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BOOTSTRAP WINDOW, ELKO AND EUREKA COUNTIES, NEVADA: GEOLOGICAL SUMMARY AND ANALYSES OF ROCK SAMPLES

By

James G. Evans

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GEOLOGICAL SUMMARY AND ANALYSES OF ROCK SAMPLES

By James G. Evans
Menlo Park, California

The geology of the Bootstrap Window is summarized in this report in order to provide a background for the presentation of the analytical results of rock samples from the window. The surface rock samples were collected in 1971 and submitted for spectrographic analysis and atomic absorption analysis for gold and mercury. The data presented here are the only ones available for publication. Since 1971 some of the sample localities have been removed by mining.

The Bootstrap Window in the Roberts Mountains thrust of north-central Nevada (fig. 1) contains a 1,500-foot-thick (460 m) autochthonous section of carbonate assemblage rocks. These carbonate rocks include the upper part of the Roberts Mountains Formation and an unnamed limestone of Devonian age. They contain abundant material that must have been deposited in or near a reef. Allochthonous cherts and shales of the siliceous assemblage, probably Ordovician and Silurian in age like the siliceous assemblage in the nearby Rodeo Creek NE quadrangle (Evans, 1974), are present around the window and in a north-trending graben within the window.

The Paleozoic rocks contain altered dikes, most of which may originally have been granodiorite. Localized recrystallization in the Paleozoic rocks probably occurred at the time of intrusion. Sometime after the intrusion both the dikes and their host rocks were epithermally altered.

Development at the Bootstrap mine in this century was within the complex 600-foot-wide (184 m) steeply dipping fault zone at the north end of the window. Gold ore came principally from an altered porphyry dike. Total production of gold through November 1959 was $330,532. Antimony ore was also mined and hauled to Dunphy in 1914 but was not shipped (Lawrence, 1963, p. 58).

Recent interest in the Bootstrap mine area arose from the similarities between the altered and mineralized limestone there and the limestone at the Carlin gold mine. The Carlin Gold Mine Co. controls the mining claims in the Bootstrap Window and has investigated the gold potential of the area. The conclusions of these studies have not been released. However, a low-grade gold ore body is being mined by open pit methods at the north end of the window. Ore bodies at the Bootstrap mine and at the Blue Star mine, 8 miles (13 km) southeast of the Bootstrap Window, together are estimated at 1.1 million tons averaging less than 0.297 ounces/ton (West, 1974, p. 572).

Rock sample sites are shown on the geologic map (fig. 2). The analyses are listed in three groups: samples from the siliceous assemblage (table 1), samples from the carbonate assemblage (table 2), samples from the altered dikes (table 3). The lower limits of detection

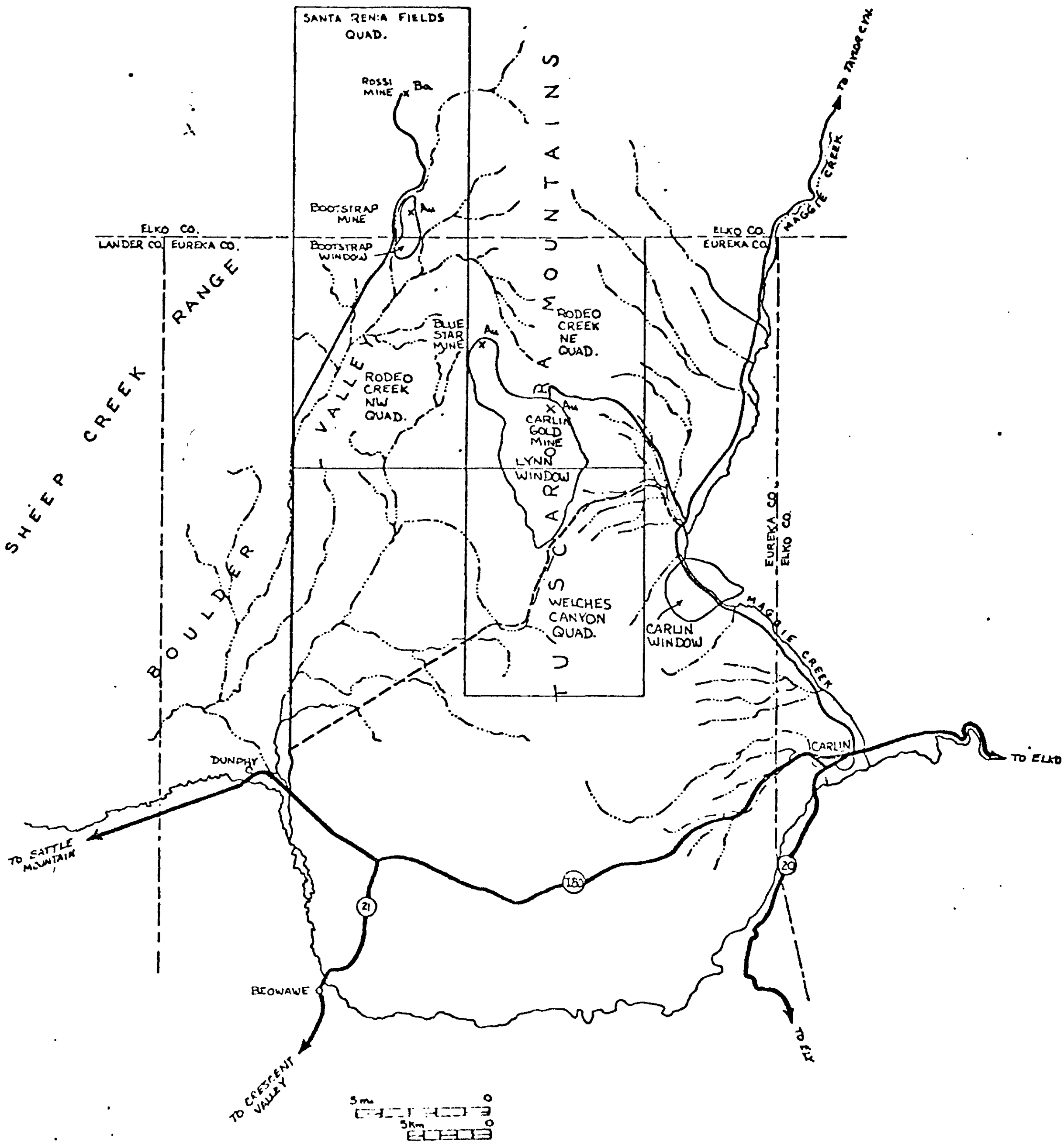

Figure 1. Index map.

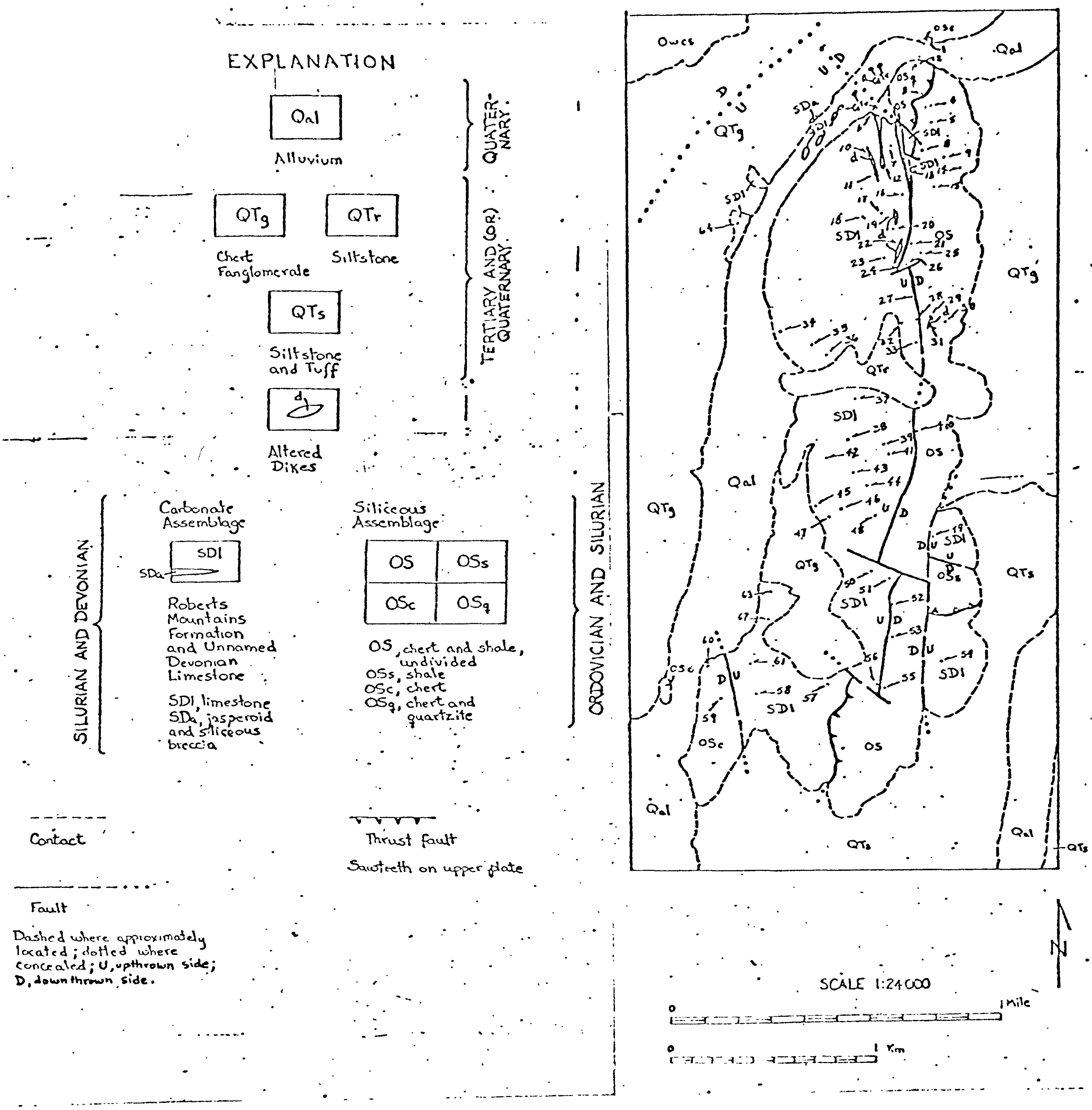

Figure 2. Geologic map of the Bootstrap Window. Numbered points are sample sites.

are shown in table 4 with an explanation of letter symbols used in reporting the analytical results.

Samples with at least 1 ppm gold (max 14 ppm) were collected from the rocks of the siliceous assemblage south of the old mine workings along the steep north-trending fault zone in the west side of the graben of siliceous assemblage rocks. Samples with gold values greater than or equal to 0.05 ppm (max 0.4 ppm) were taken from several localities in the limestone. Silver and mercury concentrations greater than 0.5 ppm are common and widespread in the Bootstrap area, although the greatest values of these two elements (Ag max 100 ppm; Hg max 8 ppm) were also found in samples from near the north-south fault on the west side of the graben. Concentrations of antimony and zinc greater than or equal to 1,000 ppm (Sb max 5,000 ppm; Zn max 5,000 ppm) occur in samples from the vicinity of the same fault. The high values of zinc are mostly in samples from the siliceous assemblage.

Table 1.--*Analyses of rock samples from the siliceous assemblage*

[See table 4 for lower limits of detection and explanation of letter symbols]

Sample no.	1	2	3	4	5	8	9	14
Fe	0.7	0.2	0.5	20.0	3.0	15.0	0.3	2.0
Mg	.3	.02	.05	.3	.5	2.0	.05	.5
Ca	.05	.2	.2	.1	.2	.5	.05	5.0
Ti	.3	.07	.05	.2	.2	.5	.03	.15
Mn	20.0	70.0	150.0	150.0	30.0	5,000.0	50.0	1,000.0
Ag	N	1.0	L	2.0	.5	N	.7	2.0
As	N	N	L	1,500.0	N	N	L	L
B	100.0	20.0	10.0	50.0	100.0	500.0	20.0	50.0
Ba	1,000.0	700.0	G(5,000.0)	1,000.0	500.0	700.0	200.0	700.0
Be	2.0	1.0	2.0	2.0	1.0	3.0	L	1.0
Bi	N	N	N	N	N	N	N	N
Cd	N	N	N	N	N	70.0	N	20.0
Co	N	N	N	10.0	N	100.0	N	10.0
Cr	50.0	100.0	15.0	100.0	70.0	150.0	L	300.0
Cu	20.0	20.0	30.0	500.0	150.0	300.0	30.0	150.0
La	30.0	20.0	20.0	20.0	30.0	70.0	N	30.0
Mo	N	N	10.0	5.0	N	200.0	N	N
Nb	10.0	L	L	10.0	L	20.0	L	L
Ni	5.0	10.0	15.0	100.0	20.0	2,000.0	5.0	50.0
Pb	N	N	15.0	10.0	15.0	20.0	N	15.0
Sb	N	N	500.0	200.0	N	N	N	N
Sc	7.0	L	5.0	10.0	10.0	30.0	5.0	10.0
Sn	N	N	N	N	N	N	N	N
Sr	100.0	200.0	150.0	100.0	L	100.0	N	300.0
V	150.0	500.0	50.0	1,000.0	300.0	5,000.0	20.0	3,000.0
W	L	N	N	70.0	N	N	N	N
Y	15.0	30.0	10.0	30.0	20.0	100.0	L	50.0
Zn	N	N	N	500.0	N	5,000.0	L	300.0
Zr	150.0	20.0	50.0	200.0	200.0	300.0	50.0	70.0
Au	.25	.1	L	.05	.2	.15	L	L
Hg	.1	.24	.26	.16	.08	3.0	.28	.45

Table 1.--*Analyses of rock samples from the siliceous assemblage*--Continued

Sample no.	15	21	24	26	29	30A	40
Fe	7.0	3.0	5.0	2.0	1.0	5.0	1.0
Mg	.3	.3	1.0	.2	.15	1.0	.7
Ca	.3	.7	1.0	.2	.15	.15	10.0
Ti	.15	.2	.3	.15	.15	.5	.05
Mn	100.0	1,000.0	700.0	200.0	70.0	150.0	150.0
Ag	100.0	2.0	.7	3.0	1.5	1.0	1.5
As	N	L	1,000.0	N	N	N	N
B	50.0	100.0	200.0	70.0	50.0	150.0	15.0
Ba	700.0	G(5,000.0)	700.0	700.0	700.0	500.0	500.0
Be	1.0	1.0	2.0	2.0	2.0	1.5	L
Bi	N	N	N	N	N	N	N
Cd	N	N	L	N	20.0	N	N
Co	N	20.0	10.0	N	N	5.0	N
Cr	50.0	50.0	150.0	20.0	100.0	50.0	30.0
Cu	150.0	100.0	100.0	50.0	100.0	30.0	20.0
La	50.0	20.0	70.0	30.0	30.0	50.0	20.0
Mo	10.0	5.0	100.0	20.0	N	N	10.0
Nb	L	10.0	10.0	10.0	L	20.0	L
Ni	30.0	70.0	200.0	100.0	100.0	50.0	30.0
Pb	20.0	10.0	50.0	10.0	N	15.0	N
Sb	N	100.0	1,000.0	150.0	N	N	N
Sc	10.0	10.0	10.0	5.0	10.0	10.0	5.0
Sn	N	N	N	N	N	N	N
Sr	150.0	200.0	100.0	N	N	L	L
V	500.0	200.0	1,000.0	300.0	5,000.0	300.0	100.0
W	N	N	150.0	N	N	150.0	N
Y	20.0	10.0	30.0	20.0	50.0	20.0	15.0
Zn	L	300.0	1,000.0	500.0	500.0	N	300.0
Zr	100.0	150.0	300.0	200.0	150.0	700.0	50.0
Au	.2	2.0	14.0	1.0	.1	L	.25
Hg	.3	.9	.14	8.0	.24	.05	.2

Table 1.--*Analyses of rock samples from the siliceous assemblage*--Continued

Sample no.	52	53	55	59	60
Fe	0.5	7.0	7.0	0.5	1.5
Mg	.1	.2	.3	.1	.07
Ca	.2	.7	.7	.1	.05
Ti	.1	.2	.2	.15	.05
Mn	700.0	1,000.0	150.0	50.0	150.0
Ag	3.0	2.0	L	1.5	1.0
As	N	N	500.0	N	N
B	10.0	70.0	70.0	50.0	20.0
Ba	300.0	1,500.0	1,000.0	1,500.0	200.0
Be	1.0	2.0	5.0	1.0	L
Bi	N	N	N	N	N
Cd	N	20.0	N	N	N
Co	10.0	10.0	5.0	N	N
Cr	50.0	70.0	100.0	100.0	30.0
Cu	100.0	200.0	100.0	20.0	30.0
La	50.0	30.0	50.0	20.0	N
Mo	10.0	20.0	200.0	N	10.0
Nb	L	10.0	15.0	10.0	L
Ni	70.0	100.0	200.0	15.0	20.0
Pb	20.0	15.0	15.0	N	N
Sb	N	N	700.0	N	N
Sc	5.0	15.0	20.0	7.0	L
Sn	N	N	N	N	N
Sr	L	150.0	N	N	N
V	3,000.0	1,000.0	5,000.0	500.0	1,000.0
W	N	L	1,000.0	N	N
Y	30.0	20.0	100.0	300.0	10.0
Zn	300.0	1,000.0	1,500.0	N	N
Zr	70.0	70.0	200.0	70.0	15.0
Au	N	.15	N	L	N
Hg	6.0	1.0	.35	.24	.16

Table 1.--*Analyses of rock samples from the siliceous assemblage*--Continued

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Sample descriptions:

1. Brecciated white chert
2. Brecciated chert and quartzite
3. Quartzite
4. Brecciated and yellow-stained chert
5. Red gouge and breccia
8. Gouge and breccia
9. Yellow and red-stained black chert
14. Chert breccia
15. Red-brown gouge and breccia
21. Barite-veined siliceous breccia
24. Gouge and breccia
26. Chert breccia
29. Thin-bedded to laminated black chert and brown cherty shale
30A. Red and yellow altered siltstone
40. Calcite-veined fault breccia
52. Red-stained black chert
53. Brecciated black chert
55. Thin-bedded brown cherty shale and black chert
59. Red-stained black chert
60. Black chert

Table 2.--*Analyses of rock samples from the carbonate assemblage*

[See table 4 for lower limits of detection and explanation of letter symbols]

Sample no.	6	7	12	13	17	18
Fe	1.0	5.0	.3	2.0	1.0	.3
Mg	.07	10.0	.05	.3	1.0	.5
Ca	.5	20.0	.5	.2	G(20.0)	G(20.0)
Ti	.03	.3	.02	.2	.1	.05
Mn	150.0	200.0	150.0	200.0	150.0	70.0
Ag	20.0	.5	.5	1.0	L	N
As	N	N	N	N	N	N
B	10.0	200.0	15.0	100.0	L	N
Ba	300.0	300.0	700.0	1,000.0	200.0	30.0
Be	1.5	1.0	2.0	2.0	L	L
Bi	N	N	N	N	N	N
Cd	N	N	N	N	N	N
Co	N	10.0	N	5.0	N	N
Cr	L	150.0	L	70.0	30.0	10.0
Cu	100.0	20.0	20.0	100.0	10.0	5.0
La	N	50.0	20.0	50.0	30.0	L
Mo	N	N	N	L	5.0	N
Nb	L	10.0	L	L	N	N
Ni	10.0	100.0	15.0	100.0	20.0	5.0
Pb	10.0	20.0	N	10.0	10.0	N
Sb	5,000	N	300.0	L	N	N
Sc	L	15.0	L	5.0	7.0	5.0
Sn	N	N	N	N	N	N
Sr	L	100.0	100.0	100.0	200.0	150.0
V	50.0	300.0	100.0	200.0	150.0	20.0
W	50.0	N	N	N	N	N
Y	10.0	30.0	10.0	10.0	30.0	L
Zn	N	N	N	500.0	N	N
Zr	20.0	150.0	20.0	100.0	100.0	100.0
Au	.3	N	.3	.1	L	L
Hg	.8	.55	1.5	1.0	.14	.35

Table 2.--*Analyses of rock samples from the carbonate assemblage*--Continued

Sample no.	20	23	27	33	34	35	36	37
Fe	3.0	3.0	10.0	10.0	0.2	7.0	1.0	2.0
Mg	.7	.5	.7	3.0	.3	1.0	1.0	.7
Ca	20.0	20.0	.5	.5	.15	G(20.0)	20.0	.7
Ti	.3	.2	.5	.7	.2	.15	.2	.2
Mn	100.0	200.0	150.0	150.0	20.0	150.0	20.0	70.0
Ag	.5	1.0	100.0	N	.5	N	N	.7
As	N	N	N	N	N	N	N	N
B	100.0	70.0	300.0	10.0	70.0	L	20.0	70.0
Ba	70.0	500.0	500.0	1,000.0	2,000.0	5,000.0	1,000.0	500.0
Be	1.0	1.0	3.0	5.0	2.0	1.0	L	1.5
Bi	N	N	N	N	N	N	N	N
Cd	N	N	N	N	N	N	N	N
Co	L	5.0	10.0	30.0	N	N	N	N
Cr	70.0	70.0	150.0	500.0	20.0	70.0	70.0	70.0
Cu	20.0	15.0	30.0	100.0	20.0	20.0	20.0	100.0
La	50.0	20.0	50.0	50.0	20.0	20.0	20.0	30.0
Mo	N	N	7.0	N	N	N	N	N
Nb	L	L	20.0	15.0	L	L	L	L
Ni	20.0	15.0	100.0	500.0	5.0	20.0	5.0	20.0
Pb	10.0	10.0	70.0	15.0	N	20.0	N	10.0
Sb	N	100.0	100.0	N	N	N	N	N
Sc	10.0	7.0	20.0	30.0	7.0	10.0	7.0	10.0
Sn	N	N	N	N	N	N	N	N
Sr	100.0	N	L	N	N	150.0	100.0	L
V	300.0	200.0	300.0	200.0	500.0	300.0	50.0	150.0
W	N	N	150.0	200.0	N	L	50.0	N
Y	30.0	20.0	50.0	30.0	10.0	50.0	L	30.0
Zn	N	200.0	1,500.0	2,000.0	N	L	N	N
Zr	500.0	200.0	200.0	200.0	200.0	150.0	150.0	500.0
Au	N	.05	.05	.1	.1	N	N	N
Hg	.16	.24	.18	.17	.22	.06	.11	.07

Table 2.--*Analyses of rock samples from the carbonate assemblage*--Continued

Sample no.	38	39	41	42	43	44	45
Fe	3.0	1.5	5.0	5.0	1.5	5.0	5.0
Mg	.3	.3	.5	10.0	.1	.3	1.0
Ca	10.0	3.0	.3	G(20.0)	.3	15.0	20.0
Ti	.2	.15	.5	.5	.15	.3	.15
Mn	50.0	500.0	1,000.0	200.0	20.0	70.0	50.0
Ag	2.0	N	L	L	L	1.5	N
As	N	N	N	N	N	N	N
B	100.0	100.0	200.0	100.0	50.0	70.0	70.0
Ba	150.0	150.0	1,000.0	500.0	150.0	700.0	150.0
Be	2.0	2.0	3.0	1.0	1.0	1.0	1.0
Bi	N	N	N	N	N	N	N
Cd	N	N	N	N	N	N	N
Co	N	N	10.0	10.0	N	10.0	N
Cr	70.0	30.0	L	100.0	15.0	150.0	100.0
Cu	50.0	20.0	50.0	20.0	20.0	50.0	10.0
La	50.0	20.0	150.0	30.0	20.0	50.0	30.0
Mo	N	N	N	N	N	5.0	N
Nb	10.0	10.0	30.0	10.0	L	10.0	L
Ni	100.0	50.0	50.0	15.0	70.0	150.0	20.0
Pb	10.0	N	50.0	15.0	N	15.0	N
Sb	200.0	N	N	N	N	N	N
Sc	15.0	7.0	10.0	15.0	5.0	10.0	10.0
Sn	N	N	N	N	N	N	N
Sr	100.0	N	L	150.0	N	100.0	L
V	200.0	200.0	150.0	150.0	150.0	300.0	100.0
W	L	N	N	N	L	N	500.0
Y	70.0	10.0	30.0	30.0	15.0	50.0	50.0
Zn	N	200.0	N	N	N	500.0	N
Zr	500.0	70.0	500.0	300.0	100.0	200.0	70.0
Au	.4	.1	.1	N	N	.05	N
Hg	.26	.4	.1	.1	.18	.26	.08

Table 2.--*Analyses of rock samples from the carbonate assemblage*--Continued

Sample no.	46	47	48	49	50	51	54	56
Fe	5.0	2.0	.3	2.0	3.0	5.0	3.0	3.0
Mg	.2	5.0	.7	.7	10.0	7.0	5.0	10.0
Ca	.3	G(20.0)	7.0	G(20.0)	20.0	1.5	10.0	15.0
Ti	.15	.15	.05	.1	.2	.3	.2	.2
Mn	100.0	200.0	50.0	500.0	150.0	100.0	150.0	150.0
Ag	N	N	20.0	.7	3.0	5.0	N	.7
As	N	N	N	N	N	N	N	N
B	100.0	20.0	10.0	L	70.0	100.0	50.0	100.0
Ba	150.0	100.0	100.0	700.0	1,000.0	1,000.0	500.0	500.0
Be	10.0	L	L	L	1.0	1.0	1.0	1.0
Bi	N	N	N	N	N	N	N	N
Cd	N	N	N	20.0	N	N	N	N
Co	L	5.0	N	N	5.0	5.0	5.0	N
Cr	20.0	100.0	15.0	70.0	200.0	300.0	50.0	150.0
Cu	30.0	10.0	100.0	15.0	50.0	70.0	30.0	30.0
La	30.0	20.0	L	30.0	30.0	20.0	30.0	50.0
Mo	N	N	N	N	5.0	L	L	N
Nb	10.0	L	L	N	10.0	10.0	L	L
Ni	20.0	10.0	20.0	30.0	100.0	100.0	20.0	50.0
Pb	N	10.0	10.0	20.0	10.0	15.0	10.0	20.0
Sb	300.0	N	N	N	N	N	N	N
Sc	7.0	7.0	L	7.0	15.0	15.0	10.0	15.0
Sn	N	N	N	N	N	N	N	N
Sr	N	100.0	L	200.0	200.0	L	100.0	150.0
V	200.0	30.0	200.0	1,000.0	500.0	500.0	200.0	150.0
W	300.0	N	N	N	N	N	N	N
Y	10.0	20.0	15.0	20.0	30.0	20.0	20.0	30.0
Zn	N	N	200.0	200.0	200.0	200.0	N	N
Zr	70.0	70.0	15.0	100.0	150.0	200.0	150.0	100.0
Au	.1	N	N	N	N	N	N	N
Hg	.24	.26	.75	.35	.55	1.5	.55	.12

Table 2.--*Analyses of rock samples from the carbonate assemblage*--Continued

Sample no.	57	58	61	62	63	64
Fe	7.0	2.0	7.0	7.0	5.0	0.2
Mg	10.0	7.0	2.0	1.5	.5	.05
Ca	20.0	10.0	10.0	.2	.1	.2
Ti	.5	.2	.15	.5	.2	.02
Mn	1,000.0	200.0	200.0	500.0	200.0	50.0
Ag	N	.5	N	N	N	1.0
As	N	N	N	N	N	N
B	150.0	50.0	70.0	200.0	70.0	L
Ba	500.0	500.0	300.0	700.0	5,000.0	G(5,000.0)
Be	2.0	1.0	1.5	5.0	3.0	1.0
Bi	N	N	N	N	N	N
Cd	N	N	N	N	N	N
Co	15.0	L	15.0	10.0	10.0	N
Cr	100.0	70.0	50.0	70.0	50.0	L
Cu	30.0	20.0	100.0	50.0	30.0	15.0
La	50.0	50.0	20.0	70.0	30.0	20.0
Mo	20.0	N	15.0	30.0	5.0	N
Nb	10.0	L	L	15.0	10.0	L
Ni	50.0	20.0	70.0	100.0	70.0	5.0
Pb	15.0	15.0	20.0	15.0	N	N
Sb	N	N	100.0	100.0	200.0	N
Sc	20.0	10.0	10.0	20.0	10.0	L
Sn	N	N	N	N	N	N
Sr	N	200.0	150.0	N	L	200.0
V	150.0	100.0	300.0	300.0	300.0	20.0
W	N	N	L	200.0	500.0	N
Y	50.0	20.0	30.0	30.0	20.0	N
Zn	N	N	300.0	N	N	N
Zr	300.0	500.0	150.0	300.0	200.0	N
Au	N	N	N	N	N	.1
Hg	1.3	.05	.13	.24	.18	.17

Sample descriptions:

6. Siliceous breccia
7. Partly altered laminated limestone
12. Siliceous breccia in altered limestone
13. Altered leached limestone
17. Bioclastic limestone
18. Thick-bedded bioclastic limestone
20. Red laminated dolomitic limestone
23. Yellow siltstone
27. Pink and yellow siltstone
33. Laminated siliceous siltstone
34. White laminated jasperoid
35. Altered rind on thick-bedded limestone
36. Yellow brecciated friable siltstone
37. Yellow siltstone
38. Red siltstone
39. Calcite-cemented jasperoid breccia
41. Thick-bedded bioclastic limestone
42. Red-stained lavender dolomitic limestone
43. Red-stained light-gray-brown laminated siltstone
44. Altered and brecciated siltstone
45. Yellow altered limestone with white calcite veins
46. Brecciated yellow-brown jasperoid
47. Light-red and yellow siltstone
48. Red-stained thin-bedded limestone
49. Yellow altered thick-bedded limestone
50. Violet laminated dolomitic limestone
51. Violet laminated dolomitic limestone
54. Light-brown laminated dolomitic limestone
56. Thin-bedded violet dolomitic limestone
57. Light-brown laminated dolomitic limestone
58. Light-brown-stained laminated limestone
61. Yellow siltstone
62. Yellow siltstone
63. Yellow and maroon siliceous silty limestone
64. Quartz veins in jasperoid

Table 3.--*Analyses of rock samples from altered dikes*

Sample no.	10	11	16	19	22	25
Fe	3.0	5.0	5.0	5.0	5.0	3.0
Mg	.5	.7	.3	.3	.5	.5
Ca	.3	1.5	.3	1.0	.7	.07
Ti	.3	.5	.7	.3	.5	.5
Mn	50.0	1,000.0	100.0	700.0	1,000.0	150.0
Ag	.5	.5	10.0	N	N	N
As	N	N	500.0	200.0	N	N
B	300.0	70.0	200.0	70.0	100.0	100.0
Ba	300.0	1,500.0	200.0	1,000.0	2,000.0	1,000.0
Be	2.0	2.0	1.5	2.0	2.0	1.0
Bi	N	N	N	N	N	N
Cd	N	N	N	N	N	N
Co	5.0	7.0	10.0	10.0	10.0	N
Cr	10.0	10.0	500.0	10.0	10.0	10.0
Cu	20.0	20.0	150.0	20.0	20.0	30.0
La	100.0	150.0	100.0	100.0	100.0	100.0
Mo	N	15.0	30.0	20.0	10.0	15.0
Nb	20.0	20.0	20.0	20.0	20.0	30.0
Ni	15.0	15.0	150.0	150.0	7.0	10.0
Pb	20.0	20.0	15.0	20.0	50.0	20.0
Sb	N	N	500.0	150.0	N	N
Sc	10.0	15.0	15.0	10.0	10.0	7.0
Sn	N	N	N	N	N	N
Sr	100.0	100.0	200.0	L	150.0	100.0
V	300.0	300.0	700.0	300.0	100.0	150.0
W	N	N	150.0	N	N	N
Y	30.0	30.0	50.0	20.0	30.0	20.0
Zn	300.0	300.0	1,500.0	1,000.0	N	N
Zr	200.0	300.0	300.0	300.0	300.0	500.0
Au	.30	.05	2.0	N	N	.15
Hg	1.1	.6	3.0	.16	.12	.16

Table 3.--*Analyses of rock samples from altered dikes*--Continued

Sample no.	28	30B	31	32A	32B
Fe	10.0	5.0	7.0	.5	7.0
Mg	5.0	.5	.7	.5	2.0
Ca	.5	.2	2.0	10.0	2.0
Ti	1.0	.5	.5	.3	.2
Mn	100.0	100.0	150.0	150.0	150.0
Ag	N	N	1.5	N	N
As	N	N	N	N	N
B	L	50.0	150.0	200.0	100.0
Ba	700.0	700.0	1,000.0	3,000.0	G(5,000.0)
Be	3.0	2.0	2.0	5.0	3.0
Bi	N	N	N	N	N
Cd	N	N	N	N	N
Co	70.0	15.0	7.0	5.0	15.0
Cr	700.0	300.0	10.0	L	150.0
Cu	100.0	70.0	100.0	30.0	100.0
La	100.0	50.0	100.0	100.0	50.0
Mo	N	N	7.0	20.0	15.0
Nb	50.0	10.0	20.0	20.0	L
Ni	1,000.0	150.0	150.0	20.0	150.0
Pb	20.0	N	70.0	20.0	70.0
Sb	N	N	100.0	N	300.0
Sc	50.0	15.0	10.0	10.0	20.0
Sn	N	N	N	N	N
Sr	100.0	N	L	200.0	200.0
V	200.0	150.0	200.0	100.0	500.0
W	150.0	10.0	70.0	N	100.0
Y	50.0	20.0	30.0	20.0	50.0
Zn	3,000.0	500.0	300.0	N	500.0
Zr	500.0	200.0	500.0	300.0	150.0
Au	L	N	N	L	.05
Hg	.18	.11	.24	.12	.3

Table 3.--*Analyses of rock samples from altered dikes*--Continued

Sample descriptions:

10.	Altered dikes (granodiorite?)
11.	do.
16.	do.
19.	do.
22.	do.
25.	do.
28.	do.
30B.	do.
31.	do.
32A.	do.
32B.	do.

Table 4.--*Lower limits of determination of elements and letter symbols used in reporting analytical results*

Approximate lower limits of determination for the elements analysed by the six-step spectrographic method:

Element	percent
Fe	0.05
Mg	.02
Ca	.05
Ti	.002

Element	parts per million
Mn	10.0
Ag	.5
As	200.0
B	10.0
Ba	20.0
Be	1.0
Bi	10.0
Cd	20.0
Co	5.0
Cr	5.0
Cu	5.0
La	20.0
Mo	5.0
Nb	10.0
Ni	5.0
Pb	10.0
Sb	100.0
Sc	5.0
Sn	10.0
Sr	100.0
V	10.0
W	50.0
Y	10.0
Zn	200.0
Zr	10.0

The precision of the reported value is approximately plus 100 percent or minus 50 percent.

Approximate lower limits of determination for gold and mercury analysed by atomic absorption in parts per million:

Au	0.05
Hg	.05

N=not detected L=present, but below determination limit G=greater than value shown

References cited

Lawrence, E. F., 1963, Antimony deposits of Nevada: Nevada Bur. Mines Bull. 61, 248 p.

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