UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

Analytical results and sample locality map of heavy-mineral-concentrate samples from the South Pequop Wilderness Study Area, Elko County, Nevada

By

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STUDIES RELATED TO WILDERNESS

Bureau of Land Management Wilderness Study Areas

The Federal Land Policy and Management Act (Public Law 94-579, October 21, 1976) requires the U.S. Geological Survey and the U.S. Bureau of Mines to conduct mineral surveys on certain areas to determine their mineral resource potential. Results must be made available to the public and be submitted to the President and the Congress. This report presents the results of a geochemical survey of the South Pequop Wilderness Study Area (NV-010-035), Elko County, Nevada.

INTRODUCTION

In September 1985 the U.S. Geological Survey conducted a reconnaissance geochemical survey of the South Pequop Wilderness Study Area, Elko County, Nevada.

The South Pequop Wilderness Study Area comprises 41,090 acres, of which the Geological Survey was asked to study 34,544 acres, in the southeast corner of Elko County, Nevada, and lies about 36 mi (58 km) southeast of Wells (see fig. 1). In this report the area studied is referred to as the study area. Access to the study area is provided by dirt roads from U.S. Highway 93, south of Wells, and from Interstate 80 through Shafter, northeast of the study area.

Up to 17,000 ft (5,182 m) of marine sediments, ranging in age from Mississippian through early Triassic, are exposed in the study area; these rocks have been folded into a complex, north-northeast-trending synclinorium. One small patch of Tertiary hornblende granodiorite crops out in the area. Stream valley floors are covered by Quaternary alluvium. The individual formations have been described by Fraser, Ketner, and Smith (1986).

The topographic relief in the study area is about 3,280 ft (1,000 m), with a maximum elevation of 8,952 ft (2,728.6 m). The ground surface is mountainous terrain cut by intermittent streams; both sides of the range are flanked by Quaternary alluvial fans. The climate is arid.

METHODS OF STUDY

Sample Media

Analyses of the stream-sediment samples represent the chemistry of the rock material eroded from the drainage basin upstream from each sample site. Such information is useful in identifying those basins which contain concentrations of elements that may be related to mineral deposits.

Heavy-mineral-concentrate samples provide information about the chemistry of a limited number of minerals in rock material eroded from the drainage basin upstream from each sample site. The selective concentration of minerals, many of which are ore-related, permits determination of some elements that are not easily detected in stream-sediment samples.

Sample Collection

Samples were collected at 53 sites (pl. 1). At all of those sites, both a heavy-mineral-concentrate sample and a stream-sediment sample were collected. Fifty-eight panned-concentrate samples (including five replicate

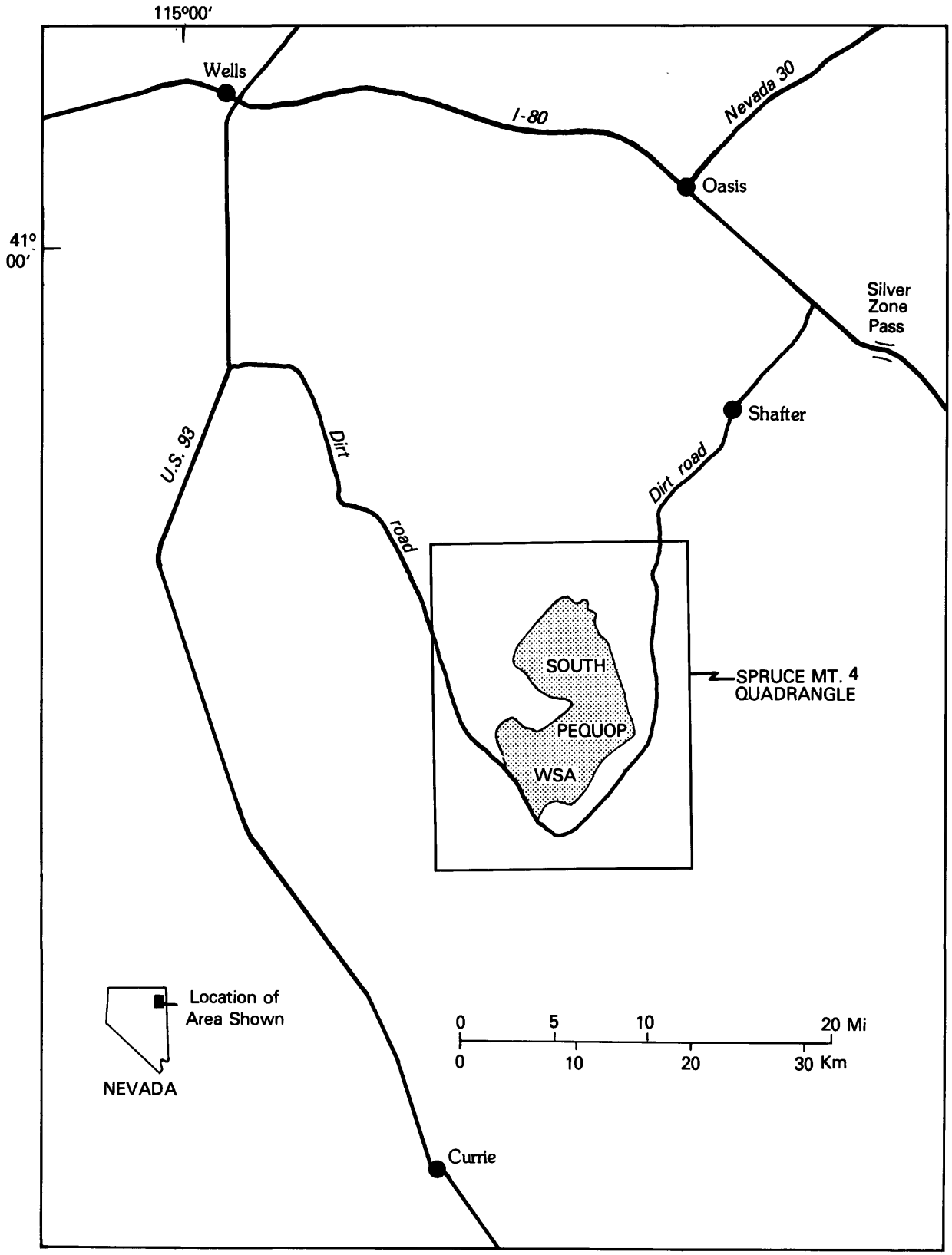

Figure 1.--Location map of the South Pequop Wilderness Study Area, Elko County, Nevada.

samples) were analyzed for a sampling density of about one sample per square mile. Stream-sediment samples were not analyzed, but were saved for archival storage. The area of the drainage basins sampled ranged from 0.25 mi^2 to 5 mi^2.

Heavy-mineral-concentrate samples

Heavy-mineral-concentrate samples were collected from the active alluvium of mostly first-order (unbranched) and some second-order (below the junction of two first-order) streams as shown on USGS topographic maps (scale = 1:24,000). Each sample was composited from several localities within an area that extended as much as 200 ft from the site plotted on the map. Each bulk sample was screened with a 2.0-mm (10-mesh) screen to remove the coarse material. The less than 2.0-mm fraction was panned until most of the calcite, quartz, feldspar, organic material, and clay-sized material were removed.

Sample Preparation

After air drying, bromoform (specific gravity 2.8) was used to remove the remaining calcite, quartz, and feldspar from the heavy-mineral-concentrate samples that had been panned. The resultant heavy mineral sample was separated into three fractions using a large electromagnet (in this case a modified Frantz Isodynamic Separator). The most magnetic material, primarily magnetite, was not analyzed. The second fraction, largely ferromagnesian silicates and iron oxides, was saved for analysis and archival storage. The third fraction (the least magnetic material) including the nonmagnetic ore minerals, zircon, sphene, etc. was split using a Jones splitter. One split was hand-ground for spectrographic analysis; the other split was saved for mineralogical analysis. Because 12 samples contained insufficient third fraction for splitting, a cursory mineralogical study was done prior to hand-grinding of the entire nonmagnetic fraction. These magnetic separates are the same separates that would be produced by using a Frantz Isodynamic Separator set at a slope of 15 degrees and a tilt of 10 degrees with a current of 0.1 ampere to remove the magnetite and ilmenite, and a current of 1.0 ampere to split the remainder of the sample into paramagnetic and nonmagnetic fractions.

Sample Analysis

Spectrographic method

The heavy-mineral-concentrate samples were analyzed for 31 elements using a semiquantitative, direct-current arc emission spectrographic method (Grimes and Marranzino, 1968). The elements analyzed and their lower limits of determination are listed in table 1. Spectrographic results were obtained by visual comparison of spectra derived from the sample against spectra obtained from standards made from pure oxides and carbonates. Standard concentrations are geometrically spaced over any given order of magnitude of concentration as follows: 100, 50, 20, 10, and so forth. Samples whose concentrations are estimated to fall between those values are assigned values of 70, 30, 15, and so forth. The precision of the analytical method is approximately plus or minus one reporting interval at the 83 percent confidence level and plus or

minus two reporting intervals at the 96 percent confidence level (Motooka and Grimes, 1976). Values determined for the major elements (iron, magnesium, calcium, and titanium) are given in weight percent; all others are given in parts per million (micrograms/gram). Analytical data for samples from the South Pequop Wilderness Study Area are listed in table 2.

ROCK ANALYSIS STORAGE SYSTEM

Upon completion of all analytical work, the analytical results were entered into a computer-based file called Rock Analysis Storage System (RASS). This data base contains both descriptive geological information and analytical data. Any or all of this information may be retrieved and converted to a binary form (STATPAC) for computerized statistical analysis or publication (VanTrump and Miesch, 1976).

REFERENCES CITED

Fraser, G. D., Ketner, K. B., and Smith, M. C., 1986, Geologic map of the Spruce Mountain 4 quadrangle, Elko County, Nevada: U.S. Geological Survey Miscellaneous Field Studies Map MF-1846, scale 1:24,000.

Grimes, D. J., and Marranzino, A. P., 1968, Direct-current arc and alternating-current spark emission spectrographic field methods for the semiquantitative analysis of geologic materials: U.S. Geological Survey Circular 591, 6 p.

Motooka, J. M., and Grimes, D. J., 1976, Analytical precision of one-sixth order semiquantitative spectrographic analyses: U.S. Geological Survey Circular 738, 25 p.

VanTrump, George, Jr., and Miesch, A. T., 1976, The U.S. Geological Survey RASS-STATPAC system for management and statistical reduction of geochemical data: Computers and Geosciences, v. 3, p. 475-488.

Table 1.--Limits of determination for the spectrographic analysis of heavy-mineral-concentrate samples, based on a 5-mg sample

Element	Lower determination limit	Upper determination limit
	Percent	
Iron (Fe)	0.1	50
Magnesium (Mg)	.05	20
Calcium (Ca)	.1	50
Titanium (Ti)	.005	2
	Parts per million	
Manganese (Mn)	20	10,000
Silver (Ag)	1	10,000
Arsenic (As)	500	20,000
Gold (Au)	20	1,000
Boron (B)	20	5,000
Barium (Ba)	50	10,000
Beryllium (Be)	2	2,000
Bismuth (Bi)	20	2,000
Cadmium (Cd)	50	1,000
Cobalt (Co)	10	5,000
Chromium (Cr)	20	10,000
Copper (Cu)	10	50,000
Lanthanum (La)	50	2,000
Molybdenum (Mo)	10	5,000
Niobium (Nb)	50	5,000
Nickel (Ni)	10	10,000
Lead (Pb)	20	50,000
Antimony (Sb)	200	20,000
Scandium (Sc)	10	200
Tin (Sn)	20	2,000
Strontium (Sr)	200	10,000
Vanadium (V)	20	20,000
Tungsten (W)	100	20,000
Yttrium (Y)	20	5,000
Zinc (Zn)	500	20,000
Zirconium (Zr)	20	2,000
Thorium (Th)	200	5,000

Table 2.--Spectrographic results from the analysis of heavy-mineral-concentrate samples from the South Pequop Wilderness Study Area, Elko County, Nevada.

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

Sample	Latitude	Longitude	Fe (%)	Mg (%)	Ca (%)	Ti (%)
200H	40 43 16N	114 35 16W	5	1	20	0.2
201H	40 43 16N	114 35 16W	5	1	20	0.2
202H	40 43 21N	114 36 29W	15	3	5	2
203H	40 43 28N	114 36 27W	10	5	15	1.5
204H	40 39 55N	114 39 00W	10	0.7	7	0.2
205H	40 40 59N	114 38 31W	20	3	5	1
206H	40 41 51N	114 37 22W	20	1.5	3	1
207H	40 38 40N	114 36 28W	50	2	5	2
208H	40 38 37N	114 36 38W	50	2	5	2
209H	40 39 14N	114 37 28W	30	0.7	5	0.5
210H	40 39 27N	114 38 04W	50	1	7	1
211H	40 39 23N	114 38 00W	30	0.7	3	0.3
212H	40 42 29N	114 36 56W	50	1	5	0.5
213H	40 42 29N	114 36 56W	30	2	7	0.7
214H	40 37 55N	114 37 27W	30	1	3	0.7
215H	40 38 33N	114 38 24W	50	1.5	5	1
216H	40 38 59N	114 39 10W	20	2	7	0.3
217H	40 38 31N	114 40 02W	20	1.5	3	0.3
218H	40 36 45N	114 39 53W	50	1	5	0.5
219H	40 36 56N	114 39 56W	30	1	7	1
220H	40 37 07N	114 41 28W	20	2	7	0.7
221H	40 36 22N	114 41 28W	50	0.7	5	0.3
222H	40 35 16N	114 41 42W	20	0.7	10	0.7
223H	40 35 29N	114 41 02W	10	1.5	10	0.3
224H	40 35 29N	114 41 02W	15	1	10	0.5
225H	40 35 19N	114 41 02W	10	3	10	>2
226H	40 33 45N	114 40 02W	10	0.7	30	0.2
227H	40 33 41N	114 39 46W	10	1	50	0.3
228H	40 36 04N	114 36 53W	30	1	10	1
229H	40 35 15N	114 37 11W	5	1	30	0.2
230H	40 35 16N	114 36 55W	10	0.5	30	0.15
231H	40 35 01N	114 37 34W	10	0.7	20	0.15
232H	40 34 46N	114 36 33W	7	1	30	0.2
233H	40 34 46N	114 36 33W	10	1	50	0.2
234H	40 34 05N	114 36 28W	7	0.7	30	0.1
235H	40 34 18N	114 37 15W	7	0.7	50	0.2
236H	40 36 43N	114 32 33W	30	2	5	1.5
237H	40 34 34N	114 38 06W	5	0.5	30	0.2
238H	40 34 05N	114 38 53W	7	0.5	50	0.1
239H	40 34 48N	114 34 17W	7	1	30	0.3

Table 2.--Spectrographic results from the analysis of heavy-mineral-concentrate samples from the South Pequop Wilderness Study Area, Elko County, Nevada.

Sample	Mn (ppm)	Ag (ppm)	As (ppm)	Au (ppm)	B (ppm)	Ba (ppm)
200H	1000	1	N	N	70	300
201H	700	<1	N	N	70	700
202H	2000	N	<500	N	100	>10000
203H	1500	N	N	N	70	5000
204H	1500	1	500	N	200	10000
205H	1500	N	<500	N	100	>10000
206H	3000	N	N	N	300	1000
207H	700	N	700	N	300	300
208H	1500	N	500	N	200	10000
209H	1000	1.5	1500	N	150	500
210H	1500	N	1000	N	150	500
211H	1000	N	1500	N	100	>10000
212H	1500	<1	N	N	100	1000
213H	1500	N	N	N	100	700
214H	1500	N	500	N	70	300
215H	1500	N	1000	N	50	300
216H	1000	<1	1500	N	100	5000
217H	1000	N	N	N	150	1000
218H	700	N	<500	N	100	300
219H	700	N	<500	N	150	150
220H	2000	N	500	N	150	500
221H	1000	N	700	N	100	500
222H	1500	N	<500	N	150	700
223H	2000	N	<500	N	150	700
224H	2000	N	<500	N	150	700
225H	1000	N	N	N	300	500
226H	5000	<1	<500	N	100	1000
227H	1500	1	N	N	100	300
228H	1000	N	700	N	200	300
229H	500	N	N	N	70	150
230H	>10000	N	<500	N	70	3000
231H	2000	N	N	N	100	500
232H	2000	N	N	N	70	700
233H	2000	1.5	N	N	100	500
234H	700	1	N	N	70	200
235H	5000	N	<500	N	70	700
236H	1500	N	N	N	100	300
237H	1000	N	N	N	100	300
238H	2000	1	N	N	70	500
239H	700	<1	N	N	150	200

Table 2.—Spectrographic results from the analysis of heavy-mineral-concentrate samples from the South Pequop Wilderness Study Area, Elko County, Nevada.

Sample	Be (ppm)	Bi (ppm)	Cd (ppm)	Co (ppm)	Cr (ppm)	Cu (ppm)
200H	3	N	N	30	300	20
201H	2	N	N	20	300	20
202H	2	N	N	200	200	70
203H	2	N	N	100	700	70
204H	5	N	N	30	70	70
205H	3	N	N	70	300	100
206H	3	N	N	100	150	70
207H	3	N	N	50	200	100
208H	2	N	N	70	200	100
209H	3	N	N	50	150	200
210H	3	N	N	70	200	200
211H	3	N	N	70	200	100
212H	3	N	N	100	150	100
213H	3	N	N	100	100	100
214H	3	N	N	100	300	300
215H	3	N	N	50	300	200
216H	5	N	N	50	300	100
217H	3	N	N	70	150	300
218H	3	N	N	50	200	300
219H	3	N	N	20	150	200
220H	2	N	N	20	150	100
221H	3	N	N	50	200	200
222H	3	N	N	30	200	70
223H	3	N	N	30	200	70
224H	3	N	N	50	200	70
225H	<2	N	N	20	300	50
226H	3	N	N	20	500	70
227H	3	N	N	20	700	50
228H	3	N	N	70	300	200
229H	2	N	N	N	200	20
230H	3	N	N	20	200	50
231H	2	N	N	10	300	30
232H	2	N	N	10	500	30
233H	3	N	N	10	1000	50
234H	2	N	N	20	500	30
235H	3	N	N	20	500	30
236H	3	N	N	100	300	200
237H	2	N	N	15	700	20
238H	2	N	N	20	500	70
239H	2	N	N	10	500	30

Table 2.—Spectrographic results from the analysis of heavy-mineral-concentrate samples from the South Pequop Wilderness Study Area, Elko County, Nevada.

Sample	La (ppm)	Mo (ppm)	Nb (ppm)	Ni (ppm)	Pb (ppm)	Sb (ppm)
200H	500	10	N	100	30	N
201H	300	15	N	70	30	N
202H	300	30	<50	300	50	N
203H	200	20	N	300	50	N
204H	200	20	N	200	70	500
205H	500	20	<50	300	50	N
206H	300	20	N	300	70	N
207H	2000	50	50	300	100	N
208H	2000	15	<50	300	70	N
209H	150	30	N	200	70	<200
210H	700	30	N	300	70	<200
211H	500	30	N	300	70	1500
212H	500	20	N	200	70	<200
213H	500	20	<50	200	100	N
214H	700	15	N	200	100	N
215H	1500	50	<50	300	100	N
216H	100	30	N	200	50	<200
217H	500	30	N	200	70	N
218H	1000	100	<50	300	100	N
219H	1000	70	<50	300	70	N
220H	1500	50	50	200	100	N
221H	500	150	<50	300	500	N
222H	700	30	<50	150	70	N
223H	300	20	<50	150	150	N
224H	300	50	<50	200	70	N
225H	500	N	70	100	70	N
226H	700	20	N	100	70	N
227H	700	30	N	100	50	N
228H	500	15	<50	300	100	N
229H	200	N	N	50	20	N
230H	200	30	N	150	50	N
231H	200	15	N	70	50	N
232H	300	15	N	70	20	N
233H	500	15	N	100	70	N
234H	200	10	N	100	30	N
235H	300	N	N	100	30	N
236H	300	20	<50	300	70	N
237H	500	N	N	100	20	N
238H	500	N	N	100	70	N
239H	300	N	<50	100	30	N

Table 2.--Spectrographic results from the analysis of heavy-mineral-concentrate samples from the South Pequop Wilderness Study Area, Elko County, Nevada.

Sample	Sc (ppm)	Sn (ppm)	Sr (ppm)	V (ppm)	W (ppm)	Y (ppm)
200H	<10	N	2000	150	N	200
201H	<10	N	2000	150	N	200
202H	70	N	1500	300	N	100
203H	50	N	1000	300	N	150
204H	15	N	500	150	N	150
205H	30	N	700	200	N	150
206H	20	N	300	200	N	150
207H	50	N	700	300	N	200
208H	30	N	500	500	N	200
209H	15	N	300	200	N	100
210H	20	N	500	300	N	200
211H	15	N	1000	200	N	100
212H	15	N	500	200	N	150
213H	10	N	300	200	N	150
214H	20	N	500	500	N	150
215H	20	N	200	200	N	200
216H	30	N	700	300	N	150
217H	30	N	300	200	N	150
218H	15	N	200	300	N	150
219H	15	N	200	300	N	200
220H	15	N	200	200	N	150
221H	15	N	200	300	N	100
222H	20	N	500	300	N	200
223H	15	N	500	150	N	100
224H	10	N	300	200	N	150
225H	30	20	1000	200	N	200
226H	10	N	700	150	N	200
227H	15	N	1000	200	N	300
228H	20	N	500	500	N	150
229H	<10	N	700	150	N	200
230H	<10	N	700	200	N	200
231H	N	N	500	200	N	200
232H	10	N	700	200	N	200
233H	10	N	1000	300	N	300
234H	<10	N	500	150	N	200
235H	15	N	700	200	N	200
236H	50	N	700	300	N	70
237H	10	N	700	150	N	200
238H	<10	N	1000	100	N	300
239H	10	N	700	150	N	200

Table 2.--Spectrographic results from the analysis of heavy-mineral-concentrate samples from the South Pequop Wilderness Study Area, Elko County, Nevada.

Sample	Zn (ppm)	Zr (ppm)	Th (ppm)
200H	N	300	N
201H	<500	1000	N
202H	N	700	N
203H	N	150	N
204H	1000	700	N
205H	<500	1000	N
206H	500	1000	N
207H	700	>2000	N
208H	500	>2000	N
209H	1000	700	N
210H	1000	>2000	N
211H	1000	500	N
212H	1000	500	N
213H	500	1000	N
214H	1500	1000	N
215H	1500	>2000	N
216H	700	200	N
217H	700	2000	N
218H	1000	>2000	N
219H	1000	>2000	N
220H	1000	>2000	N
221H	1500	>2000	N
222H	700	>2000	N
223H	500	>2000	N
224H	500	>2000	N
225H	N	>2000	N
226H	500	500	N
227H	<500	500	N
228H	700	>2000	N
229H	N	200	N
230H	700	150	N
231H	<500	300	N
232H	<500	500	N
233H	500	200	N
234H	<500	100	N
235H	<500	700	N
236H	700	>2000	N
237H	N	500	N
238H	<500	200	N
239H	N	300	N

Table 2.—Spectrographic results from the analysis of heavy-mineral-concentrate samples from the South Pequop Wilderness Study Area, Elko County, Nevada.—continued

Sample	Latitude	Longitude	Fe (%)	Mg (%)	Ca (%)	Ti (%)
240H	40 35 25N	114 34 32W	5	0.7	30	0.15
241H	40 36 29N	114 34 50W	7	1	20	0.2
242H	40 36 33N	114 34 25W	5	1	30	0.2
243H	40 35 55N	114 32 52W	7	0.7	30	0.2
244H	40 37 15N	114 32 43W	7	1	20	0.5
245H	40 37 15N	114 32 43W	7	2	20	0.5
246H	40 37 48N	114 33 05W	7	0.7	30	0.2
247H	40 38 51N	114 33 24W	10	3	20	0.7
248H	40 41 45N	114 34 51W	10	1	10	0.5
249H	40 41 40N	114 34 47W	15	1	7	0.5
250H	40 42 25N	114 34 27W	5	1	30	0.2
251H	40 42 54N	114 33 48W	5	1	20	0.15
252H	40 39 33N	114 33 46W	50	1	2	1
253H	40 40 13N	114 35 15W	30	1.5	3	0.7
254H	40 40 16N	114 35 21W	50	1	5	1
255H	40 40 42N	114 34 19W	2	3	30	0.15
256H	40 40 53N	114 34 30W	5	2	20	0.2
257H	40 40 52N	114 33 20W	5	2	30	0.1

Table 2.--Spectrographic results from the analysis of heavy-mineral-concentrate samples from the South Pequop Wilderness Study Area, Elko County, Nevada.--continued

Sample	Mn (ppm)	Ag (ppm)	As (ppm)	Au (ppm)	B (ppm)	Ba (ppm)
240H	1000	1	N	N	100	200
241H	700	<1	N	N	100	200
242H	500	N	N	N	100	150
243H	200	<1	N	N	70	150
244H	500	N	N	N	100	300
245H	500	N	N	N	100	200
246H	200	1	<500	N	100	150
247H	1500	N	<500	N	100	300
248H	1000	N	N	N	70	300
249H	5000	N	N	N	150	1000
250H	1000	1.5	N	N	100	300
251H	10000	N	N	N	70	2000
252H	1000	N	<500	N	100	500
253H	700	N	<500	N	70	200
254H	1500	N	500	N	100	700
255H	100	1	N	N	70	100
256H	200	1.5	N	N	100	150
257H	200	1	<500	N	70	100

Table 2.--Spectrographic results from the analysis of heavy-mineral-concentrate samples from the South Pequop Wilderness Study Area, Elko County, Nevada.--continued

Sample	Be (ppm)	Bi (ppm)	Cd (ppm)	Co (ppm)	Cr (ppm)	Cu (ppm)
240H	2	N	N	10	500	20
241H	2	N	N	30	300	30
242H	<2	N	N	10	500	20
243H	<2	N	N	20	500	20
244H	<2	N	N	20	500	20
245H	2	N	N	30	200	20
246H	2	N	N	10	700	20
247H	2	N	N	20	700	50
248H	2	N	N	30	200	50
249H	3	N	N	50	200	70
250H	<2	N	N	20	300	30
251H	<2	N	N	30	200	50
252H	2	N	N	100	200	200
253H	3	N	N	30	300	200
254H	3	N	N	100	300	150
255H	<2	N	N	N	500	15
256H	<2	N	N	20	500	20
257H	<2	N	N	N	300	30

Table 2.--Spectrographic results from the analysis of heavy-mineral-concentrate samples from the South Pequop Wilderness Study Area, Elko County, Nevada.--continued

Sample	La (ppm)	Mo (ppm)	Nb (ppm)	Ni (ppm)	Pb (ppm)	Sb (ppm)
240H	300	N	N	70	20	N
241H	200	10	N	150	50	N
242H	200	N	N	70	30	N
243H	200	N	N	70	20	N
244H	300	N	N	50	20	N
245H	200	N	<50	70	20	N
246H	200	N	N	100	20	N
247H	200	30	<50	100	70	N
248H	200	20	<50	150	70	N
249H	200	20	<50	100	70	N
250H	300	10	N	50	50	N
251H	150	N	N	50	100	N
252H	200	50	<50	200	70	N
253H	200	70	<50	200	100	N
254H	300	150	<50	300	100	N
255H	200	N	N	30	30	N
256H	150	N	N	100	30	N
257H	200	N	N	70	30	N

Table 2.—Spectrographic results from the analysis of heavy-mineral-concentrate samples from the South Pequop Wilderness Study Area, Elko County, Nevada.—continued

Sample	Sc (ppm)	Sn (ppm)	Sr (ppm)	V (ppm)	W (ppm)	Y (ppm)
240H	<10	N	1000	150	N	300
241H	10	N	1000	150	N	200
242H	10	N	700	150	N	200
243H	<10	N	1000	150	N	200
244H	15	N	1000	200	N	200
245H	10	N	700	150	N	150
246H	10	N	1000	150	N	200
247H	20	N	500	200	N	200
248H	15	N	200	200	N	150
249H	15	N	500	300	N	150
250H	N	N	700	200	N	200
251H	N	N	500	100	N	150
252H	30	N	N	500	N	100
253H	20	N	N	500	N	100
254H	20	N	300	500	N	100
255H	N	N	700	100	N	200
256H	N	N	700	200	N	150
257H	N	N	500	200	N	150

Table 2.--Spectrographic results from the analysis of heavy-mineral-concentrate samples from the South Pequop Wilderness Study Area, Elko County, Nevada.--continued

Sample	Zn (ppm)	Zr (ppm)	Th (ppm)
240H	N	300	N
241H	N	1000	N
242H	N	1000	N
243H	N	700	N
244H	N	2000	N
245H	N	1500	N
246H	<500	300	N
247H	N	>2000	N
248H	500	>2000	N
249H	<500	>2000	N
250H	N	300	N
251H	500	200	N
252H	<500	>2000	N
253H	1500	2000	N
254H	1500	>2000	N
255H	N	300	N
256H	N	500	N
257H	N	700	N