

State Department of Geology and Mineral Industries

702 Woodlark Building
Portland 5, Oregon

WRS

"CHETCO PEAK" URANIUM

Curry County
Chetco Area

This information is from Bert Squire, 720 SW 6th St., Grants Pass, assay data, petrographic and chemical examination, and a personal examination of the locality described by Squire.

Squire submitted a sample for assay which showed radioactivity up to 0.2 mr/hr. It appeared to be an acid rock, probably from a dike, heavily altered to clay minerals with sparsely disseminated specks of light brown material barely visible (because of size and color) showing a light yellow-green fluorescence. Squire, on a subsequent visit, gave the location as T. 39 S., R. 10 W., section 31 or 32. He described the location as at the head of Brokencot Creek on a white dike. He was very reticent about accompanying anyone from this office to his find.

Len Ramp and I tried to find the location of the sample but did not succeed. We did find a dike, a dacite porphyry, trending N. 25 E., 75 NW. The maximum width is about 40' with an average of 25'. It is too small to be mapped by Wells in the Kerby Quad map. The rock that Squire submitted for assay could possibly have been an hydrothermally altered part of this dike. A mile of the dike was explored and no anomalous radioactivity was found. No rock that looked like the uraniferous sample was found. Incidentally, the Detectron shorts out when it gets wet. Do not keep it out in a heavy rain.

Assay data are two spectrographic analyses, chemical assay, and a radioassay. The fluorescent material on the radioassayer shows above 0.1% equivalent uranium. On the spec, U & Th are present in the range

from 0.1% to 0.01%. A P_2O_5 test was run on material that was less than 1/3 fluorescent. The result was 5.36%. Sulphate on the same sample was less than 0.01%. The data is from OG-350 and letter from H.M.D. Sept. 30, 1954.

The material has some of the chemical and optical properties of autunite or meta-autunite. Autunite has the theoretical formula $CaO \cdot UO_3 \cdot P_2O_5 \cdot 12H_2O$, according to D'Arcy George in FMO-563, Mineralogy of Uranium and Thorium Bearing Minerals, an AEC publication. This source also states that the mineral usually found is seemingly the meta variety which contains $8H_2O$; 6.13% CaO, 62.58% UO_3 , 15.75% P_2O_5 and 15.75% H_2O .

The optical properties found on a brief examination of this material

are as follows:

- light green fluorescence
- thin plates - basal cleavage
- 2 good directions of cleavage
- ρ & γ -- 1.6195 to 1.6205
- very little birefringence
- no distinct pleochroism or anomalous interference colors were observed

(MS - Sept. 27)

It is suspected that Squire gave a wrong location for the assay service to disguise the find. It is hoped that the sample is from Oregon and that we do get a chance to examine the find at some later date. So far as I know there has been no discovery of an identifiable uranium mineral in the state.

Report by: Max Schafer Oct. 28, 1954.