REPORT ON

TABLE MOUNTAIN GEOLOGY

Sept.1974

R.H.Seraphim,
P.Eng., PhD.

REPORT ON
TABLE MOUNTAIN
GEOLOGY

INTRODUCTION

This report summarizes the results from four days field work, August 15 to 18 inclusive, 1974. The field work was completed primarily to determine the structures controlling the emplacement of the Table Mountain veins, and to give some guidance to further exploration. The readers should refer to prior reports on the property, including

"Table Mountain Mines Ltd., Vollaug Vein"
- R. H. Seraphim - Jan. 29, 1973

"Report on Table Mountain Mines"
- J. H. McAusland, January, 1974

for general background.

The mapping was based on an aerial photograph, Federal A 11556 - 306, enlarged to a scale of approximately 700 feet = 1 inch. The contours from a claim survey map by J. C. Motherwell, B.C.L.S., 1953, were transferred to the map included herewith.

SUMMARY, CONCLUSIONS AND RECOMMENDATION

The 'Table Mountain vein' is actually a vein zone or series of veins which were emplaced along the intense shearing following a shallow north-dipping andesite-argillite contact. The argillite near the contact is intensely folded;

the andesite was too competent to fold, hence the contact between these two rocks is a zone of adjustment manifested by intense shearing and subsequent vein emplacement.

The mapping showed that the andesite-argillite contact is probably folded along an east-west trending axis, and that the axis may plunge, or be stepped down by a series of cross faults, at an average of 5 degrees or less to the east. The mapping also showed that although the dip of the contact and vein (?) on the north flank of the anticline may steepen locally, it averages only 15 degrees northerly from the adit towards the Jennie vein. A detailed study of the drill logs might add further information on the dip of the contact in some areas in the eastern part of the property.

The Jennie vein appears to be one of the larger members of a system of steeply dipping quartz veins which formed in the andesite, and fed the shear zone on the contact. Numerous quartz stringers also outcrop in Erickson Creek near the Jennie vein. Thus the andesite-argillite contact, as shown on section A - A', near the Jennie vein, should be explored further.

ROCK TYPES

Two rock types, andesite and argillite, make almost all the exposures at Table Mountain. Only one basic (gabbro?) and one acid dyke (alaskite?) were found.

The andesite is predominantly dense, aphanitic, grey to green in colour, strongly shattered but healed with silica and minor carbonate. It is probably a flow. The argillite sequence ranges from graphitic slates through sandstones to grits and small-pebble conglomerate.

STRUCTURE

The argillites are assumed to overlie the andesite, i.e., the possibility of complete overturning is excluded. The original upper surface of the andesite was probably irregular at the time of original deposition, thus not all of the complexity of the andesite-argillite contact is caused by folding. However, the overall structure appears to fit an east-west trending anticline, with the axis lying south of but close to the outcrop of the vein system.

A thin layer of argillites covers the andesite completely in the vicinity of the decline. The andesite is exposed again, under the argillite, in the cirque cliff to the southwest of the adit. Lack of outcrop precludes the determination of whether or not the argillites overlie

greenstone in the meadows and thus along the entire south limb of the postulated anticline.

The andesite shows no evidence of bedding, therefore it is not easy to determine if it is folded as closely as the argillites. The dense and massive nature of the andesite should have made it deform by faulting rather than folding. The argillite, on the other hand, has folded in an unusually complex manner. Some of the outcrops of argillite are breccia, and this breccia has probably formed from crushing and 'flowage' near the crests and troughs of tight folds. No pattern to the complexity was determined from the observations shown on the accompanying map, other than the aforementioned broad anticlinal structure.

The nature of the andesite-argillite contact is of prime importance because the contact has controlled the emplacement of the quartz vein system. Since the argillite is intricately folded, and the andesite is not, it follows that the contact is a zone of major adjustment. The strong shearing following the contact affirms this principle.

The information gained from the adit left little doubt that the contact flattens with depth in that vicinity. The decrease in gold values and vein consistency was very disappointing. Hence the question regarding how far the area of flat contact might persist is important.

The dips observed on surface show that the

contact and related vein dip more steeply at surface on B shoot than on A shoot. The axial line of the general anticline, judging by the relative elevations of the top of the greenstone horizon at or near the axial plane in the neighbourhood of shoots A and F, is horizontal or has a shallow plunge to the east. One would expect the area of flattening to have a similar shallow plunge unless this area of flattening is stepped up or down by cross faults.

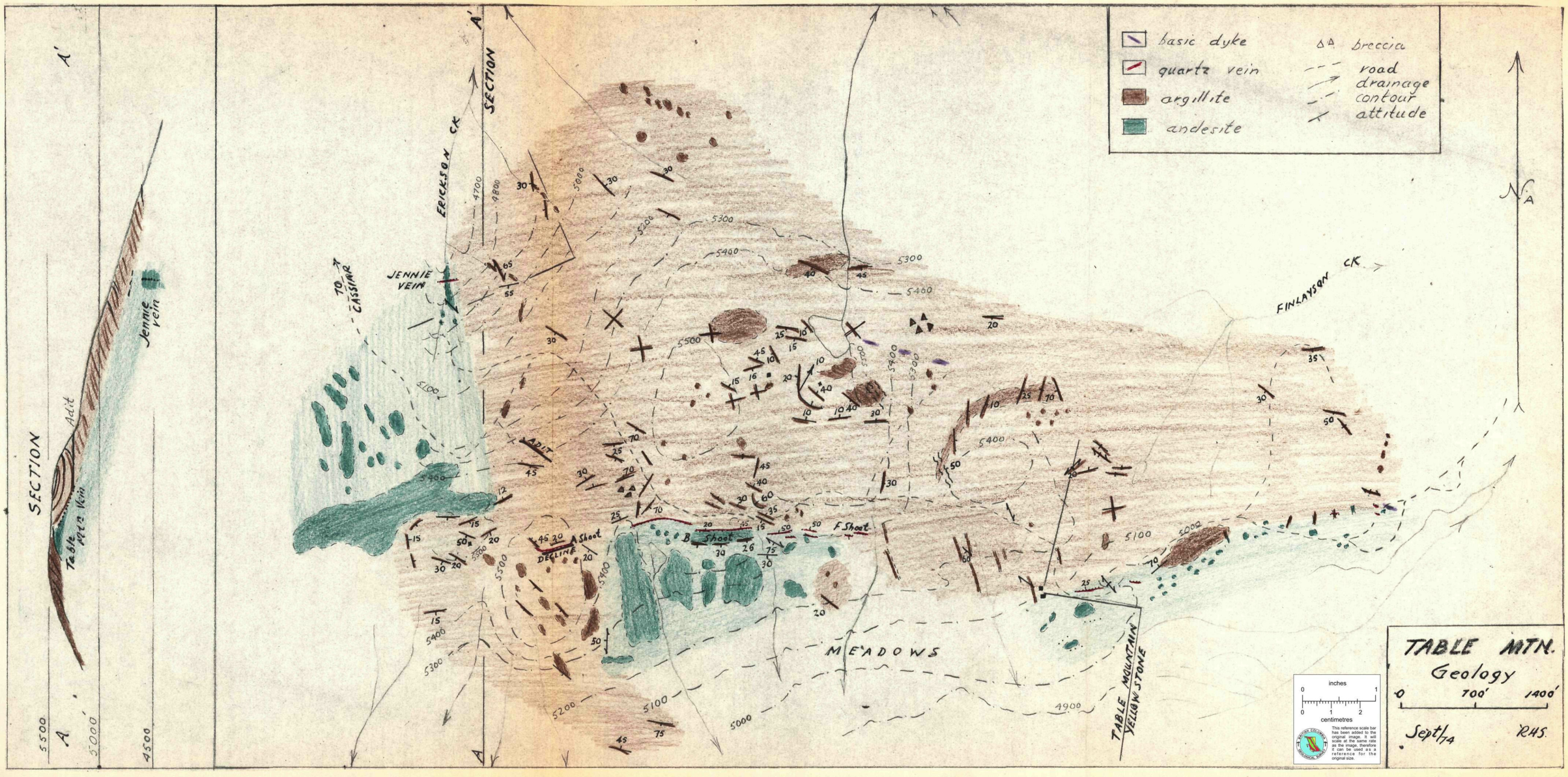
The complicating factor of cross-faults does exist. The contact and related vein system has been disrupted along strike by a series of shear zones, most of which have right hand movement. The offsets can be observed both on surface, and in the new adit. However, the writer did not observe any evidence of the amount of vertical component on these cross faults. The 100 foot lower elevation of the andesite-argillite contact at or near the anticlinal crest near F shoot as compared to A shoot remains the only evidence that the area of vein flattening may also plunge or be stepped down to the east.

The question regarding whether or not the contact and vein system will steepen again further down dip, i.e., to the north, is also important. The surface geology in the northern and western parts of the mapped area showed that the andesite-argillite contact must sub-outcrop along or very close to section A - A'. Thus the contact must dip fifteen degrees on the average between the adit and the Jennie vein.

The Jennie vein is of interest because it has gold values, and because it is the largest (six to ten feet wide) of a system of steeply dipping gold veins found in the andesites. Several of these steep veins were disclosed by the adit, where they continue up to the argillite, but are either faulted horizontally or terminate at the contact. If they are 'feeders' for the vein system which is controlled by the contact itself, then the contact near and above the Jennie vein merits exploration because a source of gold exists nearby.

R. H. SERAPHIM, P.ENG., PhD.

September 20, 1974


basic dyke
quartz vein
argillite
andesite
breccia
road
drainage
contour
attitude
SECTION A A'
Jennie vein
Adit
Table Mtn. Vein
SECTION A A'
ERICKSON CK
JENNIE VEIN
70 CASSIAR
ADIT
A Shoot
DECLINE
B Shoot
F Shoot
MEADOWS
FINLAYSON CK
TABLE MOUNTAIN YELLOW STONE
TABLE MTN.
Geology
0 700' 1400'
Sept/74
RHS
inches
centimetres
This reference scale bar has been added to the original image. The image at some size as the image, therefore it can be used as a reference for the original size.