GR 4m	**Granular (GR) zone** / upper limonite - Is dusky red, powdery clay texture and highly magnetic. It is common in the central portions of the deposits (3-8m) and absent at the borders. Is easy to dig. Has an average thickness of about 4 meters, ranging from 0-20 meters. It is typically barren.
UB 2m	**Upper breccia (UB) zone -** Is made up of ferrugenous concretions subsperical to sperical. At times it is mixed with blocks of hardpan and is gradational with harder ferricrete breccia of similar color. All fragments in an UL matrix. Has an average thickness of 2 meters. Is usually barren. It commonly has dusky red coating and a core fragment of various shades of red, yellow, brown and back.
FB 4m	**Ferricrete breccia (FB) zone /** hardpan **-** It is made up principally of ferrugenous concretions. May also be made up of manganiferous concretions and gibbsitic concretions. The color is varigated, but the dominant composition determines the principal color. It is highly or fairly well cemented and blocky, (thereby determining its hardness, which decreases from highly cemented to blocky). It is the hardest zone in the deposit. It has an average thickness of 4 meters. It oucrops in some areas, particlarly at the borders of the deposits. Though all the hardpan areas are not mineralised, the highest grades are situated within it. Grades of >2% occur in this zone. The highest have been demonstrated to be linked to gibbsitic concretions that are observed associated with asbolane.
LB 2m	**Lower breccia (LB) zone**. Reddish but rich in shades of black MnO. - Is mainly made up of manganiferous concretions with gradational contacts with the overlying breccias. Their texture is similar to that of the UB. The matrix is composed of UL/GR. This zone is generally mineralized. It has an average thickness of about 2 meters. The entire brecciated zone (UB-FB-LB) can exceed 35 meters in doline-like depressions. The breccia group is essentially one zone.
FL 15m	**Ferralite zone (FL) /** lower limonite sharply underlies the ferricrete breccias- It is mottled, with varied shades of black, yellow, brown, and red. The texture is foliated. Manganese-rich and ferrous iron-rich zones are dark gray color. This zone increases in clay toward the bottom of the unit This zone encompasses the bulk of the mineralization in the district. The grades here, though lower than the overlying breccias, are fairly uniform and are gradually gradational. Its thickness varies greatly, ranging from a few metres to tens of metres. The average is about 15 meters. Economic mineralization averages 4-5 meters in thickness.
SI 0.5m	**Silcrete zone (SI)** with quartz. This is made up of platy secondary opaline and crystalline silica, which are intercalated with clay (green, black, yellow or red). The presence of this zone is a prelude to the water table. This zone may be white, but very often dark due to the pesence of MnO or iron oxide. Th zone is usually low grade and is approximately 0.5 meter thick.
SP 3m	**Saprolite zone (SP)**. This is essentially constituted of green and brownish, sticky clay. Fragments of partly weatherd serpentinite are present. This zone is gradational, grading into fresh serpentinte at its base. This zone is depleted in cobalt and nickel.
SE >300m	**Serpentinite**. Olive green to dark green in color. It is very hard and often foliated. It is the primary ultramafic source of cobalt and nickel that is enriched in the overlying soil zone by supergene processes. Core drilling has penetrated beyond 300 meters into the serpentine basement.

Figure 17. Typical laterite profile in the Nkamouna Cobalt Deposit