60001882

Mining District File Summary Sheet

DISTRICT	Rosebud
DIST_NO	4010
COUNTY If different from written on document	Pershing
TITLE If not obvious	Rosebud Stratigraphy
AUTHOR	
DATE OF DOC(S)	
MULTI_DIST Y / N? Additional Dist_Nos:	
QUAD_NAME	Sulphur 7½'
P_M_C_NAME (mine, claim & company names)	Rosebud Mine
COMMODITY If not obvious	gold, silver
NOTES	Geology; handwritten notes; stratigraphic columns 6p. includes back of 1st page

Keep docs at about 250 pages if no oversized maps attached
(for every 1 oversized page (>11x17) with text reduce
the amount of pages by ~25)

SS: DP 9/9/08
Initials Date

DB:
Initials Date

SCANNED:
Initials Date

Revised: 1/22/08

STRATIGRAPHY

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ROSEBUD STRATIGRAPHY

need stratigraphic table w/ general introduction

CHOCLOLATE FORMATION

Introduction

The Chocolate Formation formed during a period of trachydacite effusive volcanism and porphyry intrusion, etc. puncuated by ephimeral to extended (Badger Member) periods of rhyolite (Bud Member) and trachydacite (Rosebud Member) pyroclastic eruptions, localized mass wasting and erosion. Pyroclastic and volcaniclastic debris accumulated in steep-sided, interdome valleys and regional lakes. The rhyolite ignimbrites that occur within the Bud Member are important time "lines" which may be traced across the Rosebud mining district, and possibly ~~into~~ across the Kamma and ~~the~~ adjoining mountain ranges.

Trachydacite lavas ~~are~~ where flow-laminated, the banding is characterized by thin (1-3 mm) planar flow-laminations. They are ubiquitously Fine-grained and commonly massive, controted, which may be Aplitic ~~planar-lammated~~. ~~and~~ autoclastic textures are less abundant, but not uncommon. The lateral extent of the flows is difficult to ascertain because of compositional and textural similarities between the flows, and ~~the extent of~~ relatively poor exposures. The lava flows appear to be only a few 10's of meters thick, except where they ponded(?). in paleo valleys or ~~low~~ basins. In these areas the trachyandesite lavas may exceed ~~50~~ 100 meters in thickness. Individual flows can be followed for no more than 1 to 2 kilometers along "strike," and even the distances are problematical. and may be the dominant texture for several to 10's of meters in core.

Trachydacite lava flows of the LBT and South Ridge Members are virtually indistinguishable in hand specimen and microscopically, and may be parts of the same eruptive sequence. The two members are separated by volcaniclastic and rhyolite ignimbrite deposits (Bud Member), which may represent a brief(?) hiatus in proximal volcanism. Because the pyroclastic units within the Bud Member are compositionally different from the remainder of the Chocolate Formation, ~~it~~ is likely ~~possible~~ probable that the Bud Member volcanic units ~~originated from~~ represent the fringe of major distal ignimbrite / ash flow tuff eruptions (separate magmas). ~~Patterns of major~~

Intrusive phases Trachydacite include the Rosebud sill (laccolith?), Kamma "Andesite" and possibly the White Alps Porphyry. "Quartz Latite" The Rosebud sill is the most extensive intrusion identifed within the Rosebud mining district.

Rosebud "Quartz Latite" } Trachydacite
Relay "Rhyolite"
Spotted Vitrophyre
White Alps Porphyry } trachyte?
Kamma "Andesite" = ?? maybe Sulfur Group Age?

Bud Member

Medium to thick bedded lacustrine volcaniclastic and ~~possibly~~ lahar (?) deposits are intercalated with relatively thin (2-10m) rhyolite ignimbrite and tephra fall deposits. On South Ridge Ignimbrite flows are more common in the lower one half of the unit. Two of the ignimbrites are densely welded, eventhough they are thin, indicating that the fallout from the eruptions were exceptionally hot and/or that the flows are proximal (within 1 km) to the eruption vent. Intercalated within the pyroclastic-rich lower sequence is a cobble to boulder conglomerate or debris pile that may be a megabreccia resulting from the collapse of a caldera topographic wall.

Pyroclastic eruptions either diminishing in volume with time or being diluted by ~~copious~~ voluminous volcanic detritus, because the upper portion of the unit is denivotally ~~by~~ comprised volcaniclastic material.

LBT MEMBER

The LBT Member of the Chocolate Formation a relatively think (>50 m) trachydacite lava. Fflow textures vary from thin (1-3 mm) planar flow-laminations to fine-grained and massive. Autoclastic and vesiculated (LST) textures are common, but are not laterally continuous for more than a few 10's of meters to approximately 100 meters along strike. The latter textures are best exposed in the underground mine workings.

Obriculor lava(s) – may be basal Bud.
South Ridge = lithophysae?

OVER

Rosebud Quartz Latite

~~Intrusive rocks are a major component of the volcanic pile in the Rosebud region.~~ Dikes, sills and laccoliths (?) form more than half of the surface outcrops in the central portion of the Rosebud district.

The largest intrusion (Rosebud Quartz Latite) is an irregular body of ~~two~~ porphyritic trachydacite. The body is sill-like along its margins and locally exceeds several hundred meters in thickness. The intrusion is composed of several lobes and resembles a Christmas tree laccolith.

Textures of Rosebud quartz latite varies from glassy and flow banded to fine-grained and massive.

Quartz

~~Euhedral~~ Clear, ~~euhedral~~ anhedral to shard-shaped clear quartz and bipyramidal smoky quartz (micro)phenocrysts ~~to phenocrysts~~ that are generally <1mm in maximum dimension. Smoky quartz is characteristic of the unit, but may be widely dispersed or absent. ~~Neither~~ Rarely does either variety of quartz exceed 0.1% of the rock.

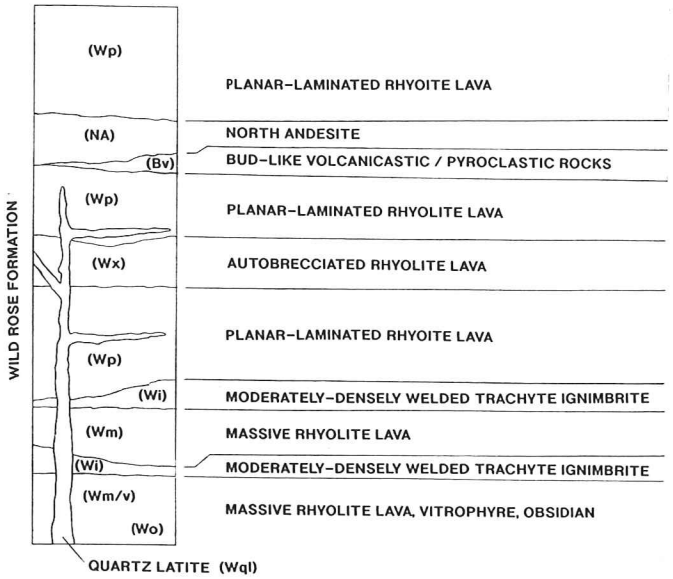
Feldspar

Sanidine is conspicuous, varying in long dimension from <1mm to >1cm, but typically varying between 4 and 8mm. Sanidine may vary in abundance from <1 to 45% of the rock, and is normally less abundant than plagioclase. Plagioclase forms glomeroporphyritic clusters of ~~tabular~~ tabular crystals, locally forming star-shaped aggregates, and also occurs as isolated phenocrysts.

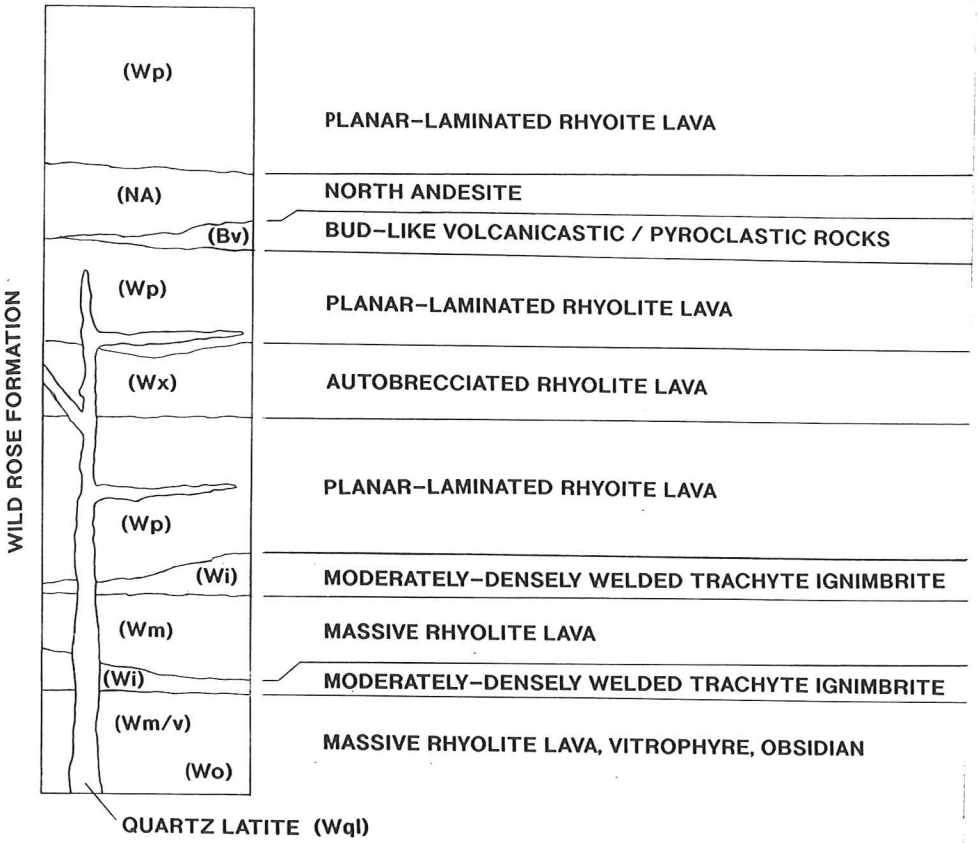
~~Amphibole~~ Biotite

Amphibole

STRATIGRAPHY



STRATIGRAPHY



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