this geological section, the following results were observed:

a) The total thickness of A and B horizon varied between 1m and 4m and averaged 2.5m to 3m. The saprolite is situated below the B-horizon.

b) The soil is generally clayey and present quartz veins fragments in most of the samples. The soil show varied colors, however, the reddish brown color, characteristic of lateritic soil was not identified in the surveyed area.

c) Gold anomalies in A and B horizon were found in the whole area and some of the best results were found in the following samples: C0920-33002 (670ppb), C0920-35002 (531ppb), C0920-37001 (525ppb), C1000-29002 (2799ppb) and C1000-29504 (336ppb).

d) Gold anomalies were found also within saprolite and some of the best results are as follow: C1000-29502 (864ppb), C1120-18504 (14800ppb) and C1120-18505 (1485ppb).

(5) Discussion

Analysis of the 487 auger samples taken within the soil geochemical gold anomaly in C block confirmed the existence of gold beneath the anomaly. Although the gold anomalies in soil are distributed within a large area, they contain low gold grade, however, the gold anomalies found distributed within saprolite are narrow and containing high gold anomalies locally distributed (Fig II-2-11). This contrast in the gold distribution pattern between soil and saprolite confirms that the mobility of gold in soil is much higher than in saprolite.

Comparison between the gold results of saprolite and soil, showed that gold anomaly in saprolite is well reflected in soil. The geological section made from the auger lines shows that there is a strong spatial relationship between gold anomaly in saprolite and in soil.

The auger sampling executed along the line C1000 at site number 2950 and line C1120 at site number 1850 presented high gold anomaly with values as high as 0.86g/t, 1.48g/t and 14.80g/t. This result suggests that there is a high potentiality for gold mineralization in the survey area.

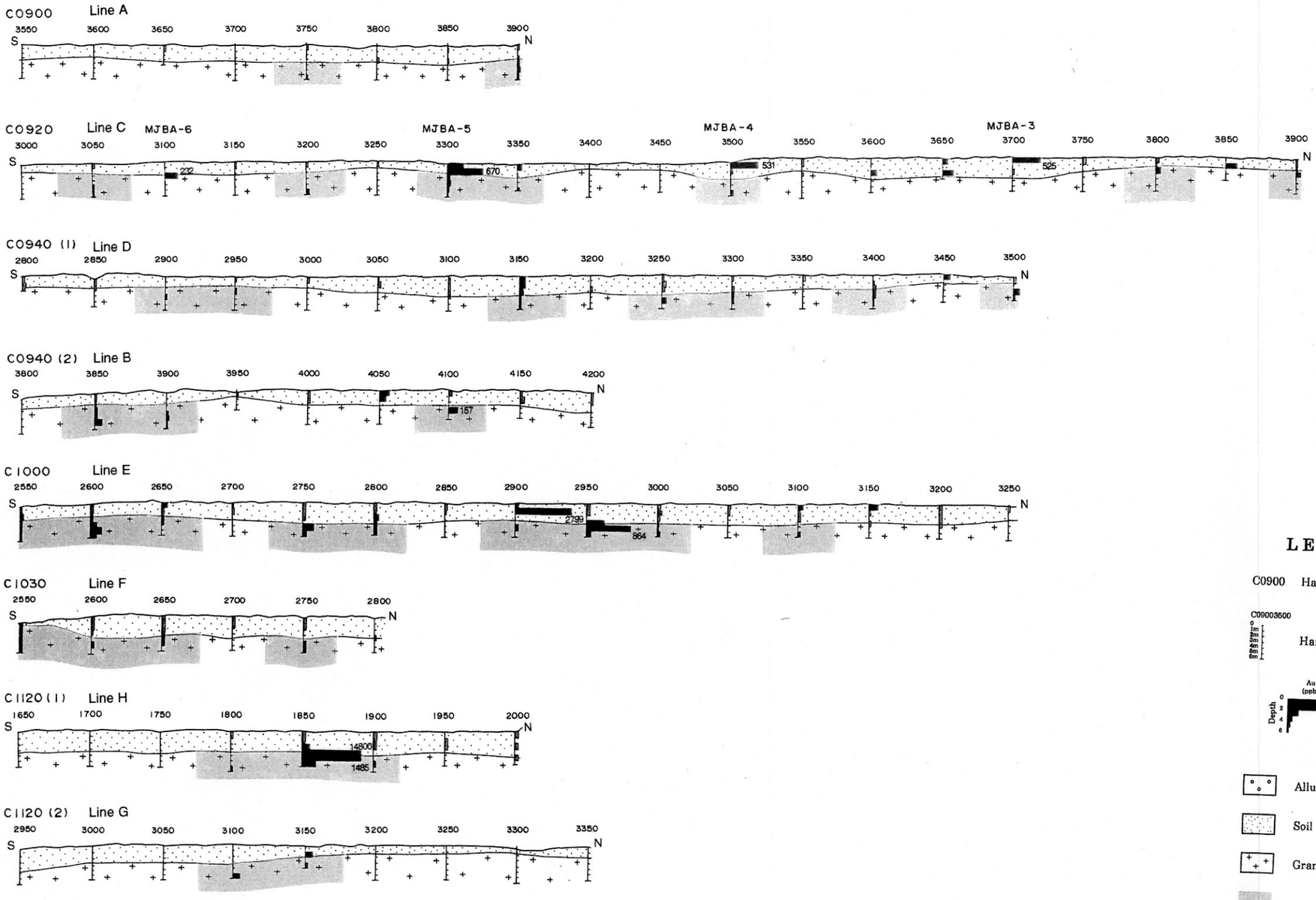
2-4-3 Drilling Survey

(1) Background and Objectives

Drilling survey was carried out within the soil geochemical gold anomaly in C block. The main objectives of this survey were to investigate the geology, tectonic and alteration type of the gold mineralization in depth and to check the saprolite thickness in the survey area.

(2) Survey areas and Amounts

The drilling survey was conducted at the central north part of the survey area (Fig II-2-9). The



LEGEND

C0900 Hand Auger survey line

C09003500 Hand Auger hole and hole number

Au (ppb)

Depth

Alluvial deposits

Soil

Granitic saprolite

Gold anomaly in saprolite

0 50 100m

Fig. II-2-10 Geological cross section and Au anomalies by auger in Block C

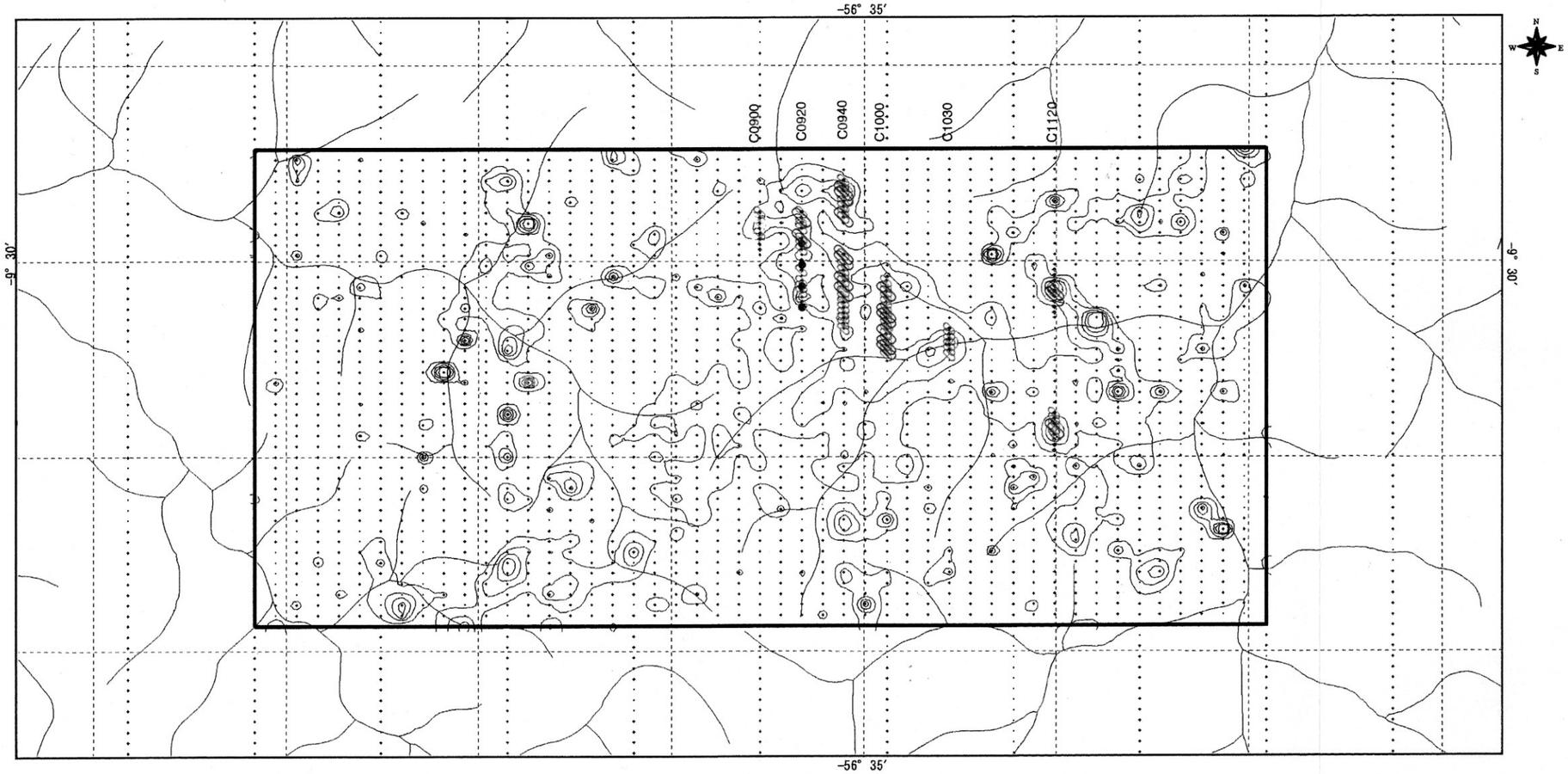


Fig. II-2-11 Distribution of Au anomaly in saprolite of Block C

totals of boreholes were 4, numbered from MJBA-3 to MJBA-6, as shown in detail in Fig II-2-12.

As indicated below, the drilling length was 202.10m.

Borehole Number	Inclination (deg.)	Length Executed
MJBA-3	-90°	50.30m
MJBA-4	-90°	50.45m
MJBA-5	-90°	50.70m
MJBA-6	-90°	50.65m
Total 4 holes		202.10m

(3) Survey Method

(i) Drilling operations

The drilling operations were conducted by using the machine and equipment mentioned on the Appendix 7. All drilling were done by HW and NQ sizes coring and Wire Line method. Table II-1-2 and Appendix 8 show the amounts of survey work and the progress record during the drilling operations.

(ii) Core logging

The core description and core sampling were similar to the B block drilling survey. Amounts of laboratory works collected in the C block area are indicated below:

Thin Section	8
Polished Section	9
X-Ray Analysis	9
Chemical Analysis	200

(4) Results of Drilling Survey

Drilling logs are shown in Appendix 9. The results of the laboratory works are shown as follows: Thin Section in Appendix 10, Polished Section in Appendix 11, X-Ray Analysis in Appendix 12 and Chemical Analysis in Appendix 13.

The results of drilling survey are described for each one of the boreholes as follows:

(i) MJBA-3 borehole

Geology: Consisting of biotite granite, Pre-Uatuma Granite (GriIIb).

0.00m to 4.30m Transported soil

4.30m to 44.00m Saprolite

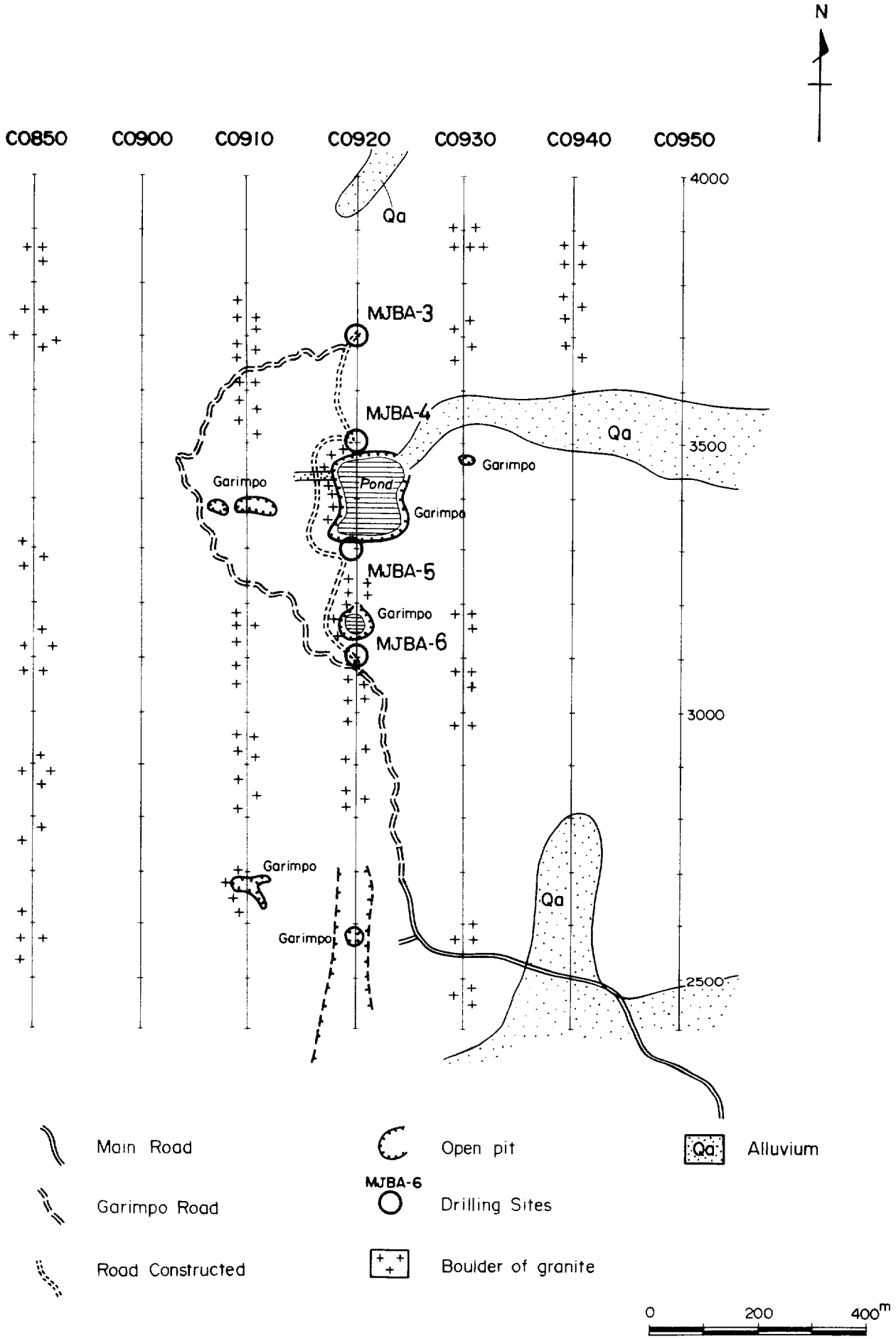


Fig. II-2-12 Location map of drilling sites from MJBA-3 to MJBA-6 in Block C

44.00m to	44.70m	Kf. porph.coar.hb.bi.granite, strong py. diss, epi.-chl. alteration
44.70m to	45.10m	Sheared granite (mylonite) Shearing angle: 10 to 20deg.
45.10m to	49.05m	Kf. porph.coar.hb.-bi.granite, low py.diss., epi.-chl. along fractures
49.05m to	49.20m	Qz.vein wide: 10cm, medium py.diss., strongk-alt., epi.- chl.alteration
49.20m to	49.40m	Silicified and bleached granite. Strong silic., medium py.diss. and epi.-chl alteration and strong k-alt.
49.40m to	50.30m	Kf.porph.coar.hb.-bi.granite. Kf., diss. py. and epi.-chl. alteration

Mineralization: From 0.00m to 44.00m: due to the strong weathering, characteristics for gold mineralization were not observed. Gold grades from 0.1 g/t to 0.55g/t were observed in the soil and saprolite sections of the borehole. Weak py dissemination was observed from 44.00m to the bottom of the hole (50.30m). Hematite and pyrite were confirmed on polished samples at 49.07m and 49.30m.

Alteration: Chlorite and epidote with medium intensity alteration was observed from 44.00m to 50.35m.

(ii) MJBA-4 borehole

Geology: Consisting of biotite granite, Pre-Uatuma Granite (GriIIb).

0.00m to	3.50m	Transported soils
3.50m to	28.20m	Saprolite (granite)
28.20m to	28.40m	Sheared and bleached granite. Light blue and cream, strongly bleached and medium silicified and medium epi.-chl. alteration
28.40m to	28.50m	Qz.vein, with disseminated py. and films.
28.50m to	39.35m	K-f.porph.coar.hb. bi.granite. With blue qz., medium silicified and medium epi.-chl.alteration, magnetic granite
39.35m to	40.70m	Silicified granite. Strong silic., weak py.diss., medium epi.-chl.alteration.
40.70m to	50.45m	K-f.porph.coar.hb.-bi.granite. With blue qz., medium silicification, medium epi.-chl.alteration. 41.10m: py.films in fractures, 48.50m and 49.05m: qz.-cal.veinlets with epi.-chl.(w:4mm)

Mineralization: From 0.00m to 28.20m: due to strong weathering, mineralization characteristics were not observed, but only a few gold anomalies were observed in this interval. The only gold mineralization observed between 28.20m to the bottom of the hole (50.45m) was a 5cm wide py rich quartz vein at 28.45m. Due to this quartz vein, the average gold grade from 28.00m to 29.00m was 1.09g/t. Pyrite, sphalerite and chalcopyrite were observed on polished samples at 28.45m and 39.95m. Gold was also observed at sample 28.45m.

Alteration: Medium grade silicification and chl-epi alteration were observed from 21.30m until 50.30m.

(iii) MJBA-5 borehole

Geology: Consisting of biotite granite, Pre-Uatuma Granite (GriIIb).

0.00m to	1.50m	Transported soils
1.50m to	21.30m	Saprolite
21.30m to	34.00m	K-f.porph.coar.hb.bi.granite to granodiorite. Weak to medium Silicification, Medium epi.-chl.alteration. Thin section sample from 33.50m confirmed the Biotite granite.
34.00m to	34.10m	Strong.silic.granite. Strong silicification, weak epi.-chl. and py.diss.(med.)
34.10m to	38.15m	K-f.porph.coar.hb. bi.granite. Med.silicification, epi.-chl.(med.)alteration
38.15m to	38.28	Brecciated and silic.granite. Strong silicification, epi.-chl.(med.to strong.), py.diss.(strong), py.film.(strong), magnetite(strong)
38.28m to	48.20	K-f.porph.coar.hb.-bi.granite. Py.films along fractures (strong), epi.-chl.(med. to strong) alteration. Thin section sample from 46.90m confirmed the biotite granite.
48.20m to	49.00m	Strong.silic.granite Strong silicification and epi.-chl.(weak.)
49.00m to	50.70m	K-f.porph.coar.hb.-bi.granite. Epi.-chl.(weak).

(iv) MJBA- 6 borehole

Geology: Consisting of biotite granite, Pre-Uatuma Granite (GriIIb).

0.00m to	2.20m	Transported soils
2.20m to	12.90m	Saprolite
12.90m to	22.40m	K-f.porph.coar.hb.bi.granite. Medium silic., edium epi.-chl., blue qz., magnetic granite
22.40m to	29.30m	Strong.silic.aplite. Strong silic., py.diss.(med.), epi.-chl.(med.), potassic alt.(weak)
29.30m to	31.40m	K-f.porph.coar.hb.-bi.granite. Medium Silic., epi.-chl.(weak)
31.40m to	32.40m	Strong.silic. aplite. Strong silic., py.diss.(med.), epi.-chl.(med.)
32.40m to	50.65m	K-f.porph.coar.hb.-bi.granite. Epi.-chl.(weak), with melanoclatic texture

Mineralization: Residual gold anomaly was observed in soil. Weak py dissemination was observed from 22.50m to 32.40m. Hematite and pyrite were confirmed by polished section at 26.15m and 27.14m.

Alteration: Silicification was observed from 12.90m to 32.40m. Weak to medium epidote and chlorite alteration was observed from 12.90m to 50.65m. Potassium alteration was observed from 22.40m to 29.30m.

(5) Discussion

Result of Phase II drilling survey indicated a thickness average for the saprolite of 26m, and a maximum thickness of 44m as confirmed in the borehole MJBA-3.

The drilling cores showed shearing structure with varied inclinations. Gold mineralization were found within sheared sections of the drilling core, confirming that gold mineralization is strongly controlled by shearing structure. The shearing inclination in the drilling cores varied from 10 degrees to 80 degrees.

Gold in hard cores as well as in saprolite were intercepted in MJBA-3, MJBA-4 and MJBA-5. The borehole MJBA-3 presented the best intercepts, showing gold values such as 0.1g/t and 0.55g/t within granitic saprolite. Some of these gold values presented oxidized pyrite.

Gold garimpo open pits with rounded form and diameters between 100m and 200m are present in the boreholes MJBA-4, MJBA-5 and MJBA-6. These boreholes did not intercept any strong gold mineralization that is assumed to be source of gold primary garimpo.

Since all the 4 boreholes were vertical and since most of shearing were sub-vertical, it is likely that the main gold mineralization related to the rounded gold primary garimpo were not intercepted by the boreholes.

2-5 Consideration

The geology of block C is composed of Lower Proterozoic Pre-Uatuma Granite, Middle Proterozoic Uatuma Group, Dykes and Quaternary sediments.

The shearing zones are the most important geological structure observed in the survey area because the gold mineralization is related to this shearing structure, as confirmed during the drilling survey.

Although the main shearing direction in the survey area is supposed to be along NW-SE direction, shearing zones along ENE-WSW and NNW-SSE directions were also observed. Gold garimpo (C8401700), located inside a shearing of NNW-SSE direction, presented samples with high gold and silver values. The NW-SE direction shear zone is well represented by the distribution of gold anomaly in soil. The soil gold anomaly represented by gold values of 25 ppb and 10 ppb, presents an elongated pattern along NW-SE direction that suggests that a shearing structure exists in this direction.

Results of factor analysis indicated the following metal signature: the factor 1 related with Pb-Zn-Fe-Cu is largely distributed in all survey area. The factor 3 related to Cu-Fe-Au is mostly distributed along the Rica and Buriti rivers that are the most important alluvial garimpo in the whole area. It is likely that metal associations such as, Copper, Gold and Iron reflect a gold mineralization adjacent to the intrusive center.

Results of auger geochemical survey in C block bears a similarity with the results of B block. The

gold anomalies within saprolite were also narrow with localized distributions containing some high gold values, as exemplified by the 14.8ppm Au on sample C112018504.

Gold mineralization related to shearing zones of varied inclination was found in hard cores as well as in saprolite in the boreholes MJBA-3, MJBA-4 and MJBA-5 (Fig. II-2-13) confirming that the gold mineralization is strongly controlled by the shearing structure.

The evidence of a relationship between shearing structure and gold mineralization open a good perspective for finding major gold deposits related to shearing structures in the survey area.

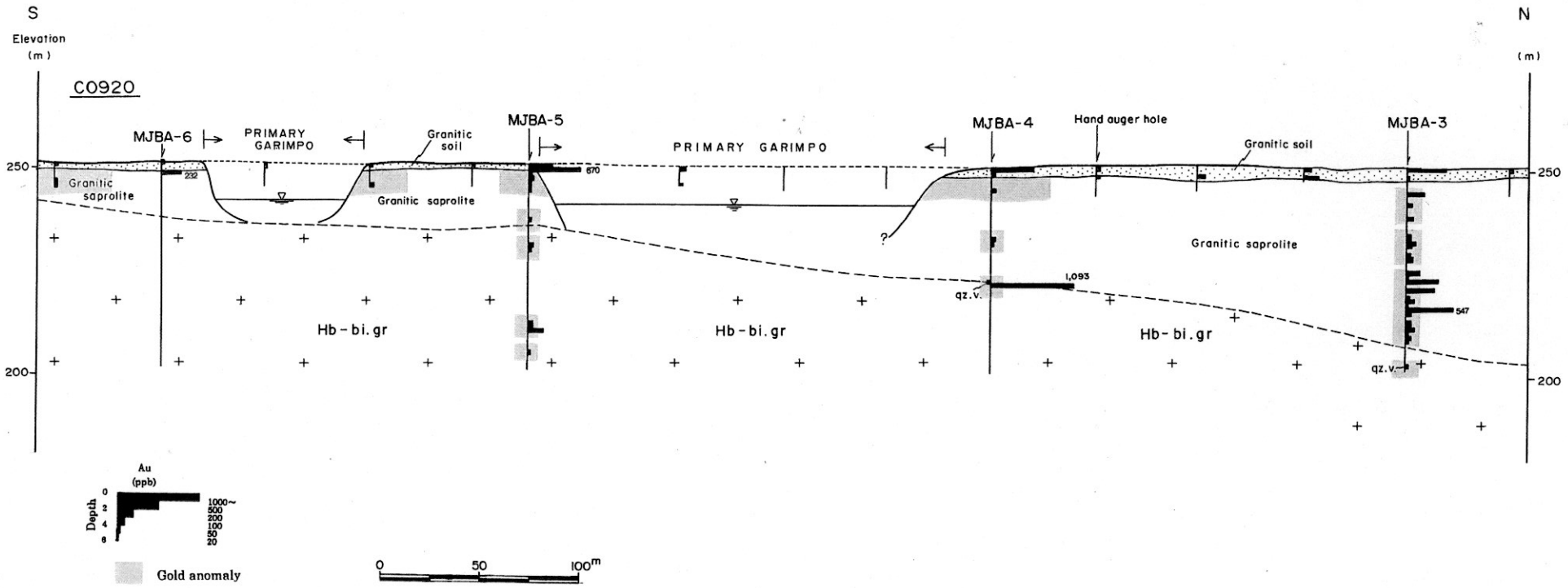


Fig. II-2-13 Cross section of borehole sites in Block C

CHAPTER 3 F BLOCK AREA

3-1 Location of the Survey Area

As shown in Fig. 2, the survey area has 10,000 Ha of surface area and it is located at the eastern part of the Alta Floresta region, at approximately 10Km north of Matupa City and very close to the Guaranta do Norte City.

3-2 Survey Methods

3-2-1 Geochemical survey

For this survey, both the regional soil geochemical survey and hand auger survey were named as geochemical survey.

(1) Field survey

The regional geochemical soil survey was performed in the entire area of F block. The sampling lines were arranged in the survey area with north to south direction, as shown in Fig. II-3-1, and keeping a spacing of 1,200m between these lines. The soil samples were collected along these lines with a sampling interval of 100m.

The Phase I Geological survey defined the area to be surveyed by hand auger during Phase II. The hand auger survey was performed with a line spacing of 200m and auger holes with a interval of 50m along these lines.

(2) Sample collection and sample preparation

The soil samples were taken from a depth of 1m that represent approximately the bottom of the B-horizon. The hand auger sampling were performed by digging a 6 m depth holes along the auger lines at spacing of 50m. The auger samples were taken at an interval of 1m, from the top of the holes until the hole bottom. The approximate weight of soil samples and auger samples were 1 Kg. The sample lists for soil and auger and respective description in field are shown in the Appendix 14&19.

Sample preparation was similar to the proceeding adopted in B block.

(3) Chemical Analysis

The chemical analysis for soil samples and hand auger samples were the same as adopted for B block. The results of chemical analysis are shown in the Appendix 30 & 34.

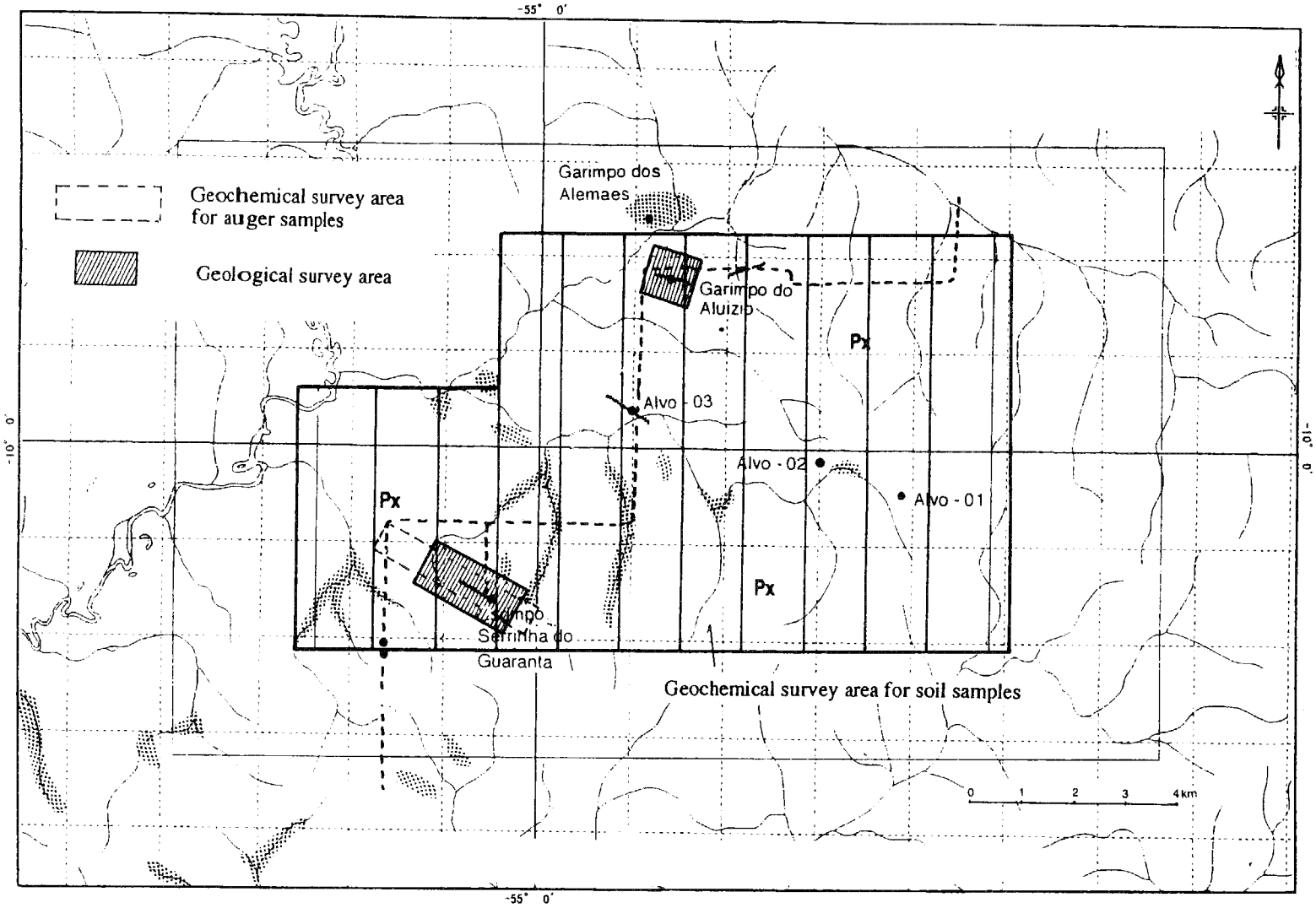


Fig. II-3-1 Location map of geochemical and geological survey areas of Block F

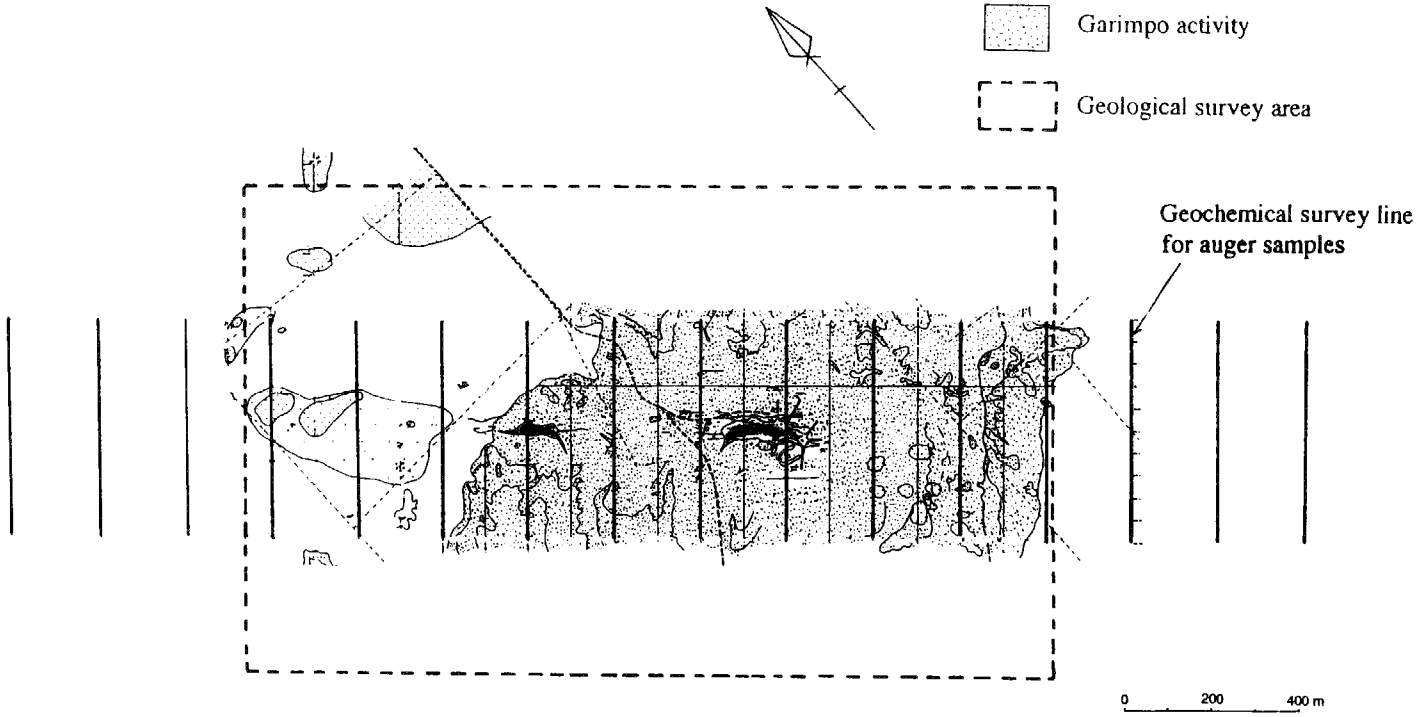


Fig. II-3-2 Location map of auger survey and geological survey area in the Serrinha do Guaranta area of Block F

(4) Interpretation Methods

The interpretation method was similar to that in B Block. Statistical data are shown in the Appendix 31 & 35, and the distribution map is shown on computerized map on Appendix 32.

3-2-2 Drilling survey

With the purpose of acquiring the geological and tectonic information in depth, 2 scout drilling were carried out.

(1) Drilling sites

The sites for the drilling were defined by the Phase II geological survey and a total of 2 boreholes were performed in two garimpo areas named Aluizio and Serrinha do Guaranta.

(2) Drilling survey method

The list of drilling machine and equipment used in this survey are annexed on Appendix 7. The survey method was similar with that adopted in B block. The drilling logs are annexed on Appendix 9.

(3) Laboratory tests results

Laboratory tests proceeding were the same as adopted in B block. Results of these tests are presented from Appendix 1 to Appendix 5.

3-2-3 Geology

Both, regional geological survey and detailed geological survey were carried out in F block, during Phase II survey.

(1) Field survey

In general, mostly crossing either the geologic, tectonic regional or mineralization trends set up the survey routes.

GPS positions were taken on every outcrop or float sites during the geological mapping. Outcrops photographs and detailed photographs and sketches in 1:100 or 1:200 were carried out on the most interesting outcrops or garimpos. For the geological survey, samples were collected for thin section analysis, polished ore analysis, X-ray analysis, fluid inclusion analysis, datation and chemical analysis for ores. The results of the detailed geological mapping were plotted in 1:2.500 scale geological map.

(2) Laboratory Tests Results

Laboratory tests samples were taken at several locations during the geological survey and their locations plotted on the Location Maps annexed to this report. These tests included thin section analysis, polished ore analysis, X-ray analysis, fluid inclusion analysis, datation and chemical analysis for ores.

Results of these tests are shown from Appendix 1 to Appendix 5.

The elements for analysis, analytical methods and detection limits were as same as that adopted for B block.

3-3 Geology

Geological mapping were carried out concomitant to soil geochemical survey and the survey results are described below:

(1) Stratigraphy

Archean to Lower Proterozoic Xingu Complex (Px), Dykes and Quaternary sediment compose the geology of F block. The geologic map is shown on Fig. II-3-3.

(i) Xingu Complex (Px)

The Xingu Complex outcrops in the entire area of block F, and it is represented by varied metamorphic units, as biotite-gneiss (Pxgn) and schist (Pxsch), granitic rocks as biotite granite (Pxmg), granite with gneissose structure (Pxgg) and porphyry granite (Pxgp) and volcanic rocks as andesitic tuff (Pxv).

The biotite-gneiss (Pxgn) confirmed by thin section sample A2338, outcrops at the southwestern end of F block area. The schist (Pxsch), outcrops with a WNW-ESE elongated exposition at the vicinities of the Serrinha do Guaranta garimpo area, in the southwestern part of F block. The unit was confirmed by thin section samples A2336, B2018 and B2048. Metamat interpreted the talc-chlorite schist, as remains of a volcano-sedimentary sequence in the survey area.

The biotite granite (Pxmg) is medium to coarse grained, and present a porphyritic potassic feldspar texture, as confirmed by thin section sample E2306. The granite with gneissose structure (Pxgg) outcrop at the shouthern part of the survey area, and it was confirmed by thin section F0606800 as medium to fine grained. The porphyry granite (Pxgp) outcrops at the Eastern part of the survey area and it was confirmed by thin section sample D2301. Alteration as sericite, chlorite and epidote were observed in the sample.

Volcanic rocks represented by andesitic tuff (Pxv) outcrops at 3 sites in the central part of the survey area. The volcanic rock was confirmed as andesitic tuff by thin section sample A2346, and presented alteration as silicification, actinolite, sericite and chlorite.

(ii) Dykes

A wide diabase dyke outcrops at the southwestern part of the F block. The diabase present a weak dissemination of pyrite and the gneissose host rock present alteration as dissemination of pyrite and hematite and silicification.

(iii) Quaternary

The quaternary (Qa) is mainly alluvial deposits that are distributed in the rivers flat.

(2) Geological structure

The shearing zones are the most important geological structure observed in the survey area and some of the primary gold garimpo, as Aluizio garimpo, are located inside these shearing structure. The main shearing direction observed in F block is WNW-ESE structure and the Aluizio garimpo is within of this shearing trend.

(3) Mineralization

The most important gold primary garimpo in the survey area are the Serrinha do Guaranta garimpo (located in the southwestern part of block F area) and Aluizio Garimpo (located in the northern part of the same area).

Others small gold garimpo also are present within the survey area and they are described below:

(i) Mineral showing F1

Mineral showing F1 is located at the western side of the survey area. The gold mineralization is probalbly related to quartz veins in sheared granitic rock. The results of ore analysis not comproved any strong gold mineralization .

(ii) Mineral showing F2

Mineral showing F2 is located at east of F1. The gold mineralization is also probalbly related to quartz veins in sheared granitic rock, but results of ore analysis not comproved any strong gold mineralization in F2.

(iii) Mineral showing F3

Mineral showing F3 is located in the central part of the survey area. The host rock is a strongly silicified volcanic rock and present quartz veinlets network. Gold mineralization is probalbly related to these quartz veinlets but results of ore analysis not comproved any strong gold mineralization in F3.

(iv) Mineral showing F4

Mineral showing F4 is located in the central part of the survey area. The host rock is also a strongly silicified volcanic rock and present quartz veinlets network. Gold mineralization is probalbly related to these quartz veinlets but, results of ore analysis not comproved any strong gold mineralization also in F4.

(4) Discussion

Shearing zones are the most important geological structure within the Archean to Lower Proterozoic

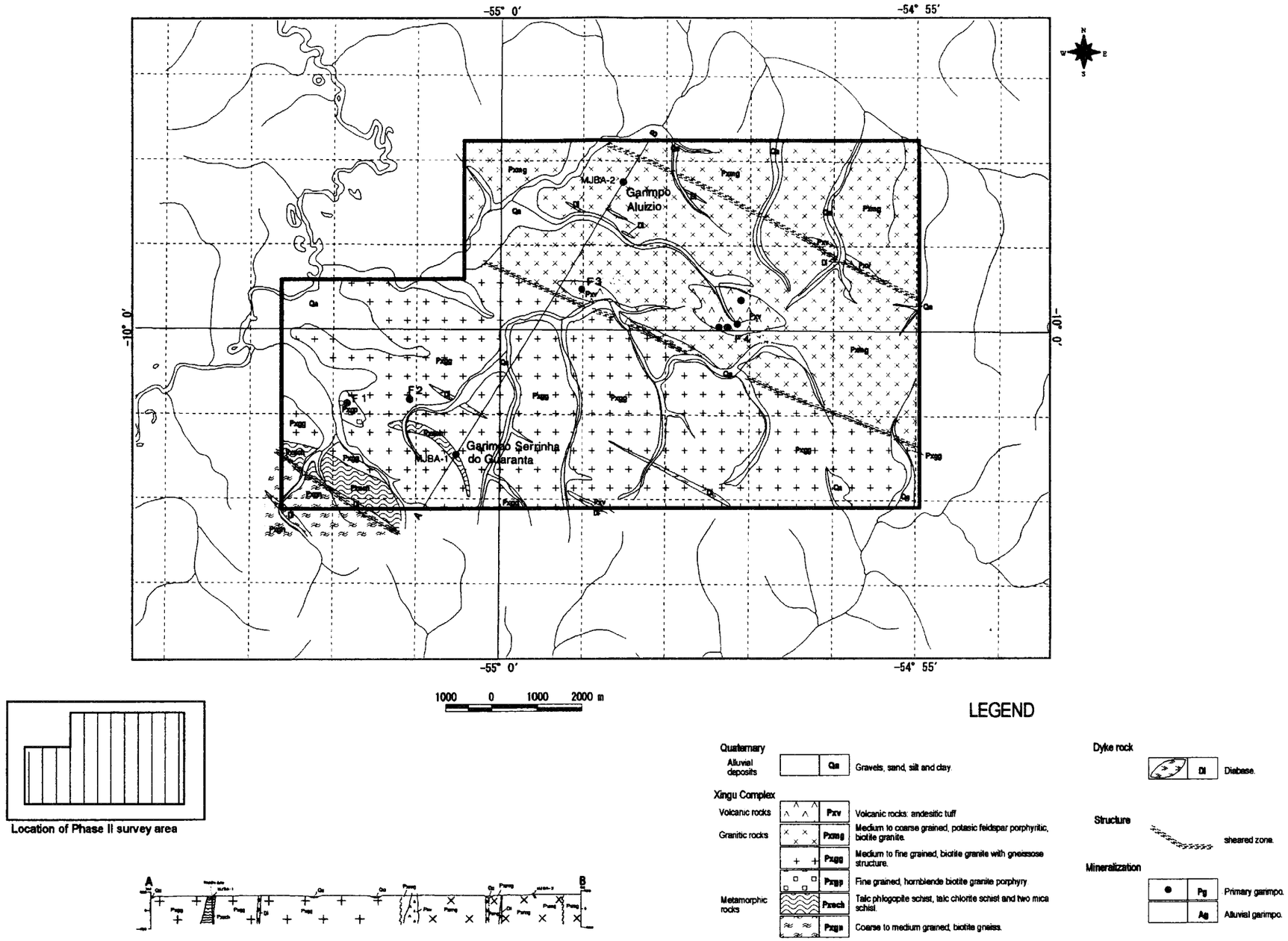


Fig. II-3-3 Geological map and cross section of Block F