-138 | <.02 | 1.34 | <.01 | .03 | 5.7 | .090 | 11.0 | 3.90 | 1.10 |
| M11A-147 | <.02 | 1.13 | .02 | <.01 | 3.6 | .010 | 5.9 | 2.20 | .55 |
| M11A-153 | .06 | 1.59 | .36 | .67 | 3.5 | .160 | 9.7 | 2.40 | 1.80 |
| M11A-159 | <.02 | 1.49 | .02 | .13 | 6.1 | .070 | 8.8 | 3.90 | .93 |
| M11A-160 | <.02 | 1.47 | <.01 | .62 | 5.3 | .070 | 7.9 | 3.40 | .77 |
| M11A-233 | <.02 | 1.78 | .02 | <.01 | 8.7 | .090 | 7.1 | 4.60 | .66 |
| M11A-234 | <.02 | 1.84 | .02 | <.01 | 8.8 | .130 | 6.7 | 4.10 | .63 |
| M11A-248 | <.02 | 1.45 | .03 | <.01 | 7.2 | .170 | 8.7 | 4.70 | 1.40 |
| M11A-258 | .04 | 3.54 | .27 | .02 | 10.0 | .040 | 16.0 | 5.70 | 6.30 |
| M11A-304 | <.02 | .95 | <.01 | .17 | 5.7 | .050 | 8.8 | 3.60 | .96 |
| M11A-309 | .04 | 2.57 | .10 | 1.36 | 5.8 | .040 | 11.0 | 3.50 | .99 |
| M11B-222 | <.02 | .83 | <.01 | .04 | 5.5 | .040 | 4.2 | 4.50 | .45 |
| M11B-246 | -- | -- | .01 | 1.54 | 6.2 | .100 | 11.0 | 3.80 | 1.20 |
| M11B-249 | .03 | .94 | <.01 | .05 | 7.1 | .140 | 15.0 | 5.20 | 1.60 |
| M11B-264 | -- | -- | .17 | 3.24 | 3.4 | .060 | 11.0 | 2.00 | .98 |
| M11B-268 | .34 | 7.09 | 1.85 | .01 | 5.9 | .520 | 20.0 | 4.80 | 3.60 |
| M11B-497 | <.02 | 1.28 | <.01 | <.01 | 7.9 | .250 | 12.0 | 5.70 | 1.30 |
| M11B-520 | .04 | 1.09 | .10 | .33 | 6.8 | .210 | 19.0 | 5.50 | 1.80 |
| M11B-687 | -- | -- | .10 | .57 | 7.8 | .210 | 20.0 | 6.60 | 2.80 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | Na %-s | P %-s | Ti %-s | Ag ppm-s | As ppm-s | Au ppm | B ppm-s | Ba ppm-s | Be ppm-s | Bi ppm-s |
|---|---|---|---|---|---|---|---|---|---|---|
| IC181064 | .640 | .040 | .27 | <2 | 140 | N | 30 | 280 | <1 | <10 |
| IC181068 | .350 | .030 | .23 | <2 | 60 | N | <20 | 52 | <1 | <10 |
| IC181074 | .700 | .040 | .27 | <2 | 70 | N | 20 | 490 | <1 | 10 |
| IC181079 | .700 | .040 | .30 | <2 | 80 | N | 20 | 30 | <1 | 10 |
| IC181080 | .750 | .040 | .28 | <2 | 90 | N | 20 | 74 | <1 | <10 |
| IC181081 | .750 | .040 | .28 | <2 | 60 | <.050 | 20 | 68 | <1 | <10 |
| IC3-064 | .360 | .050 | .29 | <2 | 190 | N | 880 | 510 | 1 | <10 |
| IC3-083 | .440 | .030 | .33 | <2 | 90 | N | 500 | 200 | 1 | <10 |
| IC3-102 | .200 | .040 | .31 | <2 | <10 | N | 90 | 370 | <1 | <10 |
| IC3-072 | .220 | .030 | .17 | 2 | 610 | .050 | 3,860 | 150 | <1 | 50 |
| M10A-190 | 1.400 | .140 | .79 | <2 | 10 | N | 30 | 1,400 | 3 | <10 |
| M10A-197 | .400 | .070 | .47 | <2 | 780 | N | 30 | 570 | 1 | <10 |
| M10A-210 | .030 | .030 | .14 | <2 | 6,200 | .150 | <20 | 360 | <1 | 20 |
| M10A-214 | .340 | .030 | .24 | <2 | 250 | N | 40 | 690 | 1 | <10 |
| M10A-258 | .050 | .090 | .53 | <2 | 730 | N | 30 | 870 | 2 | 10 |
| M10A-303 | .040 | .090 | .45 | <2 | 3,200 | .100 | 20 | 760 | 1 | <10 |
| M10A-348 | .020 | .020 | .28 | 2 | 2,400 | .100 | <20 | 500 | <1 | <10 |
| M10A-360 | .050 | .020 | .25 | <2 | 3,500 | .050 | 30 | 620 | 1 | <10 |
| M10B-326 | 1.300 | .020 | .22 | <2 | 90 | N | 30 | 1,000 | 1 | <10 |
| M10B-332 | 1.400 | .020 | .25 | <2 | 20 | N | 40 | 1,100 | 3 | <10 |
| M10B-333 | .010 | .090 | .06 | <2 | 2,800 | <.050 | 40 | 80 | 6 | 110 |
| M10B-337 | .070 | .070 | .16 | <2 | 2,700 | N | 50 | 480 | 1 | 30 |
| M10B-339 | .270 | .060 | .43 | <2 | 340 | N | 40 | 540 | 2 | <10 |
| M10B-498 | .120 | .030 | .27 | <2 | 430 | N | 90 | 590 | 2 | <10 |
| M10B-499 | .060 | .020 | .24 | <2 | 3,200 | .050 | 140 | 500 | 1 | <10 |
| M10B-505 | .150 | .020 | .23 | <2 | 100 | N | 70 | 510 | 1 | <10 |
| M11A-138 | .090 | .040 | .17 | 2 | 1,600 | .050 | 20 | 550 | 1 | <10 |
| M11A-147 | .110 | .009 | .11 | <2 | 150 | N | 40 | 350 | <1 | <10 |
| M11A-153 | .030 | .050 | .35 | <2 | 10,000 | .150 | <20 | 240 | 1 | 40 |
| M11A-159 | .320 | .030 | .25 | <2 | 160 | N | 70 | 590 | 2 | <10 |
| M11A-160 | .090 | .030 | .22 | <2 | 330 | N | 40 | 520 | 2 | <10 |
| M11A-233 | .700 | .040 | .37 | <2 | 20 | N | 50 | 740 | 3 | <10 |
| M11A-234 | .840 | .050 | .35 | <2 | <10 | N | 40 | 730 | 3 | <10 |
| M11A-248 | .090 | .080 | .49 | <2 | <10 | N | 30 | 600 | 2 | <10 |
| M11A-258 | .040 | .030 | .56 | <2 | 700 | N | 180 | 280 | 1 | <10 |
| M11A-304 | .090 | .020 | .23 | <2 | 2,400 | .100 | <20 | 470 | 1 | <10 |
| M11A-309 | .060 | .020 | .20 | <2 | 660 | N | 50 | 450 | 1 | <10 |
| M11B-222 | .410 | .020 | .19 | <2 | 20 | N | 50 | 940 | 1 | <10 |
| M11B-246 | .080 | .030 | .16 | <2 | 28,000 | .400 | <20 | 98 | 3 | 30 |
| M11B-249 | .050 | .060 | .35 | <2 | 220 | N | <20 | 870 | 2 | <10 |
| M11B-264 | .200 | .020 | .13 | <2 | 9,700 | .100 | 20 | 43 | 1 | 40 |
| M11B-268 | .030 | .200 | 1.00 | <2 | 210 | N | 20 | 350 | 3 | <10 |
| M11B-497 | .170 | .110 | .55 | <2 | 20 | N | 30 | 890 | 2 | <10 |
| M11B-520 | .020 | .100 | .42 | <2 | 750 | N | <20 | 680 | 2 | <10 |
| M11B-687 | .020 | .090 | .35 | <2 | 170 | N | <20 | 550 | <1 | <10 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | Ce ppm-s | Co ppm-s | Cr ppm-s | Cu ppm-s | Eu ppm-s | Ga ppm-s | La ppm-s | Li ppm-s | Mn ppm-s | Mo ppm-s |
|---|---|---|---|---|---|---|---|---|---|---|
| IC181064 | 120 | 1,300 | 130 | 12 | <2 | 26 | 61 | 17 | 350 | 10 |
| IC181068 | 110 | 650 | 39 | 2 | <2 | 22 | 50 | 16 | 310 | 9 |
| IC181074 | 110 | 690 | 120 | 5 | <2 | 26 | 56 | 16 | 380 | 9 |
| IC181079 | 120 | 1,200 | 54 | 27 | 2 | 30 | 61 | 19 | 560 | 4 |
| IC181080 | 130 | 880 | 54 | 6 | <2 | 28 | 55 | 20 | 340 | 16 |
| IC181081 | 110 | 490 | 54 | 3 | <2 | 25 | 54 | 16 | 340 | 16 |
| IC3-064 | 17 | 540 | 52 | 2,700 | <2 | 25 | 7 | 24 | 160 | 3 |
| IC3-083 | 69 | 1,900 | 51 | 5,700 | <2 | 35 | 30 | 23 | 450 | 33 |
| IC3-102 | 270 | 290 | 45 | 2,300 | 3 | 42 | 120 | 29 | 690 | 2 |
| IC3-072 | 68 | 2,400 | 200 | 3,600 | <2 | 18 | 34 | 9 | 270 | 10 |
| M10A-190 | 46 | 130 | 15 | 29 | <2 | 28 | 24 | 51 | 220 | 7 |
| M10A-197 | 34 | 780 | 160 | 100 | <2 | 37 | 15 | 39 | 580 | <2 |
| M10A-210 | 10 | 5,700 | 25 | 2,000 | <2 | 34 | 5 | 31 | 150 | <2 |
| M10A-214 | 31 | 250 | 36 | 530 | <2 | 40 | 13 | 33 | 98 | <2 |
| M10A-258 | 15 | 600 | 29 | 420 | <2 | 40 | 7 | 47 | 250 | 3 |
| M10A-303 | 25 | 2,600 | 23 | 510 | <2 | 48 | 10 | 54 | 280 | <2 |
| M10A-348 | 81 | 2,100 | 31 | 200 | <2 | 87 | 38 | 69 | 470 | <2 |
| M10A-360 | 44 | 2,300 | 30 | 41 | <2 | 42 | 19 | 36 | 160 | <2 |
| M10B-326 | 87 | 61 | 32 | 32 | <2 | 27 | 39 | 22 | 130 | <2 |
| M10B-332 | 30 | 100 | 88 | 45 | <2 | 43 | 15 | 30 | 150 | <2 |
| M10B-333 | 30 | 2,900 | 100 | 13,000 | <2 | 31 | 14 | 18 | 180 | 5 |
| M10B-337 | 110 | 2,200 | 130 | 1,800 | 2 | 39 | 53 | 30 | 210 | 3 |
| M10B-339 | 40 | 240 | 140 | 97 | <2 | 27 | 19 | 36 | 670 | <2 |
| M10B-498 | 88 | 380 | 31 | 68 | <2 | 30 | 38 | 30 | 180 | <2 |
| M10B-499 | 49 | 2,600 | 95 | 300 | <2 | 32 | 24 | 29 | 260 | <2 |
| M10B-505 | 38 | 130 | 85 | 310 | <2 | 36 | 18 | 29 | 180 | <2 |
| M11A-138 | 25 | 780 | 19 | 550 | <2 | 49 | 11 | 43 | 240 | <2 |
| M11A-147 | 35 | 120 | 130 | 120 | <2 | 27 | 16 | 20 | 140 | 2 |
| M11A-153 | 14 | 7,700 | 260 | 4,700 | <2 | 26 | 7 | 34 | 510 | <2 |
| M11A-159 | 220 | 190 | 94 | 1,300 | 4 | 41 | 110 | 30 | 190 | <2 |
| M11A-160 | 130 | 350 | 26 | 4,800 | <2 | 34 | 60 | 28 | 150 | <2 |
| M11A-233 | 88 | 59 | 31 | 4 | <2 | 27 | 40 | 28 | 140 | <2 |
| M11A-234 | 74 | 62 | 30 | 8 | <2 | 26 | 33 | 28 | 140 | <2 |
| M11A-248 | 8 | 67 | 27 | <1 | <2 | 34 | 3 | 35 | 200 | <2 |
| M11A-258 | 110 | 310 | 79 | 1 | <2 | 43 | 48 | 95 | 390 | <2 |
| M11A-304 | 36 | 2,000 | 33 | 58 | <2 | 39 | 17 | 39 | 200 | <2 |
| M11A-309 | 23 | 700 | 110 | 2,500 | <2 | 64 | 12 | 34 | 320 | 3 |
| M11B-222 | 84 | 54 | 30 | 250 | <2 | 16 | 38 | 16 | 110 | <2 |
| M11B-246 | 15 | >25,000 | 34 | 310 | <2 | 40 | 7 | 36 | 200 | 3 |
| M11B-249 | 13 | 270 | 23 | 10 | <2 | 72 | 5 | 60 | 310 | <2 |
| M11B-264 | 8 | 8,200 | 23 | 4,000 | <2 | 40 | 4 | 24 | 240 | 2 |
| M11B-268 | 52 | 220 | 480 | 33 | <2 | 23 | 28 | 60 | 2,400 | <2 |
| M11B-497 | 31 | 58 | 21 | 24 | <2 | 39 | 14 | 52 | 220 | <2 |
| M11B-520 | 7 | 490 | 14 | 280 | <2 | 73 | 3 | 81 | 360 | <2 |
| M11B-687 | 30 | 98 | 59 | 130 | <2 | 110 | 13 | 94 | 440 | <2 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | Nb ppm-s | Nd ppm-s | Ni ppm-s | Pb ppm-s | Sc ppm-s | Se ppm | Sr ppm-s | Th ppm-s | V ppm-s | Y ppm-s |
|---|---|---|---|---|---|---|---|---|---|---|
| IC181064 | 7 | 55 | 33 | 9 | 10 | 7.60 | 35 | 11 | 39 | 24 |
| IC181068 | 8 | 45 | 17 | 6 | 7 | 3.80 | 29 | 7 | 31 | 23 |
| IC181074 | 6 | 54 | 24 | 8 | 8 | 4.70 | 31 | 12 | 39 | 16 |
| IC181079 | -- | 62 | 41 | 12 | 10 | 14.00 | 28 | 10 | 49 | 20 |
| IC181080 | 8 | 56 | 27 | 10 | 8 | 5.10 | 34 | 9 | 41 | 19 |
| IC181081 | -- | 50 | 19 | 7 | 8 | 6.30 | 34 | 9 | 41 | 16 |
| IC3-064 | 9 | 12 | 36 | 9 | 11 | 4.10 | 29 | 12 | 53 | 9 |
| IC3-083 | 14 | 31 | 93 | 22 | 13 | 11.00 | 28 | 12 | 48 | 14 |
| IC3-102 | 13 | 110 | 34 | 7 | 11 | 2.10 | 24 | 16 | 55 | 20 |
| IC3-072 | 7 | 30 | 76 | 110 | 9 | 31.00 | 88 | 8 | 50 | 12 |
| M10A-190 | -- | 27 | 50 | 350 | 22 | <.50 | 46 | 7 | 190 | 8 |
| M10A-197 | 9 | 17 | 110 | <4 | 12 | -- | 19 | 8 | 84 | 11 |
| M10A-210 | -- | <4 | 300 | 6 | 6 | 3.40 | 6 | 4 | 24 | 7 |
| M10A-214 | 6 | 13 | 20 | <4 | 9 | -- | 20 | 11 | 39 | 5 |
| M10A-258 | 12 | 5 | 82 | <4 | 14 | -- | 10 | 5 | 89 | 6 |
| M10A-303 | 8 | 10 | 81 | <4 | 12 | -- | 9 | 8 | 90 | 5 |
| M10A-348 | 9 | 31 | 110 | 5 | 15 | -- | 3 | 11 | 52 | 7 |
| M10A-360 | 7 | 17 | 35 | <4 | 8 | -- | 9 | 14 | 36 | 12 |
| M10B-326 | 6 | 37 | 21 | <4 | 7 | -- | 60 | 14 | 34 | 4 |
| M10B-332 | 5 | 14 | 27 | <4 | 9 | <.10 | 53 | 6 | 44 | 4 |
| M10B-333 | 7 | 15 | 930 | <4 | 5 | 68.00 | 4 | 5 | 12 | 28 |
| M10B-337 | 6 | 50 | 190 | <4 | 7 | 6.80 | 11 | 8 | 28 | 13 |
| M10B-339 | 11 | 17 | 89 | <4 | 9 | -- | 17 | 6 | 67 | 6 |
| M10B-498 | 7 | 35 | 21 | <4 | 8 | -- | 8 | 21 | 38 | 8 |
| M10B-499 | 7 | 21 | 87 | <4 | 7 | 1.20 | 7 | 7 | 30 | 6 |
| M10B-505 | 7 | 17 | 15 | <4 | 8 | .20 | 6 | 9 | 32 | 3 |
| M11A-138 | 7 | 11 | 48 | <4 | 8 | -- | 9 | 9 | 31 | 9 |
| M11A-147 | <4 | 15 | 25 | <4 | 4 | .30 | 6 | 5 | 18 | 6 |
| M11A-153 | -- | 10 | 520 | 12 | 9 | 5.40 | 6 | 5 | 71 | 18 |
| M11A-159 | 6 | 99 | 25 | <4 | 10 | .70 | 16 | 13 | 36 | 17 |
| M11A-160 | 7 | 57 | 50 | <4 | 8 | -- | 12 | 13 | 35 | 11 |
| M11A-233 | 11 | 39 | 13 | <4 | 12 | -- | 20 | 16 | 58 | 6 |
| M11A-234 | 10 | 29 | 14 | <4 | 12 | -- | 21 | 12 | 53 | 6 |
| M11A-248 | 7 | <4 | 10 | <4 | 15 | -- | 12 | <4 | 110 | 3 |
| M11A-258 | 22 | 48 | 510 | 4 | 12 | -- | <2 | 29 | 64 | 14 |
| M11A-304 | 6 | 16 | 35 | 6 | 8 | -- | 10 | 14 | 37 | 7 |
| M11A-309 | 5 | 12 | 17 | <4 | 9 | <10.00 | 9 | 16 | 35 | 5 |
| M11B-222 | 4 | 36 | 24 | <4 | 6 | -- | 86 | 10 | 29 | 6 |
| M11B-246 | -- | 9 | 750 | <4 | 8 | 11.00 | 17 | 12 | 33 | 20 |
| M11B-249 | 9 | 7 | 22 | <4 | 11 | -- | 10 | 16 | 59 | 6 |
| M11B-264 | -- | 5 | 590 | 5 | 6 | 12.00 | 7 | 5 | 25 | 9 |
| M11B-268 | 29 | 24 | 200 | <4 | 20 | -- | 13 | <4 | 180 | 10 |
| M11B-497 | 7 | 18 | 18 | <4 | 17 | -- | 18 | 10 | 150 | 6 |
| M11B-520 | 9 | <4 | 94 | <4 | 12 | -- | 6 | 6 | 94 | 4 |
| M11B-687 | 16 | 11 | 220 | <4 | 28 | -- | 8 | 6 | 110 | 4 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | Yb ppm-s | Zn ppm-s | Zr ppm-s | Ft north | Ft east | Elev ft | Rel ft | Lithol | Fabric | Oretyp | Lode |
|---|---|---|---|---|---|---|---|---|---|---|---|
| IC181064 | 3 | 23 | 203 | 6,301 | 3,750 | 5,865 | 5 | 20 | 10 | 60 | 1 |
| IC181068 | 2 | 18 | 161 | 6,298 | 3,750 | 5,861 | 1 | 20 | 10 | 60 | 1 |
| IC181074 | 2 | 23 | 196 | 6,296 | 3,750 | 5,855 | 0 | 20 | 32 | 43 | 1 |
| IC181079 | 3 | 35 | 173 | 6,292 | 3,750 | 5,852 | -1 | 20 | 10 | 44 | 1 |
| IC181080 | 3 | 22 | 215 | 6,291 | 3,750 | 5,851 | -2 | 20 | 10 | 70 | 1 |
| IC181081 | 2 | 19 | 239 | 6,291 | 3,750 | 5,850 | -3 | 20 | 10 | 70 | 1 |
| IC3-064 | 1 | 53 | 254 | 5,770 | 5,300 | 6,627 | 5 | 20 | 14 | 23 | 1 |
| IC3-083 | 2 | 69 | 269 | 5,767 | 5,300 | 6,607 | 0 | 20 | 10 | 72 | 1 |
| IC3-102 | 2 | 71 | 236 | 5,765 | 5,300 | 6,589 | -10 | 20 | 10 | 22 | 1 |
| IC3-072 | 2 | 50 | 146 | 5,768 | 5,300 | 6,619 | 0 | 20 | 20 | 40 | 1 |
| M10A-190 | 2 | 33 | 183 | 1,200 | 412 | 7,153 | 12 | 50 | 10 | 60 | 5 |
| M10A-197 | 2 | 27 | 213 | 1,200 | 408 | 7,149 | 6 | 50 | 10 | 50 | 5 |
| M10A-210 | <1 | 21 | 110 | 1,200 | 404 | 7,135 | 0 | 80 | 20 | 30 | 5 |
| M10A-214 | <1 | 22 | 222 | 1,200 | 401 | 7,133 | -3 | 20 | 10 | 70 | 5 |
| M10A-258 | 2 | 25 | 230 | 1,200 | 367 | 7,109 | -3 | 50 | 10 | 60 | 6 |
| M10A-303 | 2 | 34 | 189 | 1,200 | 330 | 7,078 | 0 | 40 | 10 | 60 | 6 |
| M10A-348 | 1 | 44 | 239 | 1,200 | 294 | 7,052 | -6 | 40 | 10 | 60 | 6 |
| M10A-360 | 2 | 29 | 222 | 1,200 | 386 | 7,047 | -17 | 20 | 10 | 70 | 6 |
| M10B-326 | <1 | 16 | 211 | 1,200 | 426 | 6,986 | -- | 30 | 20 | 80 | 5 |
| M10B-332 | 1 | 17 | 206 | 1,200 | 422 | 6,980 | -- | 20 | 10 | 60 | 4 |
| M10B-333 | 3 | 38 | 60 | 1,200 | 421 | 6,979 | -- | 50 | 24 | 20 | 4 |
| M10B-337 | 1 | 22 | 115 | 1,200 | 420 | 6,975 | -- | 50 | 24 | 30 | 4 |
| M10B-339 | 1 | 18 | 161 | 1,200 | 419 | 6,974 | -- | 20 | 10 | 70 | 5 |
| M10B-498 | 1 | 24 | 301 | 1,200 | 339 | 6,833 | -- | 10 | 10 | 60 | 6 |
| M10B-499 | 1 | 63 | 207 | 1,200 | 339 | 6,832 | -- | 30 | 10 | 10 | 7 |
| M10B-505 | <1 | 26 | 185 | 1,200 | 336 | 6,829 | -- | 20 | 10 | 70 | 7 |
| M11A-138 | 1 | 25 | 171 | 1,400 | 436 | 7,184 | 12 | 40 | 10 | 60 | 4 |
| M11A-147 | <1 | 25 | 97 | 1,400 | 426 | 7,172 | 4 | 40 | 20 | 60 | 5 |
| M11A-153 | 2 | 30 | 90 | 1,410 | 423 | 7,169 | 0 | 50 | 24 | 30 | 5 |
| M11A-159 | 1 | 25 | 181 | 1,400 | 419 | 7,165 | -6 | 30 | 10 | 70 | 5 |
| M11A-160 | 1 | 21 | 139 | 1,400 | 418 | 7,166 | -7 | 20 | 10 | 70 | 5 |
| M11A-233 | 2 | 13 | 262 | 1,400 | 364 | 7,116 | -76 | 10 | 10 | 80 | 6 |
| M11A-234 | 2 | 12 | 260 | 1,410 | 363 | 7,115 | -77 | 10 | 10 | 80 | 6 |
| M11A-248 | 1 | 22 | 150 | 1,400 | 353 | 7,108 | -92 | 10 | 10 | 80 | 6 |
| M11A-258 | 3 | 36 | 541 | 1,400 | 347 | 7,102 | -100 | 50 | 10 | 80 | 6 |
| M11A-304 | <1 | 17 | 214 | 1,410 | 315 | 7,065 | 0 | 30 | 32 | 10 | 6 |
| M11A-309 | 1 | 28 | 161 | 1,400 | 312 | 7,062 | -3 | 30 | 10 | 70 | 7 |
| M11B-222 | <1 | 11 | 217 | 1,400 | 469 | 7,066 | 18 | 30 | 20 | 80 | 6 |
| M11B-246 | 3 | 18 | 158 | 1,390 | 463 | 7,047 | 0 | 50 | 24 | 10 | 5 |
| M11B-249 | 1 | 29 | 256 | 1,390 | 461 | 7,043 | -2 | 50 | 10 | 60 | 5 |
| M11B-264 | 1 | 20 | 102 | 1,390 | 458 | 7,028 | 0 | 40 | 23 | 30 | 5 |
| M11B-268 | 1 | 26 | 158 | 1,400 | 456 | 7,026 | -6 | 10 | 10 | 10 | 5 |
| M11B-497 | 2 | 29 | 168 | 1,390 | 385 | 6,804 | 3 | 20 | 10 | 50 | 6 |
| M11B-520 | 1 | 37 | 145 | 1,390 | 378 | 6,788 | 2 | 50 | 10 | 60 | 6 |
| M11B-687 | 2 | 60 | 409 | 1,390 | 316 | 6,628 | -3 | 50 | 32 | 70 | 6 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | SiO2 % | Al2O3 % | FeTO3 % | FeO % | MgO % | CaO % | Na2O % | K2O % | TiO2 % | P2O5 % |
|---|---|---|---|---|---|---|---|---|---|---|
| M12A-101 | 56.4 | 11.00 | 20.70 | 15.20 | 2.75 | <.02 | <.15 | 5.40 | .43 | <.05 |
| M12A-103 | 63.7 | 7.38 | 17.00 | 9.22 | 1.70 | <.02 | .18 | 3.31 | .25 | .06 |
| M12A-105 | -- | -- | -- | 6.24 | -- | -- | -- | -- | -- | -- |
| M12A-336 | 72.5 | 12.10 | 6.47 | 4.53 | .98 | .08 | .82 | 5.07 | .33 | .07 |
| M12A-337 | 74.2 | 11.90 | 5.48 | 3.80 | 1.13 | .04 | .61 | 4.39 | .28 | .05 |
| M12A-340 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| M12A-341 | -- | -- | -- | 10.90 | -- | -- | -- | -- | -- | -- |
| M12A-343 | 69.0 | 8.78 | 13.70 | 10.30 | 1.74 | .06 | .50 | 4.45 | .30 | .06 |
| M12A-344 | 71.1 | 8.02 | 13.00 | 10.30 | 1.72 | .03 | .17 | 4.36 | .25 | <.05 |
| M12A-610 | -- | -- | -- | 9.95 | -- | -- | -- | -- | -- | -- |
| M12A-614 | 63.2 | 9.20 | 18.00 | 12.40 | 1.68 | .21 | <.15 | 4.53 | .26 | .18 |
| M12A-830 | 57.9 | 10.60 | 21.10 | 17.50 | 2.61 | .05 | <.15 | 5.68 | .38 | <.05 |
| M12A-836 | -- | -- | -- | 9.68 | -- | -- | -- | -- | -- | -- |
| M12A-840 | 72.3 | 5.87 | 11.90 | 9.15 | 1.83 | .27 | <.15 | 3.19 | .14 | .32 |
| M12A-842 | 55.6 | 10.30 | 20.80 | 17.10 | 3.57 | .22 | <.15 | 5.74 | .48 | .19 |
| M12A-847 | 72.7 | 6.26 | 13.30 | 10.50 | 2.00 | .12 | <.15 | 3.45 | .19 | .11 |
| M13A-229 | 49.5 | 16.60 | 21.00 | 17.20 | 1.46 | .54 | <.15 | 7.33 | 1.37 | .39 |
| M13A-254 | 71.3 | 8.88 | 12.60 | 9.64 | 1.03 | .04 | .15 | 3.88 | .29 | <.05 |
| M13A-258 | -- | -- | -- | 9.12 | -- | -- | -- | -- | -- | -- |
| M13A-262 | 60.6 | 11.10 | 19.20 | 15.40 | 1.72 | .10 | .21 | 5.24 | .41 | .09 |
| M13A-306 | 67.7 | 12.00 | 11.00 | 8.38 | 1.12 | .26 | <.15 | 4.96 | .58 | .20 |
| M13A-307 | 57.6 | 15.30 | 15.60 | 12.30 | 1.54 | .43 | <.15 | 6.45 | .84 | .32 |
| M13A-313 | 63.0 | 5.78 | 17.00 | 8.75 | 1.29 | .14 | .41 | 2.13 | .13 | .10 |
| M13A-314 | 39.7 | 3.00 | 36.90 | -- | .74 | .07 | .22 | 1.21 | .04 | .09 |
| M13A-317 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| M13A-319 | 49.5 | 15.40 | 21.90 | 17.30 | 2.01 | .30 | <.15 | 7.18 | .89 | .24 |
| M13A-320 | 60.4 | 12.00 | 17.70 | 13.60 | 1.64 | .22 | <.15 | 5.50 | .57 | .17 |
| M13A-365 | 62.6 | 13.30 | 14.00 | 11.30 | 1.42 | .30 | <.15 | 5.77 | .64 | .23 |
| M13A-366 | 62.8 | 13.10 | 13.80 | 11.00 | 1.37 | .50 | <.15 | 5.67 | .63 | .39 |
| M14B-280 | 86.6 | 2.98 | 6.38 | 4.12 | .73 | .17 | <.15 | 1.55 | .07 | .15 |
| M14B-340 | 53.9 | 11.50 | 22.20 | 17.00 | 2.95 | .23 | <.15 | 6.13 | .31 | .24 |
| M14B-348 | -- | -- | -- | 10.70 | -- | -- | -- | -- | -- | -- |
| M14B-352 | 66.9 | 11.50 | 12.10 | 8.23 | 1.44 | .15 | <.15 | 4.97 | .31 | .17 |
| M14B-356 | -- | -- | -- | 12.20 | -- | -- | -- | -- | -- | -- |
| M14B-358 | 45.8 | 12.50 | 23.20 | 12.30 | 2.99 | .03 | <.15 | 5.48 | .48 | .34 |
| M1A-528 | 68.2 | 12.90 | 9.79 | 7.49 | 1.12 | .13 | .71 | 4.75 | .43 | .10 |
| M1A-647 | 62.9 | 9.19 | 17.90 | 14.80 | 3.12 | .16 | <.15 | 5.06 | .26 | .15 |
| M1A-697 | 66.6 | 8.78 | 13.10 | 10.30 | 4.87 | .15 | <.15 | 4.67 | .31 | .12 |
| M1A-698 | 67.4 | 8.38 | 12.60 | 10.30 | 4.64 | .14 | <.15 | 4.47 | .30 | .12 |
| M1A-708 | 45.8 | 16.60 | 14.70 | 12.30 | 5.99 | 1.87 | 3.31 | 5.45 | 3.44 | 1.12 |
| M1A-735 | 43.2 | 15.10 | 18.80 | 15.80 | 5.60 | 1.43 | 2.40 | 6.02 | 3.20 | .97 |
| M3A-048 | 60.8 | 12.40 | 16.50 | 12.10 | 1.94 | .04 | <.15 | 6.21 | .44 | <.05 |
| M3A-065 | 66.5 | 13.10 | 10.50 | 8.00 | 1.17 | .07 | .18 | 6.23 | .52 | .08 |
| M4A-260 | 72.1 | 9.84 | 9.45 | 7.46 | 1.14 | .04 | .27 | 5.65 | .28 | .06 |
| M4A-281 | 63.2 | 9.81 | 16.80 | 13.30 | 2.20 | .12 | <.15 | 4.97 | .34 | .11 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | MnO % | LOI 900C | Total C% | Total S% | Al %-s | Ca %-s | Fe %-s | K %-s | Mg %-s |
|---|---|---|---|---|---|---|---|---|---|
| M12A-101 | <.02 | 1.89 | .08 | .34 | 6.0 | <.005 | 15.0 | 4.40 | 1.70 |
| M12A-103 | <.02 | 5.11 | .10 | 2.36 | 3.8 | <.005 | 12.0 | 2.60 | 1.00 |
| M12A-105 | -- | -- | .05 | 2.28 | 2.6 | .010 | 6.6 | 1.60 | .57 |
| M12A-336 | <.02 | 1.48 | .04 | .22 | 6.4 | .050 | 4.4 | 3.90 | .54 |
| M12A-337 | <.02 | 1.83 | .08 | <.01 | 6.2 | .040 | 3.8 | 3.40 | .66 |
| M12A-340 | -- | -- | .92 | 6.32 | 4.1 | .160 | 17.0 | 2.30 | 1.10 |
| M12A-341 | -- | -- | .73 | 12.90 | 2.8 | .090 | 21.0 | 1.50 | .77 |
| M12A-343 | <.02 | 1.10 | <.01 | .31 | 4.6 | .050 | 9.4 | 3.50 | 1.00 |
| M12A-344 | <.02 | .63 | <.01 | .13 | 4.4 | .030 | 9.4 | 3.50 | 1.00 |
| M12A-610 | -- | -- | .65 | 16.40 | 2.0 | .150 | 25.0 | 1.30 | .52 |
| M12A-614 | <.02 | 2.45 | .11 | 1.42 | 4.8 | .150 | 12.0 | 3.60 | .97 |
| M12A-830 | .03 | .60 | .02 | .07 | 5.7 | .040 | 15.0 | 4.50 | 1.60 |
| M12A-836 | -- | -- | .24 | 2.75 | 3.1 | .230 | 11.0 | 2.20 | .93 |
| M12A-840 | .02 | 1.00 | .11 | .38 | 3.1 | .210 | 8.2 | 2.40 | 1.10 |
| M12A-842 | .03 | .79 | .08 | .32 | 5.6 | .150 | 15.0 | 4.60 | 2.10 |
| M12A-847 | .03 | 1.20 | .10 | .08 | 3.2 | .090 | 9.3 | 2.70 | 1.20 |
| M13A-229 | .03 | 1.12 | .02 | <.01 | 8.7 | .390 | 15.0 | 5.70 | .86 |
| M13A-254 | <.02 | 1.96 | .02 | .16 | 4.5 | .030 | 8.5 | 2.90 | .59 |
| M13A-258 | -- | -- | <.01 | 4.91 | 3.1 | .008 | 12.0 | 2.00 | .54 |
| M13A-262 | .03 | .90 | .03 | .04 | 5.8 | .070 | 13.0 | 4.20 | .99 |
| M13A-306 | <.02 | 1.50 | <.01 | .04 | 6.2 | .200 | 7.6 | 3.90 | .63 |
| M13A-307 | .02 | 1.39 | .03 | .08 | 8.2 | .290 | 11.0 | 5.40 | .87 |
| M13A-313 | .06 | 6.65 | .48 | 5.42 | 3.0 | .100 | 12.0 | 1.70 | .75 |
| M13A-314 | .04 | 16.20 | .72 | 20.60 | 1.6 | .050 | 26.0 | .80 | .42 |
| M13A-317 | -- | -- | .06 | .49 | 2.3 | .050 | 22.0 | 1.40 | .38 |
| M13A-319 | .04 | 1.58 | .05 | .05 | 8.0 | .220 | 15.0 | 5.90 | 1.20 |
| M13A-320 | .03 | 1.09 | .02 | .27 | 6.4 | .160 | 12.0 | 4.50 | .94 |
| M13A-365 | <.02 | 1.18 | <.01 | <.01 | 6.9 | .220 | 9.8 | 4.40 | .82 |
| M13A-366 | <.02 | 1.34 | <.01 | .05 | 6.9 | .370 | 9.7 | 4.10 | .82 |
| M14B-280 | <.02 | .82 | <.01 | <.01 | 1.7 | .130 | 4.7 | 1.30 | .47 |
| M14B-340 | .02 | 1.37 | .02 | .04 | 6.1 | .120 | 16.0 | 4.70 | 1.70 |
| M14B-348 | -- | -- | .07 | .66 | 5.1 | .060 | 13.0 | 3.30 | 1.30 |
| M14B-352 | <.02 | 1.99 | .02 | .04 | 6.2 | .100 | 8.8 | 4.00 | .90 |
| M14B-356 | -- | -- | .05 | 3.68 | 5.5 | .020 | 15.0 | 3.80 | 1.60 |
| M14B-358 | <.02 | 5.01 | .06 | .08 | 6.6 | .020 | 16.0 | 4.20 | 1.70 |
| M1A-528 | <.02 | 1.27 | <.01 | <.01 | 6.8 | .090 | 6.6 | 3.80 | .62 |
| M1A-647 | .03 | .99 | <.01 | .08 | 4.8 | .140 | 13.0 | 3.70 | 1.80 |
| M1A-697 | <.02 | 1.20 | .04 | .29 | 4.7 | .110 | 9.3 | 3.40 | 2.80 |
| M1A-698 | <.02 | .97 | .06 | .25 | 4.7 | .110 | 9.2 | 3.80 | 2.90 |
| M1A-708 | .04 | .97 | .05 | .07 | 8.8 | 1.300 | 10.0 | 4.10 | 3.40 |
| M1A-735 | .12 | 1.56 | .26 | .07 | 8.4 | .990 | 13.0 | 5.70 | 3.20 |
| M3A-048 | <.02 | 1.50 | .02 | <.01 | 6.6 | .030 | 12.0 | 4.60 | 1.20 |
| M3A-065 | <.02 | 1.41 | <.01 | <.01 | 6.9 | .060 | 7.4 | 4.50 | .69 |
| M4A-260 | <.02 | .85 | <.01 | .09 | 5.2 | .030 | 6.8 | 4.10 | .68 |
| M4A-281 | <.02 | 1.07 | <.01 | .52 | 5.3 | .090 | 12.0 | 3.70 | 1.30 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | Na %-s | P %-s | Ti %-s | Ag ppm-s | As ppm-s | Au ppm | B ppm-s | Ba ppm-s | Be ppm-s | Bi ppm-s |
|---|---|---|---|---|---|---|---|---|---|---|
| M12A-101 | .040 | .007 | .26 | <2 | 1,200 | .050 | <20 | 480 | <1 | <10 |
| M12A-103 | .090 | .010 | .16 | <2 | 3,100 | .100 | 20 | 300 | <1 | <10 |
| M12A-105 | .020 | .030 | .05 | <2 | 37,000 | 1.000 | <20 | 200 | <1 | 40 |
| M12A-336 | .610 | .020 | .19 | <2 | 60 | N | 30 | 940 | 3 | <10 |
| M12A-337 | .390 | .020 | .16 | <2 | 160 | N | 40 | 680 | 3 | <10 |
| M12A-340 | .070 | .040 | .29 | 3 | 10,000 | .300 | 30 | 23 | 23 | 50 |
| M12A-341 | .020 | .040 | .09 | 4 | 14,000 | .400 | 30 | 180 | 61 | 60 |
| M12A-343 | .290 | .020 | .17 | <2 | 1,300 | N | 40 | 660 | 5 | <10 |
| M12A-344 | .130 | .010 | .16 | <2 | 1,400 | N | 20 | 660 | 3 | <10 |
| M12A-610 | .020 | .070 | .06 | <2 | 1,200 | N | 30 | 140 | <1 | 60 |
| M12A-614 | .050 | .070 | .16 | <2 | 150 | N | 30 | 600 | <1 | <10 |
| M12A-830 | .010 | .020 | .23 | <2 | 850 | N | 90 | 450 | <1 | <10 |
| M12A-836 | .010 | .120 | .10 | <2 | 13,000 | .150 | <20 | 200 | <1 | 40 |
| M12A-840 | .008 | .100 | .10 | <2 | 11,000 | .200 | <20 | 190 | <1 | 260 |
| M12A-842 | .010 | .070 | .28 | <2 | 6,200 | .150 | <20 | 350 | <1 | 100 |
| M12A-847 | .008 | .040 | .12 | <2 | 170 | N | <20 | 210 | <1 | 20 |
| M13A-229 | .110 | .180 | .80 | <2 | 80 | N | 30 | 1,100 | 2 | <10 |
| M13A-254 | .060 | .020 | .18 | <2 | 770 | N | 30 | 420 | 2 | <10 |
| M13A-258 | .020 | <.005 | .10 | 3 | 12,000 | .100 | 20 | 270 | 14 | 30 |
| M13A-262 | .120 | .030 | .25 | <2 | 500 | N | 40 | 530 | 2 | <10 |
| M13A-306 | .060 | .090 | .34 | <2 | 20 | N | 50 | 650 | 2 | <10 |
| M13A-307 | .120 | .130 | .50 | <2 | 150 | N | 30 | 880 | 2 | <10 |
| M13A-313 | .280 | .020 | .10 | 4 | 210 | .100 | 60 | 270 | 1 | 20 |
| M13A-314 | .050 | .010 | .03 | 3 | 4,200 | .150 | 20 | 11 | 4 | 60 |
| M13A-317 | .020 | .010 | .10 | 12 | 3,500 | .100 | 20 | 10 | 2 | 50 |
| M13A-319 | .040 | .100 | .52 | <2 | 120 | N | 40 | 1,000 | 2 | <10 |
| M13A-320 | .060 | .080 | .34 | <2 | 880 | N | 30 | 740 | 2 | <10 |
| M13A-365 | .050 | .100 | .38 | <2 | <10 | N | 20 | 780 | 2 | <10 |
| M13A-366 | .060 | .170 | .37 | <2 | 20 | N | 30 | 790 | 2 | <10 |
| M14B-280 | .010 | .060 | .05 | <2 | 150 | N | <20 | 130 | <1 | 40 |
| M14B-340 | .020 | .100 | .19 | <2 | 840 | N | 30 | 570 | <1 | <10 |
| M14B-348 | .020 | .060 | .12 | <2 | 32,000 | .900 | 30 | 440 | 2 | 170 |
| M14B-352 | .050 | .070 | .19 | <2 | 1,100 | N | 40 | 620 | 1 | <10 |
| M14B-356 | .020 | .050 | .11 | <2 | >50,000 | 1.300 | <20 | 350 | 1 | 260 |
| M14B-358 | .030 | .090 | .19 | <2 | 13,000 | .250 | 20 | 530 | 2 | 30 |
| M1A-528 | .530 | .040 | .27 | <2 | 20 | N | 40 | 550 | 2 | <10 |
| M1A-647 | .040 | .050 | .16 | <2 | 20 | N | <20 | 460 | <1 | 10 |
| M1A-697 | .030 | .050 | .19 | <2 | 80 | N | 40 | 320 | <1 | <10 |
| M1A-698 | .030 | .050 | .19 | <2 | 120 | N | 30 | 310 | <1 | <10 |
| M1A-708 | 2.600 | .400 | 1.70 | <2 | 20 | N | 20 | 640 | 1 | <10 |
| M1A-735 | 1.900 | .420 | 1.70 | <2 | 50 | N | <20 | 760 | 1 | <10 |
| M3A-048 | .060 | .020 | .27 | <2 | 20 | N | 40 | 730 | 1 | <10 |
| M3A-065 | .080 | .040 | .31 | <2 | 10 | N | 40 | 770 | 1 | <10 |
| M4A-260 | .160 | .020 | .17 | <2 | 50 | N | 40 | 740 | <1 | <10 |
| M4A-281 | .020 | .050 | .21 | <2 | 2,400 | <.050 | 30 | 470 | <1 | 20 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | Ce ppm-s | Co ppm-s | Cr ppm-s | Cu ppm-s | Eu ppm-s | Ga ppm-s | La ppm-s | Li ppm-s | Mn ppm-s | Mo ppm-s |
|---|---|---|---|---|---|---|---|---|---|---|
| M12A-101 | 35 | 850 | 38 | 1,400 | <2 | 69 | 16 | 53 | 240 | <2 |
| M12A-103 | 14 | 1,700 | 170 | 8,800 | <2 | 45 | 7 | 27 | 150 | 4 |
| M12A-105 | 490 | >25,000 | 180 | 5,500 | 8 | 34 | 260 | 16 | 89 | <2 |
| M12A-336 | 37 | 63 | 14 | 1,100 | <2 | 22 | 18 | 19 | 92 | <2 |
| M12A-337 | 47 | 150 | 65 | 110 | <2 | 26 | 22 | 18 | 59 | <2 |
| M12A-340 | 43 | 9,200 | 92 | 22,000 | 5 | 32 | 19 | 18 | 940 | 3 |
| M12A-341 | 120 | 12,000 | 160 | 27,000 | 11 | 34 | 53 | 14 | 830 | 9 |
| M12A-343 | 21 | 740 | 79 | 630 | <2 | 41 | 9 | 37 | 160 | 11 |
| M12A-344 | 40 | 720 | 23 | 410 | <2 | 39 | 16 | 38 | 150 | 8 |
| M12A-610 | 10 | 1,100 | 140 | 6,500 | <2 | 21 | 5 | 16 | 210 | 3 |
| M12A-614 | 27 | 160 | 130 | 1,800 | <2 | 47 | 13 | 36 | 210 | 3 |
| M12A-830 | 39 | 710 | 35 | 58 | <2 | 87 | 18 | 70 | 300 | <2 |
| M12A-836 | 270 | 9,900 | 110 | 1,700 | 3 | 58 | 130 | 30 | 380 | 5 |
| M12A-840 | 540 | 8,400 | 100 | 13 | 5 | 56 | 260 | 38 | 230 | 5 |
| M12A-842 | 31 | 4,800 | 27 | 58 | <2 | 89 | 12 | 71 | 330 | <2 |
| M12A-847 | 5 | 120 | 100 | 460 | <2 | 53 | 3 | 41 | 260 | 3 |
| M13A-229 | 48 | 97 | 25 | 130 | <2 | 28 | 22 | 53 | 310 | <2 |
| M13A-254 | 12 | 510 | 80 | 1,300 | <2 | 28 | 6 | 30 | 170 | <2 |
| M13A-258 | 20 | 7,200 | 110 | 21,000 | 4 | 25 | 9 | 22 | 130 | <2 |
| M13A-262 | 53 | 270 | 76 | 530 | <2 | 43 | 24 | 53 | 290 | <2 |
| M13A-306 | 92 | 61 | 53 | 600 | <2 | 26 | 42 | 27 | 190 | <2 |
| M13A-307 | 39 | 200 | 24 | 480 | <2 | 31 | 19 | 42 | 280 | <2 |
| M13A-313 | 96 | 180 | 160 | 23,000 | 2 | 33 | 47 | 14 | 530 | 3 |
| M13A-314 | 220 | 2,200 | 4 | 20,000 | 5 | 22 | 110 | 11 | 360 | <2 |
| M13A-317 | 48 | 2,000 | 17 | >50,000 | <2 | 21 | 22 | 11 | 300 | <2 |
| M13A-319 | 11 | 85 | 51 | 310 | <2 | 50 | 6 | 58 | 360 | <2 |
| M13A-320 | 10 | 540 | 23 | 530 | <2 | 39 | 6 | 45 | 310 | <2 |
| M13A-365 | 60 | 53 | 29 | 40 | <2 | 36 | 28 | 40 | 190 | <2 |
| M13A-366 | 65 | 62 | 29 | 580 | <2 | 37 | 30 | 41 | 190 | <2 |
| M14B-280 | 12 | 100 | 6 | 44 | <2 | 21 | 5 | 19 | 110 | <2 |
| M14B-340 | 20 | 100 | 98 | 150 | <2 | 67 | 12 | 61 | 280 | 4 |
| M14B-348 | 240 | 11,000 | 160 | 1,000 | 2 | 59 | 130 | 38 | 200 | 9 |
| M14B-352 | 88 | 130 | 20 | 160 | <2 | 55 | 39 | 33 | 130 | <2 |
| M14B-356 | 29 | >25,000 | 130 | 970 | <2 | 76 | 15 | 43 | 220 | 15 |
| M14B-358 | 45 | 460 | 130 | 1,200 | <2 | 69 | 25 | 48 | 230 | 11 |
| M1A-528 | 22 | 39 | 34 | 12 | <2 | 24 | 10 | 27 | 100 | <2 |
| M1A-647 | 67 | 54 | 14 | 29 | <2 | 68 | 31 | 60 | 300 | 3 |
| M1A-697 | 67 | 98 | 25 | 180 | <2 | 37 | 29 | 47 | 200 | <2 |
| M1A-698 | 89 | 130 | 24 | 140 | <2 | 38 | 40 | 48 | 210 | <2 |
| M1A-708 | 130 | 49 | 170 | 600 | 4 | 22 | 64 | 47 | 420 | <2 |
| M1A-735 | 100 | 86 | 180 | 82 | 3 | 23 | 57 | 59 | 950 | <2 |
| M3A-048 | 8 | 49 | 34 | 67 | <2 | 59 | 3 | 50 | 200 | <2 |
| M3A-065 | 51 | 23 | 33 | 19 | <2 | 26 | 23 | 29 | 91 | <2 |
| M4A-260 | 14 | 29 | 22 | 55 | <2 | 33 | 6 | 26 | 86 | <2 |
| M4A-281 | 31 | 1,900 | 26 | 1,400 | <2 | 57 | 14 | 49 | 180 | <2 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | Nb ppm-s | Nd ppm-s | Ni ppm-s | Pb ppm-s | Sc ppm-s | Se ppm | Sr ppm-s | Th ppm-s | V ppm-s | Y ppm-s |
|---|---|---|---|---|---|---|---|---|---|---|
| M12A-101 | 10 | 14 | 33 | <4 | 10 | -- | <2 | 13 | 45 | <2 |
| M12A-103 | 7 | 9 | 73 | <4 | 7 | 60.00 | <2 | 7 | 25 | 3 |
| M12A-105 | <4 | 220 | 800 | <4 | 5 | 39.00 | 3 | 14 | 13 | 43 |
| M12A-336 | -- | 18 | 17 | <4 | 6 | 1.10 | 31 | 8 | 24 | 5 |
| M12A-337 | 6 | 25 | 15 | <4 | 6 | .50 | 13 | 11 | 10 | 7 |
| M12A-340 | -- | 29 | 670 | 9 | 9 | 19.00 | 7 | <4 | 45 | 230 |
| M12A-341 | 7 | 76 | 1,200 | <4 | 6 | .0 | 4 | <4 | 16 | 560 |
| M12A-343 | 7 | 11 | 54 | <4 | 6 | 1.80 | 14 | 7 | 26 | 25 |
| M12A-344 | 7 | 17 | 29 | <4 | 6 | -- | 13 | 11 | 25 | 13 |
| M12A-610 | <4 | <4 | 680 | <4 | 3 | .0 | 5 | <4 | 10 | 7 |
| M12A-614 | 7 | 12 | 63 | <4 | 7 | 3.90 | 16 | 11 | 26 | 5 |
| M12A-830 | 9 | 15 | 23 | <4 | 8 | -- | 2 | 16 | 35 | 3 |
| M12A-836 | 6 | 110 | 670 | 7 | 8 | 18.00 | 5 | 5 | 21 | 100 |
| M12A-840 | 5 | 220 | 590 | 11 | 8 | 8.10 | 5 | 11 | 26 | 54 |
| M12A-842 | 9 | 13 | 340 | 8 | 13 | -- | 4 | 13 | 58 | 9 |
| M12A-847 | 6 | <4 | 85 | <4 | 8 | .60 | 2 | 5 | 28 | 8 |
| M13A-229 | 9 | 27 | 21 | <4 | 19 | -- | 18 | 8 | 190 | 12 |
| M13A-254 | 6 | 6 | 37 | <4 | 6 | <.50 | 5 | 6 | 28 | 5 |
| M13A-258 | <4 | 17 | 350 | <4 | 4 | .0 | <2 | 6 | 15 | 210 |
| M13A-262 | 5 | 24 | 36 | <4 | 8 | <.20 | 6 | 11 | 33 | 6 |
| M13A-306 | <4 | 46 | 15 | <4 | 11 | .50 | 14 | 6 | 64 | 9 |
| M13A-307 | -- | 21 | 25 | <4 | 14 | .70 | 21 | 8 | 94 | 8 |
| M13A-313 | 5 | 42 | 150 | <4 | 6 | .0 | 27 | <4 | 20 | 44 |
| M13A-314 | -- | 95 | 920 | 7 | 3 | 49.00 | 8 | <4 | 11 | 63 |
| M13A-317 | -- | 20 | 330 | 18 | 4 | .0 | 4 | <4 | 21 | 11 |
| M13A-319 | 8 | 6 | 28 | <4 | 16 | .0 | 12 | 9 | 130 | 7 |
| M13A-320 | -- | 6 | 39 | <4 | 10 | .80 | 10 | 9 | 75 | 6 |
| M13A-365 | 6 | 26 | 14 | <4 | 13 | -- | 10 | 9 | 90 | 10 |
| M13A-366 | 7 | 30 | 20 | <4 | 12 | -- | 13 | 10 | 83 | 11 |
| M14B-280 | <4 | 4 | 32 | <4 | 4 | -- | 4 | <4 | 22 | 17 |
| M14B-340 | 9 | 9 | 49 | <4 | 10 | .80 | 6 | 10 | 28 | 5 |
| M14B-348 | 8 | 100 | 910 | 5 | 10 | <10.00 | 5 | 13 | 27 | 95 |
| M14B-352 | 6 | 34 | 17 | <4 | 9 | -- | 10 | 8 | 34 | 9 |
| M14B-356 | <4 | 15 | 5,500 | <4 | 12 | 63.00 | 6 | 14 | 46 | 110 |
| M14B-358 | 5 | 21 | 93 | 5 | 13 | <10.00 | 7 | 13 | 50 | 26 |
| M1A-528 | -- | 12 | 9 | <4 | 8 | <.50 | 25 | 15 | 37 | 3 |
| M1A-647 | 7 | 24 | 100 | <4 | 12 | -- | 8 | 7 | 39 | 6 |
| M1A-697 | 7 | 26 | 160 | <4 | 7 | -- | 6 | 11 | 29 | 5 |
| M1A-698 | 8 | 34 | 160 | <4 | 7 | -- | 6 | 11 | 30 | 7 |
| M1A-708 | 23 | 65 | 75 | <4 | 18 | -- | 230 | 8 | 220 | 29 |
| M1A-735 | -- | 56 | 100 | <4 | 17 | <.50 | 130 | 6 | 220 | 22 |
| M3A-048 | 6 | <4 | 10 | <4 | 10 | -- | 12 | 8 | 49 | <2 |
| M3A-065 | 7 | 20 | 9 | <4 | 9 | -- | 21 | 11 | 51 | 3 |
| M4A-260 | 6 | 6 | 8 | <4 | 6 | -- | 28 | 6 | 35 | 2 |
| M4A-281 | 6 | 11 | 180 | <4 | 8 | -- | 5 | 9 | 37 | 3 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | Yb ppm-s | Zn ppm-s | Zr ppm-s | Ft north | Ft east | Elev ft | Rel ft | Lithol | Fabric | Oretyp | Lode |
|---|---|---|---|---|---|---|---|---|---|---|---|
| M12A-101 | <1 | 20 | 260 | 1,370 | 674 | 7,064 | 4 | 50 | 10 | 60 | 6 |
| M12A-103 | <1 | 30 | 148 | 1,370 | 673 | 7,063 | 2 | 50 | 24 | 30 | 4 |
| M12A-105 | 3 | 15 | 41 | 1,370 | 672 | 7,062 | 0 | 40 | 24 | 10 | 4 |
| M12A-336 | 2 | 22 | 191 | 1,370 | 484 | 6,855 | 3 | 20 | 10 | 60 | 5 |
| M12A-337 | 2 | 29 | 222 | 1,370 | 483 | 6,854 | 2 | 50 | 20 | 60 | 5 |
| M12A-340 | 19 | 62 | 142 | 1,370 | 481 | 6,852 | 0 | 50 | 20 | 20 | 5 |
| M12A-341 | 45 | 95 | 98 | 1,370 | 480 | 6,851 | 0 | 50 | 20 | 30 | 5 |
| M12A-343 | 3 | 25 | 174 | 1,370 | 479 | 6,850 | -2 | 30 | 20 | 70 | 5 |
| M12A-344 | 2 | 29 | 144 | 1,370 | 478 | 6,849 | -3 | 40 | 10 | 70 | 5 |
| M12A-610 | <1 | 31 | 48 | 1,370 | 455 | 6,608 | -3 | 20 | 24 | 20 | 7 |
| M12A-614 | <1 | 50 | 184 | 1,370 | 453 | 6,605 | -6 | 20 | 10 | 74 | 7 |
| M12A-830 | <1 | 32 | 288 | 1,370 | 353 | 6,429 | 4 | 40 | 10 | 60 | 6 |
| M12A-836 | 12 | 26 | 119 | 1,370 | 350 | 6,425 | 0 | 50 | 24 | 10 | 7 |
| M12A-840 | 5 | 24 | 75 | 1,370 | 347 | 6,423 | 0 | 50 | 24 | 10 | 7 |
| M12A-842 | 2 | 44 | 175 | 1,370 | 346 | 6,421 | -1 | 50 | 10 | 10 | 6 |
| M12A-847 | 1 | 27 | 199 | 1,370 | 343 | 6,418 | -4 | 20 | 10 | 70 | 7 |
| M13A-229 | 2 | 29 | 193 | 1,990 | 609 | 6,882 | 21 | 10 | 10 | 80 | 6 |
| M13A-254 | <1 | 27 | 120 | 1,990 | 598 | 6,874 | 3 | 40 | 10 | 60 | 4 |
| M13A-258 | 27 | 64 | 82 | 1,990 | 596 | 6,871 | 0 | 50 | 20 | 30 | 4 |
| M13A-262 | 1 | 27 | 184 | 1,990 | 593 | 6,868 | -3 | 50 | 20 | 70 | 4 |
| M13A-306 | 1 | 46 | 136 | 1,990 | 564 | 6,827 | 5 | 30 | 10 | 60 | 5 |
| M13A-307 | 2 | 76 | 183 | 1,990 | 563 | 6,826 | 4 | 30 | 10 | 60 | 5 |
| M13A-313 | 4 | 120 | 64 | 1,990 | 566 | 6,823 | 1 | 40 | 24 | 20 | 5 |
| M13A-314 | 5 | 36 | 44 | 1,990 | 565 | 6,822 | 0 | 50 | 23 | 20 | 5 |
| M13A-317 | <1 | 200 | 81 | 1,990 | 563 | 6,820 | 0 | 20 | 23 | 74 | 5 |
| M13A-319 | 2 | 31 | 163 | 1,990 | 562 | 6,819 | -2 | 20 | 10 | 70 | 5 |
| M13A-320 | 1 | 27 | 215 | 1,990 | 561 | 6,818 | -3 | 30 | 10 | 70 | 5 |
| M13A-365 | 2 | 15 | 154 | 1,990 | 527 | 6,780 | 5 | 20 | 10 | 80 | 6 |
| M13A-366 | 2 | 21 | 147 | 1,990 | 526 | 6,779 | 3 | 20 | 10 | 80 | 6 |
| M14B-280 | 2 | 15 | 26 | 800 | 325 | 7,357 | -- | 53 | 10 | 80 | 6 |
| M14B-340 | 1 | 35 | 193 | 800 | 369 | 7,318 | -5 | 30 | 10 | 60 | 5 |
| M14B-348 | 10 | 54 | 127 | 800 | 376 | 7,312 | -2 | 30 | 20 | 10 | 5 |
| M14B-352 | 1 | 16 | 132 | 800 | 379 | 7,307 | 0 | 50 | 10 | 60 | 5 |
| M14B-356 | 14 | 32 | 185 | 800 | 381 | 7,310 | 0 | 40 | 10 | 10 | 5 |
| M14B-358 | 4 | 30 | 202 | 800 | 382 | 7,309 | 2 | 20 | 10 | 70 | 5 |
| M1A-528 | <1 | 18 | 241 | 200 | 98 | 7,112 | -- | 30 | 10 | 80 | 7 |
| M1A-647 | 1 | 34 | 146 | 200 | 173 | 7,018 | -- | 40 | 10 | 80 | 6 |
| M1A-697 | <1 | 24 | 189 | 200 | 201 | 6,981 | -- | 40 | 10 | 80 | 6 |
| M1A-698 | <1 | 22 | 143 | 200 | 202 | 6,982 | -- | 40 | 10 | 80 | 6 |
| M1A-708 | 3 | 25 | 222 | 200 | 208 | 6,968 | -- | 90 | 30 | 80 | 6 |
| M1A-735 | 2 | 34 | 212 | 200 | 236 | 6,948 | -- | 90 | 30 | 80 | 7 |
| M3A-048 | <1 | 19 | 229 | 400 | 479 | 7,444 | -30 | 50 | 10 | 80 | 6 |
| M3A-065 | <1 | 12 | 182 | 400 | 471 | 7,428 | -36 | 20 | 10 | 80 | 6 |
| M4A-260 | <1 | 12 | 251 | 810 | 452 | 7,236 | 33 | 20 | 10 | 60 | 5 |
| M4A-281 | <1 | 26 | 176 | 810 | 433 | 7,222 | 14 | 40 | 10 | 70 | 5 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | SiO2 % | Al2O3 % | FeTO3 % | FeO % | MgO % | CaO % | Na2O % | K2O % | TiO2 % | P2O5 % |
|---|---|---|---|---|---|---|---|---|---|---|
| M4A-292 | 53.4 | 10.70 | 22.40 | -- | 2.06 | .34 | <.15 | 4.37 | .39 | .28 |
| M4A-298 | 64.0 | 10.30 | 16.20 | 12.50 | 2.25 | .15 | <.15 | 5.08 | .37 | .15 |
| M4A-313 | 70.0 | 8.95 | 13.10 | 10.20 | 1.49 | .07 | <.15 | 4.26 | .30 | .08 |
| M4B-495 | 43.2 | 14.80 | 16.60 | 11.90 | 6.64 | 6.95 | 2.49 | 2.43 | 3.31 | .46 |
| M4B-527 | -- | -- | -- | 28.40 | -- | -- | -- | -- | -- | -- |
| M4B-537 | -- | -- | -- | 9.47 | -- | -- | -- | -- | -- | -- |
| M4B-540 | 59.1 | 2.68 | 22.50 | 7.56 | .59 | .46 | <.15 | 1.07 | .04 | .37 |
| M4B-568 | 71.5 | 8.88 | 10.60 | 6.80 | 1.03 | .05 | .19 | 5.22 | .24 | .06 |
| M4B-570 | 55.3 | 16.00 | 15.90 | 12.80 | 2.10 | .16 | .23 | 7.97 | .69 | .13 |
| M4B-594 | 58.5 | 14.10 | 15.00 | 11.90 | 1.82 | .29 | .32 | 7.57 | .74 | .23 |
| M5A-299 | 48.7 | 16.20 | 20.90 | 16.90 | 2.53 | .26 | .30 | 7.87 | 1.10 | .25 |
| M5A-319 | 41.1 | 12.00 | 25.90 | 17.40 | 6.56 | .47 | <.15 | 6.47 | 2.63 | .44 |
| M5A-325 | 63.3 | 12.70 | 13.40 | 9.72 | 1.67 | .02 | .18 | 6.65 | .39 | .06 |
| M5A-340 | 56.6 | 9.96 | 20.30 | -- | 1.71 | .30 | <.15 | 3.71 | .28 | .22 |
| M5A-341 | -- | -- | -- | 6.42 | -- | -- | -- | -- | -- | -- |
| M5A-344 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| M5A-346 | 54.1 | 8.57 | 21.80 | -- | 1.37 | .27 | <.15 | 3.72 | .24 | .30 |
| M5A-352 | 64.6 | 11.30 | 13.60 | 9.62 | 1.58 | .07 | .18 | 5.51 | .40 | .10 |
| M5B-772 | 65.3 | 12.90 | 10.70 | 8.42 | 1.40 | .38 | .68 | 6.16 | .49 | .30 |
| M5B-780 | 65.5 | 10.10 | 15.10 | 11.60 | 2.04 | .14 | .21 | 5.16 | .34 | .12 |
| M5B-790 | 56.1 | 4.33 | 24.70 | 9.34 | 1.03 | .22 | <.15 | 1.82 | .10 | .17 |
| M5B-801 | -- | -- | -- | 21.20 | -- | -- | -- | -- | -- | -- |
| M5B-810 | 53.1 | 12.90 | 19.20 | 15.50 | 5.14 | .22 | <.15 | 6.69 | .58 | .19 |
| M6A-192 | 65.5 | 12.50 | 11.50 | 8.68 | 1.42 | .03 | .60 | 6.30 | .48 | .06 |
| M6A-207 | 68.1 | 9.54 | 13.70 | 10.30 | 1.95 | .08 | <.15 | 4.76 | .29 | .11 |
| M6A-210 | 68.5 | 7.94 | 14.00 | 10.60 | 2.04 | .68 | <.15 | 4.03 | .31 | .60 |
| M6A-214 | 69.1 | 7.14 | 14.30 | 9.97 | 2.18 | .70 | <.15 | 3.77 | .05 | .64 |
| M6A-218 | 69.0 | 12.20 | 8.61 | 5.52 | 1.14 | <.02 | .25 | 6.23 | .32 | .09 |
| M6A-236 | 59.1 | 17.30 | 11.10 | 8.09 | 1.63 | .13 | .63 | 7.19 | .62 | .13 |
| M7A-150 | 53.7 | 13.30 | 21.90 | 18.00 | 2.43 | .09 | <.15 | 6.62 | .53 | .08 |
| M7A-188 | 45.6 | 10.60 | 22.40 | 17.40 | 8.76 | .61 | <.15 | 5.30 | 2.68 | .44 |
| M7A-202 | 63.9 | 11.80 | 15.30 | 12.60 | 1.75 | .07 | <.15 | 5.40 | .35 | .05 |
| M7A-234 | 64.9 | 13.00 | 12.70 | 9.85 | 1.26 | .12 | .84 | 5.03 | .54 | .09 |
| M7A-239 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| M7A-247 | 66.4 | 12.70 | 12.10 | 9.20 | 1.22 | .09 | .19 | 5.03 | .40 | .06 |
| M7B-313 | 64.9 | 9.37 | 17.00 | 12.70 | 1.68 | .05 | <.15 | 5.03 | .19 | .05 |
| M7B-317 | 59.5 | 8.54 | 20.30 | 13.60 | 1.80 | .06 | <.15 | 4.31 | .26 | .08 |
| M7B-319 | -- | -- | -- | 12.40 | -- | -- | -- | -- | -- | -- |
| M7B-320 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| M7B-329 | 67.1 | 11.30 | 11.70 | 9.66 | 1.24 | .05 | .19 | 7.15 | .29 | <.05 |
| M7B-427 | 49.2 | 17.20 | 18.80 | 15.00 | 2.67 | .39 | <.15 | 7.71 | 1.17 | .30 |
| M7B-435 | 71.4 | 11.30 | 14.00 | 6.18 | 1.55 | .14 | .49 | 5.17 | .38 | .09 |
| M7B-436 | 66.5 | 7.27 | 14.00 | 9.48 | 1.55 | .14 | <.15 | 3.56 | .23 | .09 |
| M7B-439 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| M7B-445 | 80.8 | 2.40 | 8.76 | -- | .88 | .45 | <.15 | 1.08 | .04 | .23 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | MnO % | LOI 900C | Total C% | Total S% | Al %-s | Ca %-s | Fe %-s | K %-s | Mg %-s |
|---|---|---|---|---|---|---|---|---|---|
| M4A-292 | .02 | 4.22 | .06 | 5.29 | 4.7 | .210 | 16.0 | 3.20 | 1.20 |
| M4A-298 | <.02 | 1.16 | .02 | .12 | 5.9 | .100 | 12.0 | 4.50 | 1.40 |
| M4A-313 | <.02 | 1.08 | .02 | <.01 | 4.9 | .060 | 9.5 | 3.20 | .90 |
| M4B-495 | .20 | 2.89 | .26 | .61 | 8.1 | 4.900 | 11.0 | 1.80 | 3.90 |
| M4B-527 | -- | -- | 2.32 | 2.63 | 4.8 | .530 | 25.0 | 4.10 | 2.00 |
| M4B-537 | -- | -- | .48 | 27.90 | 1.2 | .280 | 33.0 | .69 | .44 |
| M4B-540 | .04 | 10.80 | .61 | 10.30 | 1.4 | .340 | 16.0 | .82 | .35 |
| M4B-568 | <.02 | 1.94 | .14 | 1.32 | 4.5 | .040 | 7.2 | 4.00 | .60 |
| M4B-570 | <.02 | 1.45 | <.01 | <.01 | 8.3 | .120 | 11.0 | 5.80 | 1.30 |
| M4B-594 | <.02 | 1.29 | .03 | .18 | 7.5 | .230 | 11.0 | 5.50 | 1.10 |
| M5A-299 | <.02 | 1.36 | .02 | .09 | 8.5 | .180 | 14.0 | 5.70 | 1.50 |
| M5A-319 | .10 | 3.90 | .40 | .11 | 6.5 | .330 | 18.0 | 4.90 | 3.70 |
| M5A-325 | <.02 | 1.40 | <.01 | .15 | 6.6 | .020 | 9.4 | 4.80 | .98 |
| M5A-340 | <.02 | 6.03 | .17 | 10.30 | 4.3 | .400 | 16.0 | 2.70 | .96 |
| M5A-341 | -- | -- | .08 | 10.30 | 4.0 | .400 | 16.0 | 1.90 | .62 |
| M5A-344 | -- | -- | .09 | 5.78 | 4.3 | .240 | 15.0 | 2.80 | .84 |
| M5A-346 | <.02 | 7.38 | .08 | 7.67 | 4.5 | .180 | 16.0 | 2.50 | .82 |
| M5A-352 | <.02 | 2.08 | <.01 | .79 | 6.2 | .050 | 10.0 | 4.10 | .97 |
| M5B-772 | <.02 | 1.39 | .03 | .04 | 6.8 | .280 | 7.5 | 4.50 | .85 |
| M5B-780 | <.02 | 1.24 | <.01 | .01 | 5.4 | .100 | 11.0 | 4.20 | 1.20 |
| M5B-790 | .08 | 10.40 | .66 | 9.48 | 2.4 | .170 | 18.0 | 1.50 | .63 |
| M5B-801 | -- | -- | 3.14 | 6.63 | 3.1 | .120 | 23.0 | .68 | 2.60 |
| M5B-810 | .02 | 1.55 | .09 | .13 | 6.9 | .160 | 13.0 | 5.00 | 3.00 |
| M6A-192 | <.02 | 1.39 | <.01 | .02 | 6.6 | .030 | 8.1 | 4.60 | .87 |
| M6A-207 | <.02 | 1.27 | <.01 | <.01 | 5.0 | .070 | 9.7 | 3.80 | 1.20 |
| M6A-210 | <.02 | 1.21 | <.01 | .04 | 4.6 | .520 | 11.0 | 3.20 | 1.30 |
| M6A-214 | <.02 | 1.65 | .01 | .12 | 3.8 | .500 | 9.9 | 2.90 | 1.30 |
| M6A-218 | <.02 | 1.77 | .02 | <.01 | 6.4 | .020 | 6.1 | 5.00 | .67 |
| M6A-236 | <.02 | 1.89 | <.01 | .02 | 8.9 | .090 | 7.6 | 5.20 | .95 |
| M7A-150 | .04 | .97 | <.01 | .01 | 7.0 | .070 | 15.0 | 4.90 | 1.40 |
| M7A-188 | .05 | 2.65 | <.01 | .02 | 5.8 | .450 | 16.0 | 4.10 | 4.90 |
| M7A-202 | .03 | 1.12 | <.01 | <.01 | 6.2 | .050 | 11.0 | 3.90 | 1.00 |
| M7A-234 | <.02 | 1.20 | .06 | .07 | 7.0 | .080 | 8.9 | 4.20 | .73 |
| M7A-239 | -- | -- | .09 | 3.76 | 5.0 | .080 | 18.0 | 3.50 | 1.30 |
| M7A-247 | <.02 | 1.55 | .11 | .03 | 6.7 | .050 | 8.3 | 4.00 | .68 |
| M7B-313 | .02 | 1.26 | <.01 | .69 | 4.9 | .040 | 12.0 | 4.00 | .98 |
| M7B-317 | .03 | 1.89 | <.01 | 2.02 | 4.4 | .050 | 14.0 | 3.30 | 1.00 |
| M7B-319 | -- | -- | <.01 | 8.89 | 3.9 | .050 | 17.0 | 2.70 | 1.50 |
| M7B-320 | -- | -- | <.01 | 8.71 | 3.8 | .060 | 17.0 | 2.10 | 1.50 |
| M7B-329 | <.02 | .64 | <.01 | <.01 | 5.9 | .040 | 8.2 | 5.10 | .72 |
| M7B-427 | <.02 | 2.22 | .16 | <.01 | 8.9 | .290 | 13.0 | 5.60 | 1.60 |
| M7B-435 | .03 | 1.79 | .14 | 2.08 | 5.8 | .060 | 9.7 | 4.10 | .89 |
| M7B-436 | .03 | 1.79 | .14 | 2.08 | 3.7 | .060 | 9.7 | 2.00 | .89 |
| M7B-439 | -- | -- | .43 | .78 | 4.2 | .040 | 10.0 | 2.60 | 1.20 |
| M7B-445 | .03 | 4.44 | .25 | 2.37 | 1.2 | .330 | 6.0 | .70 | .50 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | Na %-s | P %-s | Ti %-s | Ag ppm-s | As ppm-s | Au ppm | B ppm-s | Ba ppm-s | Be ppm-s | Bi ppm-s |
|---|---|---|---|---|---|---|---|---|---|---|
| M4A-292 | .020 | .080 | .25 | <2 | 1,400 | .050 | 20 | 22 | <1 | 40 |
| M4A-298 | .030 | .060 | .25 | <2 | 240 | N | 30 | 490 | <1 | <10 |
| M4A-313 | .030 | .030 | .18 | <2 | 470 | .050 | 60 | 460 | <1 | 10 |
| M4B-495 | 1.900 | .210 | 1.90 | <2 | 230 | N | <20 | 240 | 2 | <10 |
| M4B-527 | .020 | .200 | .85 | 3 | 1,300 | N | 40 | 410 | <1 | 20 |
| M4B-537 | .007 | .130 | .01 | 6 | 570 | N | 40 | 80 | <1 | 100 |
| M4B-540 | .010 | .150 | .04 | 3 | 970 | <.050 | 40 | 150 | <1 | 70 |
| M4B-568 | .110 | .020 | .15 | <2 | 220 | N | 40 | 780 | <1 | <10 |
| M4B-570 | .140 | .050 | .41 | <2 | 50 | N | 40 | 1,200 | 2 | <10 |
| M4B-594 | .190 | .100 | .45 | <2 | 120 | N | 30 | 1,200 | 2 | <10 |
| M5A-299 | .170 | .100 | .63 | <2 | 20 | N | 50 | 970 | 2 | <10 |
| M5A-319 | .020 | .180 | 1.40 | <2 | 170 | N | 20 | 310 | 2 | <10 |
| M5A-325 | .060 | .020 | .24 | <2 | 90 | N | 50 | 930 | 1 | <10 |
| M5A-340 | .020 | .200 | .18 | <2 | 9,200 | .250 | 40 | 19 | <1 | 220 |
| M5A-341 | .020 | .200 | .13 | <2 | 9,200 | .550 | 30 | 14 | <1 | 220 |
| M5A-344 | .030 | .120 | .26 | <2 | 12,000 | .150 | <20 | 22 | <1 | 90 |
| M5A-346 | .030 | .090 | .15 | <2 | 5,400 | .100 | 30 | 23 | 1 | 100 |
| M5A-352 | .070 | .040 | .25 | <2 | 300 | N | 40 | 690 | 1 | <10 |
| M5B-772 | .470 | .130 | .29 | <2 | 20 | N | 40 | 1,200 | 1 | 10 |
| M5B-780 | .060 | .050 | .20 | <2 | 40 | N | 40 | 850 | <1 | <10 |
| M5B-790 | .010 | .070 | .08 | <2 | 5,700 | N | 30 | 170 | <1 | 50 |
| M5B-801 | .020 | <.005 | .07 | 3 | 100 | N | 90 | 130 | <1 | 10 |
| M5B-810 | .030 | .080 | .34 | <2 | 170 | N | 80 | 530 | <1 | <10 |
| M6A-192 | .390 | .030 | .29 | <2 | 30 | N | 40 | 970 | <1 | <10 |
| M6A-207 | .050 | .050 | .19 | <2 | 30 | N | 40 | 580 | <1 | <10 |
| M6A-210 | .020 | .280 | .20 | <2 | 1,400 | <.050 | 50 | 410 | <1 | 50 |
| M6A-214 | .020 | .280 | .04 | <2 | 1,500 | <.050 | <20 | 260 | <1 | 30 |
| M6A-218 | .160 | .040 | .19 | <2 | 90 | N | 50 | 1,400 | <1 | <10 |
| M6A-236 | .400 | .050 | .36 | <2 | 30 | N | 70 | 990 | 2 | <10 |
| M7A-150 | .040 | .030 | .31 | <2 | <10 | N | 70 | 650 | 1 | 10 |
| M7A-188 | .020 | .180 | 1.50 | <2 | 330 | N | 20 | 240 | 3 | 10 |
| M7A-202 | .040 | .020 | .21 | <2 | 20 | N | 30 | 680 | 2 | <10 |
| M7A-234 | .640 | .040 | .34 | <2 | 80 | N | 20 | 710 | 2 | <10 |
| M7A-239 | .020 | .020 | .21 | 3 | 3,500 | <.050 | <20 | 32 | 2 | 30 |
| M7A-247 | .140 | .020 | .25 | <2 | 80 | N | 20 | 670 | 2 | <10 |
| M7B-313 | .040 | .020 | .12 | <2 | 300 | N | <20 | 670 | <1 | <10 |
| M7B-317 | .020 | .020 | .16 | <2 | 9,700 | .100 | 20 | 510 | 1 | 20 |
| M7B-319 | .010 | .030 | .16 | <2 | >50,000 | 1.300 | <20 | 270 | 12 | 90 |
| M7B-320 | .010 | .020 | .17 | <2 | >50,000 | 1.250 | <20 | 54 | 12 | 80 |
| M7B-329 | .080 | .020 | .17 | <2 | <10 | N | <20 | 1,200 | <1 | <10 |
| M7B-427 | .050 | .140 | .68 | <2 | <10 | N | 60 | 920 | 3 | 10 |
| M7B-435 | .350 | .030 | .23 | 2 | 7,700 | N | 50 | 790 | 2 | 20 |
| M7B-436 | .030 | .020 | .15 | 2 | 7,700 | .100 | 80 | 74 | <1 | 20 |
| M7B-439 | .110 | .010 | .08 | <2 | 25,000 | .700 | <20 | 270 | 34 | 120 |
| M7B-445 | .010 | .060 | .03 | 2 | 5,500 | .250 | <20 | 78 | <1 | 140 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | Ce ppm-s | Co ppm-s | Cr ppm-s | Cu ppm-s | Eu ppm-s | Ga ppm-s | La ppm-s | Li ppm-s | Mn ppm-s | Mo ppm-s |
|---|---|---|---|---|---|---|---|---|---|---|
| M4A-292 | 120 | 1,400 | 24 | 4,200 | <2 | 51 | 55 | 42 | 190 | 3 |
| M4A-298 | 6 | 180 | 30 | 360 | <2 | 50 | 4 | 54 | 250 | 2 |
| M4A-313 | 18 | 180 | 25 | 130 | <2 | 45 | 7 | 38 | 190 | <2 |
| M4B-495 | 72 | 210 | 120 | 460 | 3 | 22 | 37 | 32 | 1,400 | 3 |
| M4B-527 | 10 | 880 | 230 | 820 | <2 | 40 | 4 | 50 | 2,200 | <2 |
| M4B-537 | <4 | 1,300 | 110 | 27,000 | <2 | 18 | <2 | 12 | 280 | 3 |
| M4B-540 | <4 | 820 | 190 | 20,000 | <2 | 15 | 2 | 9 | 320 | 4 |
| M4B-568 | 19 | 75 | 95 | 220 | <2 | 23 | 9 | 19 | 210 | <2 |
| M4B-570 | 31 | 77 | 27 | 9 | <2 | 51 | 13 | 47 | 200 | <2 |
| M4B-594 | 28 | 67 | 29 | 110 | <2 | 38 | 13 | 42 | 200 | <2 |
| M5A-299 | 140 | 69 | 22 | 370 | 2 | 46 | 63 | 62 | 190 | <2 |
| M5A-319 | 20 | 270 | 480 | 1,800 | <2 | 19 | 11 | 80 | 780 | <2 |
| M5A-325 | 20 | 68 | 34 | 190 | <2 | 43 | 8 | 38 | 110 | <2 |
| M5A-340 | 30 | 7,900 | 170 | 6,300 | <2 | 43 | 14 | 42 | 120 | 5 |
| M5A-341 | 30 | 7,900 | 170 | 6,300 | <2 | 32 | 14 | 29 | 98 | 5 |
| M5A-344 | 24 | 9,300 | 15 | 11,000 | <2 | 39 | 11 | 33 | 140 | <2 |
| M5A-346 | 22 | 4,600 | 160 | 4,400 | <2 | 40 | 11 | 32 | 130 | 3 |
| M5A-352 | 24 | 590 | 34 | 1,800 | <2 | 39 | 10 | 38 | 110 | <2 |
| M5B-772 | 45 | 42 | 40 | 54 | <2 | 29 | 20 | 32 | 140 | <2 |
| M5B-780 | 13 | 47 | 90 | 23 | <2 | 43 | 7 | 46 | 130 | <2 |
| M5B-790 | 38 | 4,300 | 140 | 4,400 | <2 | 22 | 17 | 17 | 620 | 2 |
| M5B-801 | 12 | 130 | 120 | 35,000 | <2 | 26 | 6 | 18 | 2,800 | <2 |
| M5B-810 | 56 | 120 | 30 | 32 | <2 | 49 | 25 | 66 | 250 | <2 |
| M6A-192 | 21 | 22 | 35 | 62 | <2 | 33 | 9 | 33 | 87 | <2 |
| M6A-207 | 13 | 29 | 150 | 160 | <2 | 42 | 6 | 38 | 120 | 7 |
| M6A-210 | 18 | 560 | 22 | 530 | <2 | 42 | 7 | 46 | 110 | 4 |
| M6A-214 | 10 | 550 | 190 | 600 | <2 | 42 | 5 | 42 | 120 | 12 |
| M6A-218 | 21 | 28 | 170 | 320 | <2 | 31 | 11 | 25 | 54 | 4 |
| M6A-236 | 75 | 33 | 46 | 130 | <2 | 39 | 33 | 36 | 73 | <2 |
| M7A-150 | 26 | 70 | 37 | 150 | <2 | 53 | 11 | 69 | 370 | <2 |
| M7A-188 | 34 | 700 | 530 | 130 | <2 | 24 | 17 | 34 | 490 | <2 |
| M7A-202 | 21 | 72 | 17 | 41 | <2 | 42 | 8 | 49 | 290 | <2 |
| M7A-234 | 67 | 100 | 41 | 870 | <2 | 32 | 34 | 36 | 220 | <2 |
| M7A-239 | 150 | 3,100 | 36 | 23,000 | 3 | 52 | 72 | 50 | 330 | <2 |
| M7A-247 | 48 | 150 | 31 | 170 | <2 | 39 | 25 | 32 | 220 | <2 |
| M7B-313 | <4 | 280 | 82 | 1,000 | <2 | 50 | <2 | 40 | 230 | <2 |
| M7B-317 | 4 | 7,900 | 98 | 3,900 | <2 | 51 | 3 | 36 | 270 | <2 |
| M7B-319 | 34 | >25,000 | 110 | 3,900 | 4 | 68 | 14 | 33 | 270 | <2 |
| M7B-320 | 38 | >25,000 | 55 | 4,000 | 4 | 49 | 16 | 33 | 260 | <2 |
| M7B-329 | 19 | 37 | 20 | 8 | <2 | 34 | 8 | 33 | 170 | <2 |
| M7B-427 | 29 | 68 | 21 | 11 | <2 | 37 | 13 | 55 | 240 | <2 |
| M7B-435 | 100 | 6,400 | 87 | 13,000 | <2 | 25 | 51 | 22 | 270 | <2 |
| M7B-436 | 100 | 6,400 | 28 | 13,000 | <2 | 23 | 51 | 22 | 270 | <2 |
| M7B-439 | 61 | 21,000 | 10 | 790 | 8 | 34 | 25 | 32 | 560 | <2 |
| M7B-445 | 9 | 4,200 | 5 | 13,000 | <2 | 13 | 4 | 10 | 290 | <2 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | Nb ppm-s | Nd ppm-s | Ni ppm-s | Pb ppm-s | Sc ppm-s | Se ppm | Sr ppm-s | Th ppm-s | V ppm-s | Y ppm-s |
|---|---|---|---|---|---|---|---|---|---|---|
| M4A-292 | -- | 52 | 470 | 12 | 9 | 18.00 | 10 | 8 | 41 | 9 |
| M4A-298 | -- | <4 | 94 | <4 | 11 | 4.30 | 6 | 10 | 51 | 4 |
| M4A-313 | 4 | 10 | 27 | <4 | 7 | -- | 5 | 12 | 30 | 2 |
| M4B-495 | 39 | 41 | 130 | <4 | 29 | -- | 280 | <4 | 320 | 21 |
| M4B-527 | 18 | 6 | 270 | 4 | 15 | 8.00 | 17 | 4 | 120 | 8 |
| M4B-537 | 5 | <4 | 1,500 | <4 | 2 | .0 | 7 | <4 | 4 | 4 |
| M4B-540 | <4 | <4 | 570 | <4 | 2 | .0 | 8 | <4 | 9 | 18 |
| M4B-568 | 5 | 8 | 78 | <4 | 5 | 2.40 | 35 | 6 | 23 | 4 |
| M4B-570 | 9 | 12 | 28 | <4 | 14 | -- | 32 | 14 | 83 | 4 |
| M4B-594 | 7 | 12 | 31 | <4 | 14 | -- | 42 | 11 | 89 | 6 |
| M5A-299 | 8 | 62 | 26 | <4 | 20 | -- | 12 | 11 | 190 | 12 |
| M5A-319 | 19 | 14 | 290 | <4 | 24 | -- | 9 | 6 | 220 | 13 |
| M5A-325 | 7 | 7 | 15 | <4 | 9 | -- | 22 | 9 | 43 | 2 |
| M5A-340 | -- | 14 | 860 | 5 | 7 | 27.00 | 10 | 6 | 33 | 13 |
| M5A-341 | -- | 14 | 860 | 5 | 5 | 27.00 | 10 | 6 | 27 | 13 |
| M5A-344 | -- | 13 | 820 | 7 | 8 | 16.00 | 10 | 6 | 32 | 10 |
| M5A-346 | -- | 11 | 570 | <4 | 7 | 22.00 | 9 | 6 | 30 | 10 |
| M5A-352 | 7 | 12 | 58 | <4 | 9 | -- | 15 | 11 | 43 | 5 |
| M5B-772 | 8 | 20 | 42 | <4 | 11 | -- | 36 | 12 | 53 | 6 |
| M5B-780 | 9 | 6 | 52 | <4 | 9 | .20 | 13 | 6 | 38 | 3 |
| M5B-790 | 5 | 15 | 1,300 | <4 | 4 | 21.00 | 7 | <4 | 13 | 5 |
| M5B-801 | 5 | <4 | 290 | <4 | 7 | .0 | 4 | <4 | 19 | <2 |
| M5B-810 | 10 | 27 | 64 | <4 | 11 | -- | 9 | 12 | 68 | 5 |
| M6A-192 | 7 | 5 | 35 | <4 | 10 | -- | 26 | 7 | 44 | <2 |
| M6A-207 | 9 | 8 | 62 | <4 | 12 | <.10 | 8 | 5 | 57 | 3 |
| M6A-210 | 8 | 8 | 140 | <4 | 11 | -- | 14 | <4 | 70 | 13 |
| M6A-214 | 10 | 5 | 140 | <4 | 9 | 4.00 | 14 | <4 | 45 | 11 |
| M6A-218 | 7 | 9 | 41 | <4 | 9 | .90 | 55 | 7 | 41 | 2 |
| M6A-236 | 12 | 34 | 34 | <4 | 15 | -- | 23 | 15 | 80 | 7 |
| M7A-150 | 10 | 11 | 54 | <4 | 10 | -- | 5 | 17 | 46 | 3 |
| M7A-188 | 34 | 18 | 310 | <4 | 24 | -- | 11 | 8 | 220 | 13 |
| M7A-202 | 9 | 8 | 23 | <4 | 7 | -- | 10 | 9 | 24 | 8 |
| M7A-234 | -- | 29 | 16 | <4 | 10 | .40 | 17 | 11 | 56 | 5 |
| M7A-239 | -- | 69 | 220 | 5 | 8 | 12.00 | 3 | 9 | 40 | 19 |
| M7A-247 | -- | 21 | 34 | <4 | 7 | .50 | 11 | 11 | 36 | 3 |
| M7B-313 | 6 | <4 | 43 | <4 | 6 | 1.60 | 12 | 12 | 24 | 2 |
| M7B-317 | 7 | <4 | 310 | <4 | 6 | 11.00 | 7 | 14 | 26 | 12 |
| M7B-319 | 7 | 23 | 2,600 | 15 | 7 | 42.00 | <2 | 15 | 31 | 280 |
| M7B-320 | -- | 25 | 2,400 | <4 | 7 | 45.00 | <2 | 13 | 35 | 230 |
| M7B-329 | 6 | 4 | 9 | <4 | 6 | -- | 54 | 5 | 21 | 3 |
| M7B-427 | 11 | 14 | 40 | <4 | 22 | -- | 12 | 8 | 210 | 6 |
| M7B-435 | 5 | 45 | 480 | 9 | 8 | 9.10 | 24 | 10 | 35 | 6 |
| M7B-436 | -- | 45 | 480 | 9 | 5 | 9.10 | 4 | 6 | 25 | 6 |
| M7B-439 | -- | 48 | 1,700 | 7 | 7 | 12.00 | 3 | 6 | 24 | 450 |
| M7B-445 | -- | 4 | 700 | 5 | 2 | <10.00 | 6 | <4 | 9 | 15 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | Yb ppm-s | Zn ppm-s | Zr ppm-s | Ft north | Ft east | Elev ft | Rel ft | Lithol | Fabric | Oretyp | Lode |
|---|---|---|---|---|---|---|---|---|---|---|---|
| M4A-292 | 1 | 25 | 122 | 810 | 421 | 7,208 | 0 | 50 | 20 | 30 | 5 |
| M4A-298 | 1 | 31 | 151 | 810 | 418 | 7,205 | -2 | 20 | 10 | 70 | 5 |
| M4A-313 | <1 | 24 | 218 | 810 | 411 | 7,203 | -8 | 10 | 10 | 70 | 6 |
| M4B-495 | 3 | 88 | 185 | 770 | 452 | 6,966 | 30 | 90 | 30 | 80 | 6 |
| M4B-527 | 2 | 34 | 89 | 770 | 438 | 6,927 | 7 | 50 | 20 | 60 | 5 |
| M4B-537 | <1 | 140 | 18 | 770 | 433 | 6,920 | 0 | 50 | 20 | 20 | 5 |
| M4B-540 | 2 | 89 | 27 | 770 | 431 | 6,918 | -2 | 50 | 20 | 20 | 5 |
| M4B-568 | <1 | 14 | 164 | 770 | 422 | 6,904 | -12 | 50 | 20 | 70 | 5 |
| M4B-570 | 1 | 19 | 237 | 770 | 421 | 6,879 | -31 | 50 | 10 | 70 | 5 |
| M4B-594 | 2 | 20 | 215 | 770 | 409 | 6,853 | -52 | 20 | 10 | 80 | 6 |
| M5A-299 | 2 | 28 | 183 | 630 | 378 | 7,248 | 23 | 50 | 10 | 80 | 6 |
| M5A-319 | 2 | 34 | 174 | 630 | 366 | 7,235 | 12 | 50 | 10 | 60 | 5 |
| M5A-325 | <1 | 17 | 205 | 630 | 362 | 7,231 | 7 | 20 | 10 | 60 | 5 |
| M5A-340 | 2 | 19 | 120 | 630 | 356 | 7,224 | 0 | 50 | 20 | 30 | 5 |
| M5A-341 | 2 | 13 | 76 | 600 | 351 | 7,221 | 0 | 50 | 20 | 30 | 5 |
| M5A-344 | 1 | 27 | 119 | 630 | 353 | 7,222 | 0 | 50 | 20 | 30 | 5 |
| M5A-346 | 1 | 17 | 99 | 630 | 352 | 7,221 | 0 | 50 | 20 | 30 | 5 |
| M5A-352 | <1 | 21 | 162 | 630 | 348 | 7,218 | -5 | 20 | 10 | 70 | 5 |
| M5B-772 | 2 | 24 | 253 | 560 | 292 | 6,741 | 10 | 20 | 10 | 60 | 6 |
| M5B-780 | <1 | 25 | 185 | 560 | 290 | 6,732 | 5 | 50 | 20 | 60 | 5 |
| M5B-790 | <1 | 27 | 66 | 560 | 285 | 6,725 | 0 | 50 | 20 | 30 | 5 |
| M5B-801 | 1 | 140 | 67 | 560 | 281 | 6,718 | -5 | 30 | 10 | 70 | 5 |
| M5B-810 | 1 | 33 | 185 | 560 | 276 | 6,713 | -11 | 50 | 10 | 70 | 5 |
| M6A-192 | <1 | 16 | 230 | 400 | 479 | 7,252 | 10 | 20 | 10 | 60 | 6 |
| M6A-207 | 1 | 18 | 141 | 400 | 470 | 7,244 | 2 | 50 | 20 | 60 | 5 |
| M6A-210 | 2 | 23 | 111 | 400 | 468 | 7,242 | 0 | 50 | 10 | 60 | 5 |
| M6A-214 | 1 | 20 | <8 | 400 | 465 | 7,239 | 0 | 50 | 20 | 30 | 5 |
| M6A-218 | <1 | 15 | 144 | 400 | 461 | 7,235 | -3 | 50 | 20 | 70 | 5 |
| M6A-236 | 2 | 17 | 289 | 400 | 448 | 7,221 | -12 | 20 | 10 | 70 | 5 |
| M7A-150 | 1 | 22 | 237 | 1,800 | 552 | 7,032 | 40 | 50 | 10 | 80 | 6 |
| M7A-188 | 2 | 35 | 179 | 1,800 | 526 | 7,009 | 0 | 50 | 10 | 60 | 4 |
| M7A-202 | 2 | 24 | 225 | 1,800 | 518 | 7,003 | -12 | 20 | 10 | 70 | 4 |
| M7A-234 | <1 | 47 | 210 | 1,800 | 500 | 6,978 | 14 | 20 | 10 | 60 | 5 |
| M7A-239 | 2 | 48 | 132 | 1,800 | 490 | 6,966 | 0 | 50 | 20 | 20 | 5 |
| M7A-247 | <1 | 26 | 217 | 1,800 | 478 | 6,960 | -3 | 50 | 10 | 70 | 5 |
| M7B-313 | <1 | 28 | 117 | 1,765 | 598 | 6,836 | 5 | 20 | 10 | 60 | 4 |
| M7B-317 | 2 | 30 | 110 | 1,765 | 596 | 6,833 | 1 | 50 | 24 | 30 | 4 |
| M7B-319 | 30 | 31 | 160 | 1,800 | 595 | 6,831 | 0 | 50 | 24 | 10 | 4 |
| M7B-320 | 24 | 22 | 150 | 1,765 | 595 | 6,831 | 0 | 80 | 20 | 10 | 4 |
| M7B-329 | <1 | 15 | 168 | 1,765 | 592 | 6,820 | -6 | 40 | 10 | 70 | 4 |
| M7B-427 | 2 | 26 | 178 | 1,765 | 572 | 6,732 | 11 | 10 | 10 | 80 | 6 |
| M7B-435 | <1 | 45 | 187 | 1,765 | 570 | 6,722 | 2 | 50 | 24 | 60 | 5 |
| M7B-436 | <1 | 45 | 106 | 1,800 | 570 | 6,721 | 3 | 50 | 24 | 60 | 5 |
| M7B-439 | 46 | 16 | 110 | 1,765 | 568 | 6,719 | 0 | 50 | 20 | 10 | 5 |
| M7B-445 | 2 | 28 | 26 | 1,765 | 566 | 6,715 | -1 | 80 | 23 | 10 | 5 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | SiO2 % | Al2O3 % | FeTO3 % | FeO % | MgO % | CaO % | Na2O % | K2O % | TiO2 % | P2O5 % |
|---|---|---|---|---|---|---|---|---|---|---|
| M7B-449 | 72.9 | 7.37 | 12.30 | 9.45 | 1.93 | .15 | <.15 | 3.67 | .24 | .13 |
| M7B-463 | 61.5 | 9.78 | 17.50 | 14.00 | 3.77 | .14 | <.15 | 5.19 | .27 | .14 |
| M8A-146 | 66.9 | 11.90 | 10.50 | 8.40 | 1.22 | .07 | .69 | 6.60 | .41 | .07 |
| M8A-151 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| M8A-158 | 40.9 | 13.20 | 28.90 | -- | 2.52 | .47 | .52 | 6.20 | .77 | .53 |
| M8A-165 | 59.3 | 14.70 | 14.20 | 11.10 | 1.69 | .18 | <.15 | 7.27 | .79 | .17 |
| M8A-206 | 64.9 | 12.20 | 12.90 | 8.75 | 1.32 | .13 | <.15 | 5.22 | .28 | .12 |
| M8A-297 | 64.9 | 9.30 | 16.80 | 14.20 | 2.17 | .06 | <.15 | 4.83 | .36 | .05 |
| M8A-305 | -- | -- | -- | 14.60 | -- | -- | -- | -- | -- | -- |
| M8A-315 | 43.5 | 13.30 | 21.70 | 17.10 | 7.74 | .95 | <.15 | 7.83 | 2.02 | .82 |
| M8A-350 | 52.9 | 12.20 | 22.60 | 18.40 | 2.41 | .12 | <.15 | 6.22 | .36 | .12 |
| M9A-165 | 54.4 | 12.40 | 21.30 | 16.00 | 2.34 | .06 | <.15 | 5.91 | .40 | .12 |
| M9A-192 | 45.6 | 14.90 | 18.30 | 14.00 | 9.59 | .20 | <.15 | 6.99 | .52 | .16 |
| M9B-199 | 58.4 | 16.00 | 13.40 | 9.60 | 1.66 | .09 | <.15 | 6.82 | .64 | .10 |
| M9B-243 | 57.6 | 12.40 | 19.40 | 16.40 | 2.07 | .09 | <.15 | 6.07 | .43 | .08 |
| M9B-262 | 44.9 | 16.40 | 22.40 | 18.10 | 11.90 | .19 | .16 | 8.42 | .47 | .16 |
| M9B-263 | 44.9 | 14.20 | 19.70 | 16.20 | 10.10 | .18 | <.15 | 7.79 | .37 | .14 |
| M9B-267 | 65.1 | 8.43 | 16.30 | 13.60 | 3.71 | .05 | <.15 | 4.62 | .32 | .05 |
| M9B-078 | 61.6 | 12.10 | 15.50 | 8.30 | 1.18 | .25 | .22 | 4.66 | .48 | .13 |
| S10A-253 | 68.9 | 12.00 | 11.90 | 8.45 | 1.02 | .03 | <.15 | 4.01 | .42 | .06 |
| S10A-369 | 43.2 | 15.10 | 24.20 | 17.10 | 8.39 | .06 | <.15 | 1.23 | 1.58 | .19 |
| S10A-382 | -- | -- | -- | 23.00 | -- | -- | -- | -- | -- | -- |
| S10A-438 | 70.8 | 7.71 | 16.40 | 11.80 | .91 | .09 | <.15 | 2.06 | .19 | <.05 |
| S10A-487 | 65.2 | 10.90 | 18.10 | 14.40 | 1.66 | .29 | <.15 | 1.40 | .37 | .09 |
| S10A-492 | -- | -- | -- | 5.07 | -- | -- | -- | -- | -- | -- |
| S10A-495 | -- | -- | -- | 3.72 | -- | -- | -- | -- | -- | -- |
| S10A-497 | 62.8 | 12.20 | 16.90 | 12.30 | 1.26 | .40 | <.15 | 3.67 | .45 | .06 |
| S10A-500 | 64.9 | 12.90 | 14.20 | 10.70 | .92 | .10 | <.15 | 4.23 | .46 | .06 |
| S10A-534 | 65.2 | 13.80 | 11.50 | 9.08 | 1.22 | .10 | <.15 | 4.44 | .46 | .07 |
| S10B-555 | 65.6 | 13.60 | 11.20 | 8.89 | 1.20 | .15 | .19 | 4.69 | .61 | .10 |
| S10B-565 | 62.6 | 14.00 | 14.00 | 11.10 | 1.49 | .23 | .19 | 4.26 | .60 | .12 |
| S10B-568 | -- | -- | -- | 13.90 | -- | -- | -- | -- | -- | -- |
| S10B-577 | -- | -- | -- | 16.70 | -- | -- | -- | -- | -- | -- |
| S10B-580 | 65.8 | 14.20 | 11.80 | 9.56 | 1.31 | .14 | .19 | 3.42 | .47 | .08 |
| S10B-588 | 57.4 | 15.70 | 17.00 | 13.50 | 1.88 | .18 | .16 | 4.91 | .60 | .09 |
| S10B-590 | 72.4 | 11.60 | 8.03 | 6.21 | .87 | .08 | .16 | 3.90 | .38 | .06 |
| S10B-630 | 61.5 | 14.10 | 13.40 | 10.80 | 1.21 | .15 | <.15 | 4.87 | .58 | .10 |
| S11A-219 | 72.1 | 9.55 | 13.20 | 9.95 | 1.60 | .27 | <.15 | 2.37 | .24 | <.05 |
| S11A-223 | -- | -- | -- | 6.14 | -- | -- | -- | -- | -- | -- |
| S11A-226 | 58.3 | 11.90 | 22.20 | 18.20 | 2.91 | .33 | <.15 | 3.20 | .26 | .09 |
| S11A-229 | 65.3 | 12.30 | 14.60 | 12.00 | 1.74 | .29 | <.15 | 2.99 | .43 | .07 |
| S11A-236 | 70.9 | 8.22 | 15.40 | 12.50 | 1.39 | .08 | <.15 | 1.64 | .18 | <.05 |
| S12A-477 | 50.6 | 18.30 | 23.20 | 18.50 | 1.34 | .36 | <.15 | 3.95 | .67 | .15 |
| S12A-499 | 62.6 | 10.50 | 17.90 | 12.50 | 1.78 | .57 | <.15 | 3.05 | 1.21 | .20 |
| S12A-531 | 44.4 | 17.10 | 26.00 | 21.40 | 2.11 | .20 | <.15 | 5.88 | .73 | .13 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | MnO % | LOI 900C | Total C% | Total S% | Al %-s | Ca %-s | Fe %-s | K %-s | Mg %-s |
|---|---|---|---|---|---|---|---|---|---|
| M7B-449 | <.02 | .95 | .06 | .25 | 3.9 | .110 | 8.6 | 2.80 | 1.10 |
| M7B-463 | .03 | 1.09 | .08 | <.01 | 5.1 | .100 | 12.0 | 4.20 | 2.20 |
| M8A-146 | <.02 | .66 | <.01 | <.01 | 6.3 | .050 | 7.6 | 5.30 | .72 |
| M8A-151 | -- | -- | .02 | .28 | 8.0 | .290 | 15.0 | 5.90 | 1.50 |
| M8A-158 | <.02 | 5.11 | .21 | 3.81 | 6.6 | .330 | 19.0 | 4.50 | 1.50 |
| M8A-165 | <.02 | 1.19 | <.01 | .01 | 7.6 | .140 | 9.9 | 5.70 | .97 |
| M8A-206 | <.02 | 2.10 | <.01 | 1.11 | 6.3 | .100 | 8.8 | 4.10 | .76 |
| M8A-297 | .03 | .67 | .02 | .04 | 5.1 | .050 | 12.0 | 4.10 | 1.30 |
| M8A-305 | -- | -- | <.01 | 3.37 | 4.8 | .060 | 15.0 | 3.80 | 1.40 |
| M8A-315 | .03 | 1.12 | <.01 | <.01 | 7.1 | .670 | 15.0 | 6.40 | 4.30 |
| M8A-350 | .03 | .94 | .02 | .29 | 6.5 | .090 | 16.0 | 5.10 | 1.40 |
| M9A-165 | .03 | 1.68 | <.01 | .52 | 6.5 | .050 | 15.0 | 4.80 | 1.40 |
| M9A-192 | .03 | 2.44 | .43 | <.01 | 7.7 | .140 | 13.0 | 5.70 | 5.10 |
| M9B-199 | <.02 | 2.05 | .04 | .09 | 8.3 | .070 | 9.3 | 5.40 | .98 |
| M9B-243 | .03 | .90 | <.01 | .04 | 6.8 | .070 | 14.0 | 5.00 | 1.30 |
| M9B-262 | .03 | 1.83 | .13 | .01 | 8.7 | .140 | 15.0 | 7.20 | 6.30 |
| M9B-263 | .03 | 1.36 | .06 | <.01 | 7.8 | .120 | 14.0 | 7.20 | 5.60 |
| M9B-267 | .03 | .85 | .12 | .06 | 4.7 | .030 | 12.0 | 3.90 | 2.20 |
| M9B-078 | .09 | 2.78 | .16 | <.01 | 6.8 | .180 | 12.0 | 4.00 | .74 |
| S10A-253 | <.02 | 1.60 | <.01 | <.01 | 6.1 | .020 | 8.5 | 3.30 | .59 |
| S10A-369 | <.02 | 5.96 | <.01 | .08 | 6.9 | .040 | 15.0 | .91 | 4.10 |
| S10A-382 | -- | -- | <.01 | .09 | 8.3 | .260 | 21.0 | 2.30 | .79 |
| S10A-438 | .06 | 1.32 | .01 | .62 | 4.0 | .060 | 12.0 | 1.70 | .56 |
| S10A-487 | .09 | 1.70 | .04 | .16 | 5.8 | .180 | 13.0 | 1.20 | 1.10 |
| S10A-492 | -- | -- | .02 | 1.28 | 2.3 | .050 | 5.9 | .42 | .40 |
| S10A-495 | -- | -- | <.01 | 2.13 | 1.6 | .180 | 4.8 | .36 | .37 |
| S10A-497 | .18 | 1.94 | <.01 | .52 | 6.4 | .290 | 12.0 | 3.00 | .76 |
| S10A-500 | <.02 | 2.15 | .03 | .04 | 6.6 | .080 | 10.0 | 3.50 | .56 |
| S10A-534 | .03 | 3.21 | .32 | <.01 | 6.9 | .080 | 8.1 | 3.60 | .72 |
| S10B-555 | .02 | 2.14 | .15 | <.01 | 6.8 | .110 | 7.9 | 3.80 | .71 |
| S10B-565 | .07 | 2.37 | .29 | .16 | 7.2 | .160 | 9.9 | 3.50 | .88 |
| S10B-568 | -- | -- | .18 | 1.48 | 7.1 | .170 | 12.0 | 2.50 | 1.20 |
| S10B-577 | -- | -- | .20 | 1.85 | 8.1 | .110 | 14.0 | 1.90 | 1.60 |
| S10B-580 | .05 | 2.20 | .19 | <.01 | 7.3 | .100 | 8.3 | 2.80 | .77 |
| S10B-588 | .07 | 2.04 | .15 | .01 | 8.2 | .130 | 12.0 | 4.10 | 1.10 |
| S10B-590 | <.02 | 3.13 | .28 | .01 | 7.2 | .120 | 9.7 | 4.10 | .72 |
| S10B-630 | .04 | 4.03 | .14 | .01 | 5.9 | .060 | 5.7 | 3.20 | .51 |
| S11A-219 | .11 | .87 | .04 | .01 | 4.7 | .180 | 9.5 | 2.00 | .91 |
| S11A-223 | -- | -- | .04 | 3.73 | 3.2 | .240 | 6.6 | .83 | .74 |
| S11A-226 | .08 | .94 | .06 | .24 | 6.2 | .230 | 16.0 | 2.70 | 1.80 |
| S11A-229 | .06 | 1.09 | <.01 | .01 | 6.5 | .210 | 11.0 | 2.50 | 1.00 |
| S11A-236 | .04 | 1.25 | <.01 | .32 | 4.3 | .060 | 11.0 | 1.40 | .86 |
| S12A-477 | .19 | 1.29 | .08 | .01 | 9.0 | .250 | 16.0 | 3.20 | .78 |
| S12A-499 | .19 | 1.37 | .01 | .23 | 5.5 | .410 | 13.0 | 2.50 | 1.10 |
| S12A-531 | .04 | 3.04 | .60 | .05 | 8.6 | .140 | 18.0 | 4.80 | 1.30 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | Na %-s | P %-s | Ti %-s | Ag ppm-s | As ppm-s | Au ppm | B ppm-s | Ba ppm-s | Be ppm-s | Bi ppm-s |
|---|---|---|---|---|---|---|---|---|---|---|
| M7B-449 | .020 | .050 | .15 | <2 | 980 | N | 60 | 320 | <1 | <10 |
| M7B-463 | .060 | .050 | .17 | <2 | 860 | .100 | 40 | 290 | 1 | 30 |
| M8A-146 | .580 | .030 | .25 | <2 | 110 | N | 20 | 1,100 | <1 | <10 |
| M8A-151 | .110 | .120 | .39 | <2 | 9,200 | .150 | 50 | 1,200 | 1 | 50 |
| M8A-158 | .300 | .170 | .45 | <2 | 3,000 | .100 | 20 | 65 | 1 | 60 |
| M8A-165 | .130 | .080 | .46 | <2 | 170 | N | 40 | 930 | 2 | <10 |
| M8A-206 | .060 | .050 | .16 | <2 | 90 | <.050 | 40 | 600 | 2 | 20 |
| M8A-297 | .020 | .020 | .22 | <2 | 290 | N | 30 | 410 | <1 | <10 |
| M8A-305 | .020 | .020 | .17 | <2 | 12,000 | .250 | <20 | 350 | <1 | 30 |
| M8A-315 | .020 | .340 | 1.10 | <2 | 270 | N | <20 | 810 | 2 | <10 |
| M8A-350 | .020 | .040 | .22 | <2 | 3,700 | .050 | 30 | 500 | <1 | 10 |
| M9A-165 | .030 | .030 | .24 | <2 | 690 | N | <20 | 630 | 2 | <10 |
| M9A-192 | .040 | .070 | .30 | <2 | 60 | N | 470 | 190 | 1 | 40 |
| M9B-199 | .070 | .040 | .38 | <2 | 300 | N | 60 | 830 | 3 | <10 |
| M9B-243 | .030 | .030 | .26 | <2 | 260 | N | 30 | 800 | 1 | <10 |
| M9B-262 | .030 | .060 | .28 | <2 | 460 | N | 40 | 200 | 2 | 40 |
| M9B-263 | .030 | .060 | .23 | <2 | 370 | N | 30 | 200 | 2 | 30 |
| M9B-267 | .020 | .010 | .21 | <2 | 1,400 | N | <20 | 250 | 1 | <10 |
| M9B-078 | .190 | .060 | .31 | <2 | 300 | 1.100 | 70 | 640 | 1 | 110 |
| S10A-253 | .100 | .010 | .25 | <2 | <10 | N | 70 | 210 | 2 | <10 |
| S10A-369 | .010 | .030 | .75 | <2 | 30 | N | 20 | 56 | 1 | <10 |
| S10A-382 | .020 | <.005 | .43 | <2 | 20 | <.050 | 30 | 160 | <1 | <10 |
| S10A-438 | .020 | <.005 | .12 | <2 | 310 | N | <20 | 120 | <1 | <10 |
| S10A-487 | .010 | .040 | .21 | <2 | 4,300 | N | 50 | 100 | <1 | <10 |
| S10A-492 | .007 | .020 | .03 | 2 | 22,000 | .300 | <20 | 57 | <1 | 50 |
| S10A-495 | .005 | .050 | .03 | 3 | 42,000 | .800 | <20 | 45 | 1 | 100 |
| S10A-497 | .080 | .020 | .30 | 2 | 100 | N | 20 | 350 | 1 | <10 |
| S10A-500 | .100 | <.005 | .28 | <2 | 10 | N | 30 | 350 | 1 | <10 |
| S10A-534 | .130 | .020 | .27 | <2 | <10 | N | 50 | 470 | 2 | <10 |
| S10B-555 | .170 | .040 | .35 | <2 | <10 | N | 90 | 360 | 2 | <10 |
| S10B-565 | .170 | .050 | .37 | <2 | 90 | N | 50 | 370 | 2 | <10 |
| S10B-568 | .090 | .050 | .17 | <2 | 28,000 | 1.350 | 210 | 270 | 1 | 50 |
| S10B-577 | .100 | .040 | .13 | <2 | 36,000 | .600 | 140 | 230 | 1 | 30 |
| S10B-580 | .160 | .030 | .28 | <2 | 40 | N | 70 | 350 | 2 | <10 |
| S10B-588 | .150 | .040 | .39 | <2 | <10 | N | 50 | 430 | 2 | <10 |
| S10B-590 | .120 | .040 | .35 | 2 | <10 | N | 50 | 490 | 2 | <10 |
| S10B-630 | .140 | .020 | .23 | <2 | <10 | N | 40 | 390 | 2 | <10 |
| S11A-219 | .050 | .005 | .16 | <2 | 240 | N | 730 | 160 | <1 | <10 |
| S11A-223 | .020 | .050 | .06 | 4 | >50,000 | 2.500 | <20 | 75 | <1 | 90 |
| S11A-226 | .030 | .020 | .17 | <2 | 2,400 | N | <20 | 150 | <1 | <10 |
| S11A-229 | .090 | .030 | .28 | <2 | 160 | N | 90 | 230 | 1 | <10 |
| S11A-236 | .020 | <.005 | .11 | <2 | 60 | N | 30 | 110 | <1 | <10 |
| S12A-477 | .110 | .010 | .37 | <2 | 460 | N | 180 | 290 | 1 | <10 |
| S12A-499 | .050 | .080 | .61 | <2 | 630 | N | 30 | 310 | 2 | <10 |
| S12A-531 | .070 | .006 | .44 | <2 | 230 | N | 60 | 440 | 1 | <10 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | Ce ppm-s | Co ppm-s | Cr ppm-s | Cu ppm-s | Eu ppm-s | Ga ppm-s | La ppm-s | Li ppm-s | Mn ppm-s | Mo ppm-s |
|---|---|---|---|---|---|---|---|---|---|---|
| M7B-449 | 8 | 780 | 91 | 690 | <2 | 42 | 4 | 34 | 180 | 2 |
| M7B-463 | 24 | 680 | 77 | 130 | <2 | 36 | 12 | 54 | 270 | 2 |
| M8A-146 | 33 | 36 | 38 | 26 | <2 | 29 | 14 | 29 | 130 | <2 |
| M8A-151 | 90 | 6,800 | 54 | 130 | <2 | 63 | 43 | 59 | 250 | <2 |
| M8A-158 | 17 | 2,300 | 17 | 2,900 | <2 | 71 | 9 | 53 | 210 | <2 |
| M8A-165 | 69 | 44 | 34 | 120 | <2 | 32 | 31 | 39 | 82 | <2 |
| M8A-206 | 19 | 130 | 18 | 910 | <2 | 46 | 7 | 30 | 130 | <2 |
| M8A-297 | 55 | 290 | 31 | 160 | <2 | 55 | 24 | 56 | 300 | <2 |
| M8A-305 | 19 | 10,000 | 23 | 3,000 | <2 | 80 | 8 | 53 | 320 | 6 |
| M8A-315 | 180 | 170 | 840 | 87 | 3 | 20 | 110 | 84 | 310 | 3 |
| M8A-350 | 43 | 3,000 | 36 | 380 | <2 | 66 | 18 | 63 | 340 | <2 |
| M9A-165 | 120 | 260 | 19 | 2,000 | 3 | 45 | 52 | 56 | 330 | <2 |
| M9A-192 | 48 | 230 | 43 | 460 | <2 | 42 | 21 | 74 | 310 | <2 |
| M9B-199 | 220 | 160 | 27 | 750 | 3 | 35 | 100 | 34 | 160 | <2 |
| M9B-243 | 17 | 240 | 36 | 420 | <2 | 61 | 8 | 54 | 310 | <2 |
| M9B-262 | 17 | 250 | 42 | 3 | <2 | 49 | 7 | 77 | 340 | <2 |
| M9B-263 | 12 | 160 | 35 | 3 | <2 | 46 | 5 | 73 | 300 | <2 |
| M9B-267 | 12 | 1,300 | 26 | 24 | <2 | 39 | 6 | 52 | 310 | <2 |
| M9B-078 | 16 | 810 | 46 | 2,800 | <2 | 31 | 7 | 34 | 720 | <2 |
| S10A-253 | 79 | 38 | 32 | 220 | <2 | 17 | 40 | 27 | 190 | <2 |
| S10A-369 | 30 | 110 | 320 | 1,000 | <2 | 16 | 19 | 42 | 170 | <2 |
| S10A-382 | 16 | 80 | 54 | 1,200 | <2 | 33 | 9 | 37 | 2,200 | 7 |
| S10A-438 | 7 | 190 | 15 | 4,100 | <2 | 16 | 4 | 25 | 470 | 2 |
| S10A-487 | <4 | 2,600 | 36 | 670 | <2 | 30 | 2 | 25 | 670 | <2 |
| S10A-492 | 430 | 19,000 | 8 | 6,700 | 5 | 11 | 200 | 9 | 170 | <2 |
| S10A-495 | 1,800 | 38,000 | 8 | 2,100 | 22 | 4 | 810 | 8 | 240 | <2 |
| S10A-497 | 6 | 180 | 38 | 5,800 | <2 | 26 | 10 | 27 | 1,300 | <2 |
| S10A-500 | 76 | 100 | 35 | 920 | <2 | 22 | 39 | 28 | 240 | 2 |
| S10A-534 | 20 | 55 | 33 | 130 | <2 | 21 | 11 | 23 | 300 | 2 |
| S10B-555 | 90 | 45 | 46 | 6 | <2 | 21 | 46 | 29 | 270 | <2 |
| S10B-565 | 28 | 88 | 40 | 1,300 | <2 | 24 | 20 | 31 | 580 | <2 |
| S10B-568 | 23 | 28,000 | 40 | 130 | <2 | 23 | 17 | 27 | 560 | <2 |
| S10B-577 | 91 | 33,000 | 42 | 55 | <2 | 28 | 52 | 29 | 370 | <2 |
| S10B-580 | 23 | 69 | 42 | 110 | <2 | 24 | 17 | 19 | 420 | <2 |
| S10B-588 | 41 | 120 | 56 | 8 | <2 | 23 | 28 | 37 | 520 | <2 |
| S10B-590 | 81 | 40 | 36 | 100 | <2 | 22 | 43 | 31 | 390 | <2 |
| S10B-630 | 63 | 60 | 28 | 86 | <2 | 16 | 33 | 18 | 130 | <2 |
| S11A-219 | 9 | 86 | 25 | 1,500 | <2 | 20 | 11 | 23 | 850 | <2 |
| S11A-223 | 2,200 | 66,000 | 13 | 1,300 | 26 | 5 | 1,000 | 13 | 160 | <2 |
| S11A-226 | 30 | 2,100 | 25 | 2,300 | <2 | 33 | 23 | 41 | 600 | <2 |
| S11A-229 | <4 | 64 | 41 | 300 | <2 | 29 | 6 | 26 | 510 | <2 |
| S11A-236 | 17 | 89 | 15 | 3,800 | <2 | 22 | 8 | 25 | 380 | <2 |
| S12A-477 | 62 | 270 | 52 | 1,100 | 2 | 37 | 30 | 32 | 1,400 | 3 |
| S12A-499 | 47 | 640 | 26 | 6,200 | 3 | 26 | 31 | 33 | 1,500 | <2 |
| S12A-531 | 13 | 350 | 46 | 1,000 | <2 | 41 | 7 | 62 | 360 | 4 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | Nb ppm-s | Nd ppm-s | Ni ppm-s | Pb ppm-s | Sc ppm-s | Se ppm | Sr ppm-s | Th ppm-s | V ppm-s | Y ppm-s |
|---|---|---|---|---|---|---|---|---|---|---|
| M7B-449 | 6 | 6 | 120 | <4 | 7 | 1.40 | 4 | 8 | 25 | 6 |
| M7B-463 | 9 | 11 | 110 | <4 | 7 | .60 | 3 | 9 | 28 | 9 |
| M8A-146 | 7 | 13 | 12 | <4 | 8 | -- | 53 | 11 | 41 | 3 |
| M8A-151 | -- | 42 | 310 | <4 | 13 | 5.00 | 33 | 9 | 59 | 10 |
| M8A-158 | -- | 10 | 190 | <4 | 14 | 30.00 | 10 | 4 | 110 | 11 |
| M8A-165 | 7 | 30 | 11 | <4 | 16 | -- | 20 | 12 | 140 | 7 |
| M8A-206 | 7 | 6 | 100 | <4 | 7 | -- | 10 | 10 | 22 | 4 |
| M8A-297 | 7 | 21 | 35 | <4 | 9 | -- | 3 | 15 | 37 | 3 |
| M8A-305 | 7 | 10 | 240 | 6 | 6 | -- | 3 | 11 | 29 | 7 |
| M8A-315 | 93 | 65 | 250 | <4 | 25 | -- | 35 | 20 | 190 | 23 |
| M8A-350 | 8 | 16 | 62 | 4 | 8 | -- | 5 | 12 | 42 | 10 |
| M9A-165 | 9 | 53 | 43 | <4 | 9 | -- | 6 | 13 | 38 | 30 |
| M9A-192 | 14 | 20 | 310 | <4 | 11 | -- | 7 | 16 | 57 | 7 |
| M9B-199 | 9 | 86 | 19 | <4 | 14 | -- | 13 | 18 | 67 | 11 |
| M9B-243 | 9 | 6 | 43 | <4 | 9 | -- | 7 | 8 | 43 | 3 |
| M9B-262 | 15 | 9 | 510 | 4 | 11 | -- | 6 | 17 | 62 | 5 |
| M9B-263 | -- | 5 | 460 | 4 | 10 | .80 | 6 | 12 | 53 | 3 |
| M9B-267 | -- | 6 | 100 | <4 | 7 | <.50 | <2 | 6 | 32 | 6 |
| M9B-078 | 8 | 7 | 25 | <4 | 10 | -- | 15 | 17 | 53 | 5 |
| S10A-253 | 8 | 34 | 11 | 8 | 8 | <.10 | 11 | 15 | 38 | 17 |
| S10A-369 | 23 | 16 | 140 | 37 | 29 | <.10 | 4 | <4 | 180 | 8 |
| S10A-382 | 15 | 9 | 5 | 45 | 13 | 1.00 | 4 | 14 | 48 | 110 |
| S10A-438 | <4 | <4 | 11 | 150 | 5 | 2.40 | 2 | 11 | 19 | 24 |
| S10A-487 | -- | <4 | 35 | 4 | 8 | <5.00 | 3 | 12 | 34 | 75 |
| S10A-492 | -- | 170 | 190 | 15 | 3 | <50.00 | 2 | <4 | 12 | 46 |
| S10A-495 | -- | 700 | 370 | <4 | 5 | <50.00 | 10 | 7 | 9 | 210 |
| S10A-497 | -- | 9 | 17 | <4 | 9 | 1.20 | 14 | 18 | 36 | 32 |
| S10A-500 | 10 | 29 | 10 | 38 | 10 | .10 | 16 | 10 | 41 | 31 |
| S10A-534 | 9 | 9 | 12 | 5 | 10 | <.10 | 16 | 13 | 42 | 7 |
| S10B-555 | 10 | 36 | 14 | <4 | 10 | <.10 | 27 | 20 | 52 | 24 |
| S10B-565 | -- | 17 | 20 | <4 | 11 | 1.10 | 26 | 11 | 46 | 36 |
| S10B-568 | -- | 5 | 180 | <4 | 10 | <50.00 | 15 | <4 | 48 | 24 |
| S10B-577 | -- | 33 | 520 | <4 | 11 | <50.00 | 16 | 5 | 48 | 45 |
| S10B-580 | -- | 15 | 12 | <4 | 11 | .30 | 25 | 12 | 41 | 30 |
| S10B-588 | -- | 26 | 25 | 5 | 12 | <.50 | 22 | 20 | 52 | 25 |
| S10B-590 | 13 | 37 | 13 | 4 | 11 | <.10 | 22 | 18 | 46 | 30 |
| S10B-630 | 7 | 28 | 9 | <4 | 8 | <.10 | 21 | 15 | 34 | 11 |
| S11A-219 | -- | 8 | 8 | <4 | 7 | .70 | 8 | 6 | 26 | 55 |
| S11A-223 | -- | 830 | 250 | <4 | 6 | <50.00 | 12 | <4 | 19 | 220 |
| S11A-226 | -- | 19 | 30 | <4 | 9 | <5.00 | <2 | 10 | 31 | 160 |
| S11A-229 | -- | 5 | 8 | 4 | 10 | <.50 | 14 | 15 | 36 | 19 |
| S11A-236 | <4 | 7 | 8 | 140 | 5 | <.10 | <2 | 9 | 19 | 19 |
| S12A-477 | 11 | 29 | 10 | 40 | 13 | <.10 | 19 | 30 | 63 | 21 |
| S12A-499 | -- | 30 | 25 | <4 | 11 | 1.60 | 10 | 15 | 78 | 85 |
| S12A-531 | 13 | 9 | 23 | 37 | 11 | <.10 | 9 | 11 | 64 | 39 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | Yb ppm-s | Zn ppm-s | Zr ppm-s | Ft north | Ft east | Elev ft | Rel ft | Lithol | Fabric | Oretyp | Lode |
|---|---|---|---|---|---|---|---|---|---|---|---|
| M7B-449 | <1 | 24 | 138 | 1,765 | 564 | 6,711 | -8 | 20 | 23 | 30 | 5 |
| M7B-463 | 1 | 27 | 126 | 1,765 | 559 | 6,697 | -19 | 50 | 20 | 80 | 7 |
| M8A-146 | <1 | 11 | 200 | 1,000 | 432 | 7,263 | 5 | 50 | 10 | 60 | 5 |
| M8A-151 | 2 | 24 | 247 | 1,000 | 429 | 7,261 | 0 | 50 | 20 | 10 | 5 |
| M8A-158 | 2 | 22 | 155 | 1,000 | 425 | 7,257 | 0 | 50 | 20 | 30 | 5 |
| M8A-165 | 1 | 16 | 235 | 1,000 | 421 | 7,253 | -6 | 20 | 10 | 70 | 5 |
| M8A-206 | 1 | 15 | 171 | 1,000 | 388 | 7,219 | -1 | 50 | 10 | 60 | 6 |
| M8A-297 | <1 | 34 | 234 | 1,000 | 322 | 7,158 | -1 | 50 | 10 | 60 | 6 |
| M8A-305 | 2 | 40 | 136 | 1,000 | 315 | 7,150 | 3 | 50 | 10 | 10 | 6 |
| M8A-315 | 3 | 57 | 252 | 1,000 | 307 | 7,142 | -6 | 50 | 10 | 70 | 6 |
| M8A-350 | 2 | 47 | 198 | 1,000 | 282 | 7,118 | -42 | 50 | 10 | 60 | 6 |
| M9A-165 | 4 | 32 | 264 | 1,605 | 458 | 7,096 | 0 | 40 | 10 | 60 | 4 |
| M9A-192 | 1 | 49 | 353 | 1,605 | 440 | 7,074 | 0 | 50 | 10 | 70 | 4 |
| M9B-199 | 2 | 21 | 300 | 1,575 | 524 | 7,021 | 4 | 40 | 10 | 70 | 4 |
| M9B-243 | <1 | 41 | 318 | 1,575 | 514 | 6,980 | 19 | 40 | 10 | 80 | 6 |
| M9B-262 | 1 | 69 | 348 | 1,575 | 503 | 6,964 | 4 | 50 | 10 | 60 | 5 |
| M9B-263 | <1 | 59 | 189 | 1,600 | 503 | 6,963 | 4 | 50 | 10 | 60 | 5 |
| M9B-267 | 1 | 31 | 145 | 1,575 | 501 | 6,960 | 0 | 50 | 20 | 10 | 5 |
| M9B-078 | 1 | 48 | 313 | 1,575 | 558 | 7,138 | 0 | 50 | 10 | 80 | 6 |
| S10A-253 | 2 | 16 | 251 | 1,200 | 1,250 | 7,910 | 265 | 30 | 10 | 60 | 3 |
| S10A-369 | 1 | 62 | 67 | 1,200 | 1,174 | 7,842 | 154 | 90 | 30 | 80 | 3 |
| S10A-382 | 10 | 46 | 296 | 1,200 | 1,158 | 7,822 | 124 | 40 | 20 | 60 | 3 |
| S10A-438 | 3 | 32 | 192 | 1,200 | 1,108 | 7,788 | 62 | 30 | 20 | 60 | 3 |
| S10A-487 | 8 | 29 | 249 | 1,200 | 1,066 | 7,751 | 3 | 30 | 20 | 10 | 3 |
| S10A-492 | 4 | 13 | 74 | 1,200 | 1,063 | 7,748 | 0 | 51 | 20 | 10 | 3 |
| S10A-495 | 16 | 14 | 55 | 1,200 | 1,061 | 7,746 | -1 | 51 | 20 | 10 | 3 |
| S10A-497 | 4 | 37 | 238 | 1,200 | 1,058 | 7,748 | -3 | 34 | 10 | 74 | 3 |
| S10A-500 | 3 | 58 | 221 | 1,200 | 1,057 | 7,749 | 0 | 20 | 20 | 70 | 3 |
| S10A-534 | 1 | 22 | 133 | 1,200 | 1,024 | 7,731 | -29 | 20 | 20 | 70 | 3 |
| S10B-555 | 3 | 14 | 376 | 1,165 | 1,168 | 7,592 | 29 | 20 | 20 | 60 | 3 |
| S10B-565 | 5 | 14 | 217 | 1,165 | 1,154 | 7,572 | 5 | 34 | 10 | 60 | 3 |
| S10B-568 | 4 | 11 | 268 | 1,165 | 1,152 | 7,570 | 3 | 51 | 20 | 10 | 3 |
| S10B-577 | 5 | 21 | 219 | 1,165 | 1,147 | 7,567 | -3 | 51 | 20 | 10 | 3 |
| S10B-580 | 3 | 15 | 212 | 1,165 | 1,145 | 7,565 | -5 | 24 | 10 | 70 | 3 |
| S10B-588 | 3 | 25 | 212 | 1,165 | 1,142 | 7,560 | -10 | 21 | 10 | 70 | 3 |
| S10B-590 | 4 | 22 | 162 | 1,165 | 1,141 | 7,559 | -11 | 20 | 20 | 70 | 3 |
| S10B-630 | 2 | 16 | 436 | 1,165 | 1,119 | 7,528 | -36 | 20 | 20 | 70 | 3 |
| S11A-219 | 5 | 16 | 237 | 890 | 1,033 | 7,905 | 2 | 51 | 20 | 60 | 3 |
| S11A-223 | 13 | <4 | 106 | 890 | 1,031 | 7,902 | 0 | 51 | 20 | 10 | 3 |
| S11A-226 | 22 | 24 | 189 | 890 | 1,021 | 7,899 | 1,029 | 41 | 20 | 30 | 3 |
| S11A-229 | 2 | 19 | 259 | 890 | 1,027 | 7,897 | -4 | 51 | 20 | 70 | 3 |
| S11A-236 | 2 | 30 | 127 | 890 | 1,026 | 7,896 | -4 | 10 | 10 | 80 | 3 |
| S12A-477 | 2 | 30 | 243 | 1,390 | 1,129 | 7,688 | 18 | 10 | 10 | 60 | 3 |
| S12A-499 | 8 | 25 | 247 | 1,390 | 1,109 | 7,668 | 0 | 21 | 10 | 20 | 3 |
| S12A-531 | 6 | 74 | 246 | 1,390 | 1,096 | 7,654 | -27 | 50 | 10 | 70 | 3 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | SiO2 % | Al2O3 % | FeTO3 % | FeO % | MgO % | CaO % | Na2O % | K2O % | TiO2 % | P2O5 % |
|---|---|---|---|---|---|---|---|---|---|---|
| S12A-548 | 62.2 | 14.10 | 13.50 | 10.50 | 1.14 | .11 | .16 | 5.00 | .58 | .09 |
| S12B-533 | 52.9 | 16.20 | 22.50 | 18.40 | 1.72 | 1.03 | <.15 | 3.34 | .62 | .07 |
| S12B-541 | 49.3 | 16.90 | 23.40 | 19.20 | 3.33 | .64 | <.15 | 2.64 | .51 | .11 |
| S12B-555 | 47.9 | 17.60 | 24.90 | 20.40 | 3.41 | .46 | <.15 | 1.89 | .53 | .15 |
| S12B-562 | 67.0 | 12.40 | 11.90 | 9.40 | 1.20 | .13 | <.15 | 4.23 | .58 | .07 |
| S12B-617 | 40.1 | 12.20 | 27.30 | 21.50 | 3.60 | 1.28 | <.15 | 6.04 | 4.65 | .97 |
| S12C-678 | 66.8 | 14.40 | 9.63 | 7.57 | 1.27 | .29 | .18 | 4.60 | .63 | .10 |
| S12C-713 | 48.2 | 14.00 | 25.50 | 21.00 | 3.31 | .68 | .16 | 2.85 | .45 | .22 |
| S12C-723 | 66.4 | 13.90 | 10.80 | 8.55 | 1.12 | .12 | .20 | 4.73 | .49 | .08 |
| S13A-584 | 65.6 | 14.10 | 11.90 | 9.35 | 1.33 | .08 | .16 | 4.39 | .41 | .06 |
| S13A-592 | 59.8 | 10.80 | 20.30 | 15.60 | 2.24 | .10 | <.15 | 2.06 | .42 | .05 |
| S13A-596 | 71.8 | 11.90 | 8.82 | 6.64 | .87 | .08 | <.15 | 3.92 | .41 | .07 |
| S14B-710 | 63.6 | 14.90 | 11.60 | 9.03 | 1.06 | .10 | .18 | 5.29 | .61 | .08 |
| S14B-742 | 68.3 | 11.80 | 10.70 | 8.51 | 1.84 | .36 | <.15 | 2.48 | .45 | .08 |
| S14B-744 | 67.1 | 13.50 | 11.50 | 9.15 | 1.78 | .43 | .25 | 2.52 | .54 | .08 |
| S14B-746 | -- | -- | -- | 11.20 | -- | -- | -- | -- | -- | -- |
| S14B-747 | 59.3 | 14.10 | 15.40 | 12.20 | 3.06 | .57 | .15 | 3.49 | .64 | .10 |
| S14B-750 | 66.2 | 14.10 | 9.77 | 7.31 | 1.05 | .12 | .22 | 4.49 | .53 | .07 |
| S14B-764 | 68.7 | 13.10 | 9.64 | 7.41 | .96 | .10 | .17 | 4.53 | .46 | .08 |
| S15A-499 | 50.7 | 13.80 | 16.90 | 13.80 | 6.88 | .32 | <.15 | 6.16 | 1.26 | .18 |
| S15A-515 | 65.5 | 14.80 | 10.50 | 8.04 | .97 | .11 | .16 | 5.29 | .53 | .09 |
| S15A-548 | 44.8 | 15.20 | 19.40 | 16.20 | 8.77 | .70 | <.15 | 7.05 | 1.38 | .20 |
| S16A-621 | 63.4 | 12.50 | 15.90 | 12.90 | 1.62 | .11 | .24 | 4.52 | .47 | .08 |
| S16A-623 | -- | -- | -- | 23.60 | -- | -- | -- | -- | -- | -- |
| S16A-626 | -- | -- | -- | 24.40 | -- | -- | -- | -- | -- | -- |
| S16A-629 | 68.8 | 10.00 | 11.90 | 8.77 | .87 | .20 | .24 | 3.07 | .41 | .09 |
| S16A-634 | 62.9 | 15.40 | 12.00 | 9.31 | 1.18 | .20 | .21 | 5.16 | .57 | .09 |
| S16B-450 | 40.2 | 15.90 | 24.60 | 20.60 | 6.85 | .31 | <.15 | 7.83 | 1.67 | .24 |
| S16B-534 | -- | -- | -- | 27.30 | -- | -- | -- | -- | -- | -- |
| S16B-558 | 60.2 | 14.40 | 17.90 | 14.10 | 2.59 | .17 | <.15 | 2.14 | .54 | .09 |
| S16B-560 | -- | -- | -- | 16.70 | -- | -- | -- | -- | -- | -- |
| S16B-564 | -- | -- | -- | 25.80 | -- | -- | -- | -- | -- | -- |
| S16B-566 | 65.6 | 12.60 | 15.00 | 11.60 | 1.86 | .14 | <.15 | 2.32 | .57 | .09 |
| S16B-573 | 55.6 | 17.10 | 17.10 | 13.60 | 2.22 | .18 | .17 | 4.68 | .70 | .08 |
| S16C-412 | 64.9 | 13.40 | 14.20 | 11.30 | .92 | .24 | <.15 | 3.77 | .43 | .05 |
| S16C-442 | 53.6 | 13.50 | 25.20 | 20.00 | 1.88 | .14 | <.15 | 3.90 | .53 | .07 |
| S16C-448 | 58.3 | 13.00 | 18.10 | 14.50 | 1.46 | .20 | <.15 | 4.39 | .65 | .11 |
| S16C-455 | 48.1 | 16.70 | 23.40 | 19.10 | 1.84 | .38 | <.15 | 5.46 | .64 | .33 |
| S16C-498 | 63.0 | 13.30 | 16.20 | 12.90 | 1.79 | .11 | <.15 | 2.98 | .43 | .09 |
| S17A-749 | 45.7 | 15.40 | 19.50 | 16.10 | 7.68 | .33 | <.15 | 7.56 | 1.67 | .24 |
| S17A-763 | 63.2 | 15.40 | 11.40 | 8.82 | 1.26 | .17 | .18 | 5.24 | .62 | .08 |
| S17A-775 | 66.6 | 12.00 | 13.10 | 10.20 | 1.19 | .22 | .19 | 4.28 | .39 | .09 |
| S17A-777 | -- | -- | -- | 15.70 | -- | -- | -- | -- | -- | -- |
| S17A-780 | 59.9 | 12.30 | 17.80 | 14.20 | 1.81 | .15 | <.15 | 5.11 | .49 | .11 |
| S17A-792 | 67.3 | 14.90 | 8.15 | 6.16 | 1.25 | .10 | <.15 | 5.28 | .52 | .08 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | MnO % | LOI 900C | Total C% | Total S% | Al %-s | Ca %-s | Fe %-s | K %-s | Mg %-s |
|---|---|---|---|---|---|---|---|---|---|
| S12A-548 | .03 | 2.50 | .34 | .04 | 7.0 | .090 | 9.4 | 4.00 | .65 |
| S12B-533 | .37 | 1.83 | .30 | <.01 | 7.9 | .710 | 15.0 | 2.80 | .99 |
| S12B-541 | .13 | 2.62 | .33 | .14 | 8.6 | .450 | 16.0 | 2.10 | 1.90 |
| S12B-555 | .11 | 2.66 | .22 | .20 | 8.9 | .320 | 17.0 | 1.60 | 1.90 |
| S12B-562 | .03 | 2.00 | .13 | .02 | 6.3 | .100 | 8.5 | 3.50 | .72 |
| S12B-617 | .06 | 2.22 | .26 | 1.13 | 6.5 | .920 | 19.0 | 5.20 | 2.20 |
| S12C-678 | .03 | 1.91 | .07 | <.01 | 7.2 | .210 | 6.7 | 3.60 | .74 |
| S12C-713 | .14 | 2.29 | .40 | .34 | 7.4 | .480 | 18.0 | 2.50 | 2.00 |
| S12C-723 | <.02 | 2.06 | .08 | <.01 | 7.1 | .090 | 7.7 | 3.90 | .65 |
| S13A-584 | .03 | 2.30 | .21 | <.01 | 7.3 | .060 | 8.4 | 3.50 | .77 |
| S13A-592 | .07 | 2.55 | .11 | 1.17 | 5.5 | .070 | 14.0 | 1.70 | 1.30 |
| S13A-596 | <.02 | 1.66 | .12 | .08 | 6.0 | .060 | 6.2 | 3.10 | .49 |
| S14B-710 | <.02 | 2.35 | .26 | .04 | 7.4 | .080 | 8.1 | 4.20 | .61 |
| S14B-742 | .07 | 2.05 | .13 | .25 | 5.9 | .270 | 7.6 | 2.00 | 1.10 |
| S14B-744 | .10 | 2.28 | .13 | <.01 | 6.9 | .320 | 8.0 | 1.80 | 1.00 |
| S14B-746 | -- | -- | .06 | 1.34 | 5.0 | .620 | 10.0 | .94 | 1.20 |
| S14B-747 | .12 | 2.54 | .03 | .11 | 7.2 | .410 | 11.0 | 2.70 | 1.80 |
| S14B-750 | .02 | 3.13 | .45 | <.01 | 7.2 | .090 | 6.8 | 3.60 | .60 |
| S14B-764 | <.02 | 2.09 | .19 | <.01 | 6.5 | .080 | 6.8 | 3.60 | .56 |
| S15A-499 | .06 | 2.87 | .28 | <.01 | 7.2 | .230 | 12.0 | 5.30 | 3.90 |
| S15A-515 | <.02 | 1.97 | .07 | .13 | 7.3 | .090 | 7.2 | 4.20 | .55 |
| S15A-548 | <.02 | 1.91 | <.01 | <.01 | 8.0 | .520 | 14.0 | 6.10 | 4.80 |
| S16A-621 | .04 | 1.07 | .19 | <.01 | 6.5 | .090 | 11.0 | 3.40 | .95 |
| S16A-623 | -- | -- | .12 | .62 | 9.6 | .300 | 21.0 | 4.50 | 2.10 |
| S16A-626 | -- | -- | .88 | .70 | 9.9 | .210 | 22.0 | 3.40 | 2.20 |
| S16A-629 | .07 | 3.52 | .60 | .91 | 5.2 | .150 | 8.3 | 2.20 | .51 |
| S16A-634 | .03 | 1.81 | .02 | <.01 | 8.0 | .140 | 8.6 | 4.10 | .69 |
| S16B-450 | <.02 | 1.46 | <.01 | .05 | 8.2 | .230 | 17.0 | 6.70 | 3.90 |
| S16B-534 | -- | -- | .78 | <.01 | 9.6 | .500 | 23.0 | 4.30 | 1.70 |
| S16B-558 | .06 | 2.14 | .05 | .02 | 7.4 | .130 | 12.0 | 1.60 | 1.50 |
| S16B-560 | -- | -- | .15 | 1.34 | 6.6 | .200 | 15.0 | .37 | 1.90 |
| S16B-564 | -- | -- | .30 | .86 | 11.0 | .750 | 22.0 | 1.70 | 2.50 |
| S16B-566 | .04 | 1.78 | .10 | .10 | 6.4 | .110 | 10.0 | 1.70 | 1.10 |
| S16B-573 | .07 | 2.22 | .12 | <.01 | 7.5 | .130 | 11.0 | 3.40 | 1.20 |
| S16C-412 | .09 | 1.67 | .13 | <.01 | 6.7 | .180 | 10.0 | 3.10 | .54 |
| S16C-442 | .07 | 1.03 | .18 | .14 | 7.0 | .100 | 18.0 | 2.90 | 1.10 |
| S16C-448 | .06 | 2.64 | .44 | .14 | 6.8 | .150 | 13.0 | 3.30 | .86 |
| S16C-455 | .07 | 2.32 | .36 | .26 | 8.6 | .290 | 16.0 | 4.20 | 1.00 |
| S16C-498 | .06 | 2.05 | .07 | .02 | 6.7 | .080 | 11.0 | 2.50 | 1.10 |
| S17A-749 | <.02 | 1.59 | <.01 | .02 | 7.3 | .220 | 13.0 | 5.80 | 3.90 |
| S17A-763 | .04 | 2.18 | .11 | <.01 | 7.7 | .130 | 7.9 | 4.20 | .75 |
| S17A-775 | .05 | 1.84 | .13 | .12 | 6.2 | .170 | 9.2 | 3.20 | .69 |
| S17A-777 | -- | -- | .07 | 2.07 | 5.5 | .200 | 15.0 | 3.30 | 1.10 |
| S17A-780 | <.02 | 1.38 | .05 | .53 | 6.4 | .100 | 13.0 | 4.30 | 1.10 |
| S17A-792 | <.02 | 2.29 | .08 | .03 | 7.3 | .080 | 5.7 | 4.10 | .74 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | Na %-s | P %-s | Ti %-s | Ag ppm-s | As ppm-s | Au ppm | B ppm-s | Ba ppm-s | Be ppm-s | Bi ppm-s |
|---|---|---|---|---|---|---|---|---|---|---|
| S12A-548 | .130 | .020 | .34 | <2 | 20 | N | 80 | 510 | 2 | <10 |
| S12B-533 | .110 | .030 | .34 | <2 | 20 | N | 600 | 300 | 1 | <10 |
| S12B-541 | .080 | .040 | .27 | <2 | 3,100 | .150 | 30 | 170 | 1 | <10 |
| S12B-555 | .050 | .060 | .25 | <2 | 4,000 | .100 | 180 | 150 | <1 | 20 |
| S12B-562 | .140 | .020 | .34 | <2 | 10 | N | 110 | 410 | 2 | <10 |
| S12B-617 | .040 | .050 | 2.40 | 6 | 50 | .100 | <20 | 420 | 2 | <10 |
| S12C-678 | .150 | .040 | .37 | <2 | <10 | N | 80 | 480 | 2 | <10 |
| S12C-713 | .030 | .100 | .24 | <2 | 7,200 | .100 | 190 | 200 | <1 | 20 |
| S12C-723 | .180 | .030 | .30 | <2 | <10 | N | 60 | 530 | 2 | <10 |
| S13A-584 | .150 | .020 | .27 | <2 | <10 | N | 50 | 360 | 2 | <10 |
| S13A-592 | .020 | .020 | .24 | <2 | 1,900 | <.050 | 180 | 150 | <1 | <10 |
| S13A-596 | .150 | .020 | .26 | <2 | 150 | N | 60 | 350 | 2 | <10 |
| S14B-710 | .160 | .030 | .36 | <2 | <10 | N | 100 | 400 | 2 | <10 |
| S14B-742 | .100 | .030 | .23 | <2 | 5,400 | .200 | 130 | 280 | <1 | <10 |
| S14B-744 | .150 | .030 | .24 | <2 | 420 | N | 160 | 310 | 1 | <10 |
| S14B-746 | .040 | .040 | .16 | <2 | 29,000 | 1.200 | 100 | 150 | <1 | 50 |
| S14B-747 | .040 | .040 | .32 | <2 | 3,000 | .050 | 290 | 330 | 1 | <10 |
| S14B-750 | .190 | .030 | .33 | <2 | 20 | N | 50 | 520 | 2 | <10 |
| S14B-764 | .140 | .030 | .28 | <2 | 20 | N | 70 | 460 | 2 | <10 |
| S15A-499 | .040 | .080 | .74 | <2 | 50 | N | 80 | 300 | 1 | <10 |
| S15A-515 | .140 | <.005 | .31 | <2 | 10 | N | 70 | 350 | 2 | <10 |
| S15A-548 | .050 | .090 | .83 | <2 | <10 | N | <20 | 230 | <1 | <10 |
| S16A-621 | .120 | .030 | .27 | <2 | 110 | N | 80 | 360 | 1 | <10 |
| S16A-623 | .070 | .090 | .27 | <2 | 14,000 | .250 | 490 | 370 | 1 | <10 |
| S16A-626 | .070 | .040 | .23 | <2 | 16,000 | .200 | 1,940 | 320 | 1 | <10 |
| S16A-629 | .120 | .040 | .22 | <2 | 30 | .350 | 60 | 320 | 1 | <10 |
| S16A-634 | .190 | .040 | .38 | <2 | <10 | N | 30 | 590 | 2 | <10 |
| S16B-450 | .050 | .090 | .99 | <2 | 10 | N | 20 | 320 | 1 | <10 |
| S16B-534 | .060 | .060 | .50 | <2 | 10 | N | 110 | 270 | 1 | <10 |
| S16B-558 | .060 | .040 | .29 | <2 | 440 | N | 40 | 190 | 1 | <10 |
| S16B-560 | .020 | .070 | .16 | <2 | 33,000 | 1.900 | <20 | 39 | <1 | 20 |
| S16B-564 | .040 | .290 | .28 | <2 | 16,000 | .350 | 980 | 160 | 1 | 20 |
| S16B-566 | .050 | .040 | .30 | <2 | 50 | N | 150 | 200 | 1 | <10 |
| S16B-573 | .140 | .030 | .36 | <2 | <10 | N | 60 | 350 | 2 | <10 |
| S16C-412 | .130 | <.005 | .25 | <2 | 30 | N | 70 | 230 | 1 | <10 |
| S16C-442 | .050 | .030 | .30 | <2 | 1,100 | N | 60 | 210 | <1 | <10 |
| S16C-448 | .080 | .040 | .37 | <2 | 560 | N | 70 | 300 | 1 | <10 |
| S16C-455 | .070 | .130 | .37 | <2 | 50 | N | 110 | 380 | 1 | <10 |
| S16C-498 | .060 | .010 | .25 | <2 | 10 | N | 40 | 300 | 1 | <10 |
| S17A-749 | .050 | .090 | .89 | <2 | <10 | N | 40 | 340 | 2 | <10 |
| S17A-763 | .140 | .030 | .36 | <2 | <10 | N | 60 | 590 | 2 | <10 |
| S17A-775 | .100 | .040 | .24 | <2 | 50 | N | 30 | 450 | <1 | <10 |
| S17A-777 | .030 | .060 | .20 | 4 | 12,000 | .600 | 140 | 330 | <1 | <10 |
| S17A-780 | .070 | .050 | .33 | 2 | 60 | .100 | 90 | 470 | 1 | <10 |
| S17A-792 | .140 | .020 | .30 | <2 | <10 | N | 110 | 570 | 2 | <10 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | Ce ppm-s | Co ppm-s | Cr ppm-s | Cu ppm-s | Eu ppm-s | Ga ppm-s | La ppm-s | Li ppm-s | Mn ppm-s | Mo ppm-s |
|---|---|---|---|---|---|---|---|---|---|---|
| S12A-548 | 84 | 65 | 45 | 440 | <2 | 23 | 44 | 27 | 340 | <2 |
| S12B-533 | 44 | 99 | 39 | 6 | <2 | 24 | 23 | 34 | 2,600 | 3 |
| S12B-541 | 12 | 2,700 | 45 | 9 | <2 | 33 | 14 | 35 | 950 | 2 |
| S12B-555 | 28 | 3,500 | 44 | 39 | <2 | 35 | 23 | 37 | 830 | <2 |
| S12B-562 | 63 | 53 | 43 | 200 | <2 | 18 | 34 | 27 | 290 | 2 |
| S12B-617 | 200 | 170 | 18 | 8,800 | 5 | 32 | 110 | 63 | 510 | 5 |
| S12C-678 | 74 | 24 | 47 | 23 | <2 | 19 | 39 | 22 | 340 | <2 |
| S12C-713 | 7 | 6,300 | 37 | 6 | <2 | 31 | 13 | 44 | 1,000 | <2 |
| S12C-723 | 31 | 32 | 38 | 42 | <2 | 20 | 16 | 24 | 190 | <2 |
| S13A-584 | 48 | 32 | 32 | 35 | <2 | 23 | 30 | 27 | 310 | <2 |
| S13A-592 | <4 | 1,600 | 38 | 6,400 | <2 | 31 | 7 | 37 | 580 | <2 |
| S13A-596 | 30 | 160 | 31 | 750 | <2 | 20 | 19 | 21 | 160 | <2 |
| S14B-710 | 99 | 30 | 46 | 120 | <2 | 20 | 52 | 28 | 180 | 2 |
| S14B-742 | 5 | 4,600 | 35 | 86 | <2 | 23 | 3 | 21 | 600 | <2 |
| S14B-744 | <4 | 340 | 130 | 13 | <2 | 25 | 3 | 17 | 800 | 4 |
| S14B-746 | <4 | 23,000 | 150 | 42 | <2 | 25 | <2 | 20 | 1,700 | <2 |
| S14B-747 | 6 | 2,500 | 140 | 44 | <2 | 28 | 4 | 39 | 900 | <2 |
| S14B-750 | 45 | 42 | 47 | 47 | <2 | 19 | 27 | 19 | 250 | <2 |
| S14B-764 | 100 | 31 | 33 | 25 | <2 | 17 | 53 | 23 | 170 | <2 |
| S15A-499 | 19 | 99 | 370 | 12 | <2 | 19 | 12 | 67 | 540 | <2 |
| S15A-515 | 48 | 39 | 39 | 860 | <2 | 20 | 25 | 26 | 100 | <2 |
| S15A-548 | 27 | 68 | 310 | 35 | <2 | 17 | 15 | 85 | 200 | <2 |
| S16A-621 | 27 | 120 | 130 | 74 | <2 | 25 | 16 | 34 | 330 | 4 |
| S16A-623 | 90 | 12,000 | 91 | 8 | <2 | 46 | 46 | 67 | 840 | <2 |
| S16A-626 | 170 | 14,000 | 100 | 10 | 2 | 44 | 88 | 59 | 680 | <2 |
| S16A-629 | 16 | 55 | 180 | 7,800 | <2 | 14 | 10 | 18 | 550 | 3 |
| S16A-634 | 46 | 35 | 53 | 36 | <2 | 22 | 28 | 29 | 300 | <2 |
| S16B-450 | 55 | 100 | 360 | 470 | <2 | 25 | 30 | 89 | 230 | 5 |
| S16B-534 | 15 | 80 | 41 | 2 | <2 | 30 | 8 | 59 | 1,900 | 4 |
| S16B-558 | 110 | 390 | 130 | 98 | <2 | 26 | 58 | 28 | 480 | 3 |
| S16B-560 | 91 | >25,000 | 160 | 420 | <2 | 34 | 47 | 22 | 550 | 2 |
| S16B-564 | 100 | 11,000 | 120 | 1,600 | 2 | 47 | 56 | 39 | 1,200 | <2 |
| S16B-566 | 11 | 78 | 180 | 950 | <2 | 27 | 7 | 20 | 350 | 3 |
| S16B-573 | 24 | 56 | 47 | 1 | <2 | 23 | 12 | 34 | 520 | <2 |
| S16C-412 | 86 | 52 | 30 | 720 | <2 | 20 | 42 | 22 | 720 | <2 |
| S16C-442 | 7 | 860 | 160 | 1,400 | <2 | 29 | 5 | 51 | 570 | <2 |
| S16C-448 | 33 | 490 | 150 | 3,800 | <2 | 25 | 19 | 37 | 500 | <2 |
| S16C-455 | 110 | 110 | 130 | 2,700 | 4 | 33 | 65 | 52 | 560 | 3 |
| S16C-498 | 47 | 57 | 29 | 470 | <2 | 28 | 23 | 29 | 480 | 2 |
| S17A-749 | 23 | 46 | 240 | 89 | <2 | 16 | 14 | 68 | 170 | 2 |
| S17A-763 | 73 | 27 | 44 | 40 | <2 | 22 | 38 | 26 | 370 | 2 |
| S17A-775 | 26 | 54 | 120 | 930 | <2 | 24 | 15 | 27 | 420 | 2 |
| S17A-777 | 620 | 8,900 | 140 | 12,000 | 6 | 33 | 330 | 38 | 370 | 3 |
| S17A-780 | 73 | 83 | 43 | 3,800 | <2 | 32 | 41 | 46 | 240 | <2 |
| S17A-792 | 73 | 22 | 37 | 240 | <2 | 17 | 38 | 21 | 130 | <2 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | Nb ppm-s | Nd ppm-s | Ni ppm-s | Pb ppm-s | Sc ppm-s | Se ppm | Sr ppm-s | Th ppm-s | V ppm-s | Y ppm-s |
|---|---|---|---|---|---|---|---|---|---|---|
| S12A-548 | 13 | 37 | 16 | 16 | 12 | <.10 | 16 | 13 | 53 | 13 |
| S12B-533 | 11 | 19 | 12 | <4 | 17 | <.10 | 18 | 14 | 48 | 130 |
| S12B-541 | -- | 14 | 110 | <4 | 15 | <1.00 | 14 | 17 | 47 | 62 |
| S12B-555 | -- | 17 | 160 | <4 | 11 | <5.00 | 9 | 15 | 48 | 55 |
| S12P-562 | 11 | 25 | 15 | 9 | 10 | <.10 | 21 | 14 | 49 | 26 |
| S12B-617 | 100 | 90 | 20 | 340 | 24 | 2.80 | 16 | 10 | 280 | 30 |
| S12C-678 | 10 | 32 | 15 | <4 | 12 | <.10 | 37 | 19 | 56 | 23 |
| S12C-713 | -- | 9 | 210 | 5 | 6 | <20.00 | 6 | 7 | 42 | 19 |
| S12C-723 | 9 | 17 | 11 | <4 | 10 | <.10 | 35 | 21 | 47 | 18 |
| S13A-584 | -- | 26 | 13 | <4 | 9 | .10 | 17 | 15 | 34 | 11 |
| S13A-592 | -- | 6 | 22 | 4 | 7 | 2.70 | 2 | 14 | 36 | 19 |
| S13A-596 | -- | 17 | 11 | <4 | 7 | .40 | 16 | 8 | 29 | 6 |
| S14B-710 | 15 | 40 | 13 | 8 | 12 | <.10 | 35 | 18 | 53 | 5 |
| S14B-742 | 5 | 5 | 62 | 4 | 9 | .10 | 37 | 14 | 40 | 57 |
| S14B-744 | 8 | <4 | 29 | 5 | 10 | .20 | 60 | 14 | 47 | 11 |
| S14B-746 | 6 | <4 | 190 | <4 | 7 | 9.20 | 16 | 15 | 29 | 55 |
| S14B-747 | 11 | 5 | 70 | <4 | 12 | <10.00 | 15 | 20 | 56 | 42 |
| S14B-750 | -- | 22 | 15 | <4 | 10 | .10 | 61 | 17 | 43 | 8 |
| S14B-764 | 9 | 42 | 11 | <4 | 9 | <.10 | 38 | 19 | 43 | 16 |
| S15A-499 | 16 | 13 | 160 | <4 | 25 | <.10 | 13 | 9 | 170 | 5 |
| S15A-515 | 12 | 21 | 12 | 33 | 11 | <.10 | 26 | 16 | 48 | 8 |
| S15A-548 | 19 | 15 | 150 | <4 | 32 | <.10 | 28 | <4 | 210 | 10 |
| S16A-621 | 9 | 13 | 28 | <4 | 9 | <.20 | 18 | 11 | 46 | 21 |
| S16A-623 | 14 | 38 | 360 | <4 | 14 | 6.10 | 12 | 24 | 57 | 87 |
| S16A-626 | 11 | 70 | 390 | <4 | 16 | <10.00 | 12 | 16 | 54 | 98 |
| S16A-629 | 5 | 8 | 29 | 11 | 8 | .0 | 17 | 14 | 36 | 19 |
| S16A-634 | -- | 26 | 15 | 5 | 11 | .10 | 25 | 20 | 53 | 28 |
| S16B-450 | 34 | 22 | 130 | 28 | 30 | .10 | 4 | <4 | 210 | 8 |
| S16B-534 | 12 | 6 | 28 | <4 | 17 | <.10 | 8 | 23 | 70 | 40 |
| S16B-558 | 11 | 50 | 52 | <4 | 11 | .30 | 8 | 22 | 50 | 44 |
| S16B-560 | 7 | 37 | 900 | <4 | 9 | 16.00 | 4 | 17 | 36 | 66 |
| S16B-564 | 17 | 47 | 800 | <4 | 14 | <10.00 | 18 | 23 | 61 | 41 |
| S16B-566 | 10 | 7 | 25 | <4 | 10 | .62 | 8 | 23 | 47 | 38 |
| S16B-573 | 12 | 11 | 21 | <4 | 13 | <.10 | 19 | 19 | 56 | 27 |
| S16C-412 | 8 | 32 | 6 | 26 | 8 | <.10 | 21 | 13 | 37 | 25 |
| S16C-442 | 9 | 5 | 41 | <4 | 11 | <1.00 | 4 | 18 | 44 | 29 |
| S16C-448 | 10 | 14 | 30 | <4 | 10 | <1.00 | 10 | 16 | 49 | 51 |
| S16C-455 | 13 | 53 | 28 | <4 | 12 | <1.00 | 16 | 18 | 54 | 45 |
| S16C-498 | 8 | 20 | 19 | 20 | 10 | .10 | 10 | 17 | 39 | 16 |
| S17A-749 | 28 | 14 | 120 | <4 | 30 | <.10 | 3 | <4 | 200 | 6 |
| S17A-763 | 13 | 32 | 15 | <4 | 12 | <.10 | 28 | 22 | 55 | 18 |
| S17A-775 | 7 | 11 | 12 | <4 | 9 | .40 | 17 | 12 | 35 | 25 |
| S17A-777 | 10 | 270 | 310 | <4 | 9 | <50.00 | 8 | 14 | 29 | 110 |
| S17A-780 | -- | 39 | 23 | 6 | 9 | 1.60 | 10 | 12 | 43 | 12 |
| S17A-792 | 12 | 31 | 16 | 10 | 11 | <.10 | 21 | 14 | 45 | 7 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | Yb ppm-s | Zn ppm-s | Zr ppm-s | Ft north | Ft east | Elev ft | Rel ft | Lithol | Fabric | Oretyp | Lode |
|---|---|---|---|---|---|---|---|---|---|---|---|
| S12A-548 | 2 | 32 | 176 | 1,390 | 1,079 | 7,665 | -42 | 20 | 10 | 70 | 3 |
| S12B-533 | 11 | 66 | 89 | 1,355 | 1,202 | 7,578 | 13 | 20 | 10 | 60 | 3 |
| S12B-541 | 8 | 36 | 196 | 1,355 | 1,197 | 7,562 | 10 | 51 | 20 | 10 | 3 |
| S12B-555 | 7 | 30 | 234 | 1,355 | 1,188 | 7,563 | 0 | 51 | 20 | 10 | 3 |
| S12B-562 | 3 | 26 | 273 | 1,355 | 1,178 | 7,561 | -7 | 20 | 10 | 70 | 3 |
| S12B-617 | 3 | 90 | 507 | 1,355 | 1,134 | 7,523 | -48 | 90 | 30 | 80 | 3 |
| S12C-678 | 2 | 49 | 181 | 1,260 | 1,208 | 7,378 | 16 | 20 | 10 | 60 | 3 |
| S12C-713 | 2 | 41 | 174 | 1,260 | 1,186 | 7,374 | 0 | 51 | 20 | 10 | 3 |
| S12C-723 | 3 | 54 | 238 | 1,260 | 1,178 | 7,413 | -8 | 20 | 10 | 70 | 3 |
| S13A-584 | 2 | 15 | 214 | 400 | 1,068 | 7,520 | 6 | 20 | 10 | 60 | 3 |
| S13A-592 | 2 | 19 | 146 | 400 | 1,060 | 7,514 | 0 | 21 | 10 | 30 | 3 |
| S13A-596 | <1 | 9 | 224 | 400 | 1,058 | 7,512 | -3 | 20 | 10 | 70 | 3 |
| S14B-710 | <1 | 21 | 301 | 960 | 1,066 | 7,561 | 32 | 30 | 20 | 60 | 3 |
| S14B-742 | 8 | 16 | 175 | 960 | 1,131 | 7,550 | 4 | 30 | 20 | 10 | 3 |
| S14B-744 | 2 | 11 | 220 | 960 | 1,132 | 7,549 | 2 | 21 | 20 | 60 | 3 |
| S14B-746 | 7 | 11 | 135 | 960 | 1,128 | 7,548 | 0 | 21 | 20 | 10 | 3 |
| S14B-747 | 5 | 18 | 264 | 960 | 1,127 | 7,547 | -1 | 51 | 20 | 70 | 3 |
| S14B-750 | 1 | 12 | 198 | 960 | 1,125 | 7,544 | -3 | 20 | 10 | 70 | 3 |
| S14B-764 | 2 | 52 | 247 | 960 | 1,114 | 7,542 | -16 | 20 | 10 | 70 | 3 |
| S15A-499 | 1 | 58 | 142 | 1 | 1,110 | 7,500 | -- | 50 | 10 | 80 | 3 |
| S15A-515 | 1 | 22 | 285 | 1 | 1,100 | 7,487 | -- | 20 | 10 | 80 | 3 |
| S15A-548 | 2 | 52 | 77 | 1 | 1,077 | 7,463 | -- | 90 | 30 | 80 | 3 |
| S16A-621 | 3 | 22 | 205 | 1,475 | 1,259 | 7,354 | 4 | 50 | 20 | 60 | 3 |
| S16A-623 | 11 | 42 | 303 | 1,475 | 1,257 | 7,352 | 2 | 51 | 20 | 10 | 3 |
| S16A-626 | 13 | 46 | 260 | 1,475 | 1,256 | 7,350 | -1 | 51 | 20 | 10 | 3 |
| S16A-629 | 2 | 47 | 209 | 1,475 | 1,254 | 7,348 | -3 | 20 | 10 | 74 | 3 |
| S16A-634 | 4 | 19 | 239 | 1,475 | 1,251 | 7,342 | -8 | 21 | 10 | 70 | 3 |
| S16B-450 | 1 | 52 | 79 | 1,507 | 1,292 | 7,515 | 96 | 50 | 10 | 60 | 3 |
| S16B-534 | 5 | 37 | 335 | 1,507 | 1,250 | 7,452 | 22 | 50 | 10 | 60 | 3 |
| S16B-558 | 5 | 40 | 185 | 1,507 | 1,230 | 7,428 | 2 | 50 | 20 | 60 | 3 |
| S16B-560 | 8 | 33 | 127 | 1,507 | 1,232 | 7,426 | 0 | 51 | 20 | 10 | 3 |
| S16B-564 | 6 | 44 | 222 | 1,507 | 1,235 | 7,423 | -4 | 51 | 20 | 30 | 3 |
| S16B-566 | 5 | 28 | 383 | 1,507 | 1,237 | 7,421 | -5 | 20 | 10 | 70 | 3 |
| S16B-573 | 3 | 33 | 283 | 1,507 | 1,224 | 7,422 | -12 | 20 | 10 | 70 | 3 |
| S16C-412 | 2 | 24 | 413 | 1,550 | 1,191 | 7,661 | 39 | 20 | 10 | 60 | 3 |
| S16C-442 | 4 | 85 | 247 | 1,550 | 1,152 | 7,651 | 0 | 20 | 10 | 60 | 3 |
| S16C-448 | 6 | 61 | 319 | 1,550 | 1,148 | 7,647 | -6 | 41 | 10 | 30 | 3 |
| S16C-455 | 5 | 55 | 266 | 1,550 | 1,140 | 7,641 | -12 | 51 | 20 | 74 | 3 |
| S16C-498 | 2 | 36 | 182 | 1,550 | 1,101 | 7,632 | -56 | 20 | 10 | 70 | 3 |
| S17A-749 | 1 | 39 | 66 | 1,800 | 1,378 | 7,432 | 41 | 50 | 10 | 60 | 3 |
| S17A-763 | 2 | 18 | 190 | 1,800 | 1,361 | 7,422 | 19 | 40 | 10 | 60 | 3 |
| S17A-775 | 3 | 17 | 205 | 1,800 | 1,347 | 7,412 | 2 | 51 | 20 | 60 | 3 |
| S17A-777 | 9 | 51 | 164 | 1,800 | 1,346 | 7,411 | 0 | 51 | 20 | 30 | 3 |
| S17A-780 | 2 | 27 | 198 | 1,800 | 1,344 | 7,410 | -2 | 21 | 10 | 70 | 3 |
| S17A-792 | <1 | 12 | 155 | 1,800 | 1,339 | 7,408 | -13 | 40 | 10 | 70 | 3 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | SiO2 % | Al2O3 % | FeTO3 % | FeO % | MgO % | CaO % | Na2O % | K2O % | TiO2 % | P2O5 % |
|---|---|---|---|---|---|---|---|---|---|---|
| S17B-412 | 42.5 | 15.80 | 15.90 | 11.80 | 9.36 | 8.25 | 1.19 | 1.10 | 1.82 | .35 |
| S17B-629 | 66.6 | 10.40 | 17.10 | 13.80 | 1.45 | .08 | <.15 | 2.87 | .36 | .05 |
| S17B-638 | -- | -- | -- | 24.50 | -- | -- | -- | -- | -- | -- |
| S17B-661 | 62.3 | 11.10 | 19.00 | 15.80 | 2.05 | .09 | <.15 | 3.88 | .29 | .06 |
| S17B-666 | 57.4 | 14.60 | 20.10 | 15.80 | 1.97 | .12 | <.15 | 3.64 | .42 | .08 |
| S17B-668 | 61.6 | 10.00 | 19.40 | 14.80 | 1.80 | .17 | <.15 | 2.86 | .29 | .10 |
| S17B-672 | -- | -- | -- | 24.90 | -- | -- | -- | -- | -- | -- |
| S17B-673 | 60.2 | 12.70 | 17.00 | 12.50 | 1.33 | .11 | .15 | 4.75 | .47 | .07 |
| S17B-675 | 63.4 | 12.60 | 15.20 | 12.20 | 1.24 | .21 | <.15 | 4.94 | .49 | .16 |
| S17B-682 | 67.9 | 11.90 | 11.80 | 9.22 | 1.03 | .10 | <.15 | 4.60 | .39 | .08 |
| S1A-430 | 68.4 | 12.30 | 11.20 | 8.82 | 1.08 | .12 | .16 | 4.34 | .45 | .09 |
| S1A-445 | 52.0 | 13.40 | 19.40 | 15.30 | 4.90 | .37 | <.15 | 3.76 | 1.10 | .16 |
| S1A-452 | -- | -- | -- | 16.40 | -- | -- | -- | -- | -- | -- |
| S1A-464 | 63.0 | 13.70 | 15.00 | 12.10 | 1.59 | .13 | <.15 | 3.27 | .49 | .08 |
| S1A-595 | 44.5 | 13.60 | 14.30 | 11.00 | 8.69 | 8.30 | 2.24 | 2.07 | 3.07 | .71 |
| S2A-486 | 68.7 | 12.20 | 14.00 | 11.10 | 1.42 | .16 | <.15 | 3.55 | .41 | .09 |
| S2A-487 | 68.7 | 12.10 | 11.80 | 9.38 | 1.28 | .16 | <.15 | 3.55 | .41 | .09 |
| S2A-490 | -- | -- | -- | 21.60 | -- | -- | -- | -- | -- | -- |
| S4A-108 | 65.0 | 11.10 | 16.60 | 12.30 | 1.94 | .07 | <.15 | 2.83 | .40 | .06 |
| S4A-122 | 42.7 | 14.40 | 18.10 | 8.15 | 7.31 | 3.18 | .64 | 2.87 | 3.35 | .77 |
| S4A-226 | 67.0 | 13.40 | 11.30 | 8.55 | 1.00 | .14 | .16 | 4.65 | .54 | .08 |
| S4A-264 | 64.3 | 13.90 | 12.00 | 6.81 | 1.48 | .26 | <.15 | 4.61 | .61 | .10 |
| S5A-146 | 69.3 | 12.80 | 9.50 | 7.33 | .93 | .13 | .20 | 4.14 | .50 | .07 |
| S5A-167 | -- | -- | -- | 24.50 | -- | -- | -- | -- | -- | -- |
| S5A-196 | 59.2 | 11.90 | 20.20 | 16.60 | 2.25 | .11 | <.15 | 4.39 | .46 | .06 |
| S6A-208 | 64.6 | 14.00 | 12.20 | 8.57 | 1.45 | .64 | .28 | 2.77 | .54 | .08 |
| S6A-212 | -- | -- | -- | 12.70 | -- | -- | -- | -- | -- | -- |
| S6A-216 | 61.8 | 14.00 | 17.10 | 12.50 | 1.86 | .39 | .19 | 1.99 | .64 | .07 |
| S6A-226 | 65.0 | 12.50 | 16.20 | 12.30 | 1.37 | .06 | <.15 | 3.10 | .35 | .08 |
| S6A-242 | 68.1 | 13.50 | 9.37 | 7.23 | .79 | .11 | <.15 | 3.83 | .27 | .07 |
| S7B-239 | -- | -- | -- | 6.87 | -- | -- | -- | -- | -- | -- |
| S7B-249 | 80.7 | 5.30 | 9.98 | 8.00 | .73 | .21 | <.15 | 1.16 | .10 | <.05 |
| S7B-286 | 61.5 | 12.80 | 19.10 | 14.20 | 1.88 | .14 | <.15 | 1.81 | .42 | .07 |
| S7B-290 | -- | -- | -- | 9.16 | -- | -- | -- | -- | -- | -- |
| S7B-296 | 51.7 | 19.10 | 21.00 | 16.00 | 2.41 | .24 | .19 | 2.75 | .49 | .14 |
| S7B-297 | 50.9 | 19.10 | 21.00 | 16.00 | 2.41 | .21 | .19 | 2.75 | .49 | .12 |
| S7B-300 | 64.4 | 13.80 | 15.20 | 12.40 | 1.47 | .18 | <.15 | 2.67 | .35 | .07 |
| S7B-313 | 60.6 | 13.30 | 14.80 | 11.90 | 1.23 | .15 | <.15 | 4.16 | .45 | .08 |
| S8A-413 | 81.7 | 5.30 | 8.89 | 7.28 | .85 | .07 | <.15 | .49 | .11 | <.05 |
| S8A-456 | -- | -- | -- | 23.30 | -- | -- | -- | -- | -- | -- |
| S8A-490 | 65.6 | 13.30 | 12.20 | 9.66 | 1.22 | .11 | <.15 | 4.22 | .56 | .09 |
| S8A-500 | 61.1 | 14.40 | 16.40 | 13.10 | 1.53 | .17 | <.15 | 3.96 | .60 | .10 |
| S8A-473 | 60.0 | 14.90 | 18.40 | 14.00 | 1.61 | .21 | <.15 | 2.53 | .51 | .08 |
| S8A-474 | 56.7 | 13.60 | 21.10 | 16.80 | 2.08 | .17 | <.15 | 3.58 | .49 | .09 |
| S8A-475 | 69.4 | 8.31 | 15.50 | 12.20 | 1.72 | .10 | <.15 | 1.92 | .23 | .12 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | MnO % | LOI 900C | Total C% | Total S% | Al %-s | Ca %-s | Fe %-s | K %-s | Mg %-s |
|---|---|---|---|---|---|---|---|---|---|
| S17B-412 | .15 | 2.83 | .11 | .02 | 8.4 | 5.900 | 11.0 | .99 | 5.20 |
| S17B-629 | .06 | 1.19 | <.01 | .12 | 5.3 | .060 | 12.0 | 2.40 | .89 |
| S17B-638 | -- | -- | .06 | .08 | 9.1 | .180 | 21.0 | .61 | 2.80 |
| S17B-661 | .06 | 1.25 | <.01 | .06 | 5.7 | .070 | 14.0 | 3.20 | 1.20 |
| S17B-666 | .08 | 1.85 | .07 | .19 | 7.6 | .090 | 14.0 | 2.70 | 1.20 |
| S17B-668 | .09 | 1.54 | .09 | 1.14 | 5.2 | .130 | 14.0 | 2.10 | 1.00 |
| S17B-672 | -- | -- | .07 | 2.83 | 10.0 | .140 | 26.0 | 2.80 | 1.80 |
| S17B-673 | .05 | 2.03 | .11 | .63 | 6.6 | .080 | 12.0 | 3.50 | .78 |
| S17B-675 | .03 | 1.34 | .04 | .04 | 6.6 | .150 | 11.0 | 4.10 | .75 |
| S17B-682 | <.02 | 1.75 | .11 | <.01 | 6.1 | .080 | 8.5 | 3.70 | .61 |
| S1A-430 | .02 | 1.85 | .15 | .03 | 6.2 | .090 | 7.9 | 3.50 | .63 |
| S1A-445 | .09 | 4.42 | .46 | .15 | 7.1 | .260 | 14.0 | 3.20 | 3.00 |
| S1A-452 | -- | -- | .23 | 1.01 | 6.7 | .250 | 14.0 | 3.00 | 3.60 |
| S1A-464 | .03 | 1.69 | .07 | <.01 | 6.9 | .100 | 11.0 | 2.80 | .94 |
| S1A-595 | .16 | 2.15 | .27 | .15 | 7.3 | 6.000 | 10.0 | 1.90 | 4.90 |
| S2A-486 | .05 | 2.15 | .14 | .22 | 6.3 | .120 | 10.0 | 2.90 | .85 |
| S2A-487 | .04 | 1.63 | .11 | .06 | 6.1 | .110 | 8.3 | 2.80 | .73 |
| S2A-490 | -- | -- | .24 | 1.38 | 7.6 | .170 | 18.0 | .98 | 1.90 |
| S4A-108 | .02 | 1.76 | <.01 | <.01 | 5.3 | .050 | 11.0 | 2.20 | 1.10 |
| S4A-122 | .12 | 5.63 | <.01 | <.01 | 7.7 | 2.300 | 13.0 | 2.50 | 4.20 |
| S4A-226 | .02 | 2.01 | .20 | .02 | 6.9 | .090 | 8.0 | 3.70 | .58 |
| S4A-264 | .04 | 2.29 | .02 | <.01 | 7.0 | .190 | 8.4 | 3.60 | .88 |
| S5A-146 | .05 | 2.65 | .36 | .02 | 6.4 | .100 | 6.6 | 3.20 | .52 |
| S5A-167 | -- | -- | .03 | .66 | 8.4 | .070 | 21.0 | 5.70 | 1.90 |
| S5A-196 | .06 | 1.40 | .28 | .02 | 6.3 | .070 | 15.0 | 3.60 | 1.40 |
| S6A-208 | .11 | 3.40 | .28 | <.01 | 7.3 | .450 | 8.5 | 2.00 | .83 |
| S6A-212 | -- | -- | .11 | 1.85 | 5.5 | .620 | 13.0 | .88 | 1.00 |
| S6A-216 | .08 | 2.33 | .03 | .06 | 7.2 | .290 | 12.0 | 1.50 | 1.10 |
| S6A-226 | .03 | 1.50 | .02 | .10 | 6.6 | .040 | 12.0 | 2.60 | .85 |
| S6A-242 | <.02 | 3.56 | .50 | .10 | 6.7 | .090 | 6.5 | 3.00 | .45 |
| S7B-239 | -- | -- | <.01 | 3.36 | 2.9 | .170 | 7.8 | .97 | .51 |
| S7B-249 | .04 | 1.75 | .32 | .05 | 2.6 | .150 | 6.9 | .81 | .40 |
| S7B-286 | .07 | 2.66 | .17 | .62 | 6.6 | .110 | 13.0 | 1.30 | 1.10 |
| S7B-290 | -- | -- | .17 | 1.39 | 3.1 | .060 | 8.1 | .09 | .99 |
| S7B-296 | .05 | 3.58 | .31 | <.01 | 9.6 | .180 | 14.0 | 2.00 | 1.40 |
| S7B-297 | .05 | 3.41 | .31 | <.01 | 9.6 | .140 | 14.0 | 2.00 | 1.40 |
| S7B-300 | .05 | 2.31 | .21 | .04 | 7.0 | .130 | 11.0 | 2.10 | .83 |
| S7B-313 | .06 | 4.81 | 1.02 | <.01 | 6.8 | .120 | 11.0 | 3.40 | .74 |
| S8A-413 | .02 | 1.92 | .22 | <.01 | 2.8 | .060 | 6.5 | .40 | .53 |
| S8A-456 | -- | -- | .13 | .23 | 8.4 | .150 | 19.0 | .74 | 2.40 |
| S8A-490 | .04 | 2.22 | .30 | <.01 | 6.6 | .090 | 8.6 | 3.30 | .73 |
| S8A-500 | .07 | 2.06 | .25 | .02 | 7.1 | .130 | 11.0 | 3.20 | .87 |
| S8A-473 | .11 | 2.08 | .24 | <.01 | 7.5 | .160 | 13.0 | 1.90 | .89 |
| S8A-474 | .05 | 2.05 | .18 | .46 | 6.8 | .130 | 15.0 | 2.90 | 1.20 |
| S8A-475 | <.02 | 1.70 | .07 | .20 | 4.3 | .080 | 11.0 | 1.40 | 1.00 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | Na %-s | P %-s | Ti %-s | Ag ppm-s | As ppm-s | Au ppm | B ppm-s | Ba ppm-s | Be ppm-s | Bi ppm-s |
|---|---|---|---|---|---|---|---|---|---|---|
| S17B-412 | 1.000 | .140 | .84 | <2 | <10 | N | <20 | 140 | <1 | <10 |
| S17B-629 | .020 | <.005 | .22 | <2 | 20 | N | 40 | 190 | <1 | <10 |
| S17B-638 | .020 | .080 | .21 | <2 | 2,100 | 1.100 | 30 | 53 | <1 | <10 |
| S17B-661 | .030 | .008 | .18 | <2 | 10 | N | 20 | 240 | <1 | <10 |
| S17B-666 | .050 | .030 | .24 | <2 | <10 | N | 70 | 260 | <1 | <10 |
| S17B-668 | .030 | .030 | .18 | <2 | 4,600 | .800 | 30 | 170 | <1 | 30 |
| S17B-672 | .030 | .010 | .13 | 3 | >50,000 | 15.000 | <20 | 200 | <1 | 530 |
| S17B-673 | .080 | .030 | .28 | <2 | 200 | .100 | 90 | 400 | 1 | <10 |
| S17B-675 | .090 | .070 | .34 | <2 | <10 | N | 30 | 450 | 1 | <10 |
| S17B-682 | .090 | .030 | .24 | <2 | <10 | N | 40 | 420 | 1 | <10 |
| S1A-430 | .120 | .030 | .27 | <2 | <10 | N | 50 | 380 | 2 | <10 |
| S1A-445 | .040 | .060 | .64 | <2 | 10 | N | 60 | 310 | 2 | <10 |
| S1A-452 | .040 | .080 | .45 | <2 | 13,000 | .500 | 270 | 200 | 1 | 20 |
| S1A-464 | .070 | .040 | .29 | <2 | <10 | N | 70 | 250 | 1 | <10 |
| S1A-595 | 1.900 | .300 | 1.70 | <2 | <10 | N | <20 | 290 | 2 | <10 |
| S2A-486 | .110 | .030 | .27 | <2 | 70 | N | 70 | 320 | 2 | <10 |
| S2A-487 | .110 | .030 | .27 | <2 | 40 | N | 50 | 320 | 2 | <10 |
| S2A-490 | .020 | .060 | .16 | <2 | 23,000 | .950 | 140 | 91 | <1 | 40 |
| S4A-108 | .040 | .010 | .22 | <2 | 70 | N | 30 | 210 | <1 | <10 |
| S4A-122 | .540 | .310 | 1.70 | <2 | <10 | N | 30 | 350 | 2 | <10 |
| S4A-226 | .150 | .030 | .36 | <2 | 10 | N | 80 | 350 | 2 | <10 |
| S4A-264 | .120 | .050 | .38 | <2 | 40 | N | 60 | 310 | 2 | <10 |
| S5A-146 | .170 | .030 | .30 | <2 | 60 | N | 90 | 370 | 2 | <10 |
| S5A-167 | .050 | .030 | .34 | <2 | 11,000 | 1.300 | <20 | 380 | 1 | 60 |
| S5A-196 | .030 | .020 | .31 | <2 | 80 | N | 20 | 220 | 1 | <10 |
| S6A-208 | .160 | .030 | .28 | <2 | 150 | N | 80 | 300 | 1 | <10 |
| S6A-212 | .020 | .030 | .17 | 3 | 34,000 | 1.100 | 30 | 85 | <1 | 20 |
| S6A-216 | .080 | .030 | .31 | <2 | 220 | N | 160 | 180 | 1 | <10 |
| S6A-226 | .050 | .030 | .24 | <2 | 130 | N | 50 | 270 | 1 | <10 |
| S6A-242 | .130 | <.005 | .16 | <2 | <10 | N | 30 | 330 | 2 | <10 |
| S7B-239 | .030 | .020 | .06 | 6 | 50 | .100 | 20 | 110 | <1 | <10 |
| S7B-249 | .010 | .009 | .06 | <2 | 70 | N | <20 | 73 | <1 | <10 |
| S7B-286 | .020 | .020 | .22 | <2 | 740 | <.015 | 50 | 130 | <1 | <10 |
| S7B-290 | <.005 | .020 | .06 | <2 | 37,000 | .650 | <20 | 9 | <1 | 30 |
| S7B-296 | .050 | .060 | .26 | <2 | 200 | N | 100 | 200 | 1 | <10 |
| S7B-297 | .050 | .040 | .26 | <2 | 200 | N | 100 | 200 | 1 | <10 |
| S7B-300 | .040 | .030 | .22 | <2 | 310 | N | 30 | 190 | 1 | <10 |
| S7B-313 | .110 | .020 | .27 | <2 | 20 | N | 70 | 360 | 2 | <10 |
| S8A-413 | .020 | .020 | .07 | <2 | <10 | N | 50 | 35 | <1 | <10 |
| S8A-456 | .020 | .060 | .28 | <2 | 5,000 | .250 | 60 | 68 | <1 | <10 |
| S8A-490 | .100 | .030 | .33 | <2 | <10 | N | 90 | 410 | 2 | <10 |
| S8A-500 | .070 | .030 | .34 | <2 | 20 | N | 70 | 360 | 1 | <10 |
| S8A-473 | .020 | .030 | .27 | <2 | 40 | 1.200 | 280 | 190 | 1 | <10 |
| S8A-474 | .030 | <.005 | .28 | <2 | 80 | N | 120 | 270 | 1 | <10 |
| S8A-475 | .010 | .030 | .15 | <2 | 4,100 | .150 | 90 | 140 | <1 | <10 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | Ce ppm-s | Co ppm-s | Cr ppm-s | Cu ppm-s | Eu ppm-s | Ga ppm-s | La ppm-s | Li ppm-s | Mn ppm-s | Mo ppm-s |
|---|---|---|---|---|---|---|---|---|---|---|
| S17B-412 | 45 | 110 | 400 | 310 | 2 | 20 | 26 | 26 | 1,200 | 2 |
| S17B-629 | 54 | 91 | 29 | 1,000 | <2 | 25 | 25 | 34 | 530 | 3 |
| S17B-638 | 420 | 1,300 | 41 | 64 | 7 | 47 | 200 | 38 | 340 | 5 |
| S17B-661 | 41 | 90 | 19 | 370 | <2 | 24 | 20 | 49 | 500 | 2 |
| S17B-666 | 43 | 55 | 120 | 1,500 | <2 | 29 | 25 | 37 | 630 | <2 |
| S17B-668 | 67 | 3,000 | 210 | 4,100 | <2 | 24 | 37 | 35 | 700 | 3 |
| S17B-672 | 11 | >25,000 | 170 | 35 | <2 | 53 | 5 | 53 | 1,300 | <2 |
| S17B-673 | 19 | 110 | 91 | 4,900 | <2 | 25 | 11 | 34 | 440 | <2 |
| S17B-675 | 32 | 36 | 41 | 230 | <2 | 23 | 23 | 39 | 300 | <2 |
| S17B-682 | 32 | 28 | 27 | 96 | <2 | 18 | 17 | 27 | 220 | 3 |
| S1A-430 | 53 | 60 | 30 | 210 | <2 | 17 | 28 | 24 | 230 | <2 |
| S1A-445 | 43 | 290 | 260 | 940 | <2 | 24 | 29 | 52 | 690 | <2 |
| S1A-452 | 17 | 13,000 | 320 | 2,100 | <2 | 22 | 16 | 48 | 440 | <2 |
| S1A-464 | 14 | 47 | 35 | 60 | <2 | 27 | 8 | 29 | 330 | 3 |
| S1A-595 | 110 | 130 | 400 | 120 | 4 | 22 | 68 | 28 | 1,200 | 2 |
| S2A-486 | 110 | 140 | 37 | 2,000 | <2 | 22 | 52 | 28 | 470 | 2 |
| S2A-487 | 59 | 98 | 37 | 550 | <2 | 22 | 32 | 24 | 370 | <2 |
| S2A-490 | 84 | 21,000 | 45 | 2,300 | <2 | 34 | 50 | 34 | 620 | <2 |
| S4A-108 | 27 | 200 | 27 | 250 | <2 | 21 | 15 | 33 | 250 | 2 |
| S4A-122 | 130 | 1,800 | 400 | 810 | 4 | 24 | 74 | 38 | 920 | 2 |
| S4A-226 | 19 | 39 | 49 | 130 | <2 | 21 | 15 | 30 | 240 | <2 |
| S4A-264 | 31 | 89 | 66 | 190 | <2 | 26 | 20 | 27 | 360 | <2 |
| S5A-146 | 72 | 35 | 52 | 240 | <2 | 18 | 39 | 19 | 420 | <2 |
| S5A-167 | 100 | 11,000 | 58 | 30 | 2 | 30 | 60 | 100 | 300 | <2 |
| S5A-196 | <4 | 170 | 53 | 19 | <2 | 27 | <2 | 66 | 480 | <2 |
| S6A-208 | 38 | 840 | 140 | 21 | <2 | 26 | 20 | 20 | 850 | <2 |
| S6A-212 | 100 | >25,000 | 140 | 7,800 | <2 | 28 | 52 | 17 | 1,500 | <2 |
| S6A-216 | 76 | 210 | 150 | 1,400 | <2 | 31 | 41 | 19 | 660 | <2 |
| S6A-226 | 77 | 82 | 38 | 1,500 | <2 | 24 | 45 | 30 | 280 | <2 |
| S6A-242 | 39 | 130 | 13 | 660 | <2 | 18 | 21 | 18 | 200 | <2 |
| S7B-239 | 7 | 230 | 13 | 50,000 | <2 | 14 | 9 | 11 | 280 | <2 |
| S7B-249 | <4 | 160 | 13 | 360 | <2 | 11 | <2 | 13 | 330 | <2 |
| S7B-286 | 31 | 640 | 130 | 4,100 | <2 | 33 | 18 | 25 | 540 | <2 |
| S7B-290 | 29 | >25,000 | 150 | 42 | <2 | 24 | 15 | 15 | 220 | <2 |
| S7B-296 | 24 | 230 | 95 | 7 | <2 | 34 | 14 | 38 | 400 | 2 |
| S7B-297 | 24 | 230 | 95 | 7 | <2 | 34 | 14 | 38 | 400 | <2 |
| S7B-300 | <4 | 350 | 29 | 220 | <2 | 24 | 4 | 28 | 440 | <2 |
| S7B-313 | 78 | 110 | 32 | 210 | <2 | 21 | 42 | 22 | 490 | 2 |
| S8A-413 | 5 | 55 | 11 | 12 | <2 | 12 | 3 | 11 | 270 | <2 |
| S8A-456 | 54 | 3,800 | 42 | 170 | <2 | 38 | 25 | 36 | 600 | 4 |
| S8A-490 | 64 | 42 | 43 | 61 | <2 | 19 | 33 | 24 | 360 | <2 |
| S8A-500 | 48 | 62 | 45 | 240 | <2 | 21 | 25 | 34 | 590 | 2 |
| S8A-473 | 9 | 85 | 160 | 8 | <2 | 28 | 6 | 21 | 870 | <2 |
| S8A-474 | 34 | 170 | 37 | 3,200 | <2 | 29 | 18 | 37 | 440 | 4 |
| S8A-475 | 18 | 3,400 | 130 | 250 | <2 | 20 | 10 | 30 | 190 | <2 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | Nb ppm-s | Nd ppm-s | Ni ppm-s | Pb ppm-s | Sc ppm-s | Se ppm | Sr ppm-s | Th ppm-s | V ppm-s | Y ppm-s |
|---|---|---|---|---|---|---|---|---|---|---|
| S17B-412 | 23 | 24 | 170 | 13 | 33 | .20 | 180 | <4 | 220 | 19 |
| S17B-629 | 7 | 21 | 13 | 37 | 7 | .40 | 2 | 13 | 30 | 22 |
| S17B-638 | 6 | 160 | 140 | 4 | 8 | 1.50 | 8 | 32 | 54 | 22 |
| S17B-661 | 6 | 18 | 19 | 13 | 7 | .20 | 3 | 12 | 27 | 19 |
| S17B-666 | 7 | 22 | 20 | <4 | 12 | <1.00 | 6 | 18 | 39 | 33 |
| S17B-668 | <4 | 28 | 250 | <4 | 7 | <5.00 | 3 | 14 | 28 | 53 |
| S17B-672 | 7 | <4 | 3,300 | <4 | 12 | 26.00 | <2 | 11 | 49 | 120 |
| S17B-673 | 8 | 7 | 34 | <4 | 9 | 1.40 | 10 | 15 | 39 | 25 |
| S17B-675 | -- | 21 | 15 | <4 | 10 | .20 | 12 | 14 | 38 | 17 |
| S17B-682 | 9 | 15 | 9 | <4 | 8 | <.10 | 12 | 10 | 34 | 4 |
| S1A-430 | 6 | 26 | 10 | 6 | 8 | .10 | 24 | 10 | 38 | 14 |
| S1A-445 | -- | 29 | 90 | <4 | 19 | 6.30 | 14 | 11 | 120 | 22 |
| S1A-452 | -- | 9 | 220 | 5 | 19 | <50.00 | 9 | <4 | 140 | 10 |
| S1A-464 | 10 | 7 | 12 | 5 | 11 | <.10 | 20 | 14 | 45 | 22 |
| S1A-595 | 38 | 56 | 150 | 6 | 26 | .20 | 520 | 5 | 250 | 20 |
| S2A-486 | 8 | 43 | 14 | 75 | 8 | .70 | 23 | 11 | 36 | 39 |
| S2A-487 | -- | 31 | 11 | <4 | 8 | .40 | 23 | 11 | 35 | 24 |
| S2A-490 | -- | 36 | 110 | <4 | 8 | <50.00 | 8 | 16 | 45 | 37 |
| S4A-108 | 7 | 12 | 17 | 10 | 6 | .20 | 10 | 9 | 31 | 26 |
| S4A-122 | 48 | 58 | 200 | 37 | 25 | .10 | 150 | 7 | 240 | 26 |
| S4A-226 | -- | 13 | 18 | <4 | 10 | .20 | 40 | 16 | 43 | 29 |
| S4A-264 | -- | 18 | 23 | 6 | 12 | .20 | 28 | 12 | 58 | 18 |
| S5A-146 | -- | 34 | 15 | <4 | 9 | .20 | 50 | 16 | 42 | 24 |
| S5A-167 | -- | 47 | 280 | <4 | 9 | <50.00 | 6 | 32 | 44 | 29 |
| S5A-196 | -- | <4 | 23 | <4 | 8 | <5.00 | 3 | 19 | 36 | 19 |
| S6A-208 | 10 | 18 | 26 | <4 | 12 | <.10 | 57 | 15 | 45 | 51 |
| S6A-212 | 5 | 44 | 180 | <4 | 9 | <10.00 | 6 | 15 | 31 | 84 |
| S6A-216 | 7 | 35 | 22 | <4 | 13 | <.50 | 23 | 23 | 47 | 63 |
| S6A-226 | -- | 41 | 17 | <4 | 10 | 1.00 | 9 | 13 | 33 | 23 |
| S6A-242 | 8 | 18 | 9 | 26 | 8 | <.10 | 21 | 11 | 21 | 12 |
| S7B-239 | -- | 8 | 59 | 16 | 4 | <500.00 | 11 | <4 | 18 | 33 |
| S7B-249 | -- | <4 | 9 | <4 | 3 | <.50 | <2 | <4 | 13 | 19 |
| S7B-286 | 7 | 17 | 16 | <4 | 11 | 1.80 | 3 | 13 | 35 | 28 |
| S7B-290 | <4 | 12 | 82 | <4 | 4 | <10.00 | <2 | 11 | 15 | 250 |
| S7B-296 | 13 | 12 | 7 | <4 | 15 | <.10 | 12 | 19 | 45 | 22 |
| S7B-297 | 13 | 12 | 7 | <4 | 15 | .10 | 10 | 19 | 45 | 22 |
| S7B-300 | -- | <4 | 11 | <4 | 9 | .30 | 8 | 14 | 30 | 12 |
| S7B-313 | 9 | 33 | 12 | 5 | 10 | <.10 | 16 | 17 | 41 | 15 |
| S8A-413 | <4 | <4 | 5 | <4 | 3 | <.10 | 4 | <4 | 14 | 5 |
| S8A-456 | 12 | 23 | 66 | 10 | 12 | .10 | 6 | 14 | 49 | 27 |
| S8A-490 | 10 | 27 | 12 | <4 | 11 | <.10 | 16 | 15 | 50 | 22 |
| S8A-500 | 10 | 20 | 16 | 6 | 12 | .10 | 10 | 18 | 48 | 40 |
| S8A-473 | 10 | 5 | 8 | <4 | 13 | .10 | 4 | 13 | 51 | 30 |
| S8A-474 | 13 | 16 | 13 | 120 | 11 | 1.20 | 5 | 14 | 45 | 27 |
| S8A-475 | 6 | 7 | 85 | <4 | 5 | <10.00 | 3 | 6 | 25 | 35 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | Yb ppm-s | Zn ppm-s | Zr ppm-s | Ft north | Ft east | Elev ft | Rel ft | Lithol | Fabric | Oretyp | Lode |
|---|---|---|---|---|---|---|---|---|---|---|---|
| S17B-412 | 2 | 85 | 84 | 1,880 | 1,474 | 7,748 | 238 | 90 | 30 | 80 | 3 |
| S17B-629 | 2 | 33 | 225 | 1,880 | 1,304 | 7,629 | 41 | 20 | 10 | 60 | 3 |
| S17B-638 | 1 | 66 | 196 | 1,880 | 1,393 | 7,622 | 29 | 50 | 10 | 10 | 3 |
| S17B-661 | 2 | 42 | 105 | 1,880 | 1,276 | 7,612 | 8 | 50 | 10 | 60 | 3 |
| S17B-666 | 4 | 33 | 228 | 1,880 | 1,270 | 7,610 | 5 | 50 | 20 | 60 | 3 |
| S17B-668 | 7 | 41 | 171 | 1,880 | 1,264 | 7,609 | 3 | 51 | 20 | 30 | 3 |
| S17B-672 | 19 | 24 | 333 | 1,880 | 1,257 | 7,607 | 0 | 51 | 20 | 10 | 3 |
| S17B-673 | 3 | 44 | 233 | 1,880 | 1,255 | 7,606 | -1 | 51 | 20 | 70 | 3 |
| S17B-675 | 2 | 31 | 228 | 1,880 | 1,253 | 7,605 | -2 | 21 | 10 | 70 | 3 |
| S17B-682 | <1 | 22 | 163 | 1,880 | 1,249 | 7,604 | -8 | 20 | 10 | 70 | 3 |
| S1A-430 | 2 | 16 | 277 | 630 | 1,006 | 7,793 | -10 | 20 | 10 | 60 | 3 |
| S1A-445 | 3 | 38 | 146 | 630 | 1,018 | 7,779 | -2 | 21 | 10 | 60 | 3 |
| S1A-452 | 1 | 33 | 105 | 630 | 1,022 | 7,775 | 0 | 51 | 20 | 10 | 3 |
| S1A-464 | 3 | 24 | 233 | 630 | 1,028 | 7,770 | -4 | 20 | 10 | 70 | 3 |
| S1A-595 | 2 | 94 | 290 | 630 | 1,146 | 7,702 | -90 | 90 | 30 | 80 | 3 |
| S2A-486 | 5 | 24 | 202 | 835 | 1,052 | 7,743 | -3 | 20 | 10 | 60 | 3 |
| S2A-487 | 3 | 16 | 185 | 800 | 1,053 | 7,742 | -4 | 20 | 10 | 60 | 3 |
| S2A-490 | 4 | 29 | 259 | 835 | 1,056 | 7,743 | 0 | 40 | 25 | 10 | 3 |
| S4A-108 | 4 | 36 | 179 | 200 | 960 | 7,992 | -8 | 20 | 10 | 80 | 3 |
| S4A-122 | 3 | 120 | 301 | 200 | 972 | 7,983 | 0 | 50 | 10 | 80 | 3 |
| S4A-226 | 4 | 13 | 228 | 200 | 1,046 | 7,912 | 90 | 21 | 10 | 60 | 3 |
| S4A-264 | 3 | 14 | 196 | 200 | 1,072 | 7,888 | 120 | 51 | 10 | 70 | 3 |
| S5A-146 | 3 | 9 | 223 | 300 | 1,051 | 7,917 | 20 | 20 | 10 | 60 | 3 |
| S5A-167 | 5 | 43 | 533 | 300 | 1,042 | 7,894 | 0 | 51 | 20 | 10 | 3 |
| S5A-196 | 2 | 27 | 209 | 300 | 1,032 | 7,876 | -16 | 20 | 10 | 60 | 3 |
| S6A-208 | 8 | 10 | 276 | 495 | 1,026 | 7,912 | 4 | 21 | 10 | 60 | 3 |
| S6A-212 | 10 | 32 | 169 | 495 | 1,021 | 7,909 | 0 | 21 | 20 | 30 | 3 |
| S6A-216 | 7 | 18 | 344 | 495 | 1,017 | 7,905 | -2 | 51 | 20 | 70 | 3 |
| S6A-226 | 3 | 24 | 208 | 495 | 1,007 | 7,900 | -9 | 31 | 10 | 20 | 3 |
| S6A-242 | 2 | 19 | 163 | 495 | 994 | 7,890 | -26 | 20 | 10 | 70 | 3 |
| S7B-239 | 3 | <4 | 63 | 690 | 1,058 | 7,779 | 44 | 51 | 20 | 20 | 3 |
| S7B-249 | 2 | 11 | 132 | 690 | 1,050 | 7,772 | 35 | 51 | 20 | 60 | 3 |
| S7B-286 | 4 | 39 | 247 | 690 | 1,023 | 7,746 | 2 | 51 | 20 | 60 | 3 |
| S7B-290 | 31 | 20 | 121 | 690 | 1,020 | 7,744 | 0 | 51 | 20 | 60 | 3 |
| S7B-296 | 4 | 51 | 289 | 690 | 1,015 | 7,742 | -4 | 20 | 10 | 80 | 3 |
| S7B-297 | 4 | 38 | 275 | 670 | 15 | 7,742 | -7 | 20 | 10 | 80 | 3 |
| S7B-300 | 2 | 22 | 228 | 690 | 1,013 | 7,740 | -7 | 51 | 20 | 70 | 3 |
| S7B-313 | 2 | 18 | 268 | 690 | 1,005 | 7,735 | -15 | 20 | 10 | 70 | 3 |
| S8A-413 | <1 | 15 | 148 | 985 | 1,234 | 7,792 | 84 | 30 | 20 | 60 | 3 |
| S8A-456 | 4 | 58 | 424 | 985 | 1,098 | 7,761 | 39 | 50 | 10 | 10 | 3 |
| S8A-490 | 3 | 18 | 276 | 985 | 1,065 | 7,732 | 10 | 40 | 10 | 70 | 3 |
| S8A-500 | 4 | 28 | 298 | 985 | 1,070 | 7,738 | 0 | 40 | 10 | 70 | 3 |
| S8A-473 | 4 | 24 | 177 | 985 | 1,088 | 7,748 | 2 | 51 | 20 | 60 | 3 |
| S8A-474 | 3 | 49 | 220 | 985 | 1,088 | 7,748 | 1 | 50 | 10 | 20 | 3 |
| S8A-475 | 5 | 28 | 124 | 985 | 1,087 | 7,747 | 0 | 41 | 20 | 60 | 3 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | SiO2 % | Al2O3 % | FeTO3 % | FeO % | MgO % | CaO % | Na2O % | K2O % | TiO2 % | P2O5 % |
|---|---|---|---|---|---|---|---|---|---|---|
| S8A-476 | 58.4 | 13.30 | 18.80 | 14.80 | 1.85 | .16 | .17 | 2.51 | .30 | .11 |
| S8A-502 | 60.7 | 12.00 | 16.50 | 11.60 | 1.19 | .17 | <.15 | 3.53 | .47 | .12 |
| S9A-077 | 54.7 | 13.20 | 25.30 | 19.00 | 1.64 | .22 | <.15 | 3.51 | .44 | .09 |
| S9A-146 | -- | -- | -- | 25.30 | -- | -- | -- | -- | -- | -- |
| S9A-222 | 56.9 | 12.10 | 20.80 | 16.70 | 2.62 | .70 | <.15 | 3.06 | .80 | .18 |
| S9A-266 | 59.6 | 13.20 | 19.10 | 15.30 | 1.50 | .14 | <.15 | 3.68 | .46 | .09 |
| S9A-330 | 62.7 | 13.70 | 14.40 | 11.50 | 1.18 | .13 | <.15 | 5.06 | .52 | .09 |
| S9A-191 | 82.8 | 4.52 | 8.88 | 7.11 | 1.15 | .04 | <.15 | .05 | .10 | <.05 |
| S9A-192 | -- | -- | -- | 6.73 | -- | -- | -- | -- | -- | -- |
| S9A-193 | -- | -- | -- | 4.81 | -- | -- | -- | -- | -- | -- |
| S9A-198 | -- | -- | -- | 7.72 | -- | -- | -- | -- | -- | -- |
| S9A-204 | 65.2 | 13.40 | 15.00 | 11.10 | 1.57 | .08 | <.15 | 2.32 | .62 | .06 |
| S9A-206 | 63.9 | 13.20 | 14.70 | 11.20 | 1.50 | .08 | <.15 | 2.35 | .55 | <.05 |
| S11A-405 | -- | -- | -- | 28.80 | -- | -- | -- | -- | -- | -- |
| S11B-165 | 57.0 | 15.50 | 16.00 | 12.60 | 1.40 | .13 | .16 | 6.10 | .60 | .11 |
| S13A-236 | -- | -- | -- | 28.20 | -- | -- | -- | -- | -- | -- |
| S14B-125 | 40.9 | 13.60 | 23.70 | 18.60 | 6.91 | .60 | <.15 | 4.63 | 2.59 | .49 |
| NIC500 | 39.6 | 11.30 | 12.80 | 10.00 | 13.40 | 10.40 | .42 | 4.55 | 1.83 | .99 |
| NIC501 | 68.0 | 15.10 | 4.12 | 3.34 | 1.46 | .84 | 4.10 | 4.74 | .53 | .09 |
| NIC504S | 68.3 | 16.40 | 2.27 | 1.83 | 1.48 | 2.37 | 6.82 | .77 | .60 | .08 |
| NIC504T | 48.8 | 13.00 | 9.37 | 6.99 | 10.10 | 9.97 | 2.65 | 1.72 | 1.90 | .93 |
| NIC505 | 45.1 | 13.10 | 11.50 | 8.29 | 10.90 | 9.34 | 1.83 | 2.62 | 1.88 | .92 |
| NIC506 | 41.7 | 14.90 | 16.70 | 13.50 | 10.80 | 1.52 | <.15 | 8.40 | 2.26 | 1.02 |
| NIC507 | 61.8 | 14.00 | 11.20 | 8.94 | 1.96 | .05 | .46 | 8.79 | .49 | .05 |
| NIC508 | 42.4 | 13.50 | 15.60 | 12.00 | 6.87 | 6.05 | 1.50 | 4.62 | 2.47 | .38 |
| NIC510 | 42.9 | 14.90 | 25.60 | 20.70 | 5.33 | .46 | <.15 | 8.05 | 1.43 | .32 |
| NIC511 | 61.2 | 11.20 | 19.30 | 15.80 | 1.57 | .11 | <.15 | 5.47 | .40 | .09 |
| NIC512 | 61.4 | 13.90 | 14.50 | 11.50 | 1.21 | .18 | <.15 | 6.80 | .78 | .15 |
| NIC514 | 64.3 | 14.00 | 16.00 | 11.90 | 1.17 | <.02 | <.15 | 2.55 | .35 | <.05 |
| NIC520 | 59.2 | 20.10 | 14.70 | 10.50 | .89 | <.02 | .16 | 2.43 | .80 | <.05 |
| NIC521 | 59.9 | 12.20 | 19.90 | 13.70 | 1.48 | .17 | <.15 | 3.75 | .75 | .06 |
| NIC522 | 72.3 | 11.50 | 12.00 | 9.06 | .95 | <.02 | <.15 | 1.87 | .40 | <.05 |
| NIC523 | 48.0 | 20.50 | 23.00 | 16.20 | 1.26 | .18 | <.15 | 4.07 | 1.02 | .10 |
| NIC524 | 64.2 | 13.50 | 15.40 | 11.70 | 1.41 | .11 | <.15 | 3.48 | .62 | .09 |
| NIC525 | 60.4 | 13.40 | 21.60 | 16.30 | 1.32 | .68 | <.15 | 2.25 | .67 | .06 |
| NIC526 | 42.9 | 14.00 | 23.30 | 18.60 | 6.17 | .98 | <.15 | 7.50 | 3.06 | .76 |
| NIC527A | 56.6 | 16.50 | 22.00 | 16.40 | 1.22 | .26 | <.15 | 2.19 | .60 | .07 |
| NIC527C | 76.8 | 8.39 | 11.10 | 16.40 | 1.03 | <.02 | <.15 | 1.51 | .28 | <.05 |
| NIC528 | 65.5 | 15.60 | 11.70 | 7.74 | 1.07 | .02 | .17 | 3.08 | .77 | .06 |
| NIC529 | 64.8 | 15.50 | 12.80 | 8.88 | .93 | .06 | .19 | 3.36 | .54 | .06 |
| NIC531 | .0 | .0 | .0 | 19.80 | .0 | .0 | .0 | .0 | .0 | .0 |
| NIC533 | 51.4 | 15.50 | 27.70 | 21.30 | 1.74 | 2.42 | <.15 | 1.94 | .68 | .11 |
| NIC534 | 62.2 | 13.30 | 18.10 | 13.40 | 1.22 | .06 | <.15 | 3.06 | .44 | <.05 |
| NIC550 | 64.0 | 11.30 | 15.30 | 11.70 | 2.03 | .19 | <.15 | 5.40 | .45 | .14 |
| NIC551 | 69.5 | 13.70 | 7.23 | 5.90 | 1.14 | .11 | .25 | 4.82 | .49 | .07 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | MnO % | LOI 900C | Total C% | Total S% | Al %-s | Ca %-s | Fe %-s | K %-s | Mg %-s |
|---|---|---|---|---|---|---|---|---|---|
| S8A-476 | .06 | 2.07 | .12 | .48 | 6.3 | .120 | 13.0 | 2.00 | 1.10 |
| S8A-502 | .04 | 2.82 | .18 | 2.08 | 6.1 | .120 | 11.0 | 2.70 | .68 |
| S9A-077 | .11 | 1.39 | <.01 | .08 | 6.6 | .170 | 18.0 | 2.80 | .98 |
| S9A-146 | -- | -- | <.01 | 2.22 | 8.1 | .100 | 22.0 | 1.80 | 2.30 |
| S9A-222 | .11 | 1.73 | .20 | .23 | 6.2 | .530 | 15.0 | 2.50 | 1.60 |
| S9A-266 | .07 | 1.66 | .17 | .20 | 6.6 | .100 | 13.0 | 3.00 | .90 |
| S9A-330 | .02 | 1.74 | .11 | .03 | 6.3 | .090 | 9.2 | 3.70 | .65 |
| S9A-191 | .04 | 1.24 | <.01 | .04 | 2.4 | .040 | 6.5 | <.05 | .73 |
| S9A-192 | -- | -- | <.01 | 3.39 | 2.3 | .050 | 7.2 | .08 | .73 |
| S9A-193 | -- | -- | <.01 | 4.62 | 1.7 | .130 | 5.8 | <.05 | .69 |
| S9A-198 | -- | -- | .05 | 7.89 | 2.5 | .010 | 8.9 | <.05 | .86 |
| S9A-204 | .06 | 1.89 | <.01 | <.01 | 6.9 | .070 | 10.0 | 1.70 | .90 |
| S9A-206 | .07 | 1.61 | <.01 | .18 | 6.6 | .070 | 11.0 | 1.80 | .88 |
| S11A-405 | -- | -- | .01 | .08 | 8.8 | .100 | 24.0 | 7.70 | 1.50 |
| S11B-165 | <.02 | 2.17 | .44 | <.01 | 8.2 | .100 | 11.0 | 5.00 | .78 |
| S13A-236 | -- | -- | <.01 | <.01 | 9.2 | .080 | 23.0 | 7.80 | 1.30 |
| S14B-125 | .06 | 2.89 | <.01 | .05 | 7.5 | .410 | 16.0 | 4.00 | 3.90 |
| NIC500 | .23 | 3.25 | .70 | .02 | 6.6 | 7.200 | 9.2 | 4.70 | 7.60 |
| NIC501 | .02 | .37 | .02 | .02 | 7.8 | .600 | 2.8 | 4.20 | .86 |
| NIC504S | .03 | .18 | <.01 | .02 | 8.6 | 1.700 | 1.6 | .71 | .87 |
| NIC504T | .19 | .70 | <.01 | .02 | 7.4 | 6.900 | 6.4 | 1.70 | 5.80 |
| NIC505 | .21 | 1.69 | .10 | .01 | 7.5 | 6.400 | 8.0 | 2.70 | 6.30 |
| NIC506 | .13 | 1.38 | .02 | .03 | 8.4 | .960 | 12.0 | 7.60 | 6.10 |
| NIC507 | <.02 | .48 | <.01 | .03 | 7.0 | .030 | 7.7 | 7.80 | 1.10 |
| NIC508 | .11 | 6.80 | 1.61 | .02 | 7.6 | 4.300 | 11.0 | 4.50 | 4.10 |
| NIC510 | .06 | 1.38 | <.01 | .03 | 8.0 | .310 | 18.0 | 7.30 | 3.10 |
| NIC511 | .03 | .71 | <.01 | .03 | 6.1 | .080 | 14.0 | 5.10 | .96 |
| NIC512 | <.02 | 1.02 | .05 | .02 | 7.4 | .130 | 10.0 | 6.10 | .73 |
| NIC514 | .05 | 1.93 | .03 | .02 | 7.6 | .020 | 12.0 | 2.40 | .73 |
| NIC520 | .08 | 2.55 | <.01 | .02 | 10.0 | .010 | 10.0 | 2.10 | .51 |
| NIC521 | .12 | 1.94 | <.01 | .02 | 6.6 | .120 | 14.0 | 3.50 | .91 |
| NIC522 | .03 | 1.39 | .02 | .02 | 6.1 | .010 | 8.4 | 1.70 | .56 |
| NIC523 | .16 | 2.48 | <.01 | .02 | 10.0 | .120 | 16.0 | 3.60 | .75 |
| NIC524 | .03 | 1.50 | <.01 | .02 | 7.3 | .080 | 11.0 | 3.20 | .86 |
| NIC525 | .15 | .73 | .03 | .02 | 7.2 | .470 | 15.0 | 2.10 | .83 |
| NIC526 | .09 | .85 | <.01 | .02 | 7.7 | .680 | 16.0 | 7.00 | 3.70 |
| NIC527A | .11 | 1.28 | <.01 | .02 | 8.5 | .170 | 15.0 | 2.00 | .74 |
| NIC527C | <.02 | 1.01 | <.01 | .02 | 4.8 | .010 | 8.6 | 1.50 | .68 |
| NIC528 | .05 | 1.96 | <.01 | .01 | 8.6 | .020 | 8.3 | 2.80 | .65 |
| NIC529 | .03 | 2.14 | .14 | .02 | 8.2 | .040 | 8.9 | 3.00 | .55 |
| NIC531 | .0 | .0 | .04 | .02 | 10.0 | 1.800 | 24.0 | 1.20 | .65 |
| NIC533 | .31 | .73 | <.01 | .01 | 8.3 | 1.700 | 19.0 | 1.80 | 1.10 |
| NIC534 | .06 | 1.46 | .04 | .02 | 6.9 | .050 | 12.0 | 2.70 | .73 |
| NIC550 | <.02 | .69 | <.01 | .02 | 5.6 | .130 | 11.0 | 5.00 | 1.20 |
| NIC551 | <.02 | 2.15 | .01 | .02 | 7.4 | .080 | 5.1 | 4.30 | .68 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | Na %-s | P %-s | Ti %-s | Ag ppm-s | As ppm-s | Au ppm | B ppm-s | Ba ppm-s | Be ppm-s | Bi ppm-s |
|---|---|---|---|---|---|---|---|---|---|---|
| S8A-476 | .030 | .030 | .19 | <2 | 4,300 | N | 330 | 200 | <1 | <10 |
| S8A-502 | .070 | .050 | .29 | 4 | 150 | N | 60 | 130 | 1 | <10 |
| S9A-077 | .050 | .010 | .26 | <2 | 110 | <.050 | 30 | 210 | <1 | <10 |
| S9A-146 | .020 | <.005 | .19 | 5 | 800 | .050 | 30 | 110 | <1 | <10 |
| S9A-222 | .040 | <.005 | .44 | <2 | 4,200 | <.050 | 20 | 220 | 1 | <10 |
| S9A-266 | .050 | <.005 | .28 | <2 | 90 | N | 40 | 330 | 1 | <10 |
| S9A-330 | .110 | .030 | .28 | <2 | 40 | N | 120 | 430 | 1 | <10 |
| S9A-191 | <.005 | .010 | .06 | <2 | 1,200 | <.050 | 30 | 6 | <1 | <10 |
| S9A-192 | <.005 | .030 | .06 | <2 | >50,000 | 2.800 | <20 | a | <1 | 250 |
| S9A-193 | <.005 | .060 | .01 | 2 | >50,000 | 3.900 | <20 | 2 | <1 | 430 |
| S9A-198 | <.005 | .010 | .05 | 3 | >50,000 | 2.000 | <20 | 5 | <1 | <10 |
| S9A-204 | .070 | .020 | .32 | <2 | 290 | N | 70 | 190 | 2 | <10 |
| S9A-206 | .050 | .010 | .31 | <2 | 780 | N | 100 | 180 | 1 | <10 |
| SI1A-405 | .050 | .050 | 1.30 | <2 | 30 | N | <20 | 790 | <1 | 10 |
| SI1B-165 | .120 | .040 | .36 | <2 | 30 | N | 70 | 420 | 1 | <10 |
| SI3A-236 | .050 | .040 | 1.40 | <2 | <10 | N | 20 | 750 | <1 | 10 |
| SI4B-125 | .030 | .210 | 1.50 | <2 | 130 | N | <20 | 120 | 1 | 10 |
| NIC500 | .340 | .450 | 1.10 | <2 | <10 | <8.000 | -- | 1,400 | 2 | <10 |
| NIC501 | 3.000 | .040 | .29 | <2 | <10 | <8.000 | -- | 1,300 | 2 | <10 |
| NIC504S | 5.000 | .040 | .34 | <2 | <10 | <8.000 | -- | 510 | 2 | <10 |
| NIC504T | 2.200 | .390 | 1.00 | <2 | <10 | <8.000 | -- | 610 | 3 | <10 |
| NIC505 | 1.500 | .360 | 1.00 | <2 | <10 | <8.000 | -- | 890 | 2 | <10 |
| NIC506 | .060 | .420 | 1.30 | <2 | <10 | <8.000 | -- | 2,000 | 1 | <10 |
| NIC507 | .310 | .020 | .29 | <2 | <10 | <8.000 | -- | 2,100 | <1 | <10 |
| NIC508 | 1.200 | .180 | 1.40 | <2 | <10 | <8.000 | -- | 510 | 2 | <10 |
| NIC510 | .030 | .140 | .82 | <2 | 70 | <8.000 | -- | 450 | 1 | <10 |
| NIC511 | .030 | .040 | .24 | <2 | <10 | <8.000 | -- | 580 | <1 | <10 |
| NIC512 | .070 | .070 | .45 | <2 | <10 | <8.000 | -- | 810 | 1 | <10 |
| NIC514 | .040 | .020 | .22 | <2 | 30 | <8.000 | -- | 270 | 1 | <10 |
| NIC520 | .110 | .020 | .44 | <2 | <10 | <8.000 | -- | 250 | 2 | <10 |
| NIC521 | .050 | .030 | .44 | <2 | 110 | <8.000 | -- | 340 | 1 | <10 |
| NIC522 | .040 | .010 | .24 | <2 | <10 | <8.000 | -- | 240 | <1 | <10 |
| NIC523 | .110 | .040 | .57 | <2 | 100 | <8.000 | -- | 390 | 2 | <10 |
| NIC524 | .090 | .040 | .37 | <2 | 20 | <8.000 | -- | 440 | 2 | <10 |
| NIC525 | .050 | .030 | .41 | <2 | 20 | <8.000 | -- | 250 | <1 | <10 |
| NIC526 | .040 | .330 | 1.70 | <2 | 70 | <8.000 | -- | 500 | 2 | <10 |
| NIC527A | .020 | .030 | .36 | <2 | <10 | <8.000 | -- | 240 | 1 | <10 |
| NIC527C | .020 | .010 | .18 | <2 | <10 | <8.000 | -- | 170 | <1 | <10 |
| NIC528 | .140 | .030 | .47 | <2 | 50 | <8.000 | -- | 380 | 2 | <10 |
| NIC529 | .130 | .030 | .33 | <2 | <10 | <8.000 | -- | 390 | 2 | <10 |
| NIC531 | .040 | .020 | .26 | <2 | 70 | <8.000 | -- | 120 | <1 | <10 |
| NIC533 | .030 | .050 | .37 | <2 | 20 | <8.000 | -- | 130 | <1 | <10 |
| NIC534 | .040 | .020 | .26 | <2 | 30 | <8.000 | -- | 200 | 1 | <10 |
| NIC550 | .050 | .060 | .27 | <2 | <10 | <8.000 | -- | 860 | <1 | <10 |
| NIC551 | .180 | .030 | .29 | <2 | <10 | <8.000 | -- | 710 | 3 | <10 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | Ce ppm-s | Co ppm-s | Cr ppm-s | Cu ppm-s | Eu ppm-s | Ga ppm-s | La ppm-s | Li ppm-s | Mn ppm-s | Mo ppm-s |
|---|---|---|---|---|---|---|---|---|---|---|
| S8A-476 | 40 | 3,600 | 140 | 2,100 | <2 | 25 | 23 | 32 | 470 | <2 |
| S8A-502 | 36 | 120 | 40 | 14,000 | <2 | 17 | 25 | 22 | 330 | <2 |
| S9A-077 | 99 | 48 | 31 | 330 | 5 | 29 | 50 | 48 | 850 | 3 |
| S9A-146 | 43 | 440 | 21 | 17,000 | 2 | 45 | 25 | 39 | 510 | 4 |
| S9A-222 | 39 | 3,500 | 26 | 2,000 | <2 | 37 | 19 | 33 | 890 | 3 |
| S9A-266 | 21 | 100 | 31 | 1,900 | <2 | 30 | 11 | 37 | 600 | 3 |
| S9A-330 | 31 | 46 | 35 | 110 | <2 | 21 | 17 | 29 | 240 | <2 |
| S9A-191 | 7 | 890 | 200 | 840 | <2 | 15 | 5 | 8 | 390 | <2 |
| S9A-192 | 540 | >25,000 | 120 | 440 | 6 | 32 | 270 | 9 | 460 | <2 |
| S9A-193 | 80 | >25,000 | 150 | 460 | <2 | 34 | 41 | 5 | 78 | <2 |
| S9A-198 | 190 | >25,000 | 98 | 4,000 | 2 | 55 | 98 | 7 | 160 | <2 |
| S9A-204 | 49 | 180 | 160 | 390 | <2 | 33 | 25 | 19 | 540 | <2 |
| S9A-206 | 36 | 550 | 150 | 2,700 | <2 | 31 | 19 | 19 | 600 | <2 |
| SI1A-405 | <4 | 93 | 270 | 470 | <2 | 44 | 2 | 97 | 400 | <2 |
| SI1B-165 | 65 | 54 | 49 | 41 | <2 | 34 | 33 | 38 | 160 | <2 |
| SI3A-236 | <4 | 79 | 280 | 2 | <2 | 41 | <2 | 100 | 210 | <2 |
| SI4B-125 | 81 | 180 | 440 | 23,000 | 2 | 20 | 48 | 83 | 500 | <2 |
| NIC500 | 340 | 55 | 990 | 2 | 5 | 17 | 220 | 72 | 1,800 | <2 |
| NIC501 | 55 | 11 | 62 | 8 | <2 | 21 | 27 | 27 | 200 | <2 |
| NIC504S | 43 | 9 | 55 | 16 | <2 | 19 | 21 | 10 | 230 | <2 |
| NIC504T | 280 | 38 | 660 | 42 | 5 | 16 | 180 | 24 | 1,400 | <2 |
| NIC505 | 250 | 49 | 760 | 85 | 4 | 17 | 170 | 47 | 1,600 | <2 |
| NIC506 | 320 | 59 | 1,000 | 4 | 6 | 32 | 190 | 110 | 1,000 | <2 |
| NIC507 | 180 | 16 | 40 | 1 | <2 | 18 | 87 | 48 | 140 | <2 |
| NIC508 | 57 | 34 | 320 | 28 | 3 | 21 | 36 | 64 | 870 | <2 |
| NIC510 | 16 | 110 | 470 | 1,300 | <2 | 30 | 9 | 89 | 440 | <2 |
| NIC511 | 5 | 27 | 33 | 240 | <2 | 77 | 3 | 57 | 310 | <2 |
| NIC512 | 58 | 34 | 31 | 140 | <2 | 28 | 28 | 37 | 170 | <2 |
| NIC514 | 100 | 59 | 29 | 62 | <2 | 29 | 48 | 27 | 420 | <2 |
| NIC520 | 110 | 30 | 59 | 13 | 2 | 33 | 53 | 10 | 590 | <2 |
| NIC521 | 200 | 150 | 52 | 510 | 4 | 28 | 98 | 41 | 950 | <2 |
| NIC522 | 62 | 31 | 32 | 420 | <2 | 17 | 29 | 17 | 250 | <2 |
| NIC523 | 95 | 170 | 79 | 210 | <2 | 33 | 28 | 31 | 1,100 | <2 |
| NIC524 | 58 | 61 | 45 | 110 | <2 | 32 | 29 | 32 | 250 | <2 |
| NIC525 | 160 | 47 | 42 | 110 | 3 | 28 | 79 | 33 | 1,100 | <2 |
| NIC526 | 69 | 170 | 360 | 260 | <2 | 36 | 39 | 77 | 690 | <2 |
| NIC527A | 50 | 46 | 50 | 160 | <2 | 36 | 26 | 29 | 750 | <2 |
| NIC527C | 10 | 35 | 31 | 120 | <2 | 22 | 5 | 19 | 77 | <2 |
| NIC528 | 160 | 26 | 41 | 140 | 3 | 26 | 76 | 18 | 380 | <2 |
| NIC529 | 90 | 62 | 43 | 150 | <2 | 20 | 43 | 25 | 280 | <2 |
| NIC531 | 120 | 800 | 83 | 1,900 | 4 | 19 | 55 | 32 | 5,700 | <2 |
| NIC533 | 60 | 46 | 53 | 410 | 2 | 19 | 32 | 27 | 2,100 | <2 |
| NIC534 | 99 | 42 | 44 | 240 | <2 | 29 | 50 | 33 | 490 | <2 |
| NIC550 | 5 | 27 | 44 | 50 | <2 | 23 | 2 | 62 | 150 | <2 |
| NIC551 | 10 | 28 | 44 | 130 | <2 | 20 | 4 | 32 | 98 | <2 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | Nb ppm-s | Nd ppm-s | Ni ppm-s | Pb ppm-s | Sc ppm-s | Se ppm | Sr ppm-s | Th ppm-s | V ppm-s | Y ppm-s |
|---|---|---|---|---|---|---|---|---|---|---|
| S8A-476 | 6 | 19 | 87 | <4 | 10 | 1.20 | 4 | 11 | 35 | 63 |
| S8A-502 | -- | 23 | 61 | 7 | 10 | 3.60 | 11 | 13 | 38 | 26 |
| S9A-077 | 9 | 42 | 16 | 12 | 11 | .60 | 5 | 15 | 41 | 160 |
| S9A-146 | 11 | 20 | 73 | 640 | 12 | .10 | 5 | 15 | 39 | 120 |
| S9A-222 | 17 | 17 | 57 | 76 | 11 | .10 | 8 | 11 | 68 | 130 |
| S9A-266 | 8 | 10 | 11 | 71 | 10 | .60 | 6 | 10 | 42 | 39 |
| S9A-330 | 11 | 14 | 15 | <4 | 10 | .10 | 14 | 11 | 42 | 13 |
| S9A-191 | <4 | 5 | 21 | <4 | 3 | <10.00 | <2 | 6 | 14 | 19 |
| S9A-192 | <4 | 230 | 160 | <4 | 5 | 30.00 | 2 | 12 | 11 | 110 |
| S9A-193 | <4 | 34 | 310 | 13 | <2 | 44.00 | 3 | 14 | 5 | 30 |
| S9A-198 | <4 | 82 | 540 | <4 | 4 | 68.00 | <2 | 26 | 8 | 36 |
| S9A-204 | 10 | 21 | 9 | <4 | 12 | .20 | 12 | 19 | 49 | 38 |
| S9A-206 | 10 | 16 | 16 | <4 | 10 | 1.50 | 7 | 18 | 42 | 30 |
| SI1A-405 | -- | <4 | 35 | 5 | 36 | .70 | 4 | <4 | 380 | <2 |
| SI1B-165 | -- | 30 | 16 | <4 | 12 | <.50 | 29 | 17 | 60 | 6 |
| SI3A-236 | -- | <4 | 28 | <4 | 21 | <.50 | 7 | <4 | 270 | <2 |
| SI4B-125 | -- | 46 | 200 | 9 | 24 | <1.00 | 17 | 4 | 230 | 36 |
| NIC500 | 130 | 120 | 440 | <4 | 26 | -- | 260 | 23 | 210 | 30 |
| NIC501 | 9 | 28 | 22 | 8 | 12 | -- | 260 | 14 | 62 | 11 |
| NIC504S | 13 | 24 | 27 | <4 | 16 | -- | 1,500 | 13 | 58 | 21 |
| NIC504T | 140 | 110 | 230 | <4 | 30 | -- | 1,300 | 26 | 200 | 41 |
| NIC505 | 110 | 95 | 280 | <4 | 28 | -- | 860 | 23 | 200 | 32 |
| NIC506 | 86 | 130 | 250 | <4 | 38 | -- | 30 | 32 | 240 | 64 |
| NIC507 | 11 | 80 | 26 | <4 | 8 | -- | 90 | 12 | 49 | 10 |
| NIC508 | 32 | 37 | 120 | <4 | 23 | -- | 180 | <4 | 240 | 16 |
| NIC510 | 42 | 9 | 140 | <4 | 22 | -- | 8 | 6 | 180 | 4 |
| NIC511 | 8 | <4 | <2 | <4 | 7 | -- | 5 | 10 | 34 | 2 |
| NIC512 | 9 | 30 | 7 | <4 | 12 | -- | 22 | 12 | 120 | 6 |
| NIC514 | 13 | 48 | 7 | <4 | 8 | -- | 6 | 14 | 37 | 9 |
| NIC520 | 20 | 50 | 6 | <4 | 16 | -- | 21 | 28 | 79 | 12 |
| NIC521 | 13 | 92 | 8 | <4 | 8 | -- | 12 | 26 | 53 | 40 |
| NIC522 | 8 | 29 | 6 | <4 | 8 | -- | 8 | 13 | 42 | 13 |
| NIC523 | 26 | 28 | 14 | <4 | 16 | -- | 17 | 17 | 79 | 30 |
| NIC524 | 12 | 29 | 15 | <4 | 10 | -- | 9 | 25 | 50 | 30 |
| NIC525 | 15 | 74 | 13 | <4 | 10 | -- | 9 | 28 | 54 | 50 |
| NIC526 | 54 | 39 | 87 | <4 | 20 | -- | 17 | 7 | 230 | 14 |
| NIC527A | 19 | 26 | 11 | <4 | 15 | -- | 3 | 16 | 60 | 45 |
| NIC527C | 9 | 5 | 8 | <4 | 7 | -- | <2 | 6 | 36 | 9 |
| NIC528 | 19 | 75 | 8 | <4 | 12 | -- | 22 | 30 | 54 | 22 |
| NIC529 | 14 | 40 | 12 | <4 | 9 | -- | 24 | 15 | 52 | 12 |
| NIC531 | 8 | 52 | 13 | <4 | 40 | -- | 8 | 28 | 59 | 370 |
| NIC533 | 13 | 29 | 14 | <4 | 11 | -- | 7 | 22 | 56 | 36 |
| NIC534 | 11 | 43 | 10 | <4 | 7 | -- | 4 | 8 | 50 | 16 |
| NIC550 | 9 | <4 | 32 | <4 | 9 | -- | 23 | 9 | 50 | 3 |
| NIC551 | 12 | 7 | 16 | <4 | 8 | -- | 55 | 11 | 50 | 8 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | Yb ppm-s | Zn ppm-s | Zr ppm-s | Ft north | Ft east | Elev ft | Rel ft | Lithol | Fabric | Oretyp | Lode |
|---|---|---|---|---|---|---|---|---|---|---|---|
| S8A-476 | 8 | 33 | 193 | 985 | 1,086 | 7,746 | 0 | 51 | 20 | 10 | 3 |
| S8A-502 | 3 | 29 | 186 | 985 | 1,062 | 7,735 | -12 | -- | 10 | 20 | 3 |
| S9A-077 | 13 | 42 | 391 | 980 | 1,062 | 7,794 | -- | 30 | 20 | 60 | 3 |
| S9A-146 | 14 | 120 | 241 | 980 | 1,046 | 7,934 | -- | 30 | 20 | 60 | 3 |
| S9A-222 | 14 | 76 | 219 | 980 | 1,021 | 7,858 | -- | 40 | 20 | 10 | 3 |
| S9A-266 | 5 | 59 | 292 | 980 | 1,011 | -- | -- | 40 | 10 | 70 | 3 |
| S9A-330 | 2 | 24 | 273 | 980 | 982 | 7,762 | -- | 20 | 10 | 70 | 3 |
| S9A-191 | 2 | 33 | 124 | 980 | 1,029 | 7,877 | 1 | 51 | 20 | 60 | 3 |
| S9A-192 | 11 | 27 | 109 | 980 | 1,028 | 7,876 | 0 | 10 | 20 | 10 | 3 |
| S9A-193 | 3 | 22 | 17 | 980 | 1,027 | 7,875 | 0 | 20 | 20 | 10 | 3 |
| S9A-198 | 3 | 39 | 78 | 980 | 1,024 | 7,872 | -3 | 41 | 20 | 30 | 3 |
| S9A-204 | 4 | 43 | 400 | 980 | 1,021 | 7,868 | -5 | 10 | 20 | 70 | 3 |
| S9A-206 | 3 | 45 | 357 | 980 | 1,020 | 7,867 | -6 | 20 | 20 | 74 | 3 |
| SI1A-405 | 1 | 33 | 132 | 1,000 | 100 | 7,200 | 0 | 50 | 20 | 80 | 9 |
| SI1B-165 | 1 | 19 | 225 | 1,000 | 100 | 7,200 | 0 | 50 | 20 | 80 | 9 |
| SI3A-236 | 2 | 37 | 157 | 1,000 | 100 | 7,100 | 0 | 50 | 20 | 80 | 9 |
| SI4B-125 | 3 | 54 | 149 | 1,000 | 100 | 7,200 | 0 | 50 | 20 | 80 | 9 |
| NIC500 | 3 | 120 | -- | -- | -- | -- | -- | 50 | -- | 99 | 99 |
| NIC501 | 1 | 19 | -- | -- | -- | -- | -- | 40 | -- | 99 | 99 |
| NIC504S | 3 | 15 | -- | -- | -- | -- | -- | 40 | -- | 99 | 99 |
| NIC504T | 4 | 76 | -- | -- | -- | -- | -- | 50 | -- | 99 | 99 |
| NIC505 | 3 | 97 | -- | -- | -- | -- | -- | 50 | -- | 99 | 99 |
| NIC506 | 5 | 110 | -- | -- | -- | -- | -- | 90 | -- | 99 | 99 |
| NIC507 | <1 | 5 | -- | -- | -- | -- | -- | 40 | -- | 99 | 99 |
| NIC508 | 2 | 28 | -- | -- | -- | -- | -- | 50 | -- | 99 | 99 |
| NIC510 | <1 | 39 | -- | -- | -- | -- | -- | 90 | -- | 99 | 99 |
| NIC511 | <1 | 23 | -- | -- | -- | -- | -- | 50 | -- | 99 | 99 |
| NIC512 | 1 | 11 | -- | -- | -- | -- | -- | 40 | -- | 99 | 99 |
| NIC514 | 2 | 21 | -- | -- | -- | -- | -- | 40 | -- | 99 | 99 |
| NIC520 | 2 | 16 | -- | -- | -- | -- | -- | 41 | -- | 99 | 99 |
| NIC521 | 4 | 22 | -- | -- | -- | -- | -- | 51 | -- | 99 | 99 |
| NIC522 | 2 | 16 | -- | -- | -- | -- | -- | 41 | -- | 99 | 99 |
| NIC523 | 4 | 22 | -- | -- | -- | -- | -- | 41 | -- | 99 | 99 |
| NIC524 | 4 | 22 | -- | -- | -- | -- | -- | 41 | -- | 99 | 99 |
| NIC525 | 6 | 23 | -- | -- | -- | -- | -- | 51 | -- | 99 | 99 |
| NIC526 | 2 | 33 | -- | -- | -- | -- | -- | 90 | -- | 99 | 99 |
| NIC527A | 7 | 20 | -- | -- | -- | -- | -- | 51 | -- | 99 | 99 |
| NIC527C | 2 | 18 | -- | -- | -- | -- | -- | 41 | -- | 99 | 99 |
| NIC528 | 2 | 16 | -- | -- | -- | -- | -- | 51 | -- | 99 | 99 |
| NIC529 | 2 | 15 | -- | -- | -- | -- | -- | 41 | -- | 99 | 99 |
| NIC531 | 36 | 7 | -- | -- | -- | -- | -- | 51 | -- | 99 | 99 |
| NIC533 | 3 | 5 | -- | -- | -- | -- | -- | 51 | -- | 99 | 99 |
| NIC534 | 2 | 28 | -- | -- | -- | -- | -- | 41 | -- | 99 | 99 |
| NIC550 | <1 | 9 | -- | -- | -- | -- | -- | 40 | -- | 99 | 99 |
| NIC551 | <1 | 3 | -- | -- | -- | -- | -- | 40 | -- | 99 | 99 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | SiO2 % | Al2O3 % | FeTO3 % | FeO % | MgO % | CaO % | Na2O % | K2O % | TiO2 % | P2O5 % |
|---|---|---|---|---|---|---|---|---|---|---|
| NIC552 | 58.2 | 13.50 | 20.70 | 17.30 | 1.85 | 2.09 | .22 | 2.99 | .54 | <.05 |
| NIC553 | 43.6 | 14.20 | 17.50 | 14.10 | 4.22 | 5.65 | 1.24 | 5.30 | 3.52 | 1.18 |
| NIC554 | 49.4 | 19.90 | 15.60 | 12.60 | 2.15 | 1.33 | 4.07 | 5.14 | .96 | .10 |
| NIC555 | 43.3 | 22.60 | 22.00 | 17.00 | 1.84 | 1.02 | .22 | 6.52 | .84 | .18 |
| NIC556 | 71.9 | 12.00 | 8.49 | 6.57 | .89 | .06 | <.15 | 4.44 | .45 | <.05 |
| NIC557 | 57.1 | 16.20 | 17.00 | 12.60 | 1.26 | .13 | <.15 | 6.19 | .65 | .09 |
| NIC558 | .0 | .0 | .0 | 23.10 | .0 | .0 | .0 | .0 | .0 | .0 |
| NIC559 | 48.5 | 15.60 | 12.20 | 8.67 | 7.74 | 7.32 | 3.09 | 2.15 | 1.36 | .34 |
| NIC570 | 63.0 | 17.60 | 6.36 | 4.80 | 1.51 | .68 | 2.16 | 5.83 | .79 | .07 |
| NIC571 | 59.3 | 17.50 | 7.95 | 6.41 | 2.01 | 3.29 | 3.69 | 3.32 | 1.19 | .40 |
| NIC574 | 55.4 | 13.00 | 19.60 | 16.00 | 2.37 | <.02 | <.15 | 7.33 | .44 | .06 |
| NIC575 | 54.4 | 9.99 | 3.25 | 2.00 | 1.85 | 14.70 | 1.65 | 3.35 | .39 | .11 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | MnO % | LOI 900C | Total C% | Total S% | Al %-s | Ca %-s | Fe %-s | K %-s | Mg %-s |
|---|---|---|---|---|---|---|---|---|---|
| NIC552 | .18 | .99 | .11 | .02 | 7.3 | 1.500 | 14.0 | 2.70 | 1.10 |
| NIC553 | .09 | 3.95 | .82 | .02 | 8.0 | 4.000 | 12.0 | 5.10 | 2.60 |
| NIC554 | .03 | .99 | <.01 | .02 | 10.0 | .930 | 11.0 | 4.70 | 1.30 |
| NIC555 | .20 | 2.25 | <.01 | .03 | 12.0 | .790 | 16.0 | 5.90 | 1.20 |
| NIC556 | <.02 | 1.30 | <.01 | .02 | 7.0 | .050 | 6.4 | 4.20 | .57 |
| NIC557 | <.02 | 1.61 | .09 | .02 | 8.5 | .100 | 12.0 | 5.40 | .75 |
| NIC558 | .0 | .0 | <.01 | .02 | 8.6 | 1.000 | 21.0 | 3.40 | .80 |
| NIC559 | .14 | 1.47 | .03 | .02 | 8.8 | 5.100 | 8.7 | 2.20 | 4.60 |
| NIC570 | .02 | 1.45 | .05 | .02 | 9.5 | .510 | 4.6 | 5.20 | .96 |
| NIC571 | .13 | 1.09 | .01 | .02 | 9.3 | 2.300 | 5.5 | 3.00 | 1.20 |
| NIC574 | <.02 | .63 | <.01 | .04 | 6.9 | .050 | 14.0 | 6.50 | 1.40 |
| NIC575 | .04 | 9.27 | 2.54 | .04 | 5.7 | 11.000 | 2.3 | 3.30 | 1.20 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | Na %-s | P %-s | Ti %-s | Ag ppm-s | As ppm-s | Au ppm | B ppm-s | Ba ppm-s | Be ppm-s | Bi ppm-s |
|---|---|---|---|---|---|---|---|---|---|---|
| NIC552 | .170 | .020 | .32 | <2 | 30 | <8.000 | -- | 330 | <1 | <10 |
| NIC553 | .990 | .350 | 1.40 | <2 | <10 | <8.000 | -- | 350 | 2 | <10 |
| NIC554 | 3.000 | .050 | .55 | <2 | 150 | <8.000 | -- | 480 | 5 | <10 |
| NIC555 | .160 | .080 | .50 | <2 | 10 | <8.000 | -- | 510 | 2 | <10 |
| NIC556 | .130 | .010 | .30 | <2 | <10 | <8.000 | -- | 450 | 2 | <10 |
| NIC557 | .100 | .040 | .38 | <2 | <10 | <8.000 | -- | 450 | 2 | <10 |
| NIC558 | .040 | .100 | .56 | <2 | 100 | <8.000 | -- | 420 | <1 | <10 |
| NIC559 | 2.500 | .160 | .79 | <2 | 20 | <8.000 | -- | 540 | 1 | <10 |
| NIC570 | 1.600 | .030 | .48 | <2 | <10 | <8.000 | -- | 930 | 3 | <10 |
| NIC571 | 2.800 | .180 | .67 | <2 | <10 | <8.000 | -- | 640 | 3 | <10 |
| NIC574 | .070 | .010 | .26 | <2 | 1,300 | <8.000 | -- | 1,200 | <1 | <10 |
| NIC575 | 1.400 | .050 | .24 | <2 | <10 | <8.000 | -- | 700 | 1 | <10 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | Ce ppm-s | Co ppm-s | Cr ppm-s | Cu ppm-s | Eu ppm-s | Ga ppm-s | La ppm-s | Li ppm-s | Mn ppm-s | Mo ppm-s |
|---|---|---|---|---|---|---|---|---|---|---|
| NIC552 | 220 | 210 | 52 | 49 | 3 | 38 | 110 | 38 | 1,300 | <2 |
| NIC553 | 91 | 180 | <1 | 130 | 4 | 25 | 51 | 68 | 760 | <2 |
| NIC554 | 78 | 120 | 53 | 30 | 2 | 35 | 49 | 65 | 260 | <2 |
| NIC555 | 31 | 110 | 67 | 240 | <2 | 41 | 10 | 49 | 1,500 | <2 |
| NIC556 | 160 | 25 | 39 | 4 | <2 | 24 | 73 | 30 | 86 | <2 |
| NIC557 | 130 | 82 | 56 | 86 | 3 | 22 | 66 | 44 | 220 | <2 |
| NIC558 | 44 | 100 | 18 | 490 | <2 | 41 | 23 | 61 | 3,000 | <2 |
| NIC559 | 61 | 160 | 250 | 78 | 2 | 21 | 37 | 27 | 1,100 | <2 |
| NIC570 | 92 | 12 | 65 | 4 | <2 | 26 | 42 | 37 | 230 | <2 |
| NIC571 | 43 | 17 | 14 | 4 | <2 | 22 | 23 | 45 | 940 | <2 |
| NIC574 | 220 | 580 | 43 | 25 | 3 | 66 | 110 | 60 | 210 | 3 |
| NIC575 | 67 | 19 | 52 | 8 | <2 | 13 | 38 | 22 | 400 | <2 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | Nb ppm-s | Nd ppm-s | Ni ppm-s | Pb ppm-s | Sc ppm-s | Se ppm | Sr ppm-s | Th ppm-s | V ppm-s | Y ppm-s |
|---|---|---|---|---|---|---|---|---|---|---|
| NIC552 | 10 | 100 | 10 | <4 | 11 | -- | 33 | 29 | 55 | 68 |
| NIC553 | 20 | 58 | 2 | <4 | 22 | -- | 110 | 5 | 160 | 41 |
| NIC554 | 21 | 44 | 5 | <4 | 12 | -- | 290 | 12 | 81 | 21 |
| NIC555 | 17 | 14 | 13 | <4 | 16 | -- | 43 | 25 | 84 | 110 |
| NIC556 | 11 | 72 | 6 | <4 | 9 | -- | 39 | 17 | 42 | 10 |
| NIC557 | 16 | 66 | 14 | <4 | 13 | -- | 17 | 15 | 65 | 48 |
| NIC558 | 10 | 24 | 5 | <4 | 15 | -- | 16 | 10 | 110 | 69 |
| NIC559 | 35 | 31 | 160 | <4 | 22 | -- | 420 | 6 | 170 | 23 |
| NIC570 | 16 | 42 | 20 | <4 | 15 | -- | 120 | 19 | 87 | 15 |
| NIC571 | 8 | 30 | 7 | 5 | 19 | -- | 170 | 6 | 130 | 30 |
| NIC574 | 11 | 90 | 69 | <4 | 9 | -- | 31 | 10 | 46 | 10 |
| NIC575 | 7 | 35 | 15 | <4 | 9 | -- | 130 | 9 | 47 | 26 |

Table 2. Analytical Results for Rock Samples from the Blackbird District, Idaho--Continued

| Sample | Yb ppm-s | Zn ppm-s | Zr ppm-s | Ft north | Ft east | Elev ft | Rel ft | Lithol | Fabric | Oretyp | Lode |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NIC552 | 8 | 9 | -- | -- | -- | -- | -- | 90 | -- | 99 | 99 |
| NIC553 | 4 | 25 | -- | -- | -- | -- | -- | 90 | -- | 99 | 99 |
| NIC554 | 2 | 18 | -- | -- | -- | -- | -- | 50 | -- | 99 | 99 |
| NIC555 | 10 | 11 | -- | -- | -- | -- | -- | 40 | -- | 99 | 99 |
| NIC556 | 2 | 10 | -- | -- | -- | -- | -- | 40 | -- | 99 | 99 |
| NIC557 | 5 | 10 | -- | -- | -- | -- | -- | 40 | -- | 99 | 99 |
| NIC558 | 9 | 22 | -- | -- | -- | -- | -- | 50 | -- | 99 | 99 |
| NIC559 | 3 | 62 | -- | -- | -- | -- | -- | 90 | -- | 99 | 99 |
| NIC570 | 2 | 9 | -- | -- | -- | -- | -- | 50 | -- | 99 | 99 |
| NIC571 | 3 | 17 | -- | -- | -- | -- | -- | 50 | -- | 99 | 99 |
| NIC574 | 1 | 14 | -- | -- | -- | -- | -- | 50 | -- | 99 | 99 |
| NIC575 | 3 | 2 | -- | -- | -- | -- | -- | -- | -- | 99 | 99 |

**Table 3. Summary of analytical results for rock samples from the Blackbird district, Idaho**

[Valid, unqualified results; L, less than limit of detection (table 1); G, greater than upper limit of detection; intf., interference prevented analysis; leaders (--), indicate no value in category. Mean computed from valid determinations. $FeTO_3$, total iron reported as $Fe_2O_3$; LOI 900°C, loss on ignition.]

| | Ore zone samples (N=82) | | | | | | | Wallrock samples (N=199) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Min. | Max. | Mean | Valid | L | G | Intf. | Min. | Max. | Mean | Valid | L | G | Intf. |
| $SiO_2$ % | 38.7 | 80.8 | 59.8 | 40 | -- | -- | 42 | 33.4 | 86.6 | 61.1 | 188 | -- | -- | 11 |
| $Al_2O_3$ % | 2.4 | 17.6 | 9.9 | 40 | -- | -- | 42 | 2.98 | 19.2 | 12.7 | 188 | -- | -- | 11 |
| $FeTO_3$ % | 8.76 | 36.9 | 19 | 40 | -- | -- | 42 | 5.48 | 27.5 | 15.4 | 188 | -- | -- | 11 |
| FeO % | 3.72 | 25.8 | 13.5 | 65 | -- | -- | 12 | 3.8 | 28.8 | 12.5 | 198 | -- | -- | -- |
| MgO % | .59 | 6.16 | 2.1 | 40 | -- | -- | 42 | .73 | 12.1 | 2.36 | 188 | -- | -- | 11 |
| CaO % | .05 | .71 | .29 | 39 | 1 | -- | 42 | .02 | 8.3 | .35 | 185 | -- | -- | 11 |
| $Na_2O$ % | .16 | .52 | .27 | 10 | 30 | -- | 42 | .15 | 3.31 | .5 | 75 | 113 | -- | 11 |
| $K_2O$ % | 1.07 | 7.29 | 3.47 | 40 | -- | -- | 42 | .05 | 8.42 | 4.76 | 188 | -- | -- | 11 |
| $TiO_2$ % | .04 | 1.81 | .43 | 40 | -- | -- | 42 | .07 | 4.65 | .65 | 188 | -- | -- | 11 |
| $P_2O_5$ % | .05 | .64 | .19 | 40 | -- | -- | 42 | .05 | 1.12 | .16 | 172 | 16 | -- | 11 |
| MnO % | .02 | .34 | .08 | 30 | 10 | -- | 42 | .02 | .37 | .06 | 111 | 77 | -- | 11 |
| LOI 900°C | .79 | 16.2 | 3.38 | 40 | -- | -- | 42 | .6 | 5.96 | 1.86 | 188 | -- | -- | 11 |
| C total % | .01 | 1.85 | .25 | 71 | 11 | -- | -- | .01 | 3.14 | .19 | 140 | 59 | -- | -- |
| S total % | .01 | 27.9 | 3.71 | 81 | 1 | -- | -- | .01 | 6.63 | .32 | 138 | 61 | -- | -- |
| Al %-S | 1.2 | 11 | 5.1 | 82 | -- | -- | -- | 1.7 | 10 | 6.6 | 199 | -- | -- | -- |
| Ca %-S | .008 | .75 | .2 | 81 | 1 | -- | -- | .01 | 6 | .25 | 198 | 1 | -- | -- |
| Fe %-S | 4.8 | 33 | 14.3 | 82 | -- | -- | -- | 3.8 | 25 | 11 | 199 | -- | -- | -- |
| K %-S | .08 | 5.9 | 2.4 | 80 | 2 | -- | -- | .09 | 7.8 | 3.8 | 198 | 1 | -- | -- |
| Mg %-S | .35 | 3.6 | 1.2 | 82 | -- | -- | -- | .38 | 6.3 | 1.4 | 199 | -- | -- | -- |
| Na %-S | .005 | .4 | .52 | 79 | 3 | -- | -- | .008 | 2.6 | .18 | 197 | 2 | -- | -- |
| P %-S | .01 | .29 | .64 | 79 | 3 | -- | -- | .005 | .42 | .06 | 188 | 11 | -- | -- |
| Ti %-S | .01 | 1 | .2 | 82 | -- | -- | -- | .05 | 2.4 | .38 | 199 | -- | -- | -- |
| Ag ppm-S | 2 | 6 | 3.4 | 19 | 63 | -- | -- | 2 | 12 | 3.6 | 12 | 187 | -- | -- |
| As ppm-S | 20 | 4,200 | 9,603 | 74 | -- | 8 | -- | 10 | 37,000 | 784 | 165 | 34 | -- | -- |
| Au ppm | .05 | 15 | .87 | 59 | 23 | -- | -- | .05 | 1.2 | .23 | 21 | 178 | -- | -- |
| B ppm-S | 20 | 1,940 | 131 | 53 | 29 | -- | -- | 20 | 730 | 69 | 176 | 23 | -- | -- |
| Ba ppm-S | 2 | 1,200 | 217 | 82 | -- | -- | -- | 6 | 1,400 | 486 | 199 | -- | -- | -- |
| Be ppm-S | 1 | 61 | 5 | 41 | 41 | -- | -- | 1 | 5 | 1.7 | 145 | 54 | -- | -- |
| Bi ppm-S | 20 | 530 | 87 | 55 | 27 | -- | -- | 10 | 110 | 24 | 29 | 170 | -- | -- |
| Ce ppm-S | 4 | 2,200 | 142 | 77 | 5 | -- | -- | 5 | 220 | 49 | 191 | 8 | -- | -- |
| Co ppm-S | 58 | 66,000 | 7,583 | 71 | -- | 11 | -- | 22 | 6,400 | 349 | 198 | -- | 1 | -- |
| Cr ppm-S | 4 | 480 | 93 | 82 | -- | -- | -- | 6 | 840 | 83 | 199 | -- | -- | -- |
| Cu ppm-S | 6 | 50,000 | 5,407 | 82 | -- | -- | -- | 1 | 35,000 | 1,163 | 197 | 1 | 1 | -- |

**Table 3. Summary of analytical results for rock samples from the Blackbird district, Idaho--Continued**
[Valid, unqualified results; L, less than limit of detection (table 1); G, greater than upper limit of detection; intf., interference prevented analysis; leaders (--), indicate no value in category. Mean computed from valid determinations. $FeTO_3$, total iron reported as $Fe_2O_3$; LOI 900°C, loss on ignition.]

| | Ore zone samples (N=82) | | | | | | | Wallrock samples (N=199) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Min. | Max. | Mean | Valid | L | G | Intf. | Min. | Max. | Mean | Valid | L | G | Intf. |
| Eu ppm-S | 2 | 26 | 5.9 | 25 | 57 | -- | -- | 2 | 5 | 3.3 | 18 | 181 | -- | -- |
| Ga ppm-S | 4 | 89 | 36 | 82 | -- | -- | -- | 11 | 110 | 33 | 199 | -- | -- | -- |
| La ppm-S | 2 | 1,000 | 67 | 80 | 2 | -- | -- | 2 | 110 | 24 | 195 | 4 | -- | -- |
| Li ppm-S | 5 | 100 | 33 | 82 | -- | -- | -- | 8 | 100 | 39 | 199 | -- | -- | -- |
| Mn ppm-S | 78 | 2,400 | 471 | 82 | -- | -- | -- | 54 | 2,800 | 401 | 199 | -- | -- | -- |
| Mo ppm-S | 2 | 15 | 4.5 | 31 | 51 | 9 | 37 | 2 | 11 | 3.4 | 55 | 144 | -- | -- |
| Nb ppm-S | 5 | 29 | 8.6 | 36 | -- | -- | -- | 4 | 100 | 12 | 152 | 8 | -- | 39 |
| Nd ppm-S | 4 | 830 | 63 | 74 | 8 | -- | -- | 4 | 99 | 23 | 184 | 15 | -- | -- |
| Ni ppm-S | 13 | 5,500 | 531 | 82 | -- | -- | -- | 5 | 510 | 60 | 199 | -- | -- | -- |
| Pb ppm-S | 4 | 120 | 13 | 32 | 50 | -- | -- | 4 | 640 | 44 | 55 | 144 | -- | -- |
| Sc ppm-S | 2 | 20 | 8.4 | 81 | 1 | -- | -- | 3 | 36 | 11 | 199 | -- | -- | -- |
| Se ppm | 1 | 68 | 20 | 43 | 24 | -- | 15 | .1 | 9.1 | 1.2 | 70 | 60 | -- | 69 |
| Sr ppm-S | 2 | 37 | 9.1 | 74 | 8 | -- | -- | 2 | 520 | 24 | 193 | 6 | -- | -- |
| Th ppm-S | 4 | 32 | 12 | 66 | 16 | -- | -- | 4 | 30 | 12 | 184 | 15 | -- | -- |
| V ppm-S | 4 | 180 | 39 | 82 | -- | -- | -- | 10 | 380 | 66 | 199 | -- | -- | -- |
| Y ppm-S | 3 | 560 | 64 | 82 | -- | -- | -- | 2 | 250 | 19 | 193 | 6 | -- | -- |
| Yb ppm-S | 1 | 46 | 7.4 | 75 | 7 | -- | -- | 1 | 31 | 2.9 | 160 | 39 | -- | -- |
| Zn ppm-S | 11 | 140 | 36 | 80 | 2 | -- | -- | 9 | 200 | 33 | 199 | -- | -- | -- |
| Zr ppm-S | 17 | 533 | 156 | 81 | 1 | -- | -- | 26 | 541 | 214 | 199 | -- | -- | -- |