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CONTRIBUTIONS TO ECONOMIC GEOLOGY

(SHORT PAPERS AND PRELIMINARY REPORTS)

1920

PART I.—METALS AND NONMETALS EXCEPT FUELS

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GEOLOGISTS IN CHARGE

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[The letters in parentheses preceding the titles are those used to designate the papers for advance publication.]

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PART I. METALS AND NONMETALS EXCEPT FUELS.

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INTRODUCTION.

The Survey's "Contributions to economic geology" have been published annually since 1902. In 1906 the increase in the number of papers coming under this classification made it necessary to divide the contributions into two parts, one including papers on metals and nonmetals except fuels and the other including papers on mineral fuels. In 1915 the year included in the title was changed from the year in which the field work reported in these papers was done to the year of publication, and in consequence there was no volume entitled "Contributions to economic geology, 1914." The subjoined table gives a summary of these bulletins.

United States Geological Survey "Contributions to economic geology."

Date in title.	Date of publication.[a]	Bulletin No.	Date in title.	Date of publication.[a]	Bulletin No.
1902	1903	213	1912, Part I	1914	540
1903	1904	225	Part II	1914	541
1904	1905	260	1913, Part I	1915	580
1905	1906	285	Part II	1915	581
1906, Part I	1907	315	1915, Part I	1916	620
Part II	1907	316	Part II	1916	621
1907, Part I	1908	340	1916, Part I	1917	640
Part II	1909	341	Part II	1917	641
1908, Part I	1909	380	1917, Part I	1918	660
Part II	1910	381	Part II	1918	661
1909, Part I	1910	430	1918, Part I	1919	690
Part II	1911	431	Part II	1919	691
1910, Part I	1911	470	1919, Part I	1920	710
Part II	1912	471	Part II	1920	711
1911, Part I	1913	530	1920, Part I	1921	715
Part II	1913	531	Part II	1921	716

[a] The date given is that of the complete volume; beginning with Bulletin 285, the papers have been issued as advance chapters as soon as they were ready.

As the subtitle indicates, most of the papers in these volumes are of three classes—(1) short papers describing as thoroughly as conditions will permit areas or deposits on which no other report is likely

to be prepared; (2) brief notes on mining districts or economic deposits whose examination has been merely incidental to other work; and (3) preliminary reports on economic investigations the results of which are to be published later in more detailed form.

Although these papers set forth mainly the practical results of economic investigations they include brief theoretical discussions and summary statements of conclusions if these appear to require prompt publication.

Beginning in the spring of 1917 and continuing throughout the period of the war the United States Geological Survey made special field explorations, surveys, and laboratory studies of deposits of ores of metals used in the manufacture of ferroalloys, pig iron, and steel, including manganese, chromium, tungsten, molybdenum, titanium. uranium, vanadium, zirconium, and iron.

Summaries of the data were promptly published by the Geological Survey in the form of press bulletins, and several longer papers on these subjects were published in Survey Bulletin 710[1] and in the Transactions of the American Institute of Mining and Metallurgical Engineers.[2] Other papers prepared largely by Federal Survey geologists have been published by several State surveys.[3] The papers on manganese and iron ore in this bulletin are some of the results of this war work, and other papers, now in preparation, will be published in "Contributions to economic geology, 1921."

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[1] Jones, E. L., jr., A reconnaissance of the Pine Creek district, Idaho: U. S. Geol. Survey Bull. 710, pp. 1–36, 1919; Deposits of manganese ore in New Mexico: Idem, pp. 37–60; Deposits of manganese ore in southeastern California: Idem, pp. 185–208. Sears, J. D., Deposits of manganese ore in Costa Rica: Idem, pp. 61–84; Deposits of manganese ore near Boqueron River, Panama: Idem, pp. 85–92. Jones, E. L., jr., and Ransome, F. L., Deposits of manganese ore in Arizona: Idem, pp. 93–184. Pardee, J. T., and Jones, E. L., jr., Deposits of manganese ore in Nevada: Idem, pp. 209–242.

[2] Harder, E. C., and Hewett, D. F., Recent studies of domestic manganese deposits: Am. Inst. Min. and Met. Eng. Trans., September, 1919, 48 pp. Diller, J. S., Recent studies of domestic chromite deposits: Idem, 44 pp. Burchard, E. F., Manganese-ore deposits in Cuba: Idem, 52 pp. Burchard, E. F., Chrome-ore deposits in Cuba: Idem, 23 pp.

[3] Stose, G. W., and Schrader, F. C., Manganese deposits of east Tennessee: Resources of Tennessee, vol. 8, Nos. 3 and 4, 531 pp., Tennessee State Geol. Survey, 1919. Stose, G. W., Miser, H. D., Katz, F. J., and Hewett, D. F., Manganese deposits of the west foot of the Blue Ridge, Va.: Virginia Geol. Survey Bull. 17, 166 pp., 1919. Hull, J. P. D., LaForge, Laurence, and Crane, W. R., Manganese deposits of Georgia: Georgia Geol. Survey Bull. 35, 295 pp., 1919.