

TERRITORY OF ALASKA
DEPARTMENT OF MINES
BOX 1391
JUNEAU, ALASKA

PE-109-03

PROPERTY EXAMINATION REPORT

ALBILL NO. 2 CLAIM, SKAGWAY QUADRANGLE, RADIOACTIVES

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42, 109-2B

The Albill group of claims was staked and recorded early this year by Alfred C. Wolk of Skagway upon some radioactive showings within, or closely adjacent to, the city limits of Skagway. Having received some promising samples from the prospect and a request for an examination, the undersigned made a brief investigation of one showing on April 18, 1956. The other showings were still covered with snow. The showing examined is the discovery on Albill No. 2 claim. It is a small and low grade prospect as seen on the surface, but indications are that it may improve with depth. Mineralization appears to be the result of channeled solutions, and is not uniformly disseminated through the rock at the surface. A simple and inexpensive drilling program is advised.

The property consists of four claims and is held by three partners. The claims are the Albill No's. 1 to 4, inclusive. The two partners in addition to Wolk are Charles L. Hermans and George T. Rapuzzi, both also of Skagway. Because of the claims' situation within the Skagway city limits and/or the watershed area from which the

city gets its water, title and mineral rights are in question at the time of writing. Mr. Wolk was given instructions on what records to look into on this matter, and was advised that if he ran into trouble on it, the TDM would help make contact with the proper authorities in an effort to clear the question, if requested.

The location being right at Skagway, a vicinity map to show the geographical situation is considered not necessary. The geographical coordinates of the prospect are approximately $135^{\circ}19'06''$ W long and $59^{\circ}26'48''$ N lat. The showing is located as shown in the photographs, Figures 1 and 2, at an elevation of 240'. It is in the Skagway (B-1) quadrangle.

The slope on which the prospect is located is very steep, averaging 45° . Ropes have been tied to trees along the trail to enable one to get up to the property easier and lessen the danger of falling. The prospect looks directly down on the roofs of the Standard Oil buildings and tanks, which creates a blasting problem.

The country rock in which the showing occurs is an andesite or rhyolite. This follows the pattern of most of the promising SE Alaska uranium prospects found thus far - they usually occur in the acidic igneous rocks of the region. The andesite is exposed as a vertical face about 25 feet high at an elevation of 240 feet, and the showing is at the base of this bluff. A narrow bench occurs there on which work can be done, below which another, but smaller, bluff occurs. These features can be seen in Figures 3 and 4.



Figure 1. Looking south across Skagway. "X" on hillside above tanks marks location of Albill No. 2 prospect.



Figure 2. Looking up the slope from in front of the Standard Oil buildings. "X" marks the location of the Albill No. 2 prospect.



Figure 3. Looking NE at prospect.
Note solution markings
on rock in lower right
corner of photo.



Figure 4. Looking SW at prospect.
The men are working at the
point where the best indications
have been found. to date.

As with several other radioactive occurrences in SE Alaska, the mineralization appears to have been introduced through joints and fractures in the rock, and is evidenced by alteration of the rock to a darker color where the rock is radioactive. In this prospect, the alteration of the rock uncovered thus far is only in close proximity to the fractures where the radioactive mineralization was introduced. Individual specimens give a high count on one side but not on the other, and thus their average uranium content is not quite up to a commercial grade. Note in Figure 5 the darker alteration extending up the rock face about 3 feet to the pointed finger. Above this alteration, the radioactive count drops off sharply.

The lateral extent is also limited. The decomposed material on the floor of the bench all shows considerable radioactivity, but it is probably a local concentration and undoubtedly of minor quantity. Beneath this unconsolidated material on the bench, the rock fractures horizontally with some layers appearing well mineralized and some not. So there appear to be two systems of joints or fractures, one vertical, (striking roughly the same as the hill side, N50°E) and one horizontal, both of which seem to have been pathways for mineralizing solutions.

A favorable association noted by Arthur E. Glover, TDM Assayer at Ketchikan, is the presence of purple fluorite throughout the rock in minute specks. This is often a good indicator of radioactivity. Glover is of the opinion that the uranium in samples submitted to him may be intimately associated with kaolin and the iron hydroxides and oxides rather than any distinct uranium mineral.



Figure 5. Best radioactivity is where rock has been altered as shown by the dark patch extending from the pointed finger down into the surface at the bench.

On digging into the bench material, a variation of the rock into a larger grained and greenish material was noted. With this variation, an increased radioactive count was noted, though an assay of this rock showed it to be considerably below commercial grade. The greenish mineral seems to be a talcose alteration of hornblende. Some of the rock containing black splotches gave higher readings also. Some of the alteration mentioned above, where high radioactivity is present, is of a pinkish color in addition to being darker than the original rock.

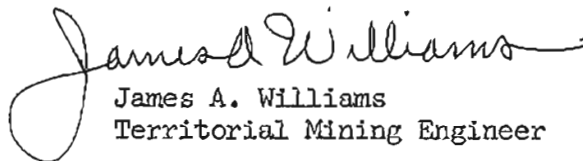
Four samples were taken during the investigation, but because of the structure and hardness of the rock, it is doubtful if any of them are truly representative. JW56-1 was of the face shown in Figure 5. It assayed 0.12% U_3O_8 , but it is not known how deep this mineralization penetrates the face (probably not more than a very few inches). JW56-2 was a highgraded sample and assayed 0.125% U_3O_8 . JW56-3 was of barren material taken horizontally across a portion of the bench and assayed 0.005% eU. JW56-4 was of the greenish alteration mentioned above, and assayed 0.015% eU. The first two samples were assayed for both eU and U_3O_8 . The comparative results were very close, indicating that the radioactivity is caused almost wholly by uranium and little, if any, by thorium. TDM U_3O_8 assays are made by the fluormetric method.

Samples or specimens taken by Wolk and assayed elsewhere have been assayed at 0.23% U_3O_8 by the Minerals Assay Laboratory at Grand Junction, and 0.77, 0.21, and 0.22% eU by the USGS Trace Elements lab at College, Alaska.

As indicated in the introductory paragraph, the prospect as seen on the surface is too small and low grade to be of consequence.

However, because of the favorable nature of the geology and mineralization, and other reported indications or shows in the general area, it seems advisable to engage in a simple and inexpensive excavation or drilling program to determine if the mineralization improves with depth. Excavation would be hazardous to the Standard Oil installation just below the prospect. (In passing, it is well to consider how mining might be accomplished without damage to Standard Oil.) That leaves core drilling as the favored method of exploration. A small drill could be back-packed to the prospect without difficulty. Water for drilling could be carried up in cans and used out of a couple of tubs or half-barrels, unless it developed that the ground is so fractured that the water would be lost in the hole.

About six thirty to forty-foot holes should be conclusive. The undersigned recommends that two be driven into the face from the bench as flat as possible, two vertically down into the bench, and two horizontally or inclined down 30° to 45° into the bottom of the bluff just below the prospect. This drilling should be done by the partners personally to keep expenses down, and if the core from the above outlined program does not show a distinct improvement in grade and extent, the partners are advised not to make further expenditures on the prospect.


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EDWARD J. BOWEN
Commissioner of Mines