

Encampment, Wyoming
August 2, 1944

Subject: CYANITE deposits.

Object: To observe the extent and geologic occurrence of certain cyanite deposits in the vicinity of Encampment.

Claim data: The claims described below were originally located by Messrs. Ashley and Houston of Encampment. Their patented ground was later purchased by the Prairie Oil Company, which company was later absorbed by Sinclair. Also geologic field work and microscopic studies on a consulting basis has been done by Professor Hintze of the University of Utah, Salt Lake City, and Professor Beckwith of the University of Wyoming. Presumably the results of all these laboratory and field investigations are now on file with Sinclair.

Location: The patented claims examined all lie near the head of Cottonwood Creek in Sec. 20 T. 14 N., R. 83 W., Carbon County, Wyoming. The approximate center of the group of claims is 5 miles from the Union Pacific RR spur at Encampment, via the mine road put in to the cyanite deposits during previous investigations.

Production

According to Mr. Carleton H. Ashley of Encampment, approximately 100 tons of the various grades and types of cyanite have been shipped for experimental purposes. The properties were not in operation at the time of inspection nor have they been actively worked for several years past.

Observations

The cyanite occurs in the Pre-Cambrian schists and gneisses which, at and near the available openings, strike generally northwestward. The most abundant rock types involved locally are hornblende schists, amphibolites, garnet amphibolites and acidic granitoid rocks which range from aplitic to pegmatitic phases. The acidic rocks seem to be definitely transgressive with respect to the darker metamorphics and are undoubtedly genetically related to the cyanite.

There are four groups of claims in this area, three of which were examined:

1) Carleton group: contains mostly white to very pale blue, coarse-textured, flat-bladed cyanite. This is associated with a brown mica, some of which is

tumescent and approaches vermiculite, and in places also with a white muscovite-like mica of roofing grade. This cyanite is reported to run from 13%-68% by volume. Shipments for experimental purposes were made from this deposit.

2) Pinyon group: ~~This~~ prospect holes on this group show about 2 feet of rather high grade sericite and some disseminated emerald-green cyanite in an acidic rock matrix.

3) Big Chief group; Patented claims Big Chief #1 and #2. Shows abundant, vividly colored, corn-flower blue cyanite in a muscovitic matrix. Some of the cyanite crystals reach 6 inches or more in length and would average well over one inch. The muscovite found with this deep blue cyanite is of roofing grade. Associated with the cyanite-muscovite rock is a light blue cyanite in a matrix of quartz and albite of pegmatitic structure, together with some light green tourmaline(?). This deposit is reported to have run from 40%-50% cyanite and showed little waste as the muscovite itself constituted a roofing grade by-product.

4) Pardelco group: This group was not visited but is reported to have an abundant tonnage of cyanite on open ground.

Comment

There can be no doubt as to the availability of an appreciable tonnage of cyanite on the Sinclair controlled ground as well as upon additional open ground in the immediate vicinity. According to Mr. C.H. Ashley work done by the oil firms indicated a reserve of 25,000 tons, using a conservative figure of 10% cyanite by volume, on their patented ground.

Exceedingly detailed field mapping, coupled with laboratory and petrographic analyses, would be required to establish the origin, mineralogic association and extent of the deposits. However, immediate production seems feasible judging from the tonnages in sight in the vicinity of Encampment alone.

Mr. Carleton H. Ashley of Encampment has an intimate knowledge of this area in general and may be referred to should inquiry regarding available cyanite be desirable. Mr. Ashley, together with Mr. Houston, originally owned the properties now held by Sinclair and Ashley himself was foreman at the time the cyanite was exploited for experimentation.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "John C. Hays". The signature is fluid and cursive, with a large initial "J" and a stylized "H".