Favorable area for zinc exploration, Saratoga County, N.Y.

by

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Three out of 6 samples of dolomite and limonite collected in a shallow road cut on New York State Route 67 just inside Saratoga County, contain 0.08 to 0.6 percent zinc (Table 1). The mineralization appears to be a mixture of iron and zinc sulfides in small inclined fratures. On July 26, 1971, while driving east on New York State Route 67 from Amsterdam to Ballston Spa we observed prominent limonite stains on dolomite, probably Beekmantown Dolomite of Ordovician age, in a road cut in the vicinity of Blue Corners, about 2.5 to 3.5 miles (4-5.5 km) west of the intersection with New York State Route 147 (Pattersonville, N.Y., 7 1/2 minute quadrangle). The road cut should be easy to find because there are only a few cuts along that stretch of road. We collected 6 samples of rock for analysis and the results are reported in table 1. A "gash" vein of sphalerite in an old limestone quarry just west of Saratoga was reported to have been 50 to 60 feet (16-20 m) long and a few inches to a foot (0.1-0.3 m) thick (Newland, David H., 1921, The Mineral resources of the state of New York; New York State Mus. Bull. Nos. 223-224, p. 306). The presence of zinc mineralization along fractures in an area of Ordovician carbonate rocks which contain major zinc deposits in Tennessee, Pennsylvania and Wisconsin and which in this area are faulted on the south side of the Adirondack uplift suggests that exploration for zinc deposits is justified.

Table 1.--Analyses of rock samples from road cut on New York Route 67, 2.5-3.5 miles (4-5.5 km) west of the intersection with N.Y. State Route 147. Semiquantitative spectrographic analyses are by R.T. Hopkins and additional atomic absorption analyses are by J.R. Hassemer, U.S. Geological Survey, Denver, Colorado. Results of the semiquantitative spectrographic analyses are reported to the nearest number in the series 1, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc. which represent approximate midpoints of group data in a geometric scale. The assigned groups for the series will include the quantitative value about 30 percent of the time. The data should not be quoted without stating these limitations. Letter symbols: L, detected but below limit of determination; N, not detected; G, greater than. Elements looked for spectrographically but not found and their lower limit of determination: As(200), Au(10), Bi(10); Cd(20); Cr(10); La(20); Sb(100); Sn(10); and W(50). In addition gold was looked for by atomic absorption but not found at a detection limit of 0.05 ppm.

Semiquantitative Spectrographic Analyses

Samples

Element Percent	Limit of detection	SNY 1	SNY 3	SNY 4	SNY5	SNY 6	SNY 7
Fe	(.05)	1	2	10	G(20)	7	1.5
Mg	(.02)	7	3	0.3	0.2	3	7
Ca	(.05)	10	7	3	0.07	7	10
Ti	(.002)	0.3	0.07	0.07	0.07	0.05	0.03
parts per million							
Ag	(.5)	N	N	1.5	N	N	N
B	(10)	N	10	20	20	10	L
Ba	(20)	70	300	300	300	300	70
Be	(1)	L	L	L	L	L	L
Co	(5)	N	N	30	7	7	N
Cu	(5)	5	30	70	50	50	5
Mn	(10)	300	1000	100	200	500	300
Mo	(5)	N	N	5	10	N	N
Nb	(10)	10	10	L	10	L	L
Ni	(5)	L	20	150	50	30	5
Pb	(10)	10	30	50	30	30	10
Sc	(5)	N	N	N	5	L	N
Sr	(100)	100	100	N	N	150	150
V	(10)	10	20	30	30	20	15
Y	(10)	10	10	10	10	10	10
Zn	(200)	N	N	7000	700	1000	N
Zr	(10)	30	100	100	70	70	50
		Atomic Absorption					
Cu		5	5	40	40	15	<(5)
Pb		40	35	110	100	60	40
Zn		10	75	6000	1300	850	15

Sample descriptions

Sample	
SNY 1	Chip sample, 1 m, barren dolomite, no visible sulfide minerals, north side of road, in road cut.
SNY 3	Grab sample, fresh dolomite, visible sulfides
SNY 4	Chip sample, brecciated dolomite, weathered sulfides.
SNY 5	Chip sample, limonite gossan from vein area
SNY 6	Chip sample, mineralized dolomite, both sides of road
SNY 7	Chip sample, fresh, light gray, dolomite with minor sulfides in seams 0.5 cm long by 1 mm wide.