

TODD CK. 1981

Location and Access

- Located on map sheet 104 A 5W - Skeena M.D.
- 40km NNE of Stewart B.C.
- 19km NW of Surprise CK-M.D.
- Very rugged terrain - 2700' - 6700' elevation -
- only access by helicopter from Stewart
- ~~much~~ of above 2 5000' elevation predominantly icefields, glaciers;
- tree-line at 4000' - most of property above tree-line.

Claim Data

Claim #	Staked by	# M.L.	Date staked	Record Date
TODD1 20	DENNIS GORE	200416	June 5, 1981	June 12, 1981
TODD2 20	"	"	" "	June 12, 1981
TODD3 20	"	200416	July 17, 1981	August 6, 1981

Record N°

TODD1	3093
TODD2	3094
TODD3	3153

TODD1, 2 initial staking by D. Gore and H. Anuckin spring as soon as ~~appropriate~~ weather and snow conditions allowed in order to protect ground area of bright gossan

TODD.3 added while mapping because of additional showings to north of TODD 1 and TODD 2 and because of proximity of terrain showing to northern boundary of TODD 1, and TODD 2.

Regional Geology

Reference Geology and Mineral Deposits of the Stewart Area

Bulletin 58.

B.C. Dept. of Mines and Petroleum Resources
1971.

By Edward W. Grove.

- Property underlain by ~~volcanic derived rocks~~ ^{Hazelton volcanics} of Lower to Middle Jurassic age.
- Grove ~~described~~ ^{described} Hazelton rocks ^{as} ~~into four~~ ^{mappable units} consisting of red and green ^{a) red and green volcanic} conglomerates and sandstones. Volcanic conglomerates and sandstones; crystal and lithic tuffs; minor breccia and minor siltstone.
- This description [?] ~~adequately~~ describes most of the rocks which underlie the property.
- The edge of the Bowen sediments which overlies the Hazelton volcanic rocks lies only a few kilometers to the north and west of the property.
to the west in the Stewart area intrusives dykes and small plugs are quite common and in some areas abundant but only a few ^{thin} basic dykes were mapped on the property.
- Structure described as relatively simple and straightforward consisting of broad gentle folds with [?]

Geology

Rock types A) Introduction

a) 1:5000 Base maps: ~~40 chain~~ ^{40 chain} - B.C. air photo. 5504-041
blown up.

b) 1:1000 - Stadia Survey; using standard instrument and technique.

B) Rock Types

a) V - intermediate volcanics - predominately light grey finegrained tuff, massive showing no or ~~se~~ ^{little} bedding, occasionally wuggy, occasionally could be described as ~~clastic~~ ^{clastic} lithic tuffs with ~~or few~~ ^{small} amounts of small rectangular clasts. Contains only trace pyrite. Weathers grey.

b) IRA - red tuff agglomerate - contains abundant subrounded clasts to 30 cm. Matrix is fine to medium grained. Predominately reddish to purple matrix. Most of clasts are volcanic rocks, non-porphyratic. Unit contains only trace pyrite if any and is not iron stained. Seems to underlie most of the area to the north and part west of Gossan. Shows no bedding ^{for the most} ~~even~~ though unit seems to have a considerable thickness. Contains horizons which have a greyish matrix. Also contains horizons of obvious crystal tuffs. but such rock types are of minor quantity.

c) [RT] - red tuff - matrix is similar to red tuff agglomerate but this unit contains clasts no ~~longer~~ larger than .5cm. Also has similar red to purple colour. Contains little or no pyrite - is also massive indicating little or no bedding.

d) [FT] ^{light grey} - siliceous tuff. found only at junction of Todd Cr and Fall Cr. light gray, fine grained, massive, hard siliceous rock. Contains no pyrite. Some copper stain along qtz-pyrite vein in one outcrop.

e) [BT] brown weathering carbonate rich tuff. Weathers brownish with typical carbonate weathered appearance. Unit is quite soft.

f) [VB] - volcanic breccia - grey weathering, massive. with a fine grained matrix; abundant angular clasts of volcanic rocks to 20cm.

g) [CT] - carbonaceous, pyritic tuff - very carbonate rich rock with local horizons containing at least 15% pyrite. Despite amount of pyrite area is not iron stained. Area has been previously explored as Cu-Au target. Saw evidence of at least one drill site as well as three trenches. Trenches 20-25m long all sub-parallel to each other.

Trenches contained small amounts of chalcopyrite and copper stain. Rock similar to ~~such~~ this was found to north at sample site 516.

1] limestone - platy, thinly bedded grey limestone; found only in part northern part of property

Intrusives

1bd] - only intrusives seen are fine grained dark grey basic dykes with hornblende phenocrysts. Such dykes are 20-30cm thick and generally strike NW. There was no alteration noted alongside the dykes.

alterations

alteration was classed according to 3 grades of intensity.

dark yellow - intensely altered - such rock forms most of the cliffs with which give the gressan its spectacular appearance. Such rock is essentially white with the most intensely altered and pyritic zones being a light grey. Pyrite content is variable but is generally high. Since these rocks are so well exposed much of pyrite is weathered out but yellow jarosite is quite common both as large yellowish patches on surfaces and in small bags within rock. Rock is quite hard and weather resistant.

- alteration is likely qtz-sericite with qtz dominating - would consider to be silicified

- original rock is impossible to decipher and in fact may be a rhyolite volcanic member.

- however it seems likely that such rock is an altered equivalent to the fine grained intermediate volcanics v

yellow xs

-

- medium alteration - this rock differs from the above in that it is a white rock with no greyish sections. Pyrite content is present but is noticeably less than above although still quite high; would consider rock to be siliceous but silicified. qtz content is likely lower than above.

queen's
[+ < c]

- low to minimal alteration
- ~~this is considered as~~
- this is obviously altered intermediate volcanics.
- alteration patches are sporadic and patchy after covering only a few square centimeters
- pyrite content is low but is greater than unaltered intermediate volcanics
- ~~more~~ pockets of such rock found within main alteration zone - at times such rock is

Overall picture of alteration ~~very~~ carbonaceous

- main gossan covers large area - 600m x 900m.
- bounded sharply to ~~north~~^W and NW by faults? -
- ~~could~~ also be ~~bound~~ bounded to the north by fault? but not enough evidence to be sure.
- western boundary approx. ~~is~~ near the headwaters of Rhob Cr.

Additional zones of gossan and alteration are much smaller and are often ~~linear~~ linear suggesting a possible relationship to faults or large structures.

- such sharply defined linear zones are found along fault and Glacier creeks.

Only minor amounts of alteration are found ~~at~~ to the north of Glacier Creek.

Other areas of alteration and gossan include
the cliffs at the base of the prominent knob to
the east of camp (sites 301-302.)
These zones are not linear as those
along Fault + Glacier creeks but are
not that extensive.

thru

Structure

Bedding almost not resistant - possible bedding attitudes indicate a N-S to NW-SE strike with an approx. 45° easterly dip.

These few attitudes are compatible with attitudes measured by Grove along American Creek to the west.

- quite intense faulting, at least 2 and perhaps 3 ~~sets~~ ^{series} of faulting.

a) ^{Main} ~~one~~ set - steep dip ($\approx 60^\circ$) strike NW

b) Second set - strike E-W - vertical dip

c) third set ?? - strike E-W - dip $\approx 25^\circ$ N.

- such faults or structures often have white qtz infilling.

- movement along faults both ~~during~~ ^{before} and after vein deposited; many veins contained brecciated zones

- at least along Fault and Glacier creeks; faults seem to have affected the emplacement of alteration.

- In northern part of map property where indicated the red. tuff. tuff is obviously well sheared with indicating a nearby major structure perhaps along Cold Creek Valley.

3) From A187L to main vein

some calcite, usually small amount of galena,
occasionally chalc and splinterite

4) Main Vein - abundant jasper, jasper breccia
- local pods of galena.

5) To north of Fault Ck to Glacier creek

predominately calcite - jasper with varying
amounts of barite, occasional galena.

6) Beyond North of Glacier Creek - predominately

qtz veins although at head of Cerqui
ck - do have 1 m. jasper - barite
vein with some galena.