Re:
Frater-Jalorne Radioactivity Discovery,
Sault Ste. Marie, M.D.,
Ontario.

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GENERAL. During the week of November 18th to 25th last, while the writer was in the Sault Ste. Marie area looking over the Camray uranium discovery, he learned of a second reportedly similar discovery some eleven miles to the north north east. A hurried trip was made into the second find and after verification of the report a group of nine claims was staked by me for the Pioneer. The Pioneer-Frater group was staked to the south of the discovery group with three small foreign claims (the Pryor-Barnes group) intervening. Insofar as observable (through six inches of snow) the geology of the Pioneer-Frater group is similar to that of the Campbell (Camray) and Jalorne discovery properties.

The following notes describe the Jalorne discovery.

PROPERTY AND TITLE The Jalorne Property consists of 27 claims, staked to straddle the Algoma Central and Hudson Bay Railroad between Mileages 104 and 106.

Title to this group is held by the Jalorne Company and its prospectors. The Jalorne is a Canadian subsidiary exploration company of the Jones Laughlin Steel Corporation.

LOCATION AND ACCESS The property is in Township 20, Range 16, Sault Ste. Marie, M.D. Access is by thrice weekly Algoma Central train service from Sault Ste. Marie. Train stops may be arranged for any Mileage Post.

GEOLOGY The area is one of reddish colored granite and syenite which cut a hybrid, grey-colored gneiss. Locally the granite and syenite contain a pegmatitic facies or pegmatitic replacement areas.

The above complex has been cut by numerous diabase dykes which appear to have localized the regional stresses within them or along their contacts. The diabase is commonly sheared and fractured and in a few cases it and the enclosing granite, pegmatite or syenite will be impregnated with hematite to give the area a patchy brick-red discoloration. It is in such a discolored, sheared diabase dyke, exposed by a railroad cut, that the Jalorne discovery was made.

MINERAL SHOWING The Jalorne discovery is a shear zone from two to five feet wide, striking N 45 degs. W which crosses, almost normally, a diabase dyke striking N 60 degs. E. Dips for the shear and the dyke are about vertical. Since the dyke is about 60 feet wide, the shear may be limited in length to the width of the dyke. Only northwest extension of the shear into the granite could be seen and this imperfectly. My impression was that the shear rapidly weakens in the granite to become a zone of discontinuous fractures.

The shear filling consists of much hematite, some hematite-calcite breccia and sparse pyrite. No pitchblende or other radioactive mineral could be selected and identified in my brief search for same. The whole shear, however, is very radioactive under the Geiger-Mueller counter. The engineer in charge for Jones Laughlin (McKee)

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Prater-Jalorne Radioactivity Discovery (Continued)

and his engineering assistant (Drury), both tell me that they were able to find and remove for later confirmation, small pea-sized grains of what they consider to be pitchblende.

CONCLUSIONS The Jalorne discovery is of much interest and may with development prove important. It's value will hinge on the verification of (1) that the radioactivity present is due to pitchblende or other amenable ore of uranium and (2) that the apparent cross-shear structure is repeated at reasonably close intervals along the dyke.

The indirect (but more important?) significance of this discovery is that it with the Camray discovery eleven miles to the southwest, occurring within and separated by the same rock types and structures (sheared diabase dyke) there is indicated a very large and attractive radioactive province.

RECOMMENDATIONS The Pioneer company should acquire acreage in the vicinity of either discovery for prospecting purposes.

Note The above recommendation was carried out with the staking of a group of claims just south of the Jalorne property.

December 9th, 1948,
Toronto, Ontario.

F. Joubin,
Mining Geologist.

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TOWNSHIP 28 RANGE 16 (NF)

The coastline under investigation cuts the extreme southwest corner of the Township.

Beach sand marks a good proportion of the shorel ıe.

Two rock outcrops occur. The southern outcrop consists of coarse pegmatitic granite with many inclusions of biotite rich material. The second, a strongly banded biotite gneiss, is located south of Agawa Bay Picnic Grounds. This granite gneiss is intruded by four diabase dykes and an interesting red coloured dyke - possibly felsite.

A specimen of the felsite was taken.

I.D.H. Wilson,

August 1961.