NOTES AND NEWS

ALLANITE FROM WYOMING*

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Although some 40 analyses of allanite are given in Dana *System of Mineralogy* not one of them shows the presence of any lead whatever. Thorium was determined in seventeen of them. The object of the present note is merely to place on record the results of an analysis of allanite by the writer in which efforts were made to determine thorium, uranium, and lead. These were all found although the percentage of uranium was very small. Work with the rare earths was largely confined to the separation of thorium and cerium from the others. From the few tests made the remaining rare earths were thought to be mainly lanthanum and didymium, that is, the other members of the cerium group.

ANALYSIS

SiO_2	33.64
ThO_2	1.28=1.12 Th
TiO_2	0.24
Al_2O_3	12.16
Fe_2O_3	7.67
Ce_2O_3	14.63
$(La, Di)_2O_3$	7.34
FeO	8.46
MnO	0.25
CaO	9.75
MgO	1.83
H_2O	2.84
U_3O_8	0.02=.017 U
PbO	0.11=.102 Pb
BeO	None
	100.22

Sp. Gr.=3.72

Age by logarithmic formula=1500 million years.

The age is calculated on the assumption that all of the lead is of radioactive origin. This may not be valid but the analysis is of interest as at least showing the presence of thorium, uranium, and lead.

This allanite was submitted for identification by F. W. Horton, of the U. S. Bureau of Mines. He received it from Charles Evans of Custer, South Dakota, who collected it from a pegmatite fourteen miles northwest of Wheatland, Wyoming. According to Frank

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L. Hess, of the Bureau of Mines, this pegmatite was worked for a time by Herman Reinhold, who claimed that he obtained gadolinite from the pegmatite in considerable quantity. The analysis shows that the mineral is not gadolinite but allanite. A careful test for beryllium was kindly made by J. J. Fahey, but none was found, thus proving the complete absence of gadolinite.

The pieces examined were of irregular shape with resinous luster and black color except for reddish-brown and pale yellow coatings or stains in a few places between the mineral and adjoining rock. Streak, pale gray.

A RECENT FIND OF BIXBYITE AND ASSOCIATED MINERALS IN THE THOMAS RANGE, UTAH

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INTRODUCTION

During early September of 1933 the writer was able to spend a week exploring the northern part of the Thomas Range in west-central Utah. The chief purpose of the trip was to locate if possible the old bixbyite locality where all the best specimens of that mineral have apparently originated. The exact location has never been very clear. It has been described as thirty-five miles south-west of Simpson,[1] and in the southern end of the Dugway Range.[2] Confusion has always arisen from the fact that "Dugway" is a term used locally to include two mountain ranges. The topographic map shows the Thomas and northerly-bordering Dugway Ranges as separated by the Dugway Road which cuts between them from east to west at a point approximately seventeen miles north of Topaz Mountain. It is possible that there may be an occurrence of bixbyite in the southern Dugway Range, but the writer believes that he has found the original locality in the north-east section of the Thomas Range. A day's exploration north of the Dugway Road failed to reveal anything of mineralogical interest.

LOCALITY AND OCCURRENCE

In its northern area the Thomas Range widens considerably to the east and west. Numerous ridges extend outward from the central body of the range and, together with their adjoining canyons,

[1] Penfield, S. L., and Foote, H. W., *Am. J. Sci.*, Vol. 4, pp. 105–110, 1897.

[2] Bixby, Maynard, A Catalogue of Utah Minerals and Localities 1916, p. 6.