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September 18, 1941.

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REPORT ON BONANZA MICA PROPERTY
MICA MOUNTAIN
TETE JAUNE, B.C.

map
envelope at back

by

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Location and Access:

The property is situated on Mica Mountain about 7 miles south of Tete Jaune Station on the Canadian National Railway. Access is by old road for approximately 4 miles and trail for 3 miles.

Claims and Ownership:

The group comprises the following claims:

<u>Claim</u>	<u>Lot</u>			
Minnie Smith	510	Leased from Crown		
Adventure	511	"	"	"
Boulder	512	"	"	"
Mammoth	513	"	"	"
Dreadnot	514	"	"	"
Premier	515	"	"	"
Bonanza	516	"	"	"
Mica	held on location			
Mica No. 1 Fraction	"	"	"	"
Mica No. 2 Fraction	"	"	"	"

The Crown-granted claims are held on lease from the Crown by F.W. Groves and Associates, Kelowna, B.C. The others were staked by the same men in September, 1940.

PROPERTY FILE

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History and Development:

Lots 510, 511, 512, 513, 514, 515 and 516 were staked by J.F. Smith, of Kamloops, in 1893, and work necessary from Crown-granting done in 1894,-5, -6,-8,-9 and 1900. During this period Smith is reported to have mined a considerable quantity of sheet mica of excellent grade and to have transported it to Kamloops by pack-horse for subsequent sale. As far as can be ascertained, work appears to have been confined largely to a pegmatite dyke on the Bonanza claim (Lot 516) on which a short adit was driven for 15 feet. McEvoy, of the Geological Survey of Canada, examined the Bonanza mine in 1898 and mentioned 1. that J.F. Smith and eleven men were taking out mica from an opening in a vein 15 feet wide, covered to the north-west with talus and to the south-east with mica schist. Mica of excellent quality was being recovered and sheets up to 11 by 8 inches were frequently encountered.

Ownership was re-organized shortly afterwards but no further work done until the present time.

1. Annual Report, Geological Survey of Canada, 1898; p. 800 - J.C. McEvoy.

The Mica claim, staked by Groves in 1940, covers old workings on what was formerly the Reliance Mineral Claim, at one time owned by the Mica Syndicate and later by Mica Mines Limited. This is described in detail in Reports of the Minister of Mines of British Columbia for 1920, p. 95; and 1928, p. 188.

In recent years it was generally concluded² that the old workings on the Bonanza claim had been covered by slides and that a similar fate had overtaken alleged workings on the Boulder claim. In 1940, however, F.W. Groves re-discovered the former and decided that the latter had never existed.

The writer spent 2½ days on the property (Sept. -7,-8,-9, 1941) in company with Mr. Groves. Three men were engaged in removing ice from the Bonanza adit at the time, the work being completed before the writer's departure.

General Geology:

Mica Mountain is made up of highly metamorphosed sediments represented by mica-garnet schist, quartz-mica schist and quartz-feldspar-mica schist, changing locally to gneiss. The schists are intruded in places by pegmatite

2. D. Lay - B.C. Minister of Mines Report, 1928 - p. 188
A.W. Davis - B.C. Minister of Mines Report, 1928 - p. 152

dykes ranging from a few feet in size to 100 feet wide by 500 feet long. These dykes are irregular in shape, commonly lens-like and are composed essentially of feldspar and quartz in medium-grained association, with lesser amounts of disseminated muscovite in the form of "booklets" and aggregate up to 1 to 2 inches in size. Rarely mica books up to 3 or 4 inches in diameter were noted. In the Bonanza and Reliance workings, and in boulders on the Boulder claim, concentrations of larger crystals, up to 10 or 12 inches across, occur.

Description of Property:

The Mammoth, Boulder and Adventure Claims (Lots 513, 512 and 511) are located in a cirque-like basin on the Sand Creek slope of Mica Mountain. The Minnie Smith, Dreadnot, Bonanza and Premier Claims (Lots 510, 514, 516 and 515) lie in a similar basin facing the McLellan River. The Mica claim covers the sharp ridge between the two cirques.

Pegmatite dykes were examined on the Bonanza, Premier, Boulder and Mica claims. Several other dykes were noted on the cliffs circumvallating the two basins but were inaccessible.

Bonanza and Premier Claims (Lots 516 and 515):

These claims, situated on the south side of a large glacial cirque, extend from the basin-bottom up talus slopes to precipitous cliffs which rise steeply over a thousand feet to the summit of Mica Mountain. The area is considerably above timberline and is constantly exposed to slides and falling rock.

The Bonanza adit (elevation 7,850 feet) was driven 15 feet into a lens-like pegmatite dyke at the foot of a small bluff. On the surface the dyke is cut-off within a few feet of the south wall of the adit by enclosing mica schist. To the north it narrows abruptly to disappear within 15 feet of the north wall of the adit. The maximum surface dimensions of the dyke are 10 feet by 30 feet.

The roof of the adit is mica schist throughout its length, dipping 30° into the hill. At the portal the floor is pegmatite but changes to mica schist within 5 feet of the surface. The average width of pegmatite exposed in the south wall is 8 feet, in the north wall is 3 feet.

A winze, 5 feet deep, was sunk at the end of the adit. Both floor and roof are mica schist which come together in the face, 20 feet from the portal. Along the

south wall of the winze 6 feet of pegmatite is still exposed but the indicated convergence of floor and roof suggests a rapid pinching out of the deposit within a short distance.

A number of mica-books up to 10 inches in size remain in the walls of the working, particularly on the north side where mica constitutes at least 25 per cent of the dyke. Much of this is contorted and twinned, however, and it is improbable that more than one-quarter of the mica present could be used commercially.

Four other pegmatite dykes (see map) were examined.

The first at elevation 8,160 feet is 50 to 75 feet wide and at least 500 feet long. Only the north end was accessible but apparently its composition is relatively homogeneous, consisting of feldspar, quartz and disseminated mica. The last occurs in the form of small flakes, aggregates and "booklets" ranging in general from $\frac{1}{2}$ -inch to 1 inch across, and constituting 5 to 10 per cent of the rock in places. Only at rare intervals do larger mica-books occur. Within an area of 2,500 square feet only four were noted, the largest

of which measured 3 by 4 inches in size. As far as could be ascertained there was no apparent tendency for concentration of mica in any specific part of the dyke.

The other three dykes at elevations of 7,880 feet, 7,750 feet and 7,600 feet are similar to the above although smaller. No place was noted where mica occurred in sufficient size and concentration to permit mining.

Boulder Claim (Lot 512)

The Boulder Claim lies on the steep rocky wall of a cirque facing Sand Creek, approximately one mile north-west of the Bonanza workings.

A pegmatite dyke, elevation 7,120 feet, 50 to 75 feet thick and 400 to 500 feet long, is exposed near the base of cliffs which rise steeply for over a thousand feet to the ridge top above.

The extensive talus slide below the dyke is comprised largely of mica schist but contains several hundred boulders of pegmatite. On the slide below a point near the east end of the dyke several pegmatite boulders containing large books of mica occur. The most notable of these, about 8 by 10 by 12 feet in size, contains one hundred to two hundred pounds of mica in books up to 8 or

10 inches across. Not over one-quarter of this would be of commercial grade owing to the presence of abundant twinning, orenulations and other defects. The other boulders contain a much smaller proportion of mica. The point from which the mica-bearing rocks had broken-off was unfortunately inaccessible. To the west, however, the dyke was examined in detail for several hundred feet along its strike but no commercial mica seen. Where examined the pegmatite resembled those described on the Bonanza and Premier claims. The apparent dearth of workable mica in general is substantiated by its absence from all pegmatite boulders along the talus slope except the few mentioned above. The mica-bearing boulders originate from a minor swell in a narrow part of the dyke.

Mica Claim:

The Mica claim lies on the ridge top between the two cirques previously described. The old Reliance workings are situated at elevation 7,570 feet near the east boundary of the claim on the steep grass-covered sidehill facing McLellan River.

The workings consist of stripping and an adit of 10 feet in length, exposing the junction of two pegmatite dykes 10 to 15 feet wide. The greatest length uncovered is about 75 feet.

A considerable quantity of mica has been recovered as evidenced by dumps at the workings and old base camp. Sheets up to 10 inches across occur, but all the mica seen was "A" twinned to an extent which precluded its use for sheets. A small proportion might be recovered of "washer" size.

A number of books are exposed in the workings but are badly twinned. The proportion of sheet mica to rock is less than one-half per cent over the exposure as a whole, but in the vicinity of the adit probably exceeds 1 per cent.

Summary and Conclusions:

(1) The Bonanza workings evidently yielded some sheet mica of excellent quality as mentioned in old reports and indicated by material on the old dumps. The pegmatite dyke, however, is small and structural relations suggest that it was largely mined-out in the past. The body pinches out in the winze on the west and north. Only on the south wall does any face of pegmatite remain. At the surface the dyke cuts off within a few feet of the south side of the portal. It is probable that the same condition occurs underground. In view of the irregular shape of the pegmatite dykes as a whole, however, there is a possibility that the deposit might extend at least a short distance in a southerly direction.

Further work does not appear advisable under the circumstances. Such work, should it be undertaken, would be best directed to exploring the extent of the dyke south of the present winze.

(2) A concentration of sheet mica is indicated in float beneath a pegmatite dyke on the Boulder claim. The proportion is not large nor is the quality very good. Detailed prospecting of the dyke directly above the mica-bearing talus might indicate a mineable deposit. General relationships, however, suggest that such a deposit would be small.

(3) The greatest quantity of sheet mica exposed on the property occurs in the old Reliance workings. Ubiquitous twinning renders it valueless for anything larger than washer size and even for this recovery would be small.

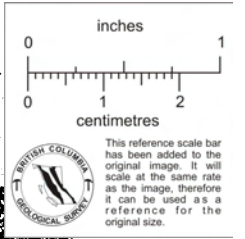
(4) Of the other pegmatite dykes examined none was seen which contained sufficient mica to be mined. Examination was necessarily of a cursory nature and by no means precludes the possibility that pockets or concentrations of commercial mica might be found with detailed prospecting.

In brief, no mineable deposit of sheet mica from which more than a few pounds of commercial material could be recovered was seen by the writer. Intensive prospecting

might conceivably disclose other bodies similar to the original Bonanza deposit. The chances are not good, however, and coupled with the short operating season, difficult and expensive mining conditions, lack of timber and wood, cost of transportation, etc., make the property definitely unattractive.

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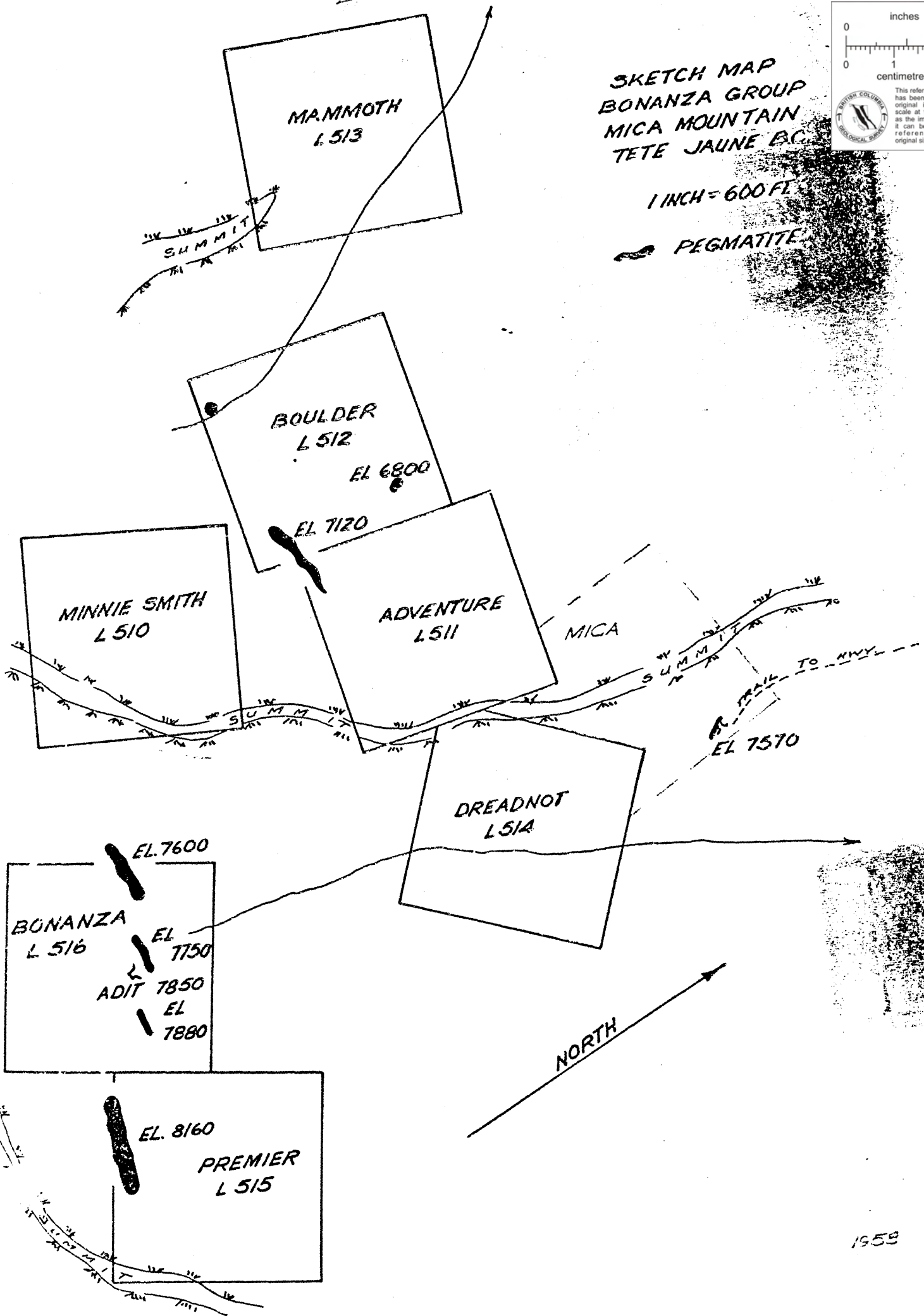
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SKETCH MAP
 BONANZA GROUP
 MICA MOUNTAIN
 TETE JAUNE BC.

1 INCH = 600 FT.

PEGMATITE



1959

EXHIBIT XVI(a)

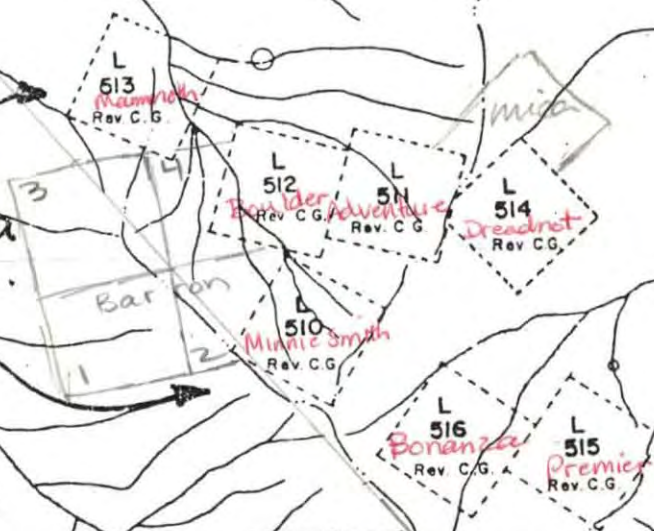
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C T l e k
General Area of Claims.

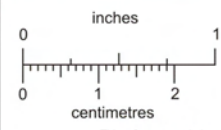
PROPERTY "H"
Tete Jaune
Cache Area



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MICA
MTN.

H. S. HASLAM AND ASSOCIATES LIMITED



This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

