82K/16W

L50-116
Claim: Erin Group
Owner: Silver Giant Mines Ltd.
Engineer: Alfred R. Allen

June, 1948.

0035

Alfred R. Allen
GEOLOGICAL ENGINEER

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Silver Giant Mine,
Spillimachene B. C.
June 10th 1948.

Mr. W.R. Wheeler, President,
Silver Giant Mines Ltd.,
707 - 850 Hastings St. West,
Vancouver B. C.

Dear Sir;

In accordance with your request I have made a geological survey of the Erin Group of mineral claims on Jubilee mountain, Golden Mining Division.

Herewith is my report accompanied with a map and two cross sections of the area.

Yours very truly,

Alfred R. Allen

THE GEOLOGY OF THE ERIN GROUP

GOLDEN MINING DIVIDION

BRITISH COLUMBIA

Report By
Alfred R. Allen
June 1948

THE GEOLOGY OF THE ERIN GROUP

Golden Mining Division

British Columbia

A. INTRODUCTION

The Erin Group of mineral claims is bounded on the northeast by 5 Crown Grant mineral claims and 3 located mineral claims not owned by Silver Giant Mines Ltd. On these adjoining mineral claims lead, copper, zinc, and silver minerals are known to occur in barite veins. It has, therefore, been deemed advisable to conduct a geological survey of the ground included within the Erin Group of mineral claims.

The survey was started May 7th by the writer and concluded June 10th 1948. From May 21st. until June 9th. able assistance was rendered by D. Stewart and V. Bryant, both of Spillimachene B. C.

The old survey station on the top of Jubilee mountain was useful as a tie-point.

Brunton compass, anneroid barometer, and chain were used for the survey, hence accurate claims and topographic maps will not be available until additional and more accurate surveying is done.

B. LOCATION

The Erin Group of mineral claims is located on Jubilee mountain about 4 miles northwesterly from Spillimachene B. C., in the Golden Mining Division. The Group is about one mile northeasterly from the camp of Silver Giant Mines.

The Erin Group is bounded on the northeast by the following Crown Grant mineral claims:- L. 648, L. 1112, L. 647, L. 134, L. 226, as well as 3 located mineral claims, all owned by the Mellon interests of Montreal Quebec.

C. CONCLUSIONS

The important geological features of the area are :-

(1) The plunging A-symetrical syncline is so located that most of the Erin Group is underlain by the Goodsir formation, but the contact between the Ottertail and Goodsir formations lies within the boundaries of the Erin No.3 and 4 mineral claims and the Erin No. 5 and 8 fractional mineral claims.

(2) Barite veins containing sulphide minerals occur in the magnesian limestone of the Ottertail formation at and near the contact with the interbedded limestone and argillaceous sediments of the Goodsir formation.

Prospecting and exploration work will be planned with the above results in mind, and should be carried out as follows:-

(1) Make a detailed examination of the areas of magnesian limestone known to be at or near the contact with the Goodsir formation.

(2) Where practical locate the actual contact of the formations, in drift covered zones, by trenching.

(3) When the contact area hes been thoroughly prospected

(3 ctd.) continue the work outward into the Magnesian limestone formation, to the boundaries of the area.

D. GEOLOGY

The map-area is underlain by the sedimentary rocks of the Ottertail and goodsir formations, believed to be Middle and Upper Cambrian in age.

The Ottertail formation is composed wholly of massive dark grey to cream colored magnesian limestone. The white to grey, cream, and buff colored weathered surface is pitted and rough because of differential weathering caused by irregular silicified zones within the limestone. Small and short zones of breccia occur here and there within the limestone.

The Goodsir formation outcrops over almost the entire area, exposures are numerous, and continuous zones within the formation have been mapped. The formation is composed of dark grey thick-bedded , fine-grained limestone which weathers grey to blue-grey, and within some beds grades into limestone breccia, and this is interbedded with an intra formational conglomerate . The conglomerate is also interbedded with argillite. In addition to the above there is a zone of light colored, somewhat silicified, finely-banded limestone. The massive-bedded, limestone occurs chiefly in the upper eleven hundred feet of the formation. It occurs in beds up to 30 feet thick. Within some of the limestone beds there are zones of breccia composed of dark grey, fine-grained , occasionally banded, angular and sub-angular fragments of limestone, clearly discernable only on the weathered surface.

The fragments are not oriented. Several thin beds are composed wholly of breccia. Small irregular, calcite-filled fractures are fairly numerous within the limestone. The limestone is interbedded with an intra formational conglomerate composed of dark grey, light grey weathered, fine-grained limestone pebbles and cobbles in a matrix of grey, green, and brown, folliated argillite. The pebbles and cobbles are elongated parallel to the bedding. The conglomerate beds are a few inches to thirty feet thick. Black, grey, brown, and green argillite occurs throught the entire formation. The zone of light colored limestone is composed chiefly of thin-bedded, grey, cream, and brown, fine-grained and fine-banded rock. The weathered surface contains long groove-like depressions , mostly brown in color. Many of the thin beds are separated by very thin beds of argillaceous material. This zone is about 200 feet thick and constitutes a good horizon marker. It is, therefore, termed the Erin member of the Goodsir formation.

A section of the Goodsir formation, measured northeasterly from Jubilee peak, is as follows:-

(1) Massive-bedded dark grey limestone, limestone breccia, and intra formational conglomerate. Thickness....1100 feet.

(2) Thin-bedded light colored, banded limestone with thin interbeds of argillite. Thickness... 200 feet.

(3) Interbedded argillite, intra formational conglomerate, and dark grey, bleu-grey weathered limestone. Thickness..: .700 feet.

Total Thickness..2100.feet.

The stratified rocks are folded into an A-symetrical syncline, the axis of which strikes north 60 to 70 degrees west, the axial plane of which dips 60 degrees southwest , and the plunge of which is 20 degrees northwesterly. The southwest limb is nearly vertical and the northeast limb dips from nearly flat to 50 degrees.

Faulting fracturing and shearing are not conspicuous within the area. Some crumpling and shearing appears to be associated with minor folding along the axis of the syncline. The argillite and argillaceous matrix of the intra formational conglomerate are sheared parallel to the fold axis. Within the limestone, small calcite stringers with a general strike of northeast-southwest, may have been formed by the deposition of calcite from circulating ground waters.

The Silver Giant orebody, comprising lead, copper, zinc, and silver minerals in a barite and silicified limestone gangue , lies along and near the contact of the Ottertail and Goodsir formations within the Ottertail magnesian limestone, on the southwest limb of the A-symetrical syncline. (Off the map-area.) Similarly, within the map-area, on the northeast limb of the syncline, at and near the contact of the Ottertail and Goodsir formations, and within the Ottertail magnesian limestone, occur barite veins containing lead, copper, zinc, and silver minerals. One such vein, about 8 inches thick and exposed for about 25 feet, is located on the Erin No. 8 fractional mineral claim, on the northeast side of the creek, about elevation 4600. This vein strikes north 45 degrees west and dips 60 degrees southwest. The barite is white, coarsely crystalline, and contains stringers of vuggy quartz along with galena, tetrahedrite, chalcopyrite, sphalerite and pyrite. There is surface coating, and fracture filling of green and blue secondary copper minerals.

E. THEORETICAL CONSIDERATIONS

Since mineral veins are known to occur in the magnesian limestone near the contact with argillaceous rocks, on both limbs of a large A-symetrical fold, it might be reasonable to suggest that during the period of folding most of the shearing occured at the contact, with attendant fracturing and crumpling of the rocks, producing channels along which mineral-bearing solutions could flow and replace the magnesian limestone.

ERIN Nº7 Fr.
ERIN Nº8 Fr.
ERIN Nº6 Fr.
ERIN Nº5 Fr.
ERIN Nº1
ERIN Nº2
ERIN Nº4
ERIN Nº3 Fr
L647 C.G.
L. 1112 C.G.
L648 C.G.
Alpine No 1
Alpine No 2
Slough
Astronomic
A
B
C
D

LEGEND

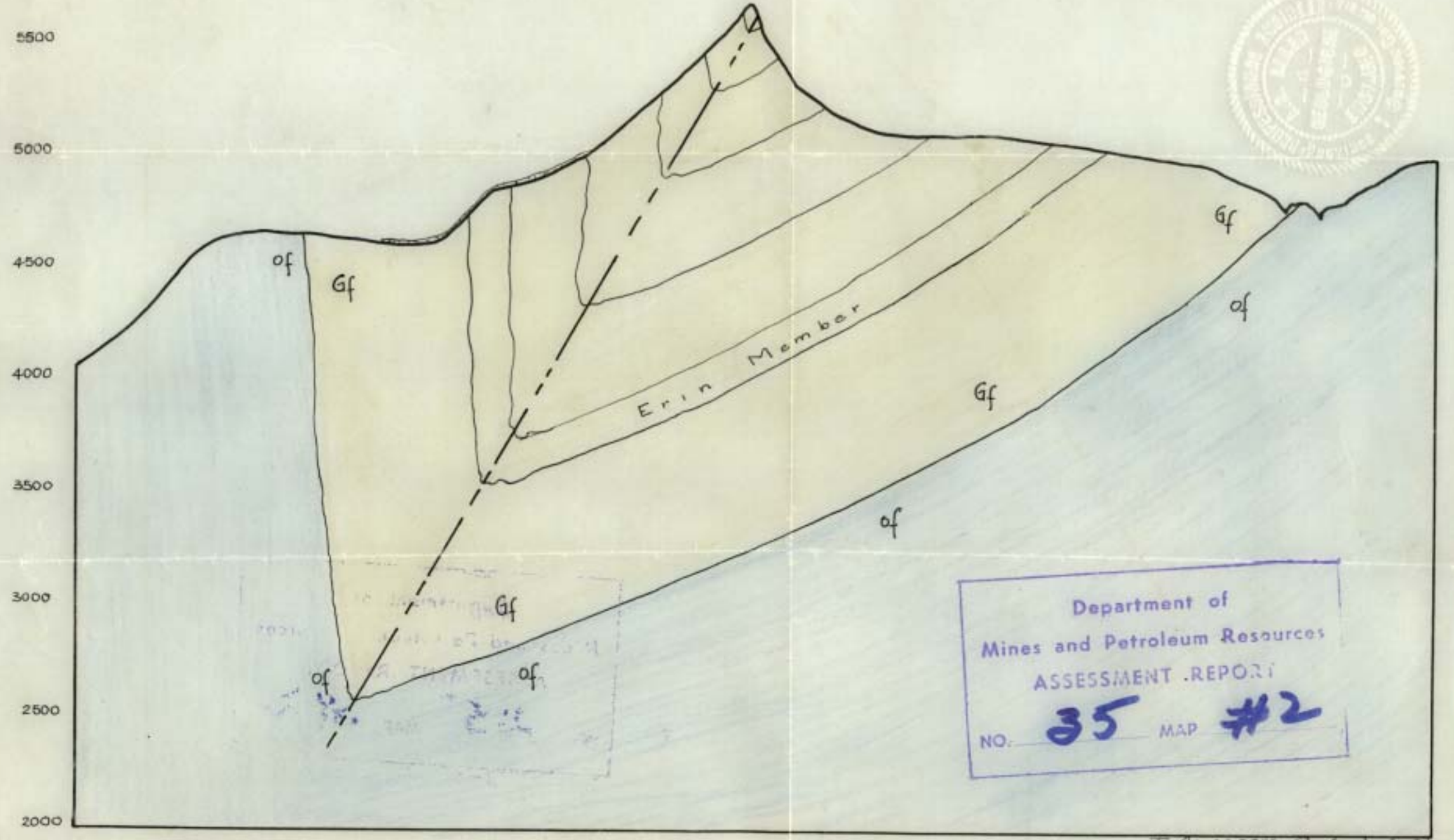
Ottertail Formation — Of
Goodsir Formation — Gf
Fold Axis
Attitudes — 30
Contours — 5100, 5000
Creek
Bedrock Poorly Exposed

REPORT 35
MAP 1

SILVER GIANT MINES
GOLDEN MIN. DIV.

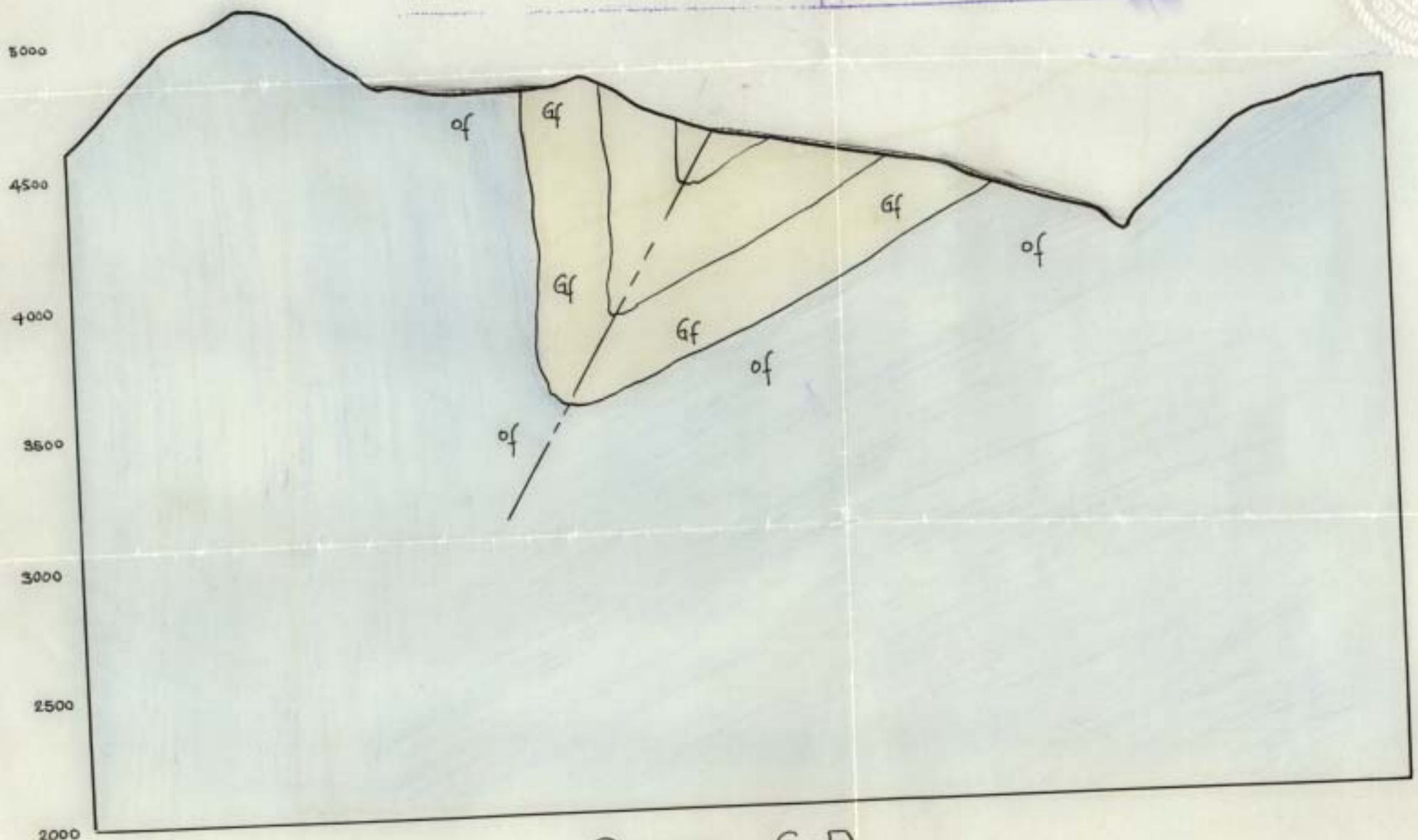
GEOLOGY OF ERIN GROUP

June 1948 Scale 1"=500' Alfred R. Allen R.P.E.



SECTION A-B

To Accompany Geological Plan
"GEOLOGY OF ERIN GROUP"
By [illegible] 1962



SECTION C-D

REPORT #35
MAP #3