

Geological reconnaissance of Lagoa Norte area, Fazenda Brasileiro gold district, Brazil

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The area is located at the Lagoa Norte region, at 10 km north of Fazenda Brasileiro gold mine, Bahia state, and has been a gold target area for CVRD. The area is part of the Paleoproterozoic Rio Itapicuru greenstone belt (southern portion), located at the eastern margin of the São Francisco craton.

Two main lithological domains have been observed: Sedimentary Domain outcropping in the northern portion and the Volcanic Domain in the southern one. The rocks show an incipient foliation with an E-W general trend plunging 50° SE to subvertical. A stretching lineation is contained in the foliation planes ranging from 80° to 120° with a subhorizontal plunge. This has also been observed in the Fazenda Brasileiro mine.

The sedimentary unit comprises a psammitic to pelitic sequence showing metric upward fining cycles. There is a major pelitic contribution towards the top (north) of the sequence. The psammitic rocks are coarse polymictic metaconglomerate with a coarse quartzitic matrix grading to medium grained metasandstones. Carbonaceous pelites, locally sericitic, are only observed in trenches. The volcanic package is dominantly composed of volcanoclastic rocks (crystal tuff) intercalated to andesites.

Metamorphism is of greenschist facies with presence of sericite essentially in pelitic rocks. Quartz veins cut the entire sequence.