

82F/3E

L49-117 SE.  
Calcite, Comet, Contact,  
Stan Fraction.  
Canadian Exploration Ltd.  
Lakes, H., Engineer.

0023

GEOLOGIC REPORT.  
on the  
CALCITE GROUP OF MINERAL CLAIMS.  
for the  
PURPOSE OF ASSESSMENT WORK.

By Harold Lakes,

September 1947.

MAPS.

Accompanying this report is a detailed map showing the general attitude of the formation, both in plan and section, which in itself is more or less self explanatory. The mapping covers the ground directly south of and adjoining the Emerald, and is correlated with similar maps of that property.

PROPERTY.

The following four Mineral Claims are covered by this report:- Calcite, Comet, Contact, and Stan Fraction.

LOCATION.

Lat. N.49-06 Long. W.117-14

Elevation around 3500

North side of Lost Creek, on the south slope from the Emerald Mine. About twelve miles from Salmo, via Spokane highway and Lost Creek roads.

Property can be reached by mountain trail of gradual grade, starting from the Lost Creek road, on the Alfie Mineral Claim of the Tungsten King group.

SURFACE CONDITIONS.

The property has an abundance of outcrops and a number of open cuts from which definite observations were recorded. The different strata can be followed sufficiently for computations along almost the entire length of the property.

SECTIONS AND GEOLOGY.

The cross-sections show the dips and position of adjoining formations, and the diagrammatic section is built up from general knowledge of the area. In building up the section, the position of the quartzite and adjoining formations, both on this group and on the south side of Lost Creek, along with other knowledge gained in mapping the surrounding area, resulted in a different conception of the regional geology. This section

indicates close folding of the strata, with resultant easterly dips of the bedding. It also indicates that the Emerald Tungsten ore zone and Emerald Lead Zinc are within the same limestone bed, offset as shown on the section. It seems to fulfill many of the problems involved in the general structure, as found in the two mines. The Emerald Tungsten ore body in this instance would occur in the sharp synclinal fold of the limestone, but in the area close to, or contacting the granite. The lead Zinc would occur in the wrinkles or minor folding, on the east leg of the anticline. The axis of the fold appears to strike about N.15 to 20 E. with a decided plunge of from 10 to 20 degrees to the south. The south plunge changes at the Emerald mine, higher up about the apex of the hill to a definite north plunge of 10 to 20 degrees.

Leaving the fold and extending easterly, observations indicate a rolling formation with folding or troughs of minor proportions. Mapping indicates that the limestone which dips steeply at the Emerald mine, flattens to the rolling formation along its easterly direction, with an average easterly dip, until it is changed along its course to a westerly dip, as it approaches the Jumbo property.

The structure may be visualized as a close fold with its axis extending along the course from the Emerald mine north to the Hudson Bay area and south to beyond Lost Creek. This folding could possibly account in part for localizing the mines along this particular strike.

In working out the diagram, the sequence of formation is from the youngest rocks to the older in the following order. Dark argillites; Limestone; Brown argillites, schistose, and at times silicious, containing skarn and narrow limestone beds; Quartzites (possibly Reno); Intruded by the Nelson granite.

#### MINERALIZATION.

The area within these Claims is along the extended strike of the Emerald Tungsten ore body to the south, but in this case the Emerald tungsten horizon would be considerably deeper. The only mineralization known to exist on the four mentioned Claims is scheelite, which may be seen by use of the Ultra Violet lamp, in most places along the skarn beds, where there are a number of exposures. One skarn bed which extends into the Emerald property is traceable by open cuts and outcrops across the full length of these Claims viz; Calcite, Contact, and Comet. Further skarn is shown at the north end near the main limestone contact. Some of the best fluorescence was in the area around the north west corner of the Comet, also on the Contact Claim in the skarn near the quartzites. Scheelite occurrence is likewise seen along the skarn bed extending in the eastern part of the Comet. In general, practically all the skarn beds show scheelite content, comparable to scheelite mineralization found in the various skarn beds of the district. This type of skarn bed is found outcropping in a number of places several miles from this location, and in many cases show scheelite fluorescence. To date no skarn bed ~~had~~ has proven to be

commercial, but by no means should they be disregarded. Selected assays at times show in excess of 1.0%  $WO_3$  however on an average they run less than half of one percent.

GENERAL STATEMENT.

The occurrence of quartzite in this section, standing almost vertical on its well defined outcrop, clearly seen for over 2000 feet along its strike, and again appearing on the south side of Lost Creek where a cross-section is visible on an open bluff, made it necessary to consider a reconstruction of the general section, as the quartzites are the oldest rocks and therefore did not properly fit in. The section as now drawn seems to cover the structural problems. The other beds of younger rocks fit the picture in their proper sequence and the folding creates a favorable condition in the limestone for ore deposition.

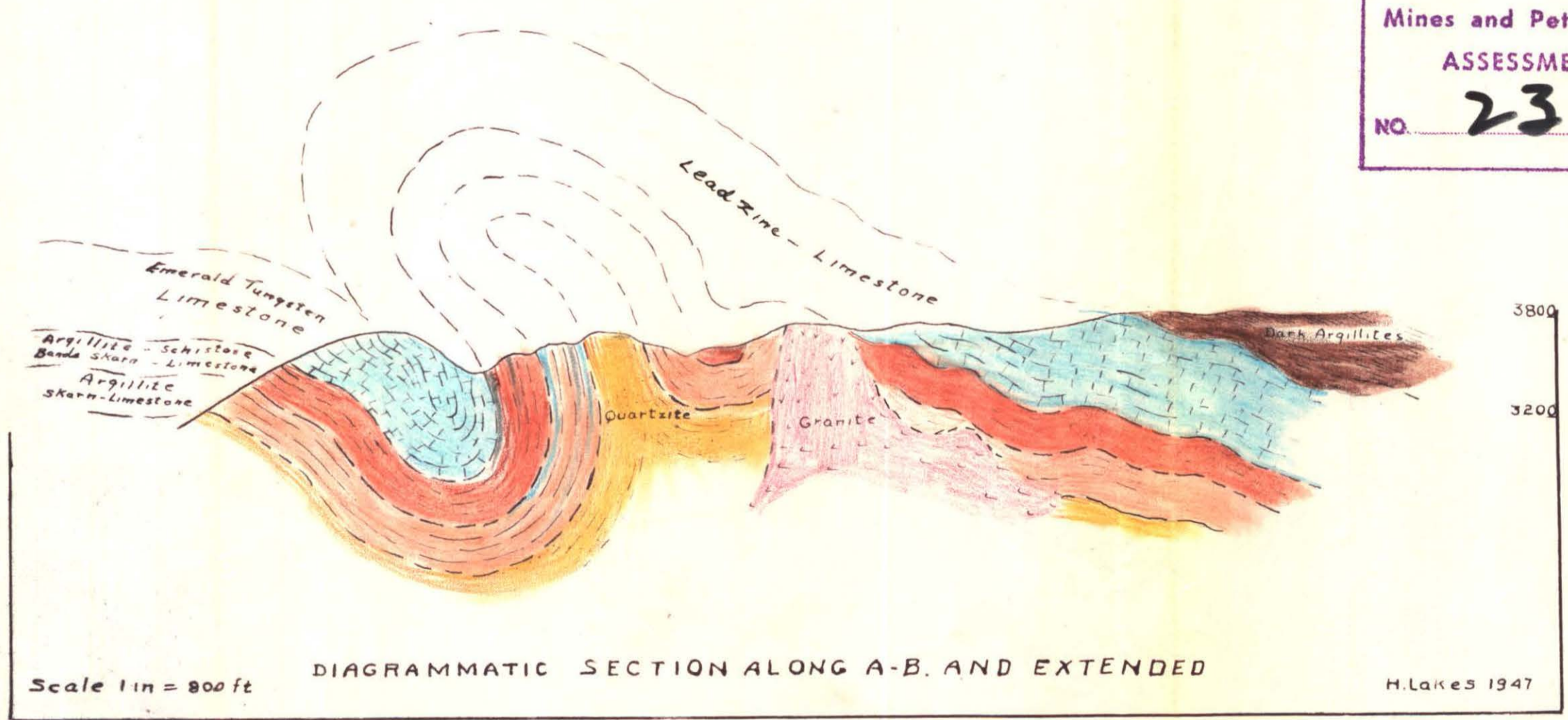
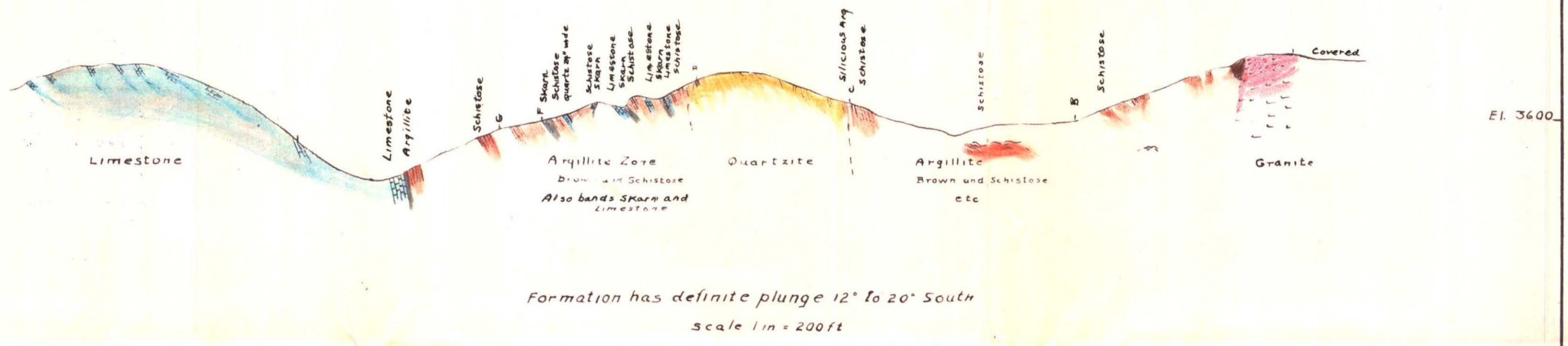
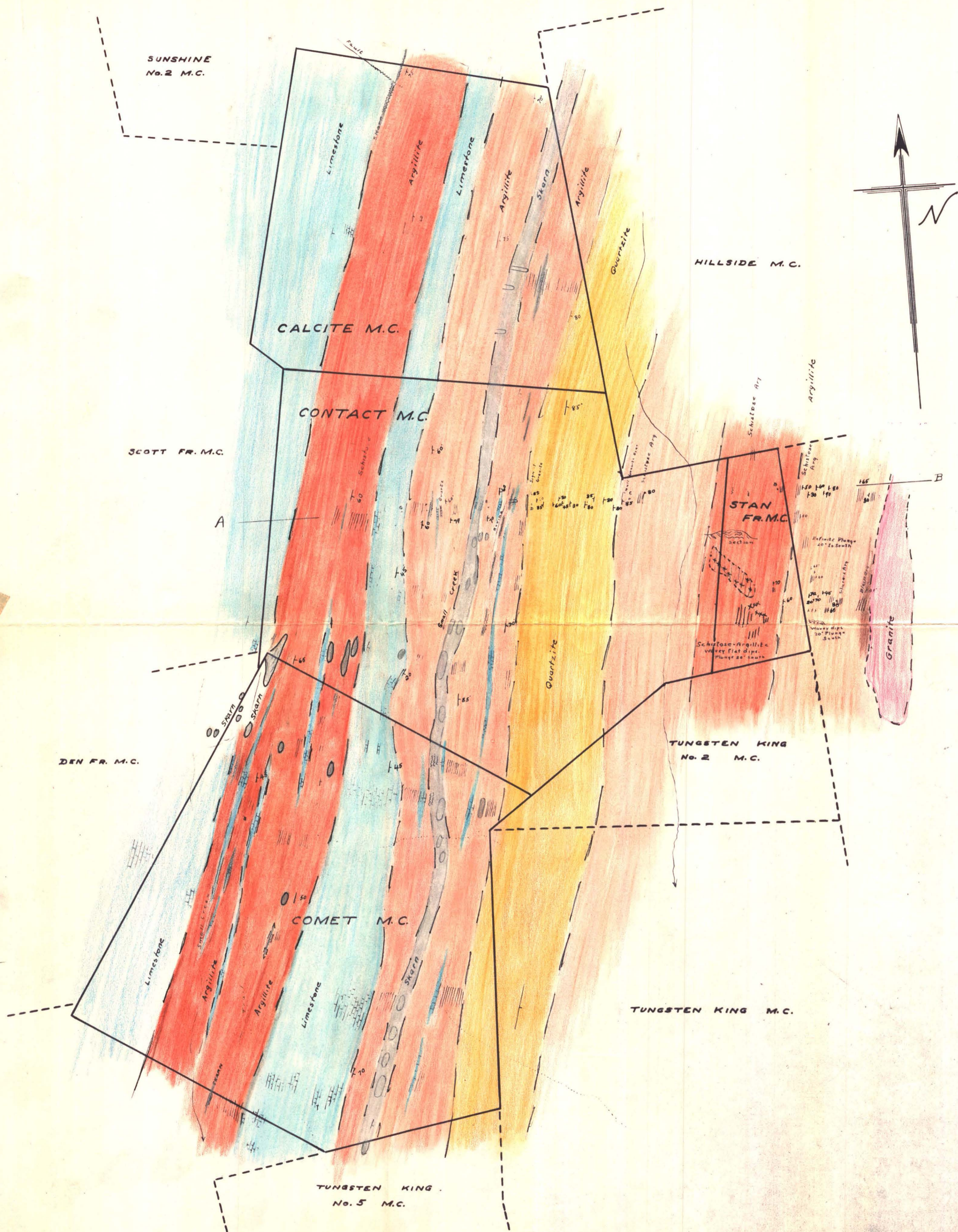
CONCLUSION.

Although this report is for the purpose of covering four Mineral Claims, a general picture has been included which it is hoped will assist in clarifying the structural problems, or at least give an idea for consideration in further mapping of the adjoining areas.

Harold Lakes

Registered Professional Engineer  
of British Columbia.

Nelson, B.C.  
September 23, 1947



Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. **23** MAP #1

**REPORT #23**  
**MAP #1**

GEOLOGIC MAP  
OF  
**CALCITE CONTACT**  
**COMET & STAN FR. M.C.s**

H. Lakes Sept/47 JOB NO.  
H. Lakes Sept/47 47-93  
Brassy Sept/47

1 in = 200 ft. SHEET NO. -