

# PMDC GEOLOGICAL AND GEOHAZARD ASSESSMENT AT TAGBANAOS AREA, BARANGAY UPPER ULIP

**COMPOSTELA VALLEY PROVINCE, Philippines** – The Philippine Mining Development Corporation (PMDC) conducted a geological and geohazard assessment at Tagbanaos Area, Barangay Upper Ulip, Monkayo, Compostela Valley Province last May 29-30, 2018. As part of the Diwalawal Mineral Reservation Area (DMRA), PMDC represented by junior geologist, *Ms. Abigail I. Abenoja*, Mines and Geosciences Bureau (MGB) Region XI geologists, *Ms. Beverly Mae M. Brebante* (Supervising Geologist), *Ms. Lady Rose G. Tablo* (Geologist), *Ms. Marie Anne E. Garcia* (Geologist) and City Environment and Natural Resources Office (CENRO) - Monkayo representative, *Ms. Rheycalyn Lugtu* (Geologist) mapped and assessed the area for potential development purposes in the future.

PMDC junior geologist *Ms. Abenoja* & one (1) PMDC geologic aid assessed and mapped the Tagbanaos Area following ridges and tributaries with steep slopes as shown in *Figure 1*. Whereas, *Figure 2* shows two (2) PMDC geologic aids guiding and assisting MGB XI geologists while posting as scale for the clast size of the volcanoclastic rock.

As per the geohazard assessment of the Team, the Tagbanaos Area is said to be moderately to highly susceptible to landslide due to its steep and rugged terrain as shown in *Figures 1 and 2*. However, the area is dominantly volcanoclastic and porphyritic andesite which are highly competent rocks.

“Nonetheless, areas that had shown signs of mass movements (i.e. landslide) were technically those that were more exposed to weathering and erosion due to loss of vegetative cover,” added by the PMDC junior geologist *Ms. Abenoja*.

In addition, the outcrops were classified as moderately to highly jointed volcanoclastics showing the dominant trend (e.g. strike and dip direction) of the bedding plane as illustrated in *Figure 3*. While *Figure 1* showed rocks of the same lithology displaying high angle elevation crossed cut by an inferred fault – physiographically manifested by high angle falls – which is now being followed as the course of the tributary upstream.



Figure 1. PMDC junior geologist *Ms. Abenoja* and one PMDC geologic aid assessed and mapped the area following ridges and tributaries with steep slopes.



Figure 2. Two PMDC geologic aids guiding and assisting MGB XI geologists while displaying an outcrop showing the clast size of the volcanoclastic rock

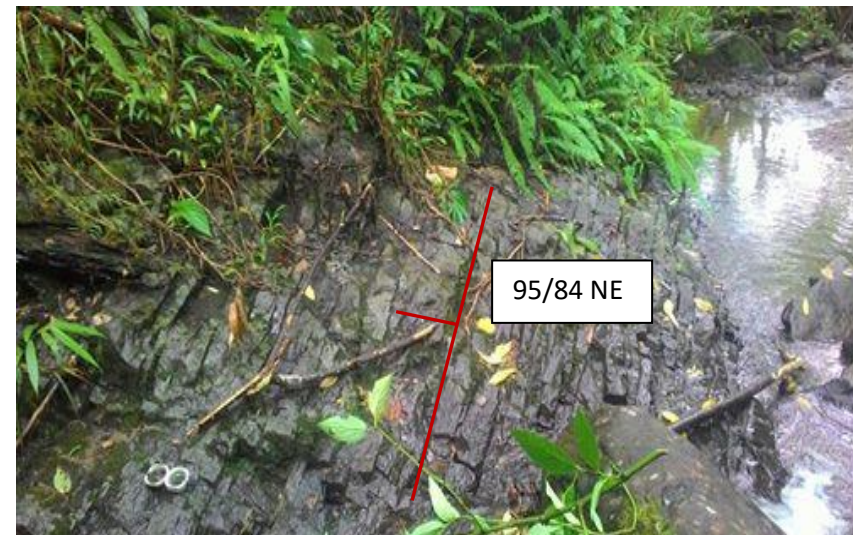


Figure 3. (Looking Southwest) Moderately to highly jointed outcrop showing the dominant trend (e.g. strike& dip direction) of the bedding plane.

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Figure 4. (Looking North) Fault in the volcanic rock having an orientation of 133/50 NE (MGB XI, 2018)

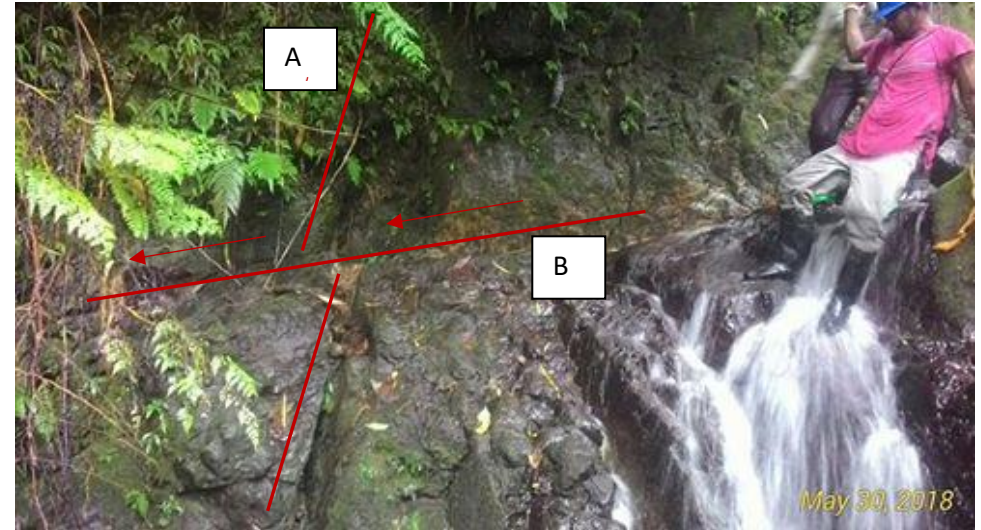


Figure 5. (Looking North) Fault (A) with 5cm quartz-calcite vein having an orientation of 345/85 SW cut by a gougy right strike-slip fault (B) with an orientation of 120/88 NE on the altered andesite porphyry (MGB XI, 2018)



Figure 6. Creek being traversed by the Team during assessment



Figure 7. A) Red lines showing dimensions: Width- 1.4m, Length- 1.7m, Height- 1.7m  
B) From top to 1.2m, sand with clay, brown  
C) 1.2m to 1.7m, oxidized, clay-chlorite altered andesite porphyry (pebble to cobble size) (MGB XI, 2018)



Figure 8. A) Red lines showing dimensions: Width- 1.2m, Length- 1m, Height- 0.7m to 1.2m  
B) Inclined along moderately steep slope about 0.7m clayey soil capping the moderate to highly weathered and clay altered andesite porphyry (MGB XI, 2018)