UNITED STATES DEPARTMENT OF THE INTERIOR

U.S. GEOLOGICAL SURVEY

Reconnaissance Geochemical Assessment of Metallic Mineral Resource Potential South Egan Range Wilderness Study Area (NV 040-168), White Pine, Lincoln, and Nye Counties, Nevada

By

E. Lanier Rowan, Albert H. Hofstra,

and Gordon W. Day

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ABSTRACT

A reconnaissance geochemical study of the South Egan Range Wilderness Study Area (WSA) NV 040-168 was undertaken in 1983 as part of an assessment of the suitability of Bureau of Land Management administered land for preservation as wilderness. This study is intended to supplement earlier work by locating areas with metallic mineral resource potential not previously identified, and by classifying the study area according to metallic mineral resource favorability. Anomalous regions were defined primarily on the basis of chemical analyses of stream-sediment samples collected systematically throughout the WSA; rock and groundwater samples provided additional information. Emission spectrography and atomic absorption spectrophotometry were the primary methods of analysis.

In the northern part of the South Egan Range WSA two regions of known mineralization were identified, and accordingly, were classified 4D (highest favorability and certainty) for resource favorability. One region was classified 3C (moderate favorability and certainty) on the basis of rock samples containing anomalous concentrations of Au, Ag, and base metals, a heavy-mineral-concentrate sample containing anomalous silver, and a water sample with anomalous SO_4^{-2}, Pb, Zn, Cu, and Mn. The suite of anomalous elements present in this region is suggestive of a base metal vein-type deposit; however, base metal skarn, and Cu/Mo porphyry deposit types are also possible. Three regions classified 2C (low favorability, moderate certainty) contain numerous scattered, anomalous concentrations of elements (e.g. Cu, Pb, Mn, Ni, Sn) believed to reflect the relatively high background levels of these elements in the formations being drained. It is possible, however, that hydrothermal enrichment has been superimposed on the anomaly pattern related to lithology, and the anomalies are due to a combination of both sources. Finally, areas of Quaternary alluvium contained no significant anomalies and were classified 1B (low favorability and certainty).

INTRODUCTION

The Federal Land Policy Management Act of 1976 specifies that lands administered by the Bureau of Land Management (BLM) must be reviewed for suitability for preservation as wilderness (Fisher and Juilliand, 1983). One aspect of the review process is the evaluation of the metallic mineral resource potential. A Geology-Energy-Minerals (GEM) report (Great Basin GEM Joint Venture, 1983), a survey of the existing literature, initiated the evaluation of the South Egan Range Wilderness Study Area (WSA), NV 040-168, White Pine, Lincoln, and Nye Counties, Nevada (fig. 1). Based on recommendations made in the GEM report, a reconnaissance geochemical survey was undertaken to locate areas of metallic mineral resource potential not previously identified by prospects, claims, or private exploration. The geochemical survey is the subject of this report, and in conjunction with the GEM report, will provide the BLM with the information needed to make an initial recommendation of suitability for wilderness designation (Fisher and Juilliand, 1983).

Anomalous regions were defined primarily on the basis of chemical analyses of both bulk sediment and heavy-mineral concentrates from stream-sediment samples collected systematically throughout the WSA. Analyses of water samples collected from springs and wells, and of rock samples collected

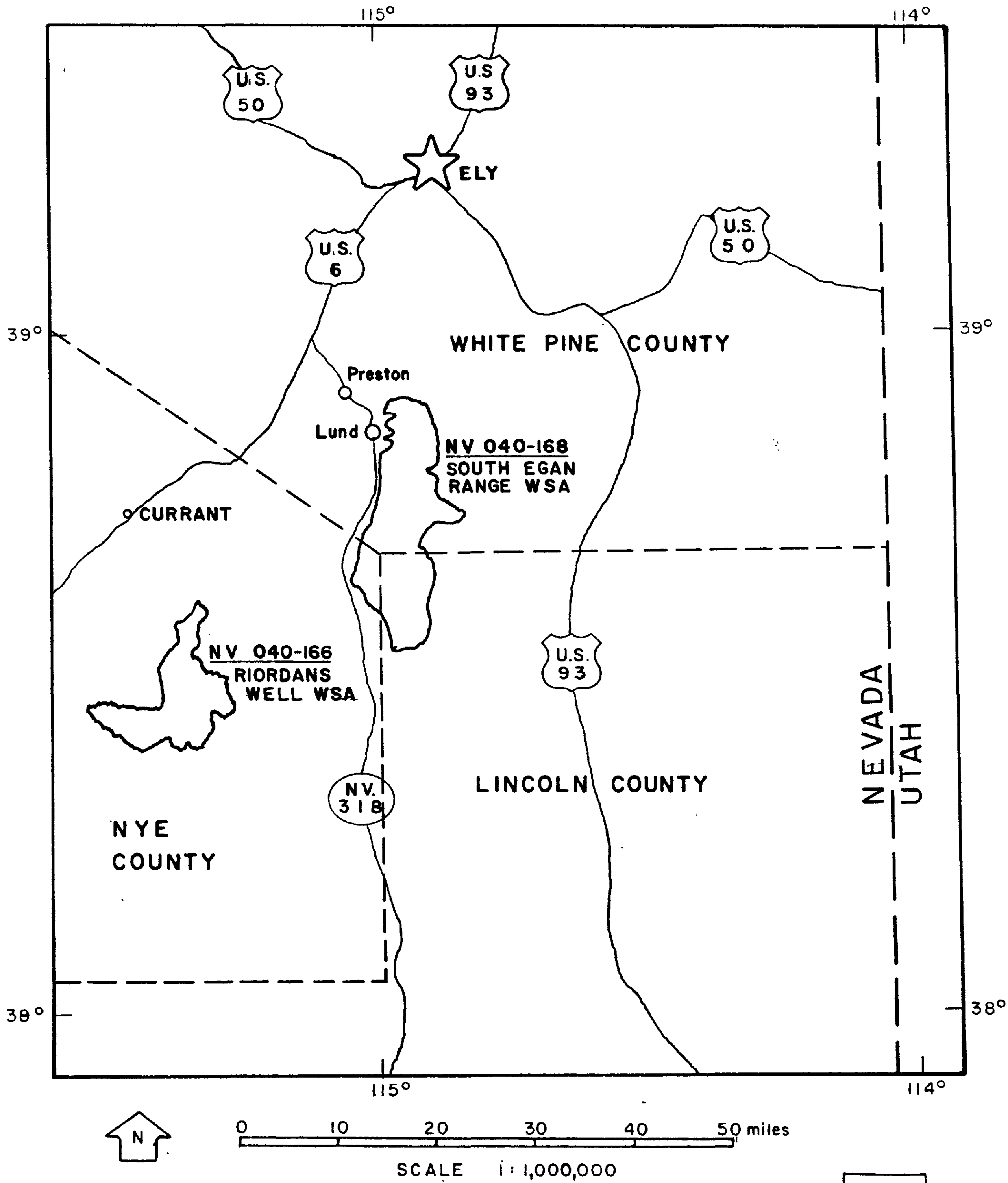

Figure 1. Study Area Location Map

from outcrops with mineralized appearance, provided additional information. Regions within the South Egan Range WSA are ranked according to their resource potential using the classification scheme in table 1.

Stream sediment, spring and well water, and rock samples (fig. 2) were collected in June 1983 with the assistance of G. B. Allen. Chemical analyses of sediment and rock samples were performed by G. W. Day, and R. W. Leinz; water samples were analyzed by W. H. Ficklin. Manipulation of data and statistical analysis were performed by B. Chazin and R. J. Goldfarb.

LOCATION AND PHYSIOGRAPHY

The South Egan Range Wilderness Study Area (WSA) is located in east-central Nevada at the junction of White Pine, Lincoln, and Nye Counties, and covers approximately 151 square miles (391 km^2). The northern boundary is about 25 miles south of Ely (fig. 1). Access to the study area is from highway 318 on the west and highway 93 on the east by dirt roads of varying quality. U.S. Geological Survey maps covering the area are the Sawmill Canyon, Brown Knoll, Parker Station, Haggerty Spring, Moorman Spring NE, Moorman Spring SE, Shingle Pass, and Lund quadrangles in the 1:24,000 scale topographic series.

The study area, a portion of the north-south trending Egan Range, is roughly 25 miles long and 8 miles wide. Relief is about 2,800 feet with a maximum elevation of 9,670 feet. The range is asymmetrical with a steep western slope above the White River Valley and a more gentle eastern slope descending into the Cave and Steptoe Valleys. The climate is arid to semi-arid and most streams are intermittent.

GEOLOGIC SETTING

The South Egan Range Wilderness Study Area (WSA) is underlain primarily by Paleozoic sediments and Tertiary volcanic rocks. Deformation during the Late Cretaceous thrusting of the Sevier Orogeny and mid-Tertiary Basin and Range extensional faulting yielded a structurally complex terrane. Individual formations, structure, paleontology, and historical geology are discussed in detail in the Egan/Mt. Grafton GEM report (Great Basin GEM Joint Venture, 1983), and by Hose and Blake (1976), Tschanz and Pampeyan (1975), and Kellogg (1964, 1963). A more extensive reference list is provided by the GEM report.

The Paleozoic section is represented by formations from each period, Cambrian through Permian, and includes limestone, dolomite, sandstone, and shale. The following brief mention of the formations believed most important in contributing to geochemical anomalies in the Paleozoic section has been condensed from the GEM report (Great Basin GEM Joint Venture, 1983). The Ordovician Pogonip Group consists primarily of platy, thin-bedded detrital limestone interbedded with flat-pebble conglomerate and shale. The Devonian formations include the Sevy and Simpson dolomites, and the Guilmette Formation which is an exceedingly dense, fine-grained, dark gray limestone. The cliff-forming Mississippian Joana Limestone is a massive, medium gray unit. The overlying Chainman Shale is a dark gray to black shale interbedded with olive-gray, platy siltstone. The upper half of this formation contains beds of quartzite and quartzitic siltstone. The Pennsylvanian Ely Limestone is a medium gray coarsely crystalline, detrital limestone. These formations are

TABLE 1.--Resource potential classification scheme (Fisher and Juilliand, 1983)

I. Level of favorability	II. Level of certainty
1. The geologic environment and the inferred geologic processes do not indicate favorability for accumulation of mineral resources.	A. The available data are insufficient and/or cannot be considered as direct or indirect evidence to support or refute the possible existence of mineral resources within the respective area.
2. The geologic environment and the inferred geologic processes indicate low favorability for accumulation of mineral resources.	B. The available data provide indirect evidence to support or refute the possible existence of mineral resources.
3. The geologic environment, the inferred geologic processes and the reported mineral occurrences or valid geochemical/geophysical anomaly indicate moderate favorability for accumulation of mineral resources.	C. The available data provide direct evidence, but are quantitatively minimal to support or refute the possible existence of mineral resources.
4. The geologic environment, the inferred geologic processes, the reported mineral occurrences, and/or valid geochemical/geophysical anomaly, and the known mines or deposits indicate high favorability for accumulation of mineral resources.	D. The available data provide abundant direct and indirect evidence to support or refute the possible existence of mineral resources.

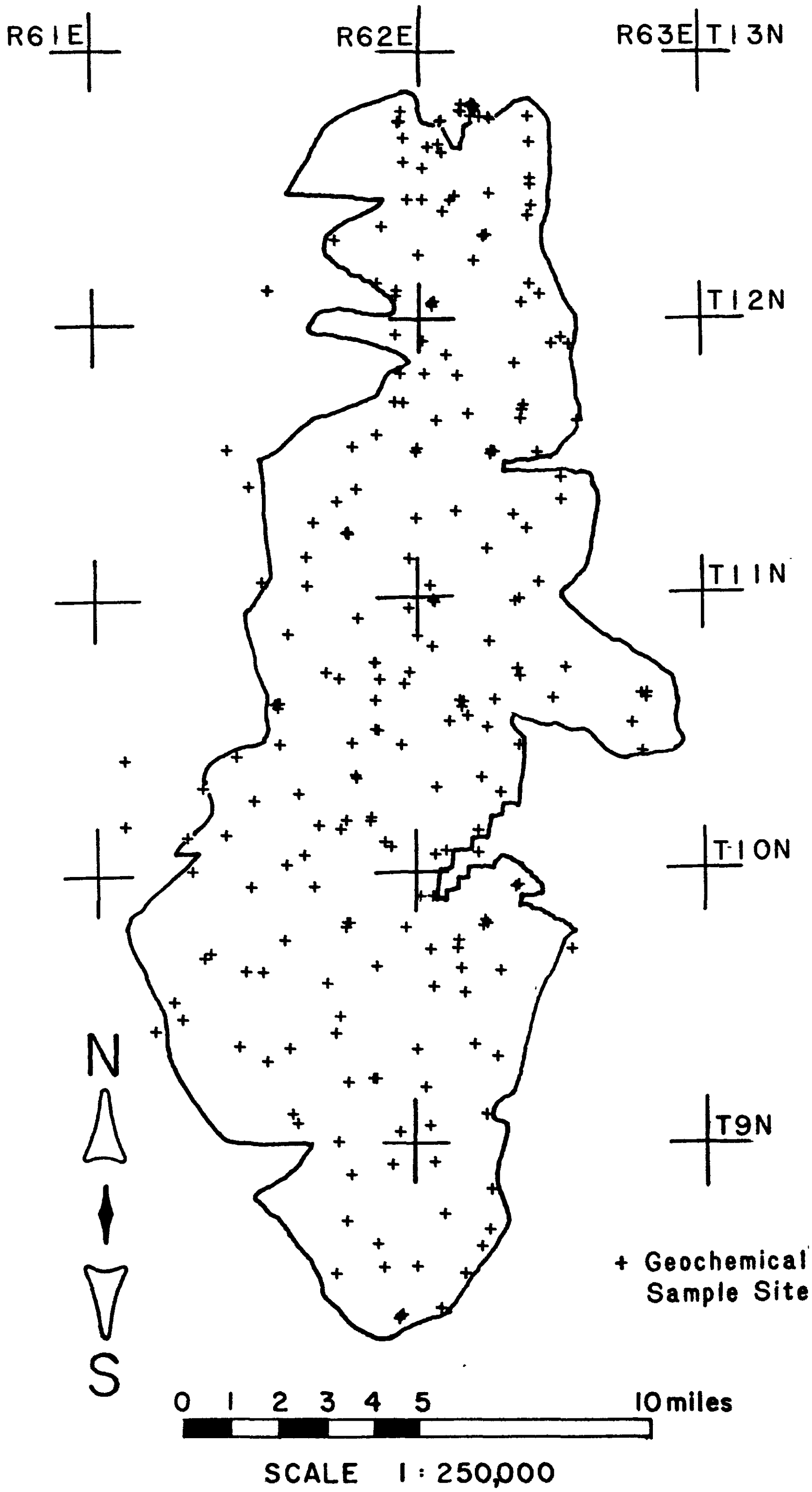

Figure 2. Geochemical Sample Sites--
South Egan Range Wilderness Study Area

truncated on the west by a major listric(?)-normal fault developed during the Miocene east-west Basin and Range extension.

On the east side of the study area, the Paleozoic section is unconformably overlain by Tertiary non-marine sediments, which are themselves unconformably overlain by volcanic rocks. The volcanic rocks consist of a basal conglomerate which grades upwards into a sequence of flows and tuffs. Compositions are predominantly felsic although some intermediate to mafic units have been identified. These rocks are all disrupted by imbricate, low-angle faults developed probably in response to crustal extension of Oligocene age (Gans and Miller, 1983). Other small outcrops of volcanic rocks are found on the western margin of the study area. Above the volcanic rocks along the eastern border of the range are poorly consolidated Pleistocene sandstone and conglomerate (Kellogg, H. E., 1964).

KNOWN METALLIC MINERAL RESOURCES

A compilation of known resources, prospects, claims, and leases, based on a survey of the literature and communication with individual companies and claim owners, is provided by the GEM report (Great Basin GEM Joint Venture, 1983). Description of deposit types expected in the area, strategic and critical mineral potential, and a discussion of mineral economics are also included in the GEM report. A summary of the known mineralization is presented here.

The Ellison mining district extends into the north end of the study area and in the 1930's and 1940's produced silver, copper, lead, zinc, and fluorite. Recent exploration by the U.S. Borax Company indicates potential for a molybdenum porphyry system at depth below the exposed fluorite, precious- and base-metal mineralization. Further study of the South Egan Range WSA was recommended in the GEM report (p. 44) to define the southward extent of precious and base metal mineralization within the study area.

The volcanic rocks east of Lund at the western border of the study area have been drilled and found to contain currently subeconomic concentrations of disseminated gold. The GEM report concludes that there is some potential for an open-pit precious-metal and industrial minerals mine in this area.

Outside of the areas of known mineralization, outcrop in the study area was classified 2B (see table 1 for classification scheme) in the GEM report, i.e. low level of mineral resource favorability and a low level of certainty in this appraisal. Alluvium at the margins of the study area was classified 1A; i.e. no indication of favorability and no data on which to base an appraisal.

In the Ward district north of the WSA on the east side of the Egan Range, a mine currently under development will produce Ag and base metals from a skarn. Also to the north, about five miles west of Ely, is the Ruth Mine. Although no longer in production, it was once a major porphyry copper mine. Based on the mineral occurrences within and north of the study area, types of mineralization possibly occurring in the study area include: (1) epithermal precious-metal deposits as veins or disseminations; (2) base-metal veins; (3) argentiferous base-metal skarn deposits; and (4) Mo and/or Cu porphyry deposits. Major components and trace elements associated with these deposit types are listed in table 2.

TABLE 2.--Elements associated with different deposit types

(Rose, Hawkes, and Webb, 1979)

Type of deposit	Major components	Associated elements
Hydrothermal deposits		
Porphyry Cu (Bingham)	Cu, S	Mo, Au, Ag, Re, As, Pb, Zn, K
Porphyry Mo (Climax)	Mo, S	W, Sn, F, Cu
Skarn-Cu (Yerington)	Cu, Fe, S	Au, Ag
Skarn-Pb (Hanover)	Pb, Zn, S	Cu, Co
Skarn-W-Mo-Sn (Bishop)	W, Mo, Sn	F, S, Cu, Be, Bi
Base-metal veins	Pb, Zn, Cu, S	Ag, Au, As, Sb, Mn
"Epithermal" precious metal	Au, Ag	Sb, As, Hg, Te, Se, S, U

GEOCHEMISTRY

Introduction

The purpose of this geochemical survey is to identify new regions of potentially significant mineralization within the South Egan Range Wilderness Study Area (WSA). For most of the study area no previous geochemical exploration results are known to exist. The results of the present study permit the areas classified as 2B and 1A in the GEM report (Great Basin GEM Joint Venture, 1983) to be further subdivided and reclassified with greater certainty.

A total of 183 bulk sediment samples, and 165 heavy-mineral-concentrate samples from stream sediments, 26 rock, and 52 water samples were collected and analyzed by semiquantitative direct-current arc emission spectrography and atomic absorption spectrophotometry. The results were entered into the U.S. Geological Survey's computerized archive, the Rock Analysis Storage System (RASS), and are presented in the appendix.

Sampling Design

Stream-sediment sample sites were chosen to provide representative coverage for a geochemical assessment of metallic mineral resource potential in the study area. The study area was divided into one-square-mile cells. In a given cell, if there was more than one appropriate site, one was chosen at random to represent the cell. Sites were generally located in first-order or small second-order streams draining areas of approximately 1/2 to 3/4 of a square mile. Differences in sediment geochemistry between sample sites should permit detection of geochemical halos surrounding major mineralized regions. However, the sample density of one site per square mile represents a compromise between sensitivity in detecting weaker, more dispersed geochemical halos, the probability of missing anomalies, and time and cost limitations. The Ellison district in the northern part of the area, and the subeconomic gold occurrence east of Lund were both clearly identified using the sampling methods of this study. It should be emphasized, however, that the sample density used only permits identification of geochemically anomalous regions where more detailed geochemical and geologic exploration should be focused.

Sample Collection

A sample of bulk sediment and a sample for heavy-mineral concentrate were each collected from 183 stream sediment sites. Due to insufficient quantity only 165 of the concentrate samples could be analyzed. At each site the bulk sediment sample was composited from a 50-foot stretch of channel, using an aluminum scoop. All samples were passed through a 10-mesh (2-mm) sieve and placed into cloth sample bags. Larger samples (about 8 lbs), collected for analysis of the heavy minerals, were panned later and the heavy fraction saved.

Spring and well water samples were collected from 52 locations. At each site 400 ml samples were stored in new, untreated plastic bottles, and 60 ml samples were filtered through a 0.45 micrometer filter, acidified with reagent-grade concentrated nitric acid to pH 2, and stored in acid-rinsed polyethylene bottles. Water temperature and pH were measured at each site.

Rock samples were collected during the course of stream-sediment sampling from 26 outcrops, most of which showed some evidence of mineralization.

Sample Preparation

The samples of bulk sediment were passed through an 80-mesh (0.18-mm) stainless steel sieve and the fine fraction retained. This fraction includes clay, silt, fine sand, hydroxides, and organic matter. Previous work has shown that this size fraction has a high capacity for metal ion adsorption and that secondary minerals of ore deposits, particularly iron and manganese oxides, tend to be friable and break down to this size. After sieving, the sediment was split, one fraction saved, and the other submitted for spectrographic and atomic absorption analysis.

The heavy-mineral (panned) concentrates were passed through a 35-mesh (0.5-mm) stainless steel sieve, and separated in bromoform (specific gravity 2.8) to remove any remaining light minerals (quartz, feldspar, etc.). The heavy minerals were separated into three fractions using a large electromagnet. The most magnetic material, largely magnetite, was discarded; the second fraction, largely ferromagnesian silicates and iron oxides, was stored for possible future analysis. The third and least magnetic fraction contained minerals such as zircon, sphene, rutile, sulfides, sulfates, carbonates, and oxides. When sufficient quantity of this fraction remained, it was divided using a Jones splitter. One split was hand ground for spectrographic analysis, and the other was stored.

Rock samples were crushed and then powdered between ceramic plates to less than 0.15 mm. Water samples required no preparation beyond that done in the collection process.

Analytical Procedures

Emission spectrography (Grimes and Marranzino, 1968) was used to analyze all bulk sediment samples, heavy-mineral concentrates, and rock samples for 31 elements. The lower limit of detection for each element is given in table 3a. In general the precision is within one reporting value of the actual value 83% of the time, and within two intervals approximately 96% of the time (Motooka and Grimes, 1976).

The semiquantitative spectrographic analyses are reported as six-step geometric midpoints (..., 1, 1.5, 2, 3, 5, 7, 10, 15,...) of increasing geometric intervals (..., 0.83-1.2, 1.2-1.8, 1.8-2.6, 2.6-3.8, 3.8-5.6, 5.6-8.3, 8.3-12, 12-18,...). These intervals represent logarithmic class widths of 0.16667. The line density on the spectrographic plate is approximately proportional to the log of the amount of the element present. Consequently, the expected error in reading line densities is logarithmically related to the element concentration. Geometric classes are advantageous because the error variance is somewhat proportional to the concentration of the element detected (Miesch, 1976).

Arsenic, antimony, and silver are potentially important pathfinders for precious-metal mineralization known to occur in the geologic setting of the study area. Due to their relatively low natural concentrations and their relatively high spectrographic lower detection limits (table 3a), they are

TABLE 3a.--Lower detection limits for sediment, heavy-mineral concentrate, and rock analyses

Element	Method	Lower detection limit for sediments (ppm) and rock	Lower detection limit for heavy-mineral concentrates (ppm)
Iron (Fe)	Emission Spec.	0.05%	.1%
Magnesium (Mg)		.02%	.05%
Calcium (Ca)	(Grimes and	.05%	.1%
Titanium (Ti)	Marranzino, 1968)	.002%	.005
Manganese (Mn)		10	20
Silver (Ag)		0.5	1
Arsenic (As)		200	500
Gold (Au)		10	20
Boron (B)		10	20
Barium (Ba)		20	50
Beryllium (Be)		1	2
Bismuth (Bi)		10	20
Cadmium (Cd)		20	50
Cobalt (Co)		5	10
Chromium (Cr)		10	20
Copper (Cu)		5	10
Lanthanum (La)		20	50
Molybdenum (Mo)		5	10
Niobium (Nb)		20	50
Nickel (Ni)		5	10
Lead (Pb)		10	20
Antimony (Sb)		100	200
Scandium (Sc)		5	10
Tin (Sn)		10	20
Strontium (Sr)		100	200
Vanadium (V)		10	20
Tungsten (W)		50	100
Yttrium (Y)		10	20
Zinc (Zn)		200	500
Zirconium (Zr)		10	20
Thorium (Th)		100	200
Arsenic (As)	Atomic Absorption	5	
Antimony (Sb)		1	
Silver (Ag)	(Modification of	0.05	
Gold (Au)	Viets, 1978)	0.05	

rarely detected in spectrographic analysis. Therefore atomic absorption analysis (Modification of Viets, 1978) of the bulk sediment samples was used for As, Sb, and Ag (table 3a).

Rock samples were analyzed spectrographically for 31 elements, and by atomic absorption for Au (Thompson and others, 1968) as well as As, Sb, and Ag (table 3a). Analyses performed on water samples are listed in table 3b. The results of chemical analysis of bulk sediment, heavy-mineral concentrate, rock, and water samples are listed in the appendix.

Threshold determination

The thresholds for element concentrations in the stream sediments are defined as the upper limit of background values. Values higher than threshold are considered anomalous and possibly related to mineralization. For the purpose of threshold determinations and statistical interpretation, the geochemical data for the Riordan's Well WSA (Hofstra and others, 1984) was combined with that of the South Egan Range WSA because the geology and types of mineralization are similar in both areas, and the statistics are generally more meaningful for a large data base.

Threshold values for each element were determined using cumulative frequency tables and percent frequency histograms, supplied by the STATPAC program A470 (VanTrump and Miesch, 1977), which provide a quick method for visual representation of the data. Modes can be easily recognized, and the frequency distribution of the data is apparent. Thresholds for elements with normal distributions were placed at breaks in the frequency distribution of the data, if present, generally between the 95th and 99th percentiles (table 4). When multimodal distributions were identified, the threshold was placed at the point between the population thought to represent unmineralized lithologies, and the remaining values thought to represent mineralized rock.

A total of only 34 rock samples were obtained from both study areas, and because many of these were collected from mine dumps, the determinations of threshold values for rocks were based upon: (1) comparison of the data with average background abundances of the elements in different rock types (table 4); and (2) published surveys of known mineralized areas.

Element associations and factor analysis

Because certain groups of elements respond similarly to a given set of environmental conditions, associations of different elements may serve to identify more clearly the geochemical variations in the geological environment. Associations of some elements may be related to rock type, while others may be related to a particular type of mineralization (see table 2).

Although data for a large number of chemical elements was acquired, geochemical associations permit the simplification of this data set into a smaller set of new variables, each consisting of a suite of elements. Factor analysis is a mathematical technique for deriving these new variables. R-mode factor analysis (VanTrump and Miesch, 1976; Davis, 1973) was used to define the geochemical associations in the sediment, concentrate, and water data bases. This type of factor analysis collects the experimental variables (elements) that tend to behave similarly into groups termed <u>factors</u>. Because

TABLE 3b.--Lower detection limits for water analyses

Element or constituent determined	Method	Detection limit (ppb)	Reference
Ag	GFAA	.2	Perkin-Elmer, 1977
As	GFAA	1	Aruscavage, 1977
Li	FAA	10	Perkin-Elmer, 1976
Ca	FAA	100	Perkin-Elmer, 1976
Cu	GFAA	1	Perkin-Elmer, 1977
Fe	GFAA	1	Perkin-Elmer, 1977
Mn	GFAA	1	Perkin-Elmer, 1977
K	FAA	100	Perkin-Elmer, 1976
Mg	FAA	100	Perkin-Elmer, 1976
Mo	GFAA	1	Perkin-Elmer, 1977
Na	FAA	100	Perkin-Elmer, 1976
Pb	GFAA	1	Perkin-Elmer, 1977
Sb	GFAA	1	Perkin-Elmer, 1977
Zn	GFAA	.5	Perkin-Elmer, 1977
SO_4	Ion Chromatography	100	Fishman and Pyen, 1979
Alkalinity[1]	Grans Plot, Titration	1000	Orion Research, 1973
F^-	Ion Chromatography	10	Fishman and Pyen, 1979
Cl^-	Ion Chromatography	50	Fishman and Pyen, 1979
Sp. Cond.	Specific Conductivity Bridge	--	Skougstad and others, 1979

GFAA Graphite furnace atomic absorption (Perkin-Elmer Corporation, 1977)

FAA Flame atomic absorption

1 As bicarbonate

TABLE 4.--Threshold values and average elemental abundances

	Threshold values (ppm) for anomalous concentrations (lower percentile limit in parentheses)				Average elemental abundances (ppm) (Rose, Hawkes, and Webb, 1979)			
Element	Stream Sediment	Heavy-mineral concentrate	Rock	Water**	Granite	Limestone	Shale	Fresh Water
Mn	1500 (98)	2000 (99)	--	--	390	1100	850	0.015
Th	--	1000 (99)	--	--	20	1.7	12	0.0001
Cr	150 (99)	--	1000	--	4.1	11	90	0.001
Ni	50 (98)	100 (99)	500	--	4.5	20	68	--
Co	--	30 (96)	--	--	1	0.1	19	0.0001
Pb	100 (99.5)	300 (92)	70	.001*	18	5	25	.003
Zn	200* (99)	500* (97.5)	300	.013	51	21	100	.020
B	100 (99)	200 (98)	70	--	10	20	100	--
Bi	10* (98)	20* (99)	15	--	.3	--	1	--
Mo	7 (99)	10* (96)	15	.005	1.3	0.4	2.6	.0015
Sn	15 (99)	20* (94)	30	--	3	--	6	--
W	--	100* (98)	200	--	1.5	.5	1.8	--
Cd	--	70 (99)	100	--	0.1	0.035	0.3	--
As	30 (98)	500* (99)	90	.007	2.1	1.1	12	.002
Au	--	20* (99.5)	.05*	--	.0023	.005	.004	--
Ag	.3 (97)	1* (97.5)	.5	--	.037	0.1	0.19	--
Sb	3 (92)	200* (98)	3	--	0.2	0.3	1-2	--
$SO_4^{=}$	--	--	--	50	--	--	--	3.74
F^-	--	--	--	.6	--	--	--	0.1
Cu	150 (99.5)	100 (98)	150	.009	12	5	42	.003

* Lower detection limit
** Water samples were analyzed by methods listed on table 3b

specific types of mineral deposits frequently contain a characteristic geochemical signature composed of a distinct suite of trace elements, factors may be useful in defining deposit types. In this study factor analysis did not directly affect the choice of boundaries of anomalous areas; however, it helped in choosing which elements to plot and in recognizing areas of lithologic control over geochemical anomalies.

The suite of elements that makes up a factor is determined through interpretation of the factor loadings which depict the influence of each factor on a variable (i.e, element), and may be interpreted similarly to correlation coefficients. In other words, a high positive or negative loading denotes, respectively, a positive or negative geochemical correlation between the element and the factor. Related to the loadings are the factor scores, which measure the magnitude of the factor's effect on each individual sample.

Tables 5, 6, and 7 show the factor loadings for the factors determined to be statistically significant (eigenvalues greater than one) within the sediment, concentrate, and water data bases, respectively.

The first two factors in stream sediments are related to lithology. Most of the elements in factor 1 (Y, Ti, V, Mn, Sc, Zr, Fe, Sr, Ba, La, Co, Be) are associated with felsic and alkalic igneous rocks (Rose, Hawkes, and Webb, 1979) and elements in factor 2 (Ca, Mg, Pb) are indicative of carbonates (table 5). The elements for these two factors were not plotted on the enclosed geochemical maps because the interest here is in metallic mineral deposits. Suites of elements in factors 3, 4, and 5 are less obviously attributable to discrete lithologies, and represent mixes of both mineralized and unmineralized sources. Factor 3 defines an element association whose most important constituents are Ni, Cu, and As; similarly, the important constituents of factor 4 are Cr, Ni, Ag, B, and for factor 5, Zn. When factors are referred to throughout the text, their important constituents are listed in parentheses. Anomalous concentrations of the important constituents of factors 3, 4, and 5, as well as ore-related elements not included in the factor analysis, such as Bi, Mo, Sb, and Sn, are plotted on plate 1.

The element associations in heavy-mineral concentrates defined by factors 1-5 are probably related to lithologic controls (table 6). Factor 6, however, shows a strong loading with Zn, and weaker Pb, Cu, and Co loadings defining a suite of elements often associated with metallic mineralization. Plate 2 shows samples enriched in these elements and/or other elements not included in the factor analysis but possibly related to mineralization, including Ag, As, Au, Bi, Cd, Mo, Sb, Sn, and W.

In spring waters, factors 4 and 5 are the most likely to be representative of mineralization (table 7). Factor 4 has strong positive loadings for Zn and Cu, while factor 5 has strong positive loadings for F^- and SO_4^{-2}, and a slightly weaker loading for Mo. Sample sites with anomalous concentrations of these elements are plotted on plate 3. Factor analysis was not applicable to the rock data due to the small number of samples.

TABLE 5.--Factor loadings for stream sediments, R-mode factor analysis, VARIMAX factor rotation

Variable	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Fe%.......	0.8248	-0.0677	0.0556	0.1276	0.3547
Mg%.......	-0.2446	0.8071	-0.2142	0.0595	0.0113
Ca%.......	-0.1554	0.7940	0.1538	0.0627	-0.1712
Ti%.......	0.8676	-0.1294	0.1736	0.0347	0.2004
Mn........	0.8553	0.1885	0.1173	0.1991	0.1306
B.........	0.4567	0.1754	0.2865	0.6395	-0.2360
Ba........	0.8025	0.2842	-0.1936	0.2502	-0.1228
Be........	0.5779	0.2851	-0.2370	0.3654	-0.3144
Co........	0.6862	-0.2105	0.0950	0.3256	0.2852
Cr........	0.4760	0.2953	0.0263	0.6471	0.0700
Cu........	0.2421	0.1978	0.7136	-0.2070	0.2576
La........	0.7978	-0.1687	-0.1625	-0.1193	-0.0152
Ni........	0.2057	0.0048	0.5653	0.6479	-0.0863
Pb........	0.3896	0.6863	0.0497	0.1239	0.0481
Sc........	0.8505	-0.0448	0.0010	0.2071	0.0751
Sr........	0.8084	0.1332	-0.0803	0.1201	-0.1310
V.........	0.8565	0.0088	0.1375	0.2094	0.2805
Y.........	0.8682	-0.0012	0.0362	0.3125	0.0352
Zn........	0.2269	-0.0782	0.0021	0.0792	0.8739
Zr........	0.8277	-0.0793	0.1296	-0.0032	0.0412
As........	-0.1810	-0.1340	0.6855	0.0839	-0.1061
Ag........	0.0220	0.0323	-0.2257	0.7782	0.2275
Percent of total data variance explained (75.51%)	43.65%	12.14%	8.05%	6.26%	5.41%
Element Assoc.	Y, Ti, V, Mn, Sc, Zr, Fe, Sr, Ba, La, Co, Be	Mg, Ca, Pb	Cu, As, Ni	Ag, Ni, Cr, B	Zn

TABLE 6.--Factor loadings for heavy-mineral concentrates R-Mode factor analysis, VARIMAX factor rotation

Variable	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
Fe%.......	0.7776	0.2799	-0.0051	0.2664	0.0775	-0.0195
Mg%.......	-0.0634	0.1008	-0.4296	0.7621	-0.2479	0.0188
Ca%.......	0.2754	-0.3404	0.1361	0.7416	0.1682	-0.0120
Ti%.......	0.5040	0.7095	0.0800	-0.0500	-0.0014	-0.0194
Mn........	0.7487	0.2832	-0.1321	-0.1383	-0.1516	0.1202
B.........	0.6242	-0.1809	0.1172	0.0284	0.2943	0.2168
Ba........	0.1771	0.1099	0.0506	0.0514	0.8590	0.0424
Be........	-0.1390	0.1449	0.7602	0.0343	-0.1266	0.0690
Co........	0.6788	0.2325	-0.1810	-0.0868	-0.1370	0.3046
Cr........	0.6583	0.0799	0.1735	0.3719	0.0645	-0.1414
Cu........	0.7224	0.0065	-0.0024	0.1066	0.1458	0.3005
La........	0.6177	0.3939	0.4304	-0.0590	0.0557	-0.2311
Nb........	0.0972	0.6324	0.1713	0.2097	-0.2897	0.1470
Ni........	0.7939	-0.1010	0.0992	0.1177	0.1438	-0.1017
Pb........	0.2859	0.1451	0.1608	0.4746	0.1011	0.4989
Sc........	0.1709	0.7369	0.0573	-0.1827	0.0894	-0.1619
Sr........	0.1432	-0.1452	0.6451	-0.1005	0.5073	-0.0356
V.........	0.7973	0.3779	0.0125	0.1072	0.1015	-0.0354
Y.........	0.4738	0.4283	0.5303	0.0094	0.2432	-0.2488
Zn........	0.0664	-0.1334	-0.0610	-0.0356	-0.0023	0.8049
Zr........	-0.0240	0.6877	-0.0776	-0.0537	0.4741	-0.0559
Percent of total data variance explained (70.76%)	31.47%	12.16%	10.11%	6.52%	5.28%	5.22%
Element Assoc.	V, Ni, Fe Mn, Cu, Co Cr, B, La, Ti	Sc, Ti Zr, Nb	Be, Sr Y	Mg, Ca	Ba, Sr	Zn, (Pb), (Co), (Cu)

TABLE 7.--Factor loadings for spring and well waters R-Mode factor analysis, VARIMAX factor rotation

Variable	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
As........	0.5383	-0.0045	0.2213	-0.5029	-0.3251
Li........	0.5837	0.1865	0.2243	0.1954	0.2517
Ca........	0.1767	-0.0303	0.8920	-0.1112	0.0439
Cu........	-0.0580	0.4471	0.1098	0.7045	-0.0525
Fe........	-0.0310	0.8272	0.0679	0.1968	-0.1397
Mn........	-0.0807	0.8539	-0.1681	0.106	0.0007
K.........	0.7168	0.0262	-0.0252	-0.0177	-0.0327
Mg........	-0.0010	-0.4300	0.5987	0.2872	0.3509
Mo........	0.5070	0.4523	0.0209	-0.2429	0.4662
Na........	0.8929	-0.1641	0.0846	-0.1204	0.1000
Pb........	0.0230	0.2898	-0.3243	0.1299	-0.5559
Zn........	0.0068	-0.0006	-0.0687	0.9010	0.0960
SO_4.......	0.6274	-0.0400	0.3043	-0.0633	0.5101
Alkalinity..	0.1951	-0.0915	0.9152	-0.0354	0.0525
F.........	0.5415	0.0021	0.2524	0.0601	0.6317
Cl........	0.8388	-0.1236	0.2662	-0.0215	0.0845
Sp. Cond....	0.3419	-0.1308	0.8827	0.0151	0.2323
Percent of total data variance explained (72.92%)	33.49%	14.05%	12.39%	7.27%	5.72%
Element Assoc.	Na, Cl, K, SO_4, Li, F, As, Mo	Mn, Fe	Alk., Ca, Mg	Zn, Cu,	F, SO_4 Mo

Interpretation of geochemical anomalies

Introduction

Under ideal conditions, the occurrence of anomalously high concentrations of an ore-related element, or a specific association of elements in a sample, may indicate that economic mineralization is present. Anomalies not related to mineralization may be caused by: (1) rock types with high background concentrations of ore-related elements; (2) concentration of normal background abundances of ore elements by coprecipitation with iron and manganese oxides and by adsorption by clays and organics; (3) contamination; (4) sampling or analytical errors; and (5) random statistical variation.

The absence of an anomaly does not necessarily mean that a mineral deposit does not exist. The deposit may occur too deep, or below an impervious layer that prevents transport of elements into the sample medium. In stream sediments and spring waters, dilution and/or immobilization of elements may cause samples collected in the vicinity of mineralization to show only sub-threshold values. Regions of interest are generally sites with anomalous concentrations of two or more ore metal elements and/or clusters of anomalous sites, particularly when reinforced by anomalies in different sample media, (e.g. bulk stream sediment, heavy-mineral concentrates, spring water, and rock).

The study area has been subdivided into zones defined by clusters or trends of geochemically anomalous sample sites. The anomalous zones referred to throughout the text, M1 through M5, are shown on plates 1-3 and figure 3. Geologic coverage exists at a scale of 1:62,000 for the southern 2/3 of the study area, south of 38°45' (Kellogg, 1964), and at a scale of 1:250,000 for the northern portion (Hose and Blake, 1975). Thus the formations outcropping in individual drainage basins could be identified with fair confidence only in the southern part of the study area. The two areas of known mineralization, designated M1 and M2, were drawn with highly generalized boundaries because the detailed geology and/or higher density of geochemical sampling necessary for greater precision were not available. Areas M3a and M3b are defined on the basis of linear trends of distinct geochemical signature; the 1:62,000 scale geologic map, however, permitted more precise placement of the boundaries than would have been possible using only the geochemistry.

The geochemistry of the South Egan Range WSA may be compared with that of the Riordan's Well WSA, NV 040-166 (Hofstra and others, 1984). Since the same Paleozoic formations outcrop there, chemical analyses from Riordan's Well WSA were combined with those of the South Egan Range WSA to form a single data base. Although lithologically similar, the Riordan's Well WSA has only four samples with anomalous Pb in the heavy-mineral concentrates, while the Egan study area has scores of such samples. This marked contrast suggests possible differences in the recent (after Basin and Range extension) hydrothermal histories of the two areas. Regional variation in the primary Pb content of the carbonate sequences may also be a contributing factor. In general, geochemical anomalies in the South Egan Range WSA tend to be broadly distributed throughout the area rather than clustered as in the Riordan's Well WSA.

It is distinctly possible that the same ore-forming processes that produced the Ellison district deposits have operated on other parts of the entire Paleozoic section resulting in widely dispersed, but geochemically detectable traces of mineralization throughout the Egan study area. Nevertheless, mineralization of a similar economic importance to the Ellison district is not indicated by the data. A shallow intrusion in the Ellison district and the presence of some Tertiary lava flows and tuffs within the area imply that the existence of additional shallow intrusions beneath the study area is not unlikely. The extensive fracturing and faulting present within the area would provide access for circulating hydrothermal fluids to most of the Paleozoic section. Since two essential ingredients of an ore-forming system are a heat source (the Ellison district intrusion and/or additional undiscovered intrusions) and a fracture system, it is thus highly speculative, but plausible that widespread, low-level hydrothermal alteration has enriched large areas and produced a random pattern of scattered anomalies.

Local "pockets" of greater interest occur within the regional lithologically-controlled pattern of anomalies. These are generally clusters of sites of anomalous concentrations of two or more ore-metal elements reinforced by anomalies in a different medium (sediments, concentrates, rock, or water). Hydrothermal enrichment superimposed on the lithologic contribution would help explain the small regions of anomalous suites such as Mo-Cu-Zn-Pb-(±Sn±Cd±Mn). Because many of these elements are commonly associated with Cu-Mo porphyry and base-metal vein systems, the strongest of these anomalies may merit more detailed geochemical sampling and geologic mapping.

Discussion of anomalies

Zones M1 and M2 have been classified 4D because they are known to contain mineral resources (fig. 3). The associations of anomalous metals in these two regions may help to identify similar types of mineralization in other parts of the study area. It should be noted that the terms "mineralization" and "resource" do not imply the existence of an ore deposit. They refer only to accumulations of ore minerals of subeconomic unspecified or unknown grade (Brobst and Pratt, 1973; McKelvey, 1972).

M1 includes the southern end of the Ellison district where veins were mined for precious and base metals, and a porphyritic intrusion with potential for molybdenum mineralization lies below the near-surface vein system. This region is best defined by anomalous elements in the heavy-mineral concentrates, particularly lead. Of the 12 concentrate sites (duplicate sites not included) in this area, 9 have anomalous lead, 5 have anomalous Cu and Zn, and 3 have anomalous Sn, Mo, and Bi. In addition, high scores for factor 6 (see discussion of element associations) in which the most important constituents are Co, Cu, Pb, and Zn, appeared at 6 sites.

The bulk sediment samples showed 6 anomalous values at only 3 sites in M1. At 2 sites Ag, As, and factor 3 (important constituents: Cu, As, Ni) scores were anomalous; at one site B was anomalous. Rock samples generally showed elevated values for a large suite of elements: Ag, Bi, Cd, Cu, Mo, Sn, W, Pb, Zn, As, and Sb. Four spring samples collected several miles east of M1 showed anomalous Pb and Cu concentrations.

Elevated Cu and Mn in concentrates at three sites (E015, E132, and E025) south and southeast of M1 suggest a possible extension of the same ore-forming system. It is also possible, however, for background levels of Cu to be concentrated to anomalous levels through adsorption by Mn oxides. As mentioned earlier, the lack of detailed geology (i.e., the exact position of the Paleozoic-Tertiary boundary with respect to individual drainage basins) combined with the sample density of approximately one site per square mile, prevents the boundaries of areas M1 (and M2) from being drawn with greater precision.

Zone M2 is an area of known (subeconomic) disseminated Au and Ag mineralization. This occurrence is best delineated by enrichments of As in bulk sediments and Zn in the heavy-mineral concentrates. The presence of As is expected because of its strong association with gold. The anomalous Zn in the concentrates from the same sites was not expected, and together with the As, provides an element association potentially useful in interpreting similar anomalies. Spatially associated anomalous scores for factor 6 in concentrates (Co, Cu, Pb, Zn) and for factor 3 (Cu, As, Ni) in the sediments reinforce the single element anomalies. In addition, a rock sample (E117R) collected from the center of the area contained highly anomalous (580 ppm) As.

Regions M3a and M3b (plates 1, 2, and 3) are adjacent northeast-trending anomalous belts. In general, sites in each belt drain basins within different geologic formations because the belts are separated by a lithologically controlled asymmetric ridge. Streams within M3a generally flow northwest from the ridge or down stratigraphic section, while streams within M3b generally flow southeast from the ridge or up section. Sites within M3a drain primarily the Devonian Guilmette Formation with contributions from older units such as the Silurian Simpson and Sevy dolomites and the Ordovician Pogonip Group; sites in M3b drain primarily the Missippian Joana Limestone and younger units such as the Chainman Shale and the Pennsylvanian Ely Limestone. For purposes of discussion the boundaries of M3a and M3b have been terminated to the south where a drainage divide no longer separates the two regions, or permits distinction of two separate geochemical trends. The anomalous element suites of regions M3a and M3b continue to appear to the south, but without topographic separation of basin systems draining different formations, the "signatures" of M3a and M3b overlap and blend together.

The principal differences between regions M3a and M3b are as follows. Region M3a is characterized by anomalous Mo in concentrates, while region M3b with one exception, has none. M3b is best defined by anomalous Ni, B, and Ag (±Zn, Cu, Pb, and Mn) in sediments, very strongly reinforced by anomalous scores for factor 3 (Cu, As, Ni) and factor 4 (Cr, Ni, B, Ag); region M3a, except for one occurrence of factor 3, contains no anomalous sediment samples. The exceptions to these observations are in the zones where the distinctive signatures of the two belts overlap.

The Ni and B concentrations in the sediments do not significantly exceed the average abundances reported for these elements in shale (table 4). Although anomalous with respect to the rest of the study area, it appears that they merely represent relatively high background levels of these elements within the formations being drained rather than mineral potential. The anomalous Ag might be in part explained by enrichment through coprecipitation of background Ag concentrations with Mn and Fe oxides; Mn is anomalous in this region also.

The parallelism of belts M3a and M3b with the strike of the geologic formations, and the fact that their distinctive geochemistry can be explained by geologically and topographically separate systems of drainage basins, strongly suggests lithologic control of their geochemistry. However, there are individual samples suggestive of hydrothermal enrichment superimposed on these broad, lithologically controlled geochemical trends. Rock sample E145R located near the center of M3a, is a gray carbonate containing veins of quartz and pink dolomite. While this type of veining is common it indicates that hydrothermal circulation was indeed taking place whether or not it was responsible for mineralization. Rock sample E129R, located in the southwest corner of M3a, was gossan collected from a prospect pit and contained 10% Fe, 70 ppm Pb, and 10 ppm Sn. The presence of gossan is significant because it is a weathered residual of sulfide mineralization. The original mineralization might have been one of a number of deposit types known to occur in this geologic setting; these include porphyry Mo and Cu, base- and precious-metal vein, and skarn deposits. This sample reinforces the adjacent Mo-Zn-Cu-Cd-Ni-B-concentrate anomaly (E126, E127, and E128) placing this small region among those worthy of possible follow-up. Similarly, water samples E196W and E083W, although outside of M3a and M3b, are of special interest because of their anomalous concentrations of Mo, F^-, and SO_4^{-2} and Mo, As, and Mn, respectively. In the absence of nearby evaporite sequences it may be assumed that anomalous sulfate was derived from sulfide minerals. SO_4^{-2}, Mo, and F^- are commonly associated with Mo porphyry systems.

The geology and geochemistry of regions M3a, M3b, and M3c are very similar, and they are given the same resource favorability classification. M3a and M3b were discussed separately only because a ridge whose crest coincided with the Joana Limestone-Guilmette Formation contact separated basins draining two groups of formations, and made it possible to distinguish different geochemical signatures for M3a and M3b. The Paleozoic formations of regions M3a and M3b continue to outcrop throughout most of region M3c. However, without topographic separation of the basins draining different formations, the signatures that characterized regions M3a and M3b overlap, and no clear pattern can be discerned. It appears that lithology plays as important a role in determining anomalies in M3c as it does in M3a and M3b. Thus anomalies in sediments are believed primarily related to the trace element chemistry of the Joana Limestone, Chainman Shale, and Ely Limestone, and anomalies in concentrates to the Guilmette and older formations.

The possibility that hydrothermal enrichment in certain elements has been superimposed on the lithology controlled trends cannot be eliminated. As mentioned earlier, the abundance of Pb in concentrates throughout the Egan WSA compared with the Riordan's Well WSA might be suggestive of different hydrothermal histories for the two areas (Hofstra and others, 1984). Certainly the existence of undiscovered Tertiary intrusions at depth is plausible, and the fracture system necessary for fluid circulation is present. The only strong factor loading for Pb is in stream sediment factor 2 (Ca, Mg, Pb). This might be interpreted to mean either that the carbonates were rich in primary Pb, or that the carbonates were particularly susceptible to Pb enrichment by hydrothermal activity. Less abundant than Pb are the scattered occurrences of anomalous Ni, Mo, Sn, Cd, Cu, and Mn in concentrates. A number of springs (E086W, E260W, E259W, E257W, E407W, and E255E) were moderately anomalous in Pb, Cu, Zn, Mn, and As. Spring sample E262W is of somewhat greater interest because of its anomalous Mo and $SO4^{-2}$.

Region M4 in the east-central portion of the study area contains three significant rock samples (E152R, E160R, and E163R). E152R was collected from a dike containing volcanic breccia fragments of felsic to intermediate composition. It contained detectable Au (<0.05 ppm), As (>200 ppm), as well as anomalous Sb and Mn. E160R and E163R were, respectively, gray siltite with jarosite-limonite fracture coatings, and vuggy red-brown-green jasperoid. E160R was anomalous in Ag and Sb, and E163R contained anomalous As, Sb, Zn, Pb, Cu, Mn, and Mo. These three rock samples are aligned roughly north-south and E152R lies within half a mile of a 30 ppm Ag value in concentrates at site E158. At site E158 anomalous concentrations were found only for silver; however, rock sample E152R, which contained detectable Au, is within a mile to the west. Anomalous values for Cu, Mn, and factor 3 (Cu, As, Ni) in sediments and Pb, Sn, Mn, and factor 6 (Co, Cu, Pb, Zn) in concentrates in the vicinity of E158 provide some reinforcement of the Ag anomaly; however, the possible role of Mn oxides in concentrating elements such as Cu cannot be dismissed. Approximately one mile northwest of sample E158R anomalous Cu and Mn occur in sediments. At three sites two miles east of E158 anomalous Cu and factor 3 (Cu, As, Ni) occur in sediments; and anomalous Pb, Mn, and factor 6 (Co, Cu, Pb, Zn) occur in concentrates.

In the immediate vicinity of rock sample E163R, a water sample, E406W, contains anomalous SO_4^{-2}, Pb, Zn, Cu, and Mn. To the north, an anomalous concentrate sample E162 is enriched in Cu, Ni, and B. Northeast of E163R there are anomalous values of Cu, As, and Ni and factor 3 (Cu, As, Ni) in sediments.

The three samples anomalous in Au, Ag, As, Sb, Pb, Zn, Cu, Mo, and Mn, combined with a high silver value in sediment, and a spring water sample containing anomalous SO_4^{-2} and base metals, are strongly suggestive of several types of mineralization all known to occur in similar geologic settings. Based on the suites of anomalous elements in region M4, porphyry copper and molybdenum are among the deposit types suggested; the Ruth porphyry copper deposit in the northern Egan Range (about five miles west of Ely) and the Ellison district porphyry molybdenum target are nearby examples of these deposit types. Precious metal anomalies may be indicative of base/precious metal skarn deposits similar to the one in the Ward district, approximately ten miles north of the study area in the Egan Range. Finally, base- and precious-metal vein deposits are commonly associated with anomalous Au, Ag, As, Sb, Pb, Zn, and Cu; the Ellison mining district provides a nearby example of this type of mineralization in the same geologic formations.

Region M5 consists of Quaternary alluvium at the margins of the study area. Samples collected from these areas probably do not reflect underlying geologic conditions; classification and the rare instances of anomalous element concentrations might be explained by coprecipitation phenomena.

METALLIC MINERAL RESOURCE FAVORABILITY

The regions designated M1 through M5 refer to the map in figure 3.

M1-4D is known to contain base- and precious-metal vein mineralization, which although currently non-economic, is a resource of Cu, Pb, Zn, Ag, and possibly Au. In addition there is reportedly potential for a molybdenum porphyry system at depth.

M2-4D is an area known to contain currently subeconomic resources in disseminated deposits of Au and Ag.

M3a-2C and M3b-2C are belts defined by anomalous concentrations of suites of elements believed to reflect the relatively high background of these elements in the surrounding outcrop. The low favorability assessment does not reflect the possibility of mineralization where hydrothermal circulation and alteration may have enriched certain elements.

M3c-2C contains primarily the same units found in regions M3a and M3b; the 2C favorability ranking is based on the same reasoning given for areas M3a and M3b.

M4-3C: Three rock samples containing anomalous Au, Ag, As, Sb, and base metals, reinforced by an anomalous water sample, and a value of 30 ppm Ag in concentrates differentiate this region from the surrounding areas ranked 2C. The elements anomalous in this area coincide most closely with the suite associated with base-metal vein deposits (see table 2); however skarn and porphyry mineralization are also possible, given the geologic setting and the geochemistry.

M5-1B is an area of Quaternary alluvium where the few samples probably do not reflect the underlying geologic conditions. With only minor exceptions, samples from this area contained no anomalous element concentrations.

RECOMMENDATIONS

Rock sample E129R, a gossan containing 10% Fe, 70 ppm Pb, and 10 ppm Sn, and water samples E196W and E083W anomalous in Mo, F^-, and SO_4^{-2} and Mo, As, and Mn respectively, were mentioned in discussion of region M3b. These samples are suggestive of mineralization, however, in the authors' judgement, are not significant enough to warrant separate zones of higher favorability. Although these samples fall in zones ranked 2C, a thorough follow-up study would include mapping of geology and alteration, and a more detailed geochemical survey of the sections containing these samples could upgrade, or at least improve confidence, in the ranking.

Further investigation of the region ranked 3C, such as detailed geologic mapping, and more detailed geochemical study, is recommended on the basis of anomalous samples in three different media (water, rock, and sediment) which provide direct if not abundant evidence of mineralization.

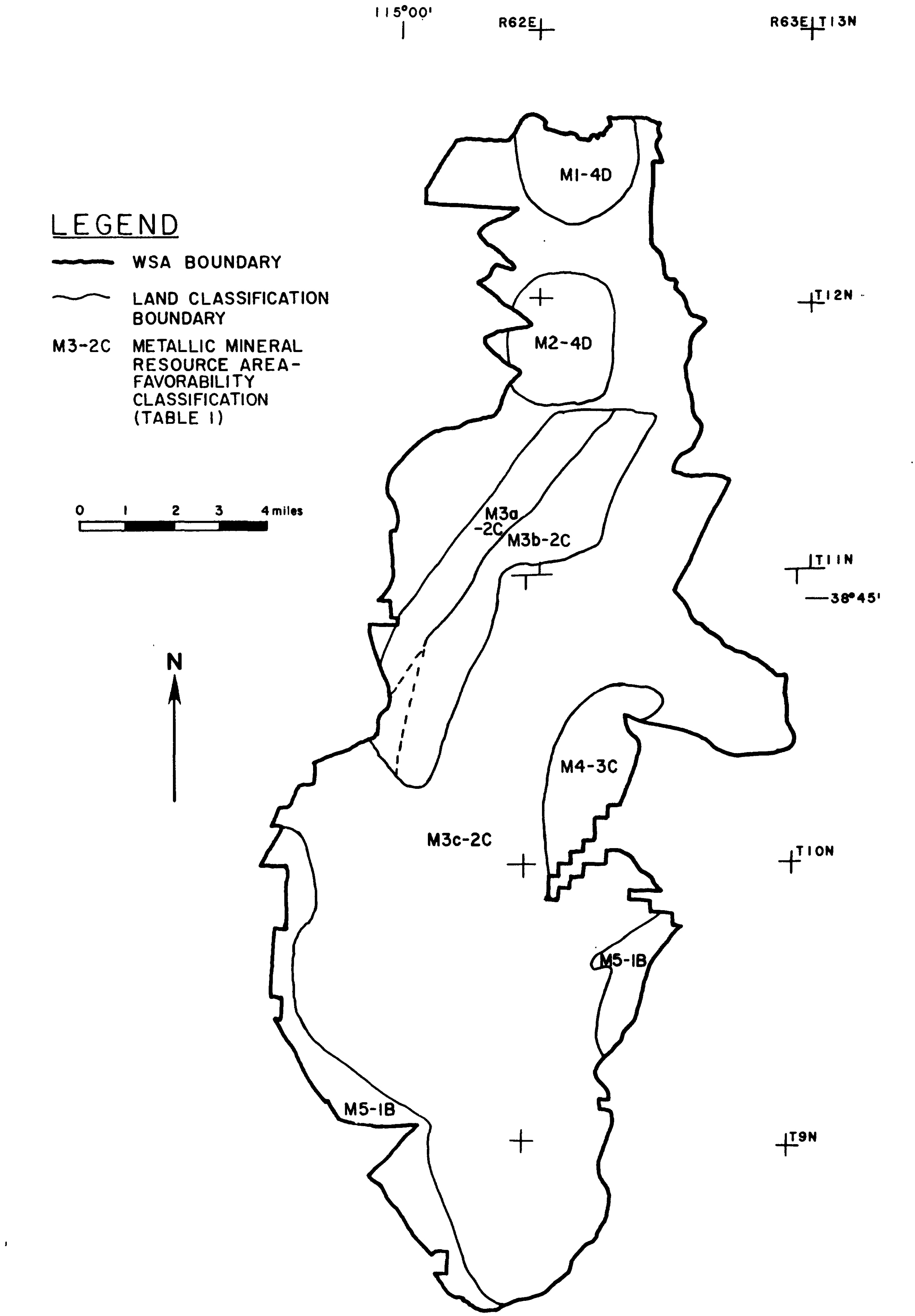

FIGURE 3-METALLIC MINERAL RESOURCE FAVORABILITY MAP, SOUTH EGAN RANGE WSA NV 040-168, WHITE PINE, LINCOLN, NYE COUNTIES, NEVADA

REFERENCES CITED

Aruscavage, P., 1977, Determination of arsenic, antimony, and selenium in coal by atomic absorption spectrometry with a graphite tube atomizer: U.S. Geological Survey Journal of Research, v. 5, no. 4, p. 405-408.

Brobst, Donald A., and Pratt, W. P., 1973, in Brobst, D. A. and W. P. Pratt, eds., United States Mineral Resources: U.S. Geological Survey Professional Paper 820, p. 1-8.

Davis, John C., 1973, Statistics and data analysis in geology: New YorK, John Wiley and Sons, Inc., 547 p.

Fisher, Don, and Juilliand, Jean, 1983, BLM studies millions of acres in western U.S. for possible wilderness designation: Mining Engineering, v. 35, no. 10, p. 1409-1410.

Fishman, M. J., and Pyen, G., 1979, Determination of selected anions in water by ion chromatography: U.S. Geological Survey Water Resources Investigations 79-101, 30 p.

Gans, P. B., and Miller, E. L., 1983, Style of mid-Tertiary extension in east-central Nevada: Utah Geological and Mineralogical Survey, Special Studies 59, Guidebook--Part I, p. 107-160.

Great Basin GEM Joint Venture, 1982, Egan/Mt. Grafton G-E-M Resources Area (GRA No. NV-14) Technical Report (NV 040-168, 040-169, 040-172): Bureau of Land Management (Denver), Final Draft, December 1982.

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

Hofstra, A. H., Rowan, E. L., and Day, G. W., 1984, Reconnaissance geochemical assessment of metallic mineral resource potential, Riordan's Well Wilderness Study Area (NV 040-166), Nye County, Nevada: U.S. Geological Survey Open-File Report 84- (in press).

Hose, R. K., Blake, M. C., and Roscoe, S., 1976, Geology and mineral resources of White Pine County, Nevada: Nevada Bureau of Mines and Geology Bulletin 85.

Kellogg, H. E., 1963, Paleozoic stratigraphy of the Southern Egan Range, Nevada: Geological Society of America Bulletin, v. 74, p. 685-708.

_______1964, Cenozoic stratigraphy and structure of the Southern Egan Range, Nevada: Geological Society of America Bulletin, v. 75, p. 949-968.

McKelvey, V. E., 1973, Mineral resource estimates and public policy, in Brobst, D. A. and Pratt, W. P., eds., United States Mineral Resources: U.S. Geological Survey Professional Paper 820, Chapter 1, p. 9-19.

Miesch, A. T., 1976, Geochemical survey of Missouri--methods of sampling, laboratory analysis, and statistical reduction of data: U.S. Geological Survey Professional Paper 954-A.

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

Orion Research Inc., 1973, Orion Research Analytical Methods Guide, 7th edition: Cambridge, Massachusetts, 20 p.

Perkin-Elmer Corporation, 1976, Analytical methods for atomic absorption spectrophotometry: Norwalk, Connecticut,   p.

Perkin-Elmer Corporation, 1977, Analytical methods for atomic absorption spectrophotometry, using the HGA graphite furnace: Norwalk, Connecticut, 586 p.

Rose, A. W., Hawkes, H. E., and Webb, J. S., 1979, Geochemistry in mineral exploration: New York, Academic Press,   p.

Skougstad, M. W., Fishman, M. J., Friedman, L. C., Erdman, D. E., and Duncan, S. S., 1979, Methods for determination of inorganic substances in water and fluvial sediments: Techniques of Water-Resource Investigations of the United States Geological Survey, Chapter A-I.

Thompson, C. E., Nakagawa, H. M., and Van Sickle, G. H., 1968, Rapid analysis for gold in geologic materials, in Geological Survey research 1968: U.S. Geological Survey Professional Paper 600-B, p. B130-B132.

Tschanz, C. M., and Pampeyan, E. H., 1970, Geology and mineral deposits of Lincoln County, Nevada: Nevada Bureau of Mines and Geology Bulletin 73.

VanTrump, G., and Miesch, A. T., 1977, The U.S. Geological Survey's RASS-STATPAC system for management and statistical reduction of geochemical data: Computers and Geoscience, v. 3, p. 475-488.

Viets, J. G., 1978, Determination of silver, bismuth, cadmium, copper, lead, and zinc in geological materials by atomic-absorption spectrometry with tricaprylylmethylammonium chloride: Analytical Chemistry, v. 52, p. 1097-1101.

APPENDIX.--Results of Chemical Analyses

Table A-1-- Spectrographic and Atomic Absorption Analyses of Stream-Sediment Samples from South Egan Range Study Area, White Pine, Lincoln, and Nye Counties, Nevada

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

Sample	Latitude	Longitude	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	As-ppm s	Au-ppm s	B-ppm s	Ba-ppm s	Be-ppm s
E001BS	38 35 4	114 56 13	3.0	.5	2.0	.700	700	N	N	N	20	500	2
E002US	38 35 1	114 57 13	2.0	1.0	10.0	.500	500	N	N	N	30	200	2
E003DS	38 33 9	114 56 39	2.0	.7	2.0	.700	700	N	N	N	30	500	2
E004BS	38 35 44	114 56 20	5.0	.5	2.0	1.000	700	N	N	N	20	500	2
E007DS	38 50 57	114 53 42	5.0	1.0	2.0	.300	500	N	N	N	10	300	1
E008BS	38 52 39	114 56 30	2.0	.7	2.0	.200	300	N	N	N	30	200	<1
E010DS	38 53 20	114 56 56	1.0	.2	1.0	.050	70	N	N	N	10	20	N
E011BS	38 53 47	114 56 56	1.0	1.0	10.0	.200	500	N	N	N	20	200	1
E012BS	38 54 5	114 57 4	.5	.1	1.0	.100	100	N	N	N	20	20	<1
E014DS	38 51 39	114 56 35	2.0	.2	1.0	.200	200	N	N	N	10	200	1
E015DS	38 52 10	114 57 27	2.0	2.0	3.0	.200	200	N	N	N	50	200	1
E017DS	38 46 45	114 59 5	.1	1.0	1.0	.002	50	N	N	N	N	<20	N
E020DS	38 46 8	114 59 15	2.0	2.0	2.0	.200	700	N	N	N	70	300	2
E021DS	38 42 42	114 59 52	1.0	.2	1.0	.100	50	N	N	N	20	20	N
E022BS	38 44 1	114 58 47	1.0	.7	2.0	.200	70	.5	N	N	70	100	1
E023BS	38 51 33	114 55 16	.5	2.0	2.0	.050	70	N	N	N	<10	<20	<1
E024BS	38 49 41	114 54 18	.2	2.0	2.0	.020	50	N	N	N	N	<20	N
E025DS	38 50 3	114 53 27	2.0	.7	1.0	.500	700	N	N	N	30	300	1
E026DS	38 48 50	114 56 8	5.0	.5	2.0	.700	700	.5	N	N	70	500	1
E027BS	38 48 55	114 54 6	1.0	1.0	1.0	.100	150	N	N	N	20	<20	<1
E028BS	38 46 17	114 54 58	2.0	2.0	5.0	.500	500	N	N	N	70	200	1
E029DS	38 46 58	114 55 43	2.0	.5	2.0	.200	500	N	N	N	50	300	1
E030BS	38 46 55	114 54 20	2.0	.7	3.0	.700	700	N	N	N	70	700	1
E031DS	38 46 40	114 54 1	5.0	1.0	2.0	1.000	1,000	N	N	N	70	1,000	1
E032US	38 47 35	114 53 13	2.0	1.0	2.0	.500	700	N	N	N	70	500	2
E033US	38 47 11	114 53 13	5.0	.7	2.0	1.000	700	N	N	N	50	700	2
E034US	38 48 3	114 53 46	2.0	.5	1.0	.200	200	N	N	N	30	70	<1
E035US	38 42 28	115 0 53	3.0	1.0	10.0	.500	500	N	N	N	70	200	2
E036BS	38 41 40	115 0 29	5.0	.5	5.0	.300	500	N	N	N	70	200	1
E037US	38 41 2	115 1 8	2.0	.7	1.0	.100	70	N	N	N	20	20	<1
E038DS	38 41 53	115 1 41	2.0	2.0	5.0	.100	300	N	N	N	20	150	1
E039US	38 40 59	115 2 3	2.0	2.0	10.0	.200	500	N	N	N	50	300	1
E040US	38 40 22	115 1 56	2.0	1.0	2.0	.500	700	N	N	N	70	200	1
E041BS	38 40 5	115 0 33	2.0	1.0	3.0	.500	500	N	N	N	50	100	1
E042BS	38 38 33	115 0 41	2.0	2.0	3.0	.200	500	N	N	N	30	200	2
E043US	38 38 32	115 0 17	1.0	2.0	3.0	.100	150	N	N	N	10	20	<1
E044US	38 38 52	115 1 30	2.0	3.0	10.0	.200	700	N	N	N	50	300	1
E045US	38 38 47	115 1 39	1.0	5.0	10.0	.100	200	N	N	N	10	200	1
E046US	38 37 40	115 2 10	.7	2.0	2.0	.050	50	N	N	N	<10	<20	N
E047US	38 37 10	115 0 50	2.0	1.0	3.0	.300	700	N	N	N	30	500	1
E048US	38 36 54	115 0 10	1.0	2.0	5.0	.100	200	N	N	N	30	200	<1
E049DS	38 35 46	114 59 28	1.0	2.0	2.0	.200	100	N	N	N	10	100	<1
E050US	38 33 56	114 59 35	1.0	2.0	3.0	.200	200	N	N	N	15	100	<1
E051US	38 43 39	114 51 20	7.0	1.0	5.0	.700	700	N	N	N	50	1,000	1
E052US	38 43 35	114 51 13	3.0	1.0	3.0	.500	1,000	N	N	N	20	500	1

Table A-1 -- Spectrographic and Atomic Absorption Analyses of Stream-Sediment Samples from South Egan Range Study Area, White Pine, Lincoln, and Nye Counties, Nevada

Sample	Bi-ppm	Cd-ppm	Co-ppm	Cr-ppm	Cu-ppm	La-ppm	Mo-ppm	Nb-ppm	Ni-ppm	Pb-ppm	Sb-ppm	Sc-ppm	Sn-ppm
	s	s	s	s	s	s	s	s	s	s	s	s	s
E001BS	N	N	5	20	50	150	N	N	30	50	N	15	N
E002DS	N	N	5	30	100	20	N	N	15	50	N	10	N
E003BS	N	N	5	30	100	100	N	N	10	70	N	10	N
E004BS	N	N	5	20	100	200	N	<20	10	50	N	20	N
E007BS	N	N	10	20	70	20	N	N	10	20	N	15	N
E008DS	N	N	5	30	70	N	N	N	10	10	N	5	N
E010DS	N	N	5	10	5	N	N	N	5	N	N	N	N
E011BS	N	N	5	20	20	N	N	N	10	10	N	5	N
E012BS	N	N	N	<10	7	70	N	N	<5	N	N	N	N
E014DS	N	N	5	10	5	70	N	N	5	10	N	5	N
E015BS	N	N	10	30	15	20	N	N	20	20	N	5	N
E017DS	N	N	N	<10	5	N	N	N	N	N	N	N	N
E020DS	N	N	15	50	100	20	N	N	20	70	N	7	N
E021BS	N	N	N	20	5	N	N	N	10	N	N	N	N
E022BS	N	N	5	100	70	20	N	N	50	100	N	7	N
E023BS	N	N	N	10	10	N	N	N	5	10	N	5	N
E024BS	N	N	N	<10	20	N	N	N	N	10	N	N	N
E025BS	N	N	5	20	150	20	N	N	15	50	N	7	N
E026BS	N	N	15	100	100	30	N	N	50	70	N	7	N
E027DS	N	N	10	30	10	N	N	N	20	N	N	N	N
E028BS	N	N	15	70	70	N	N	N	50	10	N	7	N
E029BS	<10	N	10	50	150	20	N	N	30	70	N	5	N
E030BS	N	N	10	70	70	70	N	N	30	30	N	10	N
E031BS	N	N	15	70	100	100	N	N	30	50	N	20	N
E032BS	N	N	10	100	50	70	N	N	30	70	N	10	N
E033BS	N	N	15	50	70	200	N	20	5	30	N	20	N
E034BS	N	N	10	30	20	20	N	N	30	<10	N	5	N
E035DS	N	N	10	50	70	30	N	N	30	30	N	10	N
E036DS	N	N	15	100	50	70	N	N	150	50	N	10	N
E037DS	N	N	5	30	15	N	N	N	30	N	N	5	N
E038DS	N	N	N	30	100	N	N	N	20	70	N	5	N
E039DS	N	N	5	50	30	70	N	N	20	70	N	7	N
E040DS	N	N	10	50	70	20	7	N	30	70	N	7	N
E041DS	N	N	10	50	100	20	N	N	30	30	N	7	N
E042DS	N	N	5	50	70	20	N	N	10	30	N	5	N
E043BS	N	N	N	30	30	N	N	N	5	20	N	N	N
E044BS	N	N	10	50	100	N	N	N	30	50	N	5	N
E045DS	<10	N	N	50	100	20	N	N	10	70	N	5	N
E046DS	N	N	N	10	5	20	N	N	5	N	N	N	N
E047DS	N	N	10	30	50	N	N	N	15	20	N	5	N
E048DS	N	N	5	50	50	50	N	N	30	20	N	5	N
E049DS	N	N	5	10	50	20	N	N	10	N	N	5	N
E050DS	N	N	5	20	30	70	N	N	10	10	N	5	N
E051BS	N	N	20	50	50	50	N	N	30	30	N	15	N
E052DS	N	N	10	20	100	150	N	N	20	30	N	10	N

Table A-1 -- Spectrographic and Atomic Absorption Analyses of Stream-Sediment Samples from South Egan Range Study Area, White Pine, Lincoln, and Nye Counties, Nevada

Sample	Sr-ppm s	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s	Au-ppm aa	As-ppm aa	Ag-ppm aa	Sb-ppm aa
E001BS	300	100	N	50	N	500	N	N	10	.05	N
E002BS	300	100	N	20	N	200	N	N	10	.15	N
E003BS	500	100	N	30	N	200	N	N	5	.10	N
E004BS	200	200	N	50	N	1,000	N	N	<5	N	N
E007BS	300	100	N	20	N	200	N	N	<5	N	N
E008BS	100	50	N	10	N	100	N	N	5	N	N
E010BS	N	10	N	N	N	10	N	N	15	.05	N
E011BS	150	20	N	15	N	100	N	N	15	N	N
E012BS	N	10	N	N	N	50	N	N	15	.05	N
E014BS	100	10	N	10	N	150	N	N	N	N	N
E015BS	100	50	N	15	N	150	N	N	15	.05	N
E017BS	N	N	N	N	N	N	N	N	<5	N	N
E020BS	200	70	N	15	N	200	N	N	N	N	N
E021BS	100	10	N	N	N	100	N	N	N	.05	N
E022BS	100	100	N	30	N	70	N	N	20	1.40	N
E023BS	N	10	N	N	N	10	N	N	N	N	N
E024BS	N	10	N	N	N	10	N	N	5	N	N
E025BS	200	70	N	20	N	200	N	N	5	N	N
E026BS	300	100	N	50	200	200	N	N	10	.50	N
E027BS	N	20	N	<10	N	50	N	N	10	.05	N
E028BS	500	100	N	20	<200	100	N	N	15	.15	N
E029BS	200	100	N	30	<200	200	N	N	5	.25	N
E030BS	500	100	N	30	N	500	N	N	10	N	N
E031BS	500	150	N	50	N	500	N	N	10	N	N
E032BS	200	70	N	30	N	300	N	N	10	N	N
E033BS	500	100	N	50	N	1,000	N	N	5	N	N
E034BS	100	20	N	10	N	100	N	N	5	.15	2
E035BS	300	100	N	20	N	100	N	N	5	.20	1
E036BS	500	150	N	50	N	700	N	N	15	N	1
E037BS	100	30	N	10	N	100	N	N	10	.30	5
E038BS	100	30	N	10	N	100	N	N	<5	N	--
E039BS	200	50	N	10	N	200	N	N	10	N	N
E040BS	100	100	N	30	N	200	N	N	10	.15	1
E041BS	200	100	N	20	<200	300	N	N	10	N	N
E042BS	200	70	N	15	N	200	N	N	10	.05	--
E043BS	100	10	N	<10	N	200	N	N	5	N	N
E044BS	200	50	N	20	N	150	N	N	N	N	1
E045BS	200	10	N	10	N	70	N	N	5	N	--
E046BS	N	10	N	N	N	20	N	N	5	N	N
E047BS	200	50	N	15	N	100	N	N	5	N	N
E048BS	100	50	N	15	N	100	N	N	10	N	N
E049BS	100	20	N	<10	N	100	N	N	5	N	N
E050BS	100	15	N	10	N	100	N	N	5	N	N
E051BS	1,000	200	N	30	N	500	N	N	10	N	N
E052BS	300	100	N	20	N	150	N	N	10	N	--

Table A-1 -- Spectrographic and Atomic Absorption Analyses of Stream-Sediment Samples from South Egan Range Study Area, White Pine, Lincoln, and Nye Counties, Nevada--continued

Sample	Latitude	Longitude	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	As-ppm s	Au-ppm s	B-ppm s	Ba-ppm s	Be-ppm s
E0538S	38 43 40	114 51 12	5.0	1.0	2.0	1.000	500	N	N	N	20	700	2
E0548S	38 38 59	114 52 59	3.0	1.0	2.0	.500	500	N	N	N	30	500	1
E0550S	38 37 8	114 59 39	1.0	3.0	10.0	.200	300	N	N	N	30	150	1
E0568S	38 37 59	115 2 22	1.0	5.0	7.0	.100	300	N	N	N	10	200	1
E10128S	38 54 5	114 57 1	2.0	1.0	5.0	.200	500	N	N	N	70	300	1
E1038S	38 33 1	114 55 31	10.0	1.0	2.0	1.000	1,500	N	N	N	20	300	5
E1048S	38 36 35	114 57 40	2.0	.5	5.0	.500	500	N	N	N	50	200	1
E1128S	38 54 24	114 55 34	2.0	.5	2.0	.100	700	N	N	N	50	50	1
E1138S	38 54 22	114 55 21	1.0	1.0	1.0	.100	200	N	N	N	20	100	1
E1168S	38 54 16	114 57 0	2.0	1.0	2.0	.200	500	N	N	N	30	300	1
E1188S	38 50 12	114 57 8	2.0	1.0	3.0	.200	500	N	N	N	50	300	1
E1198S	38 51 55	114 58 34	1.0	1.0	7.0	.200	200	N	N	N	70	500	1
E1200S	38 48 22	114 57 34	2.0	2.0	2.0	.200	500	N	N	N	30	200	1
E1218S	38 48 9	114 58 9	2.0	2.0	5.0	.500	700	.5	N	N	50	300	2
E1228S	38 46 34	114 58 18	1.0	2.0	10.0	.100	100	N	N	N	10	20	N
E1238S	38 46 33	114 58 15	1.0	3.0	20.0	.050	200	N	N	N	10	100	1
E1248S	38 46 35	114 58 16	.5	2.0	5.0	.050	70	N	N	N	10	20	N
E1250S	38 44 43	114 59 41	1.0	2.0	10.0	.100	200	N	N	N	20	150	1
E1268S	38 43 22	114 59 55	3.0	1.0	5.0	.700	700	N	N	N	200	200	3
E1278S	38 43 27	114 59 55	2.0	.5	5.0	.200	500	N	N	N	100	200	2
E1280S	38 43 27	114 59 53	5.0	1.0	10.0	.500	500	N	N	N	100	300	1
E1308S	38 52 1	114 54 58	1.0	3.0	5.0	.100	200	N	N	N	20	100	1
E1310S	38 52 0	114 55 3	.7	2.0	2.0	.070	100	N	N	N	10	20	<1
E1328S	38 51 59	114 55 2	.7	2.0	2.0	.070	100	N	N	N	10	20	<1
E1338S	38 52 46	114 54 54	1.0	2.0	2.0	.070	70	N	N	N	<10	20	<1
E1340S	38 45 37	114 56 19	2.0	.2	5.0	.200	500	N	N	N	50	200	1
E1358S	38 45 19	114 56 12	1.0	1.0	7.0	.200	200	N	N	N	70	200	<1
E1368S	38 45 20	114 56 15	1.0	1.0	5.0	.200	200	N	N	N	100	150	1
E1370S	38 45 22	114 56 14	.5	.5	5.0	.100	200	N	N	N	30	200	1
E1388S	38 46 6	114 56 49	5.0	1.0	2.0	.700	1,000	N	N	N	200	150	2
E1380S	38 46 6	114 56 49	5.0	.7	2.0	.500	700	N	N	N	50	200	1
E1390S	38 45 12	114 56 49	2.0	.5	3.0	.500	700	N	N	N	70	150	1
E1408S	38 45 1	114 58 1	2.0	.5	2.0	.200	200	N	N	N	50	100	1
E1418S	38 45 23	114 54 12	2.0	.5	1.0	.700	300	N	N	N	20	200	1
E1428S	38 48 4	114 54 47	2.0	2.0	5.0	.200	700	N	N	N	70	200	1
E1438S	38 48 5	114 54 51	2.0	2.0	3.0	.200	700	N	N	N	70	200	1
E1448S	38 48 1	114 54 53	5.0	.7	2.0	.500	1,000	.5	N	N	100	500	3
E1458S	38 48 7	114 56 37	1.0	3.0	5.0	.100	300	N	N	N	15	200	1
E1478S	38 47 22	114 58 4	2.0	3.0	10.0	.200	500	N	N	N	50	500	1
E1480S	38 47 9	114 58 32	1.0	3.0	5.0	.100	200	N	N	N	10	100	<1
E1508S	38 43 31	114 55 37	7.0	1.0	2.0	1.000	1,000	N	N	N	70	700	2
E1518S	38 43 24	114 55 34	5.0	1.0	2.0	.700	700	N	N	N	70	500	2
E1530S	38 44 6	114 54 15	10.0	1.0	2.0	>1.000	1,000	N	N	N	20	300	1
E1538S	38 44 6	114 54 15	20.0	1.0	2.0	>1.000	2,000	N	N	N	20	500	N
E1548S	38 43 58	114 54 11	20.0	1.0	3.0	1.000	1,500	N	N	N	10	500	1

Table A-1 -- Spectrographic and Atomic Absorption Analyses of Stream-Sediment Samples from South Egan Range Study Area, White Pine, Lincoln, and Nye Counties, Nevada--continued

Sample	Bi-ppm s	Cd-ppm s	Co-ppm s	Cr-ppm s	Cu-ppm s	La-ppm s	Mo-ppm s	Nb-ppm s	Ni-ppm s	Pb-ppm s	Sb-ppm s	Sc-ppm s	Sn-ppm s
E053DS	N	N	10	30	70	100	N	N	30	20	N	10	N
E054DS	20	N	10	30	200	100	N	N	10	70	N	10	N
E055DS	N	N	5	30	100	N	N	N	15	50	N	5	N
E056DS	N	N	N	20	50	N	N	N	10	50	N	5	N
E1012BS	N	N	10	50	30	50	N	N	30	70	N	7	N
E103BS	N	N	30	70	70	50	N	N	30	30	N	20	N
E104DS	N	N	5	50	150	N	N	N	30	50	N	10	N
E112DS	N	N	5	20	100	20	N	N	10	30	N	5	N
E113DS	N	N	5	20	70	20	N	N	10	30	N	5	N
E116DS	N	N	5	30	20	20	N	N	20	30	N	5	N
E118US	N	N	10	30	20	70	N	N	15	30	N	7	N
E119DS	N	N	N	70	20	20	N	N	20	30	N	5	N
E120BS	N	N	5	20	20	20	N	N	10	50	N	5	N
E121DS	N	N	5	30	100	20	N	N	20	70	N	7	N
E122BS	N	N	N	20	50	N	N	N	10	50	N	N	N
E123BS	N	N	N	30	20	N	N	N	10	50	N	5	N
E124DS	N	N	N	10	10	N	N	N	5	10	N	5	N
E125DS	N	N	N	50	70	N	N	N	10	50	N	5	N
E126US	N	N	20	100	70	70	N	N	70	30	N	10	N
E127DS	N	N	15	70	50	70	N	N	50	30	N	10	N
E128US	N	N	15	200	30	70	N	N	50	30	N	15	N
E130DS	N	N	N	30	10	50	N	N	10	50	N	5	N
E131DS	N	N	N	20	15	N	N	N	5	10	N	5	N
E132BS	N	N	N	20	10	N	N	N	5	10	N	5	N
E133DS	N	N	N	20	20	N	N	N	5	10	N	5	N
E134DS	<10	N	10	30	100	20	N	N	30	70	N	7	N
E135DS	N	N	N	70	50	50	N	N	N	10	N	5	N
E136DS	N	N	N	30	100	50	N	N	20	20	N	5	N
E137US	N	N	N	15	50	70	N	N	5	N	N	5	N
E138US	N	N	20	100	100	70	N	N	50	20	N	15	N
E138BS	N	N	15	70	100	50	N	N	50	70	N	10	N
E139DS	N	N	10	50	50	20	N	N	50	10	N	7	N
E140BS	N	N	5	50	30	20	N	N	50	100	N	7	N
E141BS	N	N	10	20	50	100	N	<20	10	100	N	10	N
E142DS	N	N	10	70	50	50	N	N	50	50	N	10	N
E143DS	N	N	10	70	70	70	N	N	30	50	N	10	N
E144DS	N	N	20	100	100	100	N	N	70	50	N	20	N
E145US	N	N	N	50	30	N	N	N	15	50	N	5	N
E147US	N	N	N	50	100	50	N	N	10	70	N	5	N
E148BS	N	N	N	30	100	N	N	N	10	70	N	N	N
E150US	N	N	20	30	70	300	N	20	15	70	N	20	N
E151BS	N	N	10	30	50	200	N	<20	20	70	N	10	N
E153US	N	N	30	70	150	150	N	<20	10	70	N	10	N
E153BS	N	N	50	100	150	100	N	N	10	70	N	10	N
E154BS	N	N	50	100	150	100	N	N	10	50	N	10	N

Table A-1 -- Spectrographic and Atomic Absorption Analyses of Stream-Sediment Samples from South Egan Range Study Area, White Pine, Lincoln, and Nye Counties, Nevada--continued

Sample	Sr-ppm s	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s	Au-ppm aa	As-ppm aa	Ag-ppm aa	Sb-ppm aa
E053BS	500	100	N	30	N	200	N	N	5	N	--
E054BS	300	100	N	20	N	700	N	N	10	N	--
E055BS	100	50	N	10	N	100	N	N	5	N	N
E056DS	100	30	N	10	<200	20	N	N	5	N	N
E1012DS	200	70	N	15	N	200	N	N	30	N	1
E103BS	200	1,000	N	50	200	1,000	N	N	N	N	N
E104BS	100	100	N	20	<200	150	N	N	5	.15	N
E112DS	100	30	N	15	200	100	N	N	70	.60	N
E113DS	100	30	N	15	200	100	N	N	10	.60	N
E116BS	100	50	N	10	N	200	N	N	15	N	1
E118BS	200	70	N	20	N	200	N	N	35	N	N
E119BS	200	70	N	15	N	300	N	N	5	N	N
E120BS	100	20	N	10	N	100	N	N	5	N	N
E121DS	200	50	N	20	N	200	N	N	10	N	N
E122BS	N	20	N	10	N	50	N	N	15	N	N
E123BS	100	20	N	10	N	70	N	N	25	N	N
E124DS	N	10	N	N	N	50	N	N	20	N	N
E125BS	100	50	N	10	N	100	N	N	20	N	N
E126BS	200	200	N	30	N	200	N	N	<5	.15	N
E127BS	500	100	N	20	N	100	N	N	5	.10	N
E128DS	500	150	N	50	N	300	N	N	15	.10	N
E130DS	100	30	N	10	N	100	N	N	10	N	N
E131DS	N	10	N	10	N	70	N	N	5	N	N
E132DS	N	20	N	10	N	50	N	N	5	N	N
E133BS	N	10	N	N	N	10	N	N	5	.05	N
E134BS	200	100	N	30	<200	200	N	N	5	.20	N
E135DS	500	50	N	15	N	700	N	N	10	N	N
E136DS	500	50	N	15	N	200	N	N	<5	N	N
E137BS	500	50	N	20	N	500	N	N	5	N	N
E138BS	200	150	N	30	N	200	N	N	15	.10	N
E138DS	200	150	N	30	200	200	N	N	5	.20	N
E139DS	100	150	N	30	<200	200	N	N	15	.20	N
E140DS	100	100	N	30	N	100	N	N	50	.65	N
E141GS	200	100	N	20	N	500	N	N	<5	N	N
F142BS	100	100	N	20	N	700	N	N	10	N	N
E143BS	100	100	N	20	N	300	N	N	10	N	N
E144BS	200	100	N	50	N	300	N	N	10	.30	1
E145BS	100	50	N	10	N	50	N	N	10	N	N
E147BS	200	50	N	10	N	200	N	N	15	N	N
E148BS	100	20	N	<10	N	100	N	N	15	N	N
E150BS	500	200	N	50	N	1,000	N	N	N	N	1
E151BS	500	100	N	50	N	500	N	N	N	N	N
E153BS	200	1,000	N	50	200	>1,000	N	N	5	N	1
E153BS	300	1,000	N	30	300	>1,000	N	N	5	N	N
E154BS	300	1,000	N	30	300	700	N	N	5	N	1

Table A-1 -- Spectrographic and Atomic Absorption Analyses of Stream-Sediment Samples from South Egan Range Study Area, White Pine, Lincoln, and Nye Counties, Nevada--continued

Sample	Latitude	Longitude	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	As-ppm s	Au-ppm s	B-ppm s	Ba-ppm s	Be-ppm s
E155BS	38 44 8	114 53 7	5.0	1.0	2.0	.500	500	N	N	N	15	200	1
E156BS	38 43 2	114 54 58	1.0	3.0	10.0	.100	200	N	N	N	10	100	1
E157BS	38 42 42	114 54 13	3.0	1.0	2.0	.500	700	N	N	N	70	500	3
E158BS	38 43 34	114 53 25	3.0	1.0	2.0	.200	700	N	N	N	70	500	2
E159BS	38 41 55	114 56 10	2.0	.2	1.0	.200	500	N	N	N	30	100	1
E161DS	38 42 6	114 55 6	2.0	.5	.5	.200	500	N	N	N	20	200	1
E162US	38 41 8	114 55 11	2.0	.5	2.0	.500	500	N	N	N	50	500	2
E164HS	38 40 42	114 56 12	2.0	1.0	2.0	.200	500	N	N	N	30	300	1
E165US	38 40 7	114 54 18	2.0	2.0	7.0	.200	300	N	N	N	30	200	1
E167DS	38 39 8	114 55 39	3.0	1.0	2.0	.500	700	N	N	N	50	500	2
E168DS	38 39 30	114 55 1	2.0	.7	2.0	.300	700	N	N	N	50	300	3
E169BS	38 39 27	114 54 58	2.0	.7	2.0	.300	500	N	N	N	50	500	2
E170DS	38 39 24	114 55 4	2.0	1.0	1.0	.500	700	N	N	N	50	300	2
E171DS	38 38 58	114 56 19	1.0	.5	2.0	.200	500	N	N	N	70	500	1
E172BS	38 38 17	114 56 15	2.0	.7	1.0	.500	700	N	N	N	70	500	2
E173BS	38 38 37	114 55 36	3.0	.5	2.0	1.000	500	N	N	N	10	700	2
E174BS	38 38 35	114 54 40	2.0	1.0	1.0	.300	700	N	N	N	70	700	2
E175BS	38 43 7	114 51 33	3.0	1.0	2.0	.500	500	N	N	N	50	500	1
E176DS	38 42 36	114 51 18	3.0	1.0	5.0	.700	700	N	N	N	50	500	2
E177DS	38 37 0	114 54 44	2.0	1.0	1.0	.200	300	N	N	N	10	200	<1
E178BS	38 37 13	114 55 17	5.0	.7	1.0	.300	500	N	N	N	30	300	1
E179BS	38 37 8	114 56 39	.5	.1	2.0	.050	100	N	N	N	10	50	1
E180BS	38 34 34	114 54 53	7.0	.2	2.0	1.000	1,000	N	N	N	30	200	3
E201DS	38 36 26	114 56 26	2.0	.5	3.0	.700	500	N	N	N	50	300	2
E202DS	38 50 48	114 54 8	1.0	2.0	3.0	.050	70	N	N	N	<10	20	<1
E203BS	38 51 8	114 53 57	1.0	2.0	5.0	.100	200	N	N	N	20	100	1
E2051US	38 43 39	114 51 20	5.0	1.0	5.0	.500	700	N	N	N	30	500	2
E21012US	38 54 5	114 57 1	2.0	1.0	10.0	.200	700	N	N	N	100	500	1
E210US	38 53 37	114 56 21	2.0	.5	5.0	.200	300	N	N	N	30	200	1
E21230S	38 46 33	114 58 15	1.0	3.0	10.0	.050	100	N	N	N	10	100	1
E21280S	38 43 27	114 59 33	5.0	1.0	10.0	.200	700	N	N	N	70	300	1
E2128S	38 53 14	114 56 29	2.0	2.0	2.0	.200	200	N	N	N	30	100	1
E2130US	38 52 1	114 54 58	1.0	3.0	5.0	.070	200	N	N	N	10	100	1
E21350S	38 45 19	114 56 12	1.0	1.0	10.0	.100	200	N	N	N	100	150	1
E2130S	38 54 11	114 53 59	2.0	1.0	2.0	.200	200	N	N	N	30	200	1
E21430S	38 48 5	114 54 51	2.0	2.0	5.0	.300	500	N	N	N	30	200	2
E21500S	38 43 31	114 55 37	10.0	1.0	2.0	>1.000	1,000	N	N	N	70	1,000	2
E21680S	38 39 30	114 55 1	2.0	1.0	2.0	.300	700	N	N	N	70	500	5
E2160S	38 52 56	114 53 56	2.0	2.0	3.0	.200	200	N	N	N	20	200	1
E2200S	38 45 36	114 59 14	1.0	2.0	2.0	.100	100	N	N	N	10	20	N
E221US	38 45 55	114 58 28	2.0	.5	1.0	.200	200	N	N	N	70	100	1
E2220S	38 49 29	114 56 26	.5	2.0	2.0	.070	70	N	N	N	10	20	N
E22370S	38 42 3	114 58 4	2.0	1.0	5.0	.300	700	N	N	N	70	200	2
E2230S	38 49 27	114 55 39	1.0	5.0	10.0	.050	100	N	N	N	10	50	1
E22478S	38 39 27	114 58 14	1.0	2.0	5.0	.100	200	N	N	N	20	200	2

Table A-1 -- Spectrographic and Atomic Absorption Analyses of Stream-Sediment Samples from South Egan Range Study Area, White Pine, Lincoln, and Nye Counties, Nevada--continued

Sample	Bi-ppm s	Cd-ppm s	Co-ppm s	Cr-ppm s	Cu-ppm s	La-ppm s	Mo-ppm s	Nb-ppm s	Ni-ppm s	Pb-ppm s	Sb-ppm s	Sc-ppm s	Sn-ppm s
E155DS	N	N	10	20	10	100	N	N	5	150	N	7	N
E156BS	N	N	N	10	50	N	N	N	10	20	N	N	N
E157DS	N	N	10	70	70	70	N	N	30	70	N	10	N
E158US	N	N	10	30	50	70	N	N	20	70	N	10	N
E159BS	N	N	10	30	50	50	N	N	20	100	N	7	N
E161DS	N	N	10	30	20	20	N	N	20	10	N	5	N
E162BS	<10	N	10	50	150	20	N	N	50	50	N	5	N
E164BS	N	N	10	30	100	20	N	N	30	70	N	5	N
E165DS	N	N	5	70	50	50	N	N	10	30	N	5	N
E167DS	<10	N	10	30	150	30	N	N	30	70	N	10	N
E168DS	N	N	7	30	30	70	N	N	10	30	N	10	N
E169BS	N	N	5	30	150	50	N	N	10	70	N	5	N
E170US	N	N	N	50	70	20	N	N	30	50	N	10	N
E171DS	N	N	N	100	50	50	N	N	20	70	N	10	N
E172BS	<10	N	5	50	150	20	N	N	20	50	N	10	N
E173BS	N	N	5	20	150	1,000	N	<20	10	50	N	10	N
E174US	N	N	10	30	70	100	N	N	10	70	N	10	N
E175DS	<10	N	10	30	150	20	N	N	20	70	N	10	N
E176DS	N	N	10	30	150	70	N	N	20	50	N	10	N
E177BS	N	N	10	20	5	20	N	N	10	N	N	5	N
E178BS	N	N	15	30	10	100	N	N	10	20	N	10	N
E179BS	N	N	N	20	20	N	N	N	5	20	N	5	N
E180BS	10	N	15	20	100	500	N	20	30	20	N	10	N
E201US	N	N	5	50	100	20	N	N	30	50	N	10	N
E202DS	N	N	N	50	50	20	N	N	10	20	N	N	N
E203US	N	N	N	20	20	20	N	N	10	10	N	5	N
E2051GS	10	N	10	30	150	50	N	N	10	50	N	10	N
E21012US	N	N	10	70	30	50	N	N	20	70	N	10	N
E210BS	N	N	5	30	10	20	N	N	15	20	N	5	N
E2123US	N	N	N	30	10	20	N	N	10	50	N	5	N
E2128US	N	N	15	150	30	50	N	N	100	50	N	10	N
E212GS	N	N	10	30	10	20	N	N	30	N	N	7	N
E2130US	N	N	N	30	30	N	N	N	10	70	N	5	N
E2135BS	N	N	N	20	100	20	N	N	10	20	N	5	N
E213US	N	N	5	30	10	N	N	N	10	N	N	5	N
E2143US	N	N	10	70	30	100	N	N	20	20	N	10	N
E2150DS	N	N	15	50	70	500	N	20	5	70	N	20	N
E2168US	N	N	10	70	70	70	N	N	10	30	N	10	N
E216BS	N	N	10	50	10	20	N	N	20	10	N	5	N
E220US	N	N	5	10	5	N	N	N	5	10	N	N	N
E221DS	N	N	15	100	20	20	N	N	50	N	N	7	N
E222BS	N	N	N	20	20	N	N	N	5	10	N	5	N
E22370S	N	N	15	70	30	50	N	N	30	30	N	10	N
E223US	N	N	N	30	20	N	N	N	5	30	N	5	N
E22478S	N	N	10	50	50	70	N	N	10	70	N	5	N

Table A-1.--Spectrographic and Atomic Absorption Analyses of Stream-Sediment Samples from South Egan Range Study Area, White Pine, Lincoln, and Nye Counties, Nevada--Continued

Sample	Sr-ppm s	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s	Au-ppm aa	As-ppm aa	Ag-ppm aa	Sb-ppm aa
E1558S	100	150	N	15	N	70	N	N	5	N	N
E1560S	100	20	N	N	N	10	N	N	5	N	—
E1578S	200	100	N	30	N	500	N	N	25	N	N
E1588S	200	100	N	20	N	200	N	N	15	N	N
E1598S	100	100	N	20	N	200	N	N	10	.15	N
E1610S	100	50	N	15	N	200	N	N	10	N	N
E1628S	200	100	N	20	N	200	N	N	40	.25	5
E1648S	100	50	N	15	N	100	N	N	20	N	—
E1658S	500	50	N	20	N	200	N	N	5	N	N
E1678S	200	70	N	20	N	200	N	N	5	.05	—
E1688S	200	70	N	30	N	200	N	N	5	N	[illegible]
E1690S	200	70	N	20	N	200	N	N	5	N	[illegible]
E1708S	200	70	N	20	N	200	N	N	10	.05	[illegible]
E1710S	200	70	N	30	N	300	N	N	10	N	3
E1720S	200	70	N	20	N	200	N	N	5	.05	1
E1730S	300	100	N	50	N	1,000	N	N	5	N	—
E1748S	500	100	N	30	N	500	N	N	10	N	N
E1758S	200	100	N	20	N	200	N	N	10	N	—
E1760S	500	150	N	20	N	200	N	N	10	N	—
E1778S	100	50	N	15	N	150	N	N	10	N	N
E1788S	100	70	N	30	N	200	N	N	N	.05	N
E1790S	N	10	N	10	N	20	N	N	20	.05	N
E1808S	200	200	N	50	<200	500	N	N	N	N	[illegible]
E2010S	200	100	N	30	<200	200	N	N	15	.50	N
E2028S	N	10	N	N	N	15	N	N	<5	N	N
E2030S	N	20	N	10	N	70	N	N	10	N	N
E2051US	500	100	N	30	N	500	N	N	5	.35	1
E210128S	500	70	N	20	N	200	N	N	30	N	N
E2100US	300	50	N	15	N	100	N	N	5	.05	N
E2123US	200	20	N	10	N	70	N	N	25	N	N
E21280S	300	150	N	50	N	300	N	N	15	N	[illegible]
E2120S	100	70	N	15	N	200	N	N	10	.05	N
E21300S	100	20	N	10	N	50	N	N	<5	N	N
E2135US	500	50	N	10	N	700	N	N	<5	N	N
E2138S	100	20	N	10	N	200	N	N	15	N	2
E2143US	100	100	N	30	N	500	N	N	10	N	N
E2150US	500	200	N	50	N	1,000	N	N	5	N	N
E2168US	300	70	N	30	N	200	N	N	5	N	N
E2160S	100	70	N	10	N	150	N	N	25	.05	N
E2208S	N	10	N	N	N	100	N	N	5	N	N
E2210S	100	100	N	15	N	200	N	N	10	.35	N
E2228S	N	20	N	<10	N	70	N	N	5	N	N
E2237US	300	100	N	30	N	200	N	N	15	N	N
E2238S	100	20	N	<10	N	100	N	N	<5	N	N
E22478S	100	50	N	10	N	100	N	N	10	N	N

Table A-1 -- Spectrographic and Atomic Absorption Analyses of Stream-Sediment Samples from South Egan Range Study Area, White Pine, Lincoln, and Nye Counties, Nevada--continued

Sample	Latitude	Longitude	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	As-ppm s	Au-ppm s	B-ppm s	Ba-ppm s	Be-ppm s
E224BS	38 49 50	114 55 56	1.0	5.0	10.0	.070	200	N	N	N	15	20	<1
E225BS	38 48 38	114 56 10	2.0	2.0	5.0	.200	500	N	N	N	50	100	1
E226BS	38 52 26	114 56 0	2.0	2.0	5.0	.200	300	N	N	N	70	200	1
E227BS	38 43 54	114 57 31	1.0	2.0	5.0	.100	100	N	N	N	30	100	N
E228BS	38 44 13	114 57 38	2.0	1.0	10.0	.200	500	N	N	N	70	300	1
E229BS	38 44 12	114 57 39	1.0	1.0	10.0	.200	200	N	N	N	70	200	1
E2305BS	38 50 48	114 56 13	2.0	1.0	10.0	.200	700	N	N	N	70	300	1
E230BS	38 44 2	114 56 49	2.0	2.0	10.0	.200	700	N	N	N	50	500	2
E231BS	38 43 49	114 56 56	2.0	.5	2.0	.200	300	N	N	N	30	100	1
E232BS	38 43 31	114 57 37	2.0	1.0	5.0	.300	500	N	N	N	50	200	1
E233BS	38 44 42	114 56 37	2.0	1.0	5.0	.500	500	N	N	N	70	500	2
E234BS	38 42 59	114 57 37	5.0	2.0	5.0	.700	700	N	N	N	70	200	2
E236BS	38 42 8	114 58 5	3.0	2.0	5.0	.500	700	N	N	N	70	300	2
E237BS	38 42 5	114 58 4	2.0	1.0	3.0	.200	700	N	N	N	70	200	2
E238BS	38 41 9	114 58 26	2.0	.5	1.0	.200	200	N	N	N	30	20	N
E239BS	38 41 19	114 58 19	2.0	.5	2.0	.200	300	N	N	N	30	200	<1
E240BS	38 41 47	114 59 26	2.0	.7	2.0	.200	500	N	N	N	50	200	2
E2410BS	38 32 16	114 57 0	2.0	1.0	5.0	.500	500	N	N	N	30	300	2
E241BS	38 41 13	114 58 57	3.0	.5	2.0	.300	700	N	N	N	70	200	1
E242BS	38 40 55	114 57 24	1.0	1.0	2.0	.200	200	N	N	N	30	200	1
E243BS	38 40 50	114 57 15	2.0	2.0	3.0	.300	500	N	N	N	50	200	1
E244BS	38 40 6	114 59 4	2.0	2.0	2.0	.200	200	N	N	N	50	100	<1
E245BS	38 39 7	114 59 46	2.0	1.0	3.0	.200	300	N	N	N	50	200	1
E246BS	38 39 22	114 58 19	1.0	5.0	10.0	.100	200	N	N	N	20	100	1
E247BS	38 39 27	114 58 14	2.0	3.0	7.0	.200	300	N	N	N	30	200	2
E248BS	38 39 27	114 58 17	2.0	3.0	5.0	.100	300	N	N	N	20	150	2
E249BS	38 38 20	114 58 46	2.0	2.0	5.0	.500	500	N	N	N	50	200	2
E250BS	38 37 44	114 58 28	3.0	.7	2.0	.500	700	.5	N	N	70	500	1
E251BS	38 36 31	114 58 16	2.0	.7	5.0	.500	700	N	N	N	50	300	1
E252BS	38 35 37	114 57 3	2.0	2.0	7.0	.200	500	N	N	N	30	200	<1
E253BS	38 37 25	114 58 34	1.0	.3	.5	.200	200	N	N	N	20	100	<1
E254BS	38 43 14	114 55 26	2.0	.5	2.0	.500	500	N	N	N	20	500	1
E301BS	38 51 8	114 57 34	2.0	.7	2.0	.500	500	N	N	N	15	200	1
E303BS	38 50 54	114 57 7	1.0	.7	3.0	.100	200	N	N	N	30	100	<1
E304BS	38 50 46	114 56 16	2.0	1.0	5.0	.300	700	N	N	N	70	300	1
E305BS	38 50 48	114 56 13	2.0	1.0	5.0	.200	700	N	N	N	70	300	1
E306BS	38 50 43	114 56 15	1.0	1.0	2.0	.070	100	N	N	N	20	20	<1
E307BS	38 49 29	114 57 1	2.0	1.0	2.0	.200	200	N	N	N	30	200	<1
E308BS	38 48 57	114 56 57	.5	2.0	2.0	.050	70	N	N	N	10	20	<1
E408BS	38 32 11	114 57 5	1.0	1.0	5.0	.200	300	N	N	N	20	200	1
E409BS	38 32 14	114 57 3	1.0	.5	2.0	.100	200	N	N	N	15	100	1
E410BS	38 32 16	114 57 0	5.0	1.0	7.0	.500	700	N	N	N	50	300	2
E411BS	38 33 8	114 57 26	2.0	.5	3.0	.200	200	N	N	N	30	200	1
E412BS	38 33 34	114 57 35	1.0	1.0	3.0	.200	100	N	N	N	20	200	1
E413BS	38 33 39	114 58 18	1.0	1.0	5.0	.200	500	N	N	N	30	300	1

Table A-1 -- Spectrographic and Atomic Absorption Analyses of Stream-Sediment Samples from South Egan Range Study Area, White Pine, Lincoln, and Nye Counties, Nevada--continued

Sample	Bi-ppm s	Cd-ppm s	Co-ppm s	Cr-ppm s	Cu-ppm s	La-ppm s	Mo-ppm s	Nb-ppm s	Ni-ppm s	Pb-ppm s	Sb-ppm s	Sc-ppm s	Sn-ppm s
E224BS	N	N	5	30	100	N	N	N	10	70	N	N	N
E225BS	N	N	10	70	70	20	N	N	30	50	N	5	N
E226DS	N	N	10	50	20	N	N	N	10	50	N	7	N
E227DS	N	N	5	50	70	N	N	N	20	10	N	N	N
E228BS	N	N	10	70	70	50	N	N	30	20	N	7	N
E229BS	N	N	10	30	20	N	N	N	30	10	N	5	N
E2305DS	N	N	15	50	50	70	N	N	30	30	N	10	N
E2300S	N	N	10	30	70	20	N	N	20	70	N	10	N
E231DS	N	N	5	10	10	50	N	N	10	70	N	7	N
E232BS	<10	N	5	50	150	N	N	N	20	50	N	7	N
E233US	N	N	10	70	30	20	N	N	20	30	N	10	N
E234DS	N	N	15	70	30	100	N	<20	30	30	N	10	N
E236DS	N	N	5	50	70	20	N	N	30	50	N	10	N
E237US	N	N	15	70	70	70	N	N	30	30	N	10	N
E238DS	N	N	10	30	50	N	N	N	30	N	N	5	N
E239BS	N	N	15	50	10	70	N	N	30	N	N	5	N
E240US	N	N	N	50	20	20	N	N	20	20	N	5	N
E2410DS	N	N	7	70	50	70	N	N	10	30	N	10	N
E241BS	N	N	15	30	100	N	N	N	30	15	N	7	N
E242DS	N	N	5	20	10	20	N	N	10	50	N	5	N
E243DS	N	N	5	30	100	20	N	N	10	30	N	5	N
E244DS	N	N	10	50	70	20	N	N	15	10	N	5	N
E245BS	N	N	10	30	10	50	N	N	20	10	N	7	N
E246DS	N	N	N	50	100	20	N	N	10	70	N	N	N
E247DS	N	N	10	50	50	N	N	N	10	50	N	7	N
E248DS	N	N	5	50	50	N	N	N	15	70	N	5	N
E249US	10	N	5	50	50	20	N	N	20	50	N	10	N
E250DS	N	N	10	100	50	20	N	N	50	50	N	10	N
E251US	N	N	10	50	70	20	N	N	30	70	N	7	N
E252BS	N	N	5	30	100	20	N	N	20	50	N	5	N
E253DS	N	N	5	20	5	N	N	N	10	N	N	5	N
E254US	<10	N	5	15	100	150	N	N	10	70	N	7	N
E301US	N	N	10	10	20	20	N	<20	10	70	N	10	N
E303BS	N	N	5	20	10	20	N	N	20	30	N	5	N
E304DS	N	N	10	50	50	70	N	N	20	50	N	10	N
E305DS	N	N	10	50	20	50	N	N	20	30	N	7	N
E306BS	N	N	5	10	10	N	N	N	5	20	N	5	N
E307US	N	N	5	20	10	20	N	N	20	50	N	5	N
E308US	N	N	N	20	10	N	N	N	10	10	N	5	N
E408US	N	N	10	50	15	20	N	N	20	10	N	5	N
E409US	N	N	5	15	5	N	N	N	10	N	N	5	N
E410DS	N	N	10	30	70	100	N	N	30	20	N	20	N
E411BS	N	N	10	50	10	20	N	N	30	10	N	5	N
E412US	N	N	5	20	10	N	N	N	15	N	N	5	N
E413DS	N	N	10	50	10	20	N	N	20	10	N	10	N

Table A-1 -- Spectrographic and Atomic Absorption Analyses of Stream-Sediment Samples from South Egan Range Study Area, White Pine, Lincoln, and Nye Counties, Nevada--continued

Sample	Sr-ppm s	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s	Au-ppm aa	As-ppm aa	Ag-ppm aa	Sb-ppm aa
E2248S	N	15	N	<10	N	10	N	N	N	N	N
E2258S	100	70	N	20	N	100	N	N	5	.15	N
E2260S	100	70	N	10	N	150	N	N	15	N	N
E2278S	100	50	N	10	N	200	N	N	5	N	N
E2288S	500	70	N	30	N	200	N	N	15	N	N
E2298S	500	70	N	10	N	200	N	N	<5	.05	1
E2305HS	200	70	N	20	N	200	N	N	35	N	N
E2300S	500	100	N	30	N	100	N	N	10	.05	1
E2310S	100	70	N	15	N	100	N	N	5	N	N
E2320S	200	70	N	15	N	100	N	N	10	N	N
E2338S	500	100	N	30	N	200	N	N	10	N	N
E2340S	500	100	N	30	N	500	N	N	10	N	N
E2360S	200	100	N	20	N	200	N	N	5	.10	—
E2370S	200	70	N	20	N	200	N	N	15	N	N
E2388S	100	50	N	10	N	100	N	N	10	.10	N
E2390S	200	50	N	30	N	100	N	N	10	.10	N
E2400S	100	70	N	20	N	150	N	N	10	.05	N
E24108S	500	70	N	30	N	700	N	N	5	.10	N
E2410S	200	100	N	20	N	500	N	N	20	.05	N
E2428S	100	20	N	10	N	150	N	N	5	.10	N
E2430S	100	50	N	10	N	100	N	N	<5	N	N
E2440S	100	50	N	10	N	200	N	N	5	.05	N
E2450S	100	50	N	20	N	150	N	N	25	N	N
E2460S	100	30	N	10	N	70	N	N	10	N	—
E2478S	200	50	N	20	N	100	N	N	10	N	N
E2480S	100	30	N	10	<200	200	N	N	5	.05	1
E2498S	200	70	N	20	N	200	N	N	5	.05	—
E2500S	500	100	N	50	200	200	N	N	10	.40	N
E2510S	300	50	N	20	N	200	N	N	20	.05	N
E2528S	200	70	N	15	N	150	N	N	5	.05	—
E2530S	100	20	N	10	N	150	N	N	10	.05	N
E2540S	300	70	N	30	N	500	N	N	N	N	N
E3018S	200	100	N	20	N	200	N	N	<5	N	N
E3038S	100	20	N	10	N	70	N	N	35	N	N
E3048S	500	100	N	20	N	300	N	N	30	N	N
E3058S	200	70	N	20	N	200	N	N	35	N	N
E3068S	N	20	N	N	N	70	N	N	5	N	N
E3070S	100	70	N	15	N	200	N	N	20	N	N
E3080S	N	10	N	N	N	20	N	N	5	N	N
E4088S	300	50	N	15	N	100	N	N	30	.05	N
E4090S	100	20	N	10	N	150	N	N	5	N	N
E4108S	500	100	N	50	N	150	N	N	5	.05	1
E4118S	200	30	N	20	N	200	N	N	5	N	N
E4128S	100	20	N	10	N	150	N	N	<5	N	N
E4130S	300	50	N	20	N	200	N	N	5	N	N

Table A-1 -- Spectrographic and Atomic Absorption Analyses of Stream-Sediment Samples from South Egan Range Study Area
White Pine, Lincoln, and Nye Counties, Nevada--continued

Sample	Latitude	Longitude	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	As-ppm s	Au-ppm s	B-ppm s	Ba-ppm s	Be-ppm s
E414BS	38 33 31	114 55 7	2.0	.2	.5	.200	200	N	N	N	<10	100	N
E415BS	38 34 50	114 58 12	2.0	1.0	3.0	.200	100	N	N	N	15	200	N
E416US	38 35 26	116 58 30	1.0	.5	7.0	.200	200	N	N	N	20	200	1

Table A-1 -- Spectrographic and Atomic Absorption Analyses of Stream-Sediment Samples from South Egan Range Study Area, White Pine, Lincoln, and Nye Counties, Nevada--continued

Sample	Bi-ppm s	Cd-ppm s	Co-ppm s	Cr-ppm s	Cu-ppm s	La-ppm s	Mo-ppm s	Nb-ppm s	Ni-ppm s	Pb-ppm s	Sb-ppm s	Sc-ppm s	Sn-ppm s
E414BS	N	N	10	20	7	20	N	N	5	N	N	5	N
E415BS	N	N	5	30	10	N	N	N	20	10	N	5	N
E416BS	N	N	5	30	5	70	N	N	20	<10	N	5	N

Table A-1 -- Spectrographic and Atomic Absorption Analyses of Stream-Sediment Samples from South Egan Range Study Area, White Pine, Lincoln, and Nye Counties, Nevada--continued

Sample	Sr-ppm s	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s	Au-ppm aa	As-ppm aa	Ag-ppm aa	Sb-ppm aa
E4148S	N	30	N	10	N	200	N	N	N	N	N
E4150S	100	20	N	10	N	150	N	N	10	N	N
E4168S	200	50	N	20	N	100	N	N	10	N	N

Table A-2.-- Spectrographic Analyses of Panned-Concentrates from Stream-Sediment Samples from South Egan Range Study Areas, White Pine, Lincoln, and Nye Counties Nevada.

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

Sample	Latitude	Longitude	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	As-ppm s	Au-ppm s	B-ppm s	Ba-ppm s
E001PC	38 35 4	114 56 13	1.00	1.00	.7	.70	200	N	N	N	20	3,000
E002PC	38 35 1	114 57 13	2.00	.50	10.0	1.00	1,500	N	N	N	70	10,000
E003PC	38 33 9	114 56 39	2.00	.50	20.0	.50	300	N	N	N	100	>10,000
E004PC	38 35 44	114 56 20	.50	.20	2.0	.50	300	N	N	N	<20	700
E010PC	38 53 20	114 56 56	2.00	5.00	20.0	1.00	500	N	N	N	20	10,000
E011PC	38 53 47	114 56 56	5.00	2.00	50.0	.50	500	N	N	N	20	300
E012PC	38 54 5	114 57 4	2.00	5.00	20.0	1.00	500	30	N	N	70	7,000
E013PC	38 52 43	114 55 43	5.00	.50	10.0	.50	500	N	N	N	150	10,000
E014PC	38 51 39	114 56 35	2.00	.10	1.0	.30	500	N	N	N	20	5,000
E015PC	38 52 10	114 57 27	5.00	1.00	10.0	2.00	2,000	N	N	N	70	1,500
E017PC	38 46 45	114 59 5	5.00	2.00	10.0	.70	1,500	N	N	N	50	>10,000
E020PC	38 46 8	114 59 15	.20	.50	2.0	.05	50	N	N	N	<20	5,000
E021PC	38 42 42	114 59 52	2.00	1.00	20.0	.30	500	N	N	N	200	10,000
E022PC	38 44 1	114 58 47	2.00	.50	5.0	.50	300	N	N	N	500	10,000
E025PC	38 50 3	114 53 27	7.00	.70	10.0	2.00	7,000	50	N	N	70	5,000
E026PC	38 48 50	114 54 8	1.50	.05	20.0	.70	200	N	N	N	50	>10,000
E027PC	38 48 55	114 54 6	2.00	1.00	20.0	.50	300	N	N	N	70	10,000
E028PC	38 46 17	114 54 58	2.00	.50	50.0	.70	500	N	N	N	300	>10,000
E029PC	38 46 58	114 55 43	2.00	.20	50.0	.30	300	N	N	N	70	300
E030PC	38 46 55	114 54 20	1.50	7.00	50.0	.50	500	N	N	N	30	7,000
E032PC	38 47 35	114 53 13	2.00	.50	10.0	1.50	1,500	N	N	N	70	500
E033PC	38 47 11	114 53 13	1.00	1.50	5.0	.50	100	N	N	N	<20	2,000
E034PC	38 48 3	114 53 46	7.00	.70	50.0	.70	1,500	N	N	N	200	200
E035PC	38 42 28	115 0 53	2.00	.70	50.0	.20	200	N	N	N	70	7,000
E036PC	38 41 40	115 0 29	1.50	.50	30.0	.50	200	N	N	N	70	10,000
E037PC	38 41 2	115 1 8	2.00	.50	20.0	.20	200	N	N	N	50	>10,000
E039PC	38 40 59	115 2 3	2.00	5.00	20.0	.50	200	N	N	N	20	5,000
E040PC	38 40 22	115 1 56	1.00	.70	50.0	.20	500	N	N	N	100	2,000
E041PC	38 40 5	115 0 33	1.00	.50	2.0	1.00	300	N	N	N	100	>10,000
E042PC	38 38 33	115 0 41	2.00	5.00	20.0	.30	1,000	N	N	N	50	1,500
E043PC	38 38 32	115 0 17	2.00	.70	2.0	.70	300	N	N	N	70	2,000
E045PC	38 38 47	115 1 39	2.00	7.00	7.0	1.50	300	N	N	N	<20	2,000
E046PC	38 37 40	115 2 10	2.00	5.00	10.0	1.00	1,500	N	N	N	20	500
E048PC	38 36 54	115 0 10	1.00	2.00	10.0	.20	300	N	N	N	70	5,000
E049PC	38 35 46	114 59 28	5.00	1.50	10.0	2.00	2,000	N	N	N	20	1,500
E050PC	38 35 56	114 59 35	1.00	5.00	15.0	.70	300	N	N	N	<20	7,000
E051PC	38 43 39	114 51 20	2.00	.50	7.0	.50	500	N	N	N	20	3,000
E052PC	38 43 35	114 51 13	5.00	1.00	5.0	2.00	1,500	N	N	N	20	500
E053PC	38 43 40	114 51 12	2.00	1.00	5.0	1.50	1,500	N	N	N	20	1,000
E054PC	38 38 59	114 52 59	2.00	1.00	5.0	1.50	1,500	N	N	N	50	1,000
E055PC	38 37 8	114 59 39	2.00	1.00	5.0	1.50	1,500	N	N	N	100	5,000
E056PC	38 37 59	115 2 22	5.00	2.00	5.0	2.00	1,500	N	N	N	50	2,000
E103PC	38 33 1	114 55 31	.50	.20	2.0	.10	300	N	N	N	<20	700
E104PC	38 36 35	114 57 40	2.00	.50	30.0	.50	700	N	N	N	70	7,000
E106PC	38 54 8	114 54 53	2.00	1.00	10.0	2.00	1,500	N	N	N	20	1,500

Table A-2-- Spectrographic Analyses of Panned-Concentrates from Stream-Sediment Samples from South Egan Range Study Areas, White Pine, Lincoln, and Nye Counties Nevada.

Sample	Be-ppm	Bi-ppm	Cd-ppm	Co-ppm	Cr-ppm	Cu-ppm	La-ppm	Mo-ppm	Nb-ppm	Ni-ppm	Pb-ppm
	s	s	s	s	s	s	s	s	s	s	s
E001PC	2	N	N	N	N	<10	300	N	70	10	300
E002PC	N	N	N	10	150	10	500	N	<50	10	500
E003PC	2	N	N	N	200	20	700	N	N	70	100
E004PC	2	N	N	N	N	10	500	N	50	10	20
E010PC	<2	N	N	N	50	10	150	N	70	10	2,000
E011PC	2	N	N	N	50	10	200	N	50	10	70
E012PC	2	50	N	20	50	50	200	N	70	10	30,000
E013PC	N	N	N	30	70	100	300	10	N	100	100
E014PC	N	N	N	10	20	10	150	N	N	50	N
E015PC	N	N	N	30	150	150	1,500	N	<50	70	20
E017PC	N	N	N	20	100	50	1,000	30	N	100	150
E020PC	<2	N	N	N	N	15	100	N	N	10	N
E021PC	2	N	N	N	150	30	50	N	N	70	N
E022PC	2	N	N	10	200	150	50	N	N	150	50
E025PC	N	N	N	50	50	100	700	N	<50	50	150
E026PC	N	N	N	N	150	20	500	N	N	10	N
E027PC	N	N	N	10	N	<10	300	N	N	10	N
E028PC	2	N	N	N	200	70	700	N	N	70	50
E029PC	2	N	N	N	300	50	1,500	N	N	100	N
E030PC	2	N	N	N	50	50	300	N	N	10	200
E032PC	N	N	N	10	100	50	300	N	N	10	30
E033PC	2	N	N	N	N	<10	100	N	N	10	20
E034PC	2	N	N	15	100	100	700	N	N	70	150
E035PC	2	N	N	N	300	30	1,500	N	N	70	500
E036PC	2	N	N	N	200	20	1,000	N	N	70	70
E037PC	2	N	N	N	150	30	700	N	N	70	50
E039PC	<2	N	N	10	70	20	150	N	50	10	7,000
E040PC	2	N	N	N	150	15	500	N	N	30	500
E041PC	N	N	N	N	150	30	300	N	N	70	1,000
E042PC	<2	N	N	N	50	10	N	N	N	10	1,000
E043PC	2	N	N	10	20	10	200	N	N	10	<20
E045PC	2	N	N	N	70	10	500	N	150	10	20
E046PC	N	N	N	10	150	50	1,000	N	<50	70	150
E048PC	2	N	N	N	150	20	200	N	N	10	300
E049PC	N	N	N	20	100	50	300	N	50	50	N
E050PC	<2	N	N	N	100	20	150	N	100	10	20
E051PC	2	N	N	N	100	10	150	N	50	10	3,000
E052PC	N	N	N	20	100	15	2,000	N	150	70	20
E053PC	N	N	N	10	70	15	700	N	100	10	20
E054PC	N	N	N	10	50	10	700	N	N	10	N
E055PC	2	N	70	20	100	100	300	N	50	10	1,000
E056PC	N	N	N	10	50	15	1,000	N	50	10	300
E103PC	5	N	N	N	N	10	50	N	N	10	20
E104PC	5	N	N	15	150	30	1,500	N	N	70	70
E106PC	N	N	N	10	50	15	1,000	N	300	10	500

Table A-2 -- Spectrographic Analyses of Panned-Concentrates from Stream-Sediment Samples from South Egan Range Study Areas, White Pine, Lincoln, and Nye Counties Nevada.

Sample	Sb-ppm	Sc-ppm	Sn-ppm	Sr-ppm	V-ppm	W-ppm	Y-ppm	Zn-ppm	Zr-ppm	Th-ppm
	s	s	s	s	s	s	s	s	s	s
E001PC	N	30	N	700	50	N	200	N	>2,000	N
E002PC	N	30	N	500	150	N	300	N	>2,000	N
E003PC	N	30	150	2,000	100	N	700	N	>2,000	N
E004PC	N	20	N	700	20	N	150	N	>2,000	N
E010PC	N	30	N	700	300	100	200	N	>2,000	N
E011PC	N	20	N	500	100	N	150	700	>2,000	N
E012PC	200	30	N	700	70	500	500	N	>2,000	N
E013PC	N	20	N	700	100	N	200	700	>2,000	N
E014PC	N	20	N	N	70	N	70	N	>2,000	N
E015PC	N	70	N	500	500	N	1,000	N	>2,000	N
E017PC	N	20	N	500	200	N	150	500	>2,000	N
E020PC	N	10	N	N	20	N	70	N	>2,000	N
E021PC	N	10	N	700	150	N	70	N	1,500	N
E022PC	N	15	N	700	200	N	70	500	1,500	N
E025PC	N	30	N	1,000	300	N	300	N	>2,000	N
E026PC	N	10	N	2,000	100	N	500	N	>2,000	N
E027PC	N	20	N	1,000	100	N	300	N	>2,000	N
E028PC	N	20	N	2,000	200	N	1,000	N	>2,000	N
E029PC	N	20	N	5,000	100	N	1,500	N	>2,000	N
E030PC	N	30	N	700	70	N	700	N	>2,000	N
E032PC	N	20	N	1,000	200	N	300	1,000	>2,000	N
E033PC	N	70	N	700	50	N	500	N	>2,000	N
E034PC	N	15	N	1,000	200	N	500	N	>2,000	N
E035PC	N	30	N	5,000	100	N	1,000	N	>2,000	N
E036PC	N	10	N	5,000	150	N	700	N	>2,000	N
E037PC	N	10	N	10,000	100	N	500	500	>2,000	N
E039PC	N	10	N	500	50	N	200	N	>2,000	N
E040PC	N	30	N	1,500	100	N	500	N	>2,000	N
E041PC	N	30	N	2,000	70	N	200	N	>2,000	N
E042PC	N	10	N	200	100	N	50	N	>2,000	N
E043PC	N	30	N	200	100	N	200	N	>2,000	N
E045PC	N	30	N	500	150	N	500	N	>2,000	N
E046PC	N	30	20	200	150	N	300	N	>2,000	N
E048PC	N	20	N	700	50	N	200	N	>2,000	N
E049PC	N	30	150	500	300	N	300	N	>2,000	N
E050PC	N	20	N	200	50	N	150	N	>2,000	N
E051PC	N	10	N	1,000	100	N	200	N	>2,000	N
E052PC	<200	30	70	500	200	N	500	N	>2,000	200
E053PC	N	30	N	500	150	N	500	N	>2,000	N
E054PC	N	20	N	500	200	N	500	N	>2,000	N
E055PC	N	30	N	200	500	N	300	2,000	>2,000	N
E056PC	N	10	N	200	300	N	300	N	>2,000	N
E103PC	N	10	N	1,000	20	N	20	N	2,000	N
E104PC	N	15	N	5,000	100	N	700	N	>2,000	N
E106PC	N	10	50	200	200	N	1,000	N	>2,000	N

Table A-2 -- Spectrographic Analyses of Panned-Concentrates from Stream-Sediment Samples from South Egan Range Study Area, White Pine, Lincoln, and Nye Counties--continued

Sample	Latitude	Longitude	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	As-ppm s	Au-ppm s	B-ppm s	Ba-ppm s
E112PC	38 54 24	114 55 34	2.00	1.00	50.0	.20	1,000	30	N	N	100	1,000
E113PC	38 54 22	114 55 21	2.00	1.00	10.0	2.00	1,000	50	1,500	200	70	700
E116PC	38 54 16	114 57 0	5.00	1.00	20.0	1.00	1,500	N	N	N	70	2,000
E118PC	38 50 12	114 57 8	2.00	.50	20.0	.20	500	N	N	N	50	3,000
E119PC	38 51 55	114 58 34	2.00	.70	20.0	.50	1,000	N	N	N	100	1,500
E120PC	38 48 22	114 57 34	5.00	1.50	5.0	1.00	1,500	N	N	N	150	7,000
E121PC	38 48 9	114 58 9	5.00	2.00	10.0	1.50	1,500	N	N	N	50	1,500
E122PC	38 46 34	114 58 18	.50	2.00	10.0	.20	200	N	N	N	20	1,500
E123PC	38 46 33	114 58 15	2.00	1.00	10.0	.30	500	N	N	N	20	5,000
E124PC	38 46 35	114 58 16	1.00	5.00	50.0	.10	200	N	N	N	20	10,000
E1253PC	38 34 7	114 55 59	1.00	.50	2.0	.70	200	N	N	N	30	700
E126PC	38 43 22	114 59 55	5.00	.50	5.0	.70	1,500	N	N	N	100	>10,000
E127PC	38 43 27	114 59 55	2.00	.50	20.0	.30	500	N	N	N	100	>10,000
E128PC	38 43 27	114 59 53	5.00	2.00	50.0	.20	1,000	N	N	N	100	>10,000
E131PC	38 52 0	114 55 3	5.00	5.00	10.0	1.00	2,000	N	N	N	100	10,000
E132PC	38 51 59	114 55 2	2.00	5.00	10.0	.50	700	N	N	N	20	7,000
E134PC	38 45 37	114 56 19	1.00	.20	50.0	.50	300	N	N	N	50	5,000
E135PC	38 45 19	114 56 12	2.00	1.00	50.0	.10	200	N	N	N	30	2,000
E136PC	38 45 20	114 56 15	1.50	1.00	20.0	.30	500	N	N	N	70	5,000
E137PC	38 45 22	114 56 14	5.00	1.00	20.0	1.00	1,500	N	N	N	200	>10,000
E138PC	38 46 6	114 56 49	2.00	.10	50.0	.15	300	N	N	N	70	>10,000
E139PC	38 45 12	114 56 49	2.00	.70	20.0	.50	500	N	N	N	300	>10,000
E140PC	38 45 1	114 58 1	1.50	.50	20.0	.20	200	N	N	N	50	>10,000
E141PC	38 45 23	114 54 12	1.00	.10	5.0	.50	200	N	N	N	20	1,000
E142PC	38 48 4	114 54 47	2.00	1.00	20.0	1.50	500	N	N	N	70	10,000
E143PC	38 48 5	114 54 51	2.00	.20	50.0	.20	500	N	N	N	20	3,000
E144PC	38 48 1	114 54 53	2.00	.10	20.0	.50	500	N	N	N	150	>10,000
E145PC	38 48 7	114 56 37	7.00	5.00	10.0	.70	2,000	N	N	N	20	1,500
E147PC	38 47 22	114 58 4	2.00	1.00	5.0	.50	500	N	N	N	20	1,000
E148PC	38 47 9	114 58 32	.15	1.50	2.0	.15	100	N	N	N	20	1,500
E149PC	38 43 30	114 55 32	1.00	.20	2.0	1.00	500	N	N	N	70	1,000
E151PC	38 43 24	114 55 34	1.00	.50	2.0	.70	500	N	N	N	70	1,000
E153PC	38 44 6	114 54 15	1.00	.20	2.0	.50	200	N	N	N	20	1,000
E154PC	38 43 58	114 54 11	1.00	1.00	10.0	.20	200	N	N	N	20	7,000
E155PC	38 44 8	114 53 7	.70	2.00	10.0	1.00	200	N	N	N	<20	10,000
E156PC	38 43 2	114 54 58	1.00	5.00	20.0	.07	300	N	N	N	50	10,000
E157PC	38 42 42	114 54 13	1.00	2.00	10.0	.50	200	N	N	N	30	>10,000
E158PC	38 43 34	114 53 25	5.00	2.00	15.0	1.00	700	30	N	N	70	5,000
E159PC	38 41 55	114 56 10	2.00	.50	20.0	1.00	200	N	N	N	100	10,000
E161PC	38 42 6	114 55 6	2.00	2.00	20.0	.20	700	N	N	N	50	>10,000
E162PC	38 41 8	114 55 11	7.00	1.00	20.0	2.00	1,500	N	N	N	200	>10,000
E164PC	38 40 42	114 56 12	5.00	5.00	10.0	.50	1,000	N	N	N	70	1,000
E165PC	38 40 7	114 54 18	2.00	5.00	50.0	.50	500	N	N	N	50	500
E167PC	38 39 8	114 55 39	.30	.20	2.0	.20	1,000	N	N	N	<20	1,500
E169PC	38 39 27	114 54 58	2.00	.30	1.0	1.00	1,500	N	N	N	70	200

Table A-2 -- Spectrographic Analyses of Panned-Concentrates from Stream-Sediment Samples from South Egan Range Study Area, White Pine, Lincoln, and Nye Counties--continued

Sample	Be-ppm s	Bi-ppm s	Cd-ppm s	Co-ppm s	Cr-ppm s	Cu-ppm s	La-ppm s	Mo-ppm s	Nb-ppm s	Ni-ppm s	Pb-ppm s
E112PC	2	N	70	10	20	200	100	100	N	10	7,000
E113PC	N	1,000	100	10	70	300	300	300	100	10	30,000
E116PC	2	N	N	10	70	50	500	N	N	20	700
E118PC	<2	N	N	N	50	30	100	N	N	10	50
E119PC	N	N	N	10	100	10	300	N	<50	30	150
E120PC	2	N	N	15	150	70	500	N	70	70	100
E121PC	N	N	N	50	150	50	1,000	10	<50	70	50
E122PC	N	N	N	N	150	<10	N	N	N	N	300
E123PC	N	N	N	N	20	10	100	N	N	30	100
E124PC	<2	N	N	N	N	<10	N	N	N	10	20
E1253PC	7	N	N	N	50	<10	150	N	N	10	150
E126PC	N	N	150	20	150	100	300	10	N	100	150
E127PC	2	N	N	10	100	20	100	N	N	70	200
E128PC	2	N	N	N	200	50	700	15	N	100	100
E131PC	N	N	N	20	70	100	500	N	N	70	150
E132PC	N	N	N	10	70	20	200	N	N	50	70
E134PC	2	N	N	N	300	30	2,000	N	N	70	70
E135PC	2	N	N	N	70	20	1,000	N	N	50	70
E136PC	2	N	N	N	50	<10	200	N	N	70	70
E137PC	N	N	N	15	150	50	300	N	N	70	300
E138PC	2	N	N	N	200	50	1,500	N	N	100	20
E139PC	<2	N	N	10	150	50	100	N	N	50	200
E140PC	<2	N	N	N	200	30	1,000	N	N	70	30
E141PC	2	N	N	N	N	<10	100	N	N	10	N
E142PC	N	N	N	10	100	20	700	N	N	10	50
E143PC	5	N	N	N	200	30	2,000	N	N	70	150
E144PC	2	N	N	N	150	50	1,500	N	N	50	30
E145PC	2	N	N	70	150	150	700	20	<50	150	150
E147PC	N	N	N	10	50	15	300	15	N	50	N
E148PC	N	N	N	N	N	<10	50	N	N	10	N
E149PC	N	N	N	N	20	20	500	N	N	70	N
E151PC	2	N	N	N	N	<10	300	N	N	10	20
E153PC	2	N	N	10	N	<10	150	N	N	10	20
E154PC	2	N	N	N	N	<10	50	N	N	10	N
E155PC	2	N	N	N	50	<10	500	N	70	10	50
E156PC	2	N	N	N	N	<10	100	N	N	10	70
E157PC	2	N	N	N	70	50	200	N	N	10	20
E158PC	2	N	N	N	100	50	1,000	N	150	70	70
E159PC	5	N	N	N	150	20	1,000	N	N	<10	200
E161PC	2	N	N	N	150	20	500	N	N	70	50
E162PC	N	N	N	15	150	100	700	N	50	150	50
E164PC	2	N	N	N	70	20	200	N	N	70	70
E165PC	5	N	N	N	70	<10	1,000	N	N	10	150
E167PC	2	N	N	N	N	15	300	N	N	10	70
E169PC	5	N	N	N	50	10	300	N	N	30	50

Table A-2 -- Spectrographic Analyses of Panned-Concentrates from Stream-Sediment Samples from South Egan Range Study Area, White Pine, Lincoln, and Nye Counties--continued

Sample	Sb-ppm s	Sc-ppm s	Sn-ppm s	Sr-ppm s	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s
E112PC	N	<10	N	200	50	150	70	3,000	1,000	N
E113PC	N	10	100	N	200	300	500	2,000	>2,000	N
E116PC	N	10	N	500	150	N	300	N	>2,000	N
E118PC	N	20	N	500	20	N	100	2,000	>2,000	N
E119PC	N	10	N	500	100	N	100	N	2,000	N
E120PC	N	30	N	500	200	N	200	N	>2,000	N
E121PC	N	30	N	200	200	N	300	N	>2,000	N
E122PC	N	10	N	N	20	N	N	N	500	N
E123PC	200	20	N	500	50	N	70	N	>2,000	N
E124PC	N	30	N	200	50	N	50	N	>2,000	N
E1253PC	N	15	N	1,500	50	N	300	N	>2,000	N
E126PC	N	30	N	5,000	150	N	150	3,000	>2,000	N
E127PC	N	10	N	1,500	100	N	100	N	2,000	N
E128PC	N	10	N	10,000	150	N	700	N	>2,000	N
E131PC	N	20	N	N	200	N	200	N	>2,000	N
E132PC	N	30	N	N	150	N	70	N	>2,000	N
E134PC	N	10	N	2,000	70	N	1,500	N	>2,000	N
E135PC	N	15	N	>10,000	100	N	500	N	700	N
E136PC	N	15	N	>10,000	70	N	200	N	>2,000	N
E137PC	N	20	N	10,000	200	N	300	N	>2,000	N
E138PC	N	10	N	5,000	70	N	1,500	N	1,000	N
E139PC	N	10	N	700	200	N	150	N	>2,000	N
E140PC	N	N	N	5,000	70	N	1,000	N	2,000	N
E141PC	N	10	N	1,000	70	N	300	N	>2,000	N
E142PC	N	30	N	1,000	150	N	500	N	>2,000	N
E143PC	N	20	N	2,000	100	N	1,000	N	>2,000	N
E144PC	N	10	N	2,000	150	N	700	N	>2,000	N
E145PC	N	20	N	200	200	N	100	N	>2,000	N
E147PC	N	20	N	N	70	N	70	N	>2,000	N
E148PC	N	10	N	N	20	N	70	N	>2,000	N
E149PC	N	30	N	700	70	N	500	N	>2,000	N
E151PC	N	10	N	500	100	N	200	N	>2,000	<200
E153PC	N	20	N	1,000	50	N	70	N	>2,000	N
E154PC	N	10	N	1,500	50	N	70	N	>2,000	N
E155PC	N	70	N	700	70	N	700	N	>2,000	<200
E156PC	N	10	N	200	50	N	70	N	>2,000	N
E157PC	700	10	N	2,000	50	N	300	N	>2,000	N
E158PC	2,000	70	N	700	100	N	700	N	>2,000	<200
E159PC	N	50	N	1,000	100	N	700	N	>2,000	N
E161PC	N	10	N	2,000	100	N	300	N	>2,000	N
E162PC	200	30	N	1,500	500	N	500	N	>2,000	N
E164PC	N	20	N	500	150	N	150	N	>2,000	N
E165PC	N	10	N	1,500	50	N	700	N	>2,000	N
E167PC	N	20	N	700	20	N	200	N	>2,000	N
E169PC	700	20	N	200	100	N	300	N	>2,000	<200

Table A-2.- Spectrographic Analyses of Panned-Concentrates from Stream-Sediment Samples from South Egan Range Study Area, White Pine, Lincoln, and Nye Counties--continued

Sample	Latitude	Longitude	Fe-pct. S	Mg-pct. S	Ca-pct. S	Ti-pct. S	Mn-ppm S	Ag-ppm S	As-ppm S	Au-ppm S	B-ppm S	Ba-ppm S
E170PC	38 39 24	114 55 4	1.50	.50	10.0	.20	700	N	N	N	150	700
E171PC	38 38 58	114 56 19	5.00	1.00	5.0	2.00	1,500	N	N	N	70	300
E172PC	38 38 17	114 56 15	2.00	.70	5.0	.50	500	N	N	N	150	700
E173PC	38 38 37	114 55 36	2.00	.20	2.0	1.50	1,000	N	N	N	20	2,000
E174PC	38 38 35	114 56 40	2.00	.50	1.0	1.00	1,000	N	N	N	50	1,000
E175PC	38 43 7	114 51 33	5.00	1.00	5.0	2.00	2,000	N	N	N	50	500
E176PC	38 42 36	114 51 18	2.00	.50	5.0	1.50	1,000	N	N	N	20	1,000
E177PC	38 37 0	114 54 44	1.00	1.00	5.0	1.00	1,000	N	N	N	70	1,000
E178PC	38 37 13	114 55 17	1.00	2.00	10.0	1.00	500	N	N	N	20	700
E179PC	38 37 8	114 56 39	2.00	.50	20.0	.50	500	N	N	N	100	2,000
E180PC	38 34 34	114 54 53	1.00	.10	2.0	.50	300	N	N	N	20	700
E2014PC	38 51 39	114 56 35	2.00	5.00	30.0	.30	1,000	N	N	N	20	7,000
E201PC	38 36 26	114 56 26	5.00	.50	30.0	.20	500	N	N	N	70	>10,000
E202PC	38 50 48	114 54 8	2.00	5.00	10.0	.50	200	N	N	N	70	>10,000
E203PC	38 51 8	114 53 57	2.00	1.00	10.0	1.00	1,000	N	N	N	70	7,000
E2051PC	38 43 39	114 51 20	5.00	2.00	10.0	1.50	700	N	N	N	20	3,000
E209PC	38 53 40	114 56 6	7.00	1.50	50.0	.20	500	N	N	N	20	500
E21012PC	38 54 4	114 57 4	2.00	.50	50.0	.20	700	150	5,000	N	70	>10,000
E2123PC	38 46 33	114 58 15	5.00	10.00	30.0	.15	300	N	N	N	<20	10,000
E2128PC	38 43 27	114 59 53	2.00	.20	50.0	.10	200	N	N	N	70	>10,000
E212PC	38 53 14	114 56 29	1.00	.70	20.0	.10	500	150	N	N	30	3,000
E2130PC	38 52 1	114 54 58	2.00	10.00	20.0	.20	200	N	N	N	20	5,000
E2135PC	38 45 19	114 56 12	5.00	1.00	10.0	.50	1,500	N	N	N	70	2,000
E213PC	38 54 11	114 53 59	2.00	2.00	50.0	.70	500	N	N	N	50	5,000
E2143PC	38 48 5	114 54 51	2.00	.50	50.0	.20	300	N	N	N	50	5,000
E2150PC	38 43 31	114 55 37	1.50	.50	7.0	1.00	300	N	N	N	20	2,000
E2168PC	38 39 30	114 55 1	2.00	5.00	20.0	.50	1,000	N	N	N	70	700
E220PC	38 45 36	114 59 14	2.00	.70	2.0	.50	1,000	N	N	N	70	1,500
E221PC	38 43 55	114 58 28	2.00	.70	20.0	1.00	200	N	N	N	100	>10,000
E222PC	38 49 29	114 56 26	1.50	7.00	10.0	.05	200	N	2,000	N	70	5,000
E2237PC	38 42 5	114 58 4	2.00	.50	20.0	.50	500	N	N	N	70	>10,000
E223PC	38 49 27	114 55 39	2.00	10.00	20.0	.50	300	N	N	N	20	500
E2247PC	38 39 27	114 58 14	1.00	2.00	5.0	.20	200	N	N	N	30	1,000
E224PC	38 49 50	114 55 56	5.00	2.00	10.0	.70	1,000	N	N	N	50	1,500
E225PC	38 48 38	114 56 10	5.00	.50	20.0	.30	1,000	N	N	N	100	10,000
E226PC	38 52 26	114 56 0	2.00	1.00	7.0	.10	200	N	N	N	70	5,000
E227PC	38 43 54	114 57 31	.20	1.00	10.0	.20	300	N	N	N	70	1,500
E229PC	38 44 12	114 57 39	.50	1.00	20.0	.20	300	N	N	N	70	1,500
E2305PC	38 50 48	114 56 13	5.00	.50	20.0	.50	500	N	N	N	50	>10,000
E230PC	38 44 2	114 56 49	5.00	.50	20.0	1.50	2,000	N	N	N	50	10,000
E231PC	38 43 49	114 56 56	2.00	.70	20.0	1.00	1,000	N	N	N	70	>10,000
E232PC	38 43 31	114 57 37	.50	1.00	20.0	.50	200	N	N	N	20	>10,000
E233PC	38 44 42	114 56 37	1.00	1.00	20.0	.50	200	N	N	N	50	>10,000
E234PC	38 42 59	114 57 37	2.00	.50	5.0	1.00	1,000	N	N	N	100	>10,000
E237PC	38 42 5	114 58 4	.50	.50	7.0	.20	300	N	N	N	50	3,000

Table A-2 -- Spectrographic Analyses of Panned-Concentrates from Stream-Sediment Samples from South Egan Range Study Area, White Pine, Lincoln, and Nye Counties--continued

Sample	Be-ppm	Bi-ppm	Cd-ppm	Co-ppm	Cr-ppm	Cu-ppm	La-ppm	Mo-ppm	Nb-ppm	Ni-ppm	Pb-ppm
	s	s	s	s	s	s	s	s	s	s	s
E170PC	7	N	N	N	50	<10	200	N	70	10	70
E171PC	N	N	N	20	200	50	1,500	N	<50	70	20
E172PC	2	N	N	N	70	20	300	N	N	70	50
E173PC	N	N	N	N	20	<10	1,000	N	N	10	N
E174PC	2	N	N	10	20	<10	500	N	50	10	20
E175PC	N	N	N	20	150	50	2,000	N	50	10	20
E176PC	N	N	N	10	50	10	500	N	70	10	<20
E177PC	N	N	N	N	50	30	500	N	70	70	20
E178PC	2	N	N	N	50	20	200	N	500	10	20
E179PC	7	N	N	N	150	20	1,000	N	N	50	50
E180PC	2	N	N	N	N	<10	300	N	N	10	N
E2014PC	N	N	N	N	50	20	150	N	N	50	20
E201PC	5	N	N	10	100	20	700	N	N	100	100
E202PC	2	N	N	N	20	10	70	N	N	10	20
E203PC	N	N	N	10	150	15	300	N	<50	50	50
E2051PC	2	N	N	20	150	20	1,500	N	150	30	7,000
E209PC	2	N	N	N	N	70	100	N	N	50	3,000
E21012PC	<2	20	N	70	70	70	1,000	N	N	100	>50,000
E2123PC	2	N	N	N	70	20	N	50	N	70	100
E2128PC	<2	N	N	N	150	30	1,000	N	N	70	70
E212PC	<2	N	N	15	N	30	300	N	N	10	5,000
E2130PC	<2	N	N	N	50	30	100	N	N	30	300
E2135PC	2	N	N	N	50	20	300	N	N	10	30
E213PC	N	N	N	N	150	10	150	N	50	10	50
E2143PC	5	N	N	N	300	30	1,500	N	N	70	300
E2150PC	2	N	N	N	N	<10	500	N	100	10	20
E2168PC	7	N	N	N	70	10	700	N	70	10	300
E220PC	2	N	N	10	50	10	200	N	N	30	150
E221PC	<2	N	N	N	70	10	700	N	70	10	70
E222PC	<2	N	N	N	N	<10	N	N	N	10	<20
E2237PC	2	N	N	10	100	30	700	N	N	70	700
E223PC	N	N	N	N	N	<10	100	N	N	10	20
E2247PC	2	N	N	N	50	30	N	N	N	10	70
E224PC	N	N	N	15	100	30	300	N	N	50	20
E225PC	5	N	N	15	100	30	500	10	N	70	50
E226PC	N	N	N	N	N	<10	50	N	N	50	N
E227PC	N	N	N	N	N	<10	70	N	N	N	20
E229PC	2	N	N	N	N	<10	100	N	N	10	N
E2305PC	2	N	N	N	70	30	500	N	N	50	70
E230PC	N	N	N	15	100	20	700	N	N	70	N
E231PC	N	N	N	N	N	10	700	N	N	10	30
E232PC	<2	N	N	N	N	20	500	N	50	10	20
E233PC	2	N	N	N	100	10	300	N	N	10	30
E234PC	N	N	N	10	70	10	2,000	N	<50	30	50
E237PC	N	N	N	10	N	<10	100	N	N	N	N

Table A-2 -- Spectrographic Analyses of Panned-Concentrates from Stream-Sediment Samples from South Egan Range Study Area, White Pine, Lincoln, and Nye Counties--continued

Sample	Sb-ppm s	Sc-ppm s	Sn-ppm s	Sr-ppm s	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s
E170PC	N	10	N	300	30	N	300	N	>2,000	N
E171PC	N	50	50	200	200	N	500	N	>2,000	N
E172PC	N	30	N	500	100	N	200	N	>2,000	N
E173PC	N	50	N	200	150	N	1,000	N	>2,000	<200
E174PC	N	30	N	500	70	N	150	N	>2,000	N
E175PC	300	70	30	200	300	N	700	N	>2,000	N
E176PC	<200	20	N	500	100	N	300	N	>2,000	N
E177PC	700	20	N	500	70	N	300	N	>2,000	N
E178PC	N	30	N	500	70	N	500	N	>2,000	<200
E179PC	N	20	N	2,000	100	N	1,000	N	>2,000	N
E180PC	N	10	N	700	50	N	150	N	>2,000	N
E2014PC	N	20	N	500	70	N	70	N	>2,000	N
E201PC	N	15	N	1,000	100	N	500	N	>2,000	N
E202PC	N	30	N	500	100	N	70	N	>2,000	N
E203PC	N	30	N	200	150	N	200	N	>2,000	N
E2051PC	N	50	N	700	150	N	300	N	>2,000	N
E209PC	N	10	N	500	100	N	100	N	>2,000	N
E21012PC	N	10	70	5,000	50	N	1,000	N	>2,000	N
E2123PC	N	<10	N	200	50	N	100	N	>2,000	N
E2128PC	N	15	N	5,000	100	N	1,000	N	>2,000	N
E212PC	N	20	N	1,000	50	N	300	N	>2,000	N
E2130PC	N	10	N	200	50	N	150	N	>2,000	N
E2135PC	N	10	N	10,000	100	N	70	N	1,500	N
E213PC	N	20	N	200	100	N	150	N	>2,000	N
E2143PC	N	20	150	1,500	100	N	1,000	N	>2,000	N
E2150PC	N	70	N	1,000	70	N	700	N	>2,000	N
E2168PC	N	15	N	500	70	N	500	N	>2,000	N
E220PC	N	30	N	200	150	N	150	N	>2,000	N
E221PC	N	30	N	10,000	150	N	700	N	>2,000	N
E222PC	N	20	N	200	30	N	50	N	1,500	N
E2237PC	N	10	N	1,500	70	N	700	N	>2,000	N
E223PC	N	10	N	N	70	N	50	N	>2,000	N
E2247PC	N	30	N	500	20	N	70	N	>2,000	N
E224PC	N	20	N	N	200	N	200	N	>2,000	N
E225PC	N	20	N	1,500	100	N	500	1,000	>2,000	N
E226PC	N	10	N	200	50	N	70	N	>2,000	N
E227PC	N	10	N	10,000	30	N	70	N	1,500	N
E229PC	N	<10	N	2,000	20	N	70	N	1,000	N
E2305PC	200	70	N	1,000	70	N	300	N	>2,000	N
E230PC	N	30	N	1,500	300	N	1,000	N	>2,000	N
E231PC	N	10	N	1,500	100	N	500	N	>2,000	N
E232PC	N	20	N	10,000	20	N	500	N	>2,000	N
E233PC	N	30	N	2,000	100	N	1,000	N	>2,000	N
E234PC	N	30	N	1,500	100	N	300	N	>2,000	200
E237PC	N	20	N	500	50	N	70	N	>2,000	N

Table A-2 -- Spectrographic Analyses of Panned-Concentrates from Stream-Sediment Samples from South Egan Range Study Area, White Pine, Lincoln, and Nye Counties--continued

Sample	Latitude	Longitude	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	As-ppm s	Au-ppm s	B-ppm s	Ba-ppm s
E238PC	38 41 9	114 58 26	2.00	.20	10.0	1.00	500	N	N	N	150	10,000
E239PC	38 41 19	114 58 19	1.00	.20	5.0	.20	500	N	N	N	100	>10,000
E241DPC	38 32 16	114 57 0	5.00	2.00	20.0	2.00	1,000	N	N	N	70	1,000
E241PC	38 41 13	114 58 57	10.00	.50	20.0	.50	1,500	N	N	N	150	5,000
E243PC	38 40 50	114 57 15	.50	5.00	10.0	.30	200	N	N	N	<20	500
E245PC	38 39 7	114 59 46	5.00	1.50	15.0	.50	700	N	N	N	200	2,000
E246PC	38 39 22	114 58 19	2.00	7.00	50.0	.07	200	1	N	N	20	200
E248PC	38 39 27	114 54 17	10.00	2.00	10.0	2.00	1,500	N	N	N	70	1,500
E249PC	38 38 20	114 58 46	2.00	2.00	20.0	.50	500	N	N	N	50	1,000
E251PC	38 36 31	114 58 16	1.00	.50	20.0	.70	300	N	N	N	50	5,000
E252PC	38 35 37	114 57 3	1.00	2.00	20.0	.50	500	N	N	N	70	>10,000
E253PC	38 37 25	114 58 34	5.00	.50	10.0	.70	1,500	N	N	N	150	1,500
E254PC	38 43 14	114 55 26	1.00	.50	2.0	.70	500	N	N	N	<20	700
E301PC	38 51 8	114 57 34	1.50	.50	20.0	.50	500	N	N	N	20	300
E302PC	38 51 0	114 57 6	5.00	.70	50.0	.20	500	N	N	N	70	7,000
E303PC	38 50 54	114 57 7	2.00	.70	50.0	.20	1,000	N	N	N	70	5,000
E304PC	38 50 46	114 56 16	2.00	1.00	20.0	.20	500	N	N	N	50	10,000
E305PC	38 50 48	114 56 13	1.00	.50	20.0	.10	500	N	N	N	30	5,000
E306PC	38 50 43	114 56 15	2.00	.70	2.0	.50	1,000	N	N	N	50	2,000
E307PC	38 49 29	114 57 1	2.00	1.00	10.0	1.00	1,500	N	N	N	70	1,000
E308PC	38 48 57	114 56 57	2.00	2.00	5.0	.50	1,000	N	N	N	50	7,000
E408PC	38 32 11	114 57 5	2.00	1.50	50.0	.50	500	N	N	N	70	500
E409PC	38 32 14	114 57 3	5.00	1.00	10.0	2.00	1,500	N	N	N	70	5,000
E410PC	38 32 16	114 57 0	.20	.20	5.0	1.00	300	N	N	N	20	500
E411PC	38 33 8	114 57 26	5.00	.70	20.0	1.00	500	N	N	N	50	500
E412PC	38 33 34	114 57 35	2.00	1.00	20.0	1.00	1,000	N	N	N	70	2,000
E413PC	38 33 59	114 58 18	1.00	1.00	15.0	1.00	300	N	N	N	70	7,000
E414PC	38 33 31	114 55 7	1.50	.50	2.0	.50	300	N	N	N	<20	1,000
E415PC	38 34 50	114 58 12	.50	1.00	20.0	.50	300	N	N	N	50	500
E416PC	38 35 26	114 58 30	1.00	.50	20.0	.30	500	N	N	N	70	500

Table A-2 -- Spectrographic Analyses of Panned-Concentrates from Stream-Sediment Samples from South Egan Range Study Area, White Pine, Lincoln, and Nye Counties--continued

Sample	Be-ppm s	Bi-ppm s	Cd-ppm s	Co-ppm s	Cr-ppm s	Cu-ppm s	La-ppm s	Mo-ppm s	Nb-ppm s	Ni-ppm s	Pb-ppm s
E238PC	2	N	N	30	70	30	200	N	N	70	50
E239PC	2	N	N	N	20	20	150	N	N	10	20
E2410PC	5	N	N	N	300	50	1,000	N	300	70	100
E241PC	2	N	N	20	100	100	500	10	N	70	70
E243PC	<2	N	N	N	N	10	500	N	N	10	50
E245PC	2	N	N	N	70	20	150	N	N	10	70
E246PC	<2	N	N	N	N	<10	N	N	N	10	1,000
E248PC	N	N	N	30	150	100	2,000	20	70	100	70
E249PC	2	N	N	N	50	10	200	N	<50	10	20
E251PC	<2	N	N	N	150	30	200	N	N	10	150
E252PC	N	N	N	N	N	10	200	N	N	10	150
E253PC	N	N	N	15	150	100	700	10	50	100	150
E254PC	2	N	N	N	N	15	1,000	N	N	10	20
E301PC	5	N	N	N	70	<10	50	N	N	10	N
E302PC	2	N	N	N	150	20	700	N	N	70	30
E303PC	N	N	N	N	N	10	N	N	N	10	<20
E304PC	<2	N	N	N	N	15	150	N	N	10	20
E305PC	<2	N	N	N	N	10	150	N	N	10	20
E306PC	N	N	N	10	50	20	200	N	N	30	N
E307PC	N	N	N	10	150	50	500	N	<50	50	70
E308PC	2	N	N	15	100	50	200	N	N	10	150
E408PC	<2	N	N	N	70	10	300	N	50	50	150
E409PC	N	N	N	20	150	20	1,000	N	50	20	30
E410PC	2	N	N	N	N	<10	100	N	50	N	N
E411PC	<2	N	N	N	150	20	300	N	150	100	20
E412PC	2	N	N	N	100	10	300	N	N	10	N
E413PC	2	N	N	N	150	<10	200	N	150	10	20
E414PC	5	N	N	N	N	<10	500	N	N	10	20
E415PC	N	N	N	N	70	50	50	N	N	10	20
E416PC	N	N	N	N	100	15	70	N	N	50	20

Table A-2 -- Spectrographic Analyses of Panned-Concentrates from Stream-Sediment Samples from South Egan Range Study Area, White Pine, Lincoln, and Nye Counties--continued

Sample	Sb-ppm s	Sc-ppm s	Sn-ppm s	Sr-ppm s	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s
E238PC	N	30	30	1,000	100	N	300	N	>2,000	N
E239PC	N	<10	N	2,000	50	N	150	N	1,500	N
E2410PC	N	70	70	1,500	150	N	1,500	N	>2,000	N
E241PC	N	20	N	1,500	300	N	500	N	>2,000	N
E243PC	N	20	N	200	30	N	150	N	>2,000	N
E245PC	N	30	N	700	100	N	150	N	>2,000	N
E246PC	N	30	N	N	50	N	20	N	1,500	N
E248PC	N	30	N	200	200	N	300	N	>2,000	<200
E249PC	N	30	N	200	100	N	100	N	>2,000	N
E251PC	N	20	N	1,000	70	N	500	N	>2,000	N
E252PC	N	10	N	1,500	70	N	200	N	>2,000	N
E253PC	N	20	N	200	200	N	200	N	>2,000	N
E254PC	N	50	N	700	50	N	300	N	>2,000	<200
E301PC	N	10	N	1,000	50	N	150	N	>2,000	N
E302PC	N	30	N	1,000	150	N	700	N	>2,000	N
E303PC	N	N	N	500	70	N	50	1,000	2,000	N
E304PC	N	30	N	700	30	N	150	N	>2,000	N
E305PC	N	20	N	700	20	N	70	N	>2,000	N
E306PC	N	20	N	200	70	N	100	500	>2,000	N
E307PC	N	30	N	500	150	N	500	N	>2,000	N
E308PC	N	30	N	N	200	N	150	N	>2,000	N
E408PC	N	10	N	1,000	150	N	500	N	>2,000	N
E409PC	N	70	N	500	200	N	700	N	>2,000	N
E410PC	N	20	N	700	70	N	200	N	>2,000	N
E411PC	N	50	N	500	100	N	500	N	>2,000	<200
E412PC	N	30	N	500	100	N	300	N	>2,000	N
E413PC	N	20	N	700	70	N	500	N	>2,000	N
E414PC	N	30	N	200	70	N	500.	N	>2,000	300
E415PC	N	20	N	500	20	N	100	N	>2,000	N
E416PC	N	20	N	200	50	N	70	N	>2,000	N

Table A-3 -- Atomic Absorption Analyses of Water Samples from South Egan Range Study Area, White Pine, Lincoln, and Nye Counties, Nevada

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

Sample	Latitude	Longitude	Ag-ppb aa	As-ppb aa	Li-ppm aa	Ca-ppm aa	Cu-ppb aa	Fe-ppb aa	Mn-ppb aa	K-ppm aa	Mg-ppm aa
E005W	38 35 50	114 54 55	<.2	3.6	<.01	56	<1.0	6.8	1.5	6	13.0
E006W	38 35 56	114 55 0	<.2	2.1	<.01	35	1.1	2.4	<1.0	3	5.5
E007W	38 50 57	114 53 42	<.2	3.5	<.01	40	3.5	8.6	8.0	6	9.3
E018W	38 48 58	114 57 9	<.2	<1.0	.02	51	1.1	5.3	1.4	3	13.0
E060W	38 51 0	115 0 8	<.2	1.6	<.01	50	2.3	7.0	3.1	2	21.0
E081W	38 51 0	115 0 9	<.2	2.0	<.01	54	1.8	1.0	1.3	2	22.0
E082W	38 48 5	115 1 6	<.2	3.4	<.01	55	11.0	34.0	15.0	2	25.0
E083W	38 45 40	115 0 18	<.2	14.0	.02	65	2.8	33.0	38.0	7	41.0
E084W	38 42 23	115 3 31	<.2	2.1	.02	50	6.2	110.0	27.0	5	27.0
E085W	38 41 11	115 3 30	<.2	1.0	<.01	42	10.0	11.0	1.8	2	23.0
E086W	38 41 11	115 3 30	<.2	1.9	.06	42	1.6	7.1	1.9	3	24.0
E087W	38 37 26	115 2 48	<.2	1.2	<.01	58	4.2	27.0	5.5	2	21.0
E088W	38 37 26	115 2 48	<.2	1.6	<.01	61	5.8	12.0	5.6	3	23.0
E089W	38 47 24	115 0 36	<.2	2.3	<.01	70	2.5	160.0	17.0	1	28.0
E101W	38 33 1	114 58 34	<.2	4.5	.02	54	12.0	14.0	1.8	6	19.0
E102W	38 32 23	114 56 5	<.2	6.4	<.01	71	1.1	13.0	1.5	4	22.0
E105W	38 54 11	114 55 21	<.2	2.5	<.01	80	2.0	11.0	1.0	1	20.0
E185W	38 54 17	114 55 14	<.2	1.8	<.01	93	8.5	21.0	5.6	3	30.0
E186W	38 54 17	114 55 14	<.2	2.0	<.01	94	6.2	26.0	6.1	2	30.0
E187W	38 48 45	114 55 25	<.2	1.8	.01	84	12.0	26.0	6.5	2	8.8
E188W	38 48 40	114 54 10	<.2	2.5	<.01	47	6.8	19.0	5.0	3	4.9
E189W	38 48 38	114 52 50	<.2	2.1	<.01	65	2.0	38.0	3.6	2	4.5
E190W	38 48 40	114 54 10	<.2	1.9	<.01	55	2.9	20.0	11.0	2	11.0
E191W	38 46 50	114 56 38	<.2	<1.0	<.01	15	2.6	100.0	150.0	3	4.6
E192W	38 45 41	114 53 45	<.2	2.4	.02	49	3.1	26.0	6.6	3	4.3
E193W	38 45 20	114 54 18	<.2	5.4	<.01	65	<1.0	31.0	37.0	2	6.0
E194W	38 44 37	114 54 55	<.2	5.7	.01	61	1.6	47.0	26.0	4	8.5
E195W	38 44 36	114 54 55	<.2	6.4	<.01	63	<1.0	28.0	21.0	4	9.0
E196W	38 44 30	114 56 16	<.2	3.6	.17	130	2.8	21.0	3.5	1	35.0
E204W	38 50 10	114 53 13	<.2	4.1	<.01	47	1.5	14.0	22.0	8	7.2
E205W	38 50 2	114 53 2	<.2	6.2	<.01	62	1.3	22.0	1.3	8	8.6
E214W	38 53 43	114 53 57	<.2	1.8	<.01	59	42.0	110.0	17.0	1	3.3
E215W	38 53 3	114 53 56	<.2	1.3	<.01	12	4.2	420.0	11.0	2	1.4
E217W	38 52 33	114 53 54	<.2	1.8	<.01	62	2.4	60.0	12.0	1	3.4
E254W	38 43 14	114 55 26	<.2	2.8	<.01	31	1.9	35.0	5.4	1	5.9
E255W	38 43 8	114 55 52	<.2	2.7	<.01	24	9.2	120.0	11.0	2	5.1
E256W	38 42 44	114 58 10	<.2	1.5	<.01	30	4.4	60.0	15.0	1	15.0
E257W	38 41 22	114 57 43	<.2	2.9	.06	85	4.0	300.0	46.0	8	25.0
E258W	38 41 18	114 57 44	<.2	1.3	.02	46	5.8	400.0	30.0	1	28.0
E259W	38 40 41	114 59 18	<.2	<1.0	<.01	27	9.2	2,400.0	100.0	2	8.0
E260W	38 40 30	114 59 43	<.2	1.9	.02	65	6.2	1,800.0	77.0	2	11.0
E261W	38 38 10	114 55 30	<.2	2.4	.02	71	6.4	100.0	11.0	2	13.0
E262W	38 36 35	114 57 36	<.2	1.8	.03	80	6.0	100.0	16.0	5	21.0
E318W	38 52 22	114 53 59	<.2	2.4	<.01	71	5.1	390.0	30.0	1	4.6
E400W	38 50 57	114 53 42	<.2	2.9	<.01	39	<1.0	8.6	12.0	4	9.6

Table A-3 -- Atomic Absorption Analyses of Water Samples from South Egan Range Study Area, White Pine, Lincoln, and Nye Counties, Nevada

Sample	Mo-ppb aa	Na-ppm aa	Pb-ppb aa	Sb-ppb aa	Zn-ppb aa	SO4--ppm	ALKALINEppm	F-ppm	CL--ppm	SP COND-µs
E005W	<1	25	<1.0	<1	9.0	27.0	210	.20	13.0	420
E006W	<1	14	<1.0	<1	13.0	7.2	130	.20	3.7	290
E007W	<1	17	<1.0	<1	5.2	13.0	180	.20	4.6	340
E018W	1	12	<1.0	<1	6.2	71.0	130	.20	5.4	450
E080W	<1	4	1.2	<1	7.1	8.3	270	.10	3.8	480
E081W	<1	4	<1.0	<1	4.3	11.0	270	.10	1.9	460
E082W	1	7	<1.0	<1	11.0	18.0	200	.20	3.0	500
E083W	7	10	<1.0	<1	5.6	27.0	390	.30	3.1	420
E084W	<1	9	<1.0	<1	13.0	1.8	300	.20	2.3	530
E085W	<1	10	<1.0	<1	33.0	21.0	150	.60	3.0	460
E086W	1	10	<1.0	<1	30.0	21.0	240	.30	2.4	420
E087W	<1	7	<1.0	<1	9.5	13.0	290	.20	2.6	520
E088W	<1	7	<1.0	<1	5.1	15.0	280	.30	4.3	540
E089W	1	7	<1.0	<1	5.8	17.0	350	.20	1.8	610
E101W	1	24	<1.0	<1	10.0	23.0	260	.30	10.0	540
E102W	1	33	<1.0	<1	1.3	46.0	290	.30	25.0	660
E105W	<1	6	<1.0	<1	2.2	34.0	290	.10	3.1	600
E185W	1	9	<1.0	<1	6.5	30.0	410	.40	4.2	750
E186W	1	9	<1.0	<1	5.1	23.0	450	.20	3.3	750
E187W	1	8	<1.0	<1	4.5	48.0	216	.20	4.3	510
E188W	3	8	<1.0	<1	2.4	19.0	160	.20	2.4	320
E189W	1	5	<1.0	<1	2.0	13.0	250	.10	2.3	410
E190W	2	17	<1.0	<1	1.2	25.0	230	.20	3.9	430
E191W	5	5	<1.0	<1	3.2	8.8	67	.30	1.0	140
E192W	2	26	2.4	<1	1.9	9.5	230	.20	2.6	390
E193W	2	19	<1.0	<1	1.4	20.0	250	.20	3.3	460
E194W	<1	27	<1.0	<1	1.5	34.0	250	.20	11.0	510
E195W	2	26	<1.0	<1	1.4	29.0	250	.20	9.7	490
E196W	9	15	<1.0	<1	2.0	250.0	250	1.00	9.2	970
E204W	<1	10	<1.0	<1	2.1	12.0	170	.30	2.7	350
E205W	<1	11	<1.0	<1	1.4	13.0	170	.20	2.2	310
E214W	<1	4	<1.0	<1	26.0	4.0	190	.08	1.4	350
E215W	<1	3	2.9	<1	8.3	4.3	24	.05	1.2	68
E217W	<1	3	<1.0	<1	5.8	5.0	190	.10	1.3	360
E254W	<1	7	<1.0	<1	4.2	11.0	120	.30	3.2	250
E255W	<1	10	<1.0	<1	8.4	9.0	97	.08	4.0	210
E256W	<1	10	<1.0	<1	6.0	27.0	320	.30	5.6	580
E257W	3	13	<1.0	<1	4.8	19.0	400	.30	11.0	680
E258W	1	4	<1.0	<1	4.4	9.1	260	.40	1.3	410
E259W	2	7	<1.0	<1	13.0	20.0	100	.30	1.5	230
E260W	2	8	1.3	<1	11.0	19.0	230	.20	24.0	400
E261W	<1	10	<1.0	<1	5.5	13.0	300	.30	6.5	500
E262W	9	31	<1.0	<1	6.7	120.0	230	.30	14.0	690
E318W	<1	5	1.8	<1	8.4	5.7	200	.09	1.7	400
E400W	<1	16	<1.0	<1	3.5	14.0	180	.20	5.0	360

Table A-3 -- Atomic Absorption Analyses of Water Samples from South Egan Range Study Area, White Pine, Lincoln, and Nye Counties, Nevada--continued

Sample	Latitude	Longitude	Ag-ppb aa	As-ppb aa	Li-ppm aa	Ca-ppm aa	Cu-ppb aa	Fe-ppb aa	Mn-ppb aa	K-ppm aa	Mg-ppm aa
E401W	38 40 9	114 56 14	<.2	2.5	<.01	62	1.0	5.2	<1.0	1	12.0
E402W	38 38 39	114 57 36	<.2	1.8	<.01	66	1.7	90.0	<1.0	1	5.1
E403W	38 39 22	114 56 55	<.2	2.7	<.01	78	1.9	120.0	5.9	8	3.9
E404W	38 39 56	114 56 16	<.2	2.5	<.01	75	1.6	8.6	<1.0	1	5.2
E405W	38 39 56	114 56 34	<.2	1.3	<.01	67	<1.0	4.2	1.1	2	8.7
E406W	38 40 44	114 55 11	<.2	3.3	.01	71	14.0	20.0	60.0	8	17.0
E407W	38 42 42	114 57 0	<.2	12.0	<.01	53	1.8	3.8	1.8	5	12.0

Table A-3-- Atomic Absorption Analyses of Water Samples from South Egan Range Study Area, White Pine, Lincoln, and Nye Counties, Nevada--continued

Sample	Mo-ppb aa	Na-ppm aa	Pb-ppb aa	Sb-ppb aa	Zn-ppb aa	SO4--ppm	ALKALINE-ppm	F-ppm	CL--ppm	SP COND-µs
E401W	<1	4	<1.0	<1	5.1	6.4	240	.10	1.9	410
E402W	<1	6	<1.0	<1	4.9	7.0	230	.10	1.6	390
E403W	2	3	<1.0	<1	6.6	12.0	260	.30	1.5	470
E404W	<1	5	<1.0	<1	2.6	11.0	290	.20	2.3	420
E405W	<1	7	<1.0	<1	1.6	14.0	250	.30	2.3	410
E406W	3	50	1.1	<1	15.0	70.0	240	.30	15.0	410
E407W	2	69	<1.0	<1	2.1	31.0	290	.20	17.0	410

Table A-4.-- Spectrographic and Atomic Absorption Analyses of Rock Samples from South Egan Range Study Area, White Pine, Lincoln, and Nye Counties Nevada.

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

Sample	Latitude	Longitude	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	As-ppm s	Au-ppm s	B-ppm s	Ba-ppm s
E008R	38 52 38	114 55 50	.5	.05	10.00	.050	1,000	N	N	N	10	500
E009R	38 52 39	114 56 51	.1	.02	.20	.050	50	N	N	N	<10	20
E104R	38 36 35	114 57 40	.1	.05	5.00	.020	50	N	N	N	50	<20
E107R	38 54 10	114 54 55	.1	.10	2.00	.010	20	N	N	N	N	<20
E108R	38 54 10	114 55 8	10.0	.05	.30	.020	200	N	200	N	10	<20
E109R	38 54 19	114 55 16	10.0	.10	10.00	.200	50	200.0	300	N	10	20
E110R	38 54 16	114 55 34	2.0	1.00	20.00	.100	>5,000	20.0	N	N	N	20
E110R	38 54 16	114 55 34	10.0	1.00	10.00	.200	2,000	500.0	700	N	15	<20
E111R	38 54 17	114 55 36	5.0	.10	10.00	.200	300	5.0	300	N	10	100
E114R	38 54 24	114 55 16	20.0	.02	.05	.100	10	2.0	3,000	N	70	20
E115R	38 54 22	114 55 14	1.0	.10	1.00	.100	100	N	N	N	10	1,000
E117R	38 50 5	114 56 29	10.0	.10	.50	.100	100	N	300	N	30	100
E129R	38 43 26	114 59 59	10.0	.10	.20	.020	10	N	N	N	50	100
E145R	38 48 7	114 56 37	.5	5.00	10.00	<.002	20	N	N	N	N	[illegible]
E146R	38 48 3	114 56 39	.1	5.00	10.00	.005	50	N	N	N	10	<20
E152R	38 43 32	114 54 47	2.0	.30	5.00	.500	500	N	N	N	10	1,000
E160R	38 41 50	114 54 39	1.0	.10	.50	.100	30	N	N	N	50	200
E163R	38 40 46	114 55 57	7.0	.10	1.00	.020	500	N	1,000	N	10	200
E166R	38 38 59	114 55 41	.1	.10	2.00	<.002	50	N	N	N	10	<20
E206R	38 54 25	114 55 19	2.0	1.00	5.00	.100	700	N	N	N	N	700
E206R	38 54 25	114 55 19	3.0	2.00	5.00	.100	500	N	N	N	<10	1,000
E207R	38 54 5	114 56 4	7.0	.20	20.00	.200	500	100.0	500	N	10	200
E208R	38 54 6	114 56 2	2.0	.02	.50	.200	100	10.0	2,000	N	50	300
E209R	38 53 40	114 56 6	20.0	.20	5.00	.050	200	150.0	>10,000	N	70	200
E211R	38 53 31	114 56 1	20.0	.10	20.00	.050	500	100.0	1,000	N	50	500
E235R	38 42 58	114 57 33	1.0	.50	2.00	.200	200	N	N	N	100	1,000

Table A-4.-- Spectrographic and Atomic Absorption Analyses of Rock Samples from South Egan Range Study Area, White Pine, Lincoln, and Nye Counties Nevada.

Sample	Be-ppm s	Bi-ppm s	Cd-ppm s	Co-ppm s	Cr-ppm s	Cu-ppm s	La-ppm s	Mo-ppm s	Nb-ppm s	Ni-ppm s	Pb-ppm s	Sb-ppm s	Sc-ppm s
E008R	1	N	N	N	20	150	N	N	N	10	150	N	N
E009R	N	N	N	N	10	30	N	N	N	10	N	N	N
E104R	<1	N	N	N	10	100	N	N	N	10	10	N	N
E107R	<1	N	N	N	<10	70	N	N	N	N	10	N	N
E108R	2	N	N	10	10	200	N	70	N	50	500	N	5
E109R	N	700	500	N	100	>20,000	50	50	N	10	10,000	N	5
E110R	N	15	>500	20	30	3,000	N	20	N	5	5,000	N	N
E110R	1	200	>500	30	50	>20,000	N	N	N	10	>20,000	N	10
E111R	<1	N	N	N	30	5,000	100	50	N	10	70	N	5
E114R	N	N	100	N	10	1,000	N	N	N	N	10,000	N	N
E115R	2	N	N	N	<10	150	100	N	N	N	70	N	5
E117R	N	N	N	N	20	100	20	N	N	5	10	N	N
E129R	1	N	N	N	20	100	N	N	N	30	70	N	N
E145R	N	N	N	N	10	100	N	N	N	N	100	N	N
E146R	N	N	N	N	10	100	N	N	N	N	20	N	N
E152R	1	N	N	5	20	7	70	N	20	5	30	N	15
E160R	<1	N	N	N	300	100	100	N	N	20	10	100	5
E163R	1	N	N	10	50	200	N	20	N	50	100	100	N
E166R	N	N	N	N	10	70	N	N	N	N	N	N	N
E206R	2	N	N	N	10	150	100	N	N	5	200	N	10
E206R	2	N	N	N	10	100	100	N	<20	5	30	N	5
E207R	<1	100	N	20	70	10,000	20	N	N	20	500	100	5
E208R	<1	N	N	N	30	100	70	N	N	10	70	200	N
E209R	N	N	>500	10	50	20,000	150	N	N	10	>20,000	N	5
E211R	<1	N	N	N	20	1,000	N	15	N	20	20,000	N	N
E235R	2	N	N	N	10	150	70	N	N	5	30	N	5

Table A-4 -- Spectrographic and Atomic Absorption Analyses of Rock Samples from South Egan Range Study Area, White Pine, Lincoln, and Nye Counties Nevada.

Sample	Sn-ppm s	Sr-ppm s	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s	Au-ppm aa	As-ppm aa	Ag-ppm aa	Sb-ppm aa
E008R	N	N	30	N	N	N	10	N	<.05	N	.25	N
E009R	N	N	10	N	N	N	100	N	N	N	N	N
E104R	N	N	10	N	N	N	10	N	N	N	N	N
E107R	N	N	10	N	N	N	10	N	N	N	N	N
E108R	N	N	20	N	10	1,000	50	N	N	90	.10	N
E109R	200	N	100	N	50	10,000	100	N	.20	1,000	250.00	N
E110R	30	200	20	N	20	>10,000	100	N	N	40	5.10	N
E110R	200	100	50	N	50	>10,000	100	N	.85	1,000	220.00	N
E111R	200	100	100	N	20	700	100	N	<.05	660	3.90	N
E114R	150	100	20	N	N	5,000	70	N	N	3,300	7.00	N
E115R	N	200	10	N	100	N	200	N	N	<5	N	N
E117R	N	N	100	N	10	N	200	N	N	580	N	N
E129R	10	N	1,000	N	30	300	N	N	N	90	.10	N
E145R	N	N	10	N	N	N	N	N	N	<5	N	N
E146R	N	N	10	N	N	N	N	N	N	N	N	N
E152R	N	700	100	N	50	N	500	N	<.05	>200	.10	30
E160R	N	500	200	N	20	N	100	100	N	30	2.80	N
E163R	N	N	200	N	10	500	10	N	N	1,500	N	N
E166R	N	N	10	N	N	N	N	N	N	5	N	N
E206R	N	200	10	N	50	500	200	N	N	10	.20	N
E206R	N	200	10	N	30	N	200	N	N	N	N	N
E207R	N	300	50	N	20	2,000	100	N	N	1,200	62.00	N
E208R	N	N	50	N	50	N	200	N	1.00	1,900	7.20	N
E209R	50	1,000	70	200	10	>10,000	100	N	N	3,800	92.00	N
E211R	150	100	50	N	N	5,000	70	N	.05	2,000	56.00	N
E235R	N	500	30	N	30	N	200	N	N	<5	N	N