

justed and available for immediate use. In this laboratory, also, the working table extends across the north end of the room, and thus has the advantage of 10.95 m. (36 ft.) of window space. In the center of the room a very large table is available for reference works and sundry apparatus. It may also be used for drawing purposes.

CRYSTALLOGRAPHY OF SOME CANADIAN MINERALS: 9. CERUSSITE¹

EUGENE POITEVIN

Geological Survey of Canada

The cerussite crystals here described were collected by Mr. S. J. Schofield of the Geological Survey in 1911² at the Society Girl mine, two miles east of Moyie, Fort Steele Mining Division, British Columbia. Here the mineral occurs associated with pyromorphite and limonite in an oxidized zone of the ore body. The principal metalliferous components of the unoxidized ore are argentiferous galena and zinc blende.

Cerussite crystals from this locality were described and figured by Thomson³ but the present ones show so many new features that this further account has been prepared. It may be noted that the pyromorphite of this locality has also been described crystallographically and chemically by Bowles.⁴

The cerussite crystals generally vary in color from white to reddish brown; more rarely they are colorless and in some instances malachite-green individuals have been observed. Not infrequently they are found imbedded in dense masses of limonite. The luster of the crystals varies from vitreous to resinous. Crystals vary in size from those of microscopic dimensions to those having a length of 1 cm. The prism *r* (130) exhibits vertical striations. The dome *k* (011) and the brachy-pinacoid also show striations.

The crystals show three habits, which in their order of frequency are as follows:

¹ Published by permission of the Director of the Geological Survey of Canada. Continued from page 36. This paper concludes the series.

² *Summary Rept. Geol. Survey*, 1911, 162.

³ *Am. Min.*, 3, (5), 42-43, 1918.

⁴ *Am. J. Sci.*, [4], 28, 40.

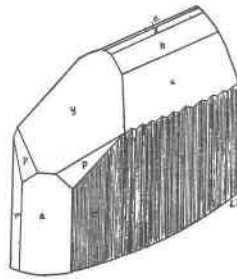
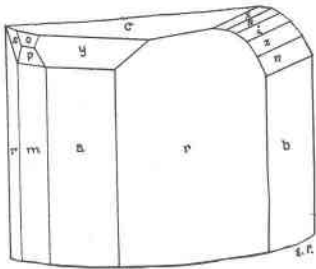
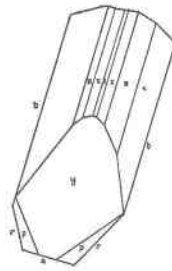
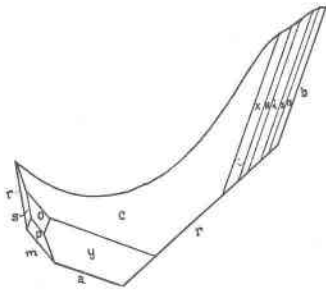


FIG. 9. A broken crystal showing numerous forms.

FIG. 10. A tabular crystal showing prominent development of brachydomes.

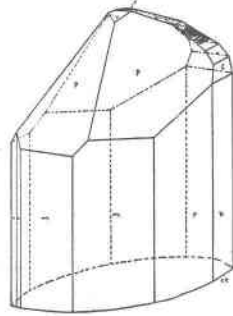
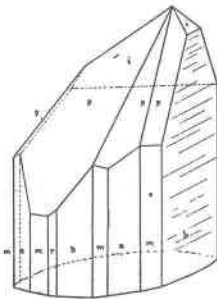
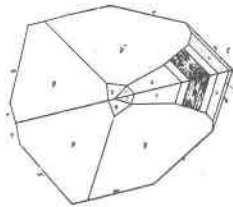
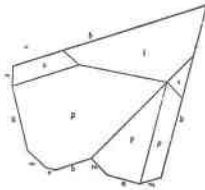


FIG. 11. A crystal twinned on r (130). FIG. 12. A crystal twinned on m (110).
 CERUSSITE, SOCIETY GIRL MINE, MOYIE, B. C.

(a) Tabular crystals having a large brachypinacoid and a zone of well-defined brachydomes, with a small unit pyramid and one large macrodome (Fig. 10).

(b) Pyramidal crystals with well-developed prisms and pyramids and limited domes. These are usually united in radiated groups with m (110) as twinning plane. This habit is illustrated in Fig. 12, showing two malachite-green crystals having m (110) as twinning plane.

(c) Pyramidal crystals having r (130) as twinning plane. This habit as exhibited by two reddish-brown individuals, is delineated in Fig. 11.

Seven of the crystals were selected for purposes of measurement. These all had bright smooth faces, giving good reflections. The angular measurements obtained agree closely with the figures accepted by Goldschmidt, and for this reason it has not been thought necessary to recalculate the axial ratios. In all, sixteen forms were measured, as set forth in the following table:

TABLE 7. ANGLE TABLE FOR CERUSSITE FROM MOYIE, B. C.

Goldschmidt Letters	Miller Indices	Calculated		Measured	
		ϕ	ρ	ϕ	ρ
<i>c</i>	001	— —	0° 00'	— —	0° 00'
<i>b</i>	010	0° 00'	90 00	0° 00'	90 00
<i>a</i>	100	90 00	"	90 00	"
<i>m</i>	110	58 37	"	58 37	"
<i>r</i>	130	28 39	"	28 37	"
<i>x</i>	012	0 00	19 52	0 00	19 54
<i>k</i>	011	"	35 52	"	35 59
<i>i</i>	021	"	55 20	"	55 22
<i>z</i>	041	"	70 55	"	70 57
<i>n</i>	051	"	74 32	"	74 32
ζ	081	"	80 11	"	80 14
<i>y</i>	102	90 00	30 39	90 00	30 37
<i>s</i>	121	39 20	61 51	39 38	61 52
<i>p</i>	111	58 37	54 14	58 37	54 14
<i>o</i>	112	"	34 46	"	34 42
<i>w</i>	211	73 02	68 01	72 58	68 04

Of the above forms, i (021), o (112), n (051), z (041) were observed in only one instance, that of a broken crystal (Fig. 9). The dome ζ (081) was observed in only one instance (Fig. 12). The base c (001) is generally very small, but it was observed on six out of seven measured crystals. The other forms are all ordinary occurrences on crystals of cerussite, and do not require special comment.