

J. S. A. (Shawnigan). Dana's "Handbook on Mineralogy," and Schales' "Outlines of Geology," published by the Scientific Publishing Co. of New York, price \$1.50 each, are perhaps the best for your purpose.

A. H. C. (Concord, N. H.) We propose to publish an index this year, but hitherto have not done so.

V.O.W.S. (New York)—We shall be very happy to do as you suggest.

PUBLICATIONS.

THE Pittsburg Reduction Company, of Pittsburg, Pa., have published a very neat little volume of nearly 300 pages devoted chiefly to the manufacture and properties of aluminum, although the book also contains much other useful matter such as comparative tables of weights and measures; metric weights and English equivalents; metric conversion tables and information of a like character. The price is unfortunately not stated.

"Silver mining in the Reco" is the title of a handsomely illustrated pamphlet containing the first report issued by the Reco Mining and Milling Company and compiled by the president, Mr. J. M. Harris, of Sandon.

The "Reco" group must undoubtedly be included as among the profitably worked silver-lead mines of the Slocan, and, as much of the information to be found in the report is new, we take the liberty of quoting as follows:

LOCATION.

The property is located on Reco Mountain, in the heart of the celebrated silver-lead mineral belt of British Columbia, described as the "Slocan." It is at present reached from the town of Sandon by a graded switch-back trail, four miles in length, though in reality the distance to the mine is less than 10,000 feet, and will be spanned by an aerial tramway during the approaching season.

EQUIPMENT.

The mine is equipped with sleeping and dining accommodations for 200 miners. The original boarding house, erected at a cost of \$2,000, was soon found to be inadequate and another, which is at present the most complete and commodious in the Slocan, was built at an additional outlay of \$5,000.

The six ore houses on the property represent an investment of \$3,000, while a similar amount of money was expended on the trails.

In the seven tunnels twelve pound rails are used for track.

VEINS.

What are described as the "leads" in the Slocan belt are in most instances well defined fissures that have in their mineralized origin cut the slate formation at right angles to depths yet unknown and unexplored. It is characteristic of them that great width is a guarantee that large chutes of concentrating ore exist; while conversely in tight and narrow veins, where the fissure is unmistakable, the cavity usually contains mineral of an extraordinary high grade.

Two of the three leads uncovered on the property up to date may be classified as of the latter description. Of the third, known as the Reco-Goodenough lead, or No. 3, Wm. A. Carlyle, provincial mineralogist, in his official report for 1896, says:

"From the small, or Reco-Goodenough vein, lying several hundred feet to the east, has come the richest silver bearing galena yet found in the Kootenay; the silver evidently occurring as argentite, although much ruby silver is found in some of the solid galena. * * * The ore so lies that generally the ground can be mined out along it (the vein), leaving the ore to be afterwards broken down clean. * * * The ore while mined from a small vein is very profitable."

The Reco-Goodenough lead crosses the Reco and Texas claims. What is known as the "Big Lead" or "Ruecau No. 2," parallels No. 3, about 500 feet to the west, in a north-west and southwest course. It is traceable through the "Texas," "Ephraim," "Ruecau," "Clifton" and adjoining claims. It is a large fissure, measuring in places forty feet between walls, and having an average width in the underground and surface exposures of twelve feet. It carries extensive bodies of galena, averaging 175 ounces of silver and 75 per cent. lead to the ton. The great bulk of the ore in the "Big Lead" can be prepared for smelting to the best advantage by concentration, and for that reason its product has been reserved until the mill to be erected by the company for that purpose is in operation. The several thousand tons on the dump will be concentrated five into one, averaging when thus reduced 175 ounces silver and 75 per cent. lead to the ton.

The Texas lead, paralleling the Big Lead 700 feet to the west, and having the same strike and dip as No. 2 and No. 3 leads, traverses the Clifton, New Denver, Ephraim and Texas claims. Several tons of ore on the Texas dump will average 400 ounces silver and 60 per cent. lead. Only assessment work has been done on this lead, because of the difficulties and hardships of development, until such time as the tramway and concentrator plans of the company have been carried out.

SHIPMENT AND PRODUCTION.

The subjoined table showing the production of the mine is compiled from Smelter statements. The total weight of shipments is given annually in pounds, though it should be explained that ore has been taken out only during three winter months each year, owing to the lesser cost of transporting over snow trails. For each year the average yield of ounces of silver and per cent lead per ton is shown, as well as the average value of silver per ounce and the price for lead. From the total of values all incidental expense for shrinkage, transportation charges, treatment and duty has been deducted.

YEAR.	Shipm'ts Net Weight.	Mill Assay.		Price.		*Net Values.
		Silver Ozs.	Lead per Cent.	Silver	Lead	
1894	146,436	175.9	75.7	62.62	3.15	\$ 7,100.91
1895	636,313	251.2	43.4	63.40	3.03	45,448.53
1896	856,557	307.7	36.0	67.53	2.96	79,081.85
+1897	1,178,749	308.9	42.7	64.33	2.98	108,402.28
Total,	2,818,055	\$239,970.37

*Receipts from the smelters after deductions of 5 per cent. silver, 10 per cent. lead,—for smelting loss—duty on lead, and freight and cost of treatment.

†Including only the first three months of the year.

Pursuing an analysis of the returns it is found that the mine has shipped in the four years of its development 1,690 tons of ore, from which have been extracted as a net yield for the company 16.8 tons of silver and 598½ tons of lead. The ounces of silver were 404,035 and the pounds of lead 1,196,987. The entire product of the two classes of ore treated has averaged 239 ounces silver and 42.47 per cent. lead to the ton.

The aggregate of deductions for freight and treatment (not inclusive of the cost of packing from the mine to the railroad warehouses) \$42,200, for duty \$9,884.20; for smelter losses of lead \$3,620.85 and silver \$13,131.02 brings the gross value up to \$308,806.44 or \$182.70 per ton. The net value, or profit to the company for the ore, at the point of shipment, averaged \$141,993 per ton—a showing that would be exceptional even in the case of a first-class gold mine. Put in still another form the first and second classes of the Reco ore average together in value at point of shipment 10.95 cents per pound gross, and 8.50 cents per pound net.

DIVIDENDS.

The following table shows the date and amount of Reco dividends paid to May 1, 1897:

1895	\$ 7,500
1896	30,000
1897, February 15th	100,000
1897, April 30th	50,000

Since this report has been tabulated another dividend of \$100,000 was declared by the management from the proceeds of ore taken out; and larger bodies of ore have been opened up, and regular dividends are now assured for several years from the ore already in sight.

THE ORES.

While lead is the predominating metal in the Reco, as it is in the Slocan mines generally, the ores show extraordinarily high averages of silver value in all the veins.

From No. 2 vein smelter shipments I. (first-class), showing the average of \$104.20 net profit for all the tonnage treated, are of coarse and medium grain galena; and II. (second-class) are vari-coloured carbonates, averaging in net profit \$61.05 per ton. One odd variety of ore found in No. 1 tunnel runs \$400 to the ton. It is a peculiar blend of grey copper and galena that resembles hematite of iron. Stibnite, which ignites and largely evaporates in its own flames, is also disclosed in quantities in this vein. It runs 160 ounces of silver